

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 999-90003/94017(DRSS)

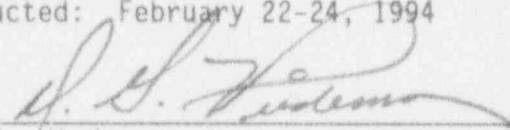
License Nos. SNM-0010 (terminated);
SUB-0477 (terminated)

Licensee: Atomic Power Development Associates, Inc. (APDA)
1911 First Street
Detroit, Michigan

Inspection At: Detroit Edison, Engineering and Research Facility
6100 W. Warren
Detroit, Michigan
-and-
Delray Power Plant
6605 W. Jefferson
Trenton, Michigan
-and-
Detroit Edison, Sibley Quarry
710 Jefferson
Trenton, Michigan
(all former APDA occupied facilities)

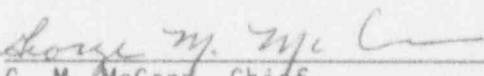
Inspection Conducted: February 22-24, 1994

Inspector:


D. G. Wiedeman
Senior Health Physicist

3/8/94
Date

Approved by:


G. M. McCann, Chief
Fuel Facilities and Decommissioning
Section

3/8/94
Date

Inspection Summary

Inspection on February 22-24, 1994 (Report No. 999-90003/94017(DRSS))

Areas Inspected: This was a special inspection to review the former licensee's activities and to determine if licensed material was properly transferred to authorized recipients and if buildings used under the licenses were properly decontaminated prior to the termination of the licenses. The inspector conducted an independent review of transfer records and performed radiation surveys in the former licensee's off-site buildings that were used for research and testing. This inspection was part of an NRC project which evaluated approximately 17,000 retired licenses. An NRC contractor, Oak Ridge National Laboratories (ORNL) performed the evaluation. On the basis of the information in the retired license file, such as type and quantity of

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authorized materials and lack of adequate decontamination documentation, ORNL concluded that these facilities have the potential for residual radioactive contamination.

Results: Licensed material possessed under AEC Licenses No. SNM-0010 and SUB-0477 were properly transferred or superseded by other NRC Licenses. The NRC inspector did not identify any radiation levels above background in or around the building formerly used by Atomic Power Development Associates, Inc. Based upon the inspection findings, it was concluded that the building and grounds meet the current NRC release criteria for release of facility for unrestricted use.

DETAILS

1. Persons Contacted

Detroit Edison Company

- *Evelyn Madsen, Principal Engineer
- *Robert Newkirk, Director, Nuclear Licensing
David Dumas, Radiation Safety Officer (Materials Program)
- *Edward Jordan, Environmental Compliance Specialist
- *John P. Williams, Site Administrator, Sibley Quarry

*Attended the exit meeting conducted on February 23-24, 1994.

2. Background

AEC License No. SNM-0010 was issued to Atomic Power Development Associates, Inc. (APDA) on December 6, 1955, based upon their application dated July 14, 1955 and supplement dated November 22, 1955. AEC License No. SUB-0477 was issued to APDA in November 1961 and expired on October 31, 1964. Authorized activities included the study and development of fuel materials and techniques for a fast breeder reactor, demonstrations, testing and non-destructive analysis of fuel materials, Attachment A. Licensed activities were authorized at four locations of use, located at the following locations: (1) 6100 W. Warren, Detroit, (2) 1911 First Street, Detroit, (3) 710 Jefferson, Trenton, and (4) 6605 W. Jefferson, Trenton, Michigan. The NRC inspectors review of transfer records indicated that prior to the termination of the APDA licenses, all special nuclear materials were transferred to Detroit Edison, AEC License No. SNM-0423. AEC Source Material License No. SUB-0477 was superseded on May 10, 1963 upon the issuance of a low-power license (DPR-9) for the Fermi, Unit 1 reactor facility. Currently Fermi, Unit 1 and all associated (on-site) buildings are covered under NRC License No. DPR-9 (Docket No. 50-16).

3. Facility Status

Currently the facilities located at 6100 W. Warren, Detroit, Michigan are Detroit Edison's Engineering and Research facility and is covered under NRC Byproduct Material License No. 21-02335-02. The buildings located at 1911 First Street, Detroit were all demolished some time in 1970. This area is now an asphalt covered parking lot. The facility located at 710 Jefferson, Trenton, Michigan (Sibley Quarry) is currently owned and operated by Detroit Edison. The site is used for lime stone mining and disposal of fly-ash from fossil fuel plants. The former research buildings used by APDA at 6605 W. Jefferson, Trenton, (Delray Power Plant) were demolished approximately three years ago.

4. Independent Measurements

Background radiation measurements were taken in the downtown area of Detroit, Michigan with a Victoreen Model 190 and Ludlum Model 19 portable survey instruments. Background measured 45-55 counts/minute (cpm) with the Victoreen and 7-15 microroentgens/hour ($\mu\text{R/h}$) (1.8-3.8 nanocoulomb per kilogram per hour) (nC/kg/h) with the Ludlum.

