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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

January 12, 2018

Monica Lynn Ford
Regional State Agreements Officer
Division of Nuclear Materials Safety
US NRC Region I

Re: 2018 Integrated Materials Performance Evaluation Program (IMPEP) Questionnaire

Dear Ms. Ford:

The Texas Commission on Environmental Quality (TCEQ) looks forward to meeting with the US Nuclear Regulatory Commission's (NRC) IMPEP review team scheduled for January 29th through February 2nd, 2018 for its quadrennial review of the TCEQ's Radioactive Materials Program.

Please find enclosed the TCEQ's responses to the IMPEP Questionnaire provided in your correspondence dated October 10, 2017. The questionnaire contains responses from both the Radioactive Materials and the Critical Infrastructure Divisions of the TCEQ.

Additionally, the "Materials Requested to Be Available for the On-site Portion of an IMPEP Review" have been prepared and will be available for the review team during their visit.

Please feel free to contact me directly at Charles.Maguire@tceq.texas.gov, (512) 239-5308 or Ms. Alisha Stallard at Alisha.Stallard@tceq.texas.gov, (512) 239-6453 if you have any questions or need additional information prior to your visit.

Sincerely,

A handwritten signature in blue ink, appearing to read "Charles Maguire", written over a horizontal line.

Charles Maguire, Division Director
Radioactive Materials Division

cc w/enclosures

Kelly Cook, Division Director
Critical Infrastructure Division MC-177

INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM
QUESTIONNAIRE

Reporting Period: February 15, 2014 – February 9, 2018 [Texas]

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.

Open Recommendations

2014 IMPEP Final Report

1. The review team recommends that the Commission develop and implement a strategy to address staffing in the LLRW and uranium recovery inspection programs in order to enhance the effectiveness and efficiency of the Program.

Since the previous IMPEP review, the Critical Infrastructure Division (CID), has added a staff member to the Radioactive Materials Compliance Team (RMCT) to assist with the inspection program. Another staff member has been designated to assist with the inspection program and act as a liaison between the CID and the Radioactive Materials Division (RMD) to enhance communication between the two divisions.

2. The review team recommends that the Compliance Team, in coordination with the Radioactive Materials Section, develop detailed inspection procedures for LLRW inspections to provide feedback to the LLRW program and enhance the inspection program.

In coordination with the Radioactive Materials (RM) Section, the RMCT has enhanced the Low-Level Radioactive Waste Disposal (LLRW) inspection procedures. The LLRW procedures were separated from the Uranium Recovery (UR) procedures. The procedures now include details on the overall aspects of the LLRW program reviewed during a routine inspection and specific details related to the receipt, transfer, and disposal of the on-demand waste shipments inspection. The procedures may be revised based on changes in the licensee's operations, to enhance the inspection program, or other factors that may prompt changes to the procedures.

The RMCT reaches out to the RM Section prior to site inspections requesting information on any comments, questions, or concerns that the RM Section has

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.

regarding the site. The RM Section is given an opportunity to attend site inspections with the RMCT.

Additionally, the RMCT reviews all new, amended and renewed licenses prior to issuance.

Finally, the two teams have periodic meetings to discuss any outstanding issues at the sites.

3. The review team recommends that the Compliance Team, in coordination with the UIC Permits Section and the Uranium Section, develop detailed inspection procedures for uranium recovery inspections to provide feedback to the uranium recovery program and enhance the inspection program.

In coordination with the RM Section, the RMCT has enhanced the UR inspection procedures. The UR procedures were separated from the LLRW procedures. The procedures now include details on the overall aspects of the UR program reviewed during a routine inspection, including procedures related to the Underground Injection Control (UIC) permit inspections. The procedures may be revised based on changes in licensee's operations, to enhance the inspection program, or other factors that may prompt changes to the procedures (Note that the UIC Permits Section and the Uranium Section which issues both licenses and permits for uranium recovery are under the RM Section).

The RMCT reaches out to the RM Section prior to site inspections requesting information on any comments, questions, or concerns that the RM Section has regarding the site. The RM Section is given an opportunity to attend site inspections with the RMCT.

Additionally, the RMCT reviews all new, amended and renewed licenses and permits prior to issuance.

Finally, the two teams have periodic meetings to discuss any outstanding issues at the sites.

2016 Periodic Meeting

No new recommendations.

2016 Special Review

1. TCEQ should improve the documentation of its communications with the licensee. Specifically,
 - a. Questions about a licensee's submittal should be developed and provided to the licensee in a formal Request for Additional Information format. Upon resolution of the questions, the outcomes can be documented. Issues raised by TCEQ, issues self-identified by WCS, and how the issues are resolved can be documented effectively.

The RM Section has a process of delegating review of submittals to the appropriate reviewers (geoscientist, engineer, health physicist) who then documents their reviews in an Interoffice Memo (IOM) which incorporates

staff recommendations. The recommendations, if significant, are relayed to the licensee through a formal letter (Technical Notice of Deficiency). The licensee responds with additional information until the issue is resolved. If not significant, such as the omission of a figure or typos, an email is sent to the licensee requesting that the corrections are made.

- b. TCEQ should improve the documentation of the assessment process when reviewing new versions of the performance assessment models that are provided annually by the licensee.

A standard operating procedure (SOP) was written for reviewing Performance Assessment (PA) updates which is being used for the 2017 PA update review. Staff reviews are now required to be documented in an IOM. All documentation will be filed alongside the reports received from WCS.

- c. TCEQ should improve the documentation of the safety technical bases for the disposition of a licensing action. This can be completed in a Safety Evaluation Report (SER) or similar document. The SER would allow TCEQ to document how the licensee is addressing compliance with regulatory requirements and why TCEQ has determined that the information provided by the licensee is acceptable. If the licensing action is subject to a hearing or an allegation, the regulatory process could be followed and supported by the contents of the SER.

Procedures have been developed in which all review of reports received from licensees and all review of applications for renewals, initial issuance and amendments are described IOMs. The memos contain all the relevant technical and regulatory information that a SER would contain. These memos are filed alongside the report or application.

- 2. TCEQ should improve the documentation of its process related to the resolution of the placeholder inputs in the performance assessment models. TCEQ should document how placeholder inputs have been removed along with suitable justification.

Documentation related to the resolution of the placeholder inputs in the PA model is part of the PA review documentation process described above. The replacement of placeholder values with other values will be reviewed and documented in memos. After preliminary review of the 2017 update, the use of the term "placeholder" is no longer used to describe any parameter value. All parameters previously denoted with the term "placeholder" have been replaced. Justifications for these parameters were provided and are currently being reviewed.

- 3. TCEQ should have a documented process to track and identify both the technical analyses upon which a regulatory decision has been made and the significance of errors or changes that may be identified in the supporting performance assessment model. Resolution of significant errors or changes should be documented and in the case of errors, appropriate corrective actions taken.

The process of tracking and identifying the technical analysis upon which a regulatory decision has been made is described above in 1.a., both for the PA and for review of applications. Resolution of significant errors or changes are documented in IOMs.

B. COMMON PERFORMANCE INDICATORS

I. Technical Staffing and Training

2. 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 Appendix A-1

- (b) A chart showing positions of the radiation control program, including management; and

**See Appendix A-2 for the Office of Compliance and Enforcement
See Appendix A-3 for the Radioactive Materials Division
See Appendix A-4 for the Critical Infrastructure Division**

- (c) Equivalent charts for sealed source and device evaluation, low-level radioactive waste and uranium recovery programs, if applicable.

Sealed Source and device evaluation is not under TCEQ jurisdiction

**See Appendix A-5 for the Low-Level Radioactive Waste group
See Appendix A-6 for the Uranium group**

3. 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:

The current (as of January 1, 2018) staffing plan for the RM Section and for the RMCT is presented in Tables 1 and 2 below. The table gives a breakdown of the approximate time in percent spent by each staff member for various activities.

Table 1: Current RM Section Staffing Plan			
Name	Position	Area of Effort	FTE %
Charles Maguire	Division Director	Administration	50
		LLRW	20
		UR	20
		Other	10
Alisha Stallard	RMD Special Assistant & Health Physicist	Administration	50
		LLRW	20
		UR	20
		Other	10
Brad Broussard	Technical Specialist	Administration	15
		LLRW	45
		UR	25
		Other	15
Bobby Janecka	RM Section Manager	Administration	40
		LLRW	40
		UR	10
		Other	10
Lynda Clayton	Program Coordinator RM Section	Administration	30
		LLRW	30
		UR	30
		Other	10
Hans Weger	Work Leader & Health Physicist	Administration	15
		LLRW	75
		UR	5
		Other	5
Tony Gonzalez	Work Leader & Health Physicist	Administration	15
		LLRW	5
		UR	75
		Other	5
Lee Line	Engineer	LLRW	65
		UR	25
		Other	10
Zhenwen Jia	Engineer	LLRW	25
		UR	65
		Other	10
Vaishali Tendolkar	Health Physicist	LLRW	90
		Other	10
Gehan Flanders	Health Physicist	LLRW	80
		UR	10
		Other	10
Mohanned Kawasmi	Health Physicist	LLRW	15
		UR	75
		Other	10
Nicole Traphan	Health Physicist	LLRW	35
		UR	35
		Other	30

Kan Tu, PG	Geoscientist	LLRW UR Other	15 75 10
David Hastings	Geoscientist	LLRW UR Other	60 30 10
Fred Duffy	Geoscientist	UR Other	90 10

Table 2: Current RMCT Staffing Plan			
Name	Position	Area of Effort	FTE %
Kelly Cook	Division Director	LLRW UR Other	5 4 91
Melinda Johnston	Special Assistant	LLRW UR Other	5 4 91
Dale Kohler	Liaison	LLRW UR Other	10 35 5
Michelle Havelka	Homeland Security Section Manager/ Coordinator	LLRW UR Other	10 15 75
Melinda Torres	Assistant Homeland Security Coordinator	LLRW Other	10 90
Muhammadali Abbaszadeh	RMCT Work Leader/Health Physicist/Inspector	LLRW UR Other	40 45 15
Sonia Simmons	Health Physicist/ Inspector	LLRW UR Other	20 65 15
Karen Bachtel	Natural Resource Specialist/ Inspector	LLRW UR Other	10 65 25
Joe Gonzalez	Health Physicist/ Inspector	LLRW	100
Lun Ma	Health Physicist/ Inspector	LLRW	100

4. 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.

