



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

March 22, 1996

Ms. Pamela Blockey-O'Brien  
D23 Golden Valley  
Douglasville, Georgia 30134

Dear Ms. Blockey-O'Brien:

This letter responds to five letters you sent us (September 17 and October 27, 1995, and January 10, January 2, and March 14, 1996) and to your telephone conversation with Craig Bassett of the Nuclear Regulatory Commission's (NRC's) Region II office and Marvin Mendonca of my staff on January 22, 1996.

With regard to your concerns about the NRC's response to your October 24, 1994, Petition and subsequent letters, NRC has evaluated, in accordance with NRC Management Directive 8.11 (Enclosure 1), your letters for the issues that were considered in the Partial Director's Decision dated July 31, 1995. Your subsequent letters do not present any new or previously unconsidered information that would change the conclusions in the Partial Director's Decision, 42 NRC 20 (1995). Therefore, the NRC has concluded and verified that the regulatory requirements, as implemented at the Georgia Tech Research Reactor to date, acceptably ensure the public health and safety.

On your question dealing with the definition of a substantial health and safety concern, the NRC uses various guidance to make a determination that such a concern exists. In this regard, the July 31, 1995, Partial Director's Decision in response to your 10 CFR 2.206 Petition stated:

The institution of proceedings pursuant to Section 2.206 is appropriate only if substantial health and safety issues have been raised. See *Consolidated Edison Co. of New York* (Indian Point, Units 1, 2, and 3), CLI-75-8, 2 NRC 173, 175 (1975); *Washington Public Power Supply System* (WPPSS Nuclear Project No. 2), DD-84-7, 19 NRC 899, 924 (1984). This is the standard that has been applied to the concerns raised by the Petitioner to determine whether the action requested by the Petitioner is warranted.

For your information, the two cases cited above (*Consolidated Edison Co. of New York* and *Washington Public Power Supply System*) are enclosed with this letter (Enclosures 2 and 3, respectively).

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As additional guidance, 10 CFR 21.3 states in part that:

"Substantial safety hazard" means a loss of safety function to the extent that there is a major reduction in the degree of protection provided to public health and safety...."

Further, with regard to the NRC orders to revoke or suspend a license or authorization to conduct licensed activities, the NRC's "General Statement of Policy and Procedures for NRC Enforcement Actions," NUREG-1600 (Enclosure 4), sections C.1 through 4 on page 14 includes guidance for issuance of such orders.

When the staff evaluates issues such as those you presented in your 10 CFR 2.206 Petition and the remedies you requested, it considers the guidance noted above.

With regard to your question about the generation of, and NRC monitoring of, beryllium-7, you may refer to the U.S. Department of Health, Education, and Welfare, Public Health Service, "Radiological Health Handbook," revised edition (January 1970), page 232, under the column "Principal means of production" and the associated references under that column for beryllium-7. The NRC monitoring program identifies any isotope that is present and measures the isotope in accordance with standard radiological monitoring techniques regardless of the source of the isotope. As the Partial Director's Decision states, the NRC analysis finds that most of the beryllium-7 in the atmosphere is generated by cosmic rays. Other references which you may find useful are the National Council on Radiation Protection and Measurements Report (NCRP) No. 45 (pg. 23) and NCRP Report No. 50 (pg. 11) which indicate beryllium-7 is a cosmogenic radionuclide.

With regard to your question on further radiological testing, you provided no credible basis to warrant further radiological sampling or surveys as stated in the Partial Director's Decision.

As to your question on background radiation, radiation monitoring can separately establish the levels of radiation from natural and global fallout and from a nuclear facility. For example, the radiation levels from a control sample can be subtracted to yield the radiation levels in the sample. For your specific question on the sample from the City of Atlanta R. M. Clayton Sewer Treatment Facility, filters were used to separate suspended material from the raw and digested sludge samples. The radioactive material inherent to those filters is not associated with the sample and, therefore, was subtracted from the measured value, just as a control sample would be

subtracted in the previous example. Specifically, as documented in NRC Inspection Report 50-160/95-01 addendum dated July 26, 1995, the Oak Ridge Institute for Science and Education (ORISE) analysis indicated that the background activity of the filter was subtracted from the sample with one exception: the filter was not subtracted for the U-235 concentration because of the minute quantity. No attempt was made to measure the radiation from any other source of background radiation (such as radiation inherent in the water preceding its use at a licensed facility), so that the measurement was thus conservative in not accounting for the natural and global fallout radiation in the samples before use. Background radiation determinations by ORISE and the Idaho National Engineering Laboratory (our consultants who analyzed various samples related to your Petition) are made using such accepted, conservative methods.

With regard to your concern about geologic conditions, none of the information you have given us alters our previous conclusion in the Partial Director's Decision.

Regarding your question on plutonium monitoring of the sewerage treatment plant, NRC has performed an analysis and found no evidence of this material being discharged from the Georgia Tech Research Reactor as stated in the Partial Director's Decision. Therefore, no further analysis is needed with regard to your Petition.