Independent radiation surveys were performed with a Victoreen Model 190 portable survey instrument with a Model RP-1 pancake probe, NRC Tag No. 042443, and Ludlum Model 19, NRC Tag No. 015522, calibrated on February 1, 1994 and July 28, 1993, respectively. Prior to the surveys all instruments were checked for accuracy and constancy with dedicated and traceable check sources. All instruments responded as expected.

The inspector conducted radiation surveys in and around buildings located at the Sibley Quarry site (710 Jefferson, Trenton, MI.) and selected rooms at 6100 W. Warren, Detroit, Michigan. The radiation surveys included areas in and around buildings No. 1, 8, 9, 17 and 18 (Sibley Quarry), the Electron Microscope Room and Metallurgy Room (6100 W. Warren, Detroit). The areas surveyed included restrooms, hallways, offices, former manufacturing areas, parking lots, building down spouts and loading docks. The NRC inspector's survey of the above referenced buildings and adjacent property did not identify any radiation levels above natural background.

5. Exit Meeting

The NRC inspector conducted an exit meeting at the conclusion of the inspection with the individuals identified in Section 1 of this report and summarized the findings of the inspection. The inspector informed the licensee that it appeared that all licensed material formerly licensed to APDA was properly transferred prior to the termination of their license and all remaining buildings used for licensed activities were properly decommissioned. During the exit meeting with the current licensee representatives, none of the participants indicated to the inspector that any of the inspection findings or documents provided to the inspector were considered proprietary.

Attachment: AEC licenses
dtd 12/1955 & 11/15/61

Pursuant to the Atomic Energy Act of 1954, and subject to the conditions and limitations incorporated herein, the Atomic Power Development Associates, Inc., (hereinafter referred to as APDA), is hereby authorized to receive, possess, (and in the case of source material to obtain title to) use and transfer the following described materials:

- a. Uranium enriched to 10% in the isotope U-235
- b. Source material consisting of natural uranium or uranium depleted in the isotope U-235.

for use, in the case of source material, in studying the techniques of fabrication of fuel elements, and in the case of special nuclear material, in connection with studies of fuel elements to determine their stability under conditions or radiation.

Unless specifically authorized by the Commission after a showing has been made that APDA possesses facilities and procedures for the safe handling and storage of large quantities, APDA shall have in its physical possession at any time a quantity of special nuclear material in excess of 1 kilogram.

APDA is further authorized to transfer source material and special nuclear material to persons appropriately licensed by the Atomic Energy Commission to receive such material

This license is subject to all applicable provisions of the Atomic Energy Act of 1954 and all applicable rules, regulations, and orders of the Commission. It is subject also to the provisions of the Atomic Energy Commission's proposed regulations published in the Federal Register April 15, 1955 (10 CFR Parts 70 and 95), July 15, 1955 (10 CFR Part 20) and August 10, 1955 (10 CFR Part 2) until such time as said proposed regulations or revisions



thereof shall become effective regulations of the Commission. The provisions of Section 70.32 of said proposed regulations are incorporated herein by reference with the same force and effect as if fully set forth herein.

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APDA is hereby allocated 15 kilograms of uranium enriched to 10% in the isotope U-235, and 2000 kilograms of natural and/or depleted uranium to be delivered approximately in accordance with the schedule of requirements stated in the application dated July 14, 1955 submitted by APDA.

FOR THE ATOMIC ENERGY COMMISSION

H. L. Price, Director
Division of Civilian Application



UNITED STATES
ATOMIC ENERGY COMMISSION

SOURCE MATERIAL LICENSE

Pursuant to the Atomic Energy Act of 1954, and Title 10, Code of Federal Regulations, Chapter 1, Part 40, "Licensing of Source Material," and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, possess and import the source material designated below; to use such material for the purpose(s) and at the place(s) designated below; and to deliver or transfer such material to persons authorized to receive it in accordance with the regulations in said Part. This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954 and is subject to all applicable rules, regulations, and orders of the Atomic Energy Commission, now or hereafter in effect, including Title 10, Code of Federal Regulations, Chapter 1, Part 20, "Standards for Protection Against Radiation," and to any conditions specified below.

Licensee		3. License No. SUB-477
1. Name Atomic Power Development Associates, Inc.	2. Address 1911 First Street Detroit 26, Michigan	4. Expiration Date October 31, 1964.
6. Source Material Uranium		5. Docket No. 40-6674
		7. Maximum quantity of source material which licensee may possess at any one time under this license Two hundred and twenty (220) pounds

CONDITIONS

8. Authorized use (Unless otherwise specified, the authorized place of use is the licensee's address stated in Item 2 above.)

In accordance with the procedures described in the licensee's application dated October 6, 1961.

Authorized place of use: As outlined in item 4 of the licensee's application.

Doc. off

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Date of issuance

For the U. S. ATOMIC ENERGY COMMISSION

U.S. GOVERNMENT PRINTING OFFICE: 1961-O-581691

Division of Licensing & Regulation

ATTACHMENT A

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