

November 29, 2011

Christopher Boyd, Assistant Commissioner  
Office of Radiological Health  
Bureau of Environmental Sciences & Engineering  
New York City Department  
of Health and Mental Hygiene  
22 Courtlandt Street, 28<sup>th</sup> Floor, CN 60  
New York, NY 10007

Dale Desnoyers, Director  
Division of Environmental Remediation  
New York State Department of Environmental Conservation  
625 Broadway  
Albany, NY 12233-7011

Howard Freed, MD, Director  
Center for Environmental Health  
New York State Health Department  
547 River Street, Room 500  
Troy, NY 12180-2216

Dear Sirs:

On October 11, 2011, the Management Review Board (MRB) met to consider the proposed final Integrated Materials Performance Evaluation Program (IMPEP) report on the New York Agreement State Program. The MRB found the New York Agreement State Program adequate, but needs improvement, to protect public health and safety, and not compatible with the U.S. Nuclear Regulatory Commission's (NRC) program. Because of the significance of the findings, the MRB determined that the New York Program should continue the period of Heightened Oversight. Heightened Oversight is an increased monitoring process the NRC uses to follow the progress of improvement needed in an Agreement State program. It involves preparation of a program improvement plan, bimonthly conference calls, and submission of status reports prior to each call with the appropriate New York and NRC managers and staff members.

Section 5.0, page 29, of the enclosed final report contains a summary of the review team's findings and recommendations for the New York Agreement State Program. We request that you prepare and submit a program improvement plan as part of your response to the review team's recommendations. I ask that you have your staff discuss the required elements of this plan with Mr. Brian McDermott, Director, Division of Materials Safety and State Agreements, Office of Federal and State Materials and Environmental Management Programs, to ensure that a path forward and measures of success are clearly identified. The plan should be submitted within 30 days of receipt of this letter. Upon review of your program improvement plan, NRC staff will schedule the first conference call. The initial conference call should be scheduled and conducted no later than January 30, 2012.

Based on the results of the current IMPEP review, a Periodic Meeting will be held within 1 year to assess the State's progress in addressing the open recommendations, and an IMPEP review take place approximately 1 year following the Periodic Meeting (2 years from current IMPEP). The MRB believes that the performance of an IMPEP at approximately 2 years from the current IMPEP will allow the State sufficient time to correct programmatic issues identified during the review. The IMPEP review will cover the State's actions in response to the recommendations in the enclosed final report.

I appreciate the courtesy and cooperation extended to the IMPEP team during the review. I also wish to acknowledge your continued support for the Agreement State Program. I look forward to our agencies continuing to work cooperatively in the future.

Sincerely,

*/RA/*

Michael F. Weber  
Deputy Executive Director for Materials, Waste,  
Research, State, Tribal, and Compliance Programs  
Office of the Executive Director for Operations

cc w/ encl: See next page

Letter to C. Boyd, et al from Michael F. Weber dated:

SUBJECT: NEW YORK 2011 FINAL IMPEP REPORT

**cc w/ enclosures:** EDATS: FSME-2011-0095

Francis Murray, President and CEO  
NY State Energy Research and Development Authority  
State Liaison Officer  
17 Columbus Circle  
Albany, NY 12223

Gene Miskin, Director  
Office of Radiological Health  
Bureau of Environmental Sciences & Engineering  
New York City Department  
of Health and Mental Hygiene  
22 Courtlandt Street, 28<sup>th</sup> Floor, CN 60  
New York, NY 10007

Jim Harrington, Director  
Remedial Bureau A  
Division of Environmental Remediation  
New York State Department of Environmental Conservation  
625 Broadway  
Albany, NY 12233-7011

Sandra Hinkel, Chief  
Radiation Control Permits Section, Remedial Bureau A  
Division of Environmental Remediation  
New York State Department of Environmental Conservation  
625 Broadway  
Albany, NY 12233-7011

Timothy Rice, Chief  
Radiological Sites Section, Remedial Bureau A  
Division of Environmental Remediation  
New York State Department of Environmental Conservation  
625 Broadway  
Albany, NY 12233-7011

Robert Chinery, M.S., P.E., Assistant Director  
Center for Environmental Health  
New York State Health Department  
547 River Street, Room 500  
Troy, NY 12180-2216

Adela Salame-Alfie, Ph.D., Acting Director  
Division of Environmental Health Investigations  
New York State Health Department  
547 River Street, Room 500  
Troy, NY 12180-2216