RMD, RM Section

Staff	Date of Hire	Position Title	Degree Earned	Years of Experience
Nicole Traphan	11/1/2017	Health Physicist	BS Chemical Science	4
Andres Trevino	7/1/2016	Engineer	BS Petroleum Engineering	30
Gehan Flanders	6/23/2014	Health Physicist	MS in Environmental Engineering & MS in Environmental Science	17
Zhenwen Jia	4/18/2016	Engineer	PhD in Natural Resources & Environmental Engineering	35
Mohanned Kawasmi	6/1/2015	Health Physicist	BS Nuclear Engineering	7
Lynda Clayton	4/1/2016	Natural Resource Specialist-Program Coordinator	MS-Environmental Science	30-various media
David Hastings	4/1/2015	Geoscientist	BS Geology, PG licensed by State of Texas	25
Fred Duffy	10/1/2015	Geoscientist	MA in Geology, PG licensed by State of Texas	39
Maryann Ryan-Gamez	10/1/2015	Geoscientist	BS Geophysics, PG licensed by State of Texas	25
Alisha Stallard	9/1/2014	Health Physicist, Special Assistant to the RMD Division Director	MS in Health Physics	11

CID, Homeland Security Section, RMCT

Staff	Date of Hire	Position Title	Degree Earned	Years of Experience
Diane Wakefield	10/2/2015	Health Physicist	BS Occupational Health	25
Karen Bachtel	2/1/2015	Natural Resource Specialist	BS Microbiology	2
Lun Ma	11/6/2017	Health Physicist	PhD Physics	9

5. 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.

RMD, RM Section

Staff Name	NRC Courses/Alternative Training Remaining	Tentative Timeline for Completion
Mohanned Kawasmi	<u>Training</u> MARSAME MARSSIM Advanced Health Physics Air Sampling for Radioactive Materials	By end of 2018 By end of 2018 September 2018 By end of 2019
Nicole Traphan	<u>Training</u> Licensing Procedures Health Physics for Uranium Recovery MARSAME Advanced Health Physics Internal Dosimetry Characterization and Planning for Decommissioning Air Sampling for Radioactive Materials <u>Site Familiarization Visit</u> Visit to in situ uranium mining site Visit to LLRW site Visit to tailings impoundment site <u>Participation in Licensing Review Actions</u> <u>Regulations Review</u> <u>Policy Review</u>	March 2018 By end of 2019 By end of 2019 September 2018 By end of 2020 By end of 2019 By end of 2021 Site visits should be completed in 2018 By end of 2018 By end of 2018 By end of 2018

Fred Duffy	<u>Training</u> Introductory Health Physics MARSAME MARSSIM Environmental Monitoring <u>Site Familiarization Visit</u> Visit to tailings impoundment site <u>Participation in License Reviews</u>	By end of 2018 By end of 2018 By end of 2018 By end of 2019 By end of 2019 By end of 2018
Zhenwen Jia	<u>Training</u> Introductory Health Physics MARSAME <u>Site Familiarization Visit</u> Visit to tailings impoundment site	By end of 2018 By end of 2019 By end of 2019

CID, Homeland Security Section, RMCT

Staff Name	NRC Courses/Alternative Training Remaining	Tentative Timeline for Completion
*Karen Bachtel	As Needed	Open
**Lun Ma	Transportation of Radioactive Materials Inspection Procedures Materials Control & Security System & Principles	By the end of 2018-2019

* Karen Bachtel will be signed off during the first or second quarter of 2018 to conduct Radioactive Material License inspections independently.

** Since the date of hire on 11/6/2017, Lun Ma has not attended any of the NRC courses. Lun has been provided on the job training by the CID's senior resident inspector and the RMCT Work Leader. In addition, Lun has completed all of the licensee's required training. Lun will be scheduled (depending on the availability) to attend the NRC courses in 2018.

6. Identify any changes to your qualification and training procedure that occurred during the review period.

A Training Program for Radioactive Materials Inspectors and License Reviewers was developed, using Inspection Manual Chapter (IMC) 1248 as a guide.

7. Please identify the technical staff that left your radioactive materials program during the review period and indicate the date they left.

RMD, RM Section

<u>Staff</u>	<u>Title</u>	<u>Date Left</u>
Philip Shaver	Health Physicist	3/10/2015
Andres Trevino	Engineer	11/30/2016
Edwin Molina	Engineer	1/4/2016
Robert Beleckis	Health Physicist	4/30/2014
Monica Sullivan	Program Specialist	2/2/2016
Gary Smith	Manager	12/31/2014
Roger Dockery	Geoscientist	10/31/2014
Uma Shanker Tangirala	Engineer	8/31/2015
Michael Pimentel	Engineer	12/31/2016
Carol Dye	Geoscientist	7/31/2017
Maryann Ryan-Gamez	Geoscientist	11/30/2017

CID, Homeland Security Section, RMCT

<u>Staff</u>	<u>Title</u>	<u>Date Left</u>
Mohanned Kawasmi	Health Physicist	5/31/2015
Diane Wakefield	Health Physicist	6/9/2017

8. 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.

TCEQ had an external hiring pause from 10/14/16 until 12/31/16. The State of Texas had a hiring freeze from 2/1/17 until 7/1/17.

As of January 5, 2018:

Position Title	Date Vacated	Status
Environmental Permit Specialist I	8/31/2016	As of January 5, 2018, interviews have been scheduled
Health Physicist I	11/30/2016	Interviews have been completed. A candidate was not hired. The position is being reclassified as an Environmental Permit Specialist I
Geoscientist II	11/30/2017	Paperwork is under development to submit to TCEQ Human Resources to fill vacancy

9. 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.

The Radioactive Materials Division and Critical Infrastructure Division is under the jurisdiction of the TCEQ Commissioners who report to the Governor of Texas and the Texas Legislature. Additionally, as part of our routine actions there are opportunities for public input including from other state and federal agencies.

II. Status of Materials Inspection Program

10. 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.

For the period of review, the CID RMCT attempted to inspect the licensees under TCEQ's jurisdiction in accordance with IMC 2800.

11. 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.

The number of inspections completed during the review period are listed in Appendix A-7, pages 43-46.

12. 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

No inspections were conducted overdue during the review period.

- 13. 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.

Currently there are no overdue inspections.

- 14. 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.

Not applicable to TCEQ.

III. Technical Quality of Inspections

- 15. What, if any, changes were made to your written inspection procedures during the reporting period?

In coordination with the RM Section, the RMCT has enhanced the both the LLRW and UR inspection procedures. The LLRW procedures were separated from the UR procedures. The LLRW procedures now include details on the overall aspects of the LLRW program reviewed during a routine inspection and specific details related to the receipt, transfer, and disposal of the on-demand waste shipments inspection. The UR procedures now include details on the overall aspects of the UR program reviewed during a routine inspection, including procedures related to the UIC permit inspections (note that the UIC Permits Section and the Uranium Section which issues both licenses and permits for uranium recovery are under the RM Section). The procedures for both programs may be revised based on changes in the licensee's operations, to enhance the inspection program, or other factors that may prompt changes to the procedures.

- 16. Prepare a table showing the number and types of supervisory accompaniments made during the review period. Include:

Inspector	Supervisor	License Category	Date
Sonia Simmons	Muhammadali Abbaszadeh	Uranium	8/5-7/2014 6/30-7/1/2015 12/1/2016 8/10/2017
Joe Gonzalez	Muhammadali Abbaszadeh	LLRW	11/9/2014 12/15-16/2015 12/14/2016 11/7/2017
Mohanned Kawasmi	Muhammadali Abbaszadeh	LLRW	11/20/2014
Diane Wakefield	Muhammadali Abbaszadeh	LLRW	12/7/2016
Muhammadali Abbaszadeh	Dale Kohler	Uranium	9/4/2014 12/9/2015 11/16/2016 6/29/2017

17. 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?

The TCEQ's inventory of radiation detection instrumentation is utilized by both the CID and the RMD. The CID maintains a separate set of instruments. Both sets of instrumentation are either sent to Ludlum Instruments, Inc. (Ludlum) or the Texas Department of State Health Services (DSHS), Radiation Control Program, for calibration. If an instrument does not function properly, it will be tagged as "out of order" and is sent to Ludlum for repair. Ludlum provides all instrument repair services. The RMD and CID do not have laboratory capabilities for radionuclide analysis. Any media requiring radionuclide analysis is sent to the DSHS Lab.

Instrument calibrations and records are maintained in electronic form as well as a paper copy form. The CID and RMD had sufficient calibrated instruments available throughout the review period.

IV. Technical Quality of Licensing Actions

18. How many specific radioactive material licenses does your program regulate at this time?

Low-level Radioactive Waste disposal, storage and processing

- 1 waste storage and processing license
- 1 low-level radioactive waste disposal and radioactive waste storage and processing license
- 1 alternative method of disposal of radioactive material license
- 1 Decommissioning, which is currently in mediation to be decommissioned

Uranium

- 1 By-product material disposal license
- 3 licenses that authorize possession of by-product material in tailings impoundments
- 2 licenses that authorize *in situ* uranium mining and processing
- 2 licenses that authorize solely processing of uranium to produce yellowcake
- 3 licenses that authorize solely *in situ* uranium mining

19. 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.

