

EDO Principal Correspondence Control

FROM: DUE: 12/21/01 EDO CONTROL: G20010562  
DOC DT: 11/19/01  
FINAL REPLY:

Senator Hillary Rodham Clinton

TO:

Madden, NRR

FOR SIGNATURE OF : \*\* GRN \*\* CRC NO:

Travers, EDO

DESC: ROUTING:

Plutonium-239/Beryllium Sources at Manhattan  
College

Travers  
Paperiello  
Kane  
Norry  
Craig  
Burns/Cyr  
Miller, RI  
Rathbun, OCA  
Vietti-Cook, SECY

DATE: 12/12/01

ASSIGNED TO: CONTACT:  
NRR Collins

SPECIAL INSTRUCTIONS OR REMARKS:

Prepare response to Senator Clinton.

HILLARY RODHAM CLINTON  
NEW YORK  
SENATOR

RUSSELL SENATE OFFICE BUILDING  
SUITE 476  
WASHINGTON, DC 20510-3204  
202-224-4451

# United States Senate

WASHINGTON, DC 20510-3204

November 19, 2001

**BY TELECOPIER**

Mr. Patrick Madden  
Chief, Non-Power Reactors Section  
Nuclear Regulatory Commission  
Mail Stop O12-D1  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852-2738

Dear Mr. Madden,

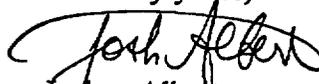
We are writing to confirm information regarding plutonium-239/beryllium sources at Manhattan College, located in Riverdale, New York.

Manhattan College has contacted this office and asked us to determine whether there is a way to expedite the transfer process. By correspondence dated September 5, 2001, the U.S. Department of Energy (DOE) informed this office it expects to deliver overpacks to the college that may be used to store the material pending its transfer to DOE custody for disposal. A copy of the DOE correspondence is attached.

We wish to confirm that such usage of overpacks is acceptable to the Nuclear Regulatory Commission and that all pertinent licenses permit the use of overpacks to store such material at the college.

I look forward to your response.

Sincerely yours,



Joshua Albert  
Director of Special Projects  
U.S. Senator Hillary Rodham Clinton  
780 Third Avenue, Suite 2601  
New York, NY 10017  
tel: 212-688-9776  
fax: 212-223-8496

Attachment

cc: Mr. Steven Lerner, DOE

Date: 9/5/01 4:21 PM  
Sender: "Lerner, Steve" <Steve.Lerner@hq.doe.gov>  
To: josh albert  
Priority: Normal  
Subject: FW: Info for Josh (in Senator Clinton's office) on the Off-S

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> <<Off-Site Sealed Source Summary Inventory 4-1-011.ppt>> <<Off-Site  
> Source Recovery Program One Pager - September 2001.wpd>>

Received: from mailsims2.senate.gov ([156.33.203.11]) by imaexch.senate.gov  
with  
SMTP

(IMA Internet Exchange 3.13) id 001FC8AA; Wed, 5 Sep 2001 16:24:26 -0400  
Received: from hqwss.hr.doe.gov (hqwss-01.hr.DOE.GOV)  
by mailsims2.senate.gov (Sun Internet Mail Server  
sims.3.5.1999.07.30.00.05.p8) with SMTP id  
<OGJ7003B8HWKUC@mailsims2.senate.gov> for josh\_albert@clinton.senate.gov;  
Wed,

5 Sep 2001 16:22:00 -0400 (EDT)

Received: from 146.138.1.115 by hqwss.hr.doe.gov with ESMTTP  
(Dept. of Energy SMTP Relay (MMS v4.7)); Wed, 05 Sep 2001 16:29:15 -0400  
Received: by hqexchub.hr.doe.gov with Internet Mail Service (5.5.2653.19 )  
id <ROBMC61A>; Wed, 05 Sep 2001 16:21:17 -0400

Date: Wed, 05 Sep 2001 16:21:00 -0400

From: "Lerner, Steve" <Steve.Lerner@hq.doe.gov>

Subject: FW: Info for Josh (in Senator Clinton's office) on the Off-Site S  
ource Recovery Program

To: "'josh\_albert@clinton.senate.gov'" <josh\_albert@clinton.senate.gov>

Message-id: <178854912754-01@Department\_of\_Energy\_E-Mail\_Security\_Server>

MIME-version: 1.0

X-Mailer: Internet Mail Service (5.5.2653.19)

Content-type: MULTIPART/MIXED;

BOUNDARY="Boundary\_(ID\_uXSfdGS7eBo4nOhjfd4AJQ)"

