



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

April 25, 2000

Docket No. 040-07102

License No. SMB-743

Nigel Morrison
Vice President and General Manager
Shieldalloy Metallurgical Corporation
West Boulevard
P.O. Box 768
Newfield, NJ 08344

SUBJECT: INSPECTION NO. 040-07102/00-01

Dear Mr. Morrison:

On March 13, 2000, Marie Miller of this office conducted a safety inspection at Newfield, New Jersey of activities authorized by the above listed NRC license. The inspection was an examination of your licensed activities as they relate to radiation safety and to compliance with the Commission's regulations and the license conditions. The inspection consisted of observations by the inspector, interviews with personnel, and a selected examination of representative records. Additional information provided in your correspondence dated March 28, 2000 was also examined as part of the inspection. The findings of the inspection were discussed with David Smith of your organization at the conclusion of the inspection. The enclosed report presents the results of this inspection.

Within the scope of this inspection, no violations were identified. As discussed in the enclosed report, we understand that you are evaluating your business plan regarding your licensed principle activities. Further, based on the April 25, 2000, telephone conversation between Dave Smith and Marie Miller of our respective organizations, we understand you will request by April 28, 2000, to delay initiation of the decommissioning process to provide an opportunity to better examine your business plan.

In accordance with Section 2.790 of the NRC's "Rules and Practices," Part 2, Title 10, Code of Federal Regulations, a copy of this letter will be placed in the Public Document Room. No reply to this letter is required.

Your cooperation with us is appreciated.

Sincerely,

Original signed by Ronald R. Bellamy

Ronald R. Bellamy, Chief
Decommissioning and Laboratory Branch
Division of Nuclear Materials Safety

N. Morrison
Shieldalloy Metallurgical Corporation

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Enclosure:
Inspection Report No. 040-07102/00-01

cc: w/encl.
David Smith, Radiation Safety Officer
Jill Lipoti, Assistant Director, Radiation Protection Programs
State of New Jersey

Distribution: w/encl.

J. Olivier, FCSS/NMSS
E. Pogue, RI

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 040-07102/00-01
Docket No. 040-07102
License No. SMB-743
Licensee: Shieldalloy Metallurgical Corporation
Location: West Boulevard
P.O. Box 768
Newfield, New Jersey 08344
Inspection Dates: March 13, 2000
Date Follow-up
Information Received: March 28, 2000 and April 25, 2000

Inspector:	Original signed by:	4/25/2000
	_____	_____
	Marie T. Miller Senior Health Physicist	date

Accompanied By: Julie Olivier, Project Manager
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Materials Safety and Safeguards

Eric Pogue, General Scientist (Intern)
Division of Nuclear Materials Safety, RI

Francis Costello, Deputy Director
Division of Nuclear Materials Safety, RI

Approved By:	Original signed by:	4/25/2000
	_____	_____
	Ronald R. Bellamy, Chief Decommissioning and Laboratory Branch Division of Nuclear Materials Safety	date

EXECUTIVE SUMMARY

Shieldalloy Metallurgical Corporation NRC Inspection Report No. 040-07102/00-01

An announced safety inspection was conducted at the Shieldalloy Metallurgical Corporation (SMC) facility in Newfield, New Jersey on March 13, 2000. The inspection was conducted to determine the status of the licensee's facility and licensed activities, and to discuss the January 21, 2000-report "Soil Sampling/Survey of the Storage Yard after Remediation" and supplemental survey information provided by SMC's letter dated March 28, 2000.

The licensee's inventories of radioactive materials were within 97% and 88% of its licensed possession limits for thorium and uranium, respectively. The licensee is evaluating its business plan regarding its current principle licensed activities and the requirements of 10 CFR 40.42. Licensed material was being stored as required by the license. A characterization survey of the perimeter was in-process to demonstrate that licensed material is being controlled.

The eastern end of the Storage Yard was remediated in 1999 as part of SMC's Nature Resource Restoration Plan for reforestation of upland areas. Based on a review of the survey report, and prior in-process observations, the inspector determined that the licensee had adequately implemented its radiation safety procedures for release criteria. This remediation is not a final action and the licensee retained ownership of the area. By NRC letter dated April 6, 2000, the NRC advised the licensee that the data from this survey may be re-evaluated at the time of license termination in order to include any possible dose from this area in the dose assessment for the entire site. Deficiencies in the licensee's Decommissioning Funding Plan for the entire site are being addressed by the licensee.

