



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION IV
1600 E. LAMAR BLVD.
ARLINGTON, TX 76011-4511

July 16, 2014

Terry O'Clair, Director
Division of Air Quality
North Dakota Department of Health
918 East Divide Avenue
2nd Floor
Bismarck, ND 58501-1947

SUBJECT: SUMMARY OF PERIODIC MEETING WITH NORTH DAKOTA DEPARTMENT OF HEALTH HELD ON JUNE 25, 2014

Dear Mr. O'Clair,

A periodic meeting was held with you and your staff on June 25, 2014, at your offices at the Department of Health, Division of Air Quality in Bismarck, North Dakota. The purpose of this meeting was to review and discuss the status of the North Dakota Agreement State Program. The NRC was represented by Pamela Henderson, Deputy Director of the Office of Federal and State Materials and Environmental Management Programs (FSME), Randy Erickson, Region IV, and me.

I have completed and enclosed the Periodic Meeting summary including any specific actions resulting from our discussion. If you, or your staff, determine that our conclusions do not accurately summarize the meeting discussion, or if you have any questions or additional remarks about the meeting, please contact me at 817-200-1116, or by e-mail at Binesh.Tharakan@nrc.gov. There will be a Special Management Review Board meeting for this Periodic Meeting, which will be scheduled later.

Sincerely,

/RA/

Binesh K. Tharakan, CHP
Regional State Agreements Officer

Enclosure:
North Dakota Periodic Meeting Summary

NORTH DAKOTA PERIODIC MEETING SUMMARY

Date of Meeting: June 25, 2014

Attendees

NRC	NORTH DAKOTA
Binesh Tharakan, RSAO	Terry O'Clair, Director Division of Air Quality
Pam Henderson, Deputy Director, FSME	Dale Patrick, Manager Radiation Control Program
Randy Erickson, RSAO	Dave Stradinger, Health Physicist Radiation Control Program
	Karen Deibert, Health Physicist Radiation Control Program

DISCUSSION:

The North Dakota Agreement State Program is administered by the Radiation Control Program (the Program), located within the Division of Air Quality (the Division) of the North Dakota Department of Health (the Department). Currently, the Program is composed of one manager and two health physicists and is planning to add two additional health physicists. The Program regulates approximately 110 specific licenses for byproduct, source, and certain special nuclear materials (radioactive materials). The number of specific licenses increased slightly from 102 licenses at the time of the last IMPEP review on April 22-26, 2013. The increase is due primarily to the increased number of radiography, well logging, and industrial gauge licensees supporting the activities in the Bakken oil and gas formation in western North Dakota. The increase in the number of industrial licenses has also increased the number of inspections performed by the Program.

The 2013 IMPEP review team closed 10 recommendations, kept one recommendation open, and made one new recommendation. The review team recommended, and the Management Review Board (MRB) agreed, that the period of Heightened Oversight be discontinued and a period of Monitoring be initiated for the Program to demonstrate a period of sustained performance. The Monitoring process allows NRC to maintain an increased level of communication with the Program and closely monitor performance improvements. Additionally, the IMPEP review team recommended, and the MRB agreed, that a Periodic Meeting be held within one year to assess the State's progress in addressing the open recommendations, and that the next IMPEP review take place in approximately two years, which would be in April 2015.

The purpose of this Periodic Meeting is to fulfill the one year requirement to assess the State's progress towards addressing the open recommendations and to evaluate the overall implementation of the Agreement State Program. In addition, the Monitoring discussion normally scheduled for the second quarter of 2014 was conducted in person at this Periodic Meeting.

