



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
 SAM NUNN ATLANTA FEDERAL CENTER
 61 FORSYTH STREET SW SUITE 23T85
 ATLANTA, GEORGIA 30303-8931

January 26, 2001

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

FROM: Douglas M. Collins, Director */RA/*
 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 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 status reports for those sites which are recommended for deletion are listed in Attachment 3. The information required for the Monthly Information Status Report is in Attachment 4. A tabular summary of all files assigned to Region II is in Attachment 5. 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) Reports for sites (recommend closure)
 (4) Quarterly Information Status Report
 (5) Tabular summary for all Region II sites

OFFICE	RII:DNMS	RII:DNMS					
SIGNATURE							
NAME	BParker	TDecker					
DATE			1/ /1	1/ /1	1/ /1	1/ /1	
COPY?	YES	YES	YES	YES	YES	YES	YES

OFFICIAL RECORD COPY

DOCUMENT NAME: C:\WINDOWS\TEMP\gwprint\01-01ts.wpd

STATUS REPORTS FOR SITES WITH ORNL SCORE >300

(Remain In Open Status)

None

STATUS REPORTS FOR SITES REVIEWED WITH SCORES >5<300

(REMAIN IN OPEN STATUS)

- | | |
|----------------|--|
| 1. SUB-00081 | Homer Laughlin China Co. |
| 2. STB-00058 | Du Pont |
| 3. 52-13137-01 | Department of HEW* |
| 4. 52-15968-01 | TII Industries, Inc.* |
| 5. C-03523 | National Advisory Committee for Aeronautics* |
| 6. 47-01163-20 | West Virginia University* |
| 7. C-04576 | Hercules Powder Co.* |

* = Initial review indicated low priority and did not warrant development of a site status report at this time.

Homer Laughlin China Co.

Background (cont'd)

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

May 15, 2000

Docket No. 040-01957

License No. SUB-00081

Licensee Name: Homer Laughlin China Company

Site Name: Homer Laughlin China Company

Site Address: _____

City: Newell State: WV Zip: 26050-1299

Regional Contact: Bryan A. Parker Phone: (404) 562-4728

Status Summary:

ORNL Final Score: 115

Background

In February 1959, the Homer Laughlin China Company was issued Source Material License No. C-4475. This license authorized possession of 100,000 pounds of source material for use in manufacturing glazed ceramic tableware (glaze to contain not more than 20% uranium).

In February 1961, this license was renewed and the license number was changed to SUB-00081.

Records indicate that licensed activities were performed in Plant No. 4 and materials were stored in a vault adjacent to the dispensary at Plant No. 8. Records also indicate that the rinse water from washing equipment used to transport uranium glaze entered the city sewer system and in some cases was washed into a storm drain that emptied directly into the Ohio River. Inspection records indicate that these effluents were estimated to be approximately 40% of the regulatory limits.

In a letter dated February 28, 1972 Homer Laughlin China (HLC) requested termination of their license and stated that all remaining licensed materials had been returned to their supplier. On March 29, 1972, the AEC terminated the license.

In August, 1994, the former licensee discovered that it possessed approximately 500 pounds of uranium oxide (U_3O_8). Subsequent to this discovery, the licensee hired a contractor to survey

Assessment (cont'd)

areas where licensed materials were used and stored. Several areas of significant contamination were discovered during this characterization survey. HLC sent the results of this survey to Region II on September 28, 1994.

On November 4, 1994, Region II issued a Confirmatory Action Letter (CAL) to HLC to ensure that the uranium oxide was properly stored and secured and that adequate control measures were implemented to protect personnel from the contamination discovered in the facility. On November 17, 1994, a Region II inspector visited the site to determine if HLC had implemented adequate protective measures. HLC had secured the material and the contamination areas as required by the CAL.

On January 5, 1995, HLC submitted their decommissioning plan for the facility. On January 9, 1995, Region II forwarded comments on the plan to HLC. HLC submitted a revised plan on January 10 and Region II approved the plan on January 12, 1995.

HLC and its decommissioning contractor began decommissioning efforts after approval of the plan. The contractor has completed the decontamination of the majority of the facility and is currently working to complete decontamination of some equipment. HLC and its contractor are having some difficulty in finding an acceptable means to dispose of the waste and bulk material.

Assessment

Region II will continue to monitor HLC's progress in decommissioning this facility. A confirmatory survey will be scheduled upon completion of HLC's decommissioning effort and review of their final survey report.

HLC's efforts to decontaminate/decommission their facility continues. Most of the building surfaces have been decontaminated, but some contaminated equipment remains to be removed and either decontaminated or disposed of as radioactive waste. Region II has visited the site on two occasions to survey floor areas in some currently operational areas which HLC needed to have released for operational safety reasons. Based upon the Region II surveys, these floor surfaces were determined to not meet the free release criteria and were not approved for release for unrestricted use. HLC and their contractor, Applied Health Physics, are evaluating the conditions which resulted in these areas not meeting the release criteria. Region II will continue to monitor HLC's decommissioning effort.

In a letter dated August 1, 1995, HLC stated that they had completed their decontamination and decommissioning efforts, but had some areas which could not be remediated to the current criteria for release for unrestricted use. HLC enclosed a risk analysis report with the letter with a request that the NRC review the report for the purpose of approving a variance on release of specified equipment and areas from the current release criteria. Region II has completed a preliminary review of the documents submitted by HLC and requested some additional

Assessment (cont'd)

information before a final review is completed. Once this additional information is received, the request will be forwarded to NMSS via a TAR for review and approval.

The HLC request was forwarded for review in a TAR on November 1, 1995. DLWM personnel expect to reply to the TAR by February 16, 1996. From a preliminary review, DLWM expects to have additional questions for HLC to answer before a final decision is rendered.

Region II personnel performed a survey of some floor areas within the HLC facility in December, 1995. The licensee had requested a release survey of some floor areas in a busy area of the facility so that the floors could be repaired. The licensee was concerned about personnel injuring themselves when trying to walk over these floor areas. As a result of this survey, these areas were declared suitable for release for unrestricted use and the licensee initiated repairs to the floors.

NMSS responded to the TAR in a letter dated March 22, 1996. In the TAR response, NMSS requested that HLC respond to fifteen comments before a decision is made regarding the approval of alternate unrestricted use limits for surface contamination. Region II forwarded the comments to HLC in a letter dated April 5, 1996. In a phone call on May 13, 1996, the HLC contractor reported that he is working on a response to the comments and should complete the response by June, 1996.

HLC was contacted on August 6, 1996, to determine the status on its response to the April 5, 1996 letter. Due to financial concerns, HLC has not completed their response. RII staff have scheduled an inspection for August 13, to review the status of the facility and the decommissioning effort.

RII staff conducted an inspection at HLC on August 13, 1996. HLC had not performed any further decommissioning pending resolution of its request for alternate release criteria. HLC intends to respond to the RII April letter regarding this request by November, 1996.

In December, 1996, HLC reported that they had not received a response from their health physics contractor who HLC hired to perform the decommissioning and to respond to the April 5, 1996, letter from RII. HLC's contractor has experienced financial and personnel problems which have delayed the response. In a January, 1997 letter, HLC's contractor, Applied Health Physics, informed RII that they were now working to complete the response. RII staff contacted HLC's contractor and was informed that a response would be forwarded by March 10, 1997.

As of June 20, 1997, HLC had not received response from contractor. HLC contacted the contractor, Applied HP, who in turn contacted Region II and informed us that a meeting was scheduled for June 27, 1997, to complete the response. Applied HP will forward the completed response to HLC for review, who will then forward it to Region II.

Assessment (cont'd)

As of October 7, 1997, Applied HP had not completed the response for HLC due to some software problems. Applied HP indicated that they expected the response to be completed soon, at which time they would forward it to HLC which would then forward it to Region II.

In early February 1998, Region II received a response from HLC dated January 28, 1998, indicating that they were providing the balance of the 15 items of information initially requested by DWM in Region II's April 5, 1996, letter. Response to items 1, 2, 3 and 5 were submitted by HLC letter dated March 12, 1997. The January 28, 1998, response for the remaining 15 items is currently being reviewed by Region II and a TAR is being prepared to forward the response to DWM for its review. This action will be completed by October 30, 1998.

On October 2, 1998, a TAR was submitted to DWM transmitting the response from HLC and requesting a re-evaluation of the HLC issue as a whole in light of the new decommissioning rule. As of January 11, 1999, the TAR was assigned to a DWM staff member; however, action was not complete on the TAR. The major issue concerns the HLC equipment which is contaminated inside in unoccupiable spaces, and HQ is still working on specific guidance regarding the release of equipment. Date of resolution is unknown, but an inspection to verify the current status of HLC and its material is scheduled for the February 1999 timeframe.

