

APPENDIX A
INDUSTRIAL/ACADEMIC/RESEARCH INSPECTION FIELD NOTES

Region I

Inspection Report No. 96-001

License No. 37-02016-05

Licensee (Name & Address):

Docket No. 030-06046

Lockheed Martin Corp
M+S VED, P.O. Box 8555
Philadelphia, PA 19101

Licensee Contact John Andrews

Telephone No. 610-354-3840

Amendments Issued Since Last Inspection: (Numbers) 46

Dates of Above Amendments: 9-24-96

Priority: 5

Program Code 3620 (changed from 3610) - Discussing w/ licensee

Date of Last Inspection 10-24 to 26-94

Date of This Inspection 11-12-96

whether corrected copy is
needed to list as a service license.

Type of Inspection:

☐ Announced
☒ Routine
☐ Initial

☒ Unannounced
☐ Special
☐ Reinspection

Next Inspection Date 11/01 - Based on 3620 license.
☒ Normal ☐ Reduced ☐ Extended

Justification for change in normal inspection frequency:

Summary of Findings and Action:

- ☐ No violations cited. Clear NRC Form 591 or regional letter issued
☒ Violation(s). NRC Form 591 issued
☐ Violation(s). regional letter issued
☐ Followup on previous violations

Inspector: Penny Thompson
(Signature)

Date 11-15-96

Approved: [Signature]
(Signature)

Date 11/2/96

Issue Date: XX/XX/XX 9/96

Information in this record was deleted
in accordance with the Freedom of Information
Act, exemptions 2
FOIA- 2007-304 87110, Appendix A

F-32

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. For example, the types of records that were reviewed and the time periods covered by those records should be noted. If the licensee demonstrates any practices at your request, describe those demonstrations. The observations and demonstrations you describe in this report, along with measurements and some records review, should substantiate your inspection findings.

NOTE: For inspections of radioactive drug distributors, ensure that all applicable sections (regarding 10 CFR Part 32) of the radiopharmacy field notes are completed.

1. INSPECTION, LICENSING, AND INCIDENT HISTORY

A. Violations were identified during any of the last two inspections or two years, whichever is longer. (N/A = Initial insp.) () N/A () Y (☒) N

B. Response letter(s) or 591(s) dated _____

C. Violations from previous inspection(s):

REQUIREMENT CITED

STATUS

D. Any repeat violation(s) identified? () Y () N
If "Yes," explain:

- E. License amendments issued since last inspection, or program changes noted in the license:

AMENDMENT #	DATE	SUBJECT
46	9-24-96	Significantly reduced licensed program.

- F. During this inspection, was the licensee's implementation of all of the above amendments or program changes inspected/observed? ☐ N/A ☒ Y ☐ N

- G. During this inspection, were any violations identified involving any of the above amendments or program changes? ☐ N/A ☐ Y ☒ N

- H. List any incidents or events reported to NRC since the last inspection (Note: "None" indicates that regional event logs, event files, and the licensing file have no evidence of any incidents or events since the last inspection): ☒ None

INCIDENT OR EVENT

- I. During this inspection, were the incidents/events reviewed with the licensee, and was the licensee's follow-up to the incidents/events examined? ☒ N/A ☐ Y ☐ N

- J. Describe the licensee's follow-up in response to the events/incidents listed in 1.H.:

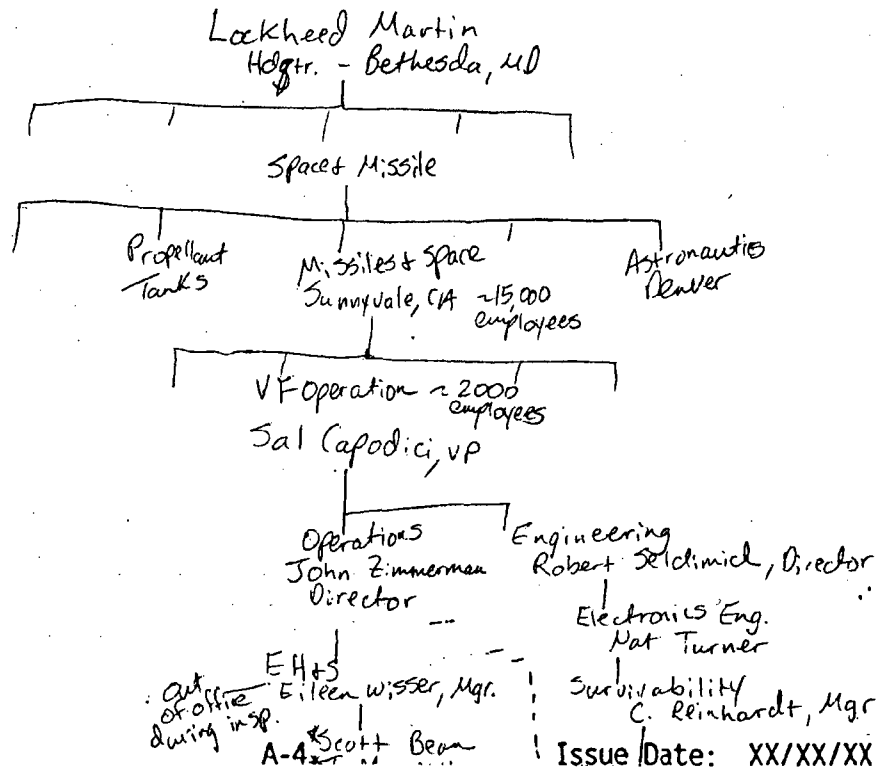
Comments:

