moments take place because of the symmetric loading and end conditions. Even after the occurrence of the plastic hinges at both ends, the beam will be able to withstand further loading until the cross-section at mid-span yields, leading to the plastic hinge mechanism.

In Figure 2.20, the bending moment along the span may be given by considering the symmetric load condition with regard to mid-span as follows:

$$M = -M_A + \frac{qL}{2}x - \frac{q}{2}x^2 \tag{2.48}$$

where $M_A = M_B$ = bending moment at beam ends.

Since the bending strain energy, U, of the beam with the effective cross-section is calculated from Equation (2.41) and the rotation at fixed end A must be zero, Equation (2.42) is satisfied. By solving Equation (2.42) together with Equation (2.48), M_A is determined by

$$M_A = \frac{qL^2}{12} \tag{2.49}$$

Now we get a critical load, q_{c1}, when both ends just yield; that is, the end moment at $x = 0$ or L reaches the plastic bending moment, $-M_P$, namely

$$q_{c1} = \frac{12M_P}{L^2} \tag{2.50}$$

The maximum bending moment, $M_{max\,1}$, which occurs at mid-span, i.e., $x = L/2$ until both ends just yield, is calculated from Equation (2.48) with Equation (2.49) since $q = q_{c1}$

as follows:

$$M_{max\,1} = \frac{q_{c1}L^2}{24} \tag{2.51}$$

Even after both ends have yielded, the beam may sustain further loading until the cross-section at mid-span yields. While the end moment is kept constant at $-M_P$, the bending moment inside the span will increase. Since the beam can now be considered to be simply supported at both ends, the additional bending moment, ΔM, inside the span due to further loading is given by neglecting the membrane stress effects, namely

$$\Delta M = \frac{q - q_{c1}}{2}\left(Lx - x^2\right) \tag{2.52}$$

Since the maximum additional bending moment, ΔM_{max}, occurs at mid-span, the total (accumulated) maximum bending moment, M_{max}, at mid-span is obtained as follows:

$$M_{max} = M_{max\,1} + \Delta M_{max} = \frac{q_{c1}L^2}{24} + \frac{(q - q_{c1})L^2}{8} = \frac{qL^2}{8} - 2M_P \qquad (2.53)$$

where $\Delta M_{max} = [(q - q_{c1})/8]L^2$.

Since a plastic hinge mechanism is formed when the cross-section at mid-span yields, with $M_{max} = M_P$, the plastic collapse load, q_c, of the beam is finally determined by

$$q_c = \frac{16M_P}{L^2} \qquad (2.54)$$

Using a method similar to that used above, the first critical or plastic collapse loads of the beams under other load applications, such as those shown in Figures 2.21(a) and (b), can be calculated.

==========

**** Please note that in Eq (2.53) above, it appears that the last term "- 2Mp" should be corrected to "- Mp".*

Attachment 3

(Excerpts from "Simplified nonlinear progressive collapse analysis of welded steel moment frames" by Lee et al (2009), Journal of Constructional Steel Research, Vol 65, 1130-1137)

(b)(4)


(b)(4)

12/17/15

Notes for Fukushima Presentation

Extraordinary event

- 4Th largest recorded earthquake and tsunami
- 20,000+ killed
- Cost: $300 B
- No off-site power , transportation disrupted
- Bad accident

Fukushima accident exacerbated by poor design:

- Emergency Diesel location in NSR TB basement
- Seawall was 30 ft high, tsunami was 45
- Tsunamis exceeding 30 feet occur regularly in Japan

US nuclear plants protected against external events (hurricanes, tornadoes, flooding, earthquakes)

- Built into safety analysis, license and design of the plant
- Revaluation in light of Fukushima-a rare evnt that did happen

Fort Calhoun-PWR just north of Omaha Nebraska on the Missouri river

- Flooded beyond its design basis in 2012 –protected by a balloon encircling the plant
- Flooding exceeded design basis, sort of like Fuku

PWR vs BWR

- BWR contains decay heat in reactor and primary containment vessel
  - Must pump water into the containment to remove heat

- PWR
  - DHR for a PWR is much different and can be done with no electrical power

  - PWRs use the decay heat energy from the reactor to boil water which is used to drive a turbine driven pump which pumps water into a component that cools the reactor-all with no electrical power

  - Also, PWRs have much more robust containments than BWRs

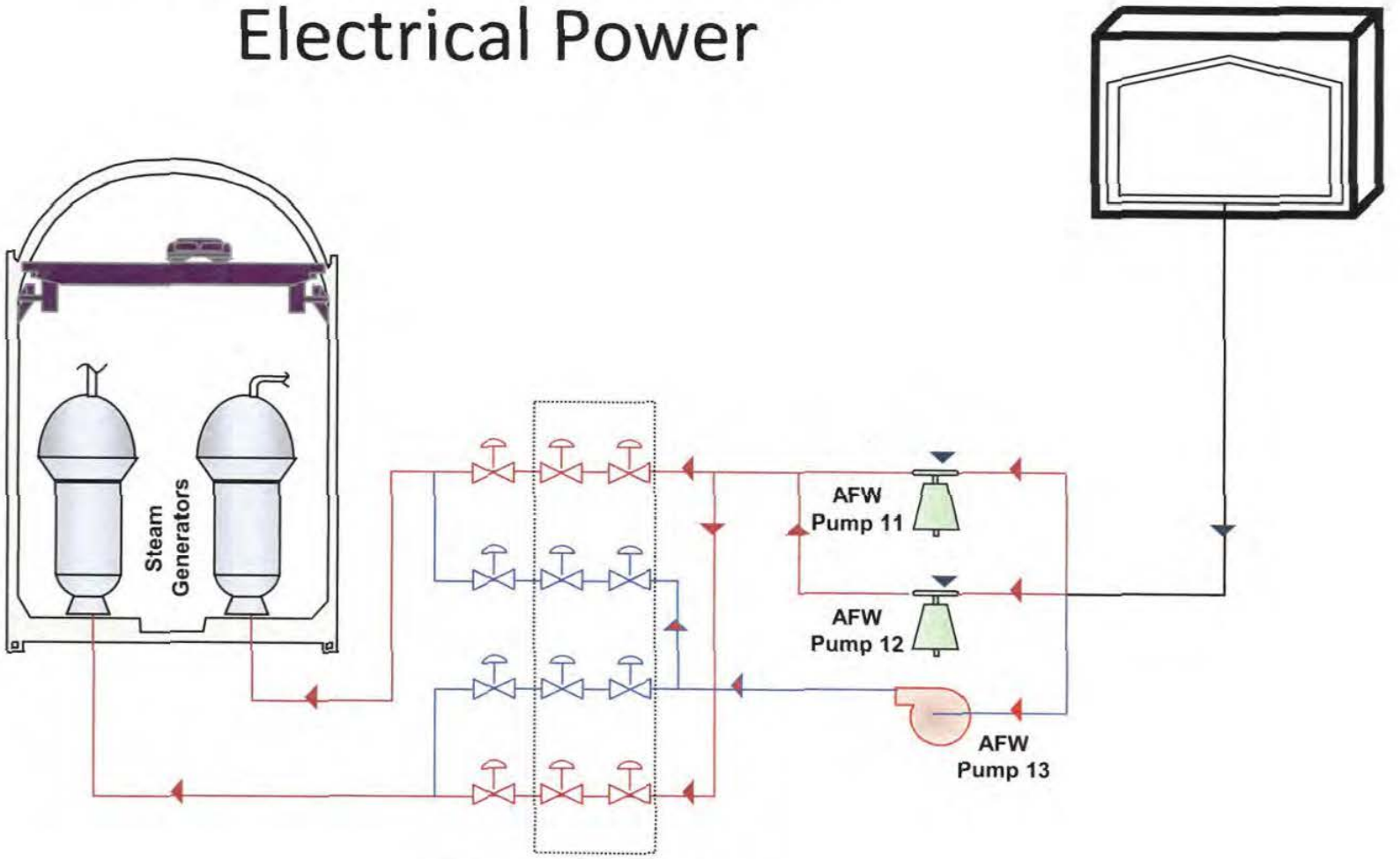
  - These factors make PWRs much less susceptible to what happened at Fuku
  - About 39 % of US reactors are BWRs.

Ft. Calhoun Station

Normal view of FCS

Flooded view of FCS

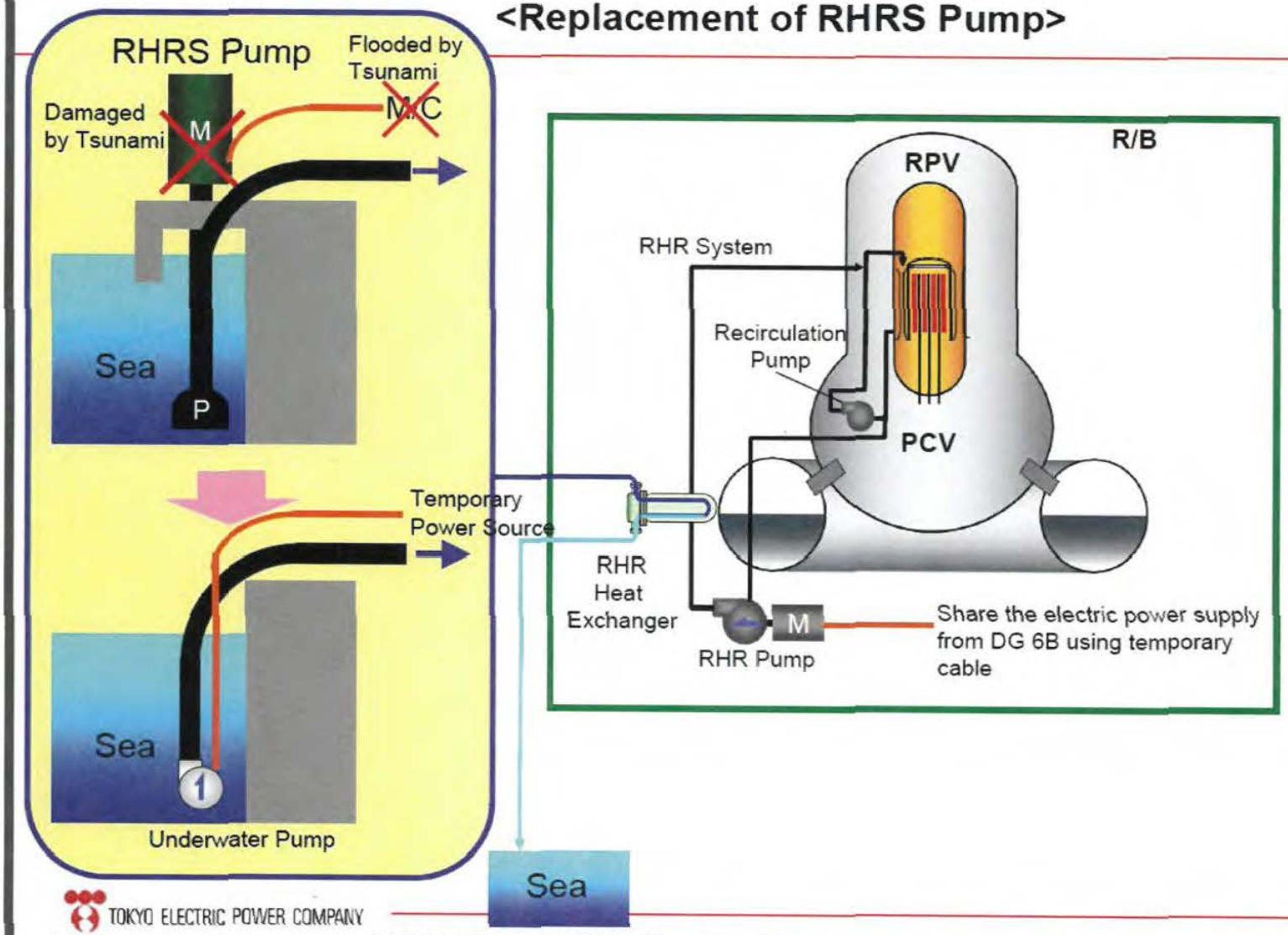
Cooling a PWR with no Electrical Power



Understanding the accident of Fukushima Daiichi NPS - Source IRSN

Major Activities at 1F Unit 5

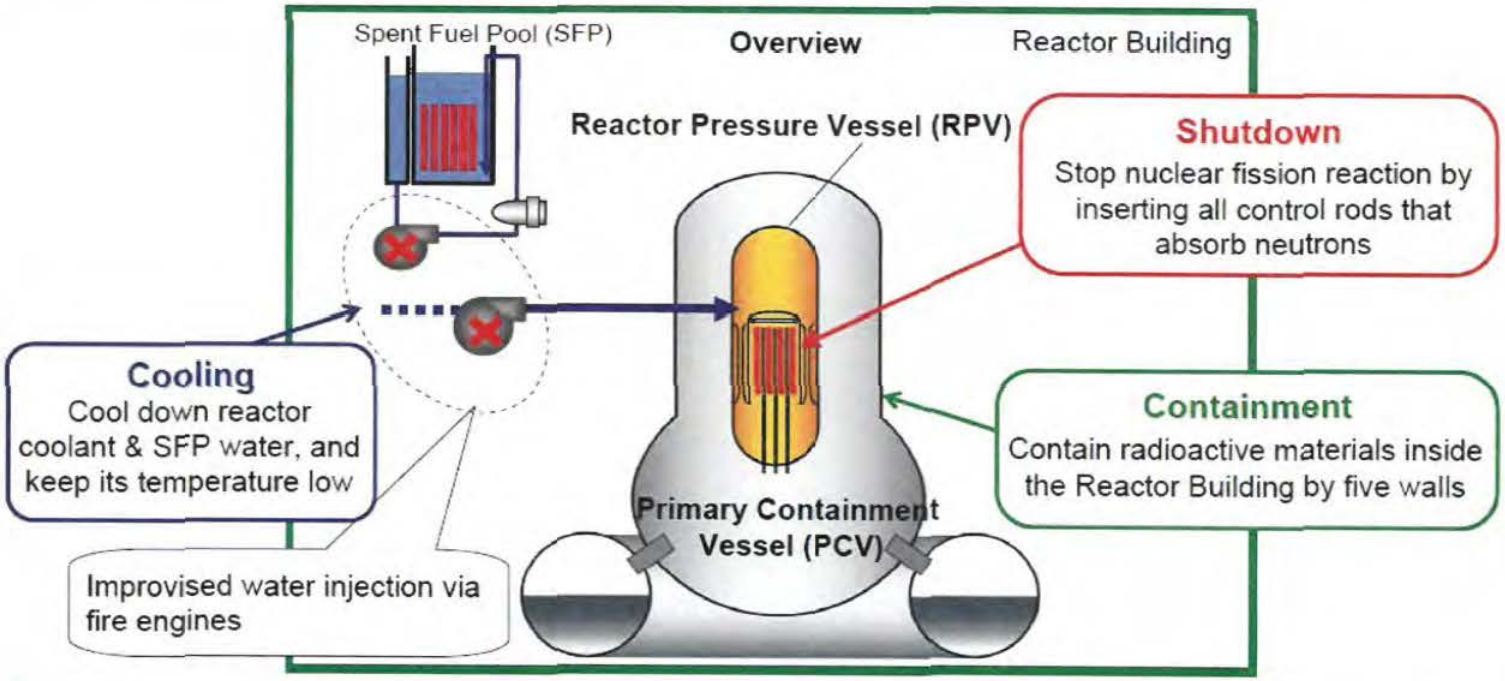
<Replacement of RHRS Pump>



TOKYO ELECTRIC POWER COMPANY

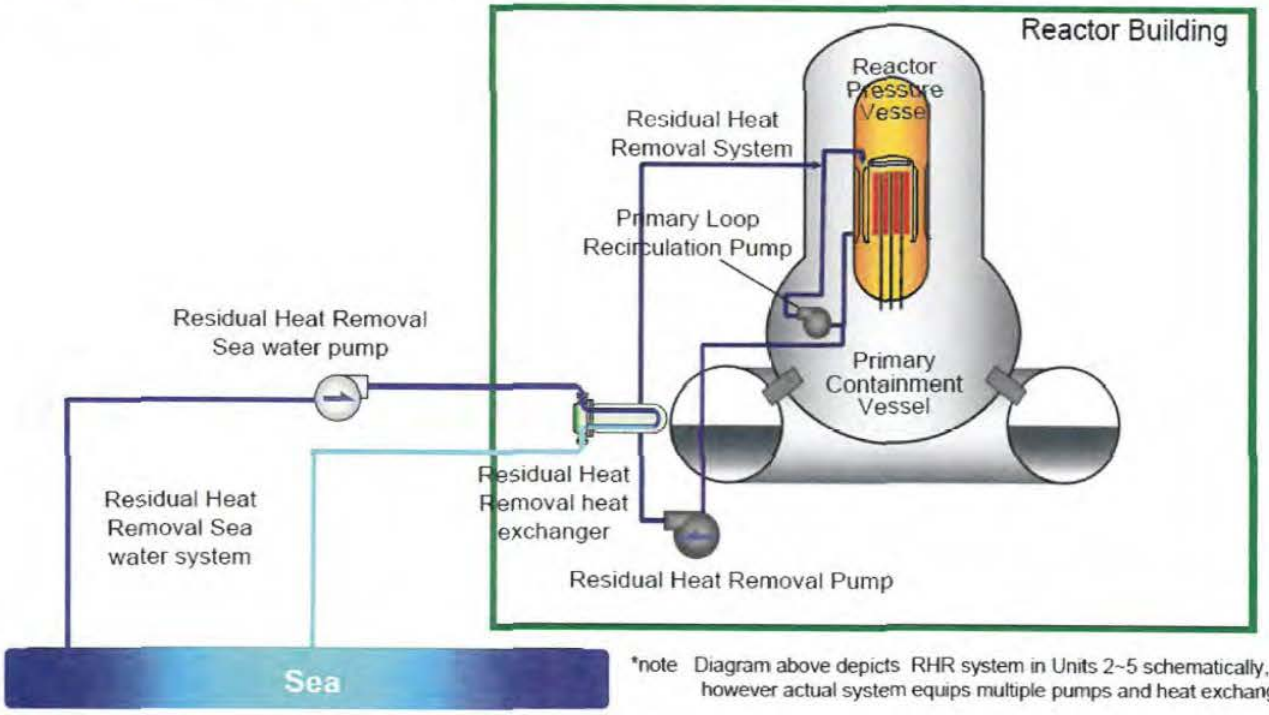
Impacts for Safety Function

- Nuclear fission chain reaction was stopped by automatic shutdown with all control rods inserted at the same time of the earthquake
- Off-site power was lost due to the impact of the earthquake, etc. and emergency generator started up. However emergency power became unavailable due to flooding by the tsunami except for Unit 6.
- Finally the "Cooling" function for the reactors and spent fuel pools of Units 1 to 4 were lost due to the loss of AC power supply and seawater systems, etc. caused by the tsunami.
- "Containment" function was impaired with high level contaminated water found in turbine buildings.



[Reference] Core Cooling System under Normal Shutdown

- Nuclear fuels continue to generate decay heat even after stop of fission by control rod insertion
- In order to remove decay heat, "Residual Heat Removal System (RHR)" is installed. RHR pumps circulate reactor coolant and remove heat by sea water through heat exchanger in "Residual Heat Removal Sea water System"
- This will enable fuels in reactors to be kept in stabilized cooling state (under 65°C).



*note Diagram above depicts RHR system in Units 2~5 schematically, however actual system equips multiple pumps and heat exchangers.

Fukushima-Daiichi Accident response - Main Control Room

On-site testimony:

"When the power source failed, we felt completely helpless."

"Heated discussion broke out among the operators regarding whether it was important to remain in the control room without power and lights."

"I bowed to ask them to remain here and somehow they agreed."