Enclosure

Status of Recommendations from Previous IMPEP Reviews

Recommendation 1

The review team recommends that the State: (1) update its existing procedures and develop new procedures, as necessary, to memorialize the policies and practices of the Agreement State program and to serve as a knowledge management tool, and (2) examine options to increase staff retention and/or develop sufficient depth in staffing to effectively implement the program. (Section 2.1, *Technical Staffing and Training*, 2011 IMPEP Report)

Status of Recommendation 1

During the January 2014 monitoring the Program indicated that it has addressed both parts of this recommendation. The program developed documented comprehensive policies and procedures to memorialize the practices of the North Dakota Agreement State program. The procedures have been implemented and are being used in the field. The procedures are working documents that are revised as necessary to reflect the current practices of the program and implement any new guidance that is promulgated by the NRC or the State.

At the time of the periodic meeting, the Program does not need to develop any new policies. Existing policies are adequate to implement a comprehensive radioactive material licensing, inspection and incident response program. Existing policies are periodically reviewed and modified as necessary. Procedures for the qualification and training of staff, radioactive material inspections, licensing actions, and incident response were recently reviewed and updated. The Program Manager informs staff of changes to any policies and the staff is provided training about the changes if necessary.

The second part of this open recommendation was to address staff retention and develop sufficient depth in staffing. This area has been a challenge for the Program due to the increased oil and gas activity in the State. The salaries offered by the Program cannot compete with private industry. One qualified inspector recently left the Program, to take a position with an oil and gas company. To address this challenge, the Program elevated the promotion potential of inspector positions from an Environmental Scientist 2 positions to Environmental Scientist 3 positions. The plan is to eventually have two Environmental Scientist 3 positions and two Environmental Scientist 2 positions. This will result in higher salary incentives for the newer staff. The Program also has the ability to provide "roll-up" dollars, which incrementally increases the staff's pay when another staff person leaves with more seniority. With respect to depth, the program hired a new full time staff member in October 2013 to add depth to the current staff. However, with the departure of a qualified inspector, the Program will be challenged to add sufficient depth in the near future to effectively implement the program. The new

staff member is being mentored by the program manager and fully qualified inspector and license reviewer. The new staff member has begun the formal training program and will attend several NRC training courses this year. The new inspector is nearly qualified in portable and fixed gauge inspections which will add some depth to the Program's inspectors.

Recommendation 2

The review team recommends that the State develop and implement a plan to ensure that inspectors become qualified to conduct inspections in all radioactive material program areas licensed by the State.

Status of Recommendation 2

One of the health physicists on staff is now fully qualified to inspect all radioactive material program areas that are licensed by the State. The second health physicist is in the process of becoming a qualified inspector for portable gauge, fixed gauge, industrial radiography, medical and high dose rate afterloader licenses. One qualified inspector recently left the Program. This departure has challenged the program to ensure inspections are being completed at the frequency required by Inspection Manual Chapter (IMC) 2800, "Materials Inspection Program." Since the departure of the qualified inspector was known ahead of time, the Program worked very hard to get ahead of the planned inspection schedule for the year. The Program is working diligently to qualify the second health physicist for certain license types and alleviate any potential burden that may be placed on the senior inspector. Additionally, the Program Manager is in the process of hiring a third health physicist, and the Division management is in the process of reorganizing positions to allow for the addition of a fourth health physicist to the radioactive materials staff.

The Program has been successful in enrolling new inspectors for NRC training courses and continues to document formal training program for the newer inspectors. The Program Manager and senior inspector continue to mentor and work with the other inspector to develop the necessary licensing and inspection skills to become a fully qualified inspector in all licensed radioactive material areas. The Program Manager maintains oversight of the formal training program and is responsible for certifying completion of the formal qualification and training program.

Program Strengths

The Program Manager stated that having written policies in place, is a program strength. The written policies allow the program to function more effectively, efficiently, and consistently than it has in the past. They have an outstanding fully qualified senior inspector, a very knowledgeable new inspector with significant medical experience, and

the Director provides outstanding support to the manager and the Program to help accomplish the mission.

Another strength is the State has a well-funded budget to support and implement the radioactive materials licensing, inspection, and incident response programs. The well-funded budget also aids in acquiring and retaining program resources. The State charges fees to licensees at about 32 percent of NRC's 2011 fees. By 2016, the fees will be at approximately 60 percent of NRC's 2011 fees and tied to the consumer price index afterwards.