With regard to your concerns about NRC's regulations [(1) NRC allows workers to receive far higher radiation doses within licensed facilities, (2) NRC does not consider a person working at a nuclear facility a "member of the public," (3) NRC allows radiation exposures above background exposures, and (4) NRC release limits to sewers are not the same as the Environmental Protection Agency's standards for drinking water], these concerns relate to the adequacy of NRC regulatory requirements. In your letters to date, as stated in the Partial Director's Decision, you have not provided adequate bases to demonstrate that the current regulatory framework does not acceptably protect the public and the environment. However, if you wish to provide relevant technical, scientific or other data and grounds to support any change to any NRC regulations, you may submit a Petition for Rulemaking in accordance with 10 CFR 2.802. For your information, I have enclosed (1) NRC's Final Rule on Standards of Protection Against Radiation, which appeared in the *Federal Register* (Enclosure 5) and (2) NRC Regulatory Guide 8.29, "Instruction Concerning Risks From Occupational Radiation Exposure" (Enclosure 6).

As you requested in a telephone conversation with Marvin Mendonca of my staff and Craig Bassett of Region II on January 22, 1996, I have enclosed copies of three NRC documents related to the increase in the licensed power level of the Georgia Tech Research Reactor to 5 megawatts (thermal): (1) an Atomic Energy Commission (AEC) letter dated December 19, 1972, that transmits a copy of the

Notice of Proposed Issuance of Construction Permit and Amended Facility License (Enclosure 7), (2) an AEC letter dated May 2, 1973, that issues the construction permit (Enclosure 8), and (3) an AEC letter dated June 6, 1974, that amends the facility license to authorize a licensed power level increase to 5 megawatts (thermal) (Enclosure 9). This process was essentially identical to the current process, and included an opportunity to ask for a public hearing on the license amendment request, except in the previous process no request for hearing was received.

With regard to your question on the indemnity agreements, the requirements for institutions such as Georgia Tech are specified in 10 CFR Part 140, Subpart D, "Provisions Applicable Only to Nonprofit Educational Institutions," which specifically states, in part, that:

- (a) The Commission will execute and issue agreements of indemnity with each non-profit educational institution subject to this subpart pursuant to the regulations in this part or such other regulations as may be issued by the Commission....
  
- (b)(1) The general form of indemnity agreement to be entered into with licensees subject to this subpart is contained in § 140.95 appendix E, as are provided for in applicable licenses, regulations or orders of the commission.

For your information 10 CFR 140.95, Appendix E, is enclosed (Enclosure 10). On the basis of your telephone conversation with Marvin Mendonca of my staff and Craig Bassett of Region II, I draw your attention to Article III, item 1, which states:

- 1. The Commission undertakes and agrees to indemnify and hold harmless the licensee and other persons indemnified, as their interest may appear, from public liability.

All other concerns and questions in your letters relate to issues that may be subjects of an ongoing license renewal hearing process in which, as you have informed members of the NRC staff, you are acting as a consultant to the Georgians Against Nuclear Energy. Consistent with Management Directive 8.11 and as previously indicated in our letters to you, the NRC staff will complete the evaluation of your remaining 10 CFR 2.206 issues at an appropriate time after taking into account the results of the license renewal proceeding.

As Craig Bassett of NRC Region II stated in a letter to you dated July 27, 1995, I also encourage you to express all your concerns to the NRC in a written form. This will help to ensure that your concerns are given proper consideration. Further, if you would like us to send you any more documents please address your request to Mr. Russell A. Powell, Chief, Freedom of Information/Local Public Document Room Branch, Division of Freedom of Information and Publications Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Sincerely,



William T. Russell, Director  
Office of Nuclear Reactor Regulation

Docket No. 50-160

Enclosures:

1. NRC Management Directive 8.11 "Review Process for 10 CFR 2.206 Petitions"
2. In the matter of Consolidated Edison Company, Inc., of New York (Indian Point, Units 1, 2, and 3), CLI-75-8, 2 NRC 173, 175 (1975)
3. In the matter of Washington Public Power Supply System (WPPSS Nuclear Project No. 2), DD-84-7, 19 NRC 899, 924 (1984)
4. NUREG-1600, "General Statement of Policy and Procedures for NRC Enforcement Actions"
5. Federal Register NRC's Final Rule on Standards of Protection Against Radiation
6. NRC Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure."
7. AEC letter dated December 19, 1972, that transmits a copy of the Notice of Proposed Issuance of Construction Permit and Amended Facility License
8. AEC letter dated May 2, 1973, that issues the Construction Permit
9. AEC letter dated June 6, 1974, that amends the Facility License authorizing a licensed power level increase to 5 megawatts (thermal)
10. 10 CFR 140.95 Appendix E

cc w/enclosures: See next page

Georgia Institute of Technology

Docket No. 50-160

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March 22, 1996

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Sincerely,  
Original Signed By  
WILLIAM T. RUSSELL  
William T. Russell, Director  
Office of Nuclear Reactor Regulation

Docket No. 50-160

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*NRC Management Directive 8.11 "Review Process for 10 CFR 2.206 Petitions"*

ENCLOSURE 1