2. ORGANIZATION AND SCOPE OF PROGRAM

- A. Describe the licensee's organizational structure to indicate the "chain-of-command" from senior management to authorized users of licensed material. Show or describe where the RSO and Chairperson of the RSC are located in the licensee's organization and to whom they report:

Employees
~ 200,000

~ 30,000



B. Identify licensee personnel contacted during the inspection (including those individuals contacted by telephone).

* Scott Bean - EH+S

* Todd Williams - EH+S

* John Andrews - RSO

Lesly Casimir - Supervisor, Rad. Effects Lab

Lawrence Brucoliere - AU in irradiator area

(Use the following identification symbols:)

Individuals present at entrance meeting

* Individuals present at exit meeting

+ Individuals contacted by telephone

C. Authorized for multiple locations of use () Y (☒) N
If yes, may use ATTACHMENT A as a guide
for inspecting laboratories. Mall Boulevard

D. Authorized for multiple permanent field office locations () Y (☒) N
(1) Inspection performed at multiple field offices () Y () N
(2) If "Yes," list office locations inspected:

E. Authorized for temporary job site locations (☒) Y () N
(1) Inspection performed at temporary job site(s) () Y (☒) N
(2) If not, describe why not:

No temporary job sites used in past 2 years
per RSO.

F. Briefly describe scope of activities, including types and quantities of use involving licensed material, frequency of use, staff size, etc.

7 workers in Rad. Effects Lab.
Co-60 irradiations w/ 2 irradiators ^(separate license) the source listed on this license, Co-60 listed on this license used infrequently.
3-83 material is irradiated electronic components received to perform standardized tests on.
Kr-85 was used for hermetic tests (1.1 Ci on 6-90), however unit is in storage and alternate methods w/o radioactives are done.
Sr-90, Cs-137, Pu-238 + Am-241 SS are in storage
Licensee considers themselves an electronic testing service w/ the data provided to organizations w/in industry (affiliates).

3. MANAGEMENT OVERSIGHT

A. Radiation Safety Committee (RSC) required [L/C]¹ ☐ Y ☒ N

(1) RSC fulfills license requirements [L/C] ☐ Y ☐ N

(2) Records maintained [L/C] ☐ Y ☐ N

Licensee has an Ionizing Radiation Advisory Group that meets quarterly.
B. Radiation Safety Officer (RSO) Made up of EHS manager, IH, RSO, & Medical Director.

(1) Authorized on license [L/C] ☒ Y ☐ N

(2) Fulfills duties as RSO ☒ Y ☐ N

RSO is 50% engineering + 50% RSO duties.
C. Audits, Reviews, or Inspections

(1) Audits are required [L/C] ☐ Y ☒ N

(2) Audits or inspections are conducted ☒ Y ☐ N

Audits conducted by RSO

Frequency monthly

(3) Content and implementation of the radiation protection program reviewed annually by the licensee [20.1101(c)]² ☒ Y ☐ N

(4) Records maintained [20.2102] ☒ Y ☐ N

Licensee generates compliance calendar + performs monthly audits of various RS activities.
D. Use by authorized individuals [L/C] ☒ Y ☐ N

E. If supervision permitted by the license or by regs. authorized users supervise adequately [L/C] ☒ Y ☐ N

¹ Here and throughout the field notes, "L/C" means "license condition."

² Here and throughout the field notes, sections of 10 CFR are referenced only by their section numbers.

4. FACILITIES

- A. Facilities as described in license application [L/C] (✓) Y () N
- B. Facilities are secured to prevent unauthorized access [L/C] - Key pad to Radiation Effects Lab. (✓) Y () N
- C. Describe any self-contained dry-source-storage irradiators and/or survey instrument calibrators (model, radionuclide, activity, use, etc.) () N/A ^{containing Co-60 irradiators + electronic components}
- 2 self shielded Co-60 irradiators possessed + listed on a separate license. This license not inspected during this inspection.
- (1) Maintenance of safety-related components performed by authorized persons [L/C] () Y (✓) N/I
- (2) Access to keys and/or material controlled [20.1801-1802, L/C] (✓) Y () N
- (3) Access to high/very high radiation areas controlled [20.1601-1602, L/C] (✓) Y () N
- (4) Adequate protection of shield integrity, fire protection [L/C] () Y (✓) N/I

Basis for Findings:

Electronic components are stored in a locked cabinet inside the irradiator room. A traveler is created for all parts that lists part description; part #, control #, record radiation history (irradiator used, liner, etc.).

Basement Storage (b)(2) High for Sealed Sources (Pu, Am, Sr, etc.) generally licensed RAM

Kr-85 Storage on 2nd Floor.