X-Server-Uid: 0bf4d294-faec-11d1-a39a-0008c7246279

X-WSS-ID: 178854912754-01-02



Off-Site Sealed Source  
Summary Inventory



Off-Site Source  
Recovery Program One Page

## **DOE's Off-Site Source Recovery Program**

### **September 2001**

- DOE is responsible for disposal of all radioactive waste which exceeds the U.S. Nuclear Regulatory Commission's limit for class C waste, commonly referred to as Greater Than Class C (GTCC) waste.
- Commercial sealed sources that are no longer needed, or no longer acceptable for use, are considered GTCC waste. Sealed sources are used for a wide variety of purposes, including laboratory research, diagnostic medical applications (such as x-rays, bone density scans, etc), and industrial measurements and inspections (such as measuring moisture content and density of materials, and inspecting welds). Sealed sources can contain several different types of radioactive material, including plutonium-238, americium-241, plutonium-239, and others.
- DOE does not have a disposal capability for GTCC waste, but through the Off-Site Source Recovery Program (OSRP) is accepting GTCC sources for storage.
- DOE's OSRP currently accepts plutonium-238 and americium-241 sources for storage at the Los Alamos National Laboratory in New Mexico. DOE is working toward the capability to accept and store plutonium-239 sources, like the ones at Manhattan College.
- DOE is currently unable to accept commercial plutonium-239 sources due to the lack of an available storage area at the Los Alamos National Laboratory which meets the security requirements and has the capacity to store the number of sources required, approximately 250.
- Based on existing DOE safeguards and security requirements, there are specific requirements for the storage of the cumulative amount of plutonium-239 found in all 250 sources. The cumulative total creates the need for a security area, which is currently not available. There are no similar security issues associated with the storage of individual sources (e.g., as at Manhattan College).
- Attached is a map that shows the various types of sources whose owners have contacted the OSRP and expressed a desire to return them to DOE. The OSRP estimates there are 5,000 to 10,000 additional sources in use which will become excess over the next ten years. The OSRP's plan is to recover all of the sources shown on the map over the next four to five years, continue to accept unwanted sources and store them until disposal is made available, and then transition to a direct disposal system under which unwanted sources would go directly from owners to disposal.
- DOE's OSRP is working towards developing appropriate storage for these sources, and expects to have this storage in place by September 2002, after which time, DOE will begin accepting plutonium-239 sources for storage pending disposition.
- In the meantime, DOE is working with Manhattan College to expedite availability of the

special overpacks that will be needed to allow shipment of the Manhattan College sources. We are planning to provide the shipping overpacks to Manhattan College within the next few months. Once the sources are packaged, if the New York State regulator agrees, Manhattan College would be able to relocate the sources on campus, thus freeing up for reuse the space the sources are currently being stored in. It is our understanding that this will alleviate Manhattan College's immediate concern regarding the sources.





LICENSE AUTHORITY FILE COPY.

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

~~DO NOT REMOVE~~

FOX  
TOM  
DRAGON  
9 pages

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-199

MANHATTAN COLLEGE

RENEWAL OF FACILITY OPERATING LICENSE

Amendment No. 6  
License No. R-94

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by the Manhattan College dated August 26, 1983, as supplemented, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. Construction of the facility was completed in substantial conformity with Construction Permit No. CPRR-75 dated August 27, 1962, the provisions of the Act, and the rules and regulations of the Commission;
  - C. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - D. There is reasonable assurance (i) that the activities authorized by this license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - E. The licensee is technically and financially qualified to engage in the activities authorized by this operating license in accordance with the rules and regulations of the Commission;
  - F. The licensee is a nonprofit educational institution and will use the facility for the conduct of educational activities, and has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;
  - G. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;

- H. The issuance of this license is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
- I. The receipt, possession and use of the byproduct and special nuclear materials as authorized by this license will be in accordance with Commission's regulations in 10 CFR Parts 30 and 70, including Sections 30.33, 70.23, and 70.31.

2. Facility Operating License No. R-94 is hereby amended in its entirety to read as follows:

A. This license applies to the tank-type nuclear reactor, known as the Manhattan College Zero Power Reactor (hereinafter MCZPR or the reactor), which is owned by Manhattan College and located on its campus in New York City, and described in the application dated August 26, 1983, as supplemented.

B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Manhattan College:

- (1) Pursuant to Section 104c of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, but not operate the reactor at the designated location on the Manhattan College campus in New York City;
- (2) Pursuant to the Act and 10 CFR part 70, "Domestic Licensing of Special Nuclear Material," to possess up to 3.9 kilograms of contained uranium 235 at enrichments equal to or less than 20 percent and up to 10 grams of contained uranium 235 at greater than 20 percent enrichment and up to 16 grams of plutonium encapsulated as a plutonium-beryllium neutron source.
- (3) Pursuant to the Act and 10 CFR Parts 30 and 70 to possess but not separate such byproduct and special nuclear materials as may have been produced by past operation of the reactor.

Amdt  
# 12,  
3-23-91

2.B.(4) Pursuant to the Act and 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of byproduct Material," to possess and use a sealed source of up to 5 millicuries for radiation monitoring equipment calibration.

Amdt  
# 10,  
4-13-92

C. This license shall be deemed to contain and is subject to the conditions specified in Parts 20, 30, 50, 51, 55, 70 and 73 of 10 CFR Chapter I, to all applicable provisions of the Act, and to the rules, regulations, and orders of the Commission now or hereafter in effect and to the additional conditions specified below:

(1) Maximum Power Level

The licensee shall not operate the reactor nor store or place fuel into the reactor tank.

Amdt. #12,  
3-23-99

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 12, are hereby incorporated in the license. The licensee shall maintain the facility in accordance with the Technical Specifications as amended.

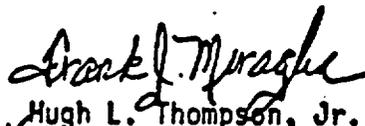
Amdt  
#12,  
3-23-99

(3) Physical Security Plan

The licensee shall follow the "Physical Security Plan for Zero Power Nuclear Reactor at Manhattan College, New York City, a Facility Possessing Special Nuclear Material of Moderate Strategic Significance," submitted by letter dated August 19, 1981, as revised by letters of August 26, and November 23, 1983.

3. This license is effective as of the date of issuance and shall expire twenty years from its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
for Hugh L. Thompson, Jr., Director  
Division of Licensing

Enclosure:  
Appendix A Technical  
Specifications

DATE OF ISSUANCE: March 26, 1985