

As requested by your memo dated March 8, 1993, we have reviewed information you furnished concerning formerly-licensed sites within Region 11 which an Oak Ridge National Laboratory (ORNL) analysis identified as having a potential for relatively high contamination. In accordance with your memo, we have directed our initial efforts at the four Region II sites (American Lava, Union CarbideLawrenceburg, EPA-Vienna, and Lockheed-Georgia) with ORNL evaluation scores above 300. In addition to the information contained in the retired docket files, our evaluation included information obtained from present and former NRC, licensee, and state (Tennessee and Georgia) personnel. The results of our evaluations to date and recommendations are enclosed.

Based on our review, we recommend **that Lockheed-Georgia** be removed from the list for reasons described in the enclosure. We expect to have information within a few weeks which will permit a characterization of the EPA-Vienna and Union Carbide-Lawrenceburg facilities. Our information collection efforts on American Lava are continuing, but prospects for resolving the status of this site without on-site surveys do **not appear promising**.

The outcome of these continuing efforts will be included in our September 30, 1993 status report to your office.

If you have any questions regarding our evaluations or recommendations please contact me or Jerry D. Ennis of my **staff at (404) 331-5787**.



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

Charles Paul Oddy

JUN 17 1993

*SNAA-0109 (70-00105)
45-014090-02
SNM-00260*

MEMORANDUM FOR: Richard E. Cunningham, Director
Division of Industrial and
Medical Nuclear Safety, NMSS

FROM: J. Philip Stohr, Director
Division of Radiation Safety and Safeguards

SUBJECT: REGION II REVIEW OF TERMINATED SITES

J. Philip Stohr
J. Philip Stohr, Director
Division of Radiation Safety
and Safeguards

Enclosure:
Facility Fact Sheet

- cc w/encl:
- R. Cooper, RI
- C. Norelius, RIII
- L. Callan, RIV
- R. Scarano, RV
- R. Bangart, NMSS

ENCLOSURE

FACILITY FACT
SHEET

American Lava Corp. (SNM-00109, 70-00105)

Location: 511 Manufacturers Road (Cherokee Blvd. & Manufacturers Road)
Chattanooga, Tennessee

Activity: Fabrication of SNM into ceramic fuel for
reactors.

ORNL's file review resulted in a ranking/score of 6,140 for this site
based on the following factors:

1. Loose materials or materials handled in loose form authorized.
2. Some likelihood that licensed activities could have generated significant contamination.
3. No verifiable decontamination of the site at closeout.
4. Possible inappropriate disposal or abandonment of contaminated material from glove boxes, hoods, etc.
5. There was limited use of contaminated waste material in the operation.
6. There was limited generation of slag or sludge in the operation and possibility of inappropriate disposal.
7. No documentation of materials disposition.
8. There was a closeout survey for this license but there was no check for alpha contamination.
9. There was no NRC final inspection of the facility.

Region 11 Remarks:

1. Based on a review of materials licensee file reference cards in the Region 11 office, it was previously thought that, as late as November 1959, American Lava had not received material under their SNM license.
2. Further review indicates that SNM was received and processed under the license. This conclusion is based on the following items:
 - a. A telegram dated March 5, 1959, to the AEC requesting a license amendment to receive 200

grams of "fully enriched uranium oxide" which the licensee wished to receive on March 9, 1959. This material was to be in pellet form and the licensee proposed to wet grind the pellets.

- b. A telegram dated March 6, 1959, from the AEC authorizing the pellet grinding operation.
 - c. A letter from the licensee dated October 14, 1959, which explains the delay in responding to an AEC letter as "due to our attention to an order for [low-enriched uranium] fuel pellets which we are producing for Allis-Chalmers Manufacturing Company. This order has required the entire output of our facility since last April [1959]."
3. In August 1982 the plant manager advised Region 11 inspectors that the fuel pellet building had been used for beryllium oxide processes since the late 1950s and had been recently decontaminated to remove the BeO hazard in preparation for other uses. A survey of the facility did identify less than a pound of Thorium in an unused drain trap. This material was subsequently transferred to another licensee. The survey did not involve evaluation of the facility's walls for alpha contamination because the walls had been recently painted. The inspector does not recall any samples being collected for evaluation.

Regional Recommendation:

The Region is seeking information from the 3M Corporation (parent corporation of American Lava) concerning decontamination of the facility. If no information is available, we recommend that site surveys be conducted.

