

INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM
QUESTIONNAIRE

Reporting Period: June 14, 2014 – June 25, 2018 [Kansas]

Note: If there has been no change in the response to a specific question since the last IMPEP questionnaire, the State or Region may copy the previous answer, if appropriate.

A. GENERAL

1. Please prepare a summary of the status of the State's or Region's actions taken in response to each of the open recommendations from previous IMPEP reviews.

RESPONSE

Problem #1

Review of authorized users was not being conducted in a through, complete, and consistent manner in adherence to existing guidance for medical licensing actions under 10CFR35.300 (KAR 28-35-264).

Root Causes

1. **After a review of all active licenses authorizing 10CFR35.300 uses, it was determined that issues identified were related to a significant paradigm shift in licensing when the new Part 35 was adopted in 2005. The prior paradigm for training and experience was focused on patient release criteria as opposed to a specific procedure-based paradigm. As a result, the Section did not correctly transition to this new paradigm.**
2. **Licensing by restriction has been the historical format, particularly for medical licenses. This has resulted in a confusing array of inconsistent wording and erroneous authorizations.**

Corrective Actions

1. **Each of the 10CFR35.300 medical licensees were contacted to determine if any users were performing procedures that they were not qualified for. No users performing unqualified procedures were identified.**

¹Estimated burden per response to comply with this voluntary collection request: 53 hours. Forward comments regarding burden estimate to the Records Management Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0183), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

2. An audit of all medical licenses authorizing 10CFR35.300 uses was completed. An additional two license actions were found to be in error similar to those found by the IMPEP review team.
3. An audit of all other active medical licenses was done.
4. Changes to the database were made which allow license reviewers to enter information about the training and experience. When an attempt is made to authorize a user for uses they are not qualified for, a message is given stating that the user is not qualified and gives the reviewer an opportunity to update that person's record. This applies to all users, not just medical. At this time, the qualification data is being populated. Licenses with improperly authorized users have been amended.
5. Section procedures were revised to adopt a new license format. Licensing by restriction will be the exception rather than the rule for medical licenses. Instead of authorizing a user for 35.300 except X, Y, and Z, they will be authorized for uses referenced in 35.392, 35.394, or 35.396 as appropriate. This change has already been incorporated into the database.

Problem #2

Response to an investigation with serious potential health and safety consequences was not responded to in a timely manner.

Root Causes

1. There was insufficient management oversight of this investigation.
2. The Section's procedure on incidents and allegations did not have guidance on when an onsite investigation should be conducted.

Corrective Action

1. There is now closer management oversight of incidents and investigations in the future.
2. The incident and investigation procedure was revised to include a preliminary priority evaluation, based on initial information, to determine when an onsite investigation is warranted. As part of this procedure revision an internal policy to investigate all medical events within five days was implemented.

B. COMMON PERFORMANCE INDICATORS

Technical Staffing and Training

1. Please provide the following organization charts, including names and positions:

- (a) A chart showing positions from the Governor down to the Radiation Control Program Director; **See attachment #1.**
- (b) A chart showing positions of the radiation control program, including management; and **See attachment #2.**
- (c) Equivalent charts for sealed source and device evaluation, low-level radioactive waste and uranium recovery programs, if applicable. **Not applicable for Kansas.**

2. Please provide a staffing plan, or complete a listing using the suggested format below, of the professional (technical) full-time equivalents (FTE) applied to the radioactive materials program by individual. Include the name, position, and, for Agreement States, the fraction of time spent in the following areas: administration, materials licensing & compliance, emergency response, ~~low-level radioactive waste, uranium recovery, other.~~ If these regulatory responsibilities are divided between offices, the table should be consolidated to include all personnel contributing to the radioactive materials program. ~~If consultants were used to carry out the program's radioactive materials responsibilities, include their efforts.~~ The table heading should be:

NAME	POSITION	AREA OF EFFORT	FTE% (%)
Kim Steves	Program Director	Director Radiation Control Program	25% RCP Administrative 20% RAM-specific Supervision 10% Budget/Fees 45% Other Duties
David Lawrenz	Environmental Program Admin Supervisor #K0227704	Unit Supervisor for RAM Licensing/Inspections	70% administrative 10% Inspection Lead/Accompaniments 15% Other program duties. 5% Emergency Response
James (Jimmy) Uhlemeyer	Environmental Compliance/Regulatory Specialist (Team Leader) #K0227862	Team Leader for RAM Licensing/Inspections	70% Lead Worker duties for RAM staff. 25% Other program duties. 5% Emergency Response
James (Jim) Harris	Environmental Compliance/Regulatory Specialist #K0077758	RAM Licensing/Inspections	50% License actions. 35% Inspections 10% Other program duties. 5% Emergency Response
Aaron Short	Environmental Compliance/Regulatory Specialist II #K0077759	RAM Licensing/Inspections	50% License actions. 35% Inspections 10% Other program duties. 5% Emergency Response
Vacant	Environmental Specialist #K0216185	RAM Licensing/Inspections	50% License actions. 35% Inspections 10% Other program duties. 5% Emergency Response

