UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BOULEVARD
ARLINGTON, TEXAS 76011-4511

November 20, 2019

Department of the Air Force
Air Force Medical Support Agency (AFMSA)
ATTN: Col. Kathleen Jones
7700 Arlington Blvd, Suite 5151
Falls Church, VA 22042-5151

SUBJECT: NRC Inspection Report 030-28641/2019-005

Dear Col. Jones:

This letter refers to the U.S. Nuclear Regulatory Commission (NRC) team inspection conducted on October 7-10, 2019, at the Air Force Medical Support Agency's office in Falls Church, Virginia. The purpose of the inspection was to review the activities authorized under the Department of the Air Force's Master Materials License 42-23539-01AF. The enclosed report presents the results of this inspection.

This inspection examined activities conducted under your license as they relate to public health and safety and common defense and security, and to confirm compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observation of activities, and interviews with personnel. Areas examined during the inspection are identified in the enclosed report. At the conclusion of the onsite inspection, the NRC team conducted an exit briefing with you and other members of your staff.

The inspection team determined that the U.S. Air Force (USAF) Radioisotope Committee implemented its Master Materials License in accordance with NRC licensing and inspection policies and procedures and in a manner that protected public health, safety, and security. No violations were identified during this inspection and a response to this inspection report is not required.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal, privacy or proprietary information so that it can be made available to the public without redaction.

Should you have any questions concerning this inspection, please contact Ms. Marti Poston at 817-200-1181 or the undersigned at 817-200-1156.

Sincerely,

/RA/

Heather J. Gepford, PhD, CHP, Chief
Materials Licensing and Decommissioning Branch
Division of Nuclear Materials Safety

Docket: 030-28641
License: 42-23539-01AF

Enclosure:
NRC Inspection Report 030-28641/2019-005
w/Attachments:
1. Supplemental Inspection Information
2. Attachment 1 – Inspection Casework Reviews
3. Attachment 2 – Independent NRC Inspections and Inspector Accompaniments
4. Attachment 3 – Permitting Casework Reviews

cc w/enclosure:
Lt. Col. Alan C. Hale
Department of the Air Force
Radioisotope Committee Secretariat
Air Force Medical Support Agency (AFMSA)
7700 Arlington Blvd, Ste. 5151
Falls Church, VA 22042-5151

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	030-28641
License:	42-23539-01AF
Report:	030-28641/2019-005
Licensee:	Department of the Air Force USAF Radioisotope Committee
Location:	Falls Church, Virginia Inspection Dates: October 7-10, 2019
Inspectors:	Shawn W. Seeley, Health Physicist and Team Lead Project Manager for the U.S. Navy Master Materials License Medical and Licensing Assistance Branch Division of Nuclear Materials Safety Region I
	Robin L. Elliott, Health Physicist Project Manager for the U.S. Navy Master Materials License Medical and Licensing Assistance Branch Division of Nuclear Materials Safety Region I
	Michelle R. Simmons, Health Physicist Materials Licensing and Decommissioning Branch Division of Nuclear Materials Safety Region IV
	Martha R. Poston, Health Physicist Project Manager for the U.S. Air Force Master Materials License Materials Licensing and Decommissioning Branch Division of Nuclear Materials Safety Region IV
Approved By:	Heather J. Gepford, PhD, CHP, Chief Materials Licensing and Decommissioning Branch Division of Nuclear Materials Safety Region IV

Enclosure

EXECUTIVE SUMMARY

Department of the Air Force
NRC Inspection Report 030-28641/2019-005

This announced U.S. Nuclear Regulatory Commission team inspection was conducted to evaluate the U.S. Air Force Radioisotope Committee implementation and administration of activities conducted under the provisions of Master Materials License 42-23539-01AF. The inspection included an assessment of the U.S. Air Force Radioisotope Committee's quarterly meetings, management oversight of the radiation safety and regulatory compliance program, a sample review of completed permitting actions, an evaluation of the Radioisotope Committee's events or incidents and allegation response programs, an evaluation of the adequacy of the Radioisotope Committee's technical staffing and training, and a review of the Air Force Inspection Agency's inspections of permitted facilities.

Licensed activities conducted by the U.S. Air Force Radioisotope Committee during the period of November 3, 2017, through October 10, 2019, were reviewed during this inspection. Through interviews and discussions with Radioisotope Committee staff, evaluation of the information contained in the U.S. Air Force's September 18, 2019, response to the NRC's questionnaire dated August 8, 2019 (NRC's Agencywide Documents Access and Management System (ADAMS) Accession No. ML19219B101), reviews of documents related to Master Materials License activities, and observations of Radioisotope Committee staff in the performance of their duties, the NRC inspection team concluded that the U.S. Air Force's permitting and inspection programs were implemented in a manner that protected the health and safety of workers and the general public and maintained the physical security and control of radioactive materials under the U.S. Air Force's control. The program areas assessed during this team inspection are summarized below:

Management Oversight

The NRC inspection team determined that there was effective management oversight of the radioactive materials program licensed under the U.S. Air Force Master Material License. Oversight provided by the U.S. Air Force was sufficient to ensure that activities protected the health and safety of Air Force employees, the environment and the public, and maintained the physical security and control of radioactive materials under the U.S. Air Force's control. The Radioisotope Committee had implemented a centralized radiation safety program and successfully executed its responsibility as required by the Master Material License and the associated Letter of Understanding. The inspection team concluded that the U.S. Air Force, through the Radioisotope Committee and Radioisotope Committee Secretariat, conducted and controlled Master Material License activities in a manner that ensured compliance with the conditions of the Master Material License and associated Letter of Understanding, Air Force Manual 40-201, and the NRC's regulations.

