

Sollenberger, Dennis

RSM

From: Monica Orendi
Sent: Tuesday, February 24, 2009 12:11 PM
To: Torre Taylor; Dennis Sollenberger
Subject: Staff Assessment.doc
Attachments: Staff Assessment.doc

Hi guys!

Here is my portion of the Staff Assessment. Let me know if you have any questions.

Thanks!
Monica

Monica Orendi
Health Physicist
USNRC
Division of Materials Safety and State Agreements (DMSSA)
Agreement State Programs Branch (ASPB)
301-415-3938
monica.orendi@nrc.gov



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RADIATION PROTECTION STANDARDS

2. **Standards. The State regulatory program shall adopt a set of standards for protection against radiation which shall apply to byproduct, source and special nuclear materials in quantities not sufficient to form a critical mass.**

In conjunction with the rulemaking authority vested in the New Jersey Commission on Radiation Protection by New Jersey Statute 26:2D-7 of the Radiation Protection Act, the BER has the requisite authority to promulgate rules for protection against radiation.

The NRC staff verified that the State adopted the relevant NRC regulations in 10 CFR Parts 19, 20, 30, 31, 32, 33, 34, 35, 36, 39, 40, 61, 70, 71, and 150 into State Regulations, New Jersey Administrative Code (N.J.A.C.) Title 7 Section 28, Radiation Protection Programs. The State has adopted an adequate and compatible set of radiation protection regulations which apply to byproduct, source, and special nuclear materials in quantities not sufficient to form a critical mass.

The staff concludes that this criterion is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization, and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). Commonwealth Statutes: 26:2D-1, 26:2D-2, 26:2D-3, 26:2D-4, 26:2D-5, 26:2D-6, 26:2D-7, 26:2D-8, 26:2D-9, 26:2D-9.1, 26:2D-9.2. State Regulations N.J.A.C. Title 7 Section 28.

3. **Uniformity of Radiation Standards. It is important to strive for uniformity in technical definitions and terminology, particularly as related to such things as units of measurement and radiation dose. There shall be uniformity on maximum permissible doses and levels of radiation and concentrations of radioactivity, as fixed by 10 CFR Part 20 of the NRC regulations based on officially approved radiation protection guides.**

The State, by statute, must promulgate and enforce rules for the regulation of byproduct, source, and special nuclear material that are in accordance with Section 274 of the Act, as amended. The NRC staff verified that the State adopted regulations compatible with 10 CFR Part 20.

The staff concludes that this criterion is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization, and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). Commonwealth Statutes: 26:2D-1, 26:2D-2, 26:2D-3, 26:2D-4, 26:2D-5, 26:2D-6, 26:2D-7, 26:2D-8, 26:2D-9, 26:2D-9.1, 26:2D-9.2. State Regulations N.J.A.C. Title 7 Section 28.

4. **Total Occupational Radiation Exposure. The regulatory authority shall consider the total occupational radiation exposure of individuals, including that from sources which are not regulated by it.**

The NRC staff review verified that the State has adopted regulations compatible with the NRC regulations in 10 CFR Part 20, including Subpart C, the occupational dose limits and Subpart D, the dose limits to individual members of the public. State licensees are required to consider the radiation doses to individuals from all sources of radiation, except background radiation and radiation from medical procedures. Like NRC licensees, State licensees are required to consider the radiation dose whether the sources are licensed or unlicensed.

The staff concludes that this criterion is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization, and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). State Regulations N.J.A.C. Title 7 Section 28.

5. **Surveys, Monitoring. Appropriate surveys and personnel monitoring under the close supervision of technically competent people are essential in achieving radiological protection and shall be made in determining compliance with safety regulations.**

NRC requires surveys and monitoring pursuant to Subpart F of 10 CFR Part 20. The NRC staff review verified that the State has adopted regulations compatible with 10 CFR Part 20 Subpart F. Therefore, State licensees are required to conduct surveys and personnel monitoring to the same standards required of NRC licensees.