Connecting commuting car batteries into necessary instruments

Photo of a door taken from inside the blacked-out building

Checking instrument reading with a flashlight during blackout

Japan and the Tsunami

Destruction of Infrastructure

Human Impact

EXHIBIT ES-1: RETIREMENT RISK FACTORS OF THE NUCLEAR FLEET

Reactor	Economic Factors							Operational Factors			Safety Issues	
	Cost	Small	Old	Stand Alone	Merchant	20yr<w/o Ext.	25yrw< w/ Ext.	Broken	Reliability	Long term Outage	Multiple Safety Issues	Fukushima Retrofit
RETIRED, 2013												
Kewaunee	X	X	X	X	X						X	
Crystal River	X		O					X		O	X	
San Onofre					X	X		X		O	X	
AT RISK												
Ft. Calhoun	X	X	X	X			O	X		O	X	
Oyster Creek	X	X	X	X	X		O			X		X
Ginna	X	X	X		X		O				X	
Point Beach	X	X	X		X		O					
Perry	X	X		X	X	X					X	
Susquehanna	X			X	X				X			X
Davis-Besse	X		O	X	X		O		X	X	X	
Nine Mile Point	X		X		X		O			X	X	X
Quad Cities	X			X	X		O					X
Dresden	X		X		X		O					X
Millstone	X		O	X	X		O				X	
Pilgrim	X	X	X		X	X	O			X	X	X
Clinton	X			X	X	X						
South Texas	X			X	X	X				X		
Commanche Peak	X			X	X	X						
Three Mile Island	X		X	X	X		O			X		
Palisades	X		X		X		O			X	X	
Fitzpatrick	X		O	X	X		O			X		X

Sequoyah	X				X	X				X		
Hope Creek	X			X	X							X
Seabrook	X				X	X			X			
Indian Point	X		X		X		O			X		
Duane Arnold	X		O		X		O				X	X
Calvert Cliff	X		O		X		O			X	X	
Vt. Yankee	X	X	X		X		O					X
Browns Ferry			X				O		X	X	X	
Monticello	X	X	X			X	O				X	
Prairie Island	X	X	X				O				X	
Turkey Point	X	X	X			X	O			X	X	
Robinson	X		X			X						
Wolf Creek	X			X					X		X	
Fermi	X		X	X		X				X		
Diablo Canyon	X			X		X					X	
Cooper	X		X	X			O				X	
Callaway	X			X		X					X	
Cook	X		O				O		X		X	
LaSalle	X				X	X						X
Limerick	X				X	X						X

Sources and Notes: Credit Suisse, *Nuclear... The Middle Age Dilemma?, Facing Declining Performance, Higher Costs, Inevitable Mortality,* February 19, 2013; UBS Investment Research, *In Search of Washington's Latest Realities (DC Field Trip Takeaways*), February 20, 2013; Platts, January 9, 2013, "Some Merchant Nuclear Reactors Could Face Early Retirement: UBS," reporting on a UBS report for shareholders; Moody's, *Low Gas Prices and Weak Demand are Masking US Nuclear Plant Reliability Issues,* Special Comment, November 8, 2012.; David Lochbaum, *Walking a Nuclear Tightrope: Unlearned Lessons of Year-Plus Reactor Outages,* September 2006, "*The NRC and Nuclear Power Plant Safety in 2011,* 2012, and UCS Tracker); NRC Reactor pages.

Operational Factors: Broken/reliability (Moody's for broken and reliability); Long Term Outages (Lochbaum, supplemented by Moody's, o-current, x=past); Near Miss (Lochbaum 2012); Fukushima Retrofit (UBS, Field Trip, 2013)

Economic Factors: Cost, Wholesale markets (Credit Suisse) Age (Moody's and NRC reactor pages with oldest unit X=as old or older than Kewaunee, i.e. 1974 or earlier commissioning, O= Commissioned 1975-1979, i.e. other pre-TMI); Small (Moody's and NRC Reactor pages, less than 700 MW at commissioning); Stand Alone (Moody's and NRC Reactor pages); Short License (Credit Suisse and NRC Reactor pages).

Reactor Concepts

OIG Training

Part 1 of 2

December 17, 2015

Table of Contents

- What is Radiation?
- PWR vs BWR
- Fukushima Daiichi
- Reactor Internals
  - 1. Reactor Internal Basics
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  - 6. Case Study - Indian Point License Renewal for Reactor Internals
- Scenario Exercise

Science Jim Show: What is Radiation

- https://www.youtube.com/watch?v=bhVO__TB2GY

Power Reactors

The NRC regulates commercial nuclear power plants that generate electricity. There are several types of these power reactors. Of these, only the Pressurized Water Reactors (PWRs) and Boiling Water Reactors (BWRs) are in commercial operation in the United States. Select a type from the list below to view a description and diagram of each.

- Pressurized Water Reactors (PWRs)
- Boiling Water Reactors (BWRs)

There are currently 100 licensed to operate nuclear power plants in the United States (65 PWRs and 34 BWRs), which generate about 20% of our nation's electrical use. For more information about operating reactors, see the location map, list of power reactors, and NRC Project Managers.

KEY TOPICS

- Foreign Ownership Control and Domination (FOCD)
- Maintenance Effectiveness
- PWR Sump Performance
- Reactor Coolant System Weld Issues
- Technical Specifications
- Power Uprates
- Digital I&C

As part of operational experience monitoring, the agency will periodically encounter certain reactor systems or management areas that could be improved. For additional information on areas related to safety that the agency is working to improve and upgrade, see Reactor Safety Focus Areas.

Page Last Reviewed/Updated Friday, November 06, 2015

Typical Pressurized-Water Reactor

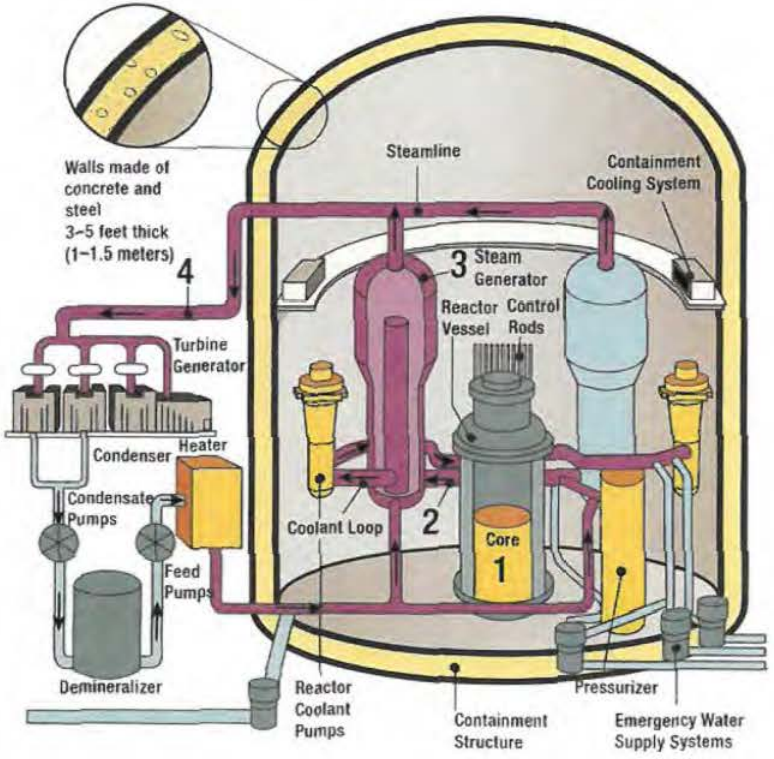
How Nuclear Reactors Work

In a typical design concept of a commercial PWR, the following process occurs:

1. The core inside the reactor vessel creates heat.
2. Pressurized water in the primary coolant loop carries the heat to the steam generator.
3. Inside the steam generator, heat from the primary coolant loop vaporizes the water in a secondary loop, producing steam.
4. The steamline directs the steam to the main turbine, causing it to turn the turbine generator, which produces electricity.

The unused steam is exhausted to the condenser, where it is condensed into water. The resulting water is pumped out of the condenser with a series of pumps, reheated, and pumped back to the steam generator. The reactor's core contains fuel assemblies that are cooled by water circulated using electrically powered pumps. These pumps and other operating systems in the plant receive their power from the electrical grid. If offsite power is lost, emergency cooling water is supplied by other pumps, which can be powered by onsite diesel generators. Other safety systems, such as the containment cooling system, also need electric power. PWRs contain between 150-200 fuel assemblies.

See also our animated diagram.



Boiling Water Reactors

Printable Version

Typical Boiling-Water Reactor

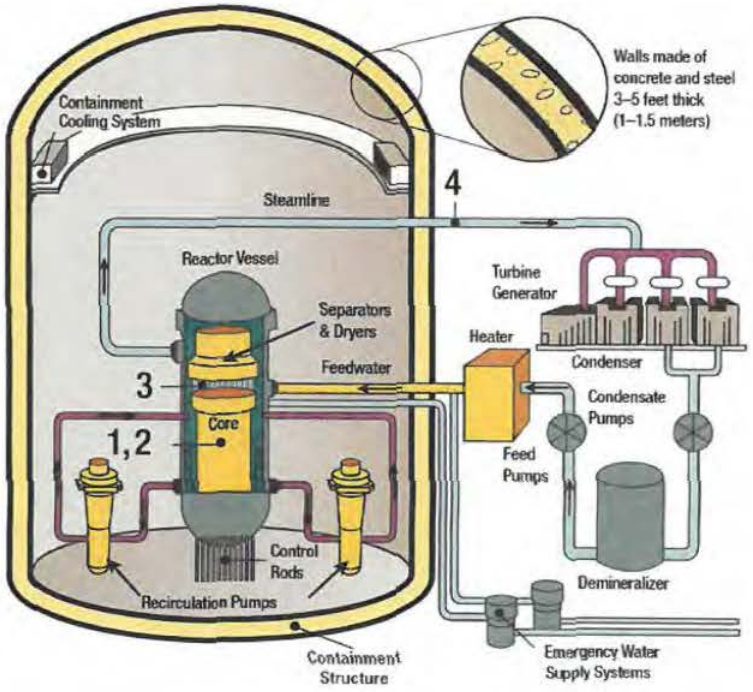
How Nuclear Reactors Work

In a typical design concept of a commercial BWR, the following process occurs:

1. The core inside the reactor vessel creates heat.
2. A steam-water mixture is produced when very pure water (reactor coolant) moves upward through the core, absorbing heat.
3. The steam-water mixture leaves the top of the core and enters the two stages of moisture separation where water droplets are removed before the steam is allowed to enter the steamline.
4. The steamline directs the steam to the main turbine, causing it to turn the turbine generator, which produces electricity.

The unused steam is exhausted to the condenser, where it is condensed into water. The resulting water is pumped out of the condenser with a series of pumps, reheated, and pumped back to the reactor vessel. The reactor's core contains fuel assemblies that are cooled by water circulated using electrically powered pumps. These pumps and other operating systems in the plant receive their power from the electrical grid. If offsite power is lost, emergency cooling water is supplied by other pumps, which can be powered by onsite diesel generators. Other safety systems, such as the containment cooling system, also need electric power. BWRs contain between 370-800 fuel assemblies.

See also our animated diagram.



Fukushima Daiichi Video

- **Understanding the accident of Fukushima Daiichi NPS - Source IRSN**
- **https://www.youtube.com/watch?v=JMaEjEWL6PU**

Inside a nuclear reactor core

- **Inside a nuclear reactor core - Bang Goes The Theory – BBC**
- https://www.youtube.com/watch?v=MGj_aJz7cTs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    - Fuel Cycle Facilities
    - Materials Transportation
    - Nuclear Materials Quick Links
- Radioactive Waste
    - Low-Level Waste
    - Waste Incidental to Reprocessing
    - High-Level Waste
    - Uranium Mill Tailings
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Compilation of the Current Licensing Basis: Request For Voluntary Participation in Pilot Program (Generic Letter 92-03)

March 19, 1992

TO: ALL NUCLEAR POWER PLANT APPLICANTS AND LICENSEES

SUBJECT: COMPILATION OF THE CURRENT LICENSING BASIS: REQUEST FOR VOLUNTARY PARTICIPATION IN PILOT PROGRAM (GENERIC LETTER 92-03)

The U.S. Nuclear Regulatory Commission (NRC) is issuing this letter to solicit the industry's participation in a voluntary pilot program to assess the advantages and disadvantages of compiling the current licensing basis (CLB). We request that only interested applicants and licensees respond to this letter. In issuing this letter, the NRC is imposing no new requirements or staff positions.

BACKGROUND

The concept of the CLB was first introduced in the regulations, 10 CFR

50.54(f), as a result of considerations in the development of the NRC's backfit rule. The CLB again became an issue in the Commission's deliberations on extending the licenses for plants beyond the original contemplated design life. In 1991, the Commission adopted the plant life extension rule, 10 CFR Part 54, which became effective on January 13, 1992. A definition of CLB was set forth in Section 54.3. Although set out in Part 54, that definition represents the staff's understanding of the scope of the CLB and should be applicable to all reactor licensees.

To further understand the advantages and disadvantages of compiling the CLB, the Commission has directed the NRC staff to solicit the industry's participation in a pilot program in which a small number of representative licensees would voluntarily compile their CLB and advise the NRC on the effort. As part of the pilot program, the staff would assess the usefulness of the compilation with respect to the NRC's regulatory activities.

The proposed effort also relates to the industry's effort to implement design basis reconstitution. Although these programs should include reconstituting that portion of the CLB relating to the design, they do not address a significant portion of the CLB, including programmatic areas such as quality assurance, training, and maintenance.

Although compiling the CLB may require a significant amount of resources, the staff expects that the licensee will thereby reduce the resources it will need to devote in the future to (1) conducting document searches needed to support regulatory oversight, (2) filing license amendment requests, (3) making changes pursuant to Section 50.59, and (4) evaluating backfits pursuant to Section 50.109.

---

1. A representative sample might include (1) a facility that was licensed in the early 1970s, (2) several facilities that were licensed between 1975 and 1985, and (3) a facility licensed within the last 5 years.

Pilot Program Participation

Participation in the pilot program is voluntary. Licensees wishing to participate should respond within 60 days of the date of this letter. Although the licensees volunteering need not provide details and schedules at this time, the staff desires to complete the pilot program compilation within a reasonable time. The licensee may choose to compile the CLB as a single set of documents in one location or by a system which provides a reference to documents that can be retrieved easily from several locations. Volunteers should select an approach, scope, and format that will be most useful to them. If the staff finds sufficient interest among licensees on these or other matters, it will conduct a workshop with those considering participating.

The staff anticipates that licensees will use the CLB during their

participation in the pilot program. During this time, the NRC staff will conduct audits with the participants to determine the usefulness of the compiled CLB. The fees for this audit will not be collected from participants under 10 CFR Part 170, but will be included in the general base fee under 10 CFR Part 171. In addition, where the licensee identifies a non-willful failure to meet a licensing commitment which could subject the licensee to enforcement action, it is our intent to exercise enforcement discretion, provided the licensee has taken prompt corrective action consistent with the provisions in the enforcement policy for non-cited violations. More significant violations will be handled on a case-by-case basis.

If there are any questions on this matter or you have an interest in attending or participating in a workshop, please contact the Technical Contact or your NRR licensing project manager. Licensees who wish to participate in the pilot program should address their responses to the attention of the NRC Document Control Desk.

This request is covered by Office of Management and Budget Clearance Number 3150-0011, which expires May 31, 1994. The estimated average number of burden hours is 10 person hours for each licensee's response, including those needed to assess the request and to respond to the generic letter. This estimate of the average number of burden hours pertains only to the identified response-related matters and does not include the time needed to develop the CLB. Comments on the accuracy of this estimate and suggestions to reduce the burden may be directed to Ronald Minsk, Office of Information and Regulatory Affairs (3150-0011), NEOB-3019, Office of Management and Budget, Washington, DC 20503, and to the U.S. Nuclear Regulatory Commission, Information and Records Management Branch (MNBB-7714), Division of Information Support Services, Office of Information and Resources Management, Washington, DC 20555.

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Since the generic letter does not contain any new or revised regulatory requirements, the Backfit Rule, 10 CFR 50.109, does not apply.

Sincerely,

James G. Partlow, Associate Director
for Projects
Office of Nuclear Reactor Regulation

Technical Contact:
D. Wigginton, NRR
(301) 504-1301

Enclosure:
List of Recently Issued Generic Letters

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Guidance for Determining

The Public Availability of

NRC Documents

September 25, 2007

Guidance for Determining the Public Availability of NRC Documents

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- Checklist for Staff to Determine If a Document Should or Should Not Be Made Publicly-Available.....Page 3
- NRC Documents Routinely Released to the Public.....Page 4
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- NRC Policy and Guidance Regarding Sensitive Information.....Page 62

CHECKLIST FOR NRC STAFF TO DETERMINE IF A DOCUMENT SHOULD OR SHOULD NOT BE MADE PUBLICLY-AVAILABLE

Questions to Ask	Decision
Is the document an official agency record? For a definition, see: http://www.internal.nrc.gov/RMB/guidance-documents/faq.html	If no, then make the document non-public. If yes, see the questions below.
Does the document contain SUNSI? For a listing and definition of each category of documents that fall into the SUNSI handling groups, see: http://www.internal.nrc.gov/sunsi/	Make it non-public.
Does the document contain PII? Examples of PII can be found at: http://www.internal.nrc.gov/PII/	Make it non-public: If PII has not been redacted. Make it public: If the PII has been redacted and it does not contain any SUNSI or any other categories of information that should not be made publicly available.
Does the document appear in the attached listing of document types routinely NOT made publicly available?	Make it non-public
Does the document contain safeguards material?	These documents are not processed in ADAMS.
Does the document contain classified information?	These documents are not processed in ADAMS
Does the document contain pre-decisional information?	Make it non-public. See MD 3.4, p.4
Is the document a draft audit report from the IG?	Make it non-public. See MD 3.4, p.8
Does the document appear in the attached listing of document types routinely made publicly available?	Make it public after a SUNSI review. Verify the document type in the attached listing.

NRC Documents Routinely Released to the Public

The following documents are routinely released to the public when they do not contain classified, safeguards, or Sensitive Unclassified Non-Safeguards Information (SUNSI): allegation, investigation, security-related, proprietary, personal privacy, Federal-, State-, and international-controlled information, and sensitive internal information, or other SUNSI set forth in Part IV of Handbook 3.4.

