

APPENDIX D

TRITIUM (H3) FIRE CONTROL DEVICES

TACOM-RI NRC LICENSE 12-00722-06

PERSONNEL INTERVIEWED:

DISPOSITION

- Y N n/a 1. Are sufficient controls in place to ensure that radioactive materials are not transferred to unlicensed or unauthorized person(s)? ⁽⁵⁾
transfer; 10 CFR 30.41; AR 11-9, 2-6a
- Y N n/a 2. Do records reflect that release of RAM to effluents or to the sanitary sewerage system comply with all applicable NRC regulation limits? ⁽⁸⁾
waste; 10 CFR 20.1301, 20.2001(a)(3), 20.2003(a); AR 11-9, 2-7c, App C-4g
- Y N n/a 3. Are records for the disposal in sanitary sewer (20.2003) retained until the NRC terminates the license? ⁽⁹⁾
waste; 10 CFR 20.2108(a), 30.35(g)(3); AR 11-9, 2-7c, App C-4g

DOSIMETRY

- Y N n/a 1. Are applicable radiation levels and/or contamination limits adhered to, and are exposures ALARA? ⁽¹⁰⁾
ALARA; 10 CFR 20.1101(b); AR 11-9, 1-8b; DA PAM 40-18, 2-7
- Y N n/a 2. Do all personnel occupationally exposed to radioactive material above applicable levels participate in an appropriate bioassay program? ⁽¹¹⁾
bioassay; 10 CFR 20.2106; AR 11-9, 5-2c(1); DA PAM 40-18, 3-6i (1) & (2), AR 11-9, App C-4I.
- Y N n/a 3. Has all previous occupational exposure data obtained from outside employment, previous organization, or administrative doses been forwarded to the Central Dosimetry Record Repository? (DD Form 1952, Dosimeter Application and Record of Occupational Radiation Exposure).⁽¹⁸⁾
Form 4, DD Form 1952; 10 CFR 20.2104(a); AR 11-9, 5-2(d)(1); DA PAM 40-18, 4-2

DOSIMETRY (continued)

- Y N n/a 4. Are automated dosimetry records (ADRs) maintained of all doses received by individuals for whom monitoring was required pursuant to §20.1502, including doses received during accidents, and emergency conditions? ⁽¹⁹⁾
Form 5 ADR; 10 CFR 20.2106(a), 10 CFR 30.32(i)(3)(vi); AR 11-9, 5-2d; DA PAM 40-18, 4-3, 4-10f(7)
- Y N n/a 5. Is the annual summary of the Automated Dosimetry Records (ADRs) maintained permanently in the individuals' medical file? ⁽²⁰⁾
Form 5 medical; 10 CFR 20.2106; AR 11-9, 5-2d; AR 40-66
- Y N n/a 6. Are Dosimetry/exposure records maintained separately from employee official medical records merged into the medical records, upon termination of the individual from the radiation safety program? ⁽²¹⁾
Form 5 medical; 10 CFR 20.2104; AR 40-66, Medical Records Quality Assurance
- Y N n/a 7. Is there a dosimetry program for minors and declared pregnant women workers who may receive (in one year) greater than 10 percent of the standard doses? Is the declaration of pregnancy on file (may be maintained separately from the ADRs)?⁽²²⁾
Form 5 pregnancy; 10 CFR 20.1502(a)(2), 20.1208, 20.2106(e); DA PAM 40-18, 2-2c(2)
- Y N n/a 8. Do all occupationally exposed personnel participate in an appropriate dosimetry or bioassay program? Adults likely to receive 10% of applicable limits must participate in a dosimetry/bioassay program.⁽²³⁾
limits; 10 CFR 20.1101(b), 1502, 1201, 1207, 1208; AR 11-9, 5-2b(1), 5-2c(1); DA PAM 40-18, 3-1, 3-6; AR 11-9, App C-4I.
- Y N n/a 9. Has the RSO provided the individual radiation workers with a copy of the annual summary of the ADRs? ⁽²⁷⁾
notification report; 10 CFR 19.13, 20.2106; AR 11-9, 5-2d; DA Pam 40-18, 4-3a.(2), 3b; AR 40-66; AR 40-5
- Y N n/a 10. Does the RSO review, sign and date personnel Automated Dosimetry Record (ADR) and retain 4th quarter ADR permanently? ⁽²⁸⁾
notification report; 10 CFR 20.2106, 35.21(b)(5); AR 11-9, 5-2d(3); DA Pam 40-18, 4-3b
- Y N n/a 11. If there is a Radiation Safety Committee (RSC), does it review the radiation exposure from ionizing radiation of individuals enrolled in the dosimetry program as required? ⁽³⁰⁾
RSC review; 10 CFR 35.22(b)(4); AR 40-5, 9-6a(5)

INSTRUMENTATION

- Y N n/a 1. Are the records of calibrations required by 10 CFR 20.1501 and 20.1906(b) maintained on file for a minimum period of 3 years? ⁽⁴⁸⁾
records; 10 CFR 20.2103(a)