The staff concludes that this criterion is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization, and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). State Regulations N.J.A.C. Title 7 Section 28.

6. **Labels, Signs, Symbols. It is desirable to achieve uniformity in labels, signs and symbols, and the posting thereof. However, it is essential that there be uniformity in labels, signs, and symbols affixed to radioactive products which are transferred from person to person.**

The NRC staff review verified that the State has adopted regulations compatible with the NRC regulations in Subpart J of 10 CFR Part 20. Therefore, the radiation labels, signs, symbols, and the posting and labeling requirements in the State regulations are compatible with those contained in the NRC regulations.

The staff concludes that this criterion is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization,

and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). State Regulations N.J.A.C. Title 7 Section 28.

7. **Instruction. Persons working in or frequenting restricted areas shall be instructed with respect to the health risks associated with exposure to radioactive materials and in precautions to minimize exposure. Workers shall have the right to request regulatory authority inspections as per 10 CFR 19, Section 19.16 and to be represented during inspections as specified in Section 19.14 of 10 CFR 19.**

The NRC staff review verified that the State has adopted regulations compatible with the NRC regulations 10 CFR Part 19.

The staff concludes that this criterion is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization, and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). State Regulations N.J.A.C. Title 7 Section 28.

8. **Storage. Licensed radioactive material in storage shall be secured against unauthorized removal.**

The NRC staff review verified that the State has adopted regulations compatible with the NRC regulations in Subpart I of 10 CFR Part 20.

The staff concludes that this criterion is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization, and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). State Regulations N.J.A.C. Title 7 Section 28.

9. **Radioactive Waste Disposal. (a) Waste disposal by material users. The standards for the disposal of radioactive materials into the air, water and sewer, and burial in the soil shall be in accordance with 10 CFR Part 20. Holders of radioactive material desiring to release or dispose of quantities or concentrations of radioactive materials in excess of prescribed limits shall be required to obtain special permission from the appropriate regulatory authority. Requirements for transfer of waste for the purpose of ultimate disposal at a land disposal facility (waste transfer and manifest system) shall be in accordance with 10 CFR 20. The waste disposal standards shall include a waste classification scheme and provisions for waste form, applicable to waste generators, that is equivalent to that contained in 10 CFR Part 61.**

The NRC staff review confirmed that the State has adopted regulations that are compatible with the NRC regulations in Subpart K of 10 CFR Part 20 - Waste Disposal. These regulations deal with general requirements for waste disposal and are applicable to all licensees.

The staff concludes that Criterion 9(a) is satisfied.

(b) Land Disposal of waste received from other persons. The State shall promulgate regulations containing licensing requirements for land disposal of radioactive waste received from other persons, which are compatible with the applicable technical definitions, performance objectives, technical requirements and applicable supporting sections set forth in 10 CFR Part 61. Adequate financial arrangements (under terms established by regulation) shall be required of each waste disposal site licensee to ensure sufficient funds for decontamination, closure and stabilization of a disposal site. In addition, Agreement State financial arrangements for long-term monitoring and maintenance of a specific site must be reviewed and approved by the Commission prior to relieving the site operator of licensed responsibility (Section 151(a)(2), Pub. L. 97-425).

The NRC staff verified that the State has adopted regulations containing licensing requirements for land disposal of radioactive waste received from other persons which are compatible with the applicable technical definitions, performance objectives, technical requirements, and applicable supporting sections set forth in 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste."

The staff concludes that Criterion 9(b) is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization, and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). State Regulations N.J.A.C. Title 7 Section 28.

10. **Regulations Governing Shipment of Radioactive Materials. The State shall, to the extent of its jurisdiction, promulgate regulations applicable to the shipment of radioactive materials, such regulations to be compatible with those established by the U. S. Department of Transportation and other agencies of the United States whose jurisdiction over interstate shipment of such materials necessarily continues. State regulations regarding transportation of radioactive materials must be compatible with 10 CFR Part 71.**

The NRC staff verified that the State has adopted regulations compatible with the NRC regulations in 10 CFR Part 71. The State's regulations specifically exempt areas of exclusive NRC jurisdiction.