Stephen Gavitt, CHP, Director  
Bureau of Environmental Radiation Protection  
New York State Health Department  
547 River Street, Room 500  
Troy, NY 12180-2216

Robert Dansereau, Assistant Director  
Bureau of Environmental Radiation Protection  
New York State Health Department  
547 River Street, Room 500  
Troy, NY 12180-2216

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INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF THE NEW YORK AGREEMENT STATE PROGRAM

JUNE 6-16, 2011

**FINAL REPORT**

Enclosure

## EXECUTIVE SUMMARY

This report presents the results of the Integrated Materials Performance Evaluation Program (IMPEP) review of the New York Agreement State Program. The New York Agreement State program is currently administered by three agencies including the New York City Department of Health and Mental Hygiene (NYC), the New York State Department of Health (DOH), and the New York State Department of Environmental Conservation (DEC). The review was conducted during the period of June 6-16, 2011, by a review team composed of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the State of Louisiana.

Based on the results of this review, the review team recommended, and the Management Review Board (MRB) agreed, that New York's performance be found unsatisfactory for two performance indicators reviewed; satisfactory, but needs improvement for two performance indicators reviewed; and satisfactory for the four remaining performance indicators reviewed. Overall, the review team further recommended, and the MRB agreed, that the New York Agreement State Program be found adequate to protect public health and safety, but needs improvement, and not compatible with NRC's program.

The review team made five recommendations regarding the performance of the New York Agreement State Program. These recommendations, which are briefly described below, included areas for improvement to correct identified performance deficiencies and weaknesses in New York Agreement State Program. The review team recommended that: (1) DOH develop and implement a process to track reciprocity inspections to ensure at least 20 percent of candidate licensees for reciprocity are inspected; (2) NYC respond to each incident received in accordance with its established Incident Response Procedure; (3) NYC modify its Incident Response Procedure to add timely notifications to the NRC Operations Center in accordance with the timelines identified in SA-300; (4) NYC evaluate all incident statistical information received from licensees, both retrospectively and prospectively and, and follow-up in a manner to ensure that each incident is properly evaluated for health, safety, and security implications; and (5) DOH develop comprehensive incident response and allegation procedures, and ensure that reportable incidents are reported to the NRC Operations Center in accordance with the timelines identified in SA-300.

Based on the results of the current review, the review team recommended, and the MRB agreed, that the period of Heightened Oversight continue and that the current Program Improvement Plan be revised to include those recommendations identified during the 2011 IMPEP review. The review team further recommended, and the MRB agreed, that a Periodic Meeting be held in approximately one year and that the next full IMPEP review take place in approximately two years.

## 1.0 INTRODUCTION

This report presents the results of the review of the New York Agreement State Program. The review was conducted during the period of June 6-16, 2011, by a review team comprised of technical staff members from the U.S. Nuclear Regulatory Commission (NRC) and the State of Louisiana. Team members are identified in Appendix A. The review was conducted in accordance with the "Implementation of the Integrated Materials Performance Evaluation Program and Rescission of a Final General Statement of Policy" published in the *Federal Register* on October 16, 1997, and the February 26, 2004, NRC Management Directive 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)." Preliminary results, which covered the period of November 10, 2006, to June 16, 2011, were discussed with New York management on the last day of the review.

A draft of this report was issued to New York for factual comment on July 15, 2011. New York responded to the findings and conclusions of the review by letters dated August 10, 2011, from Christopher Boyd, Assistant Commissioner, Bureau of Environmental Services and Engineering; electronic mail dated August 15, 2011, from Stephen M. Gavitt, Director, Bureau of Environmental Radiation Protection; and electronic mail dated August 4 and 8, 2011, from Sandra Hinkel, Chief, Radiation Control Permit Section. New York's response letters are attached to this report and can be found in NRC's Agencywide Document Access and Management System (ADAMS) using the Accession Numbers ML11222A252, ML11227A287, ML11216A261, and ML112201338. The Management Review Board (MRB) met on October 11, 2011, to consider the proposed final report. The MRB found the New York Agreement State Program adequate to protect public health and safety but needs improvement, and not compatible with NRC's program.

The New York Agreement State program is currently administered by three agencies: (1) the New York City Department of Health and Mental Hygiene (NYC), which has jurisdiction over medical, academic, and research uses of radioactive materials within the five boroughs of New York City; (2) the New York State Department of Health (DOH), which has jurisdiction over industrial uses of radioactive materials throughout the State, as well as medical, academic, and research uses outside of New York City; and (3) the New York State Department of Environmental Conservation (DEC), which has jurisdiction over discharges of radioactive material to the environment, including releases to the air and water and the disposal of radioactive wastes in the ground. Organization charts for the three programs are included as Appendix B.

