



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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

October 24, 2000

Docket No. 03005980

License No. 37-00030-02

Larry Harmon
Plant Manager
Safety Light Corporation
4150-A Old Berwick Road
Bloomsburg, PA 17815

SUBJECT: INSPECTION 03005980/1999002, SAFETY LIGHT CORPORATION,
BLOOMSBURG, PENNSYLVANIA SITE

Dear Mr. Harmon:

On December 14, 1999; January 11, 2000; March 2, 2000; March 9, 2000; June 20, 2000; August 7, 2000; and October 10, 2000, David Everhart and James Kottan of this office conducted a safety inspection at the above address of activities authorized by the above listed NRC license. Marie Miller of this office also accompanied Mr. Kottan during the October inspection because she has assumed NRC Project Manager responsibilities for this 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. The findings of the inspection were discussed with you 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.

In accordance with 10 CFR 2.790, a copy of this letter will be placed in the NRC Public Document Room and will be accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html>. 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

Enclosure:
Inspection Report No. 03005980/1999002

L. Harmon
Safety Light Corporation

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cc:
Commonwealth of Pennsylvania

L. Harmon
Safety Light Corporation

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DATE	10/24/00		10/24/00		10/30/00			

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 03005980/1999002
Docket No. 03005980
License No. 37-00030-02
Licensee: Safety Light Corporation
Location: 4150-A Old Berwick Road
Bloomsburg, PA 17815
Inspection Dates: December 14, 1999; January 11, 2000; March 2, 2000; March 9, 2000; June 20, 2000; August 7, 2000; and October 10, 2000

Inspectors:	<i>Original signed by</i> <i>David Everhart</i>	<i>October 30, 2000</i>
	_____ David Everhart Health Physicist	_____ date
	<i>Original signed by</i> <i>James Kottan</i>	<i>October 30, 2000</i>
	_____ James Kottan Radiological Safety Program Manager	_____ date
Approved By:	<i>Original signed by</i> <i>Ronald R. Bellamy</i>	<i>October 30, 2000</i>
	_____ Ronald R. Bellamy, Chief Decommissioning and Laboratory Branch Division of Nuclear Materials Safety	_____ date

EXECUTIVE SUMMARY

Safety Light Corporation
NRC Inspection Report No. 03005980/1999002

Announced inspection of the licensee's decommissioning activities related to removal of radioactive material from the two on-site underground storage silos. Areas reviewed included: management oversight, facilities, equipment and instrumentation, radiation surveys and contamination control, and training.

In October 1999 the licensee began removing radioactive material from two on-site underground storage silos. The removal and packaging of the radioactive material was completed in April 2000. The licensee completed the work in accordance with an approved Work Plan, Radiation Protection Plan, and Health and Safety Plan. The removed radioactive material was safely stored within the perimeter fence on the east side of the site in 176 55 gallon drums and 26 B-25 boxes. Samples taken of the radioactive material for characterization for disposal indicated that some of the samples exceeded the Ra-226 concentration limit for disposal. The licensee was further evaluating these characterization results and possible courses of action relative to disposal of the radioactive material. This may include additional characterization, sorting, and separation of the radioactive material. The stored radioactive material was appropriately posted, controlled, and protected.

No violations of NRC regulatory requirements were observed.

REPORT DETAILS

I. Management Oversight of the Silo Work

a. Inspection Scope

The inspector review the organization and program the licensee had in place to provide oversight and control of the work for removing the radioactive material from the two on-site underground silos.

b. Observations and Findings

The licensee employed a contractor for removal of the radioactive material from the two on-site underground silos. The licensee relied extensively on the contractor to manage and perform the work since the licensee had little experience and expertise in site remediation activities. The contractor provided the equipment, staff, and staff training for the project. The contractor's organization consisted of a site supervisor; health physics technicians, including a senior technician; crew members, such as equipment operators and support staff; and a radiation safety officer (RSO).

The overall project was conducted using an approved Work Plan, Health and Safety Plan, and Radiation Protection Plan. The contractor provided oversight of on-going work activities through the use of daily "tailgate" meetings to discuss, coordinate, and control planned daily activities. Licensee representatives periodically observed work activities, including documenting some of the silo work activities on video tape.

c. Conclusions

Based on data reviews and discussions with both licensee and contractor individuals, the inspector determined that there was an organization and mechanism in place for maintaining oversight of daily work activities. No violations or safety issues were identified.