On February 25, 1999, Region II was notified that the HLC TAR issue had been chosen by the SRP Dose Modeling Group in NMSS to be a "test case" in the development of the SRP. On March 1, 1999, an inspection/meeting was conducted at the HLC facility in Newell, WV. The inspection revealed no concerns regarding the status of the facility and the remaining low-level contaminated waste being stored onsite until the issue is resolved. In the meeting, Region II discussed the status of the TAR and the informed HLC of the case being chosen as a test case for the SRP development. In March 1999, NRC published draft NUREG-1640, "Radiological Assessments for Clearance of Equipment and Materials from Nuclear Facilities," which will probably be used by the SRP group during their review of the HLC case. As of June 22, 1999, Region II had received no feedback regarding the status of the case.

As of December 8, 1999, the Dose Modeling Group had completed its review and had forwarded its evaluation and comments to DWM (Jack Parrott). DWM was reviewing the Group's evaluation and preparing a response to the Region II October 1998 TAR. Region II expects to receive the TAR response in January 2000.

DWM provided its comments in a memorandum dated March 23, 2000. Region II forwarded these comments to Homer Laughlin on May 16, 2000.

HLC responded with letter dated September 13, 2000, requesting a meeting with NRC personnel involved in the review of the dose analysis before they respond to the NRC comments. NRC agreed and a tentative meeting date of February 14, 2001, was set for the meeting between NRC HQ and Region II personnel and HLC representatives.

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

May 15, 2000

Docket No. 040-06213

License No. STB-00058

Licensee Name: E.I. DuPont de Nemours and Co., Inc.

Site Name: Belle Works

Site Address: 901 West DuPont Avenue

City: Belle State: WV Zip: 25015

Regional Contact: Bryan A. Parker Phone: (404) 562-4728

Status Summary:

ORNL Final Score: 37

Background

License No. STB-00058 was issued on January 30, 1961, for the possession of 1,000 pounds of thorium for use in dispersions of thorium oxides in metal. The license was amended in January, 1962, and the possession limit was changed to 500 pounds.

In its December, 1960 application, the licensee described the source material as a thorium salt, probably thorium nitrate, in a crystal form containing 33 to 48 percent thorium by weight. The facility where the source material would be used was described as a restricted area of dimensions 40 feet by 100 feet with a steel frame and sheet metal building approximately 15 feet by 50 feet. Processing equipment contained in the building included tanks for dissolving, mixing and reacting the thorium salts with metal salts, a plate and frame filter press, a combination drying and calcining oven, and a controlled atmosphere furnace. A sink and other laboratory type equipment was also employed. A hood was also used when source material was handled manually and for exhausting the calcining furnace. The exhaust from the hood was 15 feet above ground and the licensee projected that 18 grams of thorium would be exhausted each day of operations. After handling of the dry source material in the hood, it was mixed with water to limit airborne contamination. The licensee stated he would use air samplers to monitor airborne material and conduct radiation surveys with a portable survey instrument and obtain wipes in work areas to monitor removable contamination. To illustrate its experience with handling hazardous materials, the licensee stated that it had many years of experience in producing catalysts containing chromium compounds which are strongly toxic.

Background (cont'd)

The methods of disposal of source material included burial and discharge to plant sewage and water effluent stream. As described in the license application, all solid or semisolid thorium-containing materials would be accumulated, stored and periodically buried. The burial would be in the plant dump which was located remotely from the plant and was separated from inhabited areas by a nest of mountains. All solutions containing thorium would be treated chemically to precipitate as much of the thorium as possible before discarding them. The restricted area was located adjacent to one of the plant's water outfalls which had a minimum flow rate of 20,000 gallons per minute. The resulting concentration of thorium was stated to be below detectable limits and several orders of magnitude below those specified in AEC regulations (Part 20).

An AEC inspector found no items of noncompliance during an inspection conducted on April 23, 1963. No other details of the inspection were in the retired docket file.

The license expired on January 31, 1965. In a memo dated June 6, 1965, an AEC employee stated that he had contacted the licensee on May 27, 1965, and was informed that the licensee had not procured or used thorium since the last inspection (date of inspection not identified). The licensee had 0.43 pounds of thorium which it possessed under a general license since the specific license expired. The retired docket file does not contain any information on the final disposition of the material or surveys performed by either the licensee or the AEC after the license expired and was terminated.

Assessment

RII personnel performed an inspection at the Du Pont facility on August 12, 1996 (Inspection Report No. STB-00058/96-01). The inspector found that Building 202, identified in the former license as the facility where licensed activities were conducted, no longer existed. The building had been demolished several years prior to this inspection, and a much larger facility, Building 291, had been erected at the site. Based upon his observations of the site and discussions with licensee personnel, the inspector determined that no original structure remained from Building 202, and that the construction of Building 291 had apparently included the entire removal of Building 202, and excavation of the area where Building 202 had existed to allow construction of the foundation for Building 291.

The inspector also determined that, as stated in documents contained in the terminated license docket file, the licensee had buried thorium contaminated waste at a site across from the main facility. A licensee document dated October 4, 1961, indicated only three drums of contaminated waste (two 55 gallon and one 30 gallon) were buried at the site on September 29, 1961. This document also stated that the material was buried under six feet of earth and that the radiation levels measured on the surface of the drums prior to burial ranged from 0.5 to 0.7 millirem per hour. The licensee's current radiation safety staff were aware of the site. The inspector visited the burial site and observed that the licensee controlled access to this area and that the area was posted with a sign indicating that radioactive material was buried at the site. The licensee's staff stated that as much as sixteen more feet of earth cover had been added to the area since the material was first buried. The licensee periodically inspected the site, but did not perform any radiological surveys in the area or analyze the groundwater obtained from monitoring wells in the area for radioactive material.

It appears that no further investigation is required regarding the facility where licensed material was used under this former license since that facility has been demolished. However, the site

Assessment (cont'd)

will remain in an "open" status until the Draft Branch Technical Position on Screening Methodology for Assessing Prior Land Burials of Radioactive Waste Authorized Under Former 10 CFR 20.304 and 20.302 is published in final form. At that time the licensee will be required to apply the screening methodology to the burial site and take action as warranted by this document.

The final copy of the BTP is not expected to be published until April or May, 1997. RII will forward a copy of the draft BTP and request that the licensee try to apply the screening methodology to their burial site. The licensee's records of material buried at the site do not specify the amount (mass or activity) of thorium buried. Therefore, the licensee would have to estimate the amount of thorium contained in the contaminated materials buried in the three drums as described in Step 1 of the screening methodology. It is doubtful the licensee will pass Step 1 or 2 of the screening methodology. If the licensee does not pass these two steps, RII will request that the licensee perform a site specific dose assessment based on a modeling protocol such as RESRAD and submit the results of this assessment for review by RII and DWM.

On June 24, 1997, the licensee indicated that after the Region II onsite visit in September 1996, sampling in and around the burial site was done in October 1996 by DuPont Environmental Remediation Services (DERS). The licensee received the results in November 1996 (all were negative), and will now forward the results to Region II for review. The licensee was informed that the BTP will soon be published and, once received, will need to be applied to their situation for screening purposes.

Region II received the results and, upon review, noted no concerns. As of October 8, 1997, the licensee had not applied the BTP to their burial situation. Region II informed the licensee that the BTP had not yet been finalized, but that a submittal could be made under the draft BTP for review and evaluation.

As of April 23, 1998, the draft BTP had not been finalized, and the licensee had not made any other submittals. Region II is awaiting word from DWM regarding the status of the draft BTP.

As of September 24, 1998, the draft BTP was no longer scheduled to be finalized, and the licensee had not made any submittals. Region II is awaiting word from DWM regarding other guidance pertaining to prior burials in light of the new decommissioning rule.

As of February 4, 1999, the draft BTP was no longer scheduled to be finalized, and the licensee had not made any submittals. Region II is awaiting word from DWM regarding other guidance pertaining to prior burials in light of the new decommissioning rule.

On June 22, 1999, Region II contacted DuPont and noted that the status remained unchanged. Region II informed DuPont that the BTP would not be finalized and that Region II would check with DWM on how best to proceed. DuPont indicated that they would be interested in a plan of action in order to proceed.

In September 1999, DWM indicated that Region II should wait until soil contamination limits were finalized before proceeding with DuPont's burial issue. In December 1999, Region II

DuPont

Assessment (cont'd)

contacted DWM, which recommended that the issue be sent to DWM as a TAR because additional guidance for subsurface contamination was not coming in the foreseeable future. Region II will review the issue and prepare a TAR by January 31, 2000.

The TAR was forwarded to DWM on May 15, 2000.