5. EQUIPMENT AND INSTRUMENTATION

- A. Instruments and equipment: 2 eberline 520 > 250; NMC Proportional Counter PC-55; Victoreen 471
- (1) Appropriate operable survey instrumentation possessed and readily accessible [L/C] (✓) Y () N
- (2) Calibrated as required [20.1501, L/C] - RMC (✓) Y () N
- (3) Calibration records maintained [20.2103(a)] (✓) Y () N
- B. Procedures established to identify and report safety component defects [21.21] () Y (✓) N/A to - 05 license

Basis for Findings:

6. MATERIALS RECEIPT, USE, TRANSFER, AND CONTROL

- A. Isotope, chemical form, quantity, and use, as authorized [L/C] (✓) Y () N
 B. Licensed materials secured to prevent unauthorized removal or access [20.1801-1802] (✓) Y () N

(1) Licensed material in storage in controlled or unrestricted areas is secured from unauthorized removal or access [20.1801] (✓) Y () N

(2) Licensed material in controlled or unrestricted areas and not in storage is controlled and under constant surveillance [20.1802] (✓) Y () N

(3) Access to restricted areas is limited [20.1003] (✓) Y () N

Tracking # (Lot #) are assigned to all parts analyzed

- C. Describe how packages are received and by whom: () N/A

All electronic components delivered to shipping. Shipping personnel provided w/ instructions that if package is labeled, the RSO is notified to perform surveys. Most packages do not come in labeled. No new Co-60 sources.

D. Written package opening procedures established and followed [20.1906(e)] (✓) Y () N

E. All incoming packages with DOT labels wiped, unless exempted (gases and special form) [20.1906(b)(1)] (✓) Y () N

F. Incoming packages surveyed [20.1906(b)(2)] (✓) Y () N

G. Monitoring in (E) and (F) above, performed within time specified [20.1906(c)] (✓) Y () N

H. Transfer(s) between licensees performed [30.41] (✓) Y () N

I. All sources surveyed before shipment and transfer [20.1501(a), L/C] (✓) Y () N

J. Records of surveys and receipt/transfer maintained [20.2103(a), 30.51] (✓) Y () N

K. Transfers among licensee's authorized users or locations performed as required [L/C] (✓) N/A () Y () N

L. Arrangements made for packages containing quantities of radioactive material in excess of Type A quantity [20.1906(a)] (✓) N/A () Y () N

M. Package receipt/distribution activities evaluated for compliance with 20.1301 [20.1302] () N/A (✓) Y () N

Basis for Findings:

7. TRAINING, RETRAINING, AND INSTRUCTIONS TO WORKERS

- A. Instructions to workers/students [10 CFR 19.12] (✓) Y () N
 B. Training program required [L/C] (✓) Y () N

(1) If so, briefly describe training program:

3 categories of workers provided annual trg:

- 1) R&M Workers
- 2) X-ray operators
- 3) Ancillary

R&SO provides training on hazards, regs, L.C., etc.

- (2) Training program implemented (✓) Y () N
- (3) Periodic training program required (✓) Y () N
- (4) Periodic training program implemented (✓) Y () N
- (5) Records maintained (✓) Y () N

- C. Individual's understanding of procedures and regulations is adequate (✓) Y () N

- (1) Current operating procedures (✓) Y () N
- (2) Emergency procedures (✓) Y () N
- (3) Use of survey instrumentation (✓) Y () N

- D. Revised Part 20
 Workers cognizant of requirements for:

- (1) Radiation safety program [20.1101] (✓) Y () N
- (2) Annual dose limits [20.1301-1302] (✓) Y () N
- (3) New NRC Forms 4 and 5 () N/A (✓) Y () N
- (4) 10% monitoring threshold [20.1502] (✓) Y () N
- (5) Dose limits to embryo/fetus and declared pregnant worker [20.1208] (✓) Y () N
- (6) Grave danger posting [20.1902] (✓) N/A () Y () N
- (7) Procedures for opening packages [20.1906] () N/A (✓) Y () N
- (8) Sewer disposal limits [20.2003] (✓) N/A () Y () N

Basis for Findings:

8. AREA RADIATION SURVEYS AND CONTAMINATION CONTROL

- A. Briefly describe area survey requirements [20.1501(a), L/C]:

Monthly surveys performed by R&SO of
 all storage locations.

Rad. effects lab personnel survey around irradiators

- B. Performed as required [20.1501(a), L/C] ☒ Y () N
- (1) Contamination found () Y ☒ N
- (2) Corrective action taken and documented () Y ☒ N *NA*
- C. Records maintained [20.2103, L/C] ☒ Y () N
- D. Handling and use of radioactive materials [L/C]
- (1) Protective clothing worn ☒ Y () N
- (2) Personnel routinely monitor or frisk themselves after procedures or before leaving () Y ☒ N *NA*
- (3) No eating/drinking/smoking in use/storage areas ☒ Y () N
- (4) No food, drink, or personal effects stored in use/storage areas ☒ Y () N
- (5) Proper dosimetry worn ☒ Y () N
- (6) Radioactive waste disposed in proper containers () Y ☒ N *NA - stored electronic components in cabinet*
- (7) No pipetting by mouth () Y ☒ N *NA*
- (8) Use of shielding/distance while using/storing material ☒ Y () N

Basis for Findings:

- E. Protection of members of the public
- (1) Licensee made adequate surveys to demonstrate either: (1) that the TEDE to the individual likely to receive the highest dose does not exceed 100 mrem in a year; or (2) that if an individual were continuously present in an unrestricted area, the external dose would not exceed 2 mrem in any hour and 50 mrem in a year [20.1301(a)(1), 1302(b)] ☒ Y () N
- (2) Unrestricted area radiation levels do not exceed 2 mrem in any one hour [20.1301(a)(2)] ☒ Y () N
- (3) Records maintained [20.2103, 20.2107] ☒ Y () N

F. Leak tests and Inventories [L/C]

- (1) Performed as required () N/A ☒ Y () N
- (2) Adequate analysis methodology and sensitivity () N/A ☒ Y () N
- (3) Records maintained [L/C]- ☒ Y () N