Technical Staffing and Training

The inspection team concluded that the Radioisotope Committee staff was qualified to perform the regulatory duties of a Master Materials License licensee. The Air Force Inspection Agency inspector was qualified to conduct safety and security inspections and the Radioisotope Committee Action Officers were qualified in accordance with the U.S. Air Force Master Materials License and the Letter of Understanding to conduct reviews of permit applications. The NRC

inspection team noted that the Radioisotope Committee had developed a formalized process to conduct and document inspection accompaniments of the Air Force Inspection Agency inspector.

Status and Technical Quality of Materials Inspection Program

The inspection team concluded that the licensee's inspection program was adequate to ensure that inspection findings were well supported, appropriately documented, and communicated to permittees in a timely and efficient manner. The team also concluded that the licensee conducted inspections in accordance with the intervals described in NRC Inspection Manual Chapter 2800, "Materials Inspection Program." The inspection team determined that the licensee had appropriately assigned priority codes and inspection due dates to permittee programs.

National Source Tracking System Program

The inspection team concluded that the licensee's program for maintaining and updating the National Source Tracking System was adequately and effectively implemented. Additionally, the inspection team confirmed that all sealed sources that were required to be in the National Source Tracking System registry were appropriately entered into the system.

NRC Independent Inspections of Air Force Permittees

Based on the results of the NRC's independent inspections, the inspection team concluded that permittee activities were conducted in a manner that protected the health and safety of the licensee's staff, the environment, and the public.

Status and Technical Quality of Materials Permitting Program

The inspection team concluded that the Radioisotope Committee's staff processed permitting actions in a manner that was consistent with NRC licensing policies, procedures, and guidance. The team identified several minor technical inconsistencies in the 22 permitting actions that were reviewed. These inconsistencies were communicated to the Radioisotope Committee staff for review and resolution. These minor inconsistencies did not affect health and safety but indicated a need for the U.S. Air Force to perform self-assessments on permitting actions beyond the initial peer review.

Decommissioning Oversight Program

The inspection team concluded that the U.S. Air Force's decommissioning inspection program was adequate to ensure that a thorough assessment of the sites was considered, and the findings appropriately documented. The unresolved item related to the timeliness rule, identified in the previous biennial inspection, was closed.

Allegation and Incident Handling Programs

The inspection team concluded that the U.S. Air Force had established a program to manage allegations. The inspection team also concluded that the U.S. Air Force had established a program for responding to incidents involving radioactive material. Licensee responses to events during the review period were complete, thorough, and timely.

REPORT DETAILS

1 Program Overview

The Department of the Air Force is authorized under NRC Master Materials License (MML) No. 42-23539-01AF to issue byproduct, source, and special nuclear material permits throughout the U.S. In October 2017, the Radioisotope Committee (RIC) maintained oversight for 52 permittees. Currently, the RIC maintains oversight for 40 permittees, a significant reduction in permits since the previous biennial inspection. The permits cover a wide range of program activities including research and development, medical, irradiator, disaster preparedness and readiness, waste disposal and decontamination, and other activities required to support the mission of the U.S. Air Force (USAF). The number of permittees will be reduced by six when the medical permits are transferred to the Defense Health Agency by the end of calendar year 2019. The MML was issued on June 26, 1985, and does not have an expiration date.

The USAF RIC updated their Letter of Understanding (LOU) on September 19, 2014. During the inspection, the 2014 LOU was reviewed in accordance with License Condition 35, which states that "the NRC and the USAF will review the LOU periodically. If changes to the LOU are warranted, then the USAF and NRC will seek to finalize such changes within 180 days of the review." The team noted that the RIC staff had submitted draft changes to the NRC's USAF MML project manager for modification to the LOU prior to the onsite review.

2 Management Oversight

2.1 Inspection Scope

The NRC inspection team evaluated the licensee's organization and management oversight activities to determine whether the USAF, through the RIC and the RIC Secretariat, had implemented its NRC licensed program in accordance with NRC regulations and the conditions and commitments in its MML in a manner that protected the public health and safety and the environment, and maintained the physical security of the radioactive materials authorized under the MML. The evaluation included observation and review of RIC quarterly meetings, discussions with licensee representatives, and review of program documentation.

The team also evaluated the methods used by the USAF to communicate with the USAF major commands and permittee radiation safety officers (RSOs). The evaluation included observations of RIC quarterly meetings, discussions with licensee representatives on the methods used to communicate with USAF personnel, review of examples of various forms of communication, and onsite inspection activities at selected USAF MML permittees.

2.2 Observations and Findings

Air Force Manual (AFMAN) 40-201, "Radioactive Materials (RAM) Management," described the policy and guidance that the USAF implemented for the management and control of radioactive material authorized under the USAF MML. It also established

policies and procedures for the acquisition, possession, use, storage, security, and disposal of radioactive material by USAF permittees under the MML.