As of January 17, 2001, Region II had not received a response to the TAR.

STATUS REPORTS FOR SITES
RECOMMENDED FOR CLOSURE

(ORNL Score >300)

N/A

(ORNL Score >5<300)

1. **41-08165-09 Tennessee Valley Authority**
2. **41-08165-17 Tennessee Valley Authority**
3. **SNM-1476 Tennessee Valley Authority**
4. **45-17819-01 U.S. Army (535th Engineering Det.)**

(ORNL Sealed Source Score >1)

1. **47-17264-01 Geological Services, Inc.**
2. **52-09574-01 Puerto Rico Water Resources**

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

January 24, 2001

Docket No. 030-15165

License No. 41-08165-09

Licensee Name: Tennessee Valley Authority (TVA)

Site Name: Power Operations Training Center

Site Address: _____

City: Soddy Daisy State: TN Zip: _____

Regional Contact: Bryan A. Parker Phone: (404) 562-4728

Status Summary:

ORNL Final Score: 244.8

Background

This was an NRC license issued on October 16, 1979, authorizing any byproduct material with atomic number 1-83, inclusive, as well as Am-241, for possession incident to equipment calibration and repair, and analysis and testing of samples. The license expiration date was February 28, 1995, but the license was terminated on April 24, 1991. In 1997, the file was identified by ORNL as needing additional followup, and the file was forwarded to Region II for review/closure. The following was provided by Oak Ridge as the site description and recommendations for followup.

Site Description:

Power Operations Training Center, Soddy Daisy, Tennessee

The licensee conducted work in four labs at the Power Operations Training Center: Radiochemical Lab; Health Physics Lab; Nondestructive Testing Lab; and the Whole Body Counting Room. It appears that although the licensee was authorized tens of millicuries of any byproduct material (curies in liquid form), the actual quantity of material handled was small. Any operations that could result in contamination spread were restricted to fume hoods with high efficiency filters. The licensee had a detailed radiation protection plan in place. In letter dated March 26, 1991, the licensee indicated that all materials on hand had been transferred to Sequoyah Nuclear Plant for disposal as waste. From October - December 1990, the licensee conducted an extensive closeout survey of their facilities. All areas were cleaned up to less than NRC limits for unrestricted release. A NRC Regional review indicated that a NRC confirmatory survey was not required.

Background (cont'd)

The ORNL site evaluation final score for this site is 244.8. An initial materials score of 207 was the main contributor to the final site score. This was due to the authorization for *any byproduct material* which covers a wide range of isotopes with varying hazards. The site evaluation system makes conservative assumptions when any byproduct material is authorized and, therefore, the initial materials score could not be lowered any further. The authorization for Am-241 in loose form also increased the initial material score due to its potential hazard. Due to the apparent limited use of materials, both the building operations and waste generation scores were reduced significantly.

ORNL Recommendation:

The Soddy Daisy, Tennessee site requires some further review to ensure that the licensee's use of material was limited and that licensee's closeout survey provided adequate coverage of all areas of operation as determined by that use.

Assessment

A review of the NRC's docket file (030-15165) regarding the adequacy of surveys was performed. To obtain a better understanding of the site's history and closeout surveys performed by TVA for requesting the license termination, TVA West Area Radiological Laboratory's (WARL) personnel were contacted. The site's history was not well known to the current personnel; therefore, Region II reviewed the closeout survey with WARL personnel. From that review, it was determined that the licensee routinely documented the instruments used to perform such surveys. The initial review appeared to indicate that the licensee's instruments were only used in the initial (3 or 4) measurements listed on the form. It was determined, however, that survey instruments listed on the form (under the Instrument Serial No. column) were used to perform measurements throughout the entire survey. It was noted that the licensee used a wide variety of instruments, monitoring for beta and gamma dose rates, as well as for direct contamination (fixed and removable) and removable alpha/beta particles. A random review of MDAs for the instrumentation used to measure removable contamination revealed an adequate level of detectability (these numbers followed the LLD documented by the licensee in the survey forms very closely). Survey results indicated that the radiological conditions of the site were adequate for its release for unrestricted use.

It is recommended that no additional surveys be performed on this license.

Therefore, based on this information, it is recommended that the status of this file be changed from "OPEN" to "CLOSED."

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

January 24, 2001

Docket No. 030-21077

License No. 41-08165-17

Licensee Name: Tennessee Valley Authority (TVA)

Site Name: Central Laboratories Services Department

Site Address: Highway 153 and Access Road

City: Chattanooga State: TN Zip:

Regional Contact: Bryan A. Parker Phone: (404) 562-4728

Status Summary:

ORNL Final Score: 6.9

Background

This was an NRC license issued on December 5, 1984, authorizing any byproduct material with atomic number 1-83, inclusive, as well as Sr-90, Co-60, Eu-152, Eu-154, Ce-144, Cs-134, Ag-110m, Rh-106, I-129, and I-131, in smaller quantities, for possession incident to equipment calibration and repair or chemical and metallurgical analysis of samples (specifically water and oil samples). The license expiration date was February 28, 1995, but the license was terminated on October 2, 1991. In 1997, the file was identified by ORNL as needing additional followup, and the file was forwarded to Region II for review/closure. The following was provided by Oak Ridge as the site description and recommendations for followup.

Site Description:

Central Laboratory Services, Chickamauga Dam, Chattanooga, Tennessee

The licensee appears to have used only a small amount of materials limited to mainly oil and water samples. Standard lab equipment such as fume hoods were provided and standard work areas were established. In 1991, the licensee began decommissioning of the lab. The hood vents were disassembled and surveyed. Other areas were also surveyed for alpha and beta contamination using smears. The survey appears to have covered all areas of use.

The ORNL site evaluation final score for this site is 6.9. An initial materials score of 5.7 was the main contributor to the final site score. This was due to the authorization for *any byproduct material* which covers a wide range of isotopes with varying hazards. Although it appears that the licensee only possessed a limited amount of materials, due to the lack of specific detailed information, the evaluator made conservative assumptions which could not lower the score further.

Background (cont'd)

ORNL Recommendation:

The Central Laboratories Services facility requires at most a cursory review of the licensee's closeout survey to ensure that all NRC guidelines have been met.

Assessment

A review of the NRC's docket file (030-21077) regarding the adequacy of surveys was performed. To obtain a better understanding of the surveys performed by TVA for requesting the license termination, TVA West Area Radiological Laboratory's (WARL) personnel were contacted. Region II reviewed the closeout survey with WARL personnel. From the review of the form used by TVA, it was determined that the licensee routinely documented the instruments used to perform such surveys. The licensee's survey did not include a description of the survey instruments but documented the manufacturer and serial numbers. The licensee's WARL staff was able to identify the models of the instruments used (Bicron 562832 was identified as a Surveyor 50, Bicron 553757 was identified as a RSO 5 (ion chamber), and Bicron 568074 as a MX Alpha Probe). The initial review appeared to indicate that the licensee's instruments were only used in the initial (3 or 4) measurements listed on the form. It was determined, however, that survey instruments listed on the form (under the Instrument Serial No. column) were used to perform measurements throughout the entire survey. It was noted that the licensee used a wide variety of instruments, monitoring for beta and gamma dose rates, as well as for direct contamination (fixed and removable) and removable alpha/beta particles. A random review of MDAs for the instrumentation used to measure removable contamination revealed an adequate level of detectability (these numbers followed the LLD documented by the licensee in the survey forms very closely). Survey results indicated that the radiological conditions of the site were adequate for its release for unrestricted use.

It is recommended that no additional surveys be performed on this license.

Therefore, based on this information, it is recommended that the status of this file be changed from "OPEN" to "CLOSED."

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

January 24, 2001

Docket No. 070-01622

License No. SNM-1476

Licensee Name: Tennessee Valley Authority (TVA)

Site Name: Central Labs Services Dept - Special Nuclear Material Lab

Site Address: Highway 153 and Access Road

City: Chattanooga State: TN Zip:

Regional Contact: Bryan A. Parker Phone: (404) 562-4728

Status Summary:

ORNL Final Score: 16.8

Background

This was an AEC license issued on June 20, 1974, authorizing enriched uranium in loose form for lab studies and sample analysis related to fuel pellet quality assurance. The license was later amended to allow only natural and depleted uranium for lab studies. The license was terminated on August 3, 1990. In 1997, the file was identified by ORNL as needing additional followup, and the file was forwarded to Region II for review/closure. The following was provided by Oak Ridge as the site description and recommendations for followup.