Document Type	Responsible Office	ITEM #
A. Documents relating to the issuance and use of a construction permit and operating license for nuclear facilities: existing and new power reactors, research and test reactors, and fuel fabrication facilities (10 CFR Parts 50 and 52); and the relicensing activities related to these activities (10 CFR Part 54)		A
1. Documents relating to the review of a tendered or an accepted application for and issuance of a construction permit	**NRR/NRO/NMSS**	A1
a. Review of the applicant's preliminary safety analysis report (PSAR)	**NRR/NRO/NMSS**	A1a
(1) PSAR	**NRR/NRO/NMSS**	A1a1
(2) Amendments to the PSAR	**NRR/NRO/NMSS**	A1a2
(3) Correspondence sent to the applicant regarding the PSAR, including questions sent to the applicant for response	**NRR/NRO/NMSS**	A1a3
(4) Correspondence from the applicant regarding the PSAR	**NRR/NRO/NMSS**	A1a4
(5) Safety evaluation report (SER)	**NRR/NRO/NMSS**	A1a5
(6) Supplements to the SER	**NRR/NRO/NMSS**	A1a6

b.	Other documents relating to the review of radiological safety		A1b
(1)	Quality assurance program plan and related correspondence with the applicant	**NRR/NRO/NMSS**	A1b1
(2)	Fire protection plan and related correspondence with the applicant	**NRR/NRO/NMSS**	A1b2
(3)	Inservice inspection and testing program plan and related correspondence with the applicant	**NRR/NRO/NMSS**	A1b3
(4)	Environmental qualifications program plan and related correspondence with the applicant	**NRR/NRO/NMSS**	A1b4
(5)	Other documents and correspondence relating to implementation of multiplant requirements in NUREG-0748, "Operating Reactors Licensing Actions Summary."	**NRR/NRO/NMSS**	A1b5
c.	Review of the applicant's environmental report		A1c
(1)	Environmental report	**NRR/NRO/NMSS**	A1c1
(2)	Amendments and supplements to the environmental report	**NRR/NRO/NMSS**	A1c2
(3)	Site suitability information and early site review information	**NRR/NRO/NMSS**	A1c3
(4)	Correspondence from NRC to the applicant regarding the environmental report, its supplements, and site suitability information, including questions sent to the applicant for response.	**NRR/NRO/NMSS**	A1c4

	(5)	Correspondence from the applicant to NRC regarding the environmental report and site suitability information, including answers to questions submitted by NRC	**NRR/NRO/NMSS**	A1c5
	(6)	Report on site visits	**NRR/NRO/NMSS**	A1c6
	(7)	Draft environmental impact statement (DEIS) and supplements	**NRR/NRO/NMSS**	A1c7
	(8)	Meeting notices and meeting summaries of public meetings with applicants, and other notices and meeting summaries	**NRR/NRO/NMSS**	A1c8
	(9)	Comments on the DEIS from individuals, States, local government agencies, Federal agencies, and other groups and organizations	**NRR/NRO/NMSS**	A1c9
	(10)	Final environmental impact statement (FEIS) and supplements	**NRR/NRO/NMSS**	A1c10
	(11)	*Federal Register* notices for items (1) and (2) above	**NRR/NRO/NMSS**	A1c11
d.	Documents relating to a limited work authorization (LWA)			A1d
	(1)	LWA	**NRR/NRO/NMSS**	A1d1
	(2)	Amendments to the LWA and related correspondence with the applicant	**NRR/NRO/NMSS**	A1d2
	(3)	Correspondence with the applicant pertaining to work performed under the LWA	**NRR/NRO/NMSS**	A1d3

e.	General information provided in the tendered or accepted application for a construction permit and related correspondence with the applicant	**NRR/NRO/NMSS**	A1e
f.	Documents relating to the issuance of an amendment to a construction permit	**NRR/NRO/NMSS**	A1f
(1)	Proposed amendment to a construction permit	**NRR/NRO/NMSS**	A1f1
(2)	Correspondence from NRC to the applicant regarding the proposed amendment to a construction permit, including questions submitted for the applicant's response	**NRR/NRO/NMSS**	A1f2
(3)	Correspondence from the applicant to NRC regarding proposed amendment to a construction permit, including answers to questions submitted by NRC	**NRR/NRO/NMSS**	A1f3
(4)	SER on the proposed amendment	**NRR/NRO/NMSS**	A1f4
(5)	Amendment to the construction permit	**NRR/NRO/NMSS**	A1f5
2.	Documents relating to the review of a tendered or an accepted application for and issuance of an operating license		A2
a.	Review of the applicant's final safety analysis report (FSAR)		A2a
(1)	Correspondence to the applicant regarding the FSAR, including questions sent to the applicant for response	**NRR/NRO/NMSS**	A2a1

(2)	Correspondence from the applicant regarding the FSAR, including answers to questions submitted by NRC for response	**NRR/NRO/NMSS**	A2a2
(3)	Draft safety evaluation report (DSER), supplements, and related correspondence with the applicant and other parties	**NRR/NRO/NMSS**	A2a3
(4)	SER and supplements	**NRR/NRO/NMSS**	A2a4
b.	Documents relating to emergency plans and amendments to emergency plans		A2b
(1)	Correspondence from NRC to the applicant/licensee regarding the plan or amendment, including questions submitted for response	**NRR/NRO/NMSS / NSIR**	A2b1
(2)	Health Physics Program	**NRR/NRO/NMSS / NSIR**	A2b2
(3)	Emergency implementation procedures	**NRR/NRO/NMSS / NSIR**	A2b3
(4)	Correspondence related to safeguards plans	**NRR/NRO/NMSS / NSIR**	A2b4
(5)	Correspondence from the applicant/ licensee to NRC regarding the plan or amendment, including answers to questions submitted by NRC for response	**NRR/NRO/NMSS / NSIR**	A2b5
(6)	Correspondence to and from State and local governments relating to the plan or amendment	**NRR/NRO/NMSS / NSIR**	A2b6
(7)	Documents received from the Federal Emergency Management Agency (FEMA) that relate to a specific nuclear power plant or nuclear power plant site	**NRR/NRO/NMSS / NSIR**	A2b7

	(8) Emergency preparedness exercise objective and scenarios, including NRC and Federal Emergency Management Agency comments and reviews. *(Release to the public after conduct of the exercise.)*	**NRR/NRO/NMSS / NSIR**	A2b8
c.	Other documents relating to the radiological safety review		A2c
	(1) Quality assurance program plan, related correspondence with the applicant, and related meeting notices and minutes of meetings with the applicant	**NRR/NRO/NMSS**	A2c1
	(2) Fire protection plan, related correspondence with the applicant, and related meeting notices and minutes of meetings with the applicant	**NRR/NRO/NMSS**	A2c2
	(3) Inservice inspection and testing program plan, related correspondence with the applicant, and related meeting notices and minutes of meetings with the applicant	**NRR/NRO/NMSS**	A2c3
	(4) Environmental qualification program plan, related correspondence with the applicant, related meeting notices, and minutes of meetings with the applicant	**NRR/NRO/NMSS**	A2c4

	(5) Other documents and correspondence relating to implementation of multiplant requirements described in NUREG-0748, "Operating Reactors Licensing Actions Summary"	**NRR/NRO/NMSS**	A2c4
d.	Documents relating to the review of the applicant's environmental report		A2d
	(1) Environmental report and supporting documents	**NRR/NRO/NMSS**	A2d1
	(2) Amendments to the environmental report	**NRR/NRO/NMSS**	A2d2
	(3) Correspondence from NRC to the applicant regarding the environmental report, its supplements, and other supporting information, including questions sent to the applicant for response	**NRR/NRO/NMSS**	A2d3
	(4) Correspondence from the applicant to NRC regarding the environmental report, its supplements, and other supporting information, including answers to questions submitted by NRC	**NRR/NRO/NMSS**	A2d4
	(5) Report of site visits	**NRR/NRO/NMSS**	A2d5
	(6) Meeting notices and summaries of public meetings and other meeting notices and summaries with applicants and licensees (if applicable)	**NRR/NRO/NMSS**	A2d6
	(7) DEIS	**NRR/NRO/NMSS**	A2d7

(8)	Comments on the DEIS from individuals; State, local, and Federal agencies; industry; and other organizations	**NRR/NRO/NMSS**	A2d8
(9)	FEIS	**NRR/NRO/NMSS**	A2d9
e.	General information provided on the tendered or accepted application	**NRR/NRO/NMSS**	A2e
3.	Other documents associated with the review and issuance of a construction permit and operating license		A3
a.	Documents relating to the review of the applicant's antitrust information	**NRR/NRO/NMSS**	A3a
(1)	Antitrust information submitted as part of the application for a construction permit and an operating license	**NRR/NRO/NMSS**	A3a1
(2)	Staff analyses of the applicant antitrust information	**NRR/NRO/NMSS**	A3a2
(3)	Correspondence with the applicant regarding antitrust matters	**NRR/NRO/NMSS**	A3a3
(4)	Findings and conclusions of attorney advice letters and correspondence between NRC and the Attorney General regarding applicant antitrust information	**NRR/NRO/NMSS**	A3a4
(5)	Hearing transcripts, testimony, submittals, and briefings on antitrust matters	**NRR/NRO/NMSS**	A3a5
b.	Insurance and indemnity information		A3b
(1)	Licensee indemnity agreement and amendments	**NRR**	A3b1

	(2) Endorsement of licensee's insurance policies	**NRR**	A3b2
	(3) Other correspondence regarding indemnity and insurance matters	**NRR**	A3b3
4.	Documents involved in proceedings, including hearings, before the Atomic Safety Licensing Board Panel (ASLBP) and the Commission review of board decisions.		A4
	a. Request for a hearing	**SECY**	A4a
	b. Board notifications	**SECY**	A4b
	c. Motions, petitions, interrogatories, answers, discovery requests, requests for admission, and requests to make a limited appearance	**SECY**	A4c
	d. Briefs, testimony, and statements of the applicant, NRC staff, and other parties	**SECY**	A4d
e.	Transcripts of hearings	**ASLBP**	A4e
f.	Orders, opinions, and decisions of the boards and Commission, including those directing the issuance of a construction permit, an operating license, and amendments to the construction permit and the operating license	**SECY**	A4f
	g. Other filings and documentation submitted by parties to the proceedings to the boards	**SECY**	A4g
5.	Documents relating to the issuance of an amendment to a license		A5
	a. Proposed amendment to a license	**NRR/NRO/NMSS**	A5a
	b. Correspondence from NRC to the licensee regarding the proposed amendments to a license, including questions submitted for the licensee's response	**NRR/NRO/NMSS**	A5b

c. Correspondence from the licensee to NRC regarding proposed amendments to a license, including answers to questions submitted by NRC	**NRR/NRO/NMSS**	A5c
d. SER on the proposed amendment	**NRR/NRO/NMSS**	A5d
e. Amendment to the license	**NRR/NRO/NMSS**	A5e
6. Documents relating to the NRC Inspection and Enforcement Program	**NRR/NRO/NMSS / RGN**	A6
a. Inspection Reports	**NRR/NRO/NMSS / RGN**	A6a
b. Preliminary notification (PN) of event	**RGN**	A6b
c. Notice of violation/nonconformance (may include proposed imposition of a civil penalty) (released to the public through the ADAMS Public Library 5 working days after the enforcement action has been taken)	**OE/RGN**	A6c
d. Licensee or vendor response to the notice of violation	**OE/RGN**	A6d
e. NRC acknowledgment of receipt of the licensee response to the notice of violation/ nonconformance	**OE/RGN**	A6e
f. Orders	**NRR/NRO/NMSS / OE**	A6f
g. Licensee response to an order	**RGN**	A6g
h. Bulletins	**NRR/NRO/NMSS**	A6h
i. Licensee response to a bulletin	**RGN**	A6i
j. Information notices	**NRR/NRO/NMSS**	A6j

k. Notification of significant enforcement action (to be released to the public through the ADAMS Public Library after the enforcement action has been taken)	**OE**	A6k
l. Confirmatory action prepared	**NRR/NRO/NMSS**	A6l
m. Systematic assessment of licensee performance (SALP) reports	**NRR**	A6m
n. International Atomic Energy Agency (IAEA) inspection reports	**NRR/NRO/NMSS**	A6n
o. Meeting notices and summaries	**NRR/NRO/NMSS / RGN**	A6o
7. Reports submitted by applicants and licensees pursuant to a construction permit and a nuclear facility operating license		A7
a. Effluent releases report required by 10 CFR 50.36a(a)(2)	**RGN**	A7a
b. Construction deficiency notice required by 10 CFR 50.55(e)(2)	**RGN**	A7b
c. Construction deficiency report required by 10 CFR 50.55(e)(3)	**NRR**	A7c
d. Facility changes, tests, and experiments conducted without prior approval required by 10 CFR 50.59(b)	**NRR**	A7d
e. Annual financial report required by 10 CFR 50.71(b)	**RGN**	A7e
f. Licensee event reports required by 10 CFR 50.73	**RGN**	A7f
g. Report on fracture toughness required by 10 CFR Part 50, Appendix G, Sec. V.E	**NRR**	A7g

h.	Report on test results of specimens withdrawn from capsules (fracture toughness tests) required by 10 CFR Part 50, Appendix H, Section III.A	**NRR**	A7h
i.	Report on effluents released in excess of design objectives required by 10 CFR Part 50, Appendix I, Section III.A	**RGN**	A7i
j.	Report on reactor containment building integrated leak rate test required by 10 CFR Part 50, Appendix J, Section V.B	**NRR**	A7j
k.	Reports on startup of reactor required by technical specifications	**RGN**	A7k
l.	Monthly operating report required by technical specifications	**NRR**	A7l
m.	Reportable occurrence required by technical specifications	**RGN**	A7m
n.	Source leakage reports required by technical specifications	**RGN**	A7n
o.	Annual environmental operation reports required by technical specifications	**RGN**	A7o
p.	Nonroutine environmental operating reports required by technical specifications	**RGN**	A7p
q.	Radiation exposure by functions report required by technical specifications	**RGN**	A7q
8.	Documents relating to decommissioning		A8
a.	Review of the application to dismantle or decommission a nuclear facility		A8a
(1)	Application and supporting documents, including the decommissioning/ dismantling plan	**NRR**	A8a1
(2)	Supplements to the applications	**NRR**	A8a2

(3) Correspondence from NRC to the applicant regarding the application and its supplements, including questions submitted for the applicant's response	**NRR**	A8a3
(4) Correspondence from the applicant to NRC regarding the application and its supplements, including answers submitted by NRC for response	**NRR**	A8a4
(5) Correspondence to and from State and local governments relating to the applicant (if applicable)	**NRR**	A8a5
(6) Decommissioning approval	**NRR/NRO/NMSS**	A8a6
b. Review of the applicant's environmental report		A8b
(1) Environmental report and supporting documents	**NRR**	A8b1
(2) Supplements to the environmental report	**NRR**	A8b2
(3) Correspondence from NRC to the applicant regarding the environmental report, its supplements, and other supporting information, including questions sent to the applicant for response	**NRR**	A8b3
(4) Correspondence from the applicant to NRC regarding the environmental report, its supplements, and other supporting information, including answers to questions submitted by NRC	**NRR**	A8b4
(5) Report of site visits	**NRR**	A8b5
(6) Summaries of public meetings (if applicable)	**NRR**	A8b6
(7) DEIS	**NRR**	A8b7

	(8) Comments on the DEIS from individuals; State, local, and Federal agencies; industry; and other organizations	**NRR**	A8b8
	(9) FEIS	NRR	A8b9
	(10) Environmental impact appraisal and negative declaration (when applicable)	**NRR**	A8b10
	c. Licensee reports during decommissioning and dismantling	**NRR/NRO/NMSS**	A8c
	9. Other documents relating to the licensing process for nuclear facilities		A9
S	a. Generic letters	**NRR/NRO/NMSS**	A9a
	b. Regulatory Issuances	**NRR/NRO/NMSS**	A9b
B.	Documents relating to licensed reactor operators		B
	1. List of reactor operator licensees (quarterly computer printout)	**NRR**	B1
	2. Operator and senior operator licensing examinations	**NRR**	B2
	3. Requalification examination reports	**NRR**	B3
	4. Notification and cancellation of operator licenses	**NRR**	B4
	5. Orders and modifications to revoke or suspend operator licenses	**NRR**	B5
	6. Operator evaluation reports	**NRR**	B6
	7. Meeting summaries and related correspondence	**NRR**	B7
	8. Fitness-for-duty reports	**NRR**	B8
	9. Facility-submitted operator licensing written examinations	**NRR**	B9

10. Operator licensing operating written examinations, as given (release to the public through the ADAMS Public Library after conduct of the examination)	**NRR**	B10
C. Documents relating to the issuance of licenses to use, process, and store byproduct material (10 CFR Parts 30 through 39). The documents are released to the public through the ADAMS Public Library after the license is issued or other licensing action is completed. (The documents are placed under the docket number for all licenses.)		C
1. Applications for licenses and for renewal or amendment of licenses	**NMSS/RGN**	C1
2. Licenses and amendments to licenses	**NMSS/RGN**	C2
3. Correspondence with licensees or prospective licensees regarding additional information	**NMSS/RGN**	C3
4. Internal memoranda regarding license applications	**NMSS/RGN**	C4
5. Enforcement letters and related correspondence	**NMSS/RGN**	C5
6. Licensee reports	**NMSS/RGN**	C6
7. Documents relating to NRC Inspection and Enforcement Program		C7
a. Inspection reports	**NRR/NRO/NMSS / RGN**	C7a
b. PN of event	**RGN**	C7b
c. Notice of violation/nonconformance (may include proposed imposition of civil penalty) (Release to the public through the ADAMS Public Library 5 working days after the enforcement action has been taken.)	**OE/RGN**	C7c

d. Licensee or vendor response to the notice of violation	**NRR/NRO/NMSS**	C7d
e. NRC acknowledgement of receipt of the licensee response to the notice of violation/nonconformance	**OE/RGN**	C7e
f. Orders	**NRR/NRO/NMSS / OE**	C7f
g. Licensee response to an order	**RGN**	C7f
h. Bulletins	**NRR/NRO/NMSS**	C7h
i. Licensee response to a bulletin	**RGN**	C7i
j. Information notices	**NRR/NRO/NMSS**	C7j
k. Notification of significant enforcement action (to be released to the public through the ADAMS Public Library after the enforcement action has been taken)	**OE**	C7k
l. Confirmatory action prepared	**NRR/NRO/NMSS**	C7l
m. Meeting notices and summaries	**NRR/NRO/NMSS / RGN**	C7m
D. Documents relating to the issuance of a license to possess and process uranium source material in uranium milling or production of uranium hexafluoride (10 CFR Part 40)		D
1. Review of the application		D1
a. Application and supporting documents	**NMSS**	D1a
b. Supplements to the application	**NMSS**	D1b
c. Correspondence from NRC to the applicant regarding the application and its supplements, including questions submitted for the applicant's response	**NMSS**	D1c

d. Correspondence from the applicant to NRC regarding the application and its supplements, including answers submitted by NRC for response	**NMSS**	D1d
e. Correspondence to and from State and local governments relating to the application (if applicable)	**NMSS**	D1e
f. Documents related to hearings to obtain a construction permit, including the construction permit. Documents involved in proceedings, including hearings before the ASLBP and the Commission review of board decisions		D1f
(1) Request for a hearing	**SECY**	D1f1
(2) Board notifications	**SECY**	D1f2
(3) Motions, petitions, interrogatories, answers, discovery requests, requests for admission, and requests to make a limited appearance	**SECY**	D1f3
(4) Briefs, testimony, and statement of the applicant, NRC staff, and other parties	**SECY**	D1f4
(5) Transcripts of hearings	**ASLBP**	D1f5
(6) Orders, opinions, and decisions of the boards and Commission, including those directing the issuance of a construction permit, an operating license, and amendments to the construction permit and the operating license	**SECY**	D1f6
(7) Other filings and documentation submitted by parties to the proceedings to the boards	**SECY**	D1f7
(8) License	**SECY**	D1f8
2. Review of the applicant's environmental report		D2
a. Environmental report and supporting documents	**NMSS**	D2a

b.	Supplements to the environmental report	**NMSS**	D2b
c.	Correspondence from NRC to the applicant regarding the environmental report, its supplements, and other supporting information, including questions sent to the applicant for response	**NMSS**	D2c
d.	Correspondence from the applicant to NRC regarding the environmental report, its supplements, and other supporting information, including answers to questions submitted by NRC	**NMSS**	D2d
e.	Report of site visits	**NMSS**	D2e
f.	Summaries of public meetings (if applicable)	**NMSS**	D2f
g.	DEIS	**NMSS**	D2g
h.	Comments on the DEIS from individuals; State, local, and Federal agencies; industry; and other organizations	**NMSS**	D2h
i.	FEIS	**NMSS**	D2i
j.	Environmental assessment and negative declaration (when applicable)	**NMSS**	D2j
3.	Review of proposed amendments to a license		D3
a.	Proposed statement	**NMSS**	D3a
b.	Correspondence from NRC to the licensee regarding the proposed amendment, including questions submitted for the applicant's response	**NMSS**	D3b

