

September 25, 1998

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

FROM: Douglas M. Collins, Director Of IP *signed*
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Division of Nuclear Materials Sa

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

The quarterly status reports for Region II sites contained on the ORNL list of formerly licensed sites which were identified as potentially contaminated are contained in Attachments 1 through 4. The status reports for 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. Each assessment paragraph in Attachments 1 and 2 reflects the quarterly status at the time of the evaluation. 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 the attachments 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 >5<300 (remain open)
 (3) Monthly Information Status Report
 (4) Tabular summary for all Region II sites

OFFICE	RII:DNMS	RII:DNMS	RII:DNMS						
SIGNATURE	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>						
NAME	BParker	TDecker	Chosey						
DATE	9/25/98	9/25/98	9/25/98	9/ /98	9/ /98	9/ /98	9/ /98	9/ /98	9/ /98
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REGION II TERMINATED SITES
LIST

SITE STATUS REPORT

September 24, 1998

Docket No. 070-00784
00724

License No. SNM-

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
4728

Phone: (404) 562-

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 fully-enriched (<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.

REGION II TERMINATED SITES
LIST
SITE STATUS REPORT

September 24, 1998

Union Carbide Corporation
Lawrenceburg, TN
00784

License No. SNM-724
Docket No. 070-

Background
(cont'd)

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.

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 II perform a confirmatory survey.

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

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

September 24, 1998

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 11 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's response to comments was reviewed and RII approved the plan in November 1995. The licensee was contacted on February 5, 1996, for a report on current status. The licensee has completed contracting for surveys to be performed in accordance with the decommissioning plan. A 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 11 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

September 24, 1998

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.

During the third quarter 1997, due to downsizing/cutbacks with UCAR's contractor, UCAR hired a new contractor to complete its decommissioning project. Beginning October 15, 1997, the new contractor is expected to take the data already collected by the former contractor (a characterization study) and begin developing proposals for remediation (a decommissioning plan). The revised schedule under the new contractor calls for the report, including the characterization study and decommissioning plan to be forwarded to Region II by December 17, 1997.

On January 16, 1998, Region 11 attended a meeting (requested by UCAR) with UCAR and its new decommissioning contractor at the UCAR facility in Lawrenceburg, Tennessee, to present UCAR's intentions regarding decontamination and decommissioning (D&D), and discuss the process and options. In attendance were representatives of UCAR, NRC Region 11, State of Tennessee Division of Radiological Health, and Nuclear Fuel Services (NFS). NFS representatives presented their findings and recommendations after reviewing previously conducted site characterization surveys by a former UCAR contractor. A tour of the facility was also conducted to familiarize all parties involved with the site. Finally, discussions were held regarding licensing, inspection, plan review and approval, and the D&D process in general. NFS is in the process of developing a decommissioning plan for UCAR based on the new dose-based release criteria. At the meeting, UCAR and NFS indicated that they planned to seek unrestricted release based on a dose of 100 millirem per year. UCAR requested the NRC's position on this in writing. On April 20, 1998, Region II sent a letter to UCAR indicating that their 100 millirem unrestricted release proposal was not acceptable. According to a UCAR representative, the Region II April 20 letter will be evaluated and a response provided.

In June 1998, UCAR indicated in telephone discussions that **they had informed their contractor (NFS) to draft** the decommissioning plan to address the 25 millirem per year unrestricted release criteria. This was **confirmed by UCAR in their letter dated July 24, 1998**. On August 19, 1998, UCAR submitted

Attachment 1

REGIONII TERMINATED SITES LIST
SITE STATUS REPORT

September 24, 1998

Union Carbide Corporation
Lawrenceburg, TN

License No. SNM-724
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Assessment (cont'd)

a decommissioning plan, including previous site characterization information, to Region II for review and approval. Region II is currently reviewing the submittal and plans to submit to DWM for review under a TAR by October 30, 1998.