Site Description:

Chickamauga Dam, Room 218, Chattanooga, Tennessee

The licensee apparently possessed and used the authorized materials at this site from the issuance date of the original license on June 20, 1974 through November 21, 1988, when they sent their remaining inventory to TVA's Sequoyah Nuclear Plant. Licensee's operations included quality assurance testing of fuel pellets. Non-destructive testing such as visual and dimensional analysis and verification was performed. Other testing involved the wet crushing or cutting of pellets which were performed in a fume hood exhausted through HEPA filters. Surveys were performed after each use of the hood. Solid wastes were shipped to another TVA facility (Muscle Shoals) for disposal with their wastes. Liquid wastes were disposed to the sewer in accordance with 10 CFR 20. The licensee ceased operations in this lab on November 21, 1988. A survey of the lab and associated equipment was performed on November 21, 1988 by the licensee. There were no results above NRC decommissioning limits after decontamination. A closeout survey was performed by the licensee on June 11, 1990. All areas and equipment were surveyed. The facility met the criteria for unrestricted release. Region II indicated that a closeout survey would be performed at the next inspection of the licensee's other license. However, there is no documentation in the file of any NRC closeout survey.

Background (cont'd)

The ORNL site evaluation score was 16.8 for this facility. The materials handling score (9.3) accounted for over 55% of the final score. This was mainly due to the fact that the licensee was authorized U-235 in loose form which represents more of a radiological hazard than the depleted or normal uranium.

ORNL Recommendation:

The TVA Chickamauga Dam Lab, Chattanooga, Tennessee site requires a review to determine if Region II had conducted a closeout survey of this lab during an inspection of another license. If the closeout survey had been performed, then a copy should be placed in this file for documentation.

Assessment

A review of the NRC's docket file (SNM-01476) regarding TVA's Chickamauga Dam Lab, and a review of the licensee's archived files revealed that Region II had not conducted a survey of this laboratory. To obtain a better understanding of the surveys performed by TVA for requesting the license termination, TVA West Area Radiological Laboratory's (WARL) personnel were contacted. Region II reviewed the closeout survey with WARL personnel, and this review revealed that the NRC's copy of the licensee's letter dated July 24, 1990 (termination surveys), was missing a page which contained the map location of the areas that were surveyed. A copy of the page was obtained from the licensee's archives and placed in the docket file.

From the review of the form used by TVA, it was determined that the licensee routinely documented the instruments used to perform such surveys. The initial review appeared to indicate that the licensee's instruments were only used in the initial (3 or 4) measurements listed on the form. It was determined, however, that survey instruments listed on the form (under the Instrument Serial No. column) were used to perform measurements throughout the entire survey. It was noted that the licensee used a wide variety of instruments, monitoring for beta and gamma dose rates, as well as for direct contamination (fixed and removable) and removable alpha/beta particles. A random review of MDAs for the instrumentation used to measure removable contamination revealed an adequate level of detectability (these numbers followed the LLD documented by the licensee in the survey forms very closely). Survey results indicated that the radiological conditions of the site were adequate for its release for unrestricted use.

The review also noted that, in 1991, the licensee performed surveys of the same laboratory under NRC License No. 41-08165-17 (as part of license termination). Those surveys again confirmed the suitability of the lab for unrestricted use. Instruments used for the survey were also adequate.

It is recommended that no additional surveys be performed on this license.

Therefore, based on this information, it is recommended that the status of this file be changed from "OPEN" to "CLOSED."

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

January 25, 2001

Docket No. N/A

License No. 45-17819-01

Licensee Name: Department of the Army, 535th Engineer Detachment

Site Name: Floating Nuclear Power Barge US STURGIS (MH-1A)

Site Address: Fort Belvoir

City: Fort Belvoir State: VA Zip: 22060

Regional Contact: Bryan A. Parker Phone: (404) 562-4728

Status Summary:

ORNL Final Score: 11

Background

NRC License No. 45-17819-01 was issued in November 16, 1977, and superceded AEC License No. 51-12758-02. As with the superceded license, this license authorized the possession of any byproduct material between atomic numbers 1 and 83, inclusive, in any form, in quantities not to exceed 1 millicurie per radionuclide. Higher possession limits were authorized for cesium-137 (36 mCi) and cobalt-60 (21 mCi) (both were sealed sources). The authorized use for these materials was instrument checking and calibration. Neither a Certificate of Disposition for the materials possessed under this license nor a letter or amendment stating the license had been terminated were in the docket file. However, the license expiration date was April 30, 1978. In 1995, the file was identified by ORNL as needing additional followup, and the file was forwarded to Region II for review/closure.

Assessment

The licensed materials were used aboard the floating nuclear power barge, US Sturgis, (MH-1A). The Sturgis was stationed at Fort Belvoir, VA during the life of this license. The facilities were the same as described in the application for License No. 51-12758-02, which included a drawing of the Radiochemistry Laboratory aboard the Sturgis where materials authorized by this license were used. The laboratory work area included a fume hood and stainless steel work surfaces. Radioactive wastes were disposed by transfer to an authorized disposal facility.

In a letter dated July 7, 1978, the U.S. Army Facilities Engineering Support Agency, Fort Belvoir, VA, reported that the Sturgis ceased reactor operation in July 1976 and reactor decommissioning was completed in November 1977. An independent survey of the facilities was performed by the Army Environmental Hygiene Agency to demonstrate compliance with NRC Regulatory Guide 1.86. According to the letter, on February 6, 1978, the decommissioning safety analysis documentation (including the radiation survey reports) was

Assessment (cont'd)

forwarded to the Division of Operating Reactors, USNRC, for concurrence as a precondition to long term storage of the Sturgis in the James River Reserve Fleet.

In a letter from the Assistant Director for Operating Reactors, Division of Operating Reactors, dated February 28, 1978, the NRC made the following statements: "The only significant residual radioactivity remaining on board the Sturgis is that which was induced in the facility structures and components during operation prior to the 1976 facility shutdown. This remaining radioactive material will be confined in defined restricted areas which will be locked and sealed to prevent access to them. This induced radioactivity is fixed within the volume of the structures and components and therefore would not be available for release to the environment even in the event of a major distress to the vessel. All other areas on board of the Sturgis have low enough levels of contamination for unrestricted access." The NRC concluded that the Army's plan for the disposition of the Sturgis would provide for safe relocation and long-term anchorage of the decommissioned vessel. This conclusion was based on surveys conducted by the Army Environmental Hygiene Agency in December 1977 and documented in a letter dated February 6, 1978 to the NRC. That letter, however, was not found in the docket file during the Region II review. Attempts to locate and obtain a copy of the surveys have been unsuccessful (NRC archives, Army contacts, etc.). Region II discussed the Sturgis decommissioning with Army health physicists who were involved with the decommissioning and/or were currently maintaining oversight of the vessel. In general, their recollections were that all sources were removed from the Sturgis and either disposed of as waste or transferred to other Army licenses. Other research by Region II of these licenses (terminated/archived) supports this; however, the transfers and/or disposals could not be definitively confirmed.

Currently, the Sturgis remains in long-term anchorage in the James River Reserve Fleet. It is expected to be there until 2028 (50 years), at which time it will be surveyed for release and scraped. It is in the control of the Army under the authority granted in Section 91(b) of the Atomic Energy Act of 1954, otherwise known as a "91b license." This allows the Department of Defense to acquire an "atomic utilization facility" such as the Sturgis, provided that facility does not produce licensed material. Based upon (1) the Division of Operating Reactors' letter dated February 28, 1978, (2) recollections of personnel involved, and (3) the fact that the radiological status of the Sturgis due to reactor operations caused the vessel to be placed in long-term anchorage under the control of the Army, it is recommended that the status of this file be changed from "OPEN" to "CLOSED."

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

January 18, 2001

Docket No. 030-12469

License No. 47-
17264-01

Licensee Name: Geological Services Inc.

Site Name: _____

Site Address: Suite 1005, West Virginia Building

City: Huntington State: WV Zip: 25701

Regional Contact: Bryan A. Parker Phone: (404) 562-4728

Status Summary:

ORNL Final Score: 17.8

Background

This was an NRC license issued on January 19, 1977, for possession and use of americium-241 for well-logging purposes. The license expiration date was January 31, 1982. In 1995, the file was identified by ORNL as needing additional followup, and the file was forwarded to Region II for review/closure.

Assessment

Region II reviewed the file and confirmed the ORNL comments. The license was terminated on December 16, 1983, according to a handwritten note in the file. The licensee had requested license renewal on November 31, 1981, but failed to provide followup information needed by the NRC to complete the action. On November 16, 1982, the NRC informed the licensee that since no response had been received to complete the deemed timely filed renewal application, the application was denied and the license terminated. That letter also required the licensee to dispose of all sources within 30 days. There was no evidence in the file that indicated when or how the licensed material was disposed.