c. Correspondence from the licensee to NRC regarding the proposed amendment, including answers to questions submitted by NRC	**NMSS**	D3c
d. SER	**NMSS**	D3d
e. Amendment to a license	**NMSS**	D3e
4. Reports submitted by the licensee		D4
a. Environmental monitoring report for air quality and water quality required by 10 CFR 40.65	**NMSS**	D4a
b. Semiannual land use survey	**NMSS**	D4b
c. Financial security documents	**NMSS**	D4c
5. Documents relating to the NRC Inspection and Enforcement Program		D5
a. Inspection reports	**NMSS/RGN**	D5a
b. PN of event	**RGN**	D5b
c. Notice of violation/nonconformance (may include proposed imposition of civil penalty) (Release to the public through the ADAMS Public Library 5 working days after the enforcement action has been taken.)	**OE/NMSS/ RGN**	D5c
d. Licensee or vendor response to the notice of violation	**OE/NMSS/ RGN**	D5d
e. NRC acknowledgement of receipt of the licensee response to the notice of violation/nonconformance	**OE/NMSS/ RGN**	D5e
f. Orders	**NMSS/OE**	D5f
g. Licensee response to an order	**NMSS/RGN**	D5g
h. Bulletins	**NMSS**	D5h
i. Licensee response to a bulletin	**NMSS/RGN**	D5i

j. Information notices	**NMSS**	D5j
k. Notification of significant enforcement action (to be released to the public through the ADAMS Public Library after the enforcement action has been taken)	**OE**	D5k
l. Confirmatory action prepared	**NMSS**	D5k
m. Meeting notices and summaries	**NMSS/RGN**	D5m
E. Documents relating to the issuance of a license to possess source material involving natural and depleted uranium or thorium (10 CFR Part 40) and documents to possess and use or possess only special nuclear material, enriched uranium U-235, enriched uranium U-233, and plutonium (10 CFR Part 70). (The documents are placed under the docket number for all licensees.)		E
1. Review of the application		E1
a. Application and supporting documents	**NMSS**	E1a
b. Supplements to the application	**NMSS**	E1b
c. Correspondence from NRC to the applicant regarding the application and its supplements, including questions submitted for the applicant's response	**NMSS**	E1c
d. Correspondence from the applicant to NRC regarding the application and its supplements, including answers submitted by NRC for response	**NMSS**	E1d
e. Correspondence to and from State and local governments relating to the application (if applicable)	**NMSS**	E1e
f. Documents relating to safety evaluations	**NMSS**	E1f
2. Review of the applicant's environmental report		E2

a. Environmental report and supporting documents	**NMSS**	E2a
b. Supplements to the environmental report	**NMSS**	E2b
c. Correspondence from NRC to the applicant regarding the environmental reports, amendments, and other supporting information, including questions sent to the applicant for response	**NMSS**	E2c
d. Correspondence from the applicant to NRC regarding the environmental report, its supplements, and other supporting information, including answers to questions submitted by NRC	**NMSS**	E2d
e. Report of site visits	**NMSS**	E2e
f. Meeting announcements and summaries of public meetings (if applicable)	**NMSS**	E2f
g. DEIS and supplements	**NMSS**	E2g
h. Comments on the DEIS from individuals; State, local, and Federal agencies; industry; and other organizations	**NMSS/ADM**	E2h
i. FEIS and supplements	**NMSS**	E2i
j. Environmental assessment and finding of no significant impact (when applicable)	**NMSS**	E2j
3. Documents related to hearings to obtain a construction permit, including the construction permit. Documents involved in proceedings, including hearings before the ASLBP and the Commission review of board decisions		E3
a. Request for a hearing	**SECY**	E3a
b. Board notifications	**SECY**	E3b

c. Motions, petitions, interrogatories, answers, discovery requests, request for admission, and request to make a limited appearance	**SECY**	E3c
d. Briefs, testimony, and statements of the applicant, NRC staff, and other parties	**SECY**	E3d
e. Transcripts of hearings	**ASLBP**	E3e
f. Orders, opinions, and decisions of the boards and the Commission, including those directing the issuance of a construction permit, an operating license, and amendments to the construction permit and the operating license	**SECY**	E3f
g. Other filings and documentation submitted by parties to the proceedings of the boards	**SECY**	E3g
h. License	**NMSS**	E3h
4. Review of proposed amendments to a license		E4
a. Proposed amendment	**NMSS**	E4a
b. Correspondence from NRC to the licensee regarding the proposed amendment, including questions submitted for the applicant's response	**NMSS**	E4b
c. Correspondence from the licensee to NRC regarding the proposed amendment, including answers to questions submitted by NRC	**NMSS**	E4c
d. SER	**NMSS**	E4d
e. Amendment to a license	**NMSS**	E4e
5. Reports submitted by the licensee	**NMSS**	E5
6. Documents relating to the NRC Inspection and Enforcement Program		E6

a. Inspection reports	**NMSS/RGN**	E6a
b. PN of event	**RGN**	E6b
c. Notice of violation/nonconformance (may include proposed imposition of a civil penalty) (Release to the public through the ADAMS Public Library 5 working days after the enforcement action has been taken.)	**OE/NMSS/ RGN**	E6c
d. Licensee or vendor response to the notice of violation	**OE/NMSS/ RGN**	E6d
e. NRC acknowledgement of receipt of the licensee response to the notice of violation/nonconformance	**OE/NMSS/ RGN**	E6e
f. Orders	**NMSS/OE**	E6f
g. Licensee response to an order	**RGN**	E6g
h. Bulletins	**NMSS**	E6h
i. Licensee response to a bulletin	**RGN**	E6i
j. Information notices	**NMSS**	E6j
k. Notification of significant enforcement action (to be released to the public through the ADAMS Public Library after the enforcement action has been taken)	**OE**	E6k
l. Confirmatory action prepared	**NMSS**	E6l
m. Meeting notices and summaries	**NMSS/RGN**	E6m
F. Documents relating to the issuance of a license to receive and dispose of low-level radioactive waste (10 CFR Part 61); includes existing documents placed in the PDR under Docket 27. (Documents are placed under the docket number for all licensees.)		F
1. Review of the application		F1

a. Application and supporting documents	**FSME**	F1a
b. Supplements to the application	**FSME**	F1b
c. Correspondence from NRC to the applicant regarding the application and Its supplements, including questions submitted for the applicant's response	**FSME**	F1c
d. Correspondence from the applicant to NRC regarding the application and its supplements, including answers submitted by NRC for response	**FSME**	F1d
e. Correspondence to and from State and local governments relating to the application (if applicable)	**FSME**	F1e
f. Documents relating to safety evaluations	**FSME**	F1f
2. Review of the applicant's environmental report		F2
a. Environmental report and supporting documents	**FSME**	F2a
b.Supplements to the environmental report	**FSME**	F2b
c. Correspondence from NRC to the applicant regarding the environmental report, its supplements, and other supporting information, including questions sent to the applicant for response	**FSME**	F2c

d. Correspondence from the applicant to NRC regarding the environmental report, its supplements, and other supporting information, including answers to questions submitted by NRC	**FSME**	F2d
e. Report of site visits	**NMSS FSME**	F2e
f. Meeting notices and summaries of public meetings (if applicable)	**FSME**	F2f
g. DEIS and supplements	**FSME**	F2g
h. Comments on the DEIS from individuals; State, local, and Federal agencies; industry; and other organizations	**FSME**	F2h
i. FEIS and supplements	**FSME**	F2i
j. Environmental assessment and finding of no significant impact (when applicable)	**FSME**	F2j
3. Documents related to hearings to obtain a construction permit, including the construction permit. Documents involved in proceedings, including hearings before the ASLBP and the Commission review of board decisions.		F3
a. Request for a hearing	**SECY**	F3a
b. Board notifications	**SECY**	F3b
c. Motions, petitions, interrogatories, answers, discovery requests, requests for admission, and requests to make a limited appearance	**SECY**	F3c
d. Briefs, testimony, and statements of the applicant, NRC staff, and other parties	**SECY**	F3d

e. Transcripts of hearings	**ASLBP**	F3e
f. Orders, opinions, and decisions of the boards and the Commission, including those directing the issuance of a construction permit, an operating license, and amendments to the construction permit and the operating license	**SECY**	F3f
g. Other filings and documentation submitted by parties to the proceedings to the boards	**SECY**	F3g
h. License	**NMSS**	F3h
4. Review of proposed amendments to a license		F4
a. Proposed amendment	**NMSS**	F4a
b. Correspondence from NRC to the licensee regarding the proposed amendment, including questions submitted for the applicant's response	**NMSS**	F4b
c. Correspondence from the licensee to NRC regarding the proposed amendment, including answers to questions submitted by NRC	**NMSS**	F4c
d. Safety evaluations and related records	**NMSS**	F4d
e. Amendment to a license	**NMSS**	F4e
5. Reports submitted by the licensee	**NMSS**	F5
6. Documents relating to NRC Inspection and Enforcement Program		F6
a. Inspection reports	**NRR/NRO/NMSS / RGN**	F6a
b. PN of event	**RGN**	F6b

c. Notice of violation/nonconformance (may include proposed imposition of a civil penalty) (Release to the public through the ADAMS Public Library 5 working days after the enforcement action has been taken.)	**OE/RGN**	F6c
d. Licensee or vendor response to the notice of violation	**OE/RGN**	F6d
e. NRC acknowledgement of receipt of the licensee response to the notice of violation/nonconformance	**OE/RGN**	F6e
f. Orders	**NRR/NRO/NMSS / OE**	F6f
g. Licensee response to an order	**RGN**	F6g
h. Bulletins	**NRR/NRO/NMSS**	F6h
i. Licensee response to a bulletin	**RGN**	F6i
j. Information notices	**NRR/NRO/NMSS**	F6j
k. Notification of significant enforcement action (to be released to the public through the ADAMS Public Library after the enforcement action has been taken)	**OE**	F6k
l. Confirmatory action prepared	**NMSS**	F6l
m. Meeting notices and summaries	**NMSS**	F6m
7. Documents relating to other general waste management activities, and so forth (low-level waste [LLW] and uranium recovery)		F7
a.LLW land disposal licenses (Dockets 27 and 61), amendments, and related correspondence	**FSME**	F7a
b. Meeting notices and summaries	**NMSS**	F7b
c. Topical reports and related correspondence	**NMSS**	F7c

8. All correspondence related to the Department of Energy (DOE) Uranium Mill Tailings Remedial Action Program (UMTRAP) that is not of a proprietary nature, as designated in writing by DOE		F8
a. Correspondence between NRC and DOE related to UMTRAP	**NMSS**	F8a
b. DOE cooperative agreements	**NMSS**	F8b
G. Documents relating to the issuance of an approval of the design of a package for use in delivering licensed nuclear material to a carrier for transportation (10 CFR Part 71)		G
1. Review of the design application		G1
a. Application and supporting documents	**NMSS**	G1a
b. Supplements to the application	**NMSS**	G1b
c. Correspondence from NRC to the applicant regarding the application and its supplements, including questions submitted for the applicant's response	**NMSS**	G1c
d. Correspondence from the applicant to NRC regarding the application and its supplements, including answers submitted by NRC for response	**NMSS**	G1d
e. Correspondence to and from State and local governments relating to the application (if applicable)	**NMSS**	G1e
f. Certificate of compliance	**NMSS**	G1f
2. Review of the quality assurance program		G2
a. Application and supporting documents	**NMSS/FSME**	G2a
b. Supplements to the application	**NMSS/FSME**	G2b

c. Correspondence from NRC to the applicant regarding the application and its supplements, including questions submitted for the applicant's response	**NMSS/FSME**	G2c
d. Correspondence from the applicant to NRC regarding the application and its supplements, including answers submitted by NRC for response	**NMSS/FSME**	G2d
e. Correspondence to and from State and local governments relating to the application (if applicable)	**NMSS/FSME**	G2e
f. Quality assurance program approval	**NMSS/FSME**	G2f
3. Registration for use of an approved package	**NMSS/FSME**	G3
4. Documents relating to NRC Inspection and Enforcement Program		G4
a. Inspection reports	**NRR/NRO/NMSS / RGN**	G4a
b. PN of event	**RGN**	G4b
c. Notice of violation/nonconformance (may include proposed imposition of civil penalty) (released to the public through the ADAMS Public Library 5 working days after the enforcement action has been taken)	**OE/RGN**	G4c
d. Licensee or vendor response to the notice of violation	**OE/RGN**	G4d
e. NRC acknowledgement of receipt of the licensee response to the notice of violation/nonconformance	**OE/RGN**	G4e
f. Orders	**NRR/NRO/NMSS / OE**	G4f

g. Licensee (certificate holder, vendor, fabricator) response to an order	**RGN**	G4g
h. Bulletins	**NRR/NRO/NMSS**	G4h
i. Licensee (certificate holder, vendor, fabricator) response to a bulletin	**RGN**	G4i
j. Information notices	**NRR/NRO/NMSS**	G4j
k. Notification of significant enforcement action (to be released to the public through the ADAMS Public Library after the enforcement action has been taken)	**OE**	G4k
l. Confirmatory action prepared	**NRR/NRO/NMSS**	G4l
m. Meeting notices and summaries	**NRR/NRO/NMSS / RGN**	G4m
5. Licensee (certificate holder, vendor, fabricator) reports	**NRR/NRO/NMSS / RGN**	G5
H. Documents relating to the review of the application for issuance of a license to operate a spent fuel storage facility (10 CFR Part 72). (Documents are placed under the docket number for all licensees.)		H
1. Review of the safety analysis report and other technical information		H1
a. Application and supporting documents	**NMSS**	H1a
b. Supplements to the application	**NMSS**	H1b
c. Correspondence from NRC to the applicant regarding the application and its supplements, including questions submitted for the applicant's response	**NMSS**	H1c
d. Correspondence from the applicant to NRC regarding the application and its supplements, including answers submitted by NRC for application response	**NMSS**	H1d

e. Correspondence to and from State and local governments relating to the application (if applicable)	**NMSS**	H1e
f. SER	**NMSS**	H1f
g. License/certificate of compliance	**NMSS**	H1g
2. Review of the applicant's environmental report		H2
a. Environmental report and supporting documents	**NMSS**	H2a
b. Supplements to the environmental report	**NMSS**	H2b
c. Correspondence from NRC to the applicant regarding the environmental report, its supplements, and other supporting information, including questions sent to the applicant for response	**NMSS**	H2c
d. Correspondence from the applicant to NRC regarding the environmental report, its supplements, and other supporting information, including answers to questions submitted by NRC	**NMSS**	H2d
e. Report of site visits	**NMSS**	H2e
f. Meeting notices and summaries of public meetings (if applicable)	**NMSS**	H2f
g. DEIS and supplements	**NMSS**	H2g
h. Comments on the DEIS from individuals; State, local, and Federal agencies; industry; and other organizations	**NMSS**	H2h
i. FEIS and supplements	**NMSS**	H2i
j. Environmental assessment and finding of no significant impact (when applicable)	**NMSS**	H2j

3. Review of proposed amendments to a license/certificate of compliance		H3
a. Proposed amendment	**NMSS**	H3a
b. Correspondence from NRC to the licensee regarding the proposed amendment, including questions submitted for the applicant's response	**NMSS**	H3b
c. Correspondence from the licensee to NRC regarding the proposed amendment, including answers to questions submitted by NRC	**NMSS**	H3c
d. SER	**NMSS**	H3d
e. Amendment to a license/certificate of compliance	**NMSS**	H3e
4. Documents relating to four plans and amendments to emergency plans		H4
a. Correspondence from NRC to the applicant/licensee/certificate holder regarding the plan or amendment, including questions submitted for response	**NMSS**	H4a
b. Correspondence from the applicant/licensee/ certificate holder to NRC regarding the plan or amendment, including answers to questions submitted by NRC for response	**NMSS**	H4b
c. Correspondence to and from State and local governments relating to the plan or amendment	**NMSS**	H4c
d. Documents received from the Federal Emergency Management Agency (FEMA) that relate to a specific nuclear power plant or nuclear power plant site	**NMSS**	H4d
5. Documents relating to the review of the decommissioning plan		H5

a. Application and supporting documents	**NMSS**	H5a
b. Supplements to the application	**NMSS**	H5b
c. Correspondence from NRC to the applicant regarding the application and its supplements, including questions submitted for the applicant's response	**NMSS**	H5c
d. Correspondence from the applicant to NRC regarding the application and its supplements, including answers submitted by NRC for response	**NMSS**	H5d
e. Correspondence to and from State and local governments relating to the application (if applicable)	**NMSS**	H5e
f. Periodic reports submitted by the licensee/certificate holder	**NMSS**	H5f
6. Documents related to hearings to obtain a construction permit, including the construction permit. Documents involved in proceedings, including hearings before the ASLBP and the Commission review of board decisions		H6
a. Request for a hearing	**SECY**	H6a
b. Board notifications	**SECY**	H6b
c. Motions, petitions, interrogatories, answers, discovery requests, requests for admission, and requests to make a limited appearance	**SECY**	H6c
d. Briefs, testimony, and statements of the applicant, NRC staff, and other parties	**SECY**	H6d
e. Transcripts of hearings	**ASLBP**	H6e

f. Orders, opinions, and decisions of the boards and the Commission, including those directing the issuance of a construction permit, an operating license, and amendments to the construction permit and the operating license	**SECY**	H6f
g. Other filings and documentation submitted by parties to the proceedings of the boards	**SECY**	H6g
h. License	**NMSS**	H6h
7. Documents relating to the NRC Inspection and Enforcement Program		H7
a. Inspection reports	**NRR/NRO/NMSS / RGN**	H7a
b. PN of event	**RGN**	H7b
c. Notice of violation/nonconformance (may include proposed imposition of civil penalty)	**OE/RGN**	H7c
d. Licensee/certificate holder (vendor or fabricator) or vendor response to the notice of violation (Release to the public through the ADAMS Public Library 5 working days after the enforcement action has been taken.)	**OE/RGN**	H7d
e. NRC acknowledgement of receipt of the licensee/certificate holder response to the notice of violation/nonconformance	**OE/RGN**	H7e
f. Orders	**NRR/NRO/NMSS / OE**	H7f
g. Licensee/certificate holder response to an order	**RGN**	H7g
h. Bulletins	**NRR/NRO/NMSS**	H7h
i. Licensee/certificate holder response to a bulletin	**RGN**	H7i
j. Information notices	**NRR/NRO/NMSS**	H7j