Low-level Radioactive Waste disposal, storage and processing

- Iso-Tex, legacy buried waste site – RW-1937 – currently in mediation to be decommissioned
- Ascend Performance Materials Texas, Inc. – RW-0219 – renewal and major amendment – issued July 18, 2017
- Waste Control Specialists – R04100 – three separate major amendments combined into one license amendment – issued August 28, 2014

Uranium

- In 2016, 1,851 cubic yards of contaminated soil was removed from a portion of the former IEC Uranium Recovery Project as part of decommissioning for eventual release for unrestricted use. The site is currently in litigation.
- URI's Rosita and Vasquez sites are currently undergoing site reclamation and groundwater restoration. No request has been made for license termination or partial termination.

20. Discuss any variances in licensing policies and procedures or exemptions from the regulations granted during the review period.

WCS was given conditional authorization in 2013 to dispose of LLRW under 30 TAC 336.5(a) and License Condition 192 of Radioactive Material License (RML) R04100. Conditional authorization required a radiological impact assessment which established radionuclide concentration limits for waste disposed in the Resource Conservation and Recovery Act (RCRA) disposal cell. Approval was granted and WCS began disposing of low activity radioactive waste in June 2014.

In 2014, transuranic waste from Los Alamos National Laboratory (LANL) was sent to the WCS site for storage after the Waste Isolation Pilot Plant (WIPP) facility was temporarily closed due to a fire and radiological release. After it was learned that some of the waste in storage was similar to waste that was involved in the radiological release event at WIPP and the waste could not be safely transported back to LANL, TCEQ granted an emergency authorization to WCS to store the waste in the bottom of the Federal Waste Facility (FWF).

There have been no variances from 30 TAC 336 granted to any uranium licensee.

21. What, if any, changes were made in your written licensing procedures (new procedures, updates, policy memoranda, etc.) during the reporting period?

TCEQ's Radioactive Materials Division has recognized the need for updated, new and/or revised standard operating procedures (SOPs) to address several processes. SOPs are being developed to be used by the section which includes both LLRW and uranium. As of January 9, 2018:

The following SOPs have been finalized:

RM Section

- Document Filing Process for the 1206 File Room
- Texas Low-Level Radioactive Waste Disposal Compact Commission (TLLRWDC) Import Petitions
- WCS Request for Changes to Procedure(s)
- Delinquent Fee Search
- RM Section Technical Notice of Deficiency Processing
- U Licensing Administrative Notice of Deficiency Processing
- U Licensing Compliance History SOP
- U Licensing SOP for Searching the Secretary of State Web Site
- Joint Groundwater Monitoring and Contamination Report
- Reviewing Performance Assessment Update from Waste Control Specialists (WCS) Radioactive Material License R04100

The following SOPs subjects are currently in draft (titles not final):

- Engineering SOP
- DRAFT HP Review SOP
- DRAFT License Processing SOP
- SOP Decommissioning Cost Estimates for Financial Assurance
- Invoice SOP
- DRAFT TCEQ Procedure for PROCEDURE FOR CONDUCTING CONFIRMATORY CLOSE OUT SURVEYS OF OPEN LANDS AT *IN SITU* LEACH URANIUM RECOVERY FACILITIES
- SOP IDA Login and Documents Distribution Procedure
- NRC Training SOP
- WCS Manifest Processing SOP
- License Verification Procedures
- Sampling
- Exemptions Approval Process

Still to be drafted – target to being finalized by the end of 2018:

- Geology Licensing Review SOP
- RM Section Memo and Correspondence SOP
- PCA Coding for WCS Cost Recovery
- WAC Notifications

There has been no new policy memorandum since the 2014 IMPEP review.

22. 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.

Low-level Radioactive Waste disposal, storage and processing

R01811 – Nuclear Sources and Services Inc. (NSSI) - The renewal date for radioactive material license R01811 was June 30, 1995. The renewal has been pending since that time. The renewal of this license was delayed due to the issue of insufficient financial assurance by the licensee. No work was allowed on this license while the licensee had not provided sufficient financial assurance, from 1996 to 2004. The financial assurance issue was settled in a State Office of Administrative Hearings court in 2004. Up until June 2007, R01811 was under the jurisdiction of DSHS and the renewal application was not reviewed after 2004 due to a backlog of renewals at that time at DSHS. Senate Bill (SB) 1604 of the Texas Legislature transferred this license to the TCEQ in June 2007. One of the provisions of SB 1604 was that the pending license applications for the by-product and the LLRW disposal facilities were given priority to meet specific deadlines. Consequently, the technical review of the renewal application for NSSI was delayed. A revised renewal application was received on November 10, 2008. A technical notice of deficiency (TNOD) was sent to NSSI on June 29, 2010. The response from NSSI was reviewed and a draft second TNOD was prepared which was sent to NSSI for their review. Staff traveled to Houston to meet with NSSI on November 28, 2017 to discuss the second TNOD and the path forward to completing the license renewal.

Uranium

R01634 – ConocoPhillips, Conquista Project – in timely renewal; in closure with groundwater issues. The licensee has recently submitted a study for re-evaluation of background values which could be used to develop revised groundwater protection standards for this site. This study is included in a major amendment submittal which also includes the creation of a supplemental disposal cell for contaminated soil along the adjacent road shoulder and the Slick Wilcox site. The amendment submittal is under review.

R01431 – ExxonMobil, Ray Point Project – in timely renewal; in closure with soil decontamination and groundwater issues. The Licensee submitted a Groundwater Characterization Report which is under review.

R02402 – RGR, Panna Maria Project – in timely renewal; in closure with groundwater issues. The licensee submitted an application for updating groundwater protection standards. The application is under review.

R03626 – South Texas Mining Venture, Hobson Project – The Licensee decommissioned a subsite, Mt. Lucas project, and it was released for unrestricted use. Amendment 28 was issued on May 2, 2014 which terminated the Mt. Lucas project from the license. The license renewal for the Hobson Project is under review.

R03653 – URI Kingsville Dome (KVD), Rosita, & Vasquez Projects – Licensee is currently in standby status, not in production. Groundwater restoration was

completed in Production Area 1 (PA1) and PA2 by the licensee at the Rosita Project and approved by TCEQ. The licensee was authorized by TCEQ to plug and abandon the Class III wells in both production areas as well as PA4. The licensee did not mine PA4. PA3 at the Rosita Project is in standby status.

Groundwater restoration was completed in PA1 and PA2 by the licensee at the Vasquez Project and approved by TCEQ. The licensee was authorized by TCEQ to plug and abandon the Class III wells in both production areas. The licensee began plugging the Class III wells at the Vasquez Project in December 2017. As of January 1, 2018, plugging activities have not been completed.

The Licensee has completed groundwater restoration in the three production areas at the KVD site. Stability sampling in one of the three production areas has not been completed.

R05360 – EFR Alta Mesa Project – Groundwater restoration has been completed in PA1. The licensee has completed the third set of the stability samples in PA1. The licensee is preparing a report on the groundwater results to submit to the TCEQ for review. The license renewal is under review.

V. Technical Quality of Incident and Allegation Activities

23. 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:

The incidents listed in the table below were reported to the NRC Operation Center's Headquarters Operations Officer.

Licensee Name/ License #	Date of Incident/Report	Type of Incident
URI, Inc./R03653	1/22/2017	Fire
EFR Alta Mesa/R05360	8/9/2017	Fire
Waste Control Specialists/R04100	8/9/2016	Suspicious activities

24. Identify any changes to your procedures for responding to incidents and allegations that occurred during the period of this review.

None.

C. NON-COMMON PERFORMANCE INDICATORS

I. Compatibility Requirements

25. 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 and rules directly affecting the TCEQ radiation control program include:

- The Texas Radiation Control Act, Chapter 401, Texas Health & Safety Code
- Texas Low-Level Radioactive Waste Disposal Compact Act, Chapter 403, Texas Health & Safety Code
- Title 30 Texas Administrative Code Chapter 336, Radioactive Substance Rules

Legislation indirectly affecting the TCEQ radiation control program includes:

- The Texas Open Meetings Act
- The Texas Public Information Act
- The Texas Administrative Procedure Act
- Texas Water Code, Chapters 5 and 27
- Texas Environmental Audit Privilege Act
- Texas Regulatory Takings Act
- Uranium Mill Tailings Reclamation Act
- Texas Government Code
- Texas Coastal Zone Management Act
- Texas Solid Waste Disposal Act

Texas 85th Legislative Session – 2017:

The following legislation, relative to the RMD program, was passed:

House Bill 2662: relating to the Texas Low-Level Radioactive Waste Disposal Compact waste disposal facility. The legislation amended the Texas Health & Safety Code Section 401.2445 by temporarily suspending the collection of 5% of gross receipts on all compact and federal waste disposed at the compact waste disposal facility for the upcoming biennium. Section 3 then reinstates the collection of the 5% of gross receipts beginning September 1, 2019. Rulemaking to amend 30 TAC 336.103(f) to enact the legislation was begun and is anticipated to be adopted in April 2018.

There were two bills, Senate Bills 1667 and 1330 which were passed and addressed issues with the Texas Low-level Radioactive Waste Disposal Compact Commission fees and status as a State of Texas Agency.

There was no legislation passed during the Texas 84th Texas Legislative Session, in 2015, impacting the Radioactive Materials program.

26. Are your regulations subject to a "Sunset" or equivalent law? If so, explain and include the next expiration date for your regulations.

30 Texas Administrative Code (30 TAC) Chapter 336: Radioactive Substance Rules is the State rule regulating radioactive materials under TCEQ authority. All TCEQ rules are subject to a quadrennial review (quad review). The purpose of the quad review is to determine if TCEQ rules are still relevant and needed. The quad review will also determine if any changes are needed to rules. The quad review for 30 TAC Chapter 336 is due in 2018.

27. 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 contents of the SRS sheet, as it is currently published on the NRC agency website, is correct. As of the date of this review, there is only one outstanding item on the TCEQ SRS:

RATS ID	NRC Chronology Identification	Date Due for State Adoption	Incoming Letter	Outgoing Package	Notes
2011-1	Decommissioning Planning Parts 20, 30, 40, and 70 76 FR 35512	12/17/2015	Proposed ML16218A245 Final ML16321A333	Comment 09/10/2016 ML16218A244 Comment 01/18/2017 ML16321A324	

The substance of the NRC comment on that item is as follows:

State Section	NRC Section	RATS ID	Category	SUBJECT and COMMENTS
§ 336.356(c)	§ 20.1406(c)	2011-1	C	<p>Minimization of Contamination</p> <p>TCEQ omitted the requirement to minimize the introduction of radioactivity into the site.</p> <p>In § 336.356(c) TCEQ needs to add the word “site” or “facility” and include the phrase “including the subsurface” and reference their radiation protection requirements and their radiological criteria for license termination in order to meet the essential objectives of 10 CFR 20.1406(c), which carries a Compatibility Category C designation.</p>

The TCEQ has not yet implemented RATS 2011-1 due to various reasons: 1) limited time is available to the TCEQ to initiate new rulemakings as a result of the biennial legislative session (agency policies significantly limit instances of initiating rulemaking during periods of legislative activity) and requirements by the Texas Secretary of State that each section of agency rules may only ever be opened for proposed changes by one rulemaking project at a time, and 2) the TCEQ received six petitions for rulemaking from the public, including regulated entities, during the IMPEP review period, particularly in 2014, which delayed intended rulemaking activities. Texas statutes and rules require short timeframes to address rulemaking petitions requiring resources to be diverted to address issues raised in the petitions.

A summary of the time between when RATS 2011-1 became effective and the expected date of adoption by the TCEQ may demonstrate this limited time.

Immediately following the adoption of RATS 2011-1 in December 2012, the Texas 83rd Legislative Session convened from January through May 2013. The TCEQ proposed rulemaking in June through November 2013, to adopt the maximum disposal rate for the Texas Compact disposal site, as required by prior state law.

In the following months, the TCEQ participated in the 2014 IMPEP review in February and Management Review Board meeting in July 2014, and received five petitions for rulemaking between April and July of the same year. During that same time, the TCEQ continued rulemaking activities, but with prioritization given to implementing requirements imposed during the 83rd legislative session (SB 347) and NRC compatibility requirements related to uranium facility financial assurance, proposing and adopting that rulemaking between November 2014 and June 2015 (the importance of these rulemaking necessitated overlap with the later legislative session).

The Texas 84th Legislative Session convened in January through June 2015. Immediately following the session, the TCEQ proposed rulemakings to implement Part 37 updates required by the NRC and final implementation of SB 347 between August and December 2015.

The TCEQ participated in the 2016 IMPEP Periodic Meeting in February 2016, when it was brought to our attention that the NRC considers RATS items to be overdue, even if they require no changes in TCEQ rules or are the sole responsibility of the Texas Department of State Health Services (DSHS), if the TCEQ has not formally communicated those facts to the NRC. This misunderstanding on the part of the TCEQ, which was corrected during conversations with NRC staff at the periodic meeting, arose due to miscommunications among TCEQ staff when the responsibility for coordinating RATS compliance was transitioned following a staff departure in July 2013. The TCEQ immediately took steps to address outstanding RATS items, sending two letters to NRC in March 2016 and May 2016 reporting RATS items that were DSHS responsibility or required no rule changes by TCEQ. The TCEQ proposed a final rulemaking intended to address all the remaining RATS items, between August and November 2016, but was notified by the NRC in September 2016 that their interpretation of TCEQ rules regarding RATS 2011-1 differed from that of the TCEQ, and that further changes would be required. Because the NRC comments addressed TCEQ rules that had not been the subject of any proposed changes in the current rulemaking, the TCEQ was unable to address the NRC comments until a subsequent rulemaking could be initiated.

The Texas 85th Legislative Session occurred from January to May 2017, delaying the time that the TCEQ could initiate rulemaking for the final outstanding 2011-1 RATS item. That rulemaking was further delayed, when the TCEQ attempted, but was unable, to include the 2011-1 change in a rulemaking required immediately after the legislative session to comply with changes in state law that became effective in July 2017. That rulemaking was proposed in November 2017 and is expected to be finalized in April 2018. The TCEQ has requested and received approval for proposal of a rulemaking in April 2018 to implement the final 2011-1 RATS requirement, which is anticipated to be finalized by September 2018. At that time, the TCEQ expects to be fully compatible with all RATS items adopted to date.

28. 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 in order to maintain compatibility with the NRC, showing the normal length of time

anticipated to complete each step.

The average TCEQ rulemaking takes approximately one year. The time frame is required to provide staff adequate time to develop the rule project, all levels of management adequate time to review and discuss, the public adequate time to review and comment, and staff adequate time to revise as needed. TCEQ rulemaking is divided into three phases including the concept memo stage, the proposal phase, and the adoption phase.

If there is a need for stakeholder input, that adds an additional 2-3 months to allow for meaningful collaboration between the agency and stakeholders. After the stakeholder meeting is held, time is then allowed for the public and stakeholders to provide comments and feedback back to the agency. Agency staff will then review the comments and discuss possible revisions with management before proceeding.

The concept memo stage takes 2-3 months and includes staff initiated or legislatively directed development of a rule project which identifies all sections that need to be amended.

The proposal phase takes 4-5 months and includes staff fully developing all documents required for a rule project, including a fiscal analysis. All documents are reviewed and approved by executive management prior to being released to the public. There is a legally mandated 19-day public notice requirement before the rule project can be considered by the Commission at Agenda. If the rule project is approved to move forward, it is filed with the Secretary of State (SOS) for publication. This takes 2 ½ weeks based on the SOS publication schedule. The comment period is typically at least 30 days.

The adoption phase takes 4-5 months and includes responding to any comments received and preparing all documents which are then approved by executive management. There is a legally mandated 19-day public notice requirement before the rule project can be adopted by the Commission at Agenda. If the rule project is approved for adoption, it is filed with the SOS for publication. This takes 2 ½ weeks based on the SOS publication schedule. The rule is effective 20 days after it is filed with the SOS.

II. Sealed Source and Device (SS&D) Evaluation Program

Questions #29 and #30 of this section are not applicable to the functions of the TCEQ. Under the jurisdiction of the Texas Department of State Health Services.

29. 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:

<u>SS&D Manufacturer, Registry Number</u>	<u>Distributor or Custom User</u>	<u>Product Type or Use</u>	<u>Date Issued</u>	<u>Type of Action</u>
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30. Please include information on the following questions in Section A, as they apply to the SS&D Program:

Technical Staffing and Training - Questions 2-9

III. Low-level Radioactive Waste Disposal Program

31. 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

Q2: 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 Appendix A-1

- (b) A chart showing positions of the radiation control program, including management; and

See Appendix A-2 for the Office of Compliance and Enforcement

See Appendix A-3 for the Radioactive Materials Division

See Appendix A-4 for the Critical Infrastructure Division

- (c) Equivalent charts for sealed source and device evaluation, low-level radioactive waste and uranium recovery programs, if applicable.

Sealed Source and device evaluation is not under TCEQ jurisdiction

See Appendix A-5 for Low-Level Radioactive Waste

- Q3: 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:

See question 3, pages 4 – 6

- Q4: 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.

RMD, RM Section (LLRW)

Staff	Date of Hire	Position Title	Degree Earned	Years of Experience
Gehan Flanders	6/23/2014	Health Physicist	MS in Environmental Engineering & MS in Environmental Science	17
Lynda Clayton	4/1/2016	Natural Resource Specialist-Program Coordinator	MS-Environmental Science	30-various media
David Hastings	4/1/2015	Geoscientist	BS Geology, PG licensed by State of Texas	25
Andres Trevino	7/1/2016	Engineer	BS Petroleum Engineering	30

CID, Homeland Security Section, RMCT

Staff	Date of Hire	Position Title	Degree Earned	Years of Experience
Diane Wakefield	10/2/2015	Health Physicist	BS Occupational Health	25
Karen Bachtel	2/1/2015	Natural Resource Specialist	BS Microbiology	2
Lun Ma	11/6/2017	Health Physicist	PhD Physics	9

Q5: 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.

See question 5, pages 8 – 9

Q6: Identify any changes to your qualification and training procedure that occurred during the review period.

See question 6, page 10

Q7: Please identify the technical staff that left your radioactive materials program during the review period and indicate the date they left.

RMD, RM Section (LLRW)

Staff	Title	Date Left
Andres Trevino	Engineer	11/30/2016
Roger Dockery	Geoscientist	10/31/2014

CID, Homeland Security Section, RMCT

Staff	Title	Date Left
Mohanned Kawasmi	Health Physicist	5/31/2015
Diane Wakefield	Health Physicist	6/9/2017

Q8: 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.

See question 8, pages 10 - 11

Q9: 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.

See question 9, page 11

Status of Materials Inspection Program - Questions 10-14

Q10: 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.

See question 10, page 11

Q11: 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.

See question 11, page 11

Q12: 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

See question 12, page 12

- Q13: 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.

See question 13, page 12

- Q14: 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.

See question 14, page 12

Technical Quality of Inspections - Questions 15-17

- Q15: What, if any, changes were made to your written inspection procedures during the reporting period?

In coordination with the RM Section, the RMCT has enhanced the LLRW inspection procedures. The LLRW procedures were separated from the UR procedures. The LLRW procedures now include details on the overall aspects of the LLRW program reviewed during a routine inspection and specific details related to the receipt, transfer, and disposal of the on-demand waste shipments inspection. The procedures may be revised based on changes in the licensee's operations, to enhance the inspection program, or other factors that may prompt changes to the procedures.

- Q16: Prepare a table showing the number and types of supervisory accompaniments made during the review period. Include:

Inspector	Supervisor	License Category	Date
Joe Gonzalez	Muhammadali Abbaszadeh	LLRW	11/9/2014 12/15-16/2015 12/14/2016 11/7/2017
Mohanned Kawasmi	Muhammadali Abbaszadeh	LLRW	11/20/2014
Diane Wakefield	Muhammadali Abbaszadeh	LLRW	12/7/2016

Q17: 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 question 17, page 13

Technical Quality of Licensing Actions - Questions 18-22

Q18: How many specific radioactive material licenses does your program regulate at this time?

Low-level Radioactive Waste disposal, storage and processing

- 1 waste storage and processing license
- 1 low-level radioactive waste disposal and radioactive waste storage and processing license
- 1 alternative method of disposal of radioactive material license
- 1 Decommissioning, which is currently in mediation to be decommissioned

Q19: 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.

Low-level Radioactive Waste disposal, storage and processing

- Iso-Tex, legacy buried waste site - RW-1937 - currently in mediation to be decommissioned
- Ascend Performance Materials Texas, Inc. - RW-0219 - renewal and major amendment - issued July 18, 2017
- Waste Control Specialists - R04100 - three separate major amendments combined into one license amendment - issued August 28, 2014

Q20: Discuss any variances in licensing policies and procedures or exemptions from the regulations granted during the review period.

WCS was given conditional authorization in 2013 to dispose of LLRW under 30 TAC 336.5(a) and License Condition 192 of Radioactive Material License (RML) R04100. Conditional authorization required a radiological impact assessment which established radionuclide concentration limits for waste disposed in the Resource Conservation and Recovery Act (RCRA) disposal cell. Approval was granted and WCS began disposing of low activity radioactive waste in June 2014.

In 2014, transuranic waste from Los Alamos National Laboratory (LANL) was sent to the WCS site for storage after the Waste Isolation Pilot Plant (WIPP) facility was temporarily closed due to a fire and radiological release. After it was learned that some of the waste in storage was similar to waste that was

involved in the radiological release event at WIPP and the waste could not be safely transported back to LANL, TCEQ granted an emergency authorization to WCS to store the waste in the bottom of the Federal Waste Facility (FWF).

- Q21: What, if any, changes were made in your written licensing procedures (new procedures, updates, policy memoranda, etc.) during the reporting period?

See question 21, page 15

- Q22: 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.

Low-level Radioactive Waste disposal, storage and processing

R01811 - Nuclear Sources and Services Inc. (NSSI) - The renewal date for radioactive material license R01811 was June 30, 1995. The renewal has been pending since that time. The renewal of this license was delayed due to the issue of insufficient financial assurance by the licensee. No work was allowed on this license while the licensee had not provided sufficient financial assurance, from 1996 to 2004. The financial assurance issue was settled in a State Office of Administrative Hearings court in 2004. Up until June 2007, R01811 was under the jurisdiction of DSHS and the renewal application was not reviewed after 2004 due to a backlog of renewals at that time at DSHS. Senate Bill (SB) 1604 of the Texas Legislature transferred this license to the TCEQ in June 2007. One of the provisions of SB 1604 was that the pending license applications for the by-product and the LLRW disposal facilities were given priority to meet specific deadlines. Consequently, the technical review of the renewal application for NSSI was delayed. A revised renewal application was received on November 10, 2008. A technical notice of deficiency (TNOD) was sent to NSSI on June 29, 2010. The response from NSSI was reviewed and a draft second TNOD was prepared which was sent to NSSI for their review. Staff traveled to Houston to meet with NSSI on November 28, 2017 to discuss the second TNOD and the path forward to completing the license renewal.

Technical Quality of Incident and Allegation Activities - Questions 23-24

- Q23: 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:

The incidents listed in the table below were reported to the NRC Operation Center's Headquarters Operations Officer.

Licensee Name/ License #	Date of Incident/Report	Type of Incident
Waste Control Specialists/R04100	8/9/2016	Suspicious activities

Q24: Identify any changes to your procedures for responding to incidents and allegations that occurred during the period of this review.

See question 24, page 17

IV. Uranium Recovery Program

32. 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

Q2: Please provide the following organization charts, including names and positions:

(d) A chart showing positions from the Governor down to the Radiation Control Program Director;

See Appendix A-1

(e) A chart showing positions of the radiation control program, including management; and

See Appendix A-2 for the Office of Compliance and Enforcement

See Appendix A-3 for the Radioactive Materials Division

See Appendix A-4 for the Critical Infrastructure Division

(f) Equivalent charts for sealed source and device evaluation, low-level radioactive waste and uranium recovery programs, if applicable.

Sealed Source and device evaluation is not under TCEQ jurisdiction

See Appendix A-6 for Uranium

Q3: 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:

See question 3, pages 4 – 6

Q4: 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.

RMD, RM Section (Uranium)

Staff	Date of Hire	Position Title	Degree Earned	Years of Experience
Nicole Traphan	11/1/2017	Health Physicist	BS Chemical Science	4
Zhenwen Jia	4/18/2016	Engineer	PhD in Natural Resources & Environmental Engineering	35
Mohanned Kawasmi	6/1/2015	Health Physicist	BS Nuclear Engineering	7
Lynda Clayton	4/1/2016	Natural Resource Specialist-Program Coordinator	MS-Environmental Science	30-various media
Fred Duffy	10/1/2015	Geoscientist	MA in Geology, PG licensed by State of Texas	39
Maryann Ryan-Gamez	10/1/2015	Geoscientist	BS Geophysics, PG licensed by State of Texas	25
Alisha Stallard	9/1/2014	Health Physicist, Special Assistant to the RMD Division Director	MS in Health Physics	11

CID, Homeland Security Section, RMCT

Staff	Date of Hire	Position Title	Degree Earned	Years of Experience
Karen Bachtel	2/1/2015	Natural Resource Specialist	BS Microbiology	2

Q5: 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.

See question 5, pages 8 – 9

Q6: Identify any changes to your qualification and training procedure that occurred during the review period.

See question 6, page 10

- Q7. Please identify the technical staff that left your radioactive materials program during the review period and indicate the date they left.

RMD, RM Section

<u>Staff</u>	<u>Title</u>	<u>Date Left</u>
Philip Shaver	Health Physicist	3/10/2015
Edwin Molina	Engineer	1/4/2016
Robert Beleckis	Health Physicist	4/30/2014
Monica Sullivan	Program Specialist	2/2/2016
Gary Smith	Manager	12/31/2014
Uma Shanker Tangirala	Engineer	8/31/2015
Michael Pimentel	Engineer	12/31/2016
Carol Dye	Geoscientist	7/31/2017
Maryann Ryan-Gamez	Geoscientist	11/30/2017

- Q8. 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.

See question 8, pages 10 - 11

- Q9. 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.

See question 9, page 11

Status of Materials Inspection Program - Questions 10-14

- Q10: 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.

See question 10, page 11

- Q11: 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.

See question 11, page 11

- Q12: 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

See question 12, page 12

- Q13: 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.

See question 13, page 12

- Q14: 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.

See question 14, page 12

Technical Quality of Inspections - Questions 15-17

- Q15: What, if any, changes were made to your written inspection procedures during the reporting period?

In coordination with the Radioactive Materials (RM) Section, the RMCT has enhanced the Uranium Recovery (UR) inspection procedures. The UR procedures were separated from the LLRW procedures. The UR procedures now include details on the overall aspects of the UR program reviewed during a routine inspection, including procedures related to the Underground Injection Control (UIC) permit inspections (note that the UIC Permits Section and the Uranium Section which issues both licenses and permits for uranium recovery are under the RM Section). The procedures may be revised based on

changes in the licensee's operations, to enhance the inspection program, or other factors that may prompt changes to the procedures.

Q16: Prepare a table showing the number and types of supervisory accompaniments made during the review period. Include:

Inspector	Supervisor	License Category	Date
Sonia Simmons	Muhammadali Abbaszadeh	Uranium	8/5-7/2014 6/30-7/1/2015 12/1/2016 8/10/2017
Muhammadali Abbaszadeh	Dale Kohler	Uranium	9/4/2014 12/9/2015 11/16/2016 6/29/2017

Q17: 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 question 17, page 13

Technical Quality of Licensing Actions - Questions 18-22

Q18: How many specific radioactive material licenses does your program regulate at this time?

Uranium

- 1 By-product material disposal license
- 3 licenses that authorize possession of by-product material in tailings impoundments
- 2 licenses that authorize *in situ* uranium mining and processing
- 2 licenses that authorize solely processing of uranium to produce yellowcake
- 3 licenses that authorize solely *in situ* uranium mining

Q19: 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.

Uranium

- Former IEC Uranium Recovery Project underwent some reclamation by the TCEQ with the removal of 1,851 cubic yards of contaminated soil. Site currently in litigation.

- **URI's Rosita and Vasquez sites are currently undergoing site reclamation and groundwater restoration. No request has been made for license termination or partial termination.**

Q20: Discuss any variances in licensing policies and procedures or exemptions from the regulations granted during the review period.

There have been no variances from 30 TAC 336 granted to any uranium licensee.

Q21: What, if any, changes were made in your written licensing procedures (new procedures, updates, policy memoranda, etc.) during the reporting period?

See question 21, page 15

Q22: 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.

Uranium

R01634 – ConocoPhillips, Conquista Project – in timely renewal; in closure with groundwater issues. The licensee has recently submitted a study for re-evaluation of background values which could be used to develop revised groundwater protection standards for this site. This study is included in a major amendment submittal which also includes the creation of a supplemental disposal cell for contaminated soil along the adjacent road shoulder and the Slick Wilcox site. The amendment submittal is under review.

R01431 – ExxonMobil, Ray Point Project – in timely renewal; in closure with soil decontamination and groundwater issues. The Licensee submitted a Groundwater Characterization Report which is under review.

R02402 – RGR, Panna Maria Project – in timely renewal; in closure with groundwater issues. The licensee submitted an application for updating groundwater protection standards. The application is under review.

R03626 – South Texas Mining Venture, Hobson Project – The Licensee decommissioned a subsite, Mt. Lucas project, and it was released for unrestricted use. Amendment 28 was issued on May 2, 2014 which terminated the Mt. Lucas project from the license. The license renewal for the Hobson Project is under review.

R03653 – URI Kingsville Dome (KVD), Rosita, & Vasquez Projects – Licensee is currently in standby status, not in production. Groundwater restoration was completed in Production Area 1 (PA1) and PA2 by the licensee at the Rosita Project and approved by TCEQ. The licensee was authorized by TCEQ to plug and abandon the Class III wells in both production areas as well as PA4. The licensee did not mine PA4. PA3 at the Rosita Project is in standby status.

Groundwater restoration was completed in PA1 and PA2 by the licensee at the Vasquez Project and approved by TCEQ. The licensee was authorized by TCEQ to plug and abandon the Class III wells in both production areas. The licensee began plugging the Class III wells at the Vasquez Project in December 2017. As of January 1, 2018, plugging activities have not been completed.

The Licensee has completed groundwater restoration in the three production areas at the KVD site. Stability sampling in one of the three production areas has not been completed.

R05360 - EFR Alta Mesa Project - The license renewal is under review.

Technical Quality of Incident and Allegation Activities - Questions 23-24

Q23: 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:

The incidents listed in the table below were reported to the NRC Operation Center's Headquarters Operations Officer.

Licensee Name/ License #	Date of Incident/Report	Type of Incident
URI, Inc./R03653	1/22/2017	Fire
EFR Alta Mesa/R05360	8/9/2017	Fire

Q24: Identify any changes to your procedures for responding to incidents and allegations that occurred during the period of this review.

See question 24, page 17

MATERIALS REQUESTED TO BE AVAILABLE FOR
THE ON-SITE PORTION OF AN IMPEP REVIEW

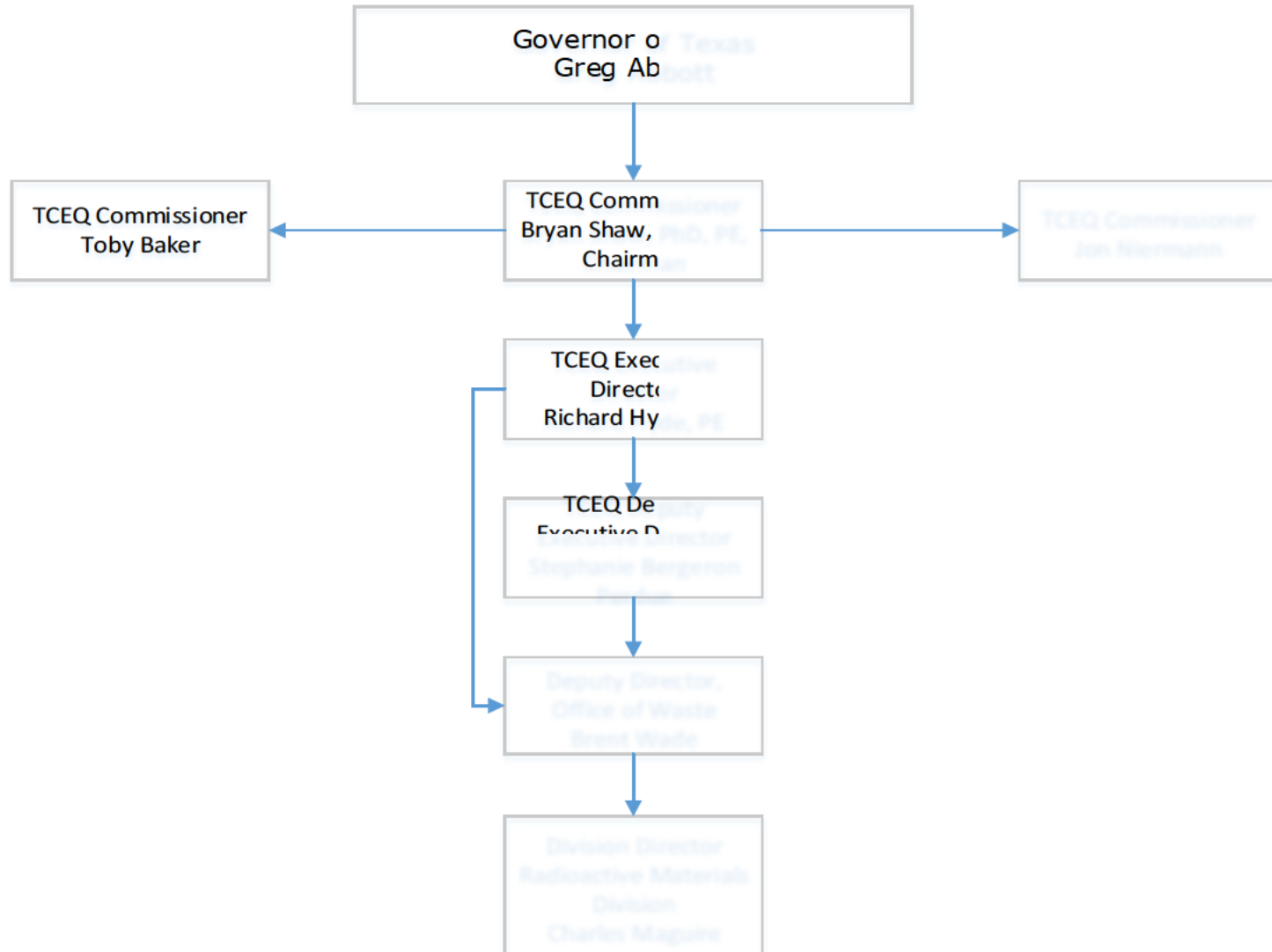
Please have the following information available for use by the IMPEP review team when they arrive at your office:

- List of open license cases, with date of original request, and dates of follow-up actions.
- List of licenses terminated during review period.
- Copy of current log or other document used to track licensing actions.
- List of all licensing actions completed during the review period (sorted by license reviewer, if possible).
- Copy of current log or other document used to track inspections.
- List of all inspections completed during the review period (sorted by inspector, if possible).
- List of inspection frequencies by license type.
- List of all allegations occurring during the review period. Show whether the allegation is open or closed and whether it was referred by NRC.
- List of all licenses that your agency has imposed additional security requirements upon.

ALSO, PLEASE HAVE THE FOLLOWING DOCUMENTS AVAILABLE:

- All State regulations
- Statutes affecting the regulatory authority of the State program
- Standard license conditions
- Technical procedures for licensing, model licenses, review guides
- SS&D review procedures, guides, and standards
- Instrument calibration records
- Inspection procedures and guides
- Inspection report forms
- Documented training plan, if applicable
- Records of results of supervisory accompaniments of inspectors
- Emergency plan and communications list
- Procedures for investigating allegations
- Procedures for investigating incidents
- Enforcement procedures, including procedures for escalated enforcement, severity levels, civil penalties (as applicable)
- Job descriptions

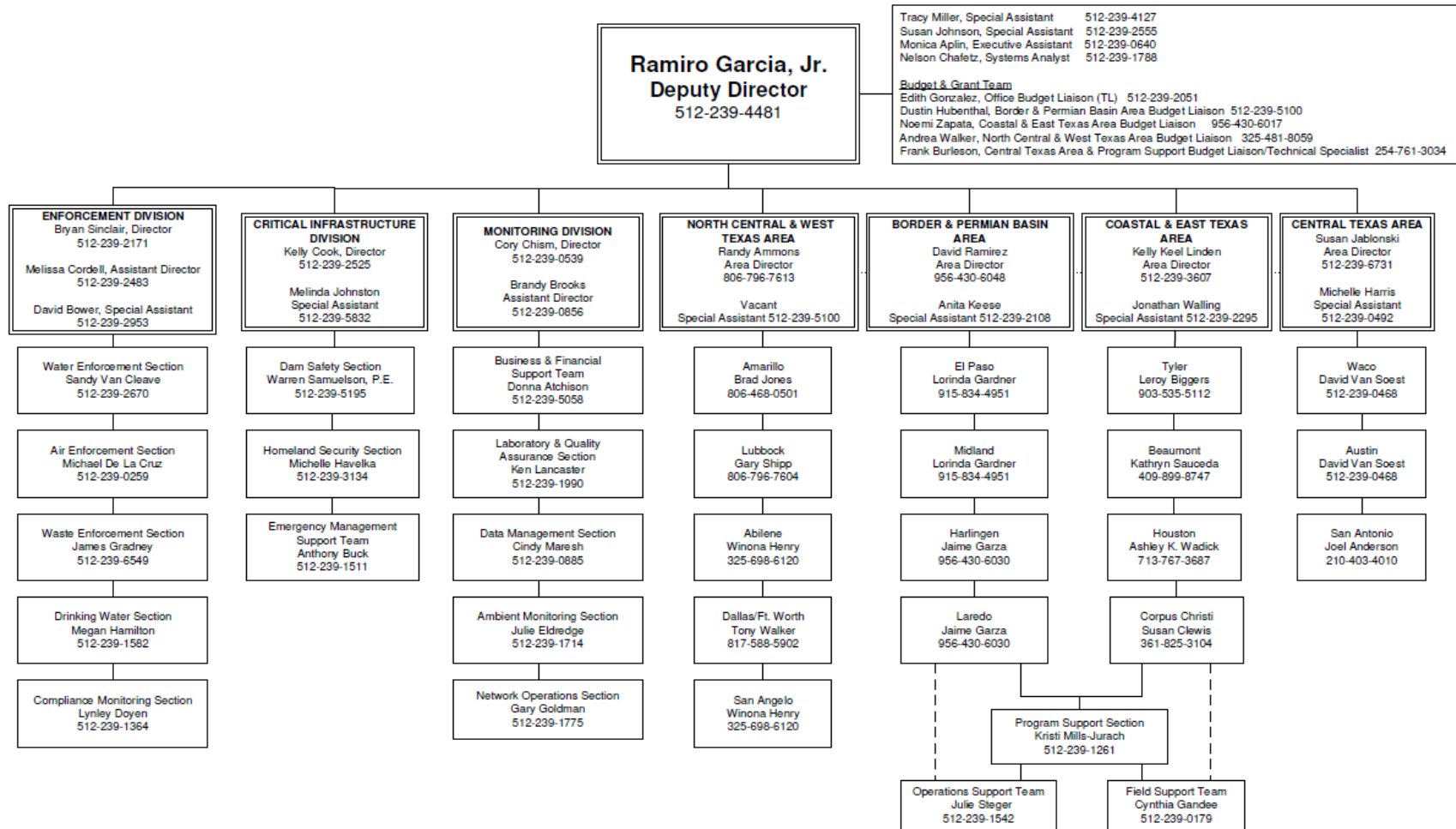
**Appendix A-1: Organization Chart from the Governor of Texas to the Radiation Control Program Director
January 1, 2018**



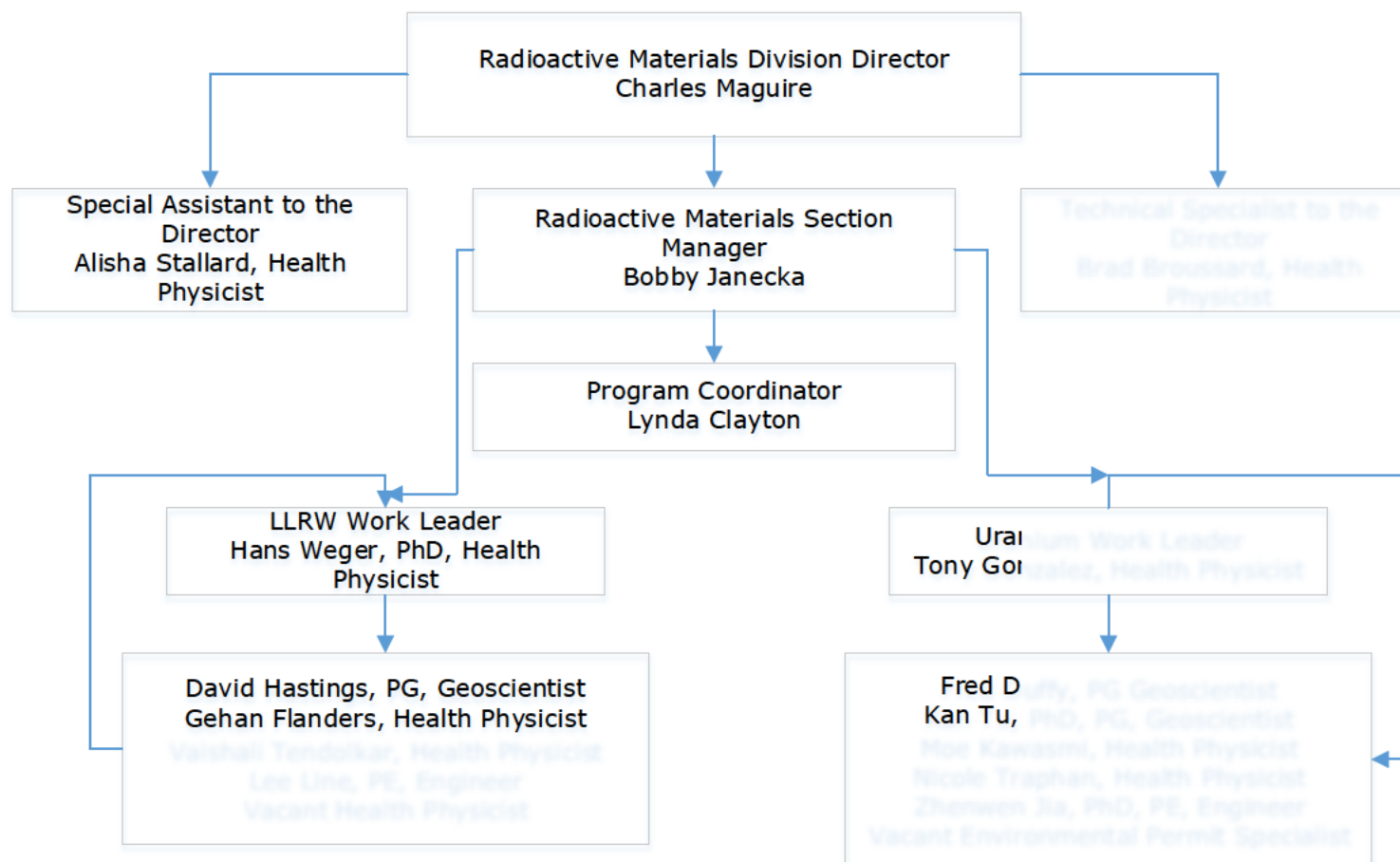
Appendix A-2: Organization Chart: Office of Compliance & Enforcement

Office of Compliance & Enforcement

January 1, 2018



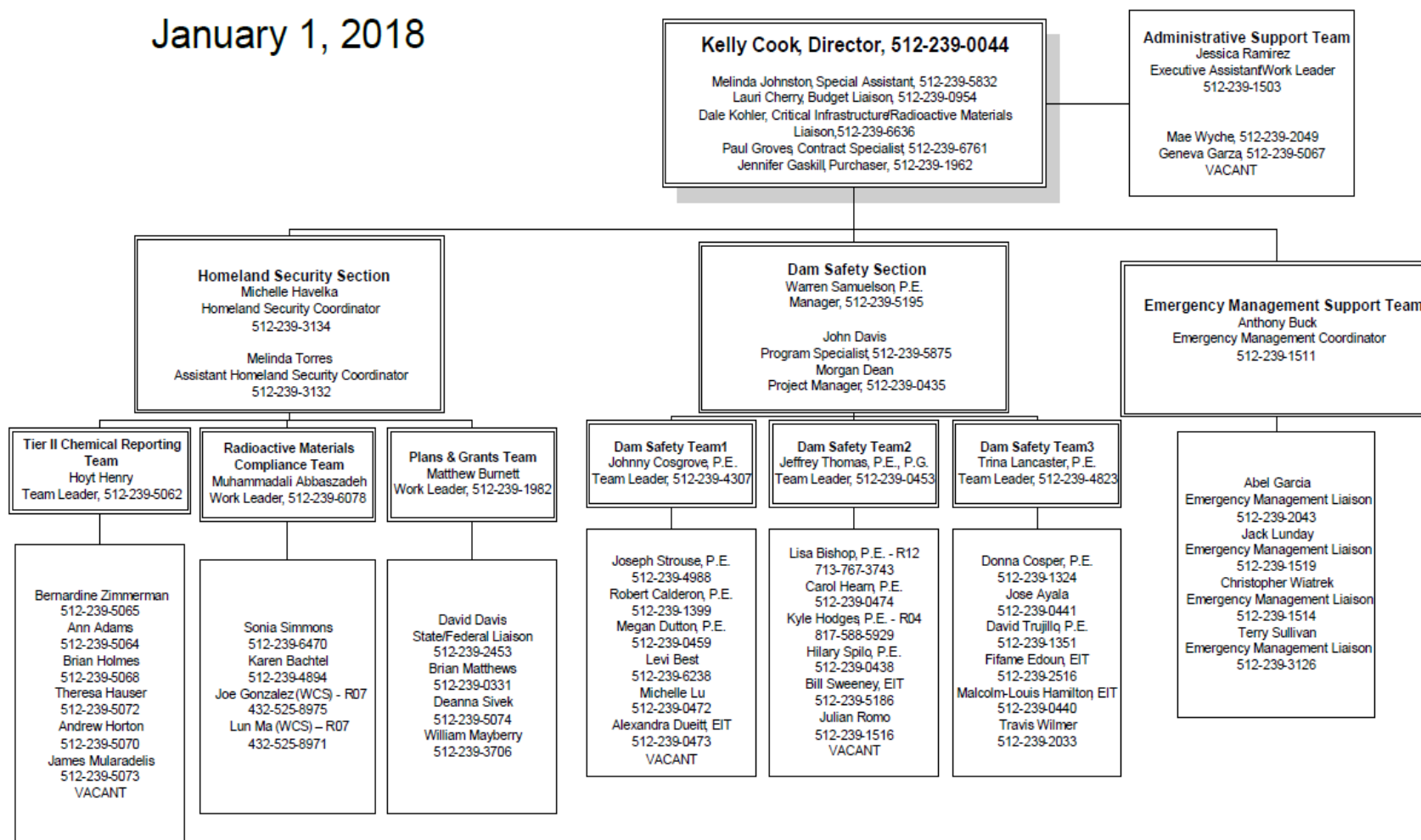
**Appendix A-3: Organization Chart for the Radiation Control Program
Radioactive Materials Division
January 1, 2018**



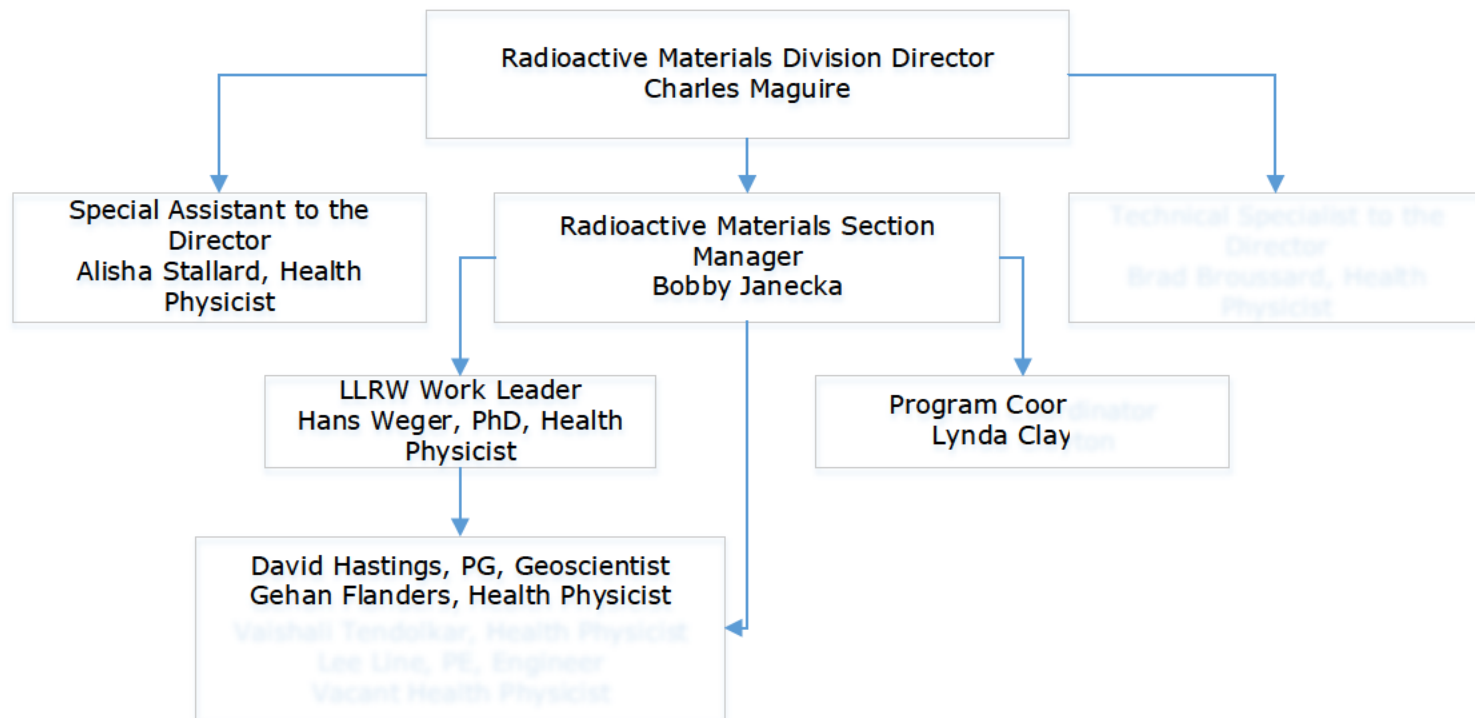
Appendix A-4: Organization Chart: Critical Infrastructure Division

Critical Infrastructure Division

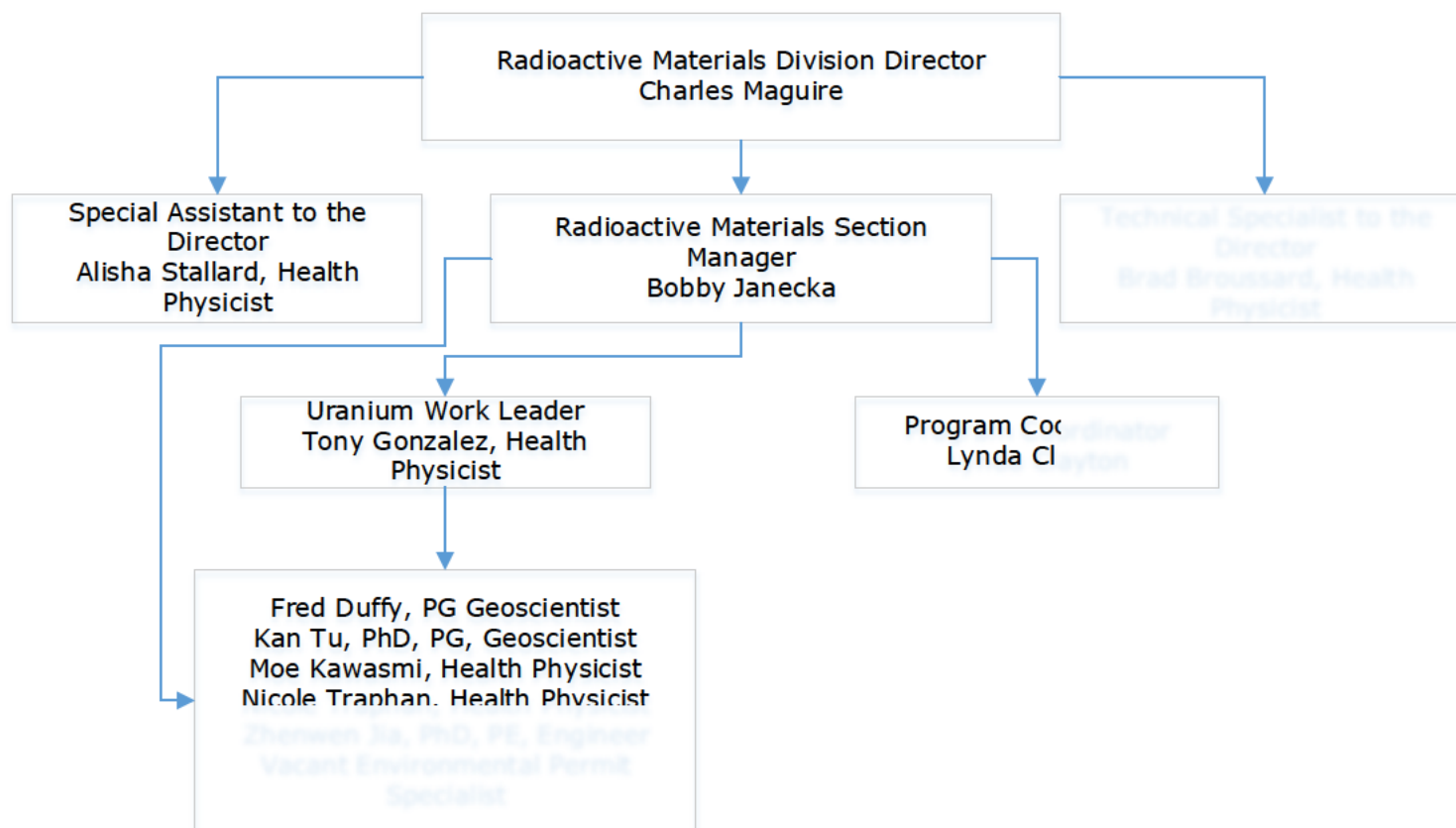
January 1, 2018



**Appendix A-5: Organization Chart: Radiation Control Program
Low-Level Radioactive Waste
January 1, 2018**



**Appendix A-6: Organization Chart: Radiation Control Program
Uranium
January 1, 2018**



**Appendix A-7: List of Inspections Completed during the review period
Radioactive Material License Investigations**

Uranium Facilities

Licensee	Facility / License	Investigation Dates
URI, Inc.	Kingsville Dome / R03653	06/30-07/01/14 08/12-13/15 06/15-16/16 11/15-17/16 07/25-27/17 2/9/17 5/17/17
	Rosita / R03653	03/10/14 03/16-18/15 06/14-16/16 07/25-27/17 08/09/17
	Vasquez / R03653	06/30 - 07/01/15 06/15-16/16 07/25-27/17
EFR Alta Mesa, LLC	Alta Mesa / R05360	04/29-30/14 08/11/15 10/26/16 10/27/17 8/18/ 10/13-14/16 03/16/17

South Texas Mining Venture, LLC	La Palangana / R06062	02/07/14 09/29 - 10/01/15 12/01-02/16 08/10/17
	Hobson / R03626	07/02-03/14 09/23-24/14 03/02-03/16 03/02/17 10/26/17
Uranium Energy Corp.	Goliad / R06064	8/11/17 Construction/Operations has not started; only monitor and baseline wells have been constructed.
	Burke Hollow / Not Issued Yet	
Signal Equities, LLC	Brevard / R06065	7/5/17 Construction/Operations has not started; only monitor and baseline wells have been constructed.
	Brown / R06065	Construction/Operations has not started
Rio Grande Resources	Panna Maria / L02402	09/25/14 03/01/16 02/28/17
ExxonMobil Corporation	Ray Point Uranium Mill / R01431	12/03/14 06/09/16 3/1/17
Conoco Phillips Company	Conquista Project / R01634	12/04/14 06/08/16 05/31/17

**Radioactive Material License Investigations
Low Level Radioactive Waste Disposal**

Licensee	Facility / License	Investigation Dates
Waste Control Specialists, LLC	Waste Control / Specialists / R04100	05/28-30/14 07/21/14 04/14-16/15 07/21-23/15 10/13-16/15 12/08-10/15 12/14-17/15 5/25-27/16 10/04-06/16 10/25-28/16 12/14-16/2016 05/23-25/17 08/16/17 12/13-15/17
Waste Control Specialists, LLC	Waste Control Specialists / R05807	7/15/2016

**Radioactive Material License Investigations
Non-Uranium Facilities**

Licensee	Facility/License	Investigation Dates
Ascend Performance Materials Texas Inc;	Chocolate Bayou Plant / RW0219	4/20 & 6/27-28/16 6/26-27/17
Iso-Tex Corp.	Friendswood / RW1937	04/21/16 & 6/30/16 6/30/17
Nuclear Sources & Services INC./ DBA NSSI/Sources & Services INC.	Houston / R01811	10/20-21/15 6/29/16 6/28-29/17