Jeffrey (Jeff) Herschell	Environmental Compliance/Regulatory Specialist	RAM Licensing/Inspections	40% inspections 40% license actions 15% Other program duties. 5% Emergency Response
Jason Meinholdt (Cross Training Inspector)	Environmental Specialist	Environmental Radiation; Emergency Preparedness; RAM Licensing/Inspections Support	85% Lead Worker for Environmental Radiation & Emergency Preparedness 15% Other Duties
Donna Reno	Administrative Specialist	Administrative Support	25% Administrative Support to RAM Program 75% Other program admin duties
Jessica Wood	Public Service Administrator	Administrative Support; Fees	50% RAM and X-ray Fees and Support 10% REP 40% Other Duties
Pam Watson	Public Service Administrator	Administrative Support; Fees	5% RAM Processing License amendments/fees 95% Other duties
Judee Walden	Environmental Program Admin	Regulations & Training	25%-Regulations 15%-Training Leader 5 % Emergency Response 55%-Other duties

3. Please provide a listing of all new professional personnel hired into your radioactive materials program since the last review, indicate the date of hire; the degree(s) they received, if applicable; additional training; and years of experience in health physics or other disciplines, as appropriate.

NAME	POSITION	DATE OF HIRE	DEGREE(S)	EXPERIENCE/TRAINING
James (Jimmy) Uhlemeyer	Environmental Compliance/Regulatory Specialist (Team Leader)	September 7, 2015	Master's in Health Physics Bachelor's in Nuclear/Mechanical	3 years research asst.at accelerator building
Cindy Anderson	Environmental Compliance/Regulatory Specialist	June 19, 2017 Resigned-August 23, 2017	ARRT BS-Nuclear Medicine	Nuclear Medicine Technologist
Jeffrey (Jeff) Herschell	Environmental Compliance/Regulatory Specialist	November 6, 2017	ARRT ASRT	5 years in diagnostic radiology

4. Please list all professional staff who have not yet met the qualification requirements for a radioactive materials license reviewer or inspector. For each, list the courses or equivalent training/experience they need and a tentative schedule for completion of these requirements.

NAME	NRC COURSES TAKEN	NRC COURSES NEEDED	SCHEDULED Estimated
Jeffrey (Jeff) Herschell	Inspection Procedures-G-108 Licensing Procedures-G-109 Nuclear Gauge Safety Well-Logging- H-314 Transportation of Radioactive Materials -H308	H-304 G-205 H-313 S-201 H-305	Have all required NRC courses by the end of 2019.
Jason Meinholdt (Cross Training Inspector)	Licensing Procedures G-109 Introductory Health Physics-H-177 Basic Health Physics-H-122 Environmental Monitoring-H-111	H-201 G-108 H-304 G-205 H-313 S-201 H-305	Have all required NRC courses by the end of 2021.
Kim Steves	Inspection Procedures G-108 Licensing Procedures G-109 Industrial Radiography H-305 Brachytherapy/Gamma Knife H-313 Applied Health Physics H-109	G-205 H-304 H-308 H-314 S-201	Have all required NRC courses by the end of 2021.

- Identify any changes to your qualification and training procedure that occurred during the review period. **No changes in qualification procedure, only updates made in training procedure. Procedures will be available for review.**
- Please identify the technical staff that left your radioactive materials program during the review period and indicate the date they left.

Name	Last Day:
David Whitfill-Supervisor of RAM Unit	February 1, 2015
Tom Conley-Radiation Control Program Director	July 25, 2015
Jason Barney-Supervisor of RAM Unit	March 10, 2017
Cindy Anderson-Inspector	August 23, 2017
Judee Walden-Supervisor of RAM Unit	February 12, 2018-Moved to Regulations/Training

- List any vacant positions in your radioactive materials program, the length of time each position has been vacant, and a brief summary of efforts to fill the vacancy.