REPORT DETAILS

I. Organization and Scope of the Program

a. Inspection Scope

The inspection included a review of organizational changes and scope of licensed activities conducted since the last inspection in September 1999.

b. Observations and Findings

The licensee's radiation safety officer and senior corporate official responsible for the site remained the same, however, the assistant radiation safety officer had resigned effective March 15, 2000. The licensee planned to hire a replacement.

There were no changes in the inventory of licensed material based on a review of the licensee's source inventory logs, and statements by the licensee that no shipments or receipts of licensed material had been made since the last inspection.

The fourth quarter minutes of the Radiation Safety Committee (RSC) meeting dated December 22, 1999, addressed the appropriate areas of concern. Specifically, the changes in license conditions and pending exemption requests, and business plans under consideration for use of the facility, the CANAL slag and baghouse dust pile. However, the meeting minutes indicated that the storage of licensed material in D111 would not trigger the notifications required under the 10 CFR 40.42, which specifies actions and time schedules for timely decommissioning of inactive facilities used for principle licensed activities. The inspector and the Region I Deputy Director, Division of Nuclear Materials Safety discussed the provisions of the Decommissioning Timeliness Rule and highlighted that storage alone is not considered a principle licensed activity. Conversely, the production of speciality alloys using source raw material is a principle licensed activity. Because SMC's last production run using licensed material occurred in February 1998, a written notification to the NRC would be required within two years and sixty days after there were no licensed principle activities in any separate building or outdoor area that contains residual radioactivity. The licensee stated this information would be considered and evaluated with respect to maintaining an NRC license.

The licensee plans to distribute raw source material and was researching the processing of contaminated waste from other processors for the separation of product metal and the radioactive contamination. There was no current business interest for using the CANAL.

c. Conclusions

The licensee's inventories of radioactive materials were within 97% and 88% of its licensed possession limits for thorium and uranium, respectively. The licensee was evaluating its business plan regarding its current principle licensed activities and the requirements of 10 CFR 40.42.

II. Facilities and Equipment

a. Inspection Scope

The inspection included a tour of the facilities used for licensed materials, including the Source Material Storage Yard (SMSY).

b. Observations and Findings

The licensee stated that there had been no processing of licensed material (pychore) for the production of speciality alloy since February 1998. Radioactive contamination remains in building D111 and the D111 Flex-Kleen baghouse, which previously were used for the production of specialty alloys and the generation of a ferrocolumbian slag, also known by the trade-name CANAL. Packaged CANAL was removed from D111 to the SMSY. The ferrocolumbian slag, which contains most of the uranium and thorium is stored in the SMSY. The baghouse dust, dust filter bags from the former American Air Filter (AAF) baghouse and soils from previous remediation projects were stored in the SMSY.

The inspector noted that areas with licensed radioactive material were conspicuously posted with the appropriate radioactive material signs as required by 10 CFR 20.1902. The third quarter report, dated October 20, 1999, documented routine radiological exposure and contamination surveys. Area surveys were documented for buildings D102, D111, D117, D202, D102 lunchroom, Warehouses D and G, and the Flex-Kleen baghouse. Since there were no operations using source material in D111 this quarter, no air samples were taken.

During the tour of the SMSY, the inspector observed some erosion of the soil along the path between the baghouse dust piles and the south meadow, which was a restored area owned by the licensee. A perimeter survey to characterize the area just outside the fence-line had been conducted recently to demonstrate that licensed radioactive materials were being controlled within the Storage Yard. Preliminary results indicated a few elevated spots, which could be attributed to licensed material or more likely, to the baghouse dust that is non source material. The migration of radioactive material was also discussed in the December 1999 RSC meeting. The licensee plans to address the erosion and the possible run off from the non source material dust pile.

c. Conclusions

Licensed material is being stored as required by the license. The characterization survey of the perimeter was in-process to demonstrate that licensed material is being controlled.