The staff concludes that this criterion is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization, and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). State Regulations N.J.A.C. Title 7 Section 28.

11. **Records and Reports. The State regulatory program shall require that holders and users of radioactive materials (a) maintain records covering personnel radiation exposures, radiation surveys, and disposals of materials; (b) keep records of the**

receipt and transfer of the materials; (c) report significant incidents involving the materials, as prescribed by the regulatory authority; (d) make available upon request of a former employee a report of the employee's exposure to radiation; (e) at request of an employee advise the employee of his or her annual radiation exposure; and (f) inform each employee in writing when the employee has received radiation exposure in excess of the prescribed limits.

The NRC staff review verified that the State has adopted regulations compatible with the NRC regulations in 10 CFR Parts 19, 20, 30, 31, 32, 33, 34, 35, 36, 39, 40, 61, 70, 71, and 150. The records and reports referenced in Criterion 11 are regulatory requirements in these parts. The State has adopted the necessary record and reporting requirements.

The staff concludes that this criterion is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization, and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). State Regulations N.J.A.C. Title 7 Section 28.

12. **Additional Requirements and Exemptions. Consistent with the overall criteria here enumerated and to accommodate special cases and circumstances, the State regulatory authority shall be authorized in individual cases to impose additional requirements to protect health and safety, or to grant necessary exemptions which will not jeopardize health and safety.**

The NRC staff has verified that the State has adopted a regulation which is compatible with 10 CFR 30.34, Terms and conditions of licenses, in N.J.A.C. 7:28-51.1. The State regulations provide the radiation control agency authority to impose, by order or license condition, additional health and safety requirements beyond the requirements specified in law and in the rules. The agency also has legal authority to grant reasonable and necessary exceptions to the regulatory requirements, either by order or by license condition.

The staff concludes that this criterion is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization, and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). State Regulations N.J.A.C. Title 7 Section 28.

PRIOR EVALUATION OF USES OF RADIOACTIVE MATERIALS

13. **Prior Evaluation of Hazards and Uses, Exceptions. In the present state of knowledge, it is necessary in regulating the possession and use of byproduct, source and special nuclear materials that the State regulatory authority require the submission of information on, and evaluation of, the potential hazards, and the capability of the user or possessor prior to his receipt of materials. This criterion is subject to certain exceptions and to continuing reappraisal as knowledge and experience in the atomic energy field increase. Frequently there are, and increasingly in the future there may be, categories of materials and uses as to**

which there is sufficient knowledge to permit possession and use without prior evaluation of the hazards and the capability of the processor and user. These categories fall into two groups: those materials and uses which may be completely exempt from regulatory controls, and those materials and uses in which sanctions for misuse are maintained without pre-evaluation of the individual possession or use. In authorizing research and development or other activities involving multiple uses of radioactive materials, where an institution has people with extensive training and experience, the State regulatory authority may wish to provide a means for authorizing broad use of materials without evaluating specific use.

The State has adopted regulations containing regulatory requirements for applying for and issuing licenses, which are compatible with NRC's regulations.

The NRC staff review confirmed that the State's regulations provide that only NRC may issue a license authorizing the distribution of agreement materials that will subsequently be exempt from regulatory control.

Since Criterion 13 was adopted, the Commission has determined that the regulatory authority to conduct safety evaluations of sealed sources and devices may be retained by the NRC, unless the State requests assumption of the authority and has in place an adequate and compatible program to implement the authority. The BER has decided not to seek authority for evaluation of sealed sources and devices.

The staff concludes that this criterion is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization, and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). State Regulations N.J.A.C. Title 7 Section 28.

15. **Human Use. The use of radioactive materials and radiation on or in humans shall not be permitted except by properly qualified persons (normally licensed physicians) possessing prescribed minimum experience in the use of radioisotopes or radiation.**

The NRC staff verified that the State has adopted compatible regulations to the NRC regulations in 10 CFR Part 35. Therefore the State's regulations include training and experience requirements for use of radioactive material which are equivalent to the NRC requirements.

The staff concludes that this criterion is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization, and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). State Regulations N.J.A.C. Title 7 Section 28.

21. Conditions Applicable to Special Nuclear Material, Source Material and Tritium. **Nothing in the State's regulatory program shall interfere with the duties imposed on the holder of the materials by the NRC, for example, the duty to report to the NRC, on NRC prescribed forms, (1) transfers of special nuclear material, source material and tritium, and (2) periodic inventory data.**

The NRC staff review did not note any aspects of the BER that could potentially interfere with duties imposed on a holder of materials by the NRC. In addition, the State's regulations specifically exempt areas of exclusive NRC or other Federal jurisdiction from State regulation. The staff is therefore satisfied that the BER will not interfere with duties imposed on the holder of materials by the NRC.

The staff concludes that this criterion is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization, and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). State Regulations N.J.A.C. Title 7 Section 28.

22. Special Nuclear Material Defined. **Special nuclear material, in quantities not sufficient to form a critical mass, for present purposes means uranium enriched in the isotope U-235 in quantities not exceeding 350 grams of contained U-235; uranium 233 in quantities not exceeding 200 grams; plutonium in quantities not exceeding 200 grams; or any combination of them in accordance with the following formula: For each kind of special nuclear material, determine the ratio between the quantity of that special nuclear material and the quantity specified above for the same kind of special nuclear material. The sum of such ratios for all kinds of special nuclear material in combination should not exceed "1" (i.e., unity). For example, the following quantities in combination would not exceed the limitation and are within the formula, as follows:**

$$\frac{175 \text{ (grams contained U-235)}}{350} + \frac{50 \text{ (grams U-233)}}{200} + \frac{50 \text{ (grams PU)}}{200} = 1$$

The NRC staff determined that the State's definition of special nuclear material in quantities not sufficient to form a critical mass in N.J.A.C 7:28-62.1, is compatible with that of the Commission's.

The staff concludes that this criterion is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization, and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). State Regulations N.J.A.C. Title 7 Section 28.

28. **NRC and Department of Energy Contractors. The State should provide exemptions for NRC and DOE contractors which are substantially equivalent to the following exemptions:**

- a. **Prime contractors performing work for the DOE at U.S. Government-owned or controlled site;**
- b. **Prime contractors performing research in, or development, manufacture, storage, testing, or transportation of, atomic weapons or components thereof;**
- c. **Prime contractors using or operating nuclear reactors or other nuclear devices in a U.S. Government-owned vehicle or vessel; and**
- d. **Any other prime contractor or subcontractor of DOE or NRC when the State and the NRC jointly determine (i) that, under the terms of the contract or subcontract, there is adequate assurance that the work there under can be accomplished without undue risk to the public health and safety; and (ii) that the exemption of such contractor or subcontractor is authorized by law.**

The NRC staff review verified that the State has adopted compatible regulations to NRC regulations in 10 CFR Parts 30, 40 and 70 including §30.12, §40.11, and §70.11 wherein the specified exemptions are contained. The NRC staff concludes that the State regulations do provide for exemptions from the State's requirements for licensing of sources of radiation for NRC and DOE contractors or subcontractors in accordance with the criterion.

The staff concludes that this criterion is satisfied.

References: Letter dated October 16, 2008, from Governor Corzine to Chairman Klein, request for an Agreement, Section on Statutory Authority and Program Organization, and additional related correspondence between the NRC and the State (ADAMS: ML090410192, ML090510713, ML090510708, ML090510709, ML090510710, ML090510711, and ML090510712). State Regulations N.J.A.C. Title 7 Section 28.