II. Facilities

a. Inspection Scope

The inspector examined the facilities the licensee utilized for removal of the radioactive material from the two on-site underground storage silos.

b. Observations and Findings

The licensee constructed a building over the area in which the two underground silos were located. The purpose of the building was to provide a containment structure in which to remove and package the radioactive material in the underground silos, and also to provide adequate shelter from the weather. The building volume was approximately 48,000 cubic feet, large enough for forklift and excavator access. The

building was ventilated through filtration units to maintain a slight negative pressure and contained air locks for entrance.

A trailer was located next to the containment building and was used as a counting and instrument laboratory and office. Additionally, a house located on the site, but outside of the facility perimeter fence, was used as an office.

c. Conclusions

Based on the above observations, the inspector determined that the containment building was constructed in accordance with the licensee's Work Plan and provided an adequate work environment to contain any airborne radioactive material which may have been generated as a result of the silo work. No violations or safety issues were identified.

III. Equipment and Instrumentation

a. Inspection Scope

The inspector observed and noted the radiation protection equipment and instrumentation used during removal and packaging of the radioactive material from the underground silos.

b. Observations and Findings

The inspector examined the survey instrumentation used by the licensee for direct radiation measurements. The inspector also noted the instrumentation used for counting wipes/smears and air samples. The inspector reviewed the calibration data for the counting instrumentation and direct radiation survey instrumentation as well as the flow rate calibrations of the air sampling pumps. Additionally, the inspector reviewed the quality control check data and control charts for this instrumentation.

The inspector also examined the ventilation systems for the containment building. The containment building air was exhausted by a number of fan systems with each system containing a prefilter, a charcoal filter, a high efficiency particulate (HEPA) filter, and fan. The licensee had the capability to vary the number of ventilation units in service depending upon the level of airborne contamination inside the containment building. The effluent of each ventilation system was sampled and analyzed.

c. Conclusions

Based on the above reviews and observations, the inspector determined the survey and counting instruments were applicable to the radioactive contaminants of interest and were appropriate for the silo work. The ventilation systems provided adequate control of radon levels in the containment building. No violations or safety issues were identified.

IV. Radiation Surveys and Contamination Control

a. Inspection Scope

The inspector reviewed the results of direct radiation surveys, contamination (wipe/smear) tests, and air sampling analyses. Additionally, the inspector reviewed site/facility postings and warnings and labeling of radioactive material.

b. Observations and Findings

Routine radiation surveys of the work areas were performed on a weekly basis by the licensee. Contamination surveys were performed on a daily basis in the containment building and the adjacent trailer. Particulate air samples were taken twice daily in the containment building: in the morning prior to entry and again in the afternoon. The airborne particulate filter samples were counted at one-half hour, 24 hour, and seven day intervals. A modified Kusnetz method was used by the licensee to calculate the radon levels in the containment building. Additionally, the seven day gross alpha analysis results were compared to the Ra-226 derived air concentration (DAC), and the seven day gross beta analysis results were compared to the Cs-137 DAC. A review of selected data for these measurements indicated that all data was less than ten percent of the appropriate DAC.

The inspector observed the work areas and radioactive material storage areas for proper postings. Containers containing the radioactive material from the silos were examined for proper labeling.

During the removal of the radioactive material from the two underground silos, the licensee took six samples of the radioactive material for characterization for subsequent disposal of the radioactive material as radioactive waste. Several of these samples exceeded the disposal site's permissible Ra-226 concentration of 10,000 pCi/g. The licensee was continuing to evaluate these characterization results relative to disposal of the radioactive material. Since the characterization samples indicated that the radioactive material is non-homogeneous, further characterization, sorting, or separation may be necessary.

c. Conclusions

Based on the above observations and data reviews, the inspector determined that the licensee performed radiation surveys in accordance with the Work Plan and the Radiation Protection Plan. Contamination control, control of radioactive material, and control of concentrations of airborne radioactive material were also controlled in accordance with the Work Plan and the Radiation Protection Plan. All areas were posted in conformance with the regulations, and all packaged radioactive materials were labeled in accordance with the regulations. The storage areas for the radioactive material removed from the underground silos was properly posted, controlled, and protected.