III. Decommissioning Activities

a. Inspection Scope

The inspection included a review of the licensee's January 21, 2000-report "Soil Sampling/Survey of the Storage Yard after Remediation" and supplemental survey information provided by SMC's letter dated March 28, 2000. In-process surveys were observed, and NRC confirmatory measurements of this area had been taken during a previous NRC inspection (See NRC Inspection Report 040-07102/99-01, dated October 28, 1999). The status of the licensee's plans to address the questions concerning SMC's Decommissioning Funding Plan (DFP) was discussed. During the inspection, the inspector noted that by letter to NRC dated January 14, 2000, that the licensee had submitted its report "Demolition and Final Survey of the AAF Baghouse. " This report will be reviewed during a subsequent inspection.

b. Observations and Findings

The eastern end of the Storage Yard was remediated in 1999 as part of SMC's Nature Resource Restoration Plan for reforestation of upland areas. Soil and residual slags generated by SMC's licensed and non-licensed operations (ferrocolumbium and ferrovanadium slags) had been removed from the area at depth between one and five feet. The area had been impacted from licensed activities and the contaminants of concern were Thorium-232 and Uranium-238 in equilibrium with their progeny. The survey and survey report were prepared by a health physics consulting firm.

A walk over survey was performed over 100% of the approximately three-acre area. Any area that had an exposure rate measurement greater than 5 microR/hour above background was marked with a flag and was remediated until it was consistent with background or met the exposure release criteria of 15 microR per hour above background.¹ The inspector discussed with the licensee's consultant by telephone the methods used to evaluate the high and variable exposure rate from the licensed radioactive materials stored in the western portion of the Storage Yard. The licensee's consultant stated that the minimum detectable count rates were established based on the ambient background and comparisons between surface and one meter measurements were observed to determine if there was any buried slag. Because this information was not included in the survey report, by letter dated March 28, 2000, the licensee provided the specific parameters to address their exposure rate detection capability under the various conditions.

In addition, fifteen soil samples were collected using methods outlined in Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM). The licensee judged that the "stratified systematic unaligned sampling protocol" would be preferred to the

¹Assumes 2.5 picocuries per gram(pCi/g) of Th-232, Th-238, U-238 and U-234 (plus progeny in equilibrium) evenly distributed throughout the soil volume to a depth of 15 centimeters (cm), with measurements at a height of less than three cm above the soil surface.

recommended random sampling protocol. The inspector agreed with this approach because the slag pieces had been found in specific areas and were not randomly distributed across the larger survey unit. All soil samples results were below the release criteria of 2.5 pCi/g for U-238, and U-234, Th-232 and Th-228. These criteria were approved for SMC's release of soils by NRC letter dated August 26, 1998. The uranium concentrations ranged from 0.23 to 0.65 pCi/g and thorium concentrations ranged from 0.32 to 0.95 pCi/g.

The inspectors noted that the licensee's revised Decommissioning Funding Plan (DFP) had been submitted to NRC on October 19, 1999. As discussed during the March 21, 2000 meeting between NRC and SMC, additional characterization information is required. A second revision to the DFP for the entire site is expected to be submitted to NRC by May 2000.

c. Conclusions

Based on a review of the survey report, and prior in-process observations, the inspector determined that the licensee had adequately implemented its radiation safety procedures for release criteria. This remediation is not a final action and the licensee retained ownership of the area. By NRC letter dated April 6, 2000, the NRC advised the licensee that the data from this survey may be re-evaluated at the time of license termination in order to include any possible dose from this area in the dose assessment for the entire site. Deficiencies in the licensee's DFP for the entire site are being addressed by the licensee.

IV. Exit Meeting

The inspector provided a synopsis of the inspection findings to the Radiation Safety Officer on March 13, 2000. The additional information requested during the exit meeting was submitted by the licensee by letter dated March 28, 2000, and discussed by telephone with the RSO on April 25, 2000..

PARTIAL LIST OF PERSONS CONTACTED

Licensee

*David R. Smith, Radiation Safety Officer and Director of Environmental Services
Allan Duff, Integrated Environmental Management, Inc. (IEM), Licensee Consultant
Carol Berger, Project Oversight, IEM