Vacant Position # K0216185	From February 12, 2018-	This position has been approved to fill and is currently advertised with the posting scheduled to close on May 14, 2018.
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- For Agreement States, does your program have an oversight board or committee which provides direction to the program and is composed of licensees and/or members of the public? If so, please describe the procedures used to avoid any potential conflict of interest. **Not applicable for Kansas.**

C. Status of Materials Inspection Program

1. Please identify individual licensees or categories of licensees the State is inspecting less frequently than called for in NRC’s Inspection Manual Chapter (IMC) 2800 and explain the reason for the difference. The list only needs to include the following information: license category or licensee name and license number, your inspection interval, and rationale for the difference.

One licensee is inspected less frequently than called for in IMC 2800, based on reasoning provided below.

Licenses Name	Licensee number	KDHE Inspection Interval	Days overdue by NRC
ONEOK HYDROCARBON	27-B778	4 Per procedure (2) See below.	139

Rationale:

A 3 curie Am-241:Be well logging source became lodged in the well bore of the licensee’s well, as described in the radioactive material license in 1999. The licensee was required to monitor the well each year for a period of five years for indication of dislocation of the source or loss of integrity of the entombment or the cavern. After five years of monitoring data, there was an option to extend the monitoring period to five years pending approval from the department. The licensee’s request to extend the monitoring period to five years was granted and in September of 2005 the Kansas inspection frequency was changed to priority 5 to coincide with the monitoring requirement. In November of 2013, the radioactive material unit supervisor changed the inspection frequency to priority 4 and this status is currently still in effect. It is the opinion of KDHE at this time that, providing the logs do not indicate a change in the source stability or integrity of the cavern, there is no justification for a higher frequency of inspections as required by a priority 3 or 4. Therefore, it is the intention of the Kansas program to modify the priority back to inspect at a Priority 5, instead of the current Priority 4. Priority 5 will allow Kansas inspections to match the well logging monitoring frequency which is required of the licensee.

2. Please provide the number of routine inspections of Priority 1, 2, and 3 licensees, as defined in IMC 2800 and the number of initial inspections that were completed during each year of the review period.

Year	Priority	Routine Inspection	Initial Inspection
2014	1	2	0
	2	5	0
	3	15	0
2015	1	6	0
	2	15	1
	3	30	4

2016	1	7	1
	2	15	0
	3	21	1
2017	1	8	1
	2	17	0
	3	31	1
2018	1	0	0
	2	2	0
	3	3	1

3. Please submit a table, or a computer printout, that identifies inspections of Priority 1, 2, and 3 licensees and initial inspections that were conducted overdue.

At a minimum, the list should include the following information for each inspection that was conducted overdue during the review period:

- (1) Licensee Name
- (2) License Number
- (3) Priority (IMC 2800)
- (4) Last inspection date or license issuance date, if initial inspection
- (5) Date Due
- (6) Date Performed
- (7) Amount of Time Overdue
- (8) Date inspection findings issued

Licensee Name	License Number	Priority (IMC 2800)	Last inspection date (Routine)	Date Due	Date Performed	NRC Amount of Time Overdue (Days)	Date inspection findings issued
XCEL NDT LLC	21-B980	1	2/3/2015	May 3, 2016	May 4, 2016	1	5/16/2016
ONEOK HYDROCARBON LP (as described in #1 above)	27-B778	3	8/26/2011	May 22, 2015	October 8, 2015	139	10/13/2015

4. Please submit a table or computer printout that identifies any Priority 1, 2, and 3 licensees-and initial inspections that are currently overdue, per IMC 2800. At a minimum, the list should include the same information for each overdue inspection provided for Question 12 plus your action plan for completing the inspection. Also include your plan for completing the overdue inspections.
No Inspections are currently overdue.
5. Please provide the number of reciprocity licensees that were candidates for inspection per year as described in IMC 1220 and indicate the number of reciprocity inspections of candidate licensees that were completed each year during the review period.