Basis for Findings:

Last documented inventory of sources in storage was 4/96. Licensee's RSO stated that he had performed inventory since then, but had not documented the inventory. RSO agreed to perform + document additional inventory A-10 ASAP.

except, see note

9. RADIATION PROTECTION

A. Licensee performed exposure evaluation [20.1501] ☒ Y ☐ N

B. Licensee incorporated ALARA considerations in the radiation protection program [20.1101(b)] ☒ Y ☐ N

C. External Dosimetry ☐ N/A

(1) Licensee monitors workers [20.1502(a). L/C] ☒ Y ☐ N

(2) External exposures account for contributions from airborne activity [20.1203] ☒ N/A ☐ Y ☒ N

(3) Processor Landauer Frequency grtly

(4) Processor is NVLAP-approved [20.1501(c)] ☒ Y ☐ N

(5) Dosimeters exchanged at required frequency [L/C] ☒ Y ☐ N

D. Internal Dosimetry - no unsealed used. ☒ N/A

(1) Licensee monitors workers [20.1502(b). L/C] ☐ Y ☐ N

(2) Briefly describe licensee's program for monitoring and controlling internal exposures [20.1701-1702. L/C]:

(3) Air sampling performed ☐ Y ☒ N

(4) Monitoring/controlling program implemented ☐ Y ☒ N

(5) Respiratory protection equipment [20.1703. L/C] ☐ Y ☒ N

E. Reports ☐ N/A

(1) Reviewed by RSO Frequency quarterly

(2) Inspector reviewed personnel monitoring records for period 1994 to 1996

(3) Prior dose determined for individuals likely to receive doses [20.2104] ☐ Y ☒ N/A - no new workers

(4) Maximum exposures TEDE 20 mrem/yr Other _____

(5) Maximum CDEs N/A Organs _____

(6) Maximum CEDE N/A

(7) Licensee sums internal and external [20.1202] ☐ Y ☒ N/A

(8) TEDEs and TODEs within limits [20.1201] ☒ Y ☐ N

(9) NRC Forms or equivalent [20.2104(d), 2106(c)]

(a) NRC Form 4 ☐ Y ☐ N Complete: ☐ Y ☐ N
(b) NRC Form 5 ☒ Y ☐ N Complete: ☒ Y ☐ N

(10) Worker declared her pregnancy in writing during inspection period (review records) ☐ N/A ☐ Y ☒ N

If "yes," licensee in compliance with dose to embryo/fetus [20.1208] ☐ Y ☐ N
and records maintained [20.2106(e)] ☐ Y ☐ N

F. Who performed PSEs at this facility (number of people involved and doses received)? [20.1206, 20.2104-2105, 20.2204] ☒ N/A

G. Records of exposures, surveys, monitoring, and evaluations maintained [20.2102-2103, 20.2106, L/C] ☒ Y ☐ N

H. Licensee advises each worker annually of worker's dose [19.13(b)] ☒ Y ☐ N

Basis for Findings:

10. RADIOACTIVE WASTE MANAGEMENT

☐ N/A

A. Disposal

☐ N/A

(1) Decay-in-storage - Sandia identifies principal isotope in irradiated components and the info is used for decay determination. Have not disposed of anything by DIS yet.
(a) Procedures approved [20.2001(a)(2), L/C] ☒ Y ☐ N
(b) In accordance with [L/C] ☐ Y ☒ N see note
(c) Labels removed or defaced [20.1904(b)] ☐ Y ☒ N/A - see note

(2) Special procedures performed as required [L/C] ☐ Y ☒ N/A

(3) Liquid scintillation (LS) media and animal carcasses [20.2005] ☒ N/A ☐ Y ☐ N

(4) Improper/unauthorized disposals [20.2001] ☐ Y ☒ N

(5) Records maintained [20.2103(a), 20.2108, L/C] ☒ Y ☐ N

B. Effluents

() N/A

(1) Release into sanitary sewer [20.2003] () N/A () Y (✓) N

(a) Material is readily soluble or readily dispersible [20.2003(a)(1)] () Y () N

(b) Monthly average release concentrations do not exceed Appendix B values [20.2003] () Y () N

(c) No more than 5 Ci of H-3, 1 Ci of C-14, and 1 Ci of all other radionuclides combined released in a year [20.2003] () Y () N

(d) Procedures to ensure representative sampling and analysis properly implemented [20.1501(a)(2), L/C] () Y () N

(2) Release to septic tanks [20.2003] () N/A () Y (✓) N

(a) Within unrestricted limits [App B, Table 2] () Y () N

(3) Waste incinerated () N/A () Y (✓) N

(a) License authorizes [20.2004(a)(3)] () Y () N

(b) Licensee directly monitors exhaust () Y () N

(c) Airborne releases evaluated and controlled [20.1501, 20.1701] () Y () N

(4) Control of effluents and ashes [20.1201, 20.1301, 20.1501, 20.2001, L/C]
{See also IP 87102, RG 8.37}

N/A - no airborne releases, Kr-85 in storage.
() Y () N

(a) Compliance with air emissions requirements in Part 20:

Licensee has demonstrated compliance with air emission requirements in Part 20 () Y () N

Basis for compliance determination (check one or more; provide basis below)

____(i) Measured concentrations of radionuclides in air effluents are below Appendix B, Table 2 concentrations (and external dose < 50 mrem/yr)