The USAF Surgeon General established policy and guidance for controlling ionizing and non-ionizing radiation hazards in the USAF. The USAF RIC oversees the implementation of the MML. Organizationally, the RIC is under the USAF Assistant Surgeon General, Director of Medical Operations, who delegated responsibility for the Chair of the RIC to the Chief, Aerospace and Operational Medicine.

The Chief of Aerospace and Operational Medicine has oversight for four program areas including public health, flight medicine, bioenvironmental engineering, and aerospace physiology. The management of the USAF radiation program is under the Bioenvironmental Engineering (BEE) Branch. In support of the MML, the BEE developed operational and medical radiation safety policies for ionizing and non-ionizing radiation, and performed other tasks as assigned by the Department of Defense and USAF committees. Policy, guidance, and associated documents are developed by the BEE and provided to USAF permittees for implementation.

The BEE is responsible for maintaining AFMAN 40-201, which is essential in implementing the MML program. Program elements in AFMAN 40-201 describe specific requirements for permitting, procuring, controlling, and disposing of radioactive material, conducting inspections and investigations, responding to incidents, and managing allegations. Under the BEE, the RIC managed the day-to-day activities of the MML. These activities included, but were not limited to, issuing permits and enforcement actions, investigating incidents and allegations, and ensuring the conditions of the MML and LOU were implemented. The RIC received support from USAF management to fulfill its responsibilities under the MML; the RIC successfully managed projects that were assigned to the RIC, or requested by the NRC, during the review period.

The RIC members represented USAF offices and organizations that oversee or directly utilize radioactive materials permitted by the RIC. Voting and alternate representatives were appointed to the RIC as specified in AFMAN 40-201. The RIC convened on a quarterly basis during the review period. The meetings met the minimum number of participants required for a quorum during the inspection period. The quarterly meetings covered a wide-range of topics that included, but were not limited to, discussion of inspection results, permitting actions, enforcement, personnel exposure results, decommissioning activities, and training.

The NRC's USAF MML project manager typically attended the quarterly RIC meetings and noted that members were actively engaged and involved with meeting discussions. The RIC staff members routinely participated in one-on-one discussions with the NRC project manager following each quarterly meeting, providing the RIC staff with an open forum to address and discuss specific issues or concerns, ask specific questions of the NRC representative(s), request support for unique licensing issues, and discuss ongoing decommissioning activities. Additionally, the USAF established a radiation safety council that met semi-annually or on an ad hoc basis depending on the urgency of the issue. The council addressed all radiation disciplines including ionizing radiation, non-ionizing radiation, lasers, and electro-magnetic frequency.

The team noted that during the review period, the RIC continued its commitment to maintain and improve communications with its permitted facilities. The inspection team reviewed the mechanisms, tools, and methods used by the RIC to communicate items of interest to its permittees. The primary methods of communication utilized by the RIC staff were periodic e-mails to base and permittee RSOs, the Air Force Medical Support (AFMS) website maintained and updated by the RIC, and periodic newsletters from the BEE branch. The AFMS website posted AFMAN 40-201, relevant NRC forms, and links to Title 10 of the Code of Federal Regulations. The team discussed with the RIC staff the need for continued outreach with the permittees and radiation safety officers on RIC requirements and management oversight.

The inspection team also reviewed the USAF's annual program review. Since the last biennial inspection, conducted in October 2017, the USAF had completed only one program review. However, the report covered calendar years 2017 and 2018. The reason for only one review being performed was staff turn-over during the first quarter of 2016. The annual program review was conducted by the Air Force Inspection Agency (AFIA), and the report described quality control of permitting actions through peer review, results of a review of internal procedures, and identification of actions taken to improve the program.

2.3 Conclusion

The NRC inspection team determined that there was effective management oversight of the radioactive materials program licensed under the USAF MML. Oversight provided by the USAF was sufficient to ensure that activities protected the health and safety of USAF employees, the environment and the public, and maintained the physical security and control of radioactive materials under the USAF's control. The RIC had implemented a centralized radiation safety program and successfully executed its responsibility as required by the MML and the associated LOU. The inspection team concluded that the USAF, through the RIC and RIC Secretariat, conducted and controlled MML activities in a manner that ensured compliance with the conditions of the MML and associated LOU, AFMAN 40-201, and the NRC's regulations.

3 Technical Staffing and Training

3.1 Inspection Scope

The NRC inspection team reviewed the licensee's radioactive materials program staffing level and turnover, as well as the technical qualifications and training history of the RIC staff members. To evaluate these elements, the team interviewed program management staff and reviewed the RIC training program and supporting documentation.

3.2 Observations and Findings

At the time of the inspection, the USAF RIC was staffed by a Chief, Deputy Chief, and three full-time Action Officers (AOs) (i.e., permit reviewers). These staff members were located in Falls Church, Virginia.

Each of the RIC AOs attended the required NRC Licensing Practices and Procedures course, and several staff attended other NRC courses applicable to the specific types of activities authorized by the MML. The AOs were trained in accordance with standard operating procedure RIC-SE-9, "Radioisotope Committee Secretariat (RICS) Action Officer (AO) Training." In additional, all fully qualified AOs were trained in standard operating procedure RIC-SE-1, "Permitting Procedures."

The program currently utilized one fully trained inspector to conduct inspections under the MML. The inspector, who is assigned to the AFIA, is located in New Mexico, and is fully qualified to independently conduct inspections of USAF permittees in accordance with the MML. Management accompaniments of the AFIA inspector were conducted on an annual basis. The licensee adopted a methodology for documenting the accompaniments similar to that which is implemented by the NRC. Although AFMAN 40-201 stipulates that RIC staff can perform independent inspections, the RIC staff did not perform any inspections during the review period.