OE	k. Notification of significant enforcement action (to be released to the public through the ADAMS Public Library after the enforcement action has been taken)	**OE**	H7k
	l. Confirmatory action prepared	**NRR/NRO/NMSS**	H7l
	m. Meeting notices and summaries	**NRR/NRO/NMSS / RGN**	H7m
I.	Documents relating to the approval of routes for the transport of spent fuel (filed under 10 CFR Part 71 but considered a 10 CFR Part 73 approval)		I
	1. Route approval letter to licensee with accompanying strip charts (only after 10 days of the last of a series of shipments in a shipping campaign)	**NMSS**	I1
J.	Documents relating to the prelicensing activities involving the high-level waste repository (10 CFR Parts 60 and 63)		J
	1. Technical high-level waste site/project-specific prelicensing documentation, including, but not limited to, the following:		J1
	a. Nuclear Regulatory Commission/Department of Energy (NRC/DOE) meeting minutes and trip reports related to public meetings, workshops, and site visits	**NMSS**	J1a
	b. State and Indian Tribe comments and correspondence	**NMSS**	J1b
	c. Technical positions and review plans	**NMSS**	J1c
	d. NRC/DOE memoranda of understanding and interagency agreements	**NMSS**	J1d
	e. DOE environmental assessments, both draft and final	**NMSS**	J1e

f. DOE site characterization plans, study plans, and site characterization program plans	**NMSS**	J1f
g. NRC site characterization analyses and comments on study plans	**NMSS**	J1g
2. DOE siting guidelines		J2
a. NRC comments sent to DOE on the guidelines	**NMSS**	J2a
b. Comments received by NRC on the guidelines	**NMSS**	J2b
c. Meeting minutes and trip reports related to the guidelines	**NMSS**	J2c
3. DOE mission plan and program plan		J3
a. NRC comments sent to DOE on the mission plan	**NMSS**	J3a
b. Comments received by NRC on the mission plan	**NMSS**	J3b
c. Meeting minutes and trip reports related to the mission plan	**NMSS**	J3c
4. DOE project decision schedule (PDS)		J4
a. NRC comments sent to DOE on the PDS	**NMSS**	J4a
b. Comments received by NRC on the PDS	**NMSS**	J4b
c. Meeting minutes and trip reports related to the PDS	**NMSS**	J4c
5. Environmental Protection Agency (EPA) high-level waste (HLW) standard		J5
a. NRC comments sent to EPA regarding proposed or final EPA HLW standard	**NMSS**	J5a
6. NRC HLW technical contractor documents		J6

a. Incoming and outgoing technical contractor correspondence and reports related to the HLW prelicensing program	**NMSS**	J6a
7. Generic HLW technical positions and review plans released for public comment	**NMSS**	J7
8. Other HLW documents between NRC and DOE or other Federal agencies, including but not limited to, the following:		J8
a. NRC comments on major Federal agency documents, such as the EPA HLW standard, the DOE Viability Assessment, Draft License Application, and Environmental Impact Statement	**NMSS**	J8a
b. NRC/DOE procedural agreements	**NMSS**	J8b
c. NRC/DOE communications related to the HLW prelicensing process	**NMSS**	J8c
K. Documents relating to the issuance of licenses to export or import nuclear materials or components for nuclear facilities (10 CFR Part 110)		K
1. Application for a license or proposed amendments to a license	**OIP**	K1
2. *Federal Register* notice of application (when required for major application)	**OIP**	K2
3. Correspondence from NRC to applicant/licensee regarding the application or proposed amendment, including questions submitted for response	**OIP**	K3
4. Correspondence from the applicant/licensee regarding the application or proposed amendment, including answers to questions submitted by NRC for response	**OIP**	K4
5. Correspondence from NRC to the Department of State for executive branch views or to DOE as an assurance letter	**OIP**	K5

6. Correspondence to NRC from the Department of State containing executive branch views or from DOE as an assurance letter	**OIP**	K6
7. Any correspondence from a member of the public, foreign governments, or international organizations regarding the application or proposed amendment	**OIP**	K7
8. Staff papers (SECY series) prepared for the Commission's review of an export or import application for a license or proposed amendment to a license (Release to the public through the ADAMS Public Library 3 days after receipt by the Commissioners.)	**SECY**	K8
9. Commission decision memorandum on issuance of an application for a license or proposed amendment to a license transmitted by the Office of the Secretary to the Executive Director for Operations	**SECY**	K9
10. Documents relating to proceedings before the ASLBP	**SECY**	K10
a. Request for a hearing	**SECY**	K10a
b. Board notifications	**SECY**	K10b
c. Motions, petitions, interrogatories, answers, discovery requests, requests for admission, and requests to make a limited appearance	**SECY**	K10c
d. Briefs, testimony, and statements of the applicant, NRC staff, and other parties	**SECY**	K10d
e. Transcripts of hearings	**ASLBP**	K10e

f. Orders, opinions, and decisions of the boards and the Commission, including those directing the issuance of a construction permit, the operating license, and amendments to the construction permit and the operating license	**SECY**	K10f
g. Other filings and documentation submitted by parties to the proceedings to the boards	**SECY**	K10g
11. License or amendment to a license	**OIP**	K11
L. Documents relating to the Agreement State Program, State liaison activities, and State and local government radiological emergency response planning (Memoranda of Understanding and Interagency Agreements with Federal Agencies [e.g., Department of Transportation (DOT), DOE, EPA, Occupational Safety and Health Administration (OSHA), FEMA, and Department of Defense (DOD])		L
1. Agreement State Program documents		L1
a. Agreements between NRC and States to license source, byproduct, and special nuclear material (pursuant to Sec. 274 of the Atomic Energy Act of 1954, as amended)	**FSME**	L1a
b. Letters to States reporting NRC's reviews of the Agreement State Program, State responses, and other documents related to NRC's reviews	**FSME**	L1b
c. "Licensing Statistics and Other Data" reports	**FSME**	L1c
2. State liaison activities		L2
a. Memoranda of understanding	**FSME**	L2a
b. Other State communications	**FSME**	L2b

3. State and local government radiological emergency response planning		L3
a. NUREG reports and supplements	**NRR**	L3a
b. Other reports and studies	**NRR**	L3b
c. Analyses of State radiological emergency response planning capabilities	**NRR**	L3c
M. Records relating to the activities of the Commissioners		M
1. Commission papers (If the document contains withholdable or sensitive material, a statement must be included on the front page and all applicable pages stating that the document must not be released.)		M1
a. All SECY papers including those subject to FOIA (a)(1) or (a)(2)" that do not contain withholdable (adjudicatory, enforcement or investigatory, attorney-client or legal work product, classified or proprietary, and personal privacy) or particularly sensitive material will normally be made publicly available 10 working days after receipt by the Commission For SECY papers subject to FOIA (a)(1) or (a)(2), redacted versions must be made publicly available.	**SECY**	M1a
b. Information papers that do not contain sensitive or withholdable information as noted above will be made publicly available 10 working days after issuance of the paper	**SECY**	M1b

2. Staff Requirements Memoranda (SRMs) and Commission voting records on the releasable SECY papers including those subject to FOIA (a)(1) or (a)(2)" (see item 1 above) will be released immediately after final Commission action. For SRMs and Commission voting records subject to FOIA(a)(1) or (a)(2), redacted versions must be made publicly available.	**SECY**	M2
3. Commission Action Memoranda (COMs) including those subject to FOIA (a)(1) or (a)(2)" that do not contain withholdable (adjudicatory, enforcement or investigatory, attorney-client or legal work product, classified or proprietary, and personal privacy) or particularly sensitive material will be released immediately after final Commission action For COMs subject to FOIA(a)(1) or (a)(2), redacted versions must be made publicly available.	**SECY**	M3
4. Documents relating to Commission meetings that must be disclosed under the Government in the Sunshine Act including those subject to FOIA (a)(1) or (a)(2)" between the words "(COMs)" and "that".	**SECY**	M4
a. *Federal Register* Sunshine Meeting Announcements	**SECY**	M4a
b. General Counsel's certification of closed Commission meetings	**SECY**	M4b
c. Full written explanations of closed Commission meetings, including Commissioner votes on closing of meeting	**SECY**	M4c
d. Transcripts of open Commission meetings	**SECY**	M4d
5. Staff requirements memorandum issued as a result of an open Commission meeting	**SECY**	M5

	6. Staff documents disclosed at open Commission meetings, such as meeting slides, background documents, and so forth	**SECY**	M6
	7. Documents, including vote sheets of individual Commissioners, released publicly at the Commissioner's direction	**SECY**	M7
	8. Correspondence to and from congressional committees having oversight responsibilities for NRC operations (to be released to the public through the ADAMS Public Library 5 working days after the NRC reply is sent to the committee)	**SECY**	M8
	9. Other correspondence sent from the Commission's Chairman to members of the Congress regarding public health, safety of nuclear facilities, safeguards of nuclear facilities and materials, or export/import of nuclear commodities, and license fee (to be released to the public through the ADAMS Public Library 5 working days after material is sent to a member of Congress)	**SECY**	M9
	10. Other executive correspondence and replies signed by the Chairman to be released to the public through the ADAMS Public Library 5 working days after material is sent to the recipient.	**SECY**	M10
	11. Commissioner speeches	**OPA**	M11
N.	Documents relating to the Commission Federal Advisory Committees (FACs)		N
1*	1. Open committee minutes and transcripts	1*	N1
1*	2. Open subcommittee and working group minutes and transcripts	1*	N2

1*	3. Committee reports and letters (Reports that contain classified, safeguards, or other sensitive unclassified information will not be released to the public through the ADAMS Public Library unless information is redacted from the reports.)	1*	N3
	a. ACRS reports and letters	**ACRS**	N3a
	b. ACNW reports and letters	**ACNW**	N3b
1*	4. Consultant reports (Reports that contain classified, safeguards, or other sensitive unclassified information will not be released to the public through the ADAMS Public Library unless information is redacted from the reports.)	1*	N4
	5. *Federal Register* notices relating to committee meetings	**SECY**	N5
1*	6. Meeting agenda	1*	N6
1*	7. Advisory committee charters	1*	N7
1*	8. Documents provided to committees	1*	N8
1[1]	9. Documents considered by committees at meetings	1**	N9
O.	Documents relating to the issuance of NRC regulations, regulatory guides, and generic requirements		O
	1. Documents relating to the issuance of NRC regulations	**SECY**	O1

1* Documents are generated from any of the following advisory committees: Advisory Committee on Reactor Safeguards (ACRS), Advisory Committee on Nuclear Waste (ACNW), Advisory Committee on the Medical Uses of Isotopes, Advisory Committee for the Decontamination of Three Mile Island (Unit 2), and Licensing Support System Advisory Review Panel.

1* Documents are generated from any of the following advisory committees: Advisory Committee on Reactor Safeguards (ACRS), Advisory Committee on Nuclear Waste (ACNW), Advisory Committee on the Medical Uses of Isotopes, Advisory Committee for the Decontamination of Three Mile Island (Unit 2), and Licensing Support System Advisory Review Panel.

a. Proposed rule and associated documents, including the regulatory analysis and the *Federal Register* notice of its issuance and availability	**SECY/ADM**	O1a
b. Comments on the proposed rule submitted by members of the public; State, local, and Federal agencies; industry; and other organizations	**SECY**	O1b
c. Requests for written interpretation of the proposed rule	**SECY**	O1c
d. Final rule as issued and associated documents, including the regulatory analysis and history, and *Federal Register* notice of its issuance	**SECY/ADM**	O1d
e. Title 10 of the *Code of Federal Regulations*	**ADM/ OIS**	O1e
2. Documents relating to petitions for rulemaking		O2
a. Petition to NRC to issue, amend, or rescind an NRC regulation	**SECY/ADM**	O2a
b. *Federal Register* notice of the filing of the petition	**SECY/ADM**	O2b
c. Correspondence with the petitioner regarding the status and content of the petition	**ADM**	O2c
d. Comments on the petition for rulemaking submitted by members of the public; State, local, and Federal agencies; industry; and other organizations	**SECY**	O2d
3. Documents relating to Policy Statements		O3

a. Proposed Policy Statement published for comment in the *Federal Register*	**SECY**	O3a
b. Comments on the proposed Policy Statement submitted by members of the public; State, local, and Federal agencies; industry; and other organizations on the proposed regulatory guide.	**SECY**	O3b
c. Policy Statement published in the *Federal Register*	**SECY**	O3c
4. Documents relating to issuance of regulatory guides		O4
a. Proposed regulatory guides and associated documents, including the regulatory analysis and the *Federal Register* notice of its issuance and availability (Release 1 working day after congressional committees have received printed copies.)	**RES/NMSS**	O4a
b. Comments on the proposed guide submitted by members of the public; State, local, and Federal agencies; industry; and other organizations on the proposed regulatory guide.	**RES/NMSS**	O4b
c. Summaries of public meetings held by NRC regarding the proposed regulatory guide	**RES/NMSS**	O4c
d. Regulatory guide (as issued) (Release 1 working day after congressional committees have received printed copies.)	**RES/NMSS**	O4d
5. Documents relating to the activities of the Committee To Review Generic Requirements		O5

a. Meeting notice transmittal memorandum without attached proposed generic requirements (attached proposed generic requirements are released to the public through the ADAMS Public Library after NRC has considered the proposed requirements in a public forum or has decided the matter addressed in the proposed requirements)	**CRGR**	O5a
b. Meeting minutes transmittal memorandum without attached minutes (attached meeting minutes released to the public through the ADAMS Public Library after NRC has decided the matter addressed in the minutes)	**CRGR**	O5b
P. NRC solicitation and contract award documents and contractor-developed reports		P
1. Documents relating to the award of a contract		P1
a. Solicitation documents (requests for proposals) (are maintained in the PDR until solicitation closing date)	**ADM**	P1a
b. Contract and contract modifications	**ADM**	P1b
2. Documents received under NRC research and technical assistance contracts or interagency agreements		P2
a. Final contractor reports published in the NUREG series	**RES/NMSS**	P2a
b. Research information letters	**RES/NMSS**	P2b
Q. Documents relating to vendor activities		Q
1. Vendor quality assurance program		Q1
a. Inspection reports by NRC	**NRR/NRO/NMSS**	Q1a
b. Notices of deviation	**NRR/NRO/NMSS**	Q1b

c. Correspondence with the vendor associated with inspection findings, including corrective actions to be taken by the vendor	**NRR/NRO/NMSS**	Q1c
2. Documents relating to vendor topical reports		Q2
a. Topical reports submitted by vendors	**NRR/NRO/NMSS**	Q2a
b. Revisions and modifications to topical reports	**NRR/NRO/NMSS**	Q2b
c. Correspondence from NRC to vendors regarding topical reports, including questions submitted by NRC for response	**NRR/NRO/NMSS**	Q2c
d. Correspondence from vendors to NRC regarding topical reports, including answers to questions submitted by NRC for response	**NRR/NRO/NMSS**	Q2d
e. Meeting agenda, summaries, and minutes of meeting regarding the content of topical reports	**NRR/NRO/NMSS**	Q2e
R. Freedom of Information Act documents		R
1. Freedom of Information Act requests, appeals, and responses, and records disclosed in response to Freedom of Information Act requests relating to public health, safety, and safeguards of nuclear facilities and material (Release to the public 5 days after requester is sent response.)	**OIS**	R1
2. Freedom of Information Act Annual Report	**OIS**	R2
S. Information Quality documents		S
1. Information Quality Requests	**OIS**	S1
2. NRC responses to Information Quality Requests	**OIS**	S2
3. Information Quality Annual Report	**OIS**	S3

T. NRC reports, publications, and directives		T
1. NRC administrative documents		T1
a. NRC management directives and handbooks	**ADM**	T1a
b. "NRC Staff Practice and Procedure Digest" (NUREG-0386)	**OGC**	T1b
c. NRC organizational charts	**HR**	T1c
d. Press releases	**OPA**	T1d
e. Plant status reports	**NRR**	T1e
f. Inspection manual	**NRR**	T1f
g. Enforcement manual	**OE**	T1g
h. Roster of utilities	**NRR**	T1h
i. Weekly Information Report (version released for public dissemination)	**EDO**	T1i
j. Media Monitor (only available at the PDR)	**OIS**	T1j
2. Published rules, regulations, orders, branch technical positions, and regulatory guides		T2
a. NRC Rules and Regulations	**ADM**	T2a
b. "NRC Issuances" (NUREG-0750 series)	**OIS**	T2b
c. Branch technical positions	**ADM**	T2c
d. NRC regulatory guides (Release 1 working day after congressional committees have received printed copies.)	**RES/ADM**	T2d
3. Other NRC final reports (NUREG reports)		T3
a. Draft reports on which public comments are solicited	**OIS**	T3a

b. Comments on draft reports that are submitted by members of the public, by State, local and Federal agencies, by industry, and by other organizations	**OIS**	T3b
c. Final published reports	**OIS**	T3c
4. Other NRC Reports to Congress		T4
a. "Report to Congress on Abnormal Occurrences" (NUREG-0090 series)	**RES**	T4a
b. Annual Report on Administration of Government in the Sunshine Act	**SECY**	T4b
5. Indexes and Lists		T5
a. ACRS index through 10/92 (only available at the PDR)	**ACRS**	T5a
b. Lists of Civil Penalties (only available at the PDR)	**OE**	T5b
c. Lists of General Licensees (only available at the PDR)	**NMSS**	T5c
d. List of Docket 30, 40, and 70 Licensees (only available at the PDR)	**NMSS**	T5d
e. List of Operators (only available at the PDR)	**NRR**	T5e
U. Correspondence between NRC and the applicant or licensee regarding license fees (to be placed in the docket file pertaining to the relevant application or license)	**CFO**	U
V. Documents relating to 10 CFR 2.206 petitions		V
S 1. The 2.206 petition submitted to NRC under 10 CFR 2.206	**NRR/NRO/NMSS**	V1
SECY 2. NRC responses to 2.206 petitions	**SECY**	V2
W. Budget-related documents		W

1. NRC Budget (Release to the public after the President has submitted the budget to Congress.)	**CFO**	W1
2. Privacy Impact Assessments Accompanying Budget Exhibit 300 (Release to the public after the President has submitted the budget to Congress.)	**OIS**	W2

NRC Information Not Routinely Released to the Public

The information listed below is not routinely released to the public. (See a separate document entitled NRC Documents Routinely Released to the Public found at http://www.nrc.gov/reading-rm/adams.html for the types of information the NRC staff routinely makes available to the public.)

A. Classified Information
1. Records containing classified information withheld in the interest of national security or foreign relations, pursuant to Executive Order 12958, "Classified National Security Information."
2. Records prohibited from public disclosure under Sections 141 through 148 of the Atomic Energy Act of 1954, as amended.
B. Safeguards Information
Records containing unclassified Safeguards Information that are protected from public disclosure by Section 147 of the Atomic Energy Act, as amended.
C. Sensitive Unclassified Non-Safeguards Information (SUNSI)
1. Allegation Information
Allegation information that would reveal the identity of an alleger.
2. Investigation Information
(a) Records relating to investigations or inquiries by the Office of Investigations.
(b) Records relating to investigations or inquiries by the Office of the Inspector General.
3. Security-Related Information

(a)	10 CFR 2.390(d)(1) Information Correspondence and reports to or from NRC that contain information or records concerning a licensee's or an applicant's physical protection or material control and accounting program for special nuclear material not otherwise designated as Safeguards Information (10 CFR 73.21) or classified as National Security Information or Restricted Data pursuant to 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."
(b)	Sensitive Homeland Security Information protected from public disclosure by Section 892 of the Homeland Security Act of 2002.
(c)	Voluntarily provided critical infrastructure information protected from public disclosure by Section 204 of the Homeland Security Act of 2002.
(d)	Other information that could be useful, or could reasonably be expected to be useful, to a terrorist in a potential attack. (Follow SUNSI Guidance at http://www.internal.nrc.gov/NRC/ Guidance/.)
4.	Proprietary Information
(a)	Trade secrets or commercial or financial information obtained from a person and privileged or confidential.
(b)	Information designated "INPO PRIVATE" submitted by the Institute of Nuclear Power Operations (INPO).
(c)	Records permitted to be withheld from disclosure under provisions of the Federal Acquisition Regulation, including source evaluation proprietary information.
(d)	10 CFR 2.390(d)(2) Information Information submitted in confidence to the Commission by a foreign government not covered under Item 5 below.

5. Privacy Act information and other personal information Records pertaining to individuals that are protected from public disclosure by the Privacy Act of 1974 and other personnel, financial, medical, and personal privacy information that would be exempt from disclosure if requested under the Freedom of Information Act because disclosure would constitute a clearly unwarranted invasion of personal privacy.
6. Federal, State, and foreign government and International Agency Information—Controlled Information
(a) Information marked "NOFORN"
(b) Information marked "Not For Public Disclosure Under Terms of the Joint Convention on the Safety of Spent Fuel and on the Safety of Radioactive Management"
(c) Information marked "Law Enforcement Sensitive" (Federal and State law enforcement agencies)
(d) Department of Defense (DOD) information marked "For Official Use Only" (FOUO)
(e) Department of Energy (DOE) information marked for "Official Use Only" (OUO)
(f) DOE information marked Unclassified Controlled Nuclear Information (UCNI)
(g) DOE information marked "Naval Nuclear Propulsion Information" (NNPI)
(h) Department of State information marked "Sensitive but Unclassified" (SBU)
(i) Government-controlled information
(j) Foreign government controlled information
(k) State agency controlled information
7. Sensitive Internal Information
(a) Drafts and predecisional information Drafts and other predecisional interagency or intragency memoranda or letters where the information has not been released in final form that would be exempt from public disclosure under 10 CFR Part 9, "Public Records," or is subject to the provisions of Part II of this handbook. Note: Predecisional information refers to advice, opinions, and recommendations considered as part of the agency's deliberative process before a final decision is made.