Program Weaknesses

Since the last IMPEP, the Program was fully staffed with three technical staff members and a manager. However, the Program recently lost a qualified staff member to the oil and gas industry. The Program will be challenged to fully qualify one of the remaining staff and bring in two additional staff to support a growing radiation control program. Any additional staff losses by the program would be a weakness. The Program Manager plans to increase efficiency by streamlining some licensing and inspection activities to help offset the workload on the staff. Currently, the program uses a detailed report for every inspection. The Program is considering the use of a form similar to NRC's Form 591 during inspections that can be left with the licensee at the end of an inspection to reduce the inspection report writing workload. The Program is also reviewing the possibility of implementing the State version of NRC's web-based licensing software to help streamline certain licensing actions.

Feedback on NRC's Program

The Program indicated that the IMPEP process especially the frequent reviews during periodic meetings and follow-up IMPEP reviews was a very beneficial program in helping the Program get back on track. The IMPEP process guided the Program to develop policies and procedures to promote knowledge management transfer and minimize the impacts from any future, potential turnover in personnel.

The Program has been successful at getting students into training and appreciates the continued funding of training courses for its staff. The Program manager stated it would be beneficial to the Program if the manager could receive refresher training since it has been several years since the manager has taken some of the technology courses.

The Program requested to accompany NRC inspectors who are performing inspections in the area as the availability arises. The Program indicated that a webinar on performance based inspection techniques would also be beneficial to the staff.

Staffing and Training

Currently, the Program has two staff members in Environmental Scientist 3 (ES3) positions and a program manager. One of the technical staff members is qualified to perform all license types licensed by the State. The other staff member is in the process of qualifying to perform fixed and portable gauge, medical, high dose rate afterloader, and industrial radiography inspections. The Program is expected to hire two additional staff at an ES2 level to replace the staff person that recently left the Program. The Program follows the guidance in IMC 1246, "Formal Qualification Programs in the Nuclear Material Safety and Safeguards Program Area" to train and qualify each technical staff member.

The Program Manager stated that increasing the number staff to four full time employees should provide sufficient resources to support the increased workload from the oil and gas activities. As part of the cross-training initiative, the Program has been training two additional staff members from the X-ray unit support the Program, by sending them to the NRC-sponsored core training courses. However, the program does not rely on these resources to implement the daily operations necessary to implement the Agreement between NRC and the State of North Dakota.

Program Reorganizations

The Program plans to add one or two ES2 staff positions to support the growth in radioactive materials use in North Dakota.

Changes in Program Budget/Funding

North Dakota is poised to successfully meet their budget obligations based on the strong economy as a result of the oil and gas industry and fiscally conservative agenda in the legislature. The Program evaluated their fee structure and set up a six-year program which automatically increased fees by fourteen percent annually. In 2014, the fourth year of the six-year program, North Dakota's fees structure is approximately 32 percent of NRC's 2011 fees. In 2016, North Dakota's fees will be approximately 60 percent of NRC's 2011 fees. After 2016, the fee structure will be adjusted automatically based on the Consumer Price Index.

Materials Inspection Program

At the time of this periodic meeting, the Program reported that there were no overdue inspections. The program is actually ahead of schedule for 2014. The number of licenses in the Program has increased by approximately 10 percent over the last year, to approximately 110 specific licenses total. The Program follows IMC 2800 for the inspection priority codes assigned to the respective license types. The security inspections were being performed in conjunction with the health and safety inspections.

The majority of new licenses issued are radiography and well logging licenses. The Program schedules the initial inspection for new licenses within nine months to ensure the inspection is completed within the first year. Reciprocity activities are tracked in a database to ensure these inspections are performed to meet the inspection criteria in IMC 1220, "Processing of NRC Form 241, "Report of Proposed Activities in Non-Agreement States, Areas of Exclusive Federal Jurisdiction, and Offshore Waters," and Inspection of Agreement State Licensees Operating under 10 CFR 150.20."