Number of Candidates	Year	Qualifying Inspections	Percentage
19	2014	4	21%
29	2015	4	14%
19	2016	5	26%
15	2017	4	27%
9	2018	3	33%

D. Technical Quality of Inspections

1. What, if any, changes were made to your written inspection procedures during the reporting period? **All Procedures were updated in 2017 and 2018.**
2. Prepare a table showing the number and types of supervisory accompaniments made during the review period. Include:

<u>Inspector</u>	<u>Supervisor</u>	<u>License Category</u>	<u>Date</u>
Inspector	Supervisor	License Category	Date
			2018
Jeff Herschell	David Lawrenz	Portable Gauge	03/27/2018
Aaron Short	David Lawrenz	Medical -Diagnostic	04/04/2018
Jim Harris	David Lawrenz	Radon Chamber	04/04/2018
			2017
Aaron Short	Judee Walden	Academia-Broad Scope Type A	09/14/2017
David Lawrenz	Judee Walden	Irradiator self- shielded and Medical Broad Scope Type A	09/27/-28/2017
James Harris	Judee Walden	Medical Private Clinic Diagnostic	11/29/2017
Jimmy Uhlemeyer	Judee Walden	Medical Mobile Service Diagnostic	07/24/2017
			2016
Judee Walden	Jason Barney	Academia-Broad Scope Type A	09/26/2016
Aaron Short	Jason Barney	Academia-Broad Scope Type A	09/26/2016
David Lawrenz	Jason Barney	Academia-Broad Scope Type A	09/26/2016
James Harris	Judee Walden Team Leader	Radiopharmacy – Commercial Service Provider - Calibrate & Leak Test only	10/25/2016
Jimmy Uhlemeyer	Judee Walden Team Leader	Well-Logging	05/11/2016
			2015
Judee Walden	Conley/Barney	-----	-----
Aaron Short	Judee Walden Team Leader	Research & Development - Non-Human	07/24/2015
David Lawrenz	Jason Barney	Medical Broad Scope-Type A	03/25/2015
James Harris	Judee Walden Team Leader	Irradiator self- shielded and Medical Broad Scope	09/08/2015

		Type A	
Jason Barney	Tom Conley	Research & Development - Non-Human	03/09/2015
Jimmy Uhlemeyer	Judee Walden Team Leader	Medical Private Clinic - Diagnostic	10/01/2015
			2014
Judee Walden	David Whitfill	Civil Defense	12/17/2014
Aaron Short	David Whitfill	Academia-Broad Scope Type A	04/24/2015
David Lawrenz	David Whitfill	Academia-Broad Scope Type A	04/24/2014
James Harris	David Whitfill	Civil Defense	12/17/2014
Jason Barney	David Whitfill	Academia-Broad Scope Type A	04/24/2014

- Describe or provide an update on your instrumentation, methods of calibration, and laboratory capabilities. Are all instruments properly calibrated at the present time? Were there sufficient calibrated instruments available throughout the review period?
See attachment #3

E. Technical Quality of Licensing Actions

- How many specific radioactive material licenses does your program regulate currently? **270 specific licenses.**
- Please identify any major, unusual, or complex licenses which were issued, received a major amendment, were terminated, decommissioned, submitted a bankruptcy notification or renewed in this period.
Kanza Construction 22-B816: Filed for bankruptcy
Beta Chem Laboratory 25-C686-01: No actions, but in court
St Francis changing ownership: 19-B272-04 will be terminated after 19-B1027 (Hospital) and 20-B1026 (Radiopharmacy) are in process of being issued.
- Discuss any variances in licensing policies and procedures or exemptions from the regulations granted during the review period.
No variances or exemptions were granted during the review period.
- What, if any, changes were made in your written licensing procedures (new procedures, updates, policy memoranda, etc.) during the reporting period?
Existing procedures are reviewed annually and revised as needed. Procedures 31-41 are new to this review period. The Radiation Control Procedures (RCPs) Notebook will be made available during the IMPEP.
- Identify by licensee name and license number any renewal applications that have been pending for one year or more. Please indicate why these reviews have been delayed and describe your action plan to reduce the backlog.
There are currently no license renewals pending for one year or more.

F. Technical Quality of Incident and Allegation Activities

1. For Agreement States, please provide a list of any reportable incidents not previously submitted to NRC (See Procedure SA-300, *Reporting Material Events*, for additional guidance, OMB clearance number 3150-0178). The list should be in the following format: **All reportable incidents were submitted to the NRC.**

<u>Licensee Name</u>	<u>License #</u>	<u>Date of Incident/Report</u>	<u>Type of Incident</u>
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2. Identify any changes to your procedures for responding to incidents and allegations that occurred during the period of this review.
The Radiation Control Procedures (RCPs) Notebook will be made available during the IMPEP. The RCP-11, Investigation of Accidents, Incidents or Overexposures, was revised 7/2014, 8/2017; 1/2018.

G. NON-COMMON PERFORMANCE INDICATORS

Compatibility Requirements

1. Please list all currently effective legislation that affects the radiation control program. Denote any legislation that was enacted or amended during the review period.
Legislation currently in effect is under Kansas Annotated Regulations (K.A.R.) 28-35-xxx. New and amended regulations will be available during IMPEP.
2. Are your regulations subject to a "Sunset" or equivalent law? If so, explain and include the next expiration date for your regulations. **Kansas is not subject to "Sunset" or equivalent laws.**
3. Please review and verify that the information in the enclosed State Regulation Status (SRS) sheet is correct. For those regulations that have not been adopted by the State, explain why they were not adopted, and discuss actions being taken to adopt them. If legally binding requirements were used in lieu of regulations and they have not been reviewed by NRC for compatibility, please describe their use.
The SRS currently active at https://scp.nrc.gov/special/regs/ks_srschart.pdf is correct. These regulations cover RATS ID 2011-1 through 2012-4.
RATS ID 2015-1 and 2015-2 are currently being addressed but have not passed legal review.
4. If you have not adopted all amendments within three years from the date of NRC rule promulgation, briefly describe your State's procedures for amending regulations to maintain compatibility with the NRC, showing the normal length of time anticipated to complete each step.
If not adopted by the required time limit, over three (3) years, the program will introduce license condition(s) that are legally binding.

Amendments are first written by program staff, then passed to the agency legal department for review. This process may take months or longer. Following review and approval by agency legal, the regulations are sent to the Kansas Department of Administration for review and approval of regulatory style and form. This process may take months or longer. Following approval by the Kansas Department of Administration, the regulations are sent to the Kansas Attorney General for legal review and approval. This process may take months or longer. The timeframe for each review varies depending upon the workload of the reviewing agencies, the size of the regulation set, and the technical content of the regulations, particularly adoptions by reference. If any changes are required by the Attorney General, the regulations are returned to the agency for revision and must again first obtain the approval stamp of the Department of Administration before going back to the Attorney General. After obtaining the required approval, a notice of hearing and public comment period of at least 60 days is filed with the Secretary of State and published in the state register. During the comment period, the agency must appear before the Joint Committee on administrative Rules and Regulations (made up of state legislators) to present the regulations and answer questions during a hearing. A public review hearing is also held. If comments from any of these places instigate “significant changes,” the review process described above is begun again. Once this process is done, the regulations are sent to the NRC for approval. Again, if there are significant changes, the process is begun again complete with new hearings.

H. **Sealed Source and Device (SS&D) Evaluation Program-Kansas has not evaluated any Sealed Source and Device Evaluations.**

1. Prepare a table listing new and amended (including transfers to inactive status) SS&D registrations of sources and devices issued during the review period. The table heading should be:

SS&D Registry of Number	Manufacturer, Distributor or Custom User	Product Type or Use	Date Issued	Type Action
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2. Please include information on the following questions in Section A, as they apply to the SS&D Program: **Kansas has not evaluated any Sealed Source and Device Evaluations.**

Technical Staffing and Training - Questions 2-9
 Technical Quality of Licensing Action Questions 18-22

I. **Low-level Radioactive Waste Disposal Program- Not applicable for Kansas.**

1. Please include information on the following questions in Section A, as they apply to the Low-Level Radioactive Waste Disposal Program:

Technical Staffing and Training - Questions 2-9
 Status of Materials Inspection Program - Questions 10-14

Technical Quality of Inspections - Questions 15-17
Technical Quality of Licensing Actions - Questions 18-22
Technical Quality of Incident and Allegation Activities - Questions 23-24

J. Uranium Recovery Program-[Not applicable for Kansas.](#)

1. Please include information on the following questions in Section A, as they apply to the Uranium Recovery Program:

Technical Staffing and Training - Questions 2-9
Status of Materials Inspection Program - Questions 10-14
Technical Quality of Inspections - Questions 15-17
Technical Quality of Licensing Actions - Questions 18-22
Technical Quality of Incident and Allegation Activities - Questions 23-24

Manufacturer	Model	Instrument Type	Serial Number/ID	Cal Date	Due Date	Location	Comments	Correction Factors
Canberra	Prospector	MCA	2063	prior to use	N/A	in shop		
	SP30X30TB	3x3 NaI probe	2198	N/A	N/A	in shop		
	MCB2	Pancake GM	446	09/08/17	09/08/18	in shop		
Berkeley Nucleonics	SAM 935-2B	Portable MCA	29857	prior to use	N/A	in shop		
	6894-2x2	2x2 NaI probe	29859	N/A	N/A	in shop		
F&J	D-812	Flow Calibrator	3202	01/16/18	01/16/19	in shop		
Bicron	Analyst	Multi-purpose	B072X	06/15/17	06/15/18	Air Run Kit		
	Analyst	Multi-purpose	B376R	08/11/17	08/11/18	in shop		
	Analyst	Multi-purpose	B377R	10/13/16	10/13/17	in shop	temp out of service	
	Analyst	Multi-purpose	B378R	09/08/17	09/08/18	in shop		
	Analyst	Multi-purpose	B430S	10/13/17	10/13/18	in shop		
S.E.International	Inspector	Digital Pocket GM	13417	06/26/17	06/26/18	in shop		
Ludlum Measurements	Model 12-4	Rem Ball	26220		#VALUE!	source room	out of service	
	Model 177	Area Monitor	38865	08/09/17	08/09/18	in shop		
	Model 19	Micro R	120905	03/15/17	03/15/18	in shop		35.3K cpm = 0.2mR/hr
	Model 19	Micro R	254444	06/08/17	06/08/18	in shop		
	Model 19	Micro R	115914	08/09/17	08/09/18	in shop		
	Model 19	Micro R	37446	05/16/17	05/16/18	in shop		180 cpm = 1uR/hr
	Model 19	Micro R	115877	08/09/17	08/09/18	in shop		38K cpm = 0.2mR/hr
	Model 26	Digital Pancake	PF001580	07/06/17	07/06/18	in shop		
	Model 2	Multi-purpose	39002	07/06/17	07/06/18	in shop		
	Model 3	Multi-purpose	137020	02/13/18	02/13/19	in shop		4.9K cpm = 1.5mR/hr
	Model 3	Multi-purpose	259870	08/09/17	08/09/18	in shop		
	Model 3	Multi-purpose	3277	02/10/17	02/10/18	in shop		4.8K cpm = 1.5mR/hr
	Model 3	Multi-purpose	109362	06/08/17	06/08/18	in shop		
	Model 5	Geiger Counter	90415	07/06/17	07/06/18	in shop		
	Model 5	Geiger Counter	90422	09/08/17	09/08/18	in shop		1430 cpm = 1.5mR/hr
	Model 2363	Neutron/Gamma	309341	09/08/17	09/08/18	in shop		
	Model 2363	Neutron/Gamma	265520	07/12/17	07/12/18	in shop		
	Model 2200	Scaler/Ratemeter	167417	10/16/17	10/16/18	in shop		
	Model 2221	Portable S/R	216518	09/08/17	09/08/18	in shop		
	Model 9	Ion Chamber	117124	02/13/18	02/13/19	in shop		BCF = 5.3
Model 9	Ion Chamber	259262	06/08/17	06/08/18	in shop			
Model 9	Ion Chamber	27334	03/14/17	03/14/18	in shop		BCF = 5	
Model 9	Ion Chamber	27293	09/08/17	09/08/18	in shop		BCF = 6.88	
Model 9	Ion Chamber	127149	07/10/17	07/10/18	in shop		BCF = 5	

	Model 9-4	Ion Chamber	327323	10/18/17	10/18/18	in shop		
	Model 9-4	Ion Chamber	327338	10/18/2017	10/18/18	in shop		
	Model 9DP	Pressurized IC	25003335	02/19/18	02/19/19	in shop		
	Model 2401-EC	Pocket GM	157973	10/16/17	10/16/18	in shop		
	Model 2401-EC	Pocket GM	303059	06/08/17	06/08/18	in shop		
	Model 2401-EC	Pocket GM	157979	03/15/17	03/15/18	Inspector	Jim Harris	
	Model 2401-EC	Pocket GM	161630	05/16/17	05/16/18	Inspector	Jimmy	
	Model 2401-EC	Pocket GM	161617	09/13/17	09/13/18	Inspector	David Lawrenz	
	Model 2401-EC	Pocket GM	219713	01/15/18	01/15/19	Inspector	Jeff Herschell	
	Model 2401-EC	Pocket GM	219722	06/12/17	06/12/18	Inspector	Aaron Short	
	Model 2401-P	Pocket Frisker	238620	03/15/17	03/15/18	in shop		
	Model 2401-P	Pocket Frisker	234746	05/16/17	05/16/18	in shop		
	Model 2401-P	Pocket Frisker	238579	08/09/17	08/09/18	in shop		
	Model 2401-P	Pocket Frisker	155317	02/13/18	02/13/19	Inspector	Aaron Short	
	Model 2401-P	Pocket Frisker	151248	10/16/17	10/16/18	in shop		
	Model 2401-P	Pocket Frisker	137895	09/08/17	09/08/18	Inspector	Jim Harris	
	Model 2401-P	Pocket Frisker	162960	05/16/17	05/16/18	Inspector	Jeff Herschell	
	Model 2401-P	Pocket Frisker	162917	07/06/17	07/06/18	Inspector	David Lawrenz	
	Model 2401-P	Pocket Frisker	218716	08/09/17	08/09/18	Inspector	Diane Greep	
	Model 2401-P	Pocket Frisker	219745	02/13/18	02/13/19	Inspector	Jimmy	
W. B. Johnson	GSM 115	Multi-purpose	5262	02/08/18	02/08/19	in shop		
	451P	Pressurized IC	4935	08/17/17	08/17/18	in shop		
	451P	Pressurized IC	6293	04/14/17	04/14/18	in shop		
Victoreen	450E	Ion Chamber	101	N/A	N/A	source room	out of service	BCF = 5.85
	740-F	CP Ion Chamber	1701	N/A	N/A	source room	out of service	
	740-F	CP Ion Chamber	467	N/A	N/A	source room	out of service	
	CDV-718A	Dose/Ratemeter	2		12/30/00	in shop	not calibrated	
Sun Nuclear	1027	Radon Monitor	47810011	03/01/17	03/01/18	in shop		1.02
	1028	Radon Monitor	96279015	11/29/17	11/29/18	in shop		
	E-130A	Geiger Counter	8091	N/A	N/A	in shop	out of service	
	E-130A	Geiger Counter	813	N/A	N/A	in shop	out of service	
	E-130A	Geiger Counter	835	N/A	N/A	in shop	out of service	
	TPM 903A	Portal Monitor	903283	12/08/17	12/08/18	in shop		
	TPM 903A	Portal Monitor	903295	12/08/17	12/08/18	in shop		
Thermo Scientific (Eberline)	PRM-7	Micro R	641	N/A	N/A	source room	out of service	
	Identifinder	Portable MCA	3558-276	prior to use	N/A	in shop		
	RO-20	Ion Chamber	3287	01/09/18	01/09/19	in shop		BCF = 4
	RO-20	Ion Chamber	3290	06/28/17	06/28/18	in shop		BCF = 4
	RO-20	Ion Chamber	3295	07/31/17	07/31/18	in shop	upgraded to AA	BCF = 4
	RO-20	Ion Chamber	4621	02/08/18	02/08/19	in shop		

	ASP-2e	"Smart Meter"	901	N/A	N/A	in shop	out of service	
RadonAway	RadStar RS800	Radon Monitor	1727	08/16/17	08/16/18	in shop		
	RadStar GM 1-2	Radon Monitor	12033	05/25/17	05/25/18	in shop	grab sampler	
Eberline / F&J Air Pumps	RAS-1	Low Vol Air	9		12/30/00	in shop	awaiting calibration	
	RAS-1	Low Vol Air	31	10/13/17	10/13/18	field	Sunrise Dairy (D-2)	0.99
	RAS-1	Low Vol Air	35		12/30/00	in shop	awaiting calibration	
	RAS-1	Low Vol Air	33		12/30/00	in shop	awaiting calibration	
	RAS-1	Low Vol Air	37		12/30/00	in shop	awaiting calibration	
	RAS-1	Low Vol Air	40		12/30/00	in shop	awaiting calibration	
	RAS-1	Low Vol Air	41	09/06/17	09/06/18	field	Burlington (L-1)	1.02
	RAS-1	Low Vol Air	42		12/30/00	in shop	awaiting calibration	
	RAS-1	Low Vol Air	43		12/30/00	in shop	awaiting calibration	
	RAS-1	Low Vol Air	44	05/17/17	05/17/18	field	EOD (H-1)	1.02
	RAS-1	Low Vol Air	54	06/26/17	06/26/18	field	Sharpe (A-1)	1.00
	LV-1D/RAS-1	Low Vol Air	55		12/30/00	in shop	awaiting calibration	
	LV-1D/RAS-1	Low Vol Air	56	03/07/18	03/07/19	in shop	New Strawn (P-1)	0.99
	LV-1D	Low Vol Air	57		12/30/00	scraped	electrical short OOS	
LV-1D	Low Vol Air	58	08/24/17	08/24/18	Expedition	spare	1.05	
Durridge	RAD 7	Alpha Spec	433	03/24/17	03/24/18	in shop		
	RAD 7	Alpha Spec	305	09/11/17	09/11/18	in shop		
RADeCO	H809V-1	Low Vol Air	5394	08/11/17	08/11/18	in shop		
	H809V-1	Low Vol Air	5395	03/24/17	03/24/18	in shop		
	H809V-1	Low Vol Air	5256	05/05/17	05/05/18	in shop		
	H809V-1	Low Vol Air	5257	12/29/17	12/29/18	in shop		
femto-TECH	CRM-510	Radon Monitor	6149	10/23/17	10/23/18	in shop		
Airthings	Corentium Pro	Radon Monitor	2700005209	03/12/17	03/12/18	in shop		
Dosimeter Corporation	3100	Multi-purpose	36-2984	N/A	N/A	in shop	out of service	
	3100	Multi-purpose	9443-011	N/A	N/A	in shop	out of service	
	3100	Multi-purpose	9548-035	N/A	N/A	in shop	out of service	
	3100	Multi-purpose	9548-031	N/A	N/A	in shop	out of service	
	FH-40F6	Pocket GM	39-189	02/07/18	02/07/19	in shop		
Self-reading Dosimeters	0-200mR	SRD	18	N/A	N/A	in shop	out of service	
	0-1000mR	SRD	22	10/20/17	10/20/18	in shop		
	0-1200mR	SRD	2	N/A	N/A	in shop	out of service	
	0-1.5R	SRD	16	10/20/17	10/20/18	in shop		
	0-5R	SRD	9	N/A	N/A	in shop	out of service	
	0-20R	SRD	28	10/20/17	10/20/18	in shop		
	PD-10i	Electronic Dosimeter	DI03410	07/20/17	07/20/18	in shop		
	PD-10i	Electronic Dosimeter	DI03412	07/20/17	07/20/18	in shop		
	PD-10i	Electronic Dosimeter	DI03419	07/20/17	07/20/18	in shop		