(b)	Records covered by the lawyer-client privilege
(c)	Legal work products
(d)	Predecisional enforcement information
(e)	Drafts or other documents prepared in adjudicatory proceedings involving the deliberative process privilege of Atomic Safety and Licensing Board members that protects the judicial decisionmaking process from scrutiny outside the appellate process [includes adjudicatory records marked "Sensitive - Not for Distribution (Except to Commission Adjudicatory Employees in accordance with 10 CFR 2.248)."]
(f)	Records concerning in-camera licensing proceedings
(g)	Records considered during a closed meeting under the Government in the Sunshine Act
(h)	Financial information relating to the administration of NRC contractors
(i)	Records relating to the formulation of the NRC budget, including the Five-Year Plan, and those relating to proposed budgetary levels for specific projects
(j)	Memoranda to or from the Commissioners, their staffs, and offices reporting directly to the Commission, except as indicated in Section M of the table in Exhibit 1 of this handbook.
(k)	Other correspondence with other Federal agencies, except for that required to be disclosed in licensing or rulemaking proceedings, including— (1) Correspondence received from other Federal agencies not covered under Section C.6 of this part. (2) Correspondence originated by NRC that deals with the deliberative process of another agency
(l)	Other records sent to or from foreign sources other than those submitted in confidence by foreign governments covered by Section C.4.d of this part or foreign government controlled information covered by Section C.6 of this part, including those whose public disclosure is prohibited in agreements, except those records that deal with export-import licensing
(m)	Any other information not included above submitted to the Commission marked "sensitive"

D. **Routine Administrative Records**
Routine administrative records (e.g., routing slips; ADAMS submission forms; internal meeting information; requests between staff for information; internal requests for services; internal formal notices, such as network announcements and bulletins; and office, division, or branch notification of events, due dates, assignments; etc.) because of insufficient public interest and because their release would constitute an unwarranted administrative burden.

NRC Policy and Guidance Regarding Sensitive Information

NUREG/BR-0168, "Policy for Processing Unclassified Safeguards Information (SGI) on NRC Computers"	Describes policy for processing unclassified Safeguards Information (SGI) on NRC computers.
Management Directive (MD) 3.1, "Freedom of Information Act" (FOIA)	Defines responsibilities/authorities for processing FOIA requests and informs staff of the types of records that can be released or are exempt (FOIA exemptions included).
MD 3.2, "Privacy Act"	Ensures lawful use of identifiable personal information.
MD 3.4, "Release of Information to the Public"	Provides policy guidance on the public release of information.
MD 3.7, "NUREG-Series Publications"	Ensures that sensitive unclassified information is not compromised by NRC release or publication of the information.
MD 3.9, "NRC Staff and Contractor Speeches, Papers, and Journal Articles on Regulatory and Technical Subjects"	Ensures that sensitive unclassified information is not compromised by NRC release or publication of the information.
MD 3.11, "Conferences and Conference Proceedings"	Ensures that sensitive unclassified information is not released at public conferences or in publicly released conference proceedings.
MD 3.12, "Handling and Disposition of Foreign Documents and Translations"	Assigns responsibilities and establishes procedures for handling of unclassified, sensitive unclassified, and classified foreign documents and their translations.
MD 3.23, "Mail Management"	Ensures that classified and unclassified sensitive information is not compromised by handling, marking, preparing, and transmitting such information.

MD 3.50, "Document Management"	Includes information on NUDOCS and ADAMS and guidelines protecting proprietary and copyrighted information.
MD 3.53, "NRC Records Management Program"	Fosters effective and efficient filing and records management practices, including the protection of sensitive unclassified information.
MD 7.4, "Reporting Suspected Wrongdoing and Processing [Office of the Inspector General] OIG Referrals"	Describes NRC management responsibilities in handling OIG investigative referrals and reports.
MD 8.8, "Management of Allegations"	Provides guidance for the allegations program, including the protection of allegers' identities.
MD 8.9, "Accident Investigation"	Specifies that the Director of the Accident Review Group is charged with preparing and reviewing all data for classified or sensitive unclassified information and distributing the investigation report and related documents.
MD 10.122, "Employee Assistance and Wellness Services Program" (Manual Chapter 4161)	Addresses the confidentiality of health and medical records.
MD 10.159, "The NRC Differing Professional Opinions Program"	Includes guidance for determining which DP/DPO documents or portions of documents should or should not be released to the public.
MD 11.1, "NRC Acquisition of Supplies and Services"	Includes guidance for ensuring that, when necessary, contractors are approved for access to sensitive unclassified information.
MD 12, "Glossary"	Defines sensitive information.
MD 12.1, "NRC Facility Security Program"	Ensures that classified and sensitive unclassified information is protected from unauthorized disclosure.

MD 12.3, "NRC Personnel Security Program"	Provides effective controls to further protect classified and sensitive unclassified information.
MD 12.4, "NRC Telecommunications Systems Security Program"	Safeguards classified or sensitive unclassified information communicated over telecommunications systems (e.g., telephones, facsimiles, networks).
MD 12.5, "NRC Automated Information Security Program"	Safeguards AIS facilities and classified Safeguards Information (SGI) and sensitive unclassified information that is processed, stored, or produced on AISs.
MD 12.6, "NRC Sensitive Unclassified Information Security Program"	Includes guidance concerning required markings on proprietary and other documents.
Memorandum: "FOIA Disclosure Policy," Office of the Executive Director for Operations, December 17, 1993	Advises that "foreseeable harm" must be shown when withholding information from release (per Department of Justice and Presidential FOIA guidance.)
NRC Enforcement Manual	Includes guidance on the proper handling and marking of predecisional enforcement information.
NRC Inspection Manual	Covers draft inspection reports, FOIA requests, and PDR releases.
NRC Yellow Announcement 21, "Staff Internet Use," March 19, 1997	Provides interim guidance concerning the use of Internet and sensitive information.
Operating Reactor Project Manager's Handbook	Includes guidance on how project managers should handle and process sensitive information and FOIA requests and allegations.
Commission Policy Statement on Protecting Identity of Allegers and Confidential Sources	Provides the distinction between allegers and confidential sources and how the agency "protects" these two groups.
Code of Federal Regulations, Title 10, "Energy"	Provides guidance on public inspections, exemptions, requests for witholding official records, and public records provisions.

NUREG/BR-0027, "NRC Security: Your Responsibilities"	Provides general information regarding sensitive unclassified information at NRC.
Staff Instructions: "Personal Information Withheld From Third Parties" http://www.internal.nrc.gov/OIS/foia/ML040430629.pdf	Describes personal information normally not released to third parties.
Staff Instructions: "How to Respond to an Initial FOIA Request" http://www.internal.nrc.gov/OIS/foia/ML031890712.pdf	Describes steps and considerations in processing an initial Freedom of Information Act (FOIA) request.
NUREG-0794, "Protection of Unclassified Safeguards Information"	Assists licensees and other persons who possess Safeguards Information in establishing an information protection system that satisfies the requirements of 10 CFR 73.21.

March 20, 2006

MEMORANDUM TO: Janice Dunn Lee, Director
Office of International Programs

THRU: Elizabeth Doroshuk, Section Chief ***/RA by Jack Ramsey/***
International Cooperation and Assistance
Office of International Programs

FROM: Jeffrey Jacobson, Senior International Relations Officer ***/RA/***
Office of International Programs

SUBJECT: FOREIGN TRAVEL TRIP REPORT

Attached is the trip report for my travel to Helsinki, Finland, during the period January 29 through February 1, 2006, and to Paris, France, during the period February 1 through 4, 2006. The purpose of the trip was to begin preliminary discussions with the NRC's Finnish and French regulatory counterparts regarding potential cooperation opportunities associated with the regulatory design reviews of the AREVA EPR reactor, as part of the NRC's Multinational Design Approval Program (MDAP).

Attachment: Trip Report

cc w/attachment: C. Harris, NSIR
J. Williams, NRR
G. Holahan, NRR
W. Dean, OEDO
M. Cullingford, NRR
P. Kang, RES
T. Sherr, NMSS
D. Reddick, OGC

March 20, 2006

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OFFICE	OIP	OIP
NAME	JJacobson*	EDoroshuk*
DATE	3/16/06	3/20/06

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TRIP REPORT

TRIP TO HELSINKI, FINLAND, JANUARY 29 - FEBRUARY 1, 2006 AND

TO PARIS, FRANCE, FEBRUARY 1 -4, 2006

Subject:: Trip Report for Travel to Helsinki, Finland, and to Paris, France.

Dates of Travel and Countries/Organizations Visited: January 29 - February 1, 2006: Finland, STUK/U.S. Embassy. February 1 - 4, 2006: France, ASN/IRSN.

Travelers Jeffrey Jacobson, OIP
Joseph Williams, NRR

Sensitivity: Sensitive, limited to NRC.

Background/Purpose: The purpose of this trip was to begin discussions with the NRC's Finnish and French regulatory counterparts regarding potential cooperation opportunities associated with the regulatory design reviews of the AREVA EPR reactor, as part of Stage 1 of the NRC's Multinational Design Approval Program (MDAP). The EPR reactor is currently under construction in Finland and has been proposed for construction in France. AREVA has also indicated its plans to submit the EPR reactor design to the NRC in late 2007 for a U.S. design certification. Constellation Energy has indicated plans to build four or more EPR units in the U.S.

The main objectives of the trip were to:

(1) obtain insights regarding the Finnish and French licensing processes as applied to the EPR reactor including schedules and outputs;

(2) obtain preliminary information regarding the breadth and depth of French and Finnish regulatory design reviews of the EPR;

(3) provide an overview of the MDAP and the U.S. licensing process to the French and Finnish regulators; and

(4) discuss logistical issues relative to the implementation of Stage 1 of the MDAP.

Abstract: Summary of Pertinent Points/Issues

On January 31, 2006, NRC staff met with the Finnish radiation safety authority (STUK) at their offices in Helsinki, Finland. The meeting began with a presentation (attached) from the NRC on the MDAP, focusing on the Stage 1 application to the EPR reactor. STUK then provided a

general overview of their licensing process as applied to the EPR, followed by more detailed discussions regarding specific portions of the their ongoing design review. Specific topics covered included the development of overall safety goals and requirements for protection against severe accidents, protection against external threats (security), system design, and fire protection. Of particular interest was STUK's development of safety goals using a risk-informed approach that appears to have effectively integrated both risk based and deterministic criteria.

The NRC staff concluded that STUK's reactor licensing process is somewhat analogous to the NRC's previous Part 50 approach. The breadth and depth of STUK's completed and planned review of the reactor design appears, at least initially, to be comparable to that of an NRC effort. STUK has also incorporated the expertise of a number of external organizations into their review process. Based on STUK's planned schedule for completing its design reviews of the EPR, much of their work should be available to the NRC to use during the staff's planned design certification review.

On February 1, 2006, the NRC staff provided Nick Killenberger of the U.S. Embassy with a brief overview of the MDAP program and discussed the results of the previous day's meeting with STUK. The staff also discussed possible future interactions and mentioned a pending Commissioner visit to Finland later this year. Mr. Killenberger indicated that the embassy would welcome such a visit and would be happy to assist and participate in a visit to the Olkiluoto site.

On February 3, 2006, NRC staff met in Paris, France with representatives of the French nuclear safety authority (ASN) and the French radio-protection research institute (IRSN). The French provided an overview of their licensing process as being applied to the EPR, followed by presentations by the NRC staff on the MDAP and the U.S. reactor licensing process. Overall, the French approach to licensing the EPR appears to be much more collaborative in nature than the U.S. process, involving early discussions between the regulator and the reactor designer regarding the acceptability of aspects of the proposed design. It also appears that the French approach to licensing is much less prescriptive in nature. Rather than a detailed template analogous to the NRC's Standard Review Plan, the topical areas receiving an in-depth review in France are decided primarily by the IRSN and the French ACRS equivalent on an ad-hoc basis.
ASN plans to receive a Preliminary Safety Analysis Report (PSAR) from AREVA in May of 2006, after which detailed design reviews will follow. Operation for the first EPR reactor, currently being planned for the site in Flamanville is scheduled for 2012. During the meeting, ASN indicated their desire for future discussions with the NRC on: safety goals for new reactors; personnel exchanges; and the NRC's construction inspection program.

Overall, based upon the preliminary information gathered during this trip, it appears that a meaningful opportunity exists to leverage the technical work of the Finnish and French regulators in the NRC's review of the EPR design, both from a safety and an efficiency perspective. The level of cooperation achievable will depend in large part on the relative standardization of the U.S., Finnish, and French EPRs, as well as on the actual content of the AREVA design certification application to be submitted to the NRC.

Discussion:

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Helsinki, Finland

On January 31, 2006, NRC staff met with the Finnish radiation safety authority (STUK) at their offices in Helsinki, Finland. The meeting began with a presentation (attached) from the NRC on the MDAP, focusing on the Stage 1 application to the EPR reactor. As part of its presentation, the staff explained that Stage 1 of the MDAP was a first step towards developing programs to capitalize on new opportunities for cooperation between our two countries in the nuclear regulatory area. STUK then provided a general overview of their licensing process as applied to the EPR, followed by more detailed discussions regarding specific portions of the their design review. Specific topics covered included the development of overall safety goals and requirements for protection against severe accidents, for protection against external threats (security), for system design, and for fire protection.

Of particular interest was STUK's development of safety goals using a risk-informed approach that appears to have effectively integrated both risk based and deterministic criteria. STUK indicated that the safety goals developed for the EPR reactor were specifically design to enhance the safety of the reactor by incorporating design features to prevent certain initiating events, by improving mitigation features, and by incorporating increased design safety margins. Also of interest is the work that STUK has done with regard to developing regulatory criteria associated with "break preclusion" of the main coolant piping, including their requirements for pipe whip restraints and the treatment of leak-before-break into the reactor's design basis. STUK has also conducted extensive reviews of the EPR's probablistic safety assessment (PSA) which was used by AREVA as a design aid, and by STUK as a means of measuring the resultant safety of the completed design.

Based upon the discussions held during this visit, it appears that STUK's reactor licensing process is somewhat analogous to the NRC's previous Part 50 approach. The breadth and depth of STUK's completed and planned review of the reactor design also appears to be comparable to that of an NRC effort. Of interest is STUK's use of the same individuals to do both construction inspection and design review activities and their extensive vendor oversight activities. (b)(4) (b)(4) STUK has also incorporated the expertise of a number of external organizations into their review process and has been working with their French counterparts ASN, albeit on a somewhat less formal basis than what is envisioned for the MDAP. Considering STUK's planned schedule for completing its design reviews of the EPR, much of their work should be available to the NRC to use during our planned design certification review. It is also worth noting that most, if not all, of the technical documents associated with the Finnish EPR are in English.

The NRC staff also discussed in what ways the NRC could reciprocate in facilitating the ongoing EPR review in Finland. STUK indicated the potential for selected NRC staff to come to Finland to become familiar with the STUK reviews and possibly participate in ongoing review activities. It is likely that the resultant regulatory products and knowledge gained through this work could also be used to facilitate a U.S. EPR review. Such cooperation would likely negate the necessity for U.S. payments to STUK, as had been mentioned in previous correspondence, although the option was left open to pay STUK for certain extended personnel exchanges, if deemed beneficial to the project. Among the initial areas where STUK expressed a desire to interface with NRC staff were security issues associated with aircraft and other potential threats

and severe accident research. STUK also indicated the potential for the NRC to provide assistance on other regulatory matters, not specifically tied to the EPR review.

Following the meetings at STUK, on February 1, 2006, the NRC staff provided Nick Killenberger of the U.S. Embassy with a brief overview of the MDAP program and the results of the previous days discussions. The staff also discussed possible future interactions and mentioned a pending Commissioner visit to Finland later this year. Mr. Killenberger indicated that the embassy would welcome such a visit and would be happy to assist and participate in a visit to the Olkiluoto site.

Paris, France

On February 3, 2006, NRC staff met in Paris, France with representatives of the French nuclear safety authority (ASN) and the French radio-protection research institute (IRSN). The French provided an overview of their licensing process as being applied to the EPR, followed by presentations by the NRC staff on the MDAP and the U.S. reactor licensing process. The French explained that the EPR design emanated from a multi-year collaborative French/German effort to develop safety guidelines for the next generation of reactors. This collaborative effort resulted in the issuance of a document in October 2000, entitled, "Technical Guidelines for the Design and Construction of the next Generation of Pressurized Water Reactors." Overall, the the French approach to licensing the EPR appears to be much more collaborative in nature than the U.S. process, involving early discussions between the regulator and the reactor designer regarding the acceptability of aspects of the proposed design. It also appears that the French approach to licensing is less prescriptive in nature. Rather than a detailed template analogous to the NRC's Standard Review Plan, the topical areas receiving an in-depth review in France are decided primarily by the IRSN and the French ACRS equivalent.

Many topical reviews of the EPR have already been completed and are available in English. ASN indicated that they would make these topical reports available for NRC review as part of the MDAP. ASN plans to receive a PSAR from AREVA in May of 2006, after which detailed design reviews will follow. These reviews would also be made available to the NRC staff. Operation for the first EPR reactor, currently being planned for the site in Flamanville is 2012. ASN indicated their desire for future discussions on the topics of safety goals for new reactors, personnel exchanges, and the NRC's construction inspection program. ASN also indicated the desire to consider personnel exchanges involving technical experts, as well as exchanges of more general project management staff. It is believed that such personnel exchanges would facilitate the future exchanges of technical information.

During the meeting, a discussion was also held concerning France's possible participation in Stage 2 of the MDAP. Originally, France had been hesitant to endorse Stage 2 of the MDAP, due to their view that the NRC would use the MDAP to try and impose the U.S. way of licensing on all participating parties. After explaining in detail the current vision of Stage 2 of the MDAP, as described in SECY -06-0029, the ASN representatives stated they would likely be more supportive of the Stage 2 effort and indicated that they would reconsider their willingness to participate in the program. Subsequent discussions with ASN representatives indicate they are now supportive of the MDAP Stage 2 initiative.

Preliminary Conclusions Regarding Cooperation Opportunities With French and Finnish Regulators

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Based upon the preliminary information obtained during this visit, it appears that a meaningful opportunity exists to leverage the planned and completed technical work of STUK and ASN into the NRC's EPR design review, both from a safety and an efficiency perspective, as part of the MDAP Stage 1 initiative. The ability to utilize the work of ASN may be more challenging than that with STUK, primarily due to differences in regulatory philosophies and the relative schedules of the planned ASN and NRC reviews. With both STUK and ASN, the degree to which the foreign regulator work products could ultimately be utilized by the NRC will depend in large part on the relative standardization of the U.S., French, and Finnish EPR designs, as well as on the actual content of the AREVA design certification application to be submitted to the NRC.

Pending Actions/Planned Next Steps for NRC:

- NRC staff visit to AREVA (Lynchburg) to discuss relative standardization of EPR and other topics
- Receipt from STUK of a prioritized list of ongoing technical reviews where NRC support would be beneficial
- Development of a Stage 1 cooperation matrix that includes each technical review area, references to relevant regulator technical reviews (planned and completed), review schedules, and desired cooperation opportunities
- Planning for trilateral meeting to discuss Stage 1 matrix and additional logistics

Points for Commission Consideration/Items of Interest:

No additional items at this time.