____(ii) Bounding calculations show that air effluents could not exceed Appendix B, Table 2 concentrations (and external dose < 50 mrem/yr)

____(iii) Dose modeling shows that dose equivalent to the individual likely to receive the highest dose does not exceed 10 mrem/yr

____(iv) Licensee does not possess sufficient radioactive material to exceed Part 20 requirements

Basis for Determination: _____

(b) Description of effluent monitoring program

- (i) Monitoring-system hardware equipment adequate () Y () N
(ii) Equipment calibrated as appropriate () Y () N
(iii) Air samples/sampling technique (charcoal, HEPA, etc.) analyzed with appropriate equipment () Y () N

- (5) EPA referral form for air effluents sent to appropriate EPA regional office per IP 87102 () N/A () Y () N

Basis for Findings:

- C. Waste Management () N/A
(1) Waste compacted [L/C] () Y () N
(2) Storage area(s) — cabinet + Basement storage room () N/A
(a) Protection from elements and fire [L/C] () Y () N
(b) Control of waste maintained [20.1801] () Y () N
(c) Containers properly labeled and area properly posted [20.1902, 20.1904] () Y () N
(d) Package integrity maintained [L/C] () Y () N

- (3) Packaging, Control and Tracking
[Part 20, App. F.III.] [20.2006(d)]:
Note: The licensee's waste is likely to be Class A.

- (a) Not packaged for disposal in cardboard or fiberboard boxes [61.56(a)] ☐ Y ☐ N
- (b) Liquid wastes solidified, (i.e., less than 1% freestanding liquid) and void spaces minimized [61.56(a), (b)] ☐ Y ☐ N
- (c) Does not generate harmful vapors [61.56] ☐ Y ☐ N
- (d) Structurally stable (will maintain its physical dimensions and form under expected disposal conditions) [61.56(b)] ☐ Y ☐ N
- (e) Packages properly labeled [App. F.III.A.2] ☒ Y ☐ N
- (f) Licensee conducts a QC program to ensure compliance with [61.55-56] and includes management evaluation of audits [App. F.III.A.3] ☐ Y ☐ N
- (g) Shipments not acknowledged within 20 days after transfer are investigated and reported [App. F.III.A.8] ☐ N/A ☐ Y ☐ N

- (4) Transfers to land disposal facilities ☐ N/A

- (a) Transferred to person specifically licensed to receive waste [30.41, 20.2001(b)] ☒ Y ☐ N
- (b) Each shipment accompanied by a manifest prepared as specified in Section I of Appendix F [20.2006(b), App. F.III.A.4] ☒ Y ☐ N
- (c) Manifests certified as specified in Section II of Appendix F [20.2006(c)] ☐ Y ☒ N / I

- D. Records of surveys and material accountability are maintained [20.2103, 2108] ☐ Y ☐ N
- Cs-137 contaminated aluminum (~600ci) shipped as LQ to SEG + on to Barnwell.*

Basis for Findings:

11. RECORDKEEPING FOR DECOMMISSIONING

- A. Records of information important to the safe and effective decommissioning of the facility maintained in an independent and identifiable location until license termination. (✓) Y () N
- B. Records include all required information [30.35(g)] (✓) Y () N

(1) List of restricted areas [30.35(g)(3)] indicates that laboratories or other rooms have been released since the last inspection (✓) Y () N

(2) Confirmatory measurements show that each room is within release limits, and licensee records adequately document the basis for releasing each room

Several locations removed from license.
as documented in licensee's amendment request info
(✓) Y () N

C. Copies of the licensee's decommissioning cost estimates and funding methods on file (✓) Y () N

D. If the licensee uses a parent company guarantee or a self-guarantee as funding method, does the file contain a copy of the financial test performed for the licensee's most recently completed fiscal year? N/I () N/A () Y () N

E. If "Yes" to D., do the financial test ratios meet the criteria in 10 CFR Part 30, Appendix A, Section II for parent company guarantees and Appendix C, Section II for self guarantees? () Y () N

F. Date that licensee's financial assurance instrument was submitted to NRC, if applicable: () N/A

G. Date that licensee's decommissioning plan was submitted to NRC, if applicable: () N/A

H. Have radiological conditions at the licensee's facility changed since the financial assurance mechanism and/or decommissioning plan was submitted due to:

- (1) Incidents or events? () N/A () Y () N
- (2) Unplanned process upsets or changes? () N/A () Y () N
- (3) Unauthorized material, form, or possession limit changes? () N/A () Y () N
- (4) Any other changes? () N/A () Y () N

If "Yes" to any of the above (1)-(4), notify regional management.

Basis for Findings (include comments and measurements on any areas the licensee released for unrestricted use):

12. COMPLIANCE WITH DECOMMISSIONING TIMELINESS RULE

- A. License to conduct a *principle activity* has expired or been revoked () Y (☒) N
- B. Licensee has made a decision to permanently cease *principal activities*, at the entire site, or any separate buildings, or any outdoor areas, including inactive burial grounds () Y (☒) N
- C. A 24-month duration has passed in which no *principal activities*, have been conducted under the license at the site, or at any separate buildings, or any outdoor areas, including inactive burial grounds () Y (☒) N
- D. If "Yes" to either A or B or C:
 (1) Identify Site/Bldg/Area: _____
 (2) Date of occurrence of A, B, or C: _____

NOTE: If "No" to A and B and C, decommissioning timeliness rule does not apply. If "Yes" to either A or B or C, then complete Attachment B, "Decommissioning Timeliness Field Notes," for this licensee.