The team discussed with the MML staff the need for adequately trained staff and succession planning for continued success of the program. The RIC Chairperson confirmed that this issue had become a regular topic of discussion throughout the year. She assured the team that the RIC was focusing resources to address future staffing needs.

3.3 Conclusion

The inspection team concluded that the RIC staff was qualified to perform the regulatory duties of an MML licensee. The AFIA inspector was qualified to conduct safety and security inspections, and the RIC AOs were qualified in accordance with the USAF MML and the LOU to conduct reviews of MML permit applications. The NRC inspection team noted that the RIC had developed a formalized process to conduct and document inspection accompaniments of the AFIA inspector.

4 Status and Technical Quality of Inspections

4.1 Inspection Scope

The inspection team reviewed selected inspection plans, inspection reports, enforcement documents, and correspondence associated with inspections conducted during the review period to determine if the licensee implemented its inspection program in a fashion that was consistent with the NRC's inspection policies and procedures. The inspection team reviewed the licensee's inspection frequencies for permittees and its timeliness for completing inspections.

To evaluate these elements, the inspection team interviewed licensee staff and the AFIA inspector, and reviewed permittee inspection files and licensee inspection data. The NRC staff accompanied the AFIA inspector on one occasion during the review period and also conducted eight (four in 2018 and four in 2019) independent inspections of permittees under the MML in order to evaluate the licensee's compliance with NRC regulations.

4.2 Observations and Findings

The inspection team determined that at the time of the on-site review, the licensee had 40 permittees subject to routine inspections. The team determined that two AFIA inspectors conducted all of the inspections during the review period. The senior inspector was qualified to inspect all permit types and the other inspector was qualified to perform about 30 percent of the permit types. Inspections performed by the second inspector were reviewed and signed out by the senior inspector. The senior inspector established inspection documentation reflective of NRC Form 591M Parts 1 and 3 for all inspections conducted during the review period. All inspections were conducted in accordance with NRC Inspection Manual Chapter (IMC) 2800 and the applicable inspection procedures. The senior inspector was training the new senior inspector, who will assume full inspection responsibilities in December 2019.

The inspection team reviewed the inspection records and determined that the licensee had developed checklists and field notes for each inspection type. The AFIA inspector used these as aids in conducting performance-based inspections to ensure that complete and thorough inspections were performed and that all safety significant items were addressed. The licensee conducted 17 inspections between October 2017 and October 2019. Six permittees were found in compliance and 11 permittees were not in compliance. Two of the non-compliant inspections involved escalated enforcement (Severity Level III or above violations). Both of the inspections involving escalated enforcement were reviewed by Region IV to ensure that appropriate enforcement decisions were made.

The inspection team determined that at the time of the inspection, the licensee had two permittees subject to 10 CFR Part 37 requirements. Both permittees were inspected by the AFIA inspector during the biennial review period.

Based on an interview of the AFIA inspector, the team determined that the inspector was technically knowledgeable in radiation safety practices and NRC regulations. The inspector utilized inspection checklists in an effective manner while performing inspections. When non-compliances were identified, the inspector properly documented and cited these violations. The inspection findings and potential violations were communicated to USAF MML management and the RIC. Written reports with inspection findings and violations, including the severity level, were issued to the permittee and followed up on as needed.

The inspection team determined that the licensee had established inspection procedures and frequencies which were consistent with NRC IMC 2800. Priority codes were assigned to the permittee programs. Routine inspections were performed within the required timeframes. The inspection team determined that the licensee maintained databases to support the day-to-day management and planning of the inspection program. The Radioactive Materials Management Information System (RAMMIS) was utilized by the RIC staff for basic permit and inspection information. Another database included an Excel spreadsheet utilized by the AFIA inspector to track permittee inspection due dates.

The inspection team determined through interviews with licensee staff that, with the exception of initial inspections, routine inspections conducted by the AFIA inspector during the review period were all unannounced.

The list of inspection casework files reviewed is found in Appendix A (Attachment 2) of this inspection report.

4.3 Conclusion

The inspection team concluded that the licensee's inspection program was adequate to ensure that inspection findings were well supported, appropriately documented, and communicated to permittees in a timely and efficient manner. The team also concluded that the licensee conducted inspections in accordance with the intervals described in NRC IMC 2800. The inspection team determined that the licensee appropriately assigned priority codes and inspection due dates to permittee programs.

5 National Source Tracking System Program

5.1 Inspection Scope

The inspection team reviewed the licensee's program for updating the National Source Tracking System (NSTS). The review included interviews of licensee staff that were responsible for entering the information into NSTS, the method that was used to enter the information into the NSTS database, and how the USAF communicated with the NRC regarding NSTS matters. The team assessed the communications between the permittees and the RIC to evaluate the effectiveness and timeliness of updates to the NSTS.

5.2 Observations and Findings

The inspection team determined that the licensee's computer system did not allow the AOs to download the required certificates necessary to access the NRC's NSTS computer database. Therefore, changes/corrections were sent via email to the NSTS Help Desk using NRC Form 748. The team confirmed that the annual NSTS reconciliation was completed on January 23, 2018, and January 8, 2019, for 2018 and 2019, respectively.