List of Contacts

STUK

Jukka Laaksonen, Director General

Keijo Vlatonen, Head, Reactor and Safety Systems

Lasse Reiman, Director, Nuclear Reactor Regulation

Matti Ojanen, Section Head, Mechanical Engineering
Ari Julin, Senior Adviser, Risk Assessment
Petteri Tiippana, Head, Plant Projects
Rauli Keskinen, Senior Adviser, Mechanical Engineering
Juhani Hyvarinen, Head, Power Plant Technology

U.S. Embassy - Helsinki
Nick Killenberger, Economic Section
Mikael Cleverley, Second Secretary

ASN
Olivier Gupta, Head, Sub-directorate for Power Reactors
Olivier Deschildre, Project Manager, Sub-directorate for Power Reactors
Pierre Charpentier, Senior Executive, Sub-directorate for Power Reactors

IRSN
Jean-Michel Evrard, EPR Project Manager, Division of Reactor Safety

NRC INTERNATIONAL TRAVEL TRIP REPORT

Traveler, Office, Division, Phone Number:
Jack Ramsey, Senior Level Advisor, Office of International Programs (OIP), 301-415-2744
Jennifer Schwartzman, International Relations Officer, OIP, 301-415-2317
Tammy Way, Deputy Project Manager for Power Reactors (International Regulatory Development Partnership [IRDP]), Advanced Systems Technology and Management (AdSTM)

Subject:
Travel to Brussels, Belgium to participate in the Seventh Steering Committee Meeting and Fifth Support Meeting of the International Atomic Energy Agency (IAEA) Regulatory Cooperation Forum (RCF).

Dates of Travel and Countries/Organizations Visited:
Dates of Travel: May 17-22, 2015
May 18: RCF Steering Committee Meeting
May 19-21: RCF Support Meeting

Desired Outcomes:
To provide a presentation and related insights about U.S. Nuclear Regulatory Commission (NRC) assistance program activities in countries seeking to establish nuclear power programs; hear from other provider countries about their recent assistance activities; receive status updates from the four RCF recipient countries (Belarus, Jordan, Poland, and Vietnam) about progress in their nuclear power program development; and discuss methods to enhance coordination among provider countries to avoid duplication of effort and ensure maximum benefit for recipient countries.

Results Achieved:
The travelers shared information about the NRC's assistance activities, gained valuable insights about other provider countries' activities and recipient countries' efforts to leverage these activities to develop their nuclear power programs, and engaged in beneficial sidebar discussions with regulatory counterparts.

Summary of Trip:
On Monday, May 18, 2015, the travelers participated in the Seventh RCF Steering Committee. Mr. Jean-Luc Lachaume, Deputy Director General of the French Nuclear Safety Authority and Chairman of the RCF, chaired the meeting. Mr. Bismark Tyobeka, Chief Executive Officer of the National Nuclear Regulator of South Africa, who serves as Vice Chairman of the RCF, provided an update of the most recent RCF Working Group meeting. Ms. Adriana Nicic, Acting Section Head of the Regulatory Activities Section at the IAEA; Pascal Daures, Head of the Nuclear Safety Preventative and Corrective Actions Sector in the European Commission's (EC) Directorate General for Development and Cooperation; and Kazuo Shimomura, Acting Deputy Director General and Chief Nuclear Officer at the Nuclear Energy Agency (NEA) also provided remarks. Representatives from the RCF recipient countries provided a brief overview of the status of their current work with various provider countries and organizations, a preview of the more detailed presentations they would each provide during the Support Meeting later in the week.

The focus of the second half of the Steering Committee meeting was on enhancing coordination among the provider countries, more effectively tracking current assistance activities, and identifying possible common training needs. The IAEA's new RCF Program Coordinator, Mr.

Mamoru Maeoka of Japan, introduced for the group's consideration a new SharePoint "mapping system" to track support activities. Ms. Nicic also proposed three potential training areas: (1) inspection and walkdown training at the Zwentendorf Nuclear Power Plant (NPP) in Austria; (2) a course on regulatory control for NPPs; and (3) a course on integrated management systems. Mr. Ramsey mentioned that the IAEA may wish to consider working with the NRC's Technical Training Center (TTC) to offer a similar inspector training at the Bellefonte Nuclear Generating Station in Alabama in the future, so that boiling-water reactor (Zwentendorf) and pressurized-water reactor (Bellefonte) training could both be offered. Mr. Tyobeka suggested that ideally, training on a Russian VVER reactor could round out the available options for emerging countries.

The group agreed that the IAEA's SharePoint system had merit, but questioned the countries' ability to keep the information up-to-date in a timely fashion. Several participants also expressed concern that between the IAEA's self-assessment programs, the RCF's separate self-assessment requirement for selecting support countries, and any additional self-assessment activities these countries may be undertaking for their own benefit, the self-assessments may be becoming too onerous. At the conclusion of the first day, the group approved a rough outline of the proposed agenda for the next RCF plenary meeting, to be held on the margins of the IAEA General Conference in September 2015, and agreed to hold the next Steering Committee meeting in the spring of 2016.

On May 19, a larger group of provider and recipient countries and representatives of multinational organizations gathered to share information about current support activities. The IAEA, NEA, EC, and a variety of RCF member countries (Iran, Japan, the Republic of Korea, the Russian Federation, and the United States) provided overviews of current activities to support emerging nuclear power countries. Mr. Ramsey provided the NRC's presentation, which focused on IRDP activities and emphasized the importance of design experience, rather than program size. He noted that IRDP provides technology-neutral advice and support and highlighted in particular the IRDP's Nuclear Executive Workshop, the material for which complements the IAEA's focus on integrated management systems.

Ms. Nicic focused on the IAEA's organizational evolution from facilitating regulatory assistance, by making connections between countries, to actually providing multilateral assistance through a series of standardized tools. She emphasized the Agency's efforts to "train the trainers" and ensure the most effective use of Agency and country resources. Mr. Shimomura shared information about NEA nuclear safety and other regulatory publications that could benefit new nuclear power countries. Iran opined that more emphasis should be placed on RCF member countries that could potentially be recipients and providers, based on experience gained from running a small nuclear power program.

As each presenter discussed his or her organization's current work with the RCF support countries, it was clear that the highest degree of duplication exists relative to work with Vietnam. The participants acknowledged that while every effort can be made to avoid duplicative activities in principle, some support countries are requesting the same information and training from everyone. One participant expressed concern that this will unnecessarily confuse the recipients.

The final two days were devoted to detailed presentations and discussions about each RCF recipient country's work with the provider countries, progress in implementing outstanding actions, and plans for future engagement. During these discussions, the EC representatives

met concurrently with the other recipient countries specifically on activities under the EC's Instrument for Nuclear Safety Cooperation (INSC). Representatives from Poland and Belarus provided their presentations on the first day, and Jordan and Vietnam presented on the second day.

Poland

During his presentation, Mr. Michal Koc, Head of the Planning and Coordination Unit in the Office of the President of the Polish National Atomic Energy Agency (PAA) indicated that PAA expects a decision on NPP technology soon and noted that the country still plans to launch its first reactor unit in 2024. PAA has increased its staff by 50 percent in the past two years and is emphasizing a strong internal safety culture. The organization is using the results of its 2013 IAEA Integrated Regulatory Review Service (IRRS) mission as the basis of its action plan and seeking support from provider countries according to the specific actions. One of the most beneficial means of support for PAA is sending experts on assignment at foreign regulatory bodies for on-the-job training. The NRC will support an assignee from PAA in Region II later this year.

Following the presentation, the provider countries discussed upcoming assistance activities in Poland. Canada offered training on licensing basis and risk-informed decision making, and Korea offered on-the-job training for a PAA staff member. In addition to confirming that plans are still moving forward for a foreign assignment for PAA in Region II, Mr. Ramsey offered an IRDP construction and inspection workshop in Warsaw. PAA will consider this and respond to NRC in the near future.

Belarus

Mr. Oleg Sobolev, Head of the Division of Communication and Public Information at the Belarusian nuclear regulatory authority, Gosatomnadzor (GAN), began his presentation with an update on the NPP construction in Belarus, now 20 percent complete. The Government still plans to bring the first reactor unit online in 2018 and the second in 2020. Mr. Sobolev explained the complex Government structure for regulatory oversight of NPPs in Belarus. Interestingly, GAN does not make the final operating license decision; this is done instead by a ministerial board. In addition, the Ministry for Emergency Situations has primary responsibility for emergency preparedness as well as siting and construction oversight. This prompted a number of questions from the group in terms of GAN's authority and effectiveness.

GAN has an ambitious schedule for IAEA peer review missions, with five scheduled between now and the middle of 2018 including a planned IRRS mission in October 2016. Mr. Sobolev indicated that the majority of issues in Belarus's RCF action plan focus on regulatory development. GAN's staff has more than doubled in size since 2013, from 39 to 82 staff, so they are specifically seeking best practices on how to grow and develop regulatory staff. GAN would also like to observe public hearings on nuclear safety issues, with which both Canada and the United States indicated they could potentially assist, and to learn more about appropriate interactions between the regulator and technical support organizations (TSOs). Mr. Sobolev and the Russian representative also noted that Russia will hold a nuclear security workshop in Minsk in July 2015 as well as a reactor-focused workshop at the Novovoronezh NPP in Russia. GAN and Rostekhnadzor are also developing a joint program on nuclear and radiation safety research and development. Under INSC auspices, the EC is spending approximately 6 million Euros on projects to improve the Belarusian regulatory framework, develop a spent fuel and radioactive waste management strategy, develop an emergency preparedness roadmap, and enhance mobile radiation monitoring.

Jordan

Tamer Kasht, Director of Communication and International Cooperation at the Energy and Minerals Regulatory Commission (EMRC) in Jordan, began by noting that Jordan is facing an escalating energy crisis, owing in part to the large influx of refugees who have joined the country's population in the past several years. Based on current calculations, 6.8 gigawatts of new power generating capacity will be needed to satisfy projected electricity demand in Jordan by 2030. He explained the infrastructure put in place between Jordan and the Russian Federation to take the actions necessary to build two 1200 megawatt (MW) VVER reactors in Jordan. A project company has been established with 51% ownership from the Jordan Nuclear Power Company and 49% from Rosatom Overseas.

Regarding EMRC's legal framework, Mr. Kasht explained that radiation and nuclear safety, previously covered under individual laws, are now chapters in the new Energy and Minerals Law passed in 2014. Based on the results of the IRRS mission to Jordan in 2014, EMRC has suggested language to strengthen the law to include a public engagement strategy, emphasis on the operator's primary responsibility for safety, and emergency preparedness. He also noted that a proposed law would be submitted to the Prime Minister before the end of May expanding EMRC's oversight to include oil, natural gas, and coal. Mr. Kasht indicated that developing staff competency was still the highest priority for EMRC; compounding this problem, a current hiring freeze is preventing the organization from bringing new experts on board.

Like Poland, EMRC was using the results of its IRRS mission to shape its action plan. The IRRS mission identified substantial areas for improvement, and it is clear that significant work lies ahead for EMRC even as the Government of Jordan moves ahead with plans for NPP construction. EMRC appears to be proceeding in a logical, structured approach, but its ability to accomplish these ambitious tasks will depend on the capacity and capability of its staff.

Jordan has been working with the Republic of Korea to construct a 5 MW research and test reactor at the Jordan University for Science and Technology, approximately 70 kilometers north of Amman. Construction has proceeded on schedule and plans are in place to load fuel in October 2015. (b)(4) (b)(4) . The IAEA is sending two technical cooperation missions to Jordan on an "urgent" basis to assist with this, and EMRC has also reached out to the NRC for assistance in this area on numerous occasions.

Vietnam

Ms. Dang Anh Thu represented the Vietnamese Agency for Radiation and Nuclear Safety (VARANS). Due to a scheduling conflict with a major nuclear safety conference in Vietnam, the majority of VARANS staff was unavailable to participate in the RCF meeting, and Ms. Dang, though well-informed, did not have the authority to make any decisions on behalf of her organization. This hampered the group's ability to update Vietnam's action plan and discuss next steps for providing targeted assistance.

Ms. Dang provided an overview of plans for nuclear power in Vietnam, culminating with the recent approval for the Ninh Thuan Unit 1 NPP site and Vietnam's cooperation with the Russian Federation. She explained that plans are underway to restructure VARANS to incorporate its TSO under the VARANS umbrella, and discussed a number of laws and "circulars" under development on various NPP safety areas including siting, construction, and licensing.

Ms. Dang then discussed the 2014 IRRS follow-up mission at VARANS, which concluded that 53 recommendations and 30 suggestions remain open from 2009. (b)(4) (b)(4) (b)(4) Ms. Dang explained that a 2008 Atomic Energy Law was drafted to establish an independent regulatory body, (b)(4) (b)(4) (b)(4)

Of all the RCF recipient countries, Vietnam has likely requested and received the most assistance with the highest level of duplication. It appears that VARANS continues to request nearly identical workshops, documents, and on-the-job training assignments from all the provider countries and organizations. (b)(4) (b)(4)

Pending Actions/Planned Next Steps for NRC:
Through the IRDP, NRC staff will continue to engage in the four recipient countries in the form of workshops and training activities. OIP will work with the IAEA and the TTC on the feasibility of establishing a walkdown and inspection training program at the Bellefonte site. OIP will also continue facilitating foreign assignee placement for PAA and potentially VARANS representatives in the next fiscal year. OIP will continue to report regularly on its assistance activities.

Points for Commission Consideration/Interest:
Jordan: While the new Jordanian law, if enacted, would give EMRC more comprehensive oversight of all sources of energy in that country, it would almost certainly deflect necessary attention away from the country's burgeoning nuclear program. (b)(4) (b)(4)

EC Engagement: It is clear that the EC's international assistance engagement, through the INSC and other vehicles, is expanding and that the Commission has sizeable resources to devote to these activities. As both differences and similarities between the NRC and EC approaches to nuclear safety continue to play out in the multilateral environment at the same time that the NRC continues to engage the EC more closely on assistance-related activities, it is becoming more important for the NRC to understand EC issues as well as possible and engage our counterparts at the Commission on a regular basis.

Enclosures:
1. Presentations from Poland
2. Presentations from Belarus
3. Presentations from Jordan
4. Presentations from Vietnam

Note: These enclosures were not among the material compiled by the OIG during its investigation, C13-027, "Special Project: NRC Regulatory Oversight."

NRC INTERNATIONAL TRAVEL TRIP REPORT

Traveler(s), Office, Division, Phone Number:

- Jack Ramsey, Senior Level Advisor for International Nuclear Safety Assistance, Office of International Programs (OIP), 301-415-2744
- Mugeh Afshar-Tous, Chief, International Cooperation and Assistance Branch, OIP, 301-415-6899

Subject:

OIP participation in an International Atomic Energy Agency (IAEA) *Interregional Meeting on the Coordination of Project INT/9/176 and on the Technical Options for Disposal of Radioactive Sources*, and in meeting with the regulators in the Republic of Moldova and in the Republic of Georgia.

Dates of Travel and Countries/Organizations Visited:

April 11 – 21, 2015; Morocco (IAEA meeting); Moldova's National Agency for Regulation of Nuclear and Radiological Activity; and Georgia's Nuclear Regulatory and Safety Department.

Desired Outcome:

- Decide on the program scope and activities for IAEA's 2015 radioactive sources project in the Mediterranean region;
- Discuss the Radiation Sources Regulatory Partnership (RSRP) project in Moldova;
- Discuss the RSRP project in Georgia.

Results Achieved:

- Presented and participated in the IAEA Project Coordination Meeting – Marrakesh, Morocco "Strengthening cradle to grave control of radioactive sources in the Mediterranean Region";
- Discussed the status of the RSRP in Moldova;
- Met with the new regulator in Georgia and discussed the status of the ongoing RSRP project in Georgia.

Summary of Trip:

During April 13-14, Mr. Ramsey and Ms. Afshar-Tous participated in the IAEA's *Interregional Meeting on the Coordination of Project INT/9/176 and on the Technical Options for Disposal of Radioactive Sources.* The Meeting was the last coordination meeting for the Phase I of this four-year project, which will end in December 2015. The Meeting was held in Marrakech with representatives from 18 Mediterranean countries. Mr. Ramsey provided a presentation on the status of the U.S. Nuclear Regulatory Commission's (NRC's) Assistance Program. NRC's Assistance funds has contributed to this Project.

This IAEA meeting provided an opportunity for the travelers to become familiar with the IAEA's *"Mediterranean Project to improve the cradle to grave management of disused sealed radioactive sources (DSRS)."* It was an opportunity to engage with representatives from many

countries to which NRC provides assistance, either bilaterally or through the IAEA projects including, Albania, Bosnia and Herzegovina, Cyprus, Egypt, Ghana, Jordan, Former Yugoslavia Republic of Macedonia, Malta, Montenegro, Morocco, Nigeria, Serbia, Slovenia, Tunisia, Turkey and the United Republic of Tanzania. Phase II of this IAEA Project will begin in January 2016 to continue for another 4 years, and will be open to any IAEA Member State.

Of significance was that Malaysia attended this meeting as a guest because Malaysia may be the first country in the world to license and implement the IAEA's system for intermediate-depth borehole disposal of DSRS. The travelers met with the representatives from Nuclear Malaysia and Malaysia's regulator, the Atomic Energy Licensing Board.

On April 16 -17, the travelers had meetings in Chisinau, Moldova. On Thursday, April 16th, upon arrival in Chisinau, the travelers met with the Mr. Lilian Darii, Head of the General Direction Multilateral Cooperation, Ministry of Foreign Affairs and Integration with Europe; and on Friday, April 17th, they met with Dr. Chiricã Lazărthe, Deputy Minister, Ministry of Environment. Both asked for the NRC to continue its assistance to the regulator in Moldova, the National Agency for Regulation of Nuclear and Radiological Activities (ANRANR), to enable it to continue with its work. Mr. Ramsey stressed that the regulator must now contribute to the international community by continuing to share its knowledge with other regulators. For example, the Moldovan regulator has shared the Russian version of its legislation with Kazakhstan's regulator for its consideration. NRC is also hopeful that the ANRANR staff will be available to provide technical training to other countries in the region.

The travelers spent most of Friday, April 17th, with ANRANR, which with its limited resources is progressing very well with maintaining and updating its radioactive sources directory. The value of NRC's Assistance investment is tangible in the form of IT equipment, licensing and inspection files both in electronic and paper formats per Moldova's legislation, as well as the registry database of sources. In addition to the assistance funds from the NRC, the ANRANR also gets some financial help from the IAEA and European Commission, and has been receiving technical training and equipment from Sweden's Radiation Safety Authority (SSM.)

Currently, ANRANR has 14 staff (including the director and 3 non-technical staff) and needs to have at least 20 (ideally 24) personnel to do the work under its purview. The ANRANR has requested additional funding from Moldova's Ministry of Finance, but is not hopeful that the request will be approved. (b)(4)
(b)(4)
(b)(4) .

On April 20, the travelers met the Republic of Georgia's regulator, the Nuclear Regulatory and Safety Department (NRSD), which reports to the Ministry of Environment. During the meeting, the Head of the NRSD, Vasil Gedevanishvili, shared plans to bureaucratically elevate the NRSD to the status of a Legal Entity of Public Law (LEPL), which, in the Georgian system, has more autonomy and decision-making authority than a department. This planned future LEPL will have three divisions: inspections, licensing, and radiological waste management. (b)(4)
(b)(4)
(b)(4) . He thanked NRC

attorneys for previously reviewing the draft laws and offering suggestions about how to strengthen the firewalls between the soon-to-be-established LEPL's regulatory and waste management functions, and said that the laws should be approved by Parliament in this summer's session.