Basis for Findings:

13. TRANSPORTATION (10 CFR 71.5(a) and 49 CFR 170-189) () N/A

A. Licensee Transports: [complete sections (1) - (4), as applicable]

- (1) Limited Quantities, and/or Instruments and Manufactured Articles: (Radioactive Material, excepted package, [additional info], 7. UN 2910) () N/A
 — 1 shipment since last insp. per RSD
- (a) Package meets general design requirements [173.410] N/A () Y () N
- (b) Radiation level ≤ 0.005 mSv/hr (0.5 mrem/hr) (Exclusive use instruments and articles, 2 mrem/hr) () Y () N
- (c) Contamination less than 173.443 limits. QC examination/test performed prior to each shipment [173.475(I)] () Y () N
- (d) Limited Quantity Package marked "Radioactive" [173.421(a)(4)] () Y () N
- (e) 173.422 certification statement attached/enclosed ("This package conforms to the conditions and limitations specified in...") () Y () N

- (2) Type A Quantities (Radioactive Material, nos. 7, UN 2982) () N/A
- (a) Packaging:
- (i) Packaging is proper for contents (i.e., DOT 7A), is unimpaired, and is prepared correctly [173.475(a)-(f)] () Y () N
 - (ii) All packages meet general design requirements [173.410] () Y () N
 - (iii) DOT 7A Package meets additional Type A design requirements [173.412, 178.350] () Y () N
- (b) Recordkeeping:
- (i) Special Form source records [173.476(a)] () Y () N
 - (ii) DOT 7A performance/design documentation [173.415(a)] () Y () N
- (c) Hazards communications requirements (consult the "NRC field reference charts" that correspond to elements (i) through (v), below):
- (i) Shipping Papers [172.200-205] () Y () N
 - (ii) Marking Packages [172.300-338] () Y () N
 - (iii) Labeling Packages [172.400-450] () Y () N
 - (iv) Placarding Vehicles [172.500-560] () Y () N
 - (v) Emergency Response information and guidance [172.600-604] () Y () N
- (d) Radiation level/Contamination limits [173.441, 173.443]
- (i) Package levels within limits () Y () N
 - (ii) QC examination/test performed prior to each shipment [173.475(I)] () Y () N
- (3) Type B Quantities (Radioactive Material, nos. 7, UN 2982) () N/A
- (a) Packaging is proper for contents (i.e., Type B), is unimpaired, and is prepared correctly [173.475(a)-(f)] () Y () N
- (b) Inspector must complete Section 2 of NRC Inspection Procedure (IP) 86740
- (c) Sections 2.c. and 2.d., shown in the previous section for Type A Quantities, also apply. Complete those sections.

(4) LSA Material and SCO (Radioactive Material, LSA, nos. 7, UN 2912) or (Radioactive Material, SCO, nos. 7, UN 2913) () N/A

- (a) If licensee makes significant LSA/SCO shipments, inspector should complete Inspection Requirement 03.02 of Temporary Instruction (TI) 2515/133 (issued 3/15/96)
- (b) Otherwise, if licensee has a minor LSA/SCO program:

- (i) Licensee properly characterizing material as LSA/SCO [173.403] () Y () N
- (ii) All packages meet general design requirements [173.410] () Y () N
- (iii) Proper LSA/SCO packaging selected and used [173.475, 173.427] () Y () N
- (iv) Placarding exclusive use vehicles, marking package "Radioactive-LSA" or "Radioactive-SCO," as appropriate [173.427(a)(6)] () Y () N
- (v) Shipping Papers [172.200-205] (see "NRC field reference chart" for content and exceptions) () Y () N

B. DOT HAZMAT Employee Training Program [49 CFR 172.700-704]:

- (1) Each HAZMAT employee receives training and is tested [172.702] () Y () N
- (2) Recurrent training at least every 2 years [172.704(c)(4)] () Y () N
- (3) HAZMAT employee training includes general awareness, function-specific, and safety training [172.704] () Y () N
- (4) HAZMAT employer recordkeeping includes employee name, completion date, description/copy/location of training materials, name and address of training provider, and certification [172.704(d)] () Y () N

C. Carrier Modal Specific Requirements, Highway Transportation [49 CFR Part 177]: () N/A

- (1) Driver Training, or CDL w/ HAZMAT endorsement [177.800, 177.816] () Y () N
- (2) Incident Reporting to DOT [177.807, see also 171.15 and 171.16] () Y () N
- (3) Shipping Paper Accessibility (on seat or in driver's side door pocket, readily visible) () Y () N
- (4) Placarded Vehicles Routing and Driver Training requirements [177.825 and 49 CFR 397 Subpart D (i.e., the motor carrier regs)] () Y () N
- (5) Sum of total package TIs on non-exclusive use vehicle < 50 [177.842(a)] () Y () N
- (6) Packages blocked/braced for transport [177.842(c)] () Y () N

D. Miscellaneous Requirements

- (1) No labeled packages carried in passenger compartments [173.448(c)] ☐ Y ☐ N
- (2) Overpack requirements observed, if packages are offered in overpack. Overpack marked w/ proper shipping name and number, package and overpack labeled as needed, marked "inner package complies" [173.24] ☐ Y ☐ N
- (3) Expanded and changed A1/A2 values from the 4/1/96 rule changes have been implemented [173.435] (verify only once per licensee) ☐ Y ☐ N
- (4) Written instructions included with exclusive use shipments [173.403] ☐ Y ☐ N