In 1999, through Internet searches and multiple phone contacts, Region II was able to determine that the principal of the company, Wiley S. Rogers, Ph.D., was deceased. His son, Leslie Rogers, worked for the company and was requested to be an authorized user in the failed renewal application. Mr. Rogers recalled driving one of the company's two vehicles, equipped with a source, to a startup company in Harrisburg, PA, in 1982. A note in the file indicated that a source was transferred to Elmer Sigouin in Camp Hill, PA (a suburb of Harrisburg) under NRC License No. 37-19600-01. Region II contacted Mr. Sigouin, who recalled buying a unit from Dr. Rogers for spare parts, but did not recall it including a source. A report in the file for an NRC inspection conducted on September 14, 1981, indicated that there were two vehicles, but appeared to indicate only one source. Two sources of 250 millicuries each were authorized, but it is unclear as to whether there were one or two sources possessed.

Assessment (cont'd)

A former employee of the licensee was also contacted by phone, Mike Mannon (a principal in Riley, Mannon, Sturgeon, Ltd., Barbersville, WV, current NRC well-logging licensee, NRC License No. 47-19672-01), who indicated that although he did not recall what happened to the sources, he thought there was only one vehicle with two sources. Mr. Mannon also recalled that Dr. Rogers had donated the vehicle and sources to a college, but did not recall what college.

Region II was unable to definitively determine the outcome of the licensed material possessed under this license. However, it appeared likely that the transfer of licensed material was authorized. Specifically, a review of Mr. Sigouin's former license indicated that if in fact he was mistaken and did receive a source or sources from Mr. Rogers, he was authorized for multiple 250 millicurie americium-241 well-logging sources. Also, if Dr. Rogers did in fact donate the licensed material to a college or university, it is highly unlikely that the institution was unauthorized to receive it. If there were two vehicles, it is possible that one was transferred without a source and the other transferred with all sources. Therefore, based on this information, it is recommended that the status of this file be changed from "OPEN" to "CLOSED."

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

November 21, 2000

Docket No. N/A

License No. 52-09574-01

Licensee Name: Puerto Rico Water Resources Authority

Site Name: South Coast Steam Plant (Costa Sur)

Site Address: _____

City: Guayanilla State: PR Zip: _____

Regional Contact: Bryan A. Parker Phone: (404) 562-4728

Status Summary:

ORNL Final Score: 1.60

Background

This license was issued on October 15, 1963, and authorized the licensee to possess one 1.5 curie Cs-137 sealed source contained in an Industrial Nucleonics Model LS-102 gauge to control level in a tank. This license was due to expire on October 31, 1965, but its expiration date was extended to October 31, 1967, on October 19, 1965. The licensee requested termination of this license in a letter dated May 31, 1967, and the license was terminated on June 12, 1967. In its termination request, the licensee stated that under the provisions of 10 CFR 30.6, it was exempt from the Commission's licensing requirements concerning this type of material because it could possess this material under its license for the BONUS nuclear reactor. The AEC apparently concurred with this request by terminating the license.

Assessment

In reviewing this issue, Region II determined that the licensee's reference to 10 CFR 30.6 was incorrect and should have been referenced to 10 CFR 30.12. In addition, on August 7, 2000, Region II met with staff members of the Environmental Studies Division of the Puerto Rico Electric Power Authority (PREPA). PREPA was formerly known as the Puerto Rico Water Resources Authority. The meeting was documented in a memo dated August 30, 2000 (see attached), and, from this meeting, it was determined that although a Cs-137 level gauge was obtained, it apparently was never installed. It remained in storage at the BONUS site and never reached its intended location of use at the Costa Sur Power Station (a fossil-fuel power plant). According to PREPA staff, the gauge was properly disposed of before or during the decommissioning of the BONUS site.

Therefore, based on this information, it is recommended that the status of this file be changed from "OPEN" to "CLOSED."

REGION II QUARTERLY INFORMATION STATUS REPORT

STATUS OF SITES IDENTIFIED BY ORNL

	Total	Sites Closed or Eliminated (including transfers)	Total Sites Pending	Pending Sites Contaminated
> 300	9	9 ¹	0	0
5-300	53 ⁴	42 ⁴	11 ^{2,3,4}	1 (Homer Laughlin China)
Total	62 ⁵	51	11	1

- 1 - **Project management for the UCAR site was transferred from Region II to DWM in January 2000. Also, ARCO is closed in this report. See Attachment 3 for more details.**

- 2 - **DuPont is also pending because of known buried drums, not due to known contamination. A TAR is pending to evaluate the issue. See Attachment 3 for more details.**

- 3 - **Four (4) files are recommended for closure in this report - See Attachment 3 for details.**

- 4 - **42 >>> 39 - Closed or eliminated by Region II or NMSS
 + 3 - Closed by Agreement States

 + 11 >>> 4 - Recommended for closure by Region II action
 + 7 - Open - reviews to be completed by Region II**

- 53 - TOTAL for <300 sites

STATUS OF LICENSES WITH SEALED SOURCES NOT ACCOUNTED FOR

	Total	Closed or Transferred	Pending Review by Region II
> 300	0	0	0
1-300	106	97	9
Total	106 ^{1,2,4}	97 ^{2,3}	9 ⁴

1 - Twenty-five (25) sites were added as part of Phase III of ORNL Terminated License Review Project (Jan/Mar 1998).

2 - **Ninety-seven (97) sites have been closed (includes sixty-nine (69) closed by RII or transferred to other Regions; thirteen (13) sites closed by RII based on U.S. Navy reviews; and fifteen (15) sites closed by Agreement States. Two (2) sites are recommended for closure in this report and one (1) site remains open and is under review by RII.**

69 - closed by Region II/ transferred to another Region
+ 13 - closed by Region II based on Navy review
+ 15 - closed by Agreement States
97

+ 2 - recommended for closure by Region II action
+ 1 - open files for Region II review
+ 6 - files added (transfers from Region I and IV)
106 - TOTAL

3 - **A total of two (2) sealed source sites are recommended for closure in this report - see Attachment 3 for site summary reports.**

4 - **Six (6) files were ADDED to the list in this report. These were all Navy files transferred to Region II for review and closure from Regions I and IV.**

TABULAR SUMMARY OF REGION II TERMINATED SITES

- Table 1. Region II Sites, Scores >300
- Table 2. Region II Sites, Scores >5<300
- Table 3. Region II Sealed Source Sites, Scores >1<300

REGION II TERMINATED SITES, SCORES >300

As of 1/25/01

LICENSE NO.	LICENSEE NAME	CITY, STATE	ORNL SCORE	STATUS
SNM-00260	Lockheed-Georgia	Dawsonville, GA	6,534	Closed by RII action
SNM-00724	Union Carbide	Lawrenceburg, TN	15,456	Closed - removed from RII list due to transfer of project management to DWM (note 2)(note 3)
SNM-00109	American Lava	Chattanooga, TN	6,140	Closed by RII action
SUB-00587	David Witherspoon	Knoxville, TN	346	Closed by RII action
45-02808-02	Atlantic Research Corp (ARCO)	Alexandria & Gainesville, VA	6,283	Closed by RII action (note 4)(note 5)
45-14090-02	EPA	Vienna, VA	750	Closed by RII action
SNM-00730	B&W NNFD	Lynchburg, VA	7,346	Closed by RII action
STB-00440	AMAX Spec.Metals	Washington, WV	321	Closed by RII action
U. S. NAVY LICENSES				
08-01393-02	Naval Research Lab	Washington, DC	3,352	Closed by RII action (note 4)

NOTES:

(Changes printed in **bold** typeface)