Materials Licensing Program

As already indicated, there was an increase in the number of new licenses issued during this review period. The Program indicated that they were performing pre-licensing visits in accordance with the risk significant radioactive material (RSRM) guidance and performing the pre-licensing security inspections as required by IMC 2800. The Program indicated that their expectation was to complete licensing actions within 30-days, once the technical staff had received the completed application or amendment request and all supporting documentation. The Program indicated that they do not have a backlog of licensing actions.

Regulations and Legislative Changes

The State is up to date on the submittal of regulatory amendments currently required for compatibility. The North Dakota legislature meets for approximately 90 days every two years. The Department has been granted authority to implement rules through an administrative rules process, therefore the Program does not have to wait for the legislature to adopt new rules.

The following amendment will need to be addressed by the Program in future rulemakings or by adopting alternate legally binding requirements:

- RATS 2011-2, "Licenses, Certifications, and Approvals for Materials Licensees," 10 CFR Parts 30, 36, 39, 40, 70, and 150 (76 FR 56951) that is due for Agreement State adoption by November 14, 2014.

Event Reporting, Including Follow-up and Closure Information in NMED

At the time of the periodic meeting, the Program had two events reported in the Nuclear Material Events Database (NMED) since the April 2013 IMPEP review. The Program has developed procedures to track and investigate events. The procedure follows the guidance in FSME procedure, SA-300, "Reporting Material Events."

Response to Incidents and Allegations

The Program continues to be responsive to notifications of incidents and allegations when they are received. No allegations have been received by the Program since the last IMPEP review.

Status of Allegations and Concerns Referred by the NRC for Action

The NRC did not refer any allegations to the Program since the last IMPEP. The Program has received complaints about technically enhanced naturally occurring radioactive materials (TENORM), which have also been reported by several national and local news media. TENORM are not regulated by the NRC and is not a matter of compatibility under the 274i Agreement of the Atomic Energy Act, as amended, and is therefore not reviewed under the IMPEP process. The Program has procedures in place to address receipt and investigation of allegations. The Program also indicated that if an investigation took place, then at the conclusion of the investigation into the allegation, the Program would communicate the results of their investigation to the concerned individual. The communication is typically performed by either email or formal correspondence.

Emerging Technologies

The Program did not have any emerging technologies since the last IMPEP.

Large, Complicated, or Unusual Authorizations for use of Radioactive Materials

As indicated earlier, the Program is currently dealing with large complex TENORM decommissioning issues, however, there have not been any significant radioactive materials issues subject to the IMPEP process.

Current State Initiatives

TENORM and oil socks regulations. None associated with the IMPEP process.

State's Mechanisms to Evaluate Performance

The Program uses an Access Database to track licensing actions, inspections, and incidents. The Program uses management review of inspection reports and licensing actions to ensure the quality of regulatory products. The Program holds a biweekly meeting to review events, track metrics for inspections and licensing actions, and to ensure communications are sufficient for any large or complicated actions. The Division also conducts a semi-annual meeting to discuss current issues, review

accomplishments, and set goals and objectives for the next six months. The Program Manager performs multiple inspection accompaniments of the technical staff each year.

Current NRC Initiatives

The following NRC initiatives were discussed with the Program:

- FSME – NMSS Merger
- NRC's inspector qualification program (IMC 1248)
- Updates on the NUREG 1556 series revisions
- Rulemaking Initiatives Parts 35 and 61
- 2016 Implementation deadline for Part 37
- Performance Based Compatibility and Agreement State Program updates
- FSME and RCPD Letters
- Policy Statements for Agreement States on Adequacy and Compatibility
- Results of the GAO audit of industrial source security and background checks

Schedule for the Next IMPEP Review

The staff recommends that the period of Monitoring be continued and the next IMPEP review be held in April 2015, as currently scheduled.