INVENTORY

- Y N n/a 1. Is an annual physical inventory of radioactive materials and ionizing radiation producing devices being performed? ⁽⁵¹⁾
lost; 10 CFR 30.51(a); 20.2201; AR 11-9, 1-4k (4), Ch 6; AR 25-400-2; AR 385-40, 10-2b(1)(c); AR 385-40, 10-2b(2)(a)1; NGR 385-11, 2-4(d)
- Y N n/a 2. Are records of receipt, transfer, and disposal kept as long as material is possessed and three years after transfer? ⁽⁵⁸⁾
records; 10 CFR 30.51(a)
- Y N n/a 3. Do your spot checks indicate inventories are accurate? ⁽⁶⁰⁾
spot check; 10 CFR 30.51(a)

MAINTENANCE

- Y N n/a 1. Are low pressure nitrogen gas gauges 0-15 psi? ⁽⁶⁶⁾
collimator; 10 CFR 20.1101(b); TM 750-116
- Y N n/a 2. Is the work area properly prepared with paper (i.e. kraft paper) on the work benches, all seams taped and replaced quarterly? ⁽⁷⁶⁾
paper; 10 CFR 20.1101(b) {Chapter : NRC License Item 9, TB 43-0197 p2-7}
- Y N n/a 3. Is unwanted radioactive material placed in an appropriately marked trash container with a plastic liner? ⁽⁸⁴⁾
waste container; 10 CFR 20.2001, 30.51(a); TM 3-261, Chap 4

MANAGEMENT

- Y N n/a 1. Has an annual audit of the Radiation Protection Program been performed? ⁽⁸⁵⁾
annual review; 10 CFR 20.1101(c), 10 CFR 35.22(b)(6); AR 11-9, 1-4g(3), 4k(2)(b)

POSTINGS

- Y N n/a 1. Is a list of individuals and telephone numbers posted of personnel to notify in the event of an emergency? ⁽¹⁰⁹⁾
emergency; 10 CFR 19.12(a)(4), 30.32(i)(3)(viii); AR 11-9, Ch 6; AR 40-5, 9-9a(2)(e), 10 CFR 35.21(b)(1)
- Y N n/a 2. Are copies of the following posted for review near the radiation controlled area or at a location frequented by all employees? ⁽¹¹⁰⁾
a. NRC Form 3, Notice to Employees?
b. Section 206 of the Energy Reorganization Act of 1974?
Form 3; 10 CFR 19.11(c), 21.6(a); Public Law 93-438

POSTINGS (continued)

- Y N n/a 3. Is there a sign posted prohibiting smoking, eating, drinking, chewing gum, tobacco, or applying cosmetics prohibited in the radiation controlled area? ⁽¹¹²⁾
no smoking; 10 CFR 20.1101(b); AR 40-5, 9-9b(4)
- Y N n/a 4. Are copies of the following documents available for review or a notice posted that describes where they may be examined in the immediate area? ⁽¹¹³⁾
a. 10 CFR Parts 19, 20, 21?
b. License, conditions, documents and amendments?
c. Operating procedures (SOPs, TMs, TBs, Regulations, etc.).
d. All reported violations from the NRC?
posting; 10 CFR 19.11(a), 19.11(b), 21.6; AR 11-9, 5-2f; AR 11-9, App C-4e; AR 40-5, 9-9.a.(2)(a); NGB 385-11, 1-12g
- Y N n/a 5. Are areas or rooms where licensed material is used or stored posted with a "CAUTION, RADIOACTIVE MATERIAL(S)" sign at the boundary closest to the radioactive material? ⁽¹¹⁶⁾
signs; 10 CFR 20.1902(e), 20.1904

STORAGE

- Y N n/a 1. Is the storage area adequately secured when not in use to preclude unauthorized use? ⁽¹³⁰⁾
security; 10 CFR 20.1801
- Y N n/a 2. Are radioactive materials secured from unauthorized access? If not, is the radioactive material under constant surveillance and immediate control? Are all radiation sources secured against unauthorized use and removal? ⁽¹²⁷⁾
security; 10 CFR 20.1801, 20.1802; AR 11-9, App C-4d
- Y N n/a 3. Is tritium material (including excess unwanted radioactive material) stored in a well ventilated area away from personnel? ⁽¹³²⁾
ventilation; 10 CFR 20.2001; NRC License App, item 9-1b

SURVEYS

- Y N n/a 1. Are termination surveys documented for structures which will no longer be used to store or handle radioactive material? ⁽¹³⁷⁾
decommissioning; 10 CFR 30.35(g); AR 11-9, 1-4j(3)
- Y N n/a 2. Does the RSO/LRSO keep decommissioning records (updated every 2 years) until the site is released to unrestricted use and are these records transferred to the licensee to be maintained until the license is terminated? ⁽¹³⁹⁾
decommissioning; 10 CFR 30.35(g)(3); AR11-9, 1-4j(3), 1-4n(3), 2-5(a); 10 CFR 20.2003, 20.2108

SURVEYS (continued)

- Y N n/a 3. Are the health physics surveys accurately documented? (Area drawing, sources, background reading, radiation levels, instrument, calibration date, points of contact, recorder.) ⁽¹⁴⁴⁾
decommission; 10 CFR 20.2103; NRC Licenses {Chapter : 12-00722-06}
- Y N n/a 4. Are records showing results of surveys maintained on file for a minimum period of 3 years? Move to decommissioning files after 3 years. ⁽¹⁴⁵⁾
records; 10 CFR 20.2103(a); 10 CFR 20.1501, 20.1906(b), 30.35(g)
- Y N n/a 5. Are wipe tests of tritium storage and work areas performed and filed quarterly? ⁽¹⁴⁷⁾
a. Are wipe test records retained for 3 years?
b. Does wipe test record verify levels of less than 10,000 dpm/cm?
records; 10 CFR 20.1501(a), 20.2103(a); License Item 10, 4b
- Y N n/a 6. Do surveys in unrestricted areas assure dose rates do not exceed 100 mrem (1 mSv) per year and 2 mrems (0.02 mSv) in a ny one hour? Are records for surveys made for 10 CFR 20.1302 kept indefinitely and transferred to the licenses upon termination? ⁽²⁶⁾
members of public; 10 CFR 20.1301(a), 20.1302(b)(1), 20.2107(b); AR 11-9, 5-2a(1); AR 11-9, App C-4m
- Y N n/a 7. Are depot tritium instrument repair rooms (TIRR) wipe tested monthly? ⁽¹⁴⁹⁾
records; 10 CFR 20.1501(a); AR 11-9, 5-3

TRAINING

- Y N n/a 1. Is annual refresher training provided and documentation kept (names and dates)? ⁽¹¹⁷⁾
Refresher; CFR 19.12, 35.21(b)(2)(x); AR 11-9, 1-4n(2)(a); License 12-00722-06
- Y N n/a 2. Do occupationally exposed personnel receive appropriate training? Attach latest documentation. ⁽¹⁶¹⁾
occupational; 10 CFR 19.12(a); AR 11-9, 1-4k(3); AR 11-9, App C-4c; 10 CFR 30.32(i)(3)(xii)
- Y N n/a 3. Has the RSO provided instructions (and a copy of NRC Regulatory Guide 8.13) regarding prenatal exposure to females occupationally exposed? ⁽¹⁶⁷⁾
pregnancy; 10 CFR 20.1208, 20.2106(e); AR 11-9, 1-4k(3), 1-4n(2)(a); DA PAM 40-18, 2-2c(5)
- Y N n/a 4. Have maintenance personnel had annual training? To include: ⁽¹⁶⁵⁾
a. Safe handling procedures
b. Survey procedures
c. Leak test
d. Emergency procedures
personnel; 10 CFR 19.12(a), 35.59(b), 30.32(i)(3); AR 11-9, 1-4.k.(2)(a), 1-4n(2)(a); License Item 8-1.b; TB 385-4, 1-6, NRC regulatory guide 8.10, 8.13

TRANSPORTATION

- Y N n/a 1. Has the RSO or his designated representative ensured the level of external radiation or removable radioactive contamination on the external surfaces of each package offered for shipment is within DOT limits? Look at the records.⁽¹⁷⁴⁾
ALARA; 10 CFR 71.87(i), 49 CFR 173.443, 173.424(e); AR 11-9, 5-3(b)
- Y N n/a 2. Are procedures in place to notify the licensee when packages are delivered with: ⁽¹⁷⁵⁾
a. Removable radioactive surface contamination exceeding the limits of 10 CFR 71.87(i); or
b. External radiation levels exceeding the limits of 10 CFR 71.47 (200 mrem/hour).
contamination; 10 CFR 20.1906(d), 71.87(i), 71.47; DA PAM 40-18, 4-10f(6), 49 CFR 173.424, 173.443(a)
- Y N n/a 3. Are all records of receipt/transfer with the surveys for the shipment of radioactive material maintained? ⁽¹⁷⁹⁾
records; 10 CFR 20.2103; 30.51(a); FORSCOM Regulation 385-1, 8-9d.(1)
- Y N n/a 4. Are packages monitored if there is evidence of damage? ⁽¹⁷⁸⁾
records; 10 CFR 20.1906(b)(3)
- Y N n/a 5. Are copies of the Radioactive Material Movement Form (RMMF) given to the local Transportation Officer and included with the shipping records (ask for survey records)? ⁽¹⁸⁵⁾
RMMF; 10 CFR 20.2103, 71.87(i), 49 CFR 173.443(a); FORSCOM Regulation 385-1, 8-9d.(1); NGR 385-11, 4-1a

Total number of questions: 46.
Questions or problems? Contact the [Webmaster](#).
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