One individual was credentialed and authorized to act on behalf of the licensee to update the NSTS. All permittees received an e-mail request from the authorized staff member to update their respective NSTS information. The authorized individual subsequently transferred the permittee data to the NSTS via facsimile during the annual reconciliation effort prior to the January 31, 2018, and January 31, 2019, deadlines.

5.3 Conclusion

The inspection team concluded that the licensee's program for maintaining and updating the NSTS was adequately and effectively implemented. Additionally, the inspection team confirmed that all sealed sources that were required to be included in the NSTS registry were appropriately entered into the system.

6 NRC Independent Inspections of Licensee Permitted Facilities

6.1 Inspection Scope

During the review period, the NRC conducted independent inspections of licensee permitted facilities to assess the adequacy of their radiation safety programs and compliance with NRC regulations and the MML.

6.2 Observations and Findings

During the review period from October 2017 through October 2019, the NRC staff inspected eight different permittee locations. The NRC inspections focused on programs that the NRC had not inspected since the MML was issued and included remote locations that were lower safety significant permittees, and specific permittees that posed higher health, safety, and security risks. The inspection findings, including any non-compliances, were subsequently presented to the licensee in NRC inspection reports.

The list of independent NRC inspections is included in Appendix B (Attachment 3) of this inspection report.

6.3 Conclusion

Based on the results of the NRC's independent inspections, the inspection team concluded that permittee activities were conducted in a manner that protected the health and safety of the licensee staff and the public.

7 Status and Technical Quality of Materials Permitting Program

7.1 Inspection Scope

The NRC inspection team assessed the status and technical quality of the permitting process by reviewing 22 permitting actions completed by the USAF RIC AOs. The permitting actions were evaluated to ensure that applicable regulations and guidance documents were being used by the AOs. This evaluation included adherence to sealed source and device registrations, adherence to permit conditions, appropriate training and experience authorizations, adequacy of facilities and equipment, adequacy of decommissioning financial assurance, use of operating and emergency procedures for the radionuclides and quantities used, adequacy of the use of official use only markings for those permits requiring it, implementation of security requirements, and consideration of enforcement history during permit renewals. The permitting actions reviewed were evaluated for completeness, consistency, timeliness, and adherence to good health physics practices. The permitting actions were also reviewed for the retention of documents required to support the action being requested.

7.2 Observations and Findings

The RIC staff processed 112 permitting actions during the review period. The RIC maintained oversight for 40 permits, which was a significant reduction since the last biennial inspection as a continued result of the authorization of exempt distribution

activities to the MML. The RIC established a self-imposed goal to process both template and non-template actions within 30 days from receipt.

The 22 permitting actions reviewed by the inspection team included four renewals, one new action, 15 amendments, and two terminations that covered a variety of uses of permitted material. The NRC inspection team made the following observations through a review of records and interviews with the AOs:

- The RIC used the following process to determine if a permit applicant is a known entity: After a new permit application is received, the RIC contacts the installation RSO, usually a bioenvironmental engineer, and requests the installation RSO to validate that the proposed requested use is legitimate. The Installation RSO is also asked to communicate to the RIC any objections for the types and amounts of radioactive material being requested by the applicant.

- The RIC used NRC Regulatory Issue Summary 2005-31, "Control of Security-Related Sensitive Unclassified Non-Safeguards Information Handled by Individuals, Firms, and Entities Subject to NRC Regulations of the Use of Source, Byproduct, and Special Nuclear Material," as guidance for reviewing permitting actions to determine if "Official Use Only" markings were needed on a permit.

- The inspection team identified several minor inconsistencies in permit documentation in the 22 permitting actions that were reviewed. The inconsistencies did not affect health and safety but indicated a need for the RIC to perform self-assessments on permitting actions beyond the initial peer review. These inconsistencies included: (1) during the renewal process, a review of a permittee's enforcement and inspection history was not documented; (2) while a "checklist" was used to review the portable gauge permittees renewal applications, a similar checklist was not used for the other modalities; (3) some permitting actions lacked documentation detailing the review of permittees request and decisions made that differed from the permittee request.

- The RIC submitted their "statement of intent" for financial assurance/ decommissioning funding plan to the NRC on April 25, 2018. The NRC approved it on January 24, 2019.

The inspection team determined that the permitting actions were thorough, complete, of good quality, and properly addressed the health, safety, environmental, and security issues. Most files generally contained appropriate documentation to support the permitting action. The AOs followed the NRC NUREG-1556 series guidance documents, NRC regulations, regulatory issue summaries, and regulatory guides during their review process.

The list of permitting casework reviewed is included in Appendix C (Attachment 4) of this inspection report.

7.3 Conclusion

The inspection team concluded that the RIC's staff processed permitting actions in a manner that was consistent with NRC licensing policies, procedures, and guidance. The

team identified several minor technical inconsistencies in the 22 permitting actions that were reviewed. These inconsistencies were communicated to the RIC staff for review and resolution. These minor inconsistencies did not affect health and safety but indicated a need for the RIC to perform self-assessments on permitting actions beyond the initial peer review.