V. Training of Workers

a. Inspection Scope

The inspector reviewed the training given to individuals performing the silo work.

b. Observations and Findings

The inspector reviewed the training manual used to give radiation worker training to the individuals removing the radioactive material from the underground silos. The inspector also reviewed the results of the written examinations given to these individuals. Additionally, the inspector reviewed the site specific training given to these workers.

c. Conclusions

Based on the above reviews, the inspector determined that the licensee had developed an adequate training program for the activities involved in removal of radioactive material from the underground silos. The training program was being effectively implemented.

VI. Exit Meeting

a. Inspection Scope

The inspector met with the licensee representatives listed below at the conclusion of the inspection on October 10, 2000. The inspector summarized the purpose scope and findings of the inspection. The licensee acknowledged the inspections findings.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

N. Fritz, RSO

L. Harmon, Plant Manager

APPENDIX A

MATERIALS DECOMMISSIONING INSPECTION RECORD

FOR FACILITIES NEEDING SIGNIFICANT DECOMMISSIONING EFFORT

Region I

Licensee (Name & Address): <div style="border: 1px solid black; padding: 5px; min-height: 60px;"> Safety Light Corporation 4150-A Old Berwick Road Bloomsburg, PA 17815 </div>		Inspection Report No. : 99-02 License No.: 37-00030-02 Docket No. : 03005980 Telephone No.: 570-784-4344	
Licensee Contact:	Larry Harmon	Date of Last Inspection:	10/7-8/99
Priority:	1	Date of This Inspection:	12/14/99, 1/11/00, 3/2/00, 3/9/00, 6/20/00, 8/7/00, 10/10/00
Program Code:	3900		
Type of Inspection:	<input checked="" type="checkbox"/> Announced <input checked="" type="checkbox"/> Routine <input type="checkbox"/> Initial Decommissioning	<input type="checkbox"/> Unannounced <input type="checkbox"/> Special <input type="checkbox"/> Reinspection of Decommissioning	
Next Inspection:	12/2000	<input checked="" type="checkbox"/> Normal	<input type="checkbox"/> Reduced <input type="checkbox"/> Extended

Brief Description of Inspection Activities:

Inspection of activities related to the removal of radioactive material from two on-site underground storage silos.

Brief Description of Findings and Action:

The licensee removed the radioactive material from the two on-site underground storage silos under an approved Work Plan, Health and Safety Plan, and Radiation Protection Plan. The radioactive material is currently being stored on the east side of the site in 176 55 gallon drums and 26 B25 boxes awaiting further evaluation for shipment and disposal. The storage area was inside the perimeter fence. The stored radioactive material was adequately posted and protected. No Safety concerns or violations of regulatory requirements were observed.

Summary of Findings and Action:

- | | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | No violations cited, clear NRC Form 591 or regional letter issued |
| <input type="checkbox"/> | Violation(s), clear NRC Form 591 issued |
| <input type="checkbox"/> | Violation(s), regional letter issued |
| <input type="checkbox"/> | Followup on previous violations |

Inspector: <u>James Kottan /RA/</u>	Date: <u>10/30/00</u>
(Type Inspector's Name)	

Approved:

Ronald Bellamy */RA M. Roberts Acting for/*

(Type Name of Approving Individual)

Date:

10/30/00

[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 field notes 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	<input checked="" type="checkbox"/>	Y	<input type="checkbox"/>	N
B. Required decommissioning financial assurance mechanisms in place.	<input type="checkbox"/>	Y	<input checked="" type="checkbox"/>	N
C. Decommissioning Plan (DP) required.	<input checked="" type="checkbox"/>	Y	<input type="checkbox"/>	N
D. Licensee final survey required.	<input checked="" type="checkbox"/>	Y	<input type="checkbox"/>	N
E. NRC confirmatory survey required.	<input checked="" type="checkbox"/>	Y	<input type="checkbox"/>	N
F. NRC closeout inspection required.	<input checked="" type="checkbox"/>	Y	<input type="checkbox"/>	N
G. Licensee doing decommissioning planning and preparation before dismantlement	<input checked="" type="checkbox"/>	Y	<input type="checkbox"/>	N
H. Licensee actively remediating site.	<input type="checkbox"/>	Y	<input checked="" type="checkbox"/>	N
I. Licensee completed site remediation.	<input type="checkbox"/>	Y	<input checked="" type="checkbox"/>	N

Description of Facility Status:

The site is contaminated from past operations. Site characterization and D&D Plan completed. Work Plan, Health and Safety Plan, and Radiation Protection Plan for removal of radioactive material from the two on-site underground storage silos were completed and incorporated into the license by reference. The licensee has completed removal of the radioactive material from the two on-site underground storage silos. The radioactive material is stored on the east side of the silo in 176 55 gallon drums and 26 B25 boxes. Samples taken of the radioactive material for characterization for disposal indicated that some of the samples exceeded the Ra-226 concentration limit for disposal. The licensee was further evaluating these characterization results and possible courses of action relative to disposal of the radioactive material. This may include additional characterization, sorting, and separation of the radioactive material. The stored radioactive material was appropriately posted, controlled, and protected.

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 field notes (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 ☒ X N
 2. Facility license conditions are in place and met by licensee. ☒ X Y ☐ N
 3. Site security and control of contaminated material being maintained in compliance with 10 CFR 20.1801 and 20.1802. ☒ X Y ☐ N
 4. Support systems and services (e.g., lighting, water supply) are in place. ☒ X 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 record keeping 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. ☒ X Y ☐ N
 10. Licensee activities conform to specific license conditions and licensee programs and procedures. ☒ X Y ☐ N
 11. Other licensee activities(describe below):

Basis for findings:

Observations by the inspector. Items 5,6,7, and 8 are not applicable to this site. Also the

licensee is exempt from the financial assurance requirements. Site tours and independent radiation measurements by the inspector have indicated that site security and control of contaminated material was being maintained by the licensee.

B.	LICENSEE ACTIVITIES INSPECTED DURING DECONTAMINATION, DISMANTLEMENT, AND SITE REMEDiation	<input type="checkbox"/>	N/I	<input type="checkbox"/>	N/A
1.	Site security and control of contaminated material being maintained in compliance with 10 CFR Part 20.	<input checked="" type="checkbox"/>	Y	<input type="checkbox"/>	N
2.	Decontamination and dismantlement of structures are being performed consistent with DP and sound industry practice (structures include buildings, utilities, treatment lagoons, etc.).	<input checked="" type="checkbox"/>	Y	<input type="checkbox"/>	N
3.	Decontamination and remediation of the following are being performed consistent with DP and sound industry practice:	<input checked="" type="checkbox"/>	Y	<input type="checkbox"/>	N
a.	Soil.	<input type="checkbox"/>	Y	<input type="checkbox"/>	N
b.	Sediment.	<input type="checkbox"/>	Y	<input type="checkbox"/>	N
c.	Surface waters.	<input type="checkbox"/>	Y	<input type="checkbox"/>	N
d.	Groundwater.	<input type="checkbox"/>	Y	<input type="checkbox"/>	N
e.	Other mediums (describe below):	<input checked="" type="checkbox"/>	Y	<input type="checkbox"/>	N
This section was completed with respect to removal of the radioactive material from the two on-site underground storage silos.					
4.	Licensee release and disposal of decommissioning wastes are consistent with DP and approved by NRC for:	<input checked="" type="checkbox"/>	Y	<input type="checkbox"/>	N
a.	Liquid wastes (e.g., groundwater, surface water, liquid from treatment ponds, process liquids).	<input type="checkbox"/>	Y	<input type="checkbox"/>	N
b.	Solid wastes (e.g., building materials, process and other facility equipment, concrete rubble, soil).	<input type="checkbox"/>	Y	<input type="checkbox"/>	N
c.	Other wastes (describe below):	<input checked="" type="checkbox"/>	Y	<input type="checkbox"/>	N
Radioactive material removed from the underground silos.					
5.	Temporary, on-site storage of low-level radioactive wastes from decommissioning meets license conditions and guidance in IP 84890.	<input checked="" type="checkbox"/>	Y	<input type="checkbox"/>	N
6.	Packaging and shipment of radioactive waste materials meet requirements in 40 CFR Parts 173-178 and 10 CFR Part 71.	<input type="checkbox"/>	Y	<input type="checkbox"/>	N
7.	Restoration of site-Licensee has restored site to meet license conditions and NRC-approved plans.	<input type="checkbox"/>	Y	<input type="checkbox"/>	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:

Observations by the inspector and review of licensee records and data. This section was completed with respect to removal of the radioactive material from the underground silos. Therefore, 4a, 4b, 6, 7,8,9 are NA.

C. LICENSEE ACTIVITIES INSPECTED AFTER COMPLETION OF SITE REMEDIATION ☐ N/I ☒ N/A

1. Licensee has submitted NRC Form 314 for disposition of licensed material in accordance with 10 CFR 30.36, 40.42, and 70.38. ☐ Y ☐ N

2. Licensee's final survey program is acceptable (see Appendix B for inspection items for final surveys). ☐ Y ☐ N

3. NRC confirmatory survey performed. ☐ Y ☐ N

4. Site maintenance activities (if any, for restricted use) conform to license conditions and NRC-approved plans and are in place and functional. ☐ Y ☐ N

5. Other licensee activities: ☐ Y ☐ N

Basis for Findings:

Observations by the inspector.

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:

As related to this inspection report for the removal of radioactive material from the two on-site underground silos, the organization was as follows. The licensee utilized a contractor for removal of the radioactive material from the underground silos. The contractor's organization included a site supervisor; health physics technicians, including a senior technician; crew members, such as equipment operators and support staff; and an RSO.

- Licensee is performing decommissioning activities in compliance with its approved DP. ☒ X ☐ Y ☐ N

Licensee has implemented procedures for the decommissioning activities identified in the DP. ☒ X ☐ Y ☐ N

The RSC and RSO fulfill license requirements to deal with all decommissioning activities. ☒ X ☐ Y ☐ N

Basis for Findings:

Observations of work activities by the inspector as well as discussions with personnel and review of records. For the silo work the licensee submitted a Work Plan, Health and Safety Plan, and Radiation Protection Plan. These plans were incorporated into the license. Based on the observations, discussions, and record reviews, the licensee was in compliance with these plans and their procedures.

B. FACILITIES

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

The licensee has removed the radioactive material from two on-site underground storage silos. The licensee has constructed a containment building over the silos in which to perform the work.

- | | | | | |
|--|-------------------------------------|---|-------------------------------------|---|
| 2. The licensee's remediation plan includes all the contaminated facilities and areas on-site and off-site | <input type="checkbox"/> | Y | <input checked="" type="checkbox"/> | 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. | <input checked="" type="checkbox"/> | Y | <input type="checkbox"/> | N |
| 4. Licensee's emergency plan is in place and operative for the duration of decommissioning. | <input type="checkbox"/> | Y | <input type="checkbox"/> | 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: | | | | |
| The site characterization has been performed. | | | | |
| 6. Licensee's characterization activities performed in conformance with good industry practice. | <input checked="" type="checkbox"/> | Y | <input type="checkbox"/> | N |

Basis for Findings:

Observations by the inspector. Item 4 is NA for this site.

C. EQUIPMENT AND INSTRUMENTATION

- | | | | | |
|---|-------------------------------------|---|--------------------------|---|
| 1. Survey instruments are applicable to contaminants of interest. | <input checked="" type="checkbox"/> | Y | <input type="checkbox"/> | N |
| 2. Use of survey instruments appropriate for site. | <input checked="" type="checkbox"/> | Y | <input type="checkbox"/> | N |

Basis for Findings:

Observations by the inspector. The licensee used gamma survey meters for direct radiation dose rate measurements due to the presence of Ra-226 and Cs-137. An alpha/beta counter was used for measuring gross alpha and beta on air filters and wipes to determine radon and contamination levels. Calibration data, instrument QC data, and measurement results were reviewed.

A. MATERIALS

- | | | | | |
|---|-------------------------------------|---|-------------------------------------|---|
| 1. Radioactive materials licensed during operations have been removed offsite; residual quantities conform to license conditions. | <input type="checkbox"/> | Y | <input checked="" type="checkbox"/> | N |
| 2. Security and control of licensed materials, including contaminated areas, is being maintained. | <input checked="" type="checkbox"/> | Y | <input type="checkbox"/> | N |

Basis for Findings:

Tours of the site indicated that security and control of material is being maintained.

E. TRAINING

1. Licensee has developed training program for new decommissioning activities (e.g., demolition of structures, excavation of soil); program is adequate. ☒ X ☐ Y ☐ N
2. Training program being effectively implemented. ☒ X ☐ Y ☐ N

Basis for Findings:

Observations by the inspector and review of data. The inspector reviewed the training manual used to give radiation worker training to the individuals removing the radioactive material from the underground silos. The inspector also reviewed the results of the written examinations given to these individuals. Additionally, the inspector reviewed the site specific training given to these workers.

F. AREA RADIATION SURVEYS AND CONTAMINATION CONTROL

- Area surveys are being performed in areas being decommissioned. ☒ X ☐ Y ☐ N
- 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. ☒ X ☐ Y ☐ N

Basis for findings:

Observations by the inspector and independent measurements by the inspector.

G. RADIATION PROTECTION

- The licensee's approved health physics program is being implemented in the field for new decommissioning activities. ☐ ☐ Y ☒ X ☐ 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:

Observations by the inspector, data reviews, and discussions with personnel. Again, this section was completed with respect to the task of removing the radioactive material from the underground silos. As a part of this work the licensee submitted a Radiation Protection Plan, which was incorporated into the license.

H. RADIOACTIVE WASTE MANAGEMENT/EFFLUENTS/ENVIRONMENTAL MONITORING

- | | | | | | |
|----|---|-------------------------------------|---|--------------------------|---|
| 1. | Offsite disposal of decommissioning wastes conforms to free release criteria and disposal site requirements. | <input type="checkbox"/> | Y | <input type="checkbox"/> | N |
| 2. | All new effluent releases conform to DP and applicable regulations. | <input type="checkbox"/> | Y | <input type="checkbox"/> | N |
| 3. | The licensee's environmental monitoring program is being implemented in conformance with the DP and all applicable limits are being met. | <input type="checkbox"/> | Y | <input type="checkbox"/> | N |
| 4. | Temporary storage/staging areas for radioactive wastes from building demolition, equipment dismantlement, soil excavation, etc., are adequately posted and protected. | <input checked="" type="checkbox"/> | Y | <input type="checkbox"/> | N |

Basis for findings:

This section applies to the removal of the radioactive material from the underground silos only. Therefore, 1,2, and 3 are NA. The radioactive material removed from the underground silos was stored on the east side of the site within the perimeter fence. The 55 gallon drums and B25 boxes containing the material are labeled and the area around the drums is roped off and posted as a radiation area. The inspector performed an independent radiation survey to verify that the area was properly posted. The radioactive materials were adequately posted and protected.

I. RECORDKEEPING FOR DECOMMISSIONING

- | | | | | | | |
|----|---|--------------------------|---|--------------------------|---|---|
| 1. | Copies of the licensee's decommissioning cost estimates and funding methods are on file. | <input type="checkbox"/> | Y | <input type="checkbox"/> | 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). | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | N |
| 3. | Licensee's financial assurance conforms with the financial assurance requirements of NRC-approved possession limits and NRC regulations. | <input type="checkbox"/> | Y | <input type="checkbox"/> | N | N |

Basis for Findings:

This section is NA. The licensee is exempted from the NRC's financial assurance requirements.

J. TRANSPORTATION

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

This section is NA. No wastes are being shipped from the site.

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.

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Y

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N

Basis for Findings:

See item 1 above.

K. POSTING AND LABELING

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

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Y

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N

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

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Y

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N

Basis for Findings:

Observations by the inspector and independent measurements by the inspector. See the basis for Section H.

L. OCCUPATIONAL HEALTH AND SAFETY

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

Ongoing work for removal of the radioactive material from the two on-site underground silos was being performed in accordance with the licensee's approved Work Plan and Health and Safety Plan.

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

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Y

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N

Basis for Findings:

Observations by the inspector. There were no health and safety issues.

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.