

June 27, 1997

MEMORANDUM TO: John T. Greeves, Director
Division of Waste Management
Office of Nuclear Material Safety and Safeguards

FROM: Douglas M. Collins. Acting Director (original signed by
Division of Nuclear Materials Safety D. M.
Collins)

SUBJECT: STATUS REPORT OF REGION 11 REVIEW OF OAK RIDGE NATIONAL
LABORATORY (ORNL) LIST OF POTENTIALLY CONTAMINATED SITES

The quarterly status reports for those Region 11 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 11 has reviewed and remain open are listed in Attachment 2. The information required for the Monthly Information Status Report is in Attachment 3. A tabular summary of all files assigned to Region 11 is in Attachment 4. Please note that the most current information in Attachments 1 and 2 is in **bold**.

If you have any questions regarding these reports or our evaluations." please contact Mr. Bryan A. Parker of my staff at (404) 562-4728.

- Attachments: (1) Reports for sites >300 (remain open)
(2) Reports for sites <300 (remain open)
(3) Monthly Information Status Report
(4) Tabular summary for all Region 11 sites

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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 information required for the Monthly Information Status Report is in Attachment 3. A tabular summary of all files assigned to Region II is in Attachment 4. Please note that the most current information in Attachments 1 and 2 is in bold.

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(2) Reports for sites <300 (remain open)
(3) Monthly Information Status Report
(4) Tabular summary for all Region II sites



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303

June 27, 1997

MEMORANDUM TO: John T. Greeves, Director
Division of Waste Management
Office of Nuclear Material Safety and Safeguards

FROM: Douglas M. Collins, Acting Director *Douglas M. Collins*
Division of Nuclear Materials Safety

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

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

SNM-00724 Union Carbide Corporation

REGIONII TERMINATED SITES LIST
SITE STATUS REPORT

JUNE 24, 1997

Docket No. 070-00784

License No. SNM-00724

Licensee Name: Union Carbide Corporation

Site Name: Carbon Products Division

Site Address: 3 miles south of Lawrenceburg, TN

City: Lawrenceburg State: TN Zip: 38464

Regional Contact: Bryan A. Parker

Phone: (404) 562-4728

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 non-recoverable 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 I1 TERMINATED SITES
LIST
SITE STATUS REPORT**

JUNE 24, 1997

Union Carbide Corporation
Lawrenceburg, TN

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

Background
(cont'd)

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 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 I1 perform a confirmatory survey.

On April 5, 1974, Region I1 performed a closeout inspection which was documented in Inspection Report 70-784/74-1. Region I1 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 I1 evaluated the available survey data to determine if the information is sufficient to conclude that the building meets existing guidelines for unrestricted use. Region I1 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 I1 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 I1 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 I1 letter to UCAR was forwarded to the State of Tennessee for their review and comment on

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

JUNE 24, 1997

Union Carbide Corporation
Lawrenceburg. TN

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

Assessment (cont'd)

May 31, 1995. Their comments were forwarded to Region II on June 18, 1995, and are under review. Region II will send a letter to UCAR with comments regarding the revised sampling plan in July, 1995.

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.

UCAR's corporate legal and environmental staff did not complete their review of the survey contractor's report until after December, 1996. UCAR has returned it to their contractor for publication in final

form. UCAR expects to receive this final report in late March **or early April**, 1997, and will forward the report to RII at that time.

REGIONII TERMINATED SITES LIST
SITE STATUS REPORT

JUNE 24, 1997

Union Carbide Corporation
Lawrenceburg, TN

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

Assessment (cont'd)

On June 20, 1997, UCAR indicated that their survey contractor was still revising the report before publication. UCAR has requested changes before publication because the report did not include proposals for remediation. A meeting between UCAR and the contractor is tentatively scheduled for July 1997, with publication of the final report by the end of the third quarter 1997 (September 30, 1997). UCAR will forward the final report to Region II upon completion.