*indicates presence at exit meeting

APPENDIX A

MATERIALS DECOMMISSIONING INSPECTION RECORD

FOR FACILITIES NEEDING SIGNIFICANT DECOMMISSIONING EFFORT

Region I

Licensee (Name & Address): Nigel Morrison, Vice President & General Manager Shieldalloy Metallurgical Corporation West Boulevard P.O. Box 768 Newfield, NJ 08344		Inspection Report No. : 040-07102/00-01 License No.: SMB-743 Docket No. : 040-01102 Telephone No.: (856)692-4200 x226			
Licensee Contact:	David R. Smith	Date of Last Inspection:	September 9, 1999		
Priority:	3	Date of This Inspection:	March 13, 2000		
Program Code:	11700				
Type of Inspection:	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;"> ☒ Announced ☐ Routine ☐ Initial Decommissioning </td> <td style="width: 50%; border: none;"> ☐ Unannounced ☐ Special ☒ Reinspection of Decommissioning </td> </tr> </table>			☒ Announced ☐ Routine ☐ Initial Decommissioning	☐ Unannounced ☐ Special ☒ Reinspection of Decommissioning
☒ Announced ☐ Routine ☐ Initial Decommissioning	☐ Unannounced ☐ Special ☒ Reinspection of Decommissioning				
Next Inspection:	March 2001	☐ Normal ☒ Reduced ☐ Extended			

Brief Description of Inspection Activities:

Inspect to determine status of facility and to discuss the survey report submitted to NRC on January 21, 2000, regarding the remediation and survey of the east portion of the Storage Yard.

Brief Description of Findings and Action:

The licensee activities with respect to processing of licensed material for the production of specialty alloys had been inactive for two years. The notification and schedule requirements of the Decommissioning Timeliness Rule were discussed. The licensee plans to reforest and deed restrict the east portion of the Storage Yard after completion of an NRC review of the survey report. Additional information to support this review was submitted by the licensee on March 28, 2000. NRC letter dated April 6, 2000, states in part that it has no objections to re-forestation of the area, and that the data from this survey may be re-evaluated at the time of license termination.

Summary of Findings and Action:

- ☒ No violations cited, clear NRC Form 591 or regional letter issued
☐ Followup on previous violations

Inspector:	Marie Miller, Senior Health Physicist, Decommissioning and Laboratory Branch (DLB) (Type Inspector's Name)	Date:	April 25 2000
Approved:	J. Kottan for Ronald R. Bellamy, Chief, DLB, Division of Nuclear Materials Safety, RI	Date:	April 25, 2000

[Field notes are to be used by the inspector to assist with the performance of the inspection. Note that all areas indicated in the field notes are not required to be addressed during each inspection. However, for those areas not covered during the inspection, a notation ("Not Reviewed") should be made in each section where applicable. Additionally, all areas covered during the inspection should be documented in sufficient detail to describe what activities and/or records the inspector observed. The fieldnotes to the "Decommissioning Inspection Procedure for Materials Licensees" should be supplemented with: (1) the applicable inspection procedures for operating facilities provided in the Inspection Procedure (IP) 87100 series; and (2) other written documentation of the inspection, as necessary.]

1. **SUMMARY OF DECOMMISSIONING STATUS**

The checklist below is intended to provide, in a written outline format, summary documentation of the status of the licensee's facility in the decommissioning process. This documentation will be filed as part of the inspection report. The inspector should use this information to develop each inspection plan(s) for the various stages of decommissioning, namely, before dismantlement, during dismantlement and site remediation, and after site remediation.

A. Licensee ceased operational program	X ¹	Y		N
B. Required decommissioning financial assurance mechanisms in place.	X	Y		N
C. Decommissioning Plan (DP) required.	X	Y		N
D. Licensee final survey required.		Y	X	N
E. NRC confirmatory survey required.		Y	X	N
F. NRC closeout inspection required.		Y	X	N
G. Licensee doing decommissioning planning and preparation before dismantlement		Y	X	N
H. Licensee actively remediating site.		Y	X	N
I. Licensee completed site remediation.	X ²	Y		N

Description of Facility Status:

Radioactive contamination remains in building D111 and D111 Flex-Kleen baghouse which previously were used for the production of specialty alloys and the generation of ferrocolumbian slas. Slag and materials and soils were previous remediation projects are stored in the Source Material Storage Yard (SMSY). Note (1): The licensee has not produced specialty alloys using source material since February 1998. The licensee plans to continue to distribute source materials and to develop markets for the slag and possibly contaminated metal products. Note (2): The licensee completed remediation of the eastern portion of the SMSY in 1999 and submittted a final survey report on January 21, 2000.

2. **INSPECTION OF KEY DECOMMISSIONING ACTIVITIES**

The following is a generic checklist of major licensee activities occurring at various stages of decommissioning. From this generic checklist and from facility-specific activities you identify, develop the set of licensee activities to be inspected - for each individual inspection throughout the decommissioning process. Plan to inspect licensee activities that present potential high-risk conditions. Then apply the standard health and safety inspection areas in Section 3 of these fieldnotes (taken from the applicable 87100 series IP for the licensee's operational program) to the specific licensee decommissioning activities that are being inspected.

To complete the licensee activities checklist, the inspector will need to obtain information from the Licensing Project Manager, review the DP, make observations at the licensee's facility, review licensee records, take measurements and samples of contaminants, and undertake other investigative measures, to determine whether the licensee is meeting all regulatory and DP commitments for each decommissioning activity the licensee is performing.

- A. LICENSEE ACTIVITIES INSPECTED BEFORE DISMANTLEMENT ☒ N/I ☐ N/A
1. Licensed material used during operations has been removed from site. ☐ Y ☐ N
 2. Facility license conditions are in place and met by licensee. ☐ Y ☐ N
 3. Site security and control of contaminated material being maintained in compliance with 10 CFR 20.1801 and 20.1802. ☐ Y ☐ N
 4. Support systems and services (e.g., lighting, water supply) are in place. ☐ Y ☐ N
 5. Decommissioning schedules are consistent with timeliness requirements in 10 CFR 30.36, 40.42, and 70.38. ☐ Y ☐ N
 6. Licensee's recordkeeping is consistent with 10 CFR 30.35, 40.36, and 70.25. ☐ Y ☐ N
 7. Financial assurance requirements are being maintained in accordance with 10 CFR 30.35, 40.36, and 70.25. ☐ Y ☐ N
 8. Licensee is conducting site characterization in accordance with applicable radiation protection procedures. ☐ Y ☐ N
 9. Construction of new site features (e.g., roads, rail spurs, staging areas, sediment control ponds) conforms to DP and does not compromise health and safety of workers and public. ☐ Y ☐ N
 10. Licensee activities conform to specific license conditions and licensee programs and procedures. ☐ Y ☐ N
 11. Other licensee activities(describe below):

Basis for findings:

- B. LICENSEE ACTIVITIES INSPECTED DURING DECONTAMINATION, DISMANTLEMENT, AND SITE REMEDIATION ☒ N/I ☐ N/A

1. Site security and control of contaminated material being maintained in compliance with 10 CFR Part 20. ☐ Y ☐ N

2.	Decontamination and dismantlement of structures are being performed consistent with DP and sound industry practice (structures include buildings, utilities, treatment lagoons, etc.).	☐	Y	☐	N
3.	Decontamination and remediation of the following are being performed consistent with DP and sound industry practice:	☐	Y	☐	N
a.	Soil.	☐	Y	☐	N
b.	Sediment.	☐	Y	☐	N
c.	Surface waters.	☐	Y	☐	N
d.	Groundwater.	☐	Y	☐	N
e.	Other mediums (describe below):	☐	Y	☐	N
4	Licensee release and disposal of decommissioning wastes are consistent with DP and approved by NRC for:	☐	Y	☐	N
a.	Liquid wastes (e.g., groundwater, surface water, liquid from treatment ponds, process liquids).	☐	Y	☐	N
b.	Solid wastes (e.g., building materials, process and other facility equipment, concrete rubble, soil).	☐	Y	☐	N
c.	Other wastes (describe below):	☐	Y	☐	N
5.	Temporary, on-site storage of low-level radioactive wastes from decommissioning meets license conditions and guidance in IP 84890.	☐	Y	☐	N
6.	Packaging and shipment of radioactive waste materials meet requirements in 40 CFR Parts 173-178 and 10 CFR Part 71.	☐	Y	☐	N
7.	Restoration of site-Licensee has restored site to meet license conditions and NRC-approved plans.	☐	Y	☐	N
8.	Licensee survey of material and equipment for free release sufficient to demonstrate compliance with release criteria.	☐	Y	☐	N
9.	Other licensee activities:	☐	Y	☐	N

Basis for Findings:

C.	LICENSEE ACTIVITIES INSPECTED AFTER COMPLETION OF SITE REMEDIATION	☐	N/I	☐	N/A
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- | | | | | | |
|----|--|-------------------------------------|--------------------------|-------------------------------------|---|
| 1. | Licensee has submitted NRC Form 314 for disposition of licensed material in accordance with 10 CFR 30.36, 40.42, and 70.38. | ☒ | ☐ | ☐ | N |
| 2. | Licensee's final survey program is acceptable (see Appendix B for inspection items for final surveys). | ☒ | ☐ | ☐ | N |
| 3. | NRC confirmatory survey performed. | ☐ | ☐ | ☒ | N |
| 4. | Site maintenance activities (if any, for restricted use) conform to license conditions and NRC-approved plans and are in place and functional. | ☒ | ☐ | ☐ | N |
| 5. | Other licensee activities: | ☐ | ☐ | ☐ | N |

Distribution of licensed raw materials and storage of licensed materials.

Basis for Findings:

The licensee submitted a final survey report for the eastern end of the Storage Yard that is part of SMC's Nature Resource Restoration Plan for reforestation of upland areas. Based on a review of the final survey report, and prior in-process observations and confirmatory measurements the inspector determined that the licensee had adequately implemented its radiation safety procedures for release criteria. This remediation is not a final action and the licensee retained ownership of the area. By letter dated April 6, 2000, the NRC advised the licensee that the data from this survey may be re-evaluated at the time of license termination in order to include any possible dose from this area in the dose assessment for the entire site.

3. INSPECTION OF STANDARD HEALTH AND SAFETY AREAS FROM THE OPERATIONAL INSPECTION PROGRAM

Identify the standard inspection areas (from the inspection program of the licensee's operational program) to be covered during each decommissioning inspection. [Inspection areas A through L below correspond to the typical inspection areas in the 87100 series IPs that are applicable to decommissioning.] Then identify the new activities within the standard inspection areas undertaken by the licensee during decommissioning. Some of the new activities given below, as well as any other activities the inspector identifies, should be considered inspection items under the general set of health and safety inspection areas used in the applicable 87100 series IP.

Minimum inspection areas for the initial decommissioning inspection: decommissioning organization (A.1); decommissioning activities in compliance with NRC-approved DP (A.2); licensee procedures for implementing the DP (A.3); Radiation Safety Committee (RSC) and Radiation Safety Officer (RSO) responsibilities (A.4); and the licensee's decommissioning training program (E.1).

A.GENERAL OVERVIEW

- Describe the licensee's decommissioning organizational structure:

Radiation Safety Officer and Radiation Safety Committee make decisions regarding decommissioning. Consulting firm used to perform survey and document survey

reports.

2. Licensee is performing decommissioning activities in compliance with its approved DP. ☐ Y ☒¹ N
- Licensee has implemented procedures for the decommissioning activities identified in the DP. ☒ Y ☐ N
- The RSC and RSO fulfill license requirements to deal with all decommissioning activities. ☒ Y ☐ N

Basis for Findings:

RSC meets and documents decisions regarding limited decommissioning activities. Licensee implementing release criteria procedures which were approved by NRC. Note(1): A DP is not required for the decommissioning activities completed to date.

B. FACILITIES

1. Describe, from field observation, the licensee-identified facilities and outdoor areas to be decommissioned:

Not Applicable. Remediation had been completed in 1999. Inspection reviewed status of facility and completed final survey report for eastern portion of Storage Yard.

2. The licensee's remediation plan includes all the contaminated facilities and areas on-site and off-site ☐ Y ☐ N
3. All essential systems and services (e.g., electrical power, water supply, communications systems) are in place and functional for the planned decommissioning activities. ☐ Y ☐ N
4. Licensee's emergency plan is in place and operative for the duration of decommissioning. ☐ Y ☐ N
5. For complex sites needing site characterization, describe the key site characterization activities to be performed by the licensee to determine the nature and extent of contamination:

6. Licensee's characterization activities performed in conformance with good industry practice. ☐ Y ☐ N

Basis for Findings:

C. EQUIPMENT AND INSTRUMENTATION

1. Survey instruments are applicable to contaminants of interest.

☒	Y	☐	N
☒	Y	☐	N

2. Use of survey instruments appropriate for site.

Basis for Findings:

Consulting firm provided appropriate survey instruments and arranged for analyses of soil samples.

A. MATERIALS

1. Radioactive materials licensed during operations have been removed offsite; residual quantities conform to license conditions.

☐	Y	☒	N
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2. Security and control of licensed materials, including contaminated areas, is being maintained.

☒	Y	☐	N
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Basis for Findings:

All licensed material remains onsite. Licensee plans to decommission using in-situ disposal.

E. TRAINING

1. Licensee has developed training program for new decommissioning activities (e.g., demolition of structures, excavation of soil); program is adequate.

☒	Y	☐	N
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2. Training program being effectively implemented.

☒	Y	☐	N
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Basis for Findings:

Licensee using experience technicians and health physics professionals for surveys. Personnel who had performed excavation of soil received radiation safety training from SMC.

F. AREA RADIATION SURVEYS AND CONTAMINATION CONTROL

Area surveys are being performed in areas being decommissioned.

☒	Y	☐	N
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Where active remediation (e.g., demolition of structures, excavation of soil) is being performed, radiation levels in unrestricted areas do not exceed 2 mrem in any one hour.

☒	Y	☐	N
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Basis for findings:

TLD results documented exposures less than 2 mrem in any one hour in the area that was remediated.

G. RADIATION PROTECTION

The licensee's approved health physics program is being implemented in the field for new decommissioning activities.

☒ X Y ☐ N

Site security and control of contaminated material are in compliance with 10 CFR 20.1801 and 20.1802.

☒ X Y ☐ N

Basis for findings:

Areas were posted as required. Access to site controlled by entering through reception area into fenced property. Personnel working in remediated area wore whole body dosimetry. No personnel contaminations reported.

H. RADIOACTIVE WASTE MANAGEMENT/EFFLUENTS/ENVIRONMENTAL MONITORING

1. Offsite disposal of decommissioning wastes conforms to free release criteria and disposal site requirements.

☒ X Y ☐ N

2. All new effluent releases conform to DP and applicable regulations.

☐ N/I Y ☐ N

3. The licensee's environmental monitoring program is being implemented in conformance with the DP and all applicable limits are being met.

☐ N/I Y ☐ N

4. Temporary storage/staging areas for radioactive wastes from building demolition, equipment dismantlement, soil excavation, etc., are adequately posted and protected.

☒ X Y ☐ N

Basis for findings:

Survey results documented in final survey report. Results below site specific criteria approved by NRC in August 1998.

I. RECORDKEEPING FOR DECOMMISSIONING

1. Copies of the licensee's decommissioning cost estimates and funding methods are on file.

☒ X Y ☐ N N

2. Licensee has adequate records for decommissioning activities performed (e.g., for decontamination and dismantlement of structures; decontamination and remediation of soil, sediment, surface waters, groundwater; surveys of remediated facilities).

☒ X Y ☐ N N

3. Licensee's financial assurance conforms with the financial assurance requirements of NRC-approved possession limits and NRC regulations.

☒ Y ☐ N ☐ N

Basis for Findings:

Decommissioning Funding Plan (DFP) submitted to NRC on October 19, 1999. A second revision to the DFP for the entire site is expected to be submitted to NRC by May 2000. Note (1): The adequacy of the licensee's financial assurance requirements will be reviewed as part of this licensing action.

J. TRANSPORTATION

1. Describe the licensee's program to package and ship decommissioning waste materials:

No shipments made during since last inspection period.

2. Licensee's program meets all applicable 10 CFR and 49 CFR requirements for marking labeling, placarding, and shipping paper requirements for radioactive waste shipments.

☐ N ☐ Y ☐ N

Basis for Findings:

Area was not inspected.

K. POSTING AND LABELING

1. All contaminated areas, waste processing areas, and waste handling areas are posted in conformance with regulations.

☒ Y ☐ N

2. Packaged radioactive waste materials are labeled in accordance with regulations.

☐ Y ☒ N

Basis for Findings:

Inspector observed radioactive material postings. Waste stored in SMSY. Waste not packaged for disposal.

L. OCCUPATIONAL HEALTH AND SAFETY

1. Describe the occupational health and safety observations made at the licensee's facilities:

Area not inspected

2. Licensee and Occupational Safety and Health Administration were informed of occupational health and safety issues observed during the inspection.

☐

Y

☐

N

Basis for Findings:

4. **VIOLATIONS, NON-CITED VIOLATIONS, FOLLOWUP ITEMS, AND OTHER ISSUES**

Briefly state (1) the requirements and (2) how and when the licensee violated the requirement. For non-cited violations, indicate why the violation was not cited. Briefly describe followup items and other issues.

None.