1. Original list had seven sites with scores >300.
2. UCAR submitted survey/sampling plan 11/94. RII comments to UCAR 1/12/95. UCAR response received 5/95. RII response forwarded to State of Tennessee for review 6/95. State comments received 6/95 and are under review. RII comments forwarded to UCAR 08/03/95. UCAR response to comments reviewed and RII approved plan 11/95. Licensee has tentatively scheduled survey to begin in the spring of 1996. UCAR started survey in April, 1996 and expected to complete in June. Expected completion date changed to end of August, 1996. Two soil samples obtained by NRC during June, 1996 inspection confirmed to contain uranium above release criteria. UCAR expects to forward survey report to RII in November, 1996. UCAR amended its date to forward the survey report to late March or early April, 1997. In June 1997, contractor was still revising report. UCAR had not accepted the original because it did not include proposals for remediation. UCAR expects to forward to RII by September 30, 1997. Due to downsizing of contractor UCAR had to obtain another contractor. The new contractor plans to have a decommissioning plan submittal prepared by mid-December 1997. A joint meeting was held on January 16, 1998, with Region II, UCAR, NFS (contractor), and State of Tenn. personnel. Results of characterization surveys were presented, and discussion was held regarding proposed remediation. UCAR, via NFS, is preparing a decommissioning plan. UCAR proposed unrestricted release criteria of 100 millirem dose. Region II responded with letter dated 4/20/98 indicating that 100 millirem for unrestricted use was unacceptable. UCAR indicated during telephone discussions in May/June 1998 that they accepted Region II's response regarding 100 millirem unrestricted release and would direct their contractor to develop the decommissioning plan based on 25 millirem instead. On August 19, 1998, UCAR submitted their decommissioning plan to Region II for approval. Review of the plan is ongoing. In late February 1999, NMSS and OSP decided that a Commission ruling was unnecessary, and to proceed with the clean-up with NRC as the lead agency over the decommissioning. In April 1999, it was determined that a EA was needed as part of the review for the DP, so DWM began preparing one. Also, in April-May 1999, the DP was reviewed by DWM and Region II and found to be deficient. As of June 1999, the completed EA was being reviewed by the NMSS EIS review team, and Region II was preparing a deficiency letter for UCAR to address the issues found during the DP review. On September 22, 1999, Region II received DWM's comments on the DP. Region II combined its comments with those of DWM and prepared draft request for additional information letter. On December 2, 1999, Region II held a conference with UCAR to discuss the comments in order to clarify and finalize the letter. Region II will coordinate the final draft of the letter with DWM and the State of Tennessee, and plans to issue the letter to UCAR in January 2000. Project management for this site was transferred to DWM in January, 2000.
3. Office of State Programs (OSP) issued transmittal SP-97-080 indicating that NRC was going to turn over all terminated site files for sites located in Agreement States to the respective state. However, State of Tennessee has requested that UCAR not be turned over to maintain continuity during the ongoing decommissioning. Region II, OSP, and OGC are reviewing the issue and negotiating with the state regarding what roles each agency will play. In late 1998, questions arose regarding what agency (NRC v. the State of Tenn.) should have jurisdiction over the decommissioning. As of February 4, 1999, NMSS was preparing a Commission Paper recommending that the site be turned over to the State. In late February 1999, NMSS and OSP decided that a Commission ruling was unnecessary, and to proceed with the clean-up with NRC as the lead agency over the decommissioning.
4. Added to listing from Phase III of ORNL Terminated License Review Project (received by RII in Jan/Mar 1998).
5. As of February 4, 1999, ARCO was under active review by RII. Review thus far found that the Cherokee Avenue site was adequately decommissioned under a different license (the -08 license); however, questions remain about the status of the Pine Ridge plant. The former licensee, ARCO, is researching the issue. RII is awaiting a response from them. On June 22, 1999, RII contacted ARCO and noted that records have been retrieved, but not yet fully reviewed by them. On September 1, 1999, ARCO sent RII a letter indicating that no additional info on Pine Ridge had been found. ARCO continued to followup with former employees. As of December 1999, no additional info had turned up, but ARCO continued to followup. **Based on additional information provided by ARCO, this file was closed in this report.**

REGION II TERMINATED SITES, SCORES >5<300

As of 1/25/01

LICENSE NO.	LICENSEE NAME	CITY, STATE	ORNL SCORE	STATUS
01-00126-13	Army-Redstone Arsenal	Huntsville, AL	14	Closed by RII action
01-02861-01	US Army Chem.Corps	Ft. McClellan, AL	240	Closed by RII action
SNM-00842	EPA (Eastern Env. Rad. Facility)	Montgomery, AL	19	Closed by RII action
09-01708-01	Orlando Research, Inc.	Orlando, FL	40	Closed by RII action
09-02747-04	US Air Force	Eglin AFB, FL	6	Deleted by NMSS
09-07428-02	Florida Power & Light	Ft. Pierce, FL	84	Closed by RII action
10-00512-01	US Public Health Service (HHS)	Savannah, GA	12	Closed by RII action
10-00512-04	US Public Health Service (HHS)	Savannah, GA	83	Closed by RII action
10-01937-15	Georgia Tech	Atlanta, GA	163	Deleted by NMSS
10-01125-01	University of Georgia	Athens, GA	11	Closed by RII action

REGION II TERMINATED SITES, SCORES >5<300 (As of 1/25/01)

LICENSE NO.	LICENSEE NAME	CITY, STATE	ORNL SCORE	STATUS
10-09653-01	Luminous Processes, Inc.	Athens, GA	53	Closed by State of Georgia (note 3) (note 4)
16-00380-03	US Army Med. Res. Lab.	Ft. Knox, KY	31	Closed by RII action
SNM-00430	Radiochemistry, Inc.	Louisville, KY	10	Closed by State of Kentucky (note 3)
SUB-00432	Pittsburgh Metallurgical Co.	Calvert City, KY	14	Closed by RII action
32-00632-16	Duke Univ. Med. Cntr.	Durham, NC	148	Closed by RII action
32-06655-07	Duke University	Durham, NC	32	Closed by RII action
51-12758-02	US Army (535th Engineer Detachment)	Fort Davis Canal Zone, Panama	11	Closed by RII action
52-13137-01	Dept. of HEW	San Juan, PR	48	Open
52-15968-01	TII Industries, Inc.	Toa Alta, PR	34	Open (note 4)
39-00743-05	Medical College of South Carolina	Charleston, SC	205	Closed by RII action
39-01285-03	University of South Carolina	Columbia, SC	18	Closed by RII action

REGION II TERMINATED SITES, SCORES >5<300 (As of 1/25/01)

LICENSE NO.	LICENSEE NAME	CITY, STATE	ORNL SCORE	STATUS
39-12652-01	Jerry Walker and Charles Lee	Clemson, SC	7	Deleted by NMSS
41-08165-09	Tennessee Valley Authority	Soddy Daisy, TN	244	Recommended for closure by RII action (note 4)
41-08165-17	Tennessee Valley Authority	Chattanooga, TN	6	Recommended for closure by RII action (note 4)
C-03469	American Lava	Chattanooga, TN	33	Closed by RII action
C-03569	Kingston Pencil Corp.	Chattanooga, TN	10	Closed by State of Tennessee (note 3)
C-05317	Knoxville Iron Co.	Knoxville, TN	45	Closed by RII action
SMA-00227	Vitro Chemical	Chattanooga, TN	123	Closed by RII action
SMB-00720	Union Carbide	Lawrenceburg, TN	219	Consolidated with SNM-724 (>300 site)
SNM-01315	US Nuclear	Oak Ridge, TN	180	Closed by RII action

REGION II TERMINATED SITES, SCORES >5<300 (As of 1/25/01)

LICENSE NO.	LICENSEE NAME	CITY, STATE	ORNL SCORE	STATUS
SNM-01476	Tennessee Valley Authority	Chattanooga, TN	16	Recommended for closure by RII action (note 4)
10-12233-02	Southern Space, Inc.	Portsmouth, VA	122	Closed by RII action (note 4)
45-00953-02	US Army	Ft. Belvoir, VA	40	Closed by RII action
45-03499-05	College of William & Mary	Williamsburg, VA	57	Closed by RII action (note 4)
45-10085-03	Roanoke College	Salem, VA	66	Closed by RII action
45-13733-01	Meloy Labs, Inc.	Springfield, VA	50	Closed by RII action
45-17819-01	US Army (535th Engr.Det.)	Ft. Belvoir, VA	11	Recommended for closure by RII action
C-03465	B&W NNFD	Lynchburg, VA	81	Closed by RII action
C-03523	National Advisory Committee for Aeronautics	Langley Field, VA	8	Open
SUB-00921	Atlantic Research Corp. Research & Ordnance Division	Alexandria, VA	22	Closed by RII action

REGION II TERMINATED SITES, SCORES >5<300 (As of 1/25/01)

LICENSE NO.	LICENSEE NAME	CITY, STATE	ORNL SCORE	STATUS
SUC-01047	Portsmouth Terminal	Portsmouth, VA	64	Closed by RII action
47-01163-20	West Virginia University	Morgantown, WV	41	Open (note 4)
47-17725-01	Appalachian Reg.Hosp.	Beckley, WV	13	Deleted by NMSS
C-04327	Fostoria Glass Co.	Moundsville, WV	15	Closed by RII action
C-04345	Wheeling Tile Co.	Wheeling, WV	7	Closed by RII action
C-04576	Hercules Powder Co.	Ridgely, WV	6	Open
C-04922	Carborundum Company	Parkersburg, WV	84	Closed by RII action
STB-00058	E.I. DuPont de Nemours	Belle, WV	37	Open (note 2)
SUB-00081	Homer Laughlin China	Newell, WV	115	Open (note 1)
SUC-00628	Fostoria Glass Co.	Moundsville, WV	9	Closed by RII action
U. S. NAVY LICENSES				
04-02579-01	Naval Postgraduate School	Monterey, CA	19	Closed by RII action