Basis for Findings:

13. POSTING AND LABELING

- A. NRC Form 3 "Notice to Workers" is posted [19.11] ☒ Y ☐ N
- B. Parts 19, 20, 21, Section 206 of Energy Reorganization Act, procedures adopted pursuant to Part 21, and license documents are posted or a notice indicating where documents can be examined is posted [19.11, 21.6] ☐ Y ☒ N
- C. Other posting and labeling per 20.1902 and 20.1904, respectively, and the licensee is not exempted by 20.1903 or 20.1905 ☒ Y ☐ N

Basis for Findings:

N/C Parts 19, 20, ^{license} 21 were not posted nor ~~where~~
the location of these documents posted.

14. GENERIC COMMUNICATION OF INFORMATION

- A. Bulletins, information notices, NMSS Newsletters, etc., received by the licensee
B. Licensee took appropriate action in response to bulletins, generic letters, etc.

☒ Y ☐ N

☐ Y ☒ N */IA*

Basis for Findings:

15. NOTIFICATION AND REPORTS

- A. Licensee in compliance with 19.13, 30.50 (reports to individuals, public and occupational, monitored to show compliance with Part 20) ☐ N/A ☒ Y ☐ N
B. Licensee in compliance with 20.2201, 30.50 (theft or loss) ☒ None ☐ Y ☐ N
C. Licensee in compliance with 20.2202, 30.50 (incidents) ☒ None ☐ Y ☐ N
D. Licensee in compliance with 20.2203, 30.50 (overexposures and high radiation levels) ☒ None ☐ Y ☐ N
E. Licensee aware of NRC Ops Center phone number [(301)-816-5100] ☒ Y ☐ N

Basis for Findings:

16. SPECIAL LICENSE CONDITIONS OR ISSUES

☐ N/A

- A. Special license conditions or issues to be reviewed:

- B. Evaluation:

17. OBSERVATIONS/DEMONSTRATIONS OF LICENSED ACTIVITIES

Briefly describe the activities and procedures observed and/or demonstrated during the inspection. For example, if you observed licensee personnel working in radiation areas using licensed material or performing functions associated with radiation safety such as receiving or transporting licensed material; conducting or receiving training; disposing of radioactive waste; conducting surveys; or making measurements, then describe what you saw. If the licensee demonstrated any practices at your request, describe those demonstrations. The observations and demonstrations you describe here, and elsewhere in the "Basis for Findings" sections of this report, along with measurements and some records review, should substantiate your inspection findings.

Describe what activities or procedures were observed and/or demonstrated by the licensee during the inspection:

Reviewed licensee's testing procedures for electronic components. Also, licensee demonstrated use of small Co-60 source. Reviewed storage locations of sealed sources.

20. VIOLATIONS, NON-CITED VIOLATIONS (NCVs), AND OTHER ISSUES

() N/A

NOTE: Briefly state (1) the requirement and (2) how and when the licensee violated the requirement. For non-cited violations (NCVs), indicate why the violation was not cited. Attach copies of all licensee documents needed to support the violation.

19, 11 Parts 19, 20, & License not posted.

21. DEBRIEF WITH REGIONAL STAFF

- A. Was inspection feedback provided to regional licensing staff?

(☒) Y () N

If "Yes," name of individual on the licensing staff: Kathy Dolce

If "Yes," describe issues discussed:

Type of license (program code).

- B. Briefly describe post-inspection communications with other regional staff (inspector's supervisor, Agreement State officer, State liaison officer, etc.):

22. PERFORMANCE EVALUATION FACTORS (PEFs)

- | | | | | | |
|----|---|---|-----|---|---|
| A. | Lack of senior management involvement with the radiation safety program and/or Radiation Safety Officer (RSO) oversight | () | Y | (<input checked="" type="checkbox"/>) | N |
| B. | RSO too busy with other assignments | () | Y | (<input checked="" type="checkbox"/>) | N |
| C. | Insufficient staffing | () | Y | (<input checked="" type="checkbox"/>) | N |
| D. | Radiation Safety Committee fails to meet or functions inadequately | (<input checked="" type="checkbox"/>) | N/A | () | Y () N |
| E. | Inadequate consulting services or inadequate audits conducted | () | N/A | () | Y (<input checked="" type="checkbox"/>) N |

Remarks (consider the above assessment and/or other pertinent PEFs with regard to the licensee's oversight of the radiation safety program):

Regional follow-up on above PEFs citations:

Continue on normal inspection frequency.

END

Attachments:

- A. "Laboratory Inspection Field Notes"
- B. "Decommissioning Timeliness Inspection Field Notes"

APPENDIX A - ATTACHMENT A
LABORATORY INSPECTION FIELD NOTES

1. Date _____ Authorized User(s) _____
2. Location(s) Building _____ Room(s) _____
3. Person(s) Contacted _____
4. Describe scope of lab use (nuclides, form, frequency, purpose, etc):
5. Training
A. Frequency: _____ Conducted by: _____
B. Individuals interviewed understand safety practices () Y () N

Basis for Findings:

6. Surveys
A. Types of surveys performed (daily, weekly, monthly, etc.)
- B. Instrumentation properly calibrated and used () Y () N
- C. Efficiency of counting system(s) determined () Y () N
- D. Hood airflow adequate and checked as required () N/A () Y () N
- E. Records maintained: trigger levels established, area diagram, instrument used, individual performing survey, results in proper units, decontamination performed as necessary, etc. () Y () N
- F. Inspector performed independent and/or confirmatory measurements () Y () N