SAIC	PD-10i	Electronic Dosimeter	DI03418	06/23/17	06/23/18	in shop	
	PD-10i	Electronic Dosimeter	DI03411	06/23/17	06/23/18	in shop	
	PD-10i	Electronic Dosimeter	DI03408	01/02/18	01/02/19	in shop	
	PD-10i	Electronic Dosimeter	DI03407	06/23/17	06/23/18	in shop	
	PD-10i	Electronic Dosimeter	DI03405	06/23/17	06/23/18	in shop	
	PD-10i	Electronic Dosimeter	DI03413	01/02/18	01/02/19	in shop	
	PD-10i	Electronic Dosimeter	DI03417	08/17/17	08/17/18	in shop	
	PD-10i	Electronic Dosimeter	DI03415	08/17/17	08/17/18	in shop	
	PD-10i	Electronic Dosimeter	DI02571	08/17/17	08/17/18	in shop	
	PD-10i	Electronic Dosimeter	DI02541	08/17/17	08/17/18	in shop	
	PD-10i	Electronic Dosimeter	DI02558	10/18/17	10/18/18	in shop	
	PD-10i	Electronic Dosimeter	DI02577	10/18/17	10/18/18	in shop	
	PD-10i	Electronic Dosimeter	DI02556	10/24/16	10/24/17	in shop	failed calibration
	PD-10i	Electronic Dosimeter	DI02573	10/18/17	10/18/18	in shop	
	PD-10i	Electronic Dosimeter	DI02545	11/29/17	11/29/18	in shop	
	PD-10i	Electronic Dosimeter	DI02546	11/29/17	11/29/18	in shop	
	PD-10i	Electronic Dosimeter	DI02539	03/30/16	03/30/17	S. Hannah	failed calibration
	PD-10i	Electronic Dosimeter	DI02540	11/29/17	11/29/18	in shop	
PD-10i	Electronic Dosimeter	DI02548	06/23/17	06/23/18	in shop		
Garmin	GPS III Plus	GPS	96496031	N/A	N/A	in Expedition	Shay Hannah
	GPS III Plus	GPS	96495923	N/A	N/A	Env Spec	Jimmy
	GPS III Plus	GPS	96495931	N/A	N/A	stolen	
	GPS III Plus	GPS	96495930	N/A	N/A	in shop	
	GPS III Plus	GPS	96495934	N/A	N/A	Inspector	Jim Harris
	GPS III Plus	GPS	96495924	N/A	N/A	unknown	
	GPS III Plus	GPS	92114880	N/A	N/A	in shop	