8. Decommissioning Oversight Program

8.1 Inspection Scope

The inspection team reviewed the USAF's oversight of decommissioning activities at permitted sites. The scope of the activities examined included the technical quality of inspections, amendments to permits for decommissioning sites, reviews of decommissioning related documents and correspondence, tracking decommissioning progress at sites in progress or under consideration, and decommissioning timeliness milestones. The team evaluated these elements through discussions with RIC staff and review of procedures and documents. The team did not review decommissioning activities for facilities designated for closure under the authority of the Base Realignment and Closure (BRAC) process.

8.2 Observations and Findings

The USAF AFMAN 40-201 and the LOU contained guidance for the USAF's handling of decommissioning and site termination. The RIC is currently developing a standard operating procedure specifically for decommissioning.

During the previous biennial inspection, the inspection team reviewed activities and/or documentation related to permitted sites in various stages of decommissioning. Several of those sites reviewed during the previous biennial, had possession-only permits that have been issued for time periods of greater than two years. These included two McClellan AFB permits for Ra-226, a Nellis AFB permit for an active range, two Davis-Monthan AFB permits for an aircraft "boneyard," an Elmendorf AFB permit for Ra-226, and a Hill AFB permit for Ra-226. The NRC guidance provided for the issuance of a possession-only permit for a period of two years. Outside of this time frame, the NRC applies the Decommissioning Timeliness Rule [10 CFR 30.36(d)] which requires site remediation within two years after the determination that licensed material is no longer used. The applicability of possession-only permits was under reconsideration by the NRC. This issue was identified as an Unresolved Item (URI) (030-28641/2017-06-01).

In response to the URI, Region IV issued a Technical Assistance Request (TAR) to Nuclear Materials Safety and Safeguards (NMSS) dated February 15, 2018 (ADAMS Accession No. ML 18024B512). Nuclear Materials Safety and Safeguards issued the TAR response on November 2, 2018 (ADAMS Accession ML No. 18155A434). The majority of the sites were determined by NMSS to be under EPA Oversight and therefore not subject to the timeliness rule. The remaining sites were determined by NMSS to be using material in accordance with their permits. Following the TAR response, the USAF reviewed all the permittees with possession only permits and identified those that were covered under the memorandum between the Department of Defense and the NRC related to Base Realignment and Closure (BRAC) process, and therefore outside the jurisdiction of the USAF MML. These BARC sites were removed from the permittee list

maintained by the USAF MML. The remaining permits were revised (Nellis and both Davis-Monthan) to clarify the parameters of the permit and address the "possession-only" language. The inspectors reviewed the revised permits and found the revisions to be consistent with the guidance provided in the TAR. Therefore, the URI will be closed.

In accordance with Condition 31 of the 2014 LOU, the USAF is required to submit decommissioning plans (DP) for decommissioning groups 3 or above to the NRC for review and approval. During the inspection period, the NRC received, reviewed, and subsequently approved changes to the DP for Robins AFB, Georgia. Robins AFB, Georgia is currently the only USAF permittee in decommissioning. Two additional sites (Hill AFB and Kirtland AFB) were in the process of decommissioning during the previous biennial inspection; both completed decommissioning during the review period and the permits were terminated by the RIC. The permit terminations for the decommissioning activities were reviewed by the inspectors and found to be consistent with NRC policies, procedures and guidance.

8.3 Conclusion

The inspection team concluded that the USAF's decommissioning inspection program was adequate to ensure that a thorough assessment of the sites was considered and the findings appropriately documented. The unresolved item identified during the previous biennial inspection was closed.

9 Allegation and Incident Handling Programs

9.1 Inspection Scope

The inspection team reviewed the licensee's program for handling allegations and responding to incidents. This included a determination of the adherence to NRC reporting requirements, the effectiveness of the licensee in handling allegations and responding to incidents, and the status of any open allegations. In evaluating this program area, the team utilized the MML's responses to the NRC questionnaire and interviews with licensee staff.

9.2 Observations and Findings

The AFMAN 40-201 and LOU contained instructions for the USAF's handling of incidents and allegations. The USAF had a standard operating procedure for both management of allegations and response to incidents involving radioactive materials. The USAF did not receive any allegations during the evaluation period. The team determined that the licensee had conducted annual allegation training for its staff utilizing the training information provided by the NRC.

The team reviewed the Nuclear Material Events Database (NMED) for events reported to the NRC and the USAF log of incidents for events the USAF has identified. Because the RIC manages the USAF's Generally Licensed Sources and Devices (GLD) Program, reports and events associated with GLDs were also reviewed. The USAF standard operating procedure AFMAN 40-201 assigns the initial response to the permittee where the event or incident occurred with review and recommendations being assigned to RIC staff.

The inspection team reviewed two events reported to the NRC during the review period:

- NMED 190254 (Event Notification 54122) involved an autoclave that exploded and was found to contain low levels of Th-232. The written report was dated July 18, 2019.

- Event Notification 54227 involved the inadvertent disposal of a 15 mCi source in a chemical scanner on or about July 11, 2019. The written report was dated August 14, 2019.

Both events were appropriately processed in accordance with the requirements of the procedure and in a manner that provided protected health and safety for USAF staff, the public and the environment.

9.3 Conclusion

The inspection team concluded that the USAF had a program in place to manage allegations. The inspection team concluded that the USAF had a program and written procedures in place for responding to incidents involving radioactive material. Licensee response to events during the review period were complete, thorough, and timely.

SUPPLEMENTAL INSPECTION INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

Col. K. Jones, USAF RIC Chair
Col Peake, Associate Chief Bioenvironmental
Lt. Col. S. Nemmers, Acting Chief, Medical Physics
Lt. Col. A. Hale, Chief, Radiation Health, USAF RIC Secretariat
Maj. R. Kice, AFIA
R. Bhat, PhD., RIC Staff
B. Murren, RIC Staff
Capt B. McCombs, Deputy Chief, USAF RIC Secretariat

INSPECTION PROCEDURES (IPs) USED

IP 87129, "Master Materials Program"

ITEMS OPENED, CLOSED AND DISCUSSED

Opened

None

Closed

030-28641/1706-01	URI	Potential conflict between use of possession-only licenses and Timeliness Rule for decommissioning sites

Discussed

None

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
AFB	Air Force Base
AFIA	Air Force Inspection Agency
AFMAN	Air Force Manual
AOs	Action Officers
BEE	Bioenvironmental Engineer
BRAC	Base Realignment and Closure
CFR	Code of Federal Regulations
DP	Decommissioning Plan
GLD	generally licensed device
IMC	Inspection Manual Chapter
IP	Inspection Procedure
LER	Licensee Event Report
LOU	Letter of Understanding
MML	Master Materials License
NMED	Nuclear Material Events Database
NRC	Nuclear Regulatory Commission
NSTS	National Source Tracking System
RAM	Radioactive Materials
RAMMIS	Radioactive Materials Management Information System
RIC	Radioisotope Committee
RSO	Radiation Safety Officer
TAR	Technical Assistance Request
URI	Unresolved Item
USAF	U.S. Air Force

INSPECTION CASEWORK REVIEWS

File No.: 1
Permittee: Nellis AFB, Permit No.: NV-00797
Permit Type: Decontamination Services — Date Inspected: 11/21/17

File No.: 2
Permittee: Anderson AFB, FL Permit No.: GU-00300
Permit Type: Portable Gauge — Date Inspected: 1/19/18

File No.: 3
Permittee: Kirtland AFB, Permit No.: NM-30470
Permit Type: Irradiator
Comment: This was a security inspection — Date Inspected: 2/12-14/18

File No.: 4
Permittee: Edwards AFB, Permit No.: CA-30305
Permit Type: Measuring System — Date Inspected: 5/30/18

File No.: 5
Permittee: Davis Monthan AFB, Permit No.: AZ-30068
Permit Type: Decontamination Services — Date Inspected: 6/1/18

File No.: 6
Permittee: Nellis AFB, Permit No.: NV-00516
Permit Type: Portable Gauge — Date Inspected: 7/18/18

File No.: 7
Permittee: Nellis AFB, Permit No.: NV-00333
Permit Type: Nuclear Medicine, Written Directive — Date Inspected: 7/18/18

File No.: 8
Permittee: Elmendorf AFB, Permit No.: AK-01810
Permit Type: Nuclear Medicine, Written Directive — Date Inspected: 8/7/18

File No.: 9
Permittee: Kessler AFB, Permit No.: MS-01002
Permit Type: Medical Institution, no Written Directive — Date Inspected: 9/10/18

File No.: 10
Permittee: Wright-Patterson AFB, Permit No.: OH-00803
Permit Type: Waste Disposal Processing — Date Inspected: 02/14/19

File No.: 11
Permittee: Wright Patterson AFB, Permit No.: OH-04682
Permit Type: HDR — Date Inspected: 2/14/19

File No.: 12
Permittee: Malmstrom AFB. Permit No.: MT-00616
Permit Type: Portable Gauge — Date Inspected: 5/21/19

File No.: 13
Permittee: Travis AFB, Permit No.: CA-007840
Permit Type: Medical Written Directive, Y-90 Date Inspected: 5/29/19

File No.: 14
Permittee: Hill AFB, Permit No.: UT-00696
Permit Type: Irradiator Date Inspected: 8/15-16/19
Comment: This was a security inspection

INDEPENDENT NRC INSPECTIONS AND INSPECTOR ACCOMPANIMENTS

Independent Inspections:

Elgin AFB, Florida Permit No. FL-00497-03/01AFP Permit No. FL-00781-00/04AFP Permit No. FL-0883-04/01AFP	Permit Type: DU Munitions, DU Range and LLRW NRC Inspector: J. Cassata
Kirtland AFB, New Mexico Permit No. NM-00792-00/02AFP Permit No. NM-00677-01/03AFP Permit No. NM-00610-01/06AFP Permit No. NM-00602-01/03AFP	Permit Type: Irradiator, Research and Calibration Services NRC Inspector: J. Dykert
Tinker AFB, Oklahoma Permit No. OK-00678-03/02AFP	Permit Type: Navigation Equipment (C-14) NRC Inspector: J. Dykert
Robins AFB, Georgia Permit No. GA-00462-03/03AFP	Permit Type: Decommissioning (Bldg. 181) NRC Inspector: O. Masnyk-Bailey
Wright Patterson, Ohio Permit No. OH-00563-01/03AFP Permit No. OH-30154-04/01AFP Permit No. OH-30158-04/02AFP	Permit Type: Research and Calibration Services NRC Inspector: G. Warren
Elmendorf AFB, Alaska Permit No. AK-01810-04/09AFP	Permit Type: Nuclear Medicine NRC Inspector: J. vonEhr

Accompaniments:

Kirtland AFB, New Mexico Permit No. NM-00602-01/03AFP	Permit Type: Irradiator NRC Inspector: J. Katanic

PERMITTING CASEWORK REVIEWS

File No.: 1
Permittee: Wright Patterson AFB, Ohio
Type of Action: New
Permit Type: MuseumPermit Reviewer: BM

Permit No.: OH-00798-00/00
Amendment No. 0

File No.: 2
Permittee: Wright Patterson AFB, Ohio
Type of Action: Termination
Permit Type: Waste Disposal Service

Permit No.: OH-00472-03/03
Amendment No. 3
Permit Reviewer: BM

File No.: 3
Permittee: Anderson AFB, Guam
Type of Action: Termination
Permit Type: Industrial

Permit No.: GU-00300-02/02
Amendment No. 2
Permit Reviewer: SN

File No.: 4
Permittee: Nellis AFB, Nevada
Type of Action: Renewal
Permit Type: Industrial

Permit No.: NV-23354-05/00
Amendment No. 0
Permit Reviewer: PL

File No.: 5
Permittee: Anderson AFB, Guam
Type of Action: Amendment
Permit Type: Industrial

Permit No.: GU-00300-02/00
Amendment No. 0
Permit Reviewer: BM

File No.: 6
Permittee: USAF Academy, Colorado
Type of Action: Amendment
Permit Type: Academic

Permit No.: CO-12629-04/00
Amendment No. 0
Permit Reviewer: BM

File No.: 7
Permittee: Elmendorf AFB, Alaska
Type of Action: Renewal
Permit Type: Medical

Permit No.: AK-01810-05/00
Amendment No. 0
Permit Reviewer: BM

File No.: 8
Permittee: Nellis AFB, Nevada
Type of Action: Amendment
Permit Type: Medical

Permit No.: NV-00333-03/11
Amendment No.11
Permit Reviewer: SN

File No.: 9
Permittee: Elgin AFB, Florida
Type of Action: Amendment
Permit Type: Medical

Permit No.: FL-17214-04/08
Amendment No. 8
Permit Reviewer: BM

File No.:10
Permittee: Wright Patterson AFB, Ohio
Type of Action: Amendment
Permit Type: Medical

Permit No.: OH-04682-05/03
Amendment No. 3
Permit Reviewer: BM

File No.: 11
Permittee: Malstrom AFB, Montana
Type of Action: Amendment
Permit Type: Industrial

Permit No.: MT-00616-03/02
Amendment No. 2
Permit Reviewer: BM

File No.: 12
Permittee: Tonopah Test Range, Nevada
Type of Action: Amendment
Permit Type: Industrial

Permit No.: NV-00516-03/02
Amendment No. 2
Permit Reviewer: SN

File No.: 13
Permittee: Hill AFB, Utah
Type of Action: Amendment
Permit Type: Self-Shielded Irradiator

Permit No.: UT-00696-02/03
Amendment No. 3
Permit Reviewer: BM

File No.: 14
Permittee: Kirtland AFB, New Mexico
Type of Action: Renewal
Permit Type: Medical

Permit No.: NM-30470-04/02
Amendment No. 2
Permit Reviewer: BM

File No.: 15
Permittee: Whiteman AFB, Missouri
Type of Action: Amendment
Permit Type: AINS

Permit No.: MO-30352-05/01
Amendment No. 1
Permit Reviewer: SN

File No.: 16
Permittee: Tyndall AFB, Florida
Type of Action: Amendment
Permit Type: Relocatable VACIS

Permit No.: FL-00709-02/03
Amendment No. 3
Permit Reviewer: TG

File No.: 17
Permittee: Nellis AFB, Nevada
Type of Action: Amendment
Permit Type: Industrial

Permit No.: NV-23354-05/01
Amendment No. 1
Permit Reviewer: SN

File No.: 18
Permittee: Wright Patterson AFB, Ohio
Type of Action: Amendment
Permit Type: Museum

Permit No.: OH-00798-00/01
Amendment No. 1
Permit Reviewer: BM

File No.: 19
Permittee: Travis AFB, California
Type of Action: Renewal
Permit Type: Portable Gauge

Permit No.: CA-07840-04/09
Amendment No. 9
Permit Reviewer: SN

File No.: 20
Permittee: Wright Patterson AFB, Ohio
Type of Action: Amendment
Permit Type: Museum

Permit No.: OH-00798-00/02
Amendment No. 2
Permit Reviewer: BM

File No.: 21
Permittee: Davis-Monthan, Arizona
Type of Action: Amendment
Permit Type: Luminous Products

Permit No.: AZ-03068-05/01
Amendment No. 1
Permit Reviewer: SN

File No.: 22
Permittee: Tyndall AFB, Florida
Type of Action: Amendment
Permit Type: Relocatable VACIS

Permit No.: FL-00709-02/04
Amendment No. 4
Permit Reviewer: BM

USAF BIENNIAL NRC INSPECTION REPORT 030-28641/2019-005 DATED – NOVEMBER 20, 2019

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ADAMS ACCESSION NUMBER: ML19305D415

X SUNSI Review By: MRP	ADAMS: X Yes ☐ No	☐ Sensitive X Non-Sensitive	☐ Non-Publicly Available X Publicly Available		Keyword NRC-002
OFFICE	RIV:DNMS/MLDB	RI:DNMS/MLAB	RI:DNMS/MLAB	RIV:DNMS/MLDB	C:MLDB
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