Basis for Findings:

7. Receipt and Transfer
- A. Incoming packages properly surveyed () Y () N
 - B. Interlaboratory transfers performed as specified in the license () N/A () Y () N
 - C. Records maintained () Y () N

Basis for Findings:

8. Personnel Dosimetry
- A. Appropriate dosimetry assigned and worn () N/A () Y () N
 - B. Results available to lab personnel () Y () N
 - C. Bioassays performed () N/A () Y () N

Basis for Findings:

9. Handling Waste
- A. Procedures followed () Y () N
 - B. Proper storage (area, containers, labeling, etc.) () Y () N
 - C. Liquid/solid waste disposal () Y () N
 - D. Incineration () N/A () Y () N
 - E. Compaction () N/A () Y () N
 - F. Sewer discharge () N/A () Y () N
 - G. Records maintained () Y () N

Basis for Findings:

10. Inventory
- A. Inventory conducted () N/A
 - B. Records maintained () Y () N

Basis for Findings:

11. Storage and use of licensed material
- | | | |
|----|---|-------------|
| A. | Adequate method to prevent unauthorized access | () Y () N |
| B. | Condition of areas acceptable | () Y () N |
| C. | Personnel wear disposable gloves and protective clothing while handling material | () Y () N |
| D. | Personnel routinely monitor or frisk themselves after procedures or before leaving | () Y () N |
| E. | No eating/drinking/smoking in use/storage areas | () Y () N |
| F. | No food, drink, or personal items stored in use/storage areas | () Y () N |
| G. | Use of shielding/distance while using/storing material | () Y () N |
| H. | RAM is under surveillance and control (when not in storage) in an unrestricted area | () Y () N |
| I. | Proper dosimetry worn | () Y () N |
| J. | Radioactive waste disposed of in proper containers | () Y () N |
| K. | No pipetting by mouth | () Y () N |

Basis for Findings:

12. Posting and Labeling
- | | | |
|----|--|-------------|
| A. | NRC Form 3 "Notice to Workers" | () Y () N |
| B. | Parts 19, 20, 21, Section 206 of Energy Reorganization Act, procedures for Part 21, and license documents or a notice indicating where documents can be examined | () Y () N |
| C. | Other posting and labeling requirements met | () Y () N |

Basis for Findings:

13. Violations Identified:

APPENDIX A - ATTACHMENT B
DECOMMISSIONING TIMELINESS FIELD NOTES

Licensee: _____

Date of Inspection: _____

1. COMPLIANCE WITH DECOMMISSIONING TIMELINESS RULE

(NOTE: Repeat the answers given in Section 12 of the main body of the field notes. The issues in subsequent sections are dependent on the answers to these questions.)

- A. License to conduct a *principle activity* has expired or been revoked () Y () N
- B. Licensee has made a decision to permanently cease *principal activities*, at the entire site, or any separate buildings, or any outdoor areas, including inactive burial grounds () Y () N
- C. A 24-month duration has passed in which no *principal activities*, have been conducted under the license at the site, or at any separate buildings, or any outdoor areas, including inactive burial grounds () Y () N
- D. If "Yes" to either A or B or C above:
- (1) Identify Site/Bldg/Area: _____
- (2) Date of occurrence of A, B, or C: _____

2. NOTIFICATION REQUIREMENTS

- A. Licensee has provided written notification to NRC within 60 days of the occurrence of 1.A., 1.B., or 1.C. above () Y () N
- If "Yes," date of notification: _____
- B. If the licensee is requesting to delay initiation of the decommissioning process, the licensee has provided written notification to NRC within 30 days of occurrence of 1.A., 1.B., or 1.C. above () N/A () Y () N
- If "Yes," date of notification: _____

Comments:

3. DECOMMISSIONING PLAN/SCHEDULE REQUIREMENTS

- A. Licensee is required to submit a decommissioning plan per 10 CFR 30.36(g), 40.42(g), 70.38(g), or 10 CFR Part 72?

() Y () N

If "No" to 3.A., answer the following items B. - F.:

- B. The decommissioning work scope is covered by current license conditions

() Y () N

- C. Decommissioning has been initiated within 60 days of notification to NRC, or NRC has granted a delay

() Y () N

- D. If licensee has initiated decommissioning, give date the decommissioning was initiated:

Initiation date: _____

- E. If decommissioning has been completed, it was completed within 24 months of notification to NRC

() N/A () Y () N

- F. If decommissioning is still scheduled to be completed, it is on schedule to be completed within 24 months of notification to NRC

() N/A () Y () N

Comments:

If "Yes" to 3.A., answer the following items G. - J.:

- G. The decommissioning plan has been submitted to NRC within 12 months of notification

() Y () N

If "Yes," date of submittal: _____

If NRC approved, date of NRC approval: _____

- H. Has the licensee submitted an alternative schedule request?

() Y () N

If "Yes," date of submittal: _____

I. If decommissioning has been completed, it was completed within 24 months after approval of the decommissioning plan

☐ N/A ☐ Y ☐ N

J. If decommissioning is still scheduled to be completed, it is on schedule to be completed within 24 months after approval of the decommissioning plan

☐ N/A ☐ Y ☐ N

Comments:

Violations identified, if any: