

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 I through 4. The status reports for those sites with an ORNL final score greater than 300 which remain open are at Attachment I and those with a score from 5 to 300 are at Attachment 2. The status reports for those sites with an ORNL final score greater than 300 which Region II recommends be closed are at Attachment 3 and those with a score from 5 to 300 are at Attachment 4. The information required for the Monthly Information Status Report is at Attachment 5. A tabular summary of all files assigned to Region II is at Attachment 6.

A detailed description of the actions Region 11 has taken to evaluate the status of the two sites associated with the former American Lava Corporation (License No. SNM-00109, ORNL Score 6,140 and License No. C-03469, ORNL Score 33) is at Attachment 7. Region II recommends that the terminated sites status for both these sites be changed from "open" to "closed." We ask that you review these documents as soon as possible so that we may notify the current site owners/occupants of the results of our evaluations and recommendations.

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) Reports for sites <300 (recommend deletion)
 - (5) Monthly Information Status Report
 - (6) Tabular summary for all Region II sites
 - (7) American Lava Evaluations



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

November 6, 1995

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 
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 SCORES >300

(RECOMMENDED FOR DELETION)

**REGION II TERMINATED SITES
LIST**

SITE STATUS REPORT

OCTOBER 31, 1995

Docket No. 070-00105
00109

License No. SNM-

Licensee Name: American Lava
Corporation

Site Name: Production Facility (Building
8)

Site Address: 511 Manufacturers
Road

City: Chattanooga
Regional Contact: Jay L. Henson
0344

State: TN Zip: 37405
Phone: (404) 331-

Status Summary:

ORNL Final Score:
6140

Background

License issued to American Lava on August 15, 1957, authorizing possession of up to 2,500 pounds of UO_2 containing uranium enriched to 20% in the U235 isotope, "for use in the fabrication of ceramictype fuel elements." The summary process/equipment description provided with the license application is attached. Detailed process information and a facility description are available in the docket file. The application states that the SNM used would consist of "Mallinckrodt or equivalent grade chemically pure UO_2 powder enriched to a maximum of 20% in the U235 isotope."

In November 1957, the licensee requested authorization to process 5,000 grams of UO_2 enriched to 8%, in their Research Laboratory (which was licensed for source material under License No. C-3469), rather than in the location of use identified in License No. SNM00109, which was still under construction. It is unclear from the file whether this operation took place.

In March 1959, the licensee asked for and received, authorization to receive high-density pellets containing 200 grams of "fully enriched uranium oxide dispersed in thorium oxide at the rate of three to 8 percent uranium oxide to thorium oxide" for testing of their pellet grinding procedures.

Between April and, at least, October 1959, the licensee was producing an order of fuel pellets for Allis-Chalmers Manufacturing Company. The records do not indicate the quantity of material involved in filling this order or if this was the only production order American Lava received.

**REGION II TERMINATED SITES
LIST**

SITE STATUS REPORT

OCTOBER 31, 1995

American Lava
00109

License No. SNM-

(A subsidiary of 3M Corporation)
Chattanooga, TN

Docket No. **070-00105**

On June 28, 1960, the licensee requested that license SNM- 00109 be terminated. No information concerning decontamination of the facility was included with the letter.

By AEC letter dated July 13, 1960, the license was terminated.

Between July 1960 and approximately 1981, the licensee had used the facility for processes involving beryllium oxide (BeO). Following termination of the BeO operation, chemical decontamination activities resulted in the removal of floor tiles, ducts, pipes, and interior plasterboard walls, leaving only the building's shell intact.

In July 1982, NMSS requested that Region II conduct a survey of the former American Lava facility. The survey was conducted on August 4, 1982 and documented in an August 27, 1982 memo to NMSS. A small quantity of thorium was found in the trap of an unused drain line and was transferred to an authorized person.

3M's Radiation Safety Officer (RSO) located a memo dated August 31, 1982, in the company's archives. The memo reviews the Chattanooga facility's history and states, "At the completion of the (uranium) work all materials were sent to Northern States Power as fuel elements, or in raw material form to Mallinckrodt, or Davidson Chemical (part of W. R. Grace) and clean up was conducted with surveys performed to determine that the building was cleaned to the then current acceptable release levels. No burial activity was performed on 3M property during this operation." 3M's RSO advised that he had found no other records that described the decontamination efforts in any greater detail.

In 1983, 3M sold the facility to General Electric Ceramics, Inc.

In December 1989, General Electric Ceramics, Inc., stock was sold to Adolph Coors, Inc., and the name of the facility was changed to Coors Electronic Package Company. Coors currently owns the facility. No contact has been made with Coors.

Records of the State of Tennessee Division of Radiological Health and interviews of State of Tennessee, 3M, GE, and former American Lava employees, including the former Vice President and General Manager, Manufacturing Director, Plant Manager, and Division Engineer, has not developed any additional information concerning closeout surveys of the Chattanooga plant.

REGION II TERMINATED SITES LIST

SITE STATUS REPORT

OCTOBER 31, 1995

American Lava
00109
(A subsidiary of 3M Corporation)
Chattanooga, TN
Assessment

License No. SNM-

Docket No. 070-00105

It was determined that the records did not contain adequate information to ascertain the current radiological condition of this facility. Region II personnel performed a followup inspection of this facility on November 22, 1994. The survey revealed that background radiation levels in the original structure were approximately two times the levels found in an area of the building that was added after licensed activities were discontinued. The survey also revealed that the radiation levels detected at the surface of the soil where a settling pond was formerly located were approximately fifty percent higher than the levels measured from soil near where the settling pond was located.

The results of this survey were forwarded to the current facility owner, Coors Electronic Package Company, in a letter dated January 24, 1995. Based on the results of the survey, it appeared that further investigation, including additional, more sensitive surveys, should be performed in Building 8 and in the area of the former settling pond adjacent to this building to demonstrate that this facility meets the NRC's criteria for release for unrestricted use.

Coors Ceramics Company responded to the report in a letter dated March 3, 1995. Their position is that Building 8 was thoroughly cleaned and renovated since licensed activities were discontinued. They further stated that based upon the review of their files and those of previous owners, they believe the facility is ready for occupancy and that the existing levels of radiation in the facility are due solely to natural background.

Region II plans to request that Coors produce any documentation which describes the type and intensity of decontamination/cleaning efforts which were undertaken in this facility in the past. Region II will also request that Coors produce documents that indicate the settling pond behind Building 8 was established after licensed activities were discontinued. Region II will also attempt to get a better description of the survey performed at this facility by Region II personnel on August 4, 1982, to determine if it was adequate enough to demonstrate that the facility meets the criteria for release for unrestricted use.

Region II personnel conducted additional interviews with a former employee of American Lava to determine if the settling pond existed and/or was used to support the licensed activities **performed under the terminated license**. Based upon this interview, **it appears the settling pond did not exist** when licensed activities were performed. **This conclusion** is supported by information in the docket file describing the manufacturing process. As described, effluents which **may have contained**

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Docket No. 070-00105

licensed material were not released from the facility either to a settling pond or to a sanitary sewer.

Based upon the above, and additional information obtained during this interview and interviews with former Region II employees who conducted surveys at this facility in 1982, Region II personnel reevaluated their assessment of what additional information is needed to support a recommendation to delete this facility from the list. Region II personnel conducted an additional survey of this facility in July, 1995, to support the reevaluation.

The results of the reevaluation and July, 1995, survey were summarized in a memorandum that was submitted for review with the 4th quarter FY 95 site status report. Based upon this reevaluation, it is recommended that the status of this terminated site be changed from "open" to "closed".