

November 8, 1996

MEMORANDUM TO: Donald A. Cool, Director
Division of Industrial and Medical Nuclear Safety
Office of Nuclear Material Safety and Safeguards

FROM: Bruce S. Mallett, Director (original signed by DM Collins)
Division of Nuclear Materials Safety

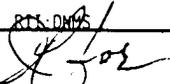
SUBJECT: STATUS REPORT OF REGION II REVIEW OF OAK RIDGE NATIONAL
LABORATORY (ORNL) LIST OF POTENTIALLY CONTAMINATED SITES

The quarterly status reports for those Region II sites contained on the ORNL list of formerly licensed sites identified as potentially contaminated are contained in Attachments 1 through 4. The status reports for those sites with an ORNL final score greater than 300 which remain open are in Attachment 1 and **those with a score** from 5 to 300 which Region II has reviewed and remain open are listed in Attachment 2. The status reports for those sites which are **recommended** for deletion are listed in Attachment 3. The sealed source files which have been reviewed and are recommended for deletion are listed in Attachment 4. The information required for the Monthly Information Status Report is in Attachment 5. A tabular summary of all files assigned to Region II is in Attachment 6.

If you have any questions regarding these reports or our evaluations, please contact Mr. Jay L. Henson of my staff at (404) 331-0344.

- Attachments: (1) Reports for sites >300 (remain open)
(2) Reports for sites <300 (remain open)
(3) Reports for sites <300 (recommend deletion)
(4) Sealed Sources (recommend deletion)
(5) Monthly Information Status Report
(6) Tabular summary for all Region II sites

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W., SUITE 2900
ATLANTA, GEORGIA 30323-0199

November 8, 1996

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Office of Nuclear Material Safety
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FROM: *for* Bruce S. Mallett, Director *BSM*
Division of Nuclear Materials Safety

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STATUS REPORTS FOR SITES WITH ORNL SCORE >300
(Remain In Open Status)

SNM-00724 Union Carbide Corporation

SITE STATUS REPORT

OCTOBER 23, 1996

Docket No. 070-00784

License No. SNM-00724

Licensee Name: Union carbide CorporationSite Name: Carbon Products DivisionSite Address: 3 miles south of Lawrenceburg, TN

City: Lawrenceburg

State: TN

Zip: 38464

Regional Contact: Jay L. Henson

Phone: (404) 331-0344

Status Summary:

ORNL Final Score: 15,456

Background

On August 26, 1963, Union Carbide-Lawrenceburg was issued an SNM license authorizing possession of up to 500 grams of fullyenriched (<94%) uranium for testing of equipment and processes in their Lawrenceburg Fuel Development Facility.

On May 22, 1964, the license was amended to authorize possession of 150 kilograms of U235 to make graphite-coated uranium-thorium carbide particles and graphite-matrix fuel elements.

The possession limit was increased to 475 kg. on June 12, 1964.

On December 6, 1964, a capsule containing 93% enriched uranium exploded in a furnace used to convert uranium oxide to uranium dicarbide. one additional capsule ruptured after being ejected from the furnace by the explosion. The two ruptured capsules contained 10.9 kg. of uranium. The licensee's description of the cleanup and associated sampling/monitoring performed after the incident does not clearly state the quantity of material that was recovered from the ruptured capsules. Soil samples were taken outside the fence around the facility, but there is no indication that soil samples were taken within the restricted area.

Liquid wastes containing "small amounts" (undefined) of nonrecoverable licensed material were piped to two settling basins after being fluorometrically measured. Daily samples were also taken of liquid exiting the basin prior to entering Shoal Creek.

**REGION 11 TERMINATED SITES LIST
SITE STATUS REPORT**

OCTOBER 23, 1996

Union Carbide Corporation
Lawrenceburg, TN

License No. SNM-724
Docket No. 070-00784

By letter dated February 4, 1974, the licensee submitted closeout survey information and requested that License No. SNM-724 be terminated and the facility be released for unrestricted use. (NOTE: The submitted survey does not to include soil or settling basin sampling.)

In a March 15, 1974 memo, the Chief, Fuel Fabrication and Reprocessing Branch, AEC, stated that the submitted survey appeared to meet AEC guidelines for decontamination of facilities prior to release for unrestricted use, but desired that Region 11 perform a confirmatory survey.

On April 5, 1974, Region 11 performed a closeout inspection which was documented in Inspection Report 70-784/74-1. Region 11 recommended that the license be terminated and the facility released for unrestricted use. (NOTE: The report does not include soil or settling basin sampling.)

By AEC letter dated June 4, 1974, License No. SNM-724 was terminated and the facility released for unrestricted use.

Assessment

Region 11 evaluated the available survey data to determine if the information is sufficient to conclude that the building meets existing guidelines for unrestricted use. Region 11 determined that sampling of the soil in the former restricted area as well as the settling basins should be performed.

Union Carbide (UCAR) submitted a survey/sampling plan on November 11, 1994. Region 11 reviewed the plan and sent comments back to UCAR on January 12, 1995. UCAR expects to submit a revised sample plan in April 1995.

UCAR submitted their revised sampling plan in a letter dated April 20, 1995. Region 11 personnel reviewed the plan and prepared a response which included comments regarding some changes which must be made to the plan before it could be approved. The Region 11 letter to UCAR was forwarded to the State of Tennessee for their review and comment on May 31, 1995. Their comments were forwarded to Region 11 on June 18, 1995, and are under review. Region 11 will send a letter to UCAR with comments regarding the revised sampling plan in July, 1995.

SITE STATUS REPORT

OCTOBER 23, 1996

Union Carbide Corporation
Lawrenceburg, TN

License No. SNM-724
Docket No. 070-00784

Assessment

Region II's comments to the UCAR sampling plan were forwarded to UCAR in a letter dated August 3, 1995. UCAR's response to Region II's comments was received on October 26, 1995. Region II is reviewing this response and expects to complete the review by November 3, 1995.

UCAR response to comments reviewed and RII approved plan November 1995. Licensee contacted on February 5, 1996, for report on current status. Licensee has completed contract for survey performed in accordance with decommissioning plan. Survey is tentatively scheduled to begin in the second calendar quarter of 1996.

UCAR began the facility survey in April, 1996. During the week of April 22-26, 1996, Region II staff observed the sampling of the sediment and soil from the bottom of the two settling ponds and obtained split samples from some of the sampling locations for analysis by ORISE. UCAR expects to complete the survey in June, 1996. Region II personnel will conduct inspections of the decommissioning effort and perform some confirmatory surveys prior to completion of the survey.

A Region II inspector conducted an inspection in June, 1996, at the UCAR facility while the UCAR survey contractor obtained core soil samples around the facility and performed surveys of the upper walls and ceiling in the High Bay end of Building 10. UCAR now expects to complete its survey by the end of August, 1996, and hopes to submit a final report by the end of September, 1996.

In August, 1996, ORISE informed RII that two of the soil samples obtained during the June, 1996, inspection exceeded the release criteria. RII informed UCAR of this information. UCAR received its contractor's survey report in September and is reviewing the report prior to submission to NRC. UCAR now expects to submit their report in November, 1996.