REGION II TERMINATED SITES, SCORES >5<300 (As of 1/25/01)

LICENSE NO.	LICENSEE NAME	CITY, STATE	ORNL SCORE	STATUS
04-07316-02	Naval Energy & Environmental Support Activity	Port Hueneme, CA	34	Closed by RII action (note 4)
31-00718-02	New York Naval Shipyard Material Lab	Brooklyn, NY	7	Closed by RII action

NOTES:

(Current information printed in bold typeface)

- Homer Laughlin's remediation efforts continue. New estimated date for completion is July/August, 1995. HLC submitted request for approval of alternative release criteria for fixed contamination in some areas of facility and on some equipment. Request reviewed by RII personnel. Forwarded to NMSS for review and approval in 1/95. Some areas at facility surveyed and released by RII personnel in 12/95. NMSS requested additional information from licensee before decision on TAR. Licensee preparing response and expects to forward in June, 1996. Response not received. RII is scheduled inspection of former licensee facility to determine status of facility and progress on response. RII inspected in August, 1996. Licensee continues to work on response and expects to forward to RII by December, 1996. Due to contractor problems, HLC response has been further delayed. Response expected by March 10, 1997. Response delayed - expected to be completed June 27, 1997, by contractor. Software problems caused additional delay. Contractor is resolving problems and will submit ASAP. Licensee provided remainder of response by letter dated January 28, 1998. Region II is preparing TAR for DWM to review response. TAR was sent to HQ on 10/02/98 requesting review in light of new decommissioning rule. As of February 4, 1999, no response received. On February 25, 1999, Region II was notified that the HLC TAR issue had been chosen by the SRP Dose Modeling Group in NMSS to be a "test case" in the development of the SRP. On March 1, 1999, an inspection/meeting was conducted at the HLC facility in Newell, WV. The inspection revealed no concerns regarding the status of the facility and the remaining low-level contaminated waste being stored onsite until the issue is resolved. In the meeting, Region II discussed the status of the TAR and the informed HLC of the case being chosen as a test case for the SRP development. In March 1999, NRC published draft NUREG-1640, "Radiological Assessments for Clearance of Equipment and Materials from Nuclear Facilities," which will probably be used by the SRP group during their review of the HLC case. As of June 22, 1999, Region II had received no feedback regarding the status of the case. On December 3, 1999, RII was informed that the Dose Modeling Group had completed their evaluation. DWM was reviewing and responding to RII's October 1998 TAR. Response was expected in early 2000. DWM provided its comments in a memo dated March 23, 2000. The comments were forwarded to HLC for a response on May 15, 2000. **HLC responded with letter dated September 13, 2000, requesting a meeting with NRC personnel involved in the review of the dose analysis before they respond to the NRC comments. NRC agreed and a tentative meeting date of February 14, 2001, was set for the meeting between NRC HQ and Region II personnel and HLC representatives.**
- DuPont will evaluate the burial site using the draft Branch Technical Position, "Screening Methodology for Assessing Prior Land Burials of Radioactive Waste Authorized Under Former 10 CFR 20.304 and 20.302," dated October 1996, and submit for review. As of April 23, 1998, no submittals had been made. BTP has not been finalized. As of September 24, 1998, no submittals had been made. The BTP is not scheduled to be finalized. Region II is awaiting other guidance regarding former burials from DWM. As of February 4, 1999, no submittals had been made. The BTP is not scheduled to be finalized. Region II is awaiting other guidance regarding former burials from DWM. On June 22, 1999, Region II contacted DWM and requested guidance on how to proceed with the DuPont case. From discussions with DuPont on June 22, 1999, no change in status was noted. Region II is awaiting word from DWM regarding how best to proceed. As of December 1999, DWM recommended that a TAR be submitted to allow format review of the issue by them. A TAR will be prepared by RII. **A TAR was forwarded to DWM on May 15, 2000. No response to the TAR as of January 24, 2001**
- Office of State Programs (OSP) issued transmittal SP-97-080 indicating that NRC was going to turn over all terminated site files for sites located in Agreement States to the respective state. In addition, transmittal SP-98-025 informed the Agreement States of possible funding for closing out terminated sites which are turned over. In May 1998, Region II notified the Agreement States of the requisite sites in their jurisdiction, and has requested each State to provide notification to Region II as sites are closed out.
- Added to listing from Phase III of ORNL Terminated License Review Project (received by RII in Jan/Mar 1998).

**REGION II TERMINATED SITES, SEALED SOURCES ONLY
SCORES >1 BUT <300
AS OF 1/25/01**

LICENSE NO.	LICENSE NAME	CITY, STATE	ORNL SCORE	STATUS
01-01905-01	AW Williams Inspection Co.	Mobile, AL	2.2	Closed by RII action (note 1)
01-02377-01	Vester Thompson	Mobile, AL	3.0	Closed by RII action
01-02377-02	Vester Thompson	Mobile, AL	11.2	Closed by RII action
01-02510-02	Central Foundry Co.	Holt, AL	22.1	Closed by RII action
01-03568-01	Caldwell Foundry	Birmingham, AL	2.6	Closed by RII action (note 1)
01-03568-02	Caldwell Foundry	Birmingham, AL	2.6	Closed by RII action (note 1)
01-04151-01	Ephriam Camp, MD	Huntsville, AL	9.9	Closed by State of Alabama (note 1)
01-05661-03	Lloyd Noland Hospital	Fairfield, AL	28.2	Closed by RII action
01-09722-01	HK Porter	Birmingham, AL	1.9	Closed by RII action
01-11485-01	Chicago Bridge & Iron	Birmingham, AL	2.5	Closed by RII action
19-01398-31	Isotopes, Inc./US Coast Guard	Mobile, AL	291.0	Closed (Transfer to Region I)
CSA-03529	Alabama Polytechnic Inst.	Auburn, AL	2.6	Closed by RII action
SNM-00766	University of Alabama	Tuscaloosa, AL	7.3	Closed by RII action
SNM-00842	EPA Eastern Env. Rad. Facility	Montgomery, AL	14.0	Closed by RII action
04-07326-02	Aerospace Corp.	Cape Canaveral, FL	2.4	Closed by RII action
09-07428-02	Florida Power & Light	Ft. Pierce, FL	14.1	Closed by RII action
09-11579-01	QC Labs	Hollywood, FL	2.1	Closed by RII action
09-23043-01	TRW Space and Defense Sector	Cape Canaveral, FL	17.2	Closed by RII action (note 1)
SUD-00263	University of Florida	Gainesville, FL	3.7	Closed by RII action
10-09383-01	Dynatronics	Chamblee, GA	1.5	Closed by RII action (note 1)

REGION II TERMINATED SITES - SEALED SOURCE FILES AS OF 1/25/01

LICENSE NO.	LICENSE NAME	CITY, STATE	ORNL SCORE	STATUS
10-09823-01	Georgia Power	Mcdonough, GA	2.1	Closed by RII action (note 1)
16-00380-03	Army Medical Research	Ft. Knox, KY	1.2	Closed by RII action
16-17692-01	Mason & Hanger Silas Mason Co.	Lexington, KY	22.9	Closed (Transferred to Region III - Use in Middletown, IA at Army Ammo. Plant)
41-08165-01	Tennessee Valley Authority	Drakesboro, KY	44.8	Closed by RII action (note 2)
CSA-05228	University of Louisville	Louisville, KY	2.6	Closed by RII action
SNM-00413	University of Louisville	Louisville, KY	13.5	Closed by RII action
SUD-00278	University of Kentucky	Lexington, KY	2.6	Closed by RII action
23-10448-01	Superior Inspection Co.	MS	1.9	Closed by RII action
SNM-00479	Mississippi State Univ.	State College, MS	13.5	Closed by RII action
SUD-00158	Mississippi State Univ.	State College, MS	2.6	Closed by RII action
CSA-05230 SNM-00396	University of Mississippi	University, MS	2.6	Closed by RII action
SNM-00393	Research Triangle Inst.	Durham, NC	7.3	Closed by State of North Carolina (note 1)
SNM-00698	Wake Forest College	Winston Salem, NC	13.5	Closed by State of North Carolina (note 1)
SUD-00395	North Carolina State	Raleigh, NC	2.6	Closed by State of North Carolina (note 1)
52-03569-05	Commonwealth of PR - Civil Defense Warehouse	Gurabo, PR	5.9	Closed by RII action
52-09574-01	Puerto Rico Water Resources	San Juan, PR	1.6	Recommended for closure by RII action