As part of NRSD's reorganization, the future LEPL will take over control of Georgia's two radiological waste sites at Saakadze and Mtskheta, both of which have been under control of Tbilisi State University's Institute of Physics. On April 20, NRSD official Jumber Mamasakhlisi, gave the NRC visitors a tour of the two sites. The Saakadze site is a Soviet-era radiological waste facility that was originally owned and managed by the city of Tbilisi. (b)(4)

(b)(4)

(b)(4) The Mtskheta site is located at one of the decommissioned nuclear research reactors, and it houses radiological sources collected throughout the country over the past two decades in a storage facility largely financed by the U.S. Department of Energy's National Nuclear Safety Administration. (b)(4)

(b)(4)

In the afternoon of April 20th, the travelers met with Georgia' Deputy Minister of Heath, Maia Bitadze, who told the NRC experts that the Government has come to better understand the importance of regulating and managing radiological materials, a shift in approach that is reflected in the Government's strong support for increasing funding to and the status of the new organization. She said that Georgia's Association Agreement (AA) and Deep and Comprehensive Free Trade Agreement (DCFTA) with the European Union, signed in June 2014, had further helped change Government attitudes towards environmental and regulatory issues, as these are emphasized in both documents as areas for improvement. However, she added that U.S. support will continue to be critical into the future.

Attachment:

Agenda for the IAEA meeting

Note: The attachment was not among the material compiled by the OIG during its investigation, C13-027, "Special Project: NRC Regulatory Oversight."

NRC INTERNATIONAL TRAVEL TRIP REPORT

Traveler(s), Office, Division, Phone Number:

- Jack Ramsey, Senior Level Advisor for International Nuclear Safety Assistance, Office of International Programs (OIP), 301-415-2744
- Danielle Emche, International Relations Specialist, International Cooperation and Assistance Branch, OIP, 301-415-2644
- Sergey Katsenelendbogen, Advanced Systems Technology and Management, Inc. (NRC contractor)

Subject:

The U.S. Nuclear Regulatory Commission (NRC) international assistance travel in support of the International Regulatory Development Partnership (IRDP) activities in Romania and Radiation Sources Regulatory Partnership (RSRP) activities in Moldova.

Dates of Travel and Countries/Organizations Visited:

September 5 - 12, 2015; Bucharest, Romania; National Commission for Nuclear Activities Control (CNCAN); and Chisinau, Moldova; National Agency for Regulation of Nuclear and Radiological Activity (NRNRA).

Desired Outcome:

- In Romania, to attend the NRC IRDP Construction Permit Application Review Workshop and decide on a path forward for future cooperation and assistance activities with CNCAN.
- In Moldova, to participate in the RSRP 5th Regional Meeting, and receive program updates from country representatives attending the meeting.

Results Achieved:

- In Romania, NRC discussed cooperation and assistance requests with CNCAN, and decided on a path forward for future assistance activities.
- In Moldova, NRC received country updates from the meeting attendees; and discussed country assistance requests, RSRP database software topics, and future RSRP activities.

Summary of Trip:

On September 6, 2015, Mr. Ramsey and Ms. Emche visited Romania and participated in the NRC IRDP Construction Permit Application Review Workshop. Romanian attendees included participants from CNCAN, NuclearElectrica S.A., University of Bucharest, and the Institute for Nuclear Research Pitesti. Romanian participants discussed the challenge of implanting the European Council Revised Nuclear Safety Directive and the need to demonstrate that new reactors constructed in a country cannot produce a severe accident. Romania is constructing two Canada Deuterium Uranium (CANDU) reactors at Cernavoda, the existing site of two operating CANDU 6 reactors, Cernavoda Units 1 and 2. Cernavoda Units 3 and 4 will be updated versions of the CANDU 6 design. Unit 3 is roughly 53 percent complete and Unit 4 is roughly 30 percent complete; and are expected to operate in 2019 and 2020, respectively.

Following the workshop, Madalina Tronea, Nuclear Safety Advisor, CNCAN, met with NRC representatives. Ms. Tronea said that CNCAN has roughly 100 staff and that her main challenge is hiring and training staff. In 2009, CNCAN's total staff was reduced by 15, and in its 2016 budget CNCAN proposed to regain 15 full0time equivalents.

Ms. Tronea discussed CNCAN requests for assistance. NRC representatives agreed to work with CNCAN on its top assistance priority to enhance and formalize an inspector training program. CNCAN will provide NRC with an English version of its existing inspector training program documents for review and comparison with NRC's program. After NRC reviews the documents, CNCAN experts in this area will visit the United States for engaging in technical exchange. CNCAN is also interested in developing a training course similar to the NRC's R-800, "Perspectives in Reactor Safety." NRC representatives said that they would look into whether NRC could share the course material with CNCAN, and whether NRC instructors could teach a session of the course in Romania. In addition, the CNCAN Director for Ionizing Radiation is interested in visiting an advanced laser installation in the United States. CNCAN staff committed to send further information for this request. The NRC Knowledge Management Portal is also of interest to CNCAN staff and they are interested in viewing a demonstration of the site.

CNCAN requested assistance related to a finding from its 2011 International Atomic Energy Agency (IAEA) Integrated Regulatory Review Service (IRRS) mission, that there is no process in Romania for incident investigations, nor a process for analyzing lessons learned from events. CNCAN staff expressed that one of their priority requests for assistance is to develop incident investigation procedures. CNCAN requested information on NRC's process for performing incident investigations, and NRC committed to provide this information.

During September 8 – 11, 2015, NRC representatives visited Chisinau, Moldova, and participated in the RSRP 5th Regional Meeting. Representatives from Armenia, Belarus, Georgia, Kazakhstan, Tajikistan, Ukraine, and Uzbekistan attended. Meeting participants provided national presentations. In addition, RSRP software updates were presented by NRC contractors and all meeting attendees engaged in discussions related to future RSRP activities.

Moldova was the first country to present, and Mr. Artur Buzdugan, Director, NRNRA, began with an overview of NRNRA's regulatory authority for the safety and security of radioactive sources. Mr. Buzdugan reported that NRNRA has the ability to conduct announced and unannounced inspections. NRNRA's radioactive sources database is 90 percent complete and it is focused on completing the database and issuing licenses. (b)(4) (b)(4) (b)(4). Mr. Buzdugan stated that NRNRA's challenges include public engagement, properly maintaining and using radiation detection equipment, the Transnistria region, and relations with border police and coordinating movement of radioactive material. NRNRA is located within the Ministry of Environment, which can be challenging because the Ministry does not fully appreciate the mission and priorities of NRNRA.

Mr. Grigol Basilia, Main Specialist, Nuclear and Radiation Safety Department, Ministry of Energy and Natural Resources, presented for Georgia. Mr. Basilia introduced the ongoing activities in Georgia to create an independent regulatory authority outside of the Ministry of Energy and Natural Resources, which will take effect January 1, 2016. The name of the new regulatory authority has not been decided. Currently, his organization is focused on developing the structure and responsibilities of the different offices within the new regulator. Mr. Basilia referenced the visit of Commissioner Ostendorff in 2013, and he said that a subsequent visit by

a Commissioner to speak to the same officials and reiterate the same points related to creating the regulatory body would be useful. One issue moving forward is that the new regulator will subsume the Department for Waste Management, which operates the radioactive waste facility. The new regulator will be responsible for regulating and operating this facility.

Mr. Jabor Salomov, Deputy Director, Nuclear and Radiation Safety Agency (NRSA), under the Academy of Sciences, presented on the activities in Tajikistan. Mr. Salomov explained that NRSA has been working with the NRC to develop Tajikistan's radioactive sources database since 2006. NRSA is updating its regulatory framework and developing new regulations to support the framework. He said that NRSA is focused on activities related to finding a solution for storing radioactive waste, addressing mill tailings, and conditioning sites where uranium was previously extracted. NRSA is developing guidance documents for remediation of uranium mills and Mr. Salomov requested NRC support for this effort.

Ms. Iryna Tkachonak, Deputy Head of the Section for Supervision of Radioactive Sources, Gosatomnadzor, Department for Nuclear and Radiation Safety, Ministry for Emergency Situations presented for Belarus. Ms. Tkachonak explained that there are roughly 100 staff working for Gosatomnadzor. She said that Gosatomnadzor's main challenge is preparing for its IAEA IRRS mission in 2016, and completing the self-assessment. She said that her section is focused on processing and reviewing radioactive sources licensing documents, and enhancing the management of radioactive sources.

Mr. Yakubekovd Sardorbek, Deputy Head of the Nuclear Unit, State Inspectorate on Safety, Industry, and Mining (SISIM), presented on the activities in Uzbekistan. Mr. Sardorbek explained that Uzbekistan began using the Radioactive Sources Database (RASOD) software in 2009, with the support of NRC. SISIM headquarters is in Tashkent, where its seven staff are based, and it is responsible for activities related to nuclear safety, radiation safety, and radioactive waste licensing and inspection. Mr. Sardorbek added that there are three other entities with responsibilities related to regulating nuclear material in Uzbekistan.

Additional RSRP discussions were focused on the database software technology, and were led by Armenia which, as the first users of the original system, takes the lead for its enhancement. The latest upgrade for the system will be available to users in the coming months. The new system, known as Advanced Regulatory Information System (ARIS) is an umbrella suite that offers an upgrade to the original RASOD system, and includes additional modules for licensing, inspections, and import/export tracking. Key features of ARIS are its hardened backup capability and ability to restrict user rights. The system also has a feature for translation into any language. User manuals for ARIS will be available in the near future with the system roll-out to occur at the end of 2015.

Future needs of the RSRP were discussed. There is significant interest from African countries in the program, but lacking Internet infrastructure in African countries creates a challenge for downloading the software. There was discussion of whether Belarus will officially join the program and use the ARIS technology, and Belarus confirmed that the Government has not made a decision. Meeting participants agreed that creating a new ARIS module for radioactive waste would be useful. At the close of the meeting, all participants agreed about the need for an RSRP database training seminar in the next few months.

Next Steps:

- OIP will pursue offering the, "R-800 Perspectives in Reactor Safety," to CNCAN staff.
- OIP will work with NRC contractors to ensure the review of CNCAN inspector training program documents and comparison with NRC's inspector training program, and coordinate with the Office of Nuclear Reactor Regulation as necessary.
- CNCAN will send to NRC information related to a potential visit to the United States by the CNCAN Director for Ionizing Radiation, and visit to an advanced laser installation.
- OIP will coordinate with CNCAN for an opportunity to demonstrate the NRC Knowledge Management Portal.
- OIP and NRR will address the CNCAN request event investigation information.
- OIP will explore the potential for a Commission visit to Georgia for mid-2016, to engage once the regulator is established.
- OIP will work with NRSA for uranium recovery assistance, and NSRA's effort to develop related NRSA guidance documents.
- OIP will consider the possibility of holding a regional RSRP training seminar.

Attachments:

1. Agenda for the meeting in Bucharest, Romania
2. Agenda for the meeting in Chisinau, Moldova

Note: These attachments were not among the material compiled by the OIG during its investigation, C13-027, "Special Project: NRC Regulatory Oversight."

NRC INTERNATIONAL TRAVEL TRIP REPORT

Traveler, Office, Division, Phone Number:

- Jack Ramsey, Office of International Programs (OIP), 301-415-2744
- Brett Rini, OIP, 301-415-1948
- C. Eugene Carpenter, Office of Nuclear Reactor Regulation (NRR), 301-415-2983

Subject:
EUROSAFE Conference and European Commission Coordination

Dates of Travel and Countries/Organizations Visited:
October 30 – November 5, 2015; Brussels, Belgium; European Commission Headquarters

Desired Outcome:
Gain insight into the implementation of the European Commission's Nuclear Safety Directive and coordinate provision of assistance with the European Commission (EC)

Results Achieved:
All the outcomes described above were achieved.

Summary of Trip:

EUROSAFE Forum 2015

On November 2 and 3, the travelers participated in the EUROSAFE Forum, which is an annual global and European initiative aimed at promoting the convergence of technical nuclear safety practices in Europe. It is formed and managed primarily by technical safety organizations (TSOs) and regulatory authorities in the following countries: Belgium, Bulgaria, Czech Republic, Finland, France, Germany, Japan, Lithuania, the Netherlands, Russia, Slovenia, Spain, Slovakia, Sweden, Switzerland, Ukraine, and the United Kingdom. Some of these organizations are also members of ETSON, the European Technical Safety Organization Network. This year's Forum was hosted by Bel V of Belgium. The Forum is similar to the U.S. Nuclear Regulatory Commission's (NRC's) Regulatory Information Conference, but it occurs in a shorter time period and on a smaller scale. The theme of the 2015 Forum was "Implementing the 2014 European Directive: Nuclear Safety and Security Challenges Ahead."

The opening plenary sessions focused on the theme of the conference with multiple presentations related to achieving the highest nuclear safety standards and obtaining technical convergence on nuclear safety and radiation protection throughout Europe. The plenary session of the conference included presentations from Jacques Repussard of the Institut de Radioprotection et de Sûreté Nucléaire (IRSN) of France and ETSON, Gerassimos Thomas of the EC, Antonio Munuera of the Spanish Consejo de Seguridad Nuclear, and Pierre Doumont of Electrabel in Belgium.

Mr. Repussard, IRSN Director General, discussed the importance of technical convergence in nuclear safety and radiation protection. He discussed several important requirements for nuclear safety including: the adequacy of the regulatory process, the competency of the TSO to evaluate risks and its implementation of science, and the need for nuclear safety oversight to be viewed as legitimate by society through transparency and the involvement of stakeholders.

Given that the theme of the conference was implementation of the European safety directive, he proclaimed that, "nuclear safety is a national responsibility but a European problem… given that reactors don't cross borders, but accidents do." He also mentioned that since operators and vendors are now multinational, a European framework and oversight is required.

Of the items listed above, Mr. Repussard felt that Europe has some room for improvement. Specifically, he highlighted that there are multiple different approaches to safety, and there is little harmony in regards to emergency management in Europe. In addition, transparency from the regulators and TSOs is inconsistent. However, he did mention that the United States is much better at including stakeholders than most countries, and he referred to Commission meetings, votes, and other public meetings as examples. Mr. Repussard commented that European organizations are willing to support developing nuclear countries but not willing to support other European countries that may need nuclear expertise. While there are legitimate concerns about commercial competition, nuclear safety is not competition-based.

Mr. Thomas, Deputy Director General in the Directorate-General for Energy at the EC discussed the European nuclear safety directive and how nuclear safety is a global matter. He commented that many member states are delayed in their efforts to implement the directive, and that the EC plans to pursue assurance that the member states implement the directive and will perform peer reviews to confirm. He discussed several challenges that the member states face including long-term operations and the need for replacement capacity for older plants. With new construction being considered, he stated that more standardization and cooperation is needed throughout Europe. He also declared that nuclear utilities need to replace their senior managers, as the current mangers have been in place for several years and may not have the experience needed for managing the change that is required. Lastly, he discussed how high safety standards and continuous improvement are needed at the global level and that Europe needs to "export" its high standards to the rest of the world.

Mr. Munuera, Nuclear Safety Director of the Consejo de Seguridad Nuclear, discussed the safety improvements implemented post-Fukushima. He explained the differences between the European Nuclear Safety Regulators Group, which he referred to as the policy group, and the Western European Nuclear Regulators Association, which he referred to as a club of regulators. He provided an overview of the stress tests that utilities performed post-Fukushima and discussed commendable practices including the NRC's efforts to implement extensive damage mitigating guidelines, commonly referred to as B.5.b. He discussed several ongoing safety improvements in Europe post-Fukushima including mobile equipment, containment integrity, improvements to severe accident mitigation guidelines, emergency management centers, and response teams.

The final plenary speaker was Pierre Doumont of Electrabel, a Belgium-based energy corporation. His main message was the need for more focus on security. Mr. Doumont explained how nuclear safety and security have the same objectives – mainly to protect the local population, plant workers, and the environment. However, the design basis threat for security is evolving much faster than any design basis accident. He discussed the need for defense-in-depth and continuous improvement in the security arena. He also mentioned that some security rules will not align smoothly with safety principles, specifically the conflict between a desire for transparency with the public and a need for confidentiality.

Immediately following the plenary session, the speakers participated in a question-and-answer session. Many of the questions focused on nuclear security and safety/security interface. Mr. Thomas responded that the EC does not have any near-term plans to address nuclear security,

and a nuclear security directive has not been considered, as security is a national concern. The other panelists also acknowledged that they are not committing significant effort into addressing safety/security interface issues.

Following the plenary session, the conference divided into multiple technical tracks: Nuclear Installation Safety – Assessment; Nuclear Installation Safety – Research; Radiation Protection, Environment, and Emergency Preparedness; Waste Management and Decommissioning and Dismantling; and Security of Nuclear Installations and Materials. The travelers attended multiple presentations in the various tracks to obtain the most relevant information to ongoing European activities. The list of speakers and the presentation materials for all the sessions are available online at http://www.eurosafe-forum.org/eurosafe2015.

Meeting with European Commission Representatives

On November 4, the travelers met with two individuals from the EC: Mr. Pascal Daures, Team Leader, Instrument for Stability, Nuclear Safety in the Directorate General for International Cooperation and Development; and Mr. János Végh, Scientific and Technical Project Officer for Nuclear Reactor Safety Assessment in the Joint Research Centre. The purpose of the meeting was to share the status of assistance activities at the NRC and at the EC to ensure mutual awareness of what both organizations are carrying out.

Mr. Ramsey shared that he had just traveled to Armenia during the week of October 26, 2015. (b)(4) (b)(4) He also mentioned that the EC plans to loan staff to the Armenian Nuclear Regulatory Authority (ANRA), to ensure safety during the review of the plants life extension application. (b)(4) (b)(4) (b)(4). Participants discussed how expertise on VVER-230, which is an older technology, will be diminishing in the coming years.

The participants discussed both organizations' plans regarding support for Iran given the recent multinational nuclear deal with Iran. The EC is offering a technical mission to Iran for December 2015, to provide support to the Iran Nuclear Regulatory Authority (INRA). The EC is willing to support INRA, but this support is limited to the operator of Bushehr, the Iranian NPP, through evaluation of stress tests. Mr. Ramsey discussed that currently there are no plans for the United States Government (USG) to be involved in providing any regulatory support.

The participants also discussed ongoing assistance activities in Ukraine. Mr. Ramsey discussed plans for the NRC's upcoming bilateral meeting with the State Nuclear Regulatory Inspectorate of Ukraine (SNRIU) in December 2015. He mentioned that the USG is getting more involved in providing assistance in the security arena in addition to safety, given recent concerns about insider threats. The topics for the December meeting will also include grid stability, power uprates, license renewal, and restart of construction activities from halted plants. Mr. Daures explained that the EC has significant funding for support to Ukraine but that member states are concerned about SNRIU's independence. Ukraine has plans to pass legislation in 2015 to fix the law to ensure SNRIU's independence. The EC is also disappointed that SNRIU and Ukraine are not augmenting their technical capacity. Ukraine had asked the EC to take over maintenance and operation of the Chernobyl shelter, but the EC declined.

Lastly, the participants discussed Atucha Units 1 and 2 NPP in Argentina. (b)(4)
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At the end of the meeting, both organizations briefly touched on ongoing work in Jordan, Uzbekistan, Tajikistan, Kazakhstan, and the Kyrgyz Republic.

Pending Actions/Planned Next Steps for NRC:

- NRC travelers will share relevant presentation materials with staff in the program offices that may be interested.
- NRC will continue to hold periodic bilateral meetings with the EC to discuss the organizations' assistance activities.

Points for Commission Consideration/Interest:
None

"On the Margins":
The NRC delegation met separately during EUROSAFE with representatives from Armenia, France, Germany, Jordan, and others to discuss ongoing cooperative activities.