Environmental Protection Agency (45-14090-02)

Location: 9200 Leesburg Pike, Vienna, Virginia,
and
12709 Twinbrook Parkway, Rockville,
Maryland

Activity: Research and
development

ORNL's file review resulted in a ranking/score of 750 for this license based on the following factors:

1. Loose materials authorized, including any byproduct material with Atomic Numbers from 1 to 83, Am-241, Pu- 238, Pu-239, and PLI-241 .
2. Some likelihood that licensed activities could have generated significant contamination.
3. No verifiable decontamination of the site at closeout.
4. Possible inappropriate disposal or abandonment of contaminated material from hoods, etc.
5. There was no closeout survey for this license.

Region 11 Remarks:

1. We have obtained a letter from the licensee to the NRC dated March 20, 1978, which states **that:** the Vienna, Virginia, facility was closed in June 1973 and that no americium or plutonium was obtained under the license, and no work involving licensed material was performed at the Rockville, Maryland, facility. The licensee letter also transmitted the results of EPA's closeout survey/decontamination of the facility. This survey indicates that no contamination was left at the facility. NOTE: The EPA survey does not specifically address four underground septic-type tanks which could have contained radioactive waste from one sink and an experimental animal area.
2. The EPA laboratory was on the property of Hazelton Laboratories (now Hazelton Washington). We have obtained a memo from the Hazelton RSO which documents closeout survey and decontamination action by Hazelton Laboratories. The Hazelton survey also does not address the underground tanks. Hazelton Washington is a current NRC licensee and a portion of the former EPA animal facility is still used by Hazelton as a radioactive waste storage area. Hazelton's RSO states that the underground tanks are still in place, but unused.

3. The initial NRC inspection of this license was conducted on June 13, 1973 (the license was issued in November 1972). At that time the inspector found that the licensee was in the process of closing the facility. The inspector reported that the licensee was performing metabolism and bioeffects studies on cats and listed the following radioisotopes as being used: H-3, C-14, Ca-45, Fe-59, Sr-85, Sr-89, Sr-90, and I-131. Additionally, standards (sealed sources) with the following isotopes were listed: Sr-90, Co-60, Be-133, and Cs-137. The inspector noted that waste disposal was by decay-in-storage or pickup by **Hittman Nuclear and Development** Corporation, Columbia, Maryland.

Regional Recommendation:

With the exception of the underground tanks, surveys of the facility appear to be adequate. The Region will cause surveys/sampling of the underground tanks at the former EPA facility at 9200 Leesburg Pike, Vienna, Virginia, to be performed.

Lockheed-Georgia (SNM-00260)

Location: Dawsonville, Georgia (now within the Dawson Forest Wildlife Management Area)

Activity: Research and Development

ORNL's file review resulted in a ranking/score of 6,534 for this license based on the following factors:

1. Highly likely that outdoor contamination could have occurred.
2. There was no verifiable decontamination of the site at closeout.
3. Possible inappropriate disposal of contaminated material .
4. There was significant generation of slag or sludge.
5. There is an indication of potentially significant burial or dumping at the site.

Region 11 Remarks:

1. On several occasions, the last being in 1991, this site has been the subject of technical studies, including ground and aerial surveys. Two areas (the hot cell and the "cooling-off area") have been identified as not meeting NRC guidelines for unrestricted use. The hot cell building was sealed and fenced and the cooling off area was fenced. Both areas were posted with "No Trespassing" and radiation warning signs.
2. The site is currently under the control of the State of Georgia and monitored by the state Environmental Protection Division. The state's monitoring program includes **river water (the Etowah River is nearby)**, groundwater, river sediment, fish, game, soil, and vegetation sampling as well as TLD and other direct monitoring of the area.

Regional Recommendation:

This site has been sufficiently well characterized and is adequately controlled and monitored. Recommend it be removed from the l i s t .

Union Carbide (SNM-00724)

Location: Three miles south of Lawrenceburg, Tennessee

Activity: Nuclear fuels development using high-enriched uranium.

ORNL's file review resulted in a ranking/score of 15,456 for this license based on the **following factors**:

1. License was for loose materials or material handled in loose form.
2. High likelihood that activity could have generated significant contamination.
3. There was evidence of serious release(s) to the environment.
4. There was high turnover of materials (throughput) in the facility.
5. There was limited use of glove boxes, hoods, or protective clothing.
6. There was significant generation of waste material in routine cleanup of facility.
7. There was some check for alpha contamination, but not thorough.
8. There was no NRC final inspection of the facility.

Region 11 Remarks:

In addition to the information supplied as an enclosure to our memo dated September 14, 1992, we have located the retired files of the organization which performed the decontamination and closeout surveys of the facility. These files are being reviewed in an attempt to locate the closeout documentation. If this documentation is not located, the available information will be used to make a decision concerning additional confirmatory measurements.