REGION II TERMINATED SITES - SEALED SOURCE FILES AS OF 1/25/01

LICENSE NO.	LICENSE NAME	CITY, STATE	ORNL SCORE	STATUS
52-17662-01	Geotec Subsoil Exploration & Materials Lab.	Rio Piedras, PR (San Juan)	14.4	Closed by RII action
52-18076-01	Chevron Chemical Co.	Guayama, PR	2.8	Closed by RII action
SNM-01372	Hospital Pavia	Santurce, PR	66.9	Closed by RII action
SNM-01944	Hospital Pavia	Santurce, PR	100.3	Closed by RII action
CSA-03841	University of Puerto Rico	Mayaguez, PR	1.7	Closed by RII action
SUD-00601	University of South Carolina	Columbia, SC	2.6	Closed by State of South Carolina (note 1)
19-08794-02	JM Huber	Etowah, TN	2.1	Closed by State of Tennessee (note 1)
41-08165-15	Tennessee Valley Authority	Johnsonville, TN	6.6	Closed by RII action
41-08706-11	University of Tennessee	Memphis, TN	2.4	Closed by State of Tennessee (note 1)
SNM-00478	Memphis State University	Memphis, TN	13.5	Closed by State of Tennessee (note 1)
SNM-00484	Christian Brothers College	Memphis, TN	11.1	Closed by State of Tennessee (note 1)
SNM-00537	Oak Ridge Technical	Oak Ridge, TN	13.5	Closed by State of Tennessee (note 1)
SNM-00586	Tennessee Polytechnic Inst.	Cookeville, TN	13.5	Closed by State of Tennessee (note 1)
SNM-00671	University of Chattanooga	Chattanooga, TN	13.5	Closed by State of Tennessee (note 1)
SNM-00813	Southern Missionary College	Collegedale, TN	13.5	Closed by State of Tennessee (note 1)
SNM-00854	Vanderbilt University	Nashville, TN	13.5	Closed by State of Tennessee (note 1)
SUD-00561	University of Tennessee	Knoxville, TN	2.6	Closed by State of Tennessee (note 1)

REGION II TERMINATED SITES - SEALED SOURCE FILES AS OF 1/25/01

LICENSE NO.	LICENSE NAME	CITY,STATE	ORNL SCORE	STATUS
45-00174-03	Robert McClelland	Danville, VA	22.0	Closed by RII Action
45-01972-02	Allied Chemical	Hopewell, VA	3.1	Closed by RII Action
45-06177-04	Stuart Lee Adelman, PhD	Virginia Beach, VA	16.4	Closed by RII action
45-09361-06	American Machine & Foundry	VA	5.9	Closed by RII action
45-09469-01	Avtex Fibers	Front Royal, VA	5.9	Closed by RII Action
45-11841-01	AT&T	Purcellville, VA	1.0	Closed by RII Action
45-11842-01	AT&T	Keswick, VA	1.0	Closed by RII Action
45-12222-01	AT&T	Buckingham County, VA	1.0	Closed by RII Action
45-12698-01	U.S. Public Health Service Hospital	Norfolk, VA	5.4	Closed by RII action (note 2)
45-13195-01	AT&T	Moseley, VA	1.0	Closed by RII Action
45-13307-01	Bassett Furniture	Bassett, VA	8.1	Closed by RII Action
45-15353-01	James Hancock	Norfolk, VA	14.3	Closed by RII Action
45-17132-01	Army	VA	2.1	Closed by RII Action
CSA-03518	Virginia Polytechnic Inst.	Blacksburg, VA	1.5	Closed by RII Action
GL-00337	Cottrell Electronics	VA	1.0	Closed by RII Action
GL-00307	Epperson & Dull Co.	VA	1.0	Closed by RII Action
GL-00306	Jack Hartman & Co.	VA	1.0	Closed by RII Action
GL-00344	Powers Regulator Co.	VA	1.0	Closed by RII Action
GL-00345	Powers Regulator Co.	VA	1.0	Closed by RII Action
SNM-00138	Virginia Tech	Blacksburg, VA	5.1	Closed by RII Action
34-21191-01	Hunt Wireline Services	Parkersburg, WV	68.3	Closed by RII Action
47-00260-07	Union Carbide Corp	S. Charleston, WV	7.6	Open (note 2)

REGION II TERMINATED SITES - SEALED SOURCE FILES AS OF 1/25/01

LICENSE NO.	LICENSE NAME	CITY,STATE	ORNL SCORE	STATUS
47-01163-26	West Virginia University	Morgantown, WV	11.1	Closed by RII Action
47-09638-05	Charleston General Hospital	Charleston, WV	3.5	Closed by RII Action
47-13738-01	Mathiessen & Hegeler Zinc	Spelter, WV	1.3	Closed by RII Action
47-17264-01	Geological Services Inc.	Huntington, WV	17.8	Recommended for closure by RII action (note 2)
47-17373-01	State Construction Inc.	Ripley, WV	25.1	Closed by RII Action
47-17428-01	Allied Chemical	WV	1.9	Closed by RII Action
47-17517-01	Preston Contractors	Kingwood, WV	1.9	Closed by RII Action
47-19164-01	Green Construction Co.	Hinton / Green Sulphur Springs, WV	8.4	Closed by RII Action
47-21213-01	Acme Construction Co.	Skelton, WV	8.4	Closed by RII action
SNM-00522	Dept. Of Interior	Morgantown, WV	18.4	Closed by RII action
SNM-01512	West Virginia Univ.	Morgantown, WV	57.5	Closed by RII Action (note 2)

U. S. NAVY LICENSES

SNM-00232	Navy - Bureau of Ships	Mare Island, CA	23.0	Closed by RII based on Navy evaluation
SNM-00491	Naval Ordnance Test Station	China Lake, CA	18.0	Closed by RII based on Navy evaluation
SNM-00678	Naval Civil Engineering Lab.	Port Hueneme, CA	51.0	Closed by RII based on Navy evaluation
04-00364-06	Mare Island Naval Shipyard	Mare Island / Vallejo, CA	14.4	Closed by RII based on Navy evaluation
04-01039-01	San Francisco Naval Shipyard	San Francisco, CA	??	Open (note 3)

REGION II TERMINATED SITES - SEALED SOURCE FILES AS OF 1/25/01

LICENSE NO.	LICENSE NAME	CITY,STATE	ORNL SCORE	STATUS
04-03141-01	Naval Weapons Station	Concord, CA	10.8	Closed by RII based on Navy evaluation
08-00038-54	Naval Electronics Systems Command	Washington, DC	166.1	Closed by RII action
09-03267-01	Navy Mine Defense Lab	Panama City, FL	2.9	Closed by RII based on Navy evaluation
10-00287-04	Marine Corps Logistics Base	Albany, GA	11.9	Closed by RII based on Navy evaluation
04-04484-01	Navy - Subic Bay Repair Facility	Guam	11.0	Closed by RII based on Navy evaluation
19-00318-03	Naval Explosive Ordnance Tech Ctr	Indian Head, MD	11.3	Closed by RII based on Navy evaluation
19-00360-02	Naval Propellant Plant	Indian Head, MD	7.2	Open (note 3)
19-00360-08	Explosive Ordnance Disposal Facility	Indian Head, MD	3.6	Open (note 3)
37-00314-06	Philadelphia Naval Shipyard / Hospital	Philadelphia, PA	10.8	Closed by RII based on Navy evaluation
38-07741-03	Naval Construction Battalion Center	Davisville, RI	60.1	Open (note 3)
39-06126-01	Charleston Naval Shipyard	Charleston, SC	8.4	Closed by RII based on Navy evaluation
45-04052-02	Norfolk Naval Shipyard	Norfolk & Portsmouth, VA	22.5	Closed by RII based on Navy evaluation
45-07740-01	Navy	Yorktown, VA	1.6	Closed by RII based on Navy evaluation
???	Navy	??	??	Open (note 3)
???	Navy	??	??	Open (note 3)

NOTES:

(Current information printed in bold typeface)

- Office of State Programs (OSP) issued transmittal SP-97-080 dated 11/14/97 indicating that NRC was going to turn over all terminated site files for sites located in Agreement States to the respective state. In addition, transmittal SP-98-025 dated 04/02/98 informed the Agreement States of possible funding for closing out terminated sites which are turned over. In May 1998, Region II notified the Agreement States of the requisite sites in their jurisdiction, and has requested each State to provide notification to Region II as sites are closed out.

REGION II TERMINATED SITES - SEALED SOURCE FILES AS OF 1/25/01

2. Added to listing from Phase III of ORNL Terminated License Review Project (received by RII in Jan/Mar 1998).
3. **Added to listing for transfer from Region I or IV - received by RII in Sep 2000 and Jan 2001.**