At the time of the review, the combined New York programs regulated approximately 1,500 specific licenses, including all major types of licenses with the exception of uranium mill tailings. The review focused on the radioactive materials program, as implemented under the Section 274b of the Atomic Energy Act of 1954, as amended, Agreement between the NRC and the State of New York.

In preparation for the review, a questionnaire addressing the common and non-common performance indicators was sent to each of the three agencies on January 20, 2011 (ML110200486). Each agency provided an electronic response to the questionnaire; DEC on May 9, 2011; NYC on May 20, 2011; and DOH on May 23, 2011. A copy of the respective questionnaire responses can be found in ADAMS using the Accession Numbers ML111290549,

ML111460424 and ML111460513. An update to the questionnaire response from NYC was received by email on June 9, 2011 and can be found under ML111990239.

The review team's general approach for conduct of this review consisted of: (1) examination of each agency's response to the questionnaire; (2) review of applicable New York statutes and regulations; (3) analysis of quantitative information from each agency's licensing and inspection database; (4) technical review of selected licensing and inspection actions; (5) field accompaniments of 11 State inspectors; and (6) interviews with staff and management to answer questions and to clarify issues. The review team evaluated the information gathered against the established criteria for each common and applicable non-common performance indicator and made a preliminary assessment of the New York Agreement State Program's performance.

On November 3, 2005, the Management Review Board (MRB) met to consider the findings of a Periodic Meeting with the New York Agreement State Program conducted on April 12-13 and 19, 2005. As a result, the MRB determined that the New York Agreement State Program should enter into a period of Heightened Oversight due to a number of overdue NRC amendments required for compatibility by each of the agencies that comprise the Agreement State program (ML053540394).

On February 8, 2007, the MRB again met to consider the findings of a full IMPEP review conducted on November 1-9, 2006. As a result, the MRB determined that the period of Heightened Oversight should be extended due to a lack of progress in eliminating the overdue amendments. As a result, each agency continued to have bimonthly calls to discuss their progress in adopting regulations, and additional Periodic Meetings were held respectively with each agency on November 27, 28 and 29, 2007 and again on July 16, 28 and 29, 2009. Following each of the Periodic Meetings, the MRB convened and determined that the period of Heightened Oversight should continue.

Section 2.0 of the report discusses the State's actions in response to recommendations made during the previous IMPEP review. Results of the current review for the common performance indicators are presented in Section 3.0. Section 4.0 discusses results of the applicable non-common performance indicators, and Section 5.0 summarizes the review team's findings and recommendations. The recommendations made by the review team are comments that relate directly to performance by the State. A response is requested from the State to all recommendations in the final report.

## 2.0 STATUS OF ITEMS IDENTIFIED IN PREVIOUS REVIEWS

During the previous review, which concluded on November 9, 2006, two recommendations were left open from the prior (2002) review. No new recommendations were opened during the 2006 review. The review team's evaluation of the status of these recommendations is as follows:

1. The review team recommends that DEC transmit inspection findings to their licensees within thirty days after the close of the inspection. (Held open from Section 3.2.5 of the 2002 IMPEP review)



Status: Based on the review of inspection casework and discussions with DEC staff, the review team found that DEC is issuing inspection findings in a timely manner. This recommendation is closed.

2. The review team recommends that each New York Agency (NYC, DOH and DEC) develop and implement an action plan to adopt NRC regulations in accordance with the current NRC policy on adequacy and compatibility. (Open from Section 4.1.3 of the 2002 IMPEP review).

Status: The review team found that the NYC, DOH, and DEC have each developed and implemented an action plan to adopt NRC regulations in accordance with the current NRC policy on adequacy and compatibility. Under Heightened Oversight, each Program's overdue regulations, as identified on their current Program Improvement Plan, continue to be tracked and monitored. While each Program is still working to achieve the ultimate goal of timely adoption of regulations, slight progress has been made. This progress, however, has been negated by regulation amendments which were not previously overdue for adoption, becoming overdue for adoption, during the review period. This recommendation remains open.

### 3.0 COMMON PERFORMANCE INDICATORS

IMPEP identifies five common performance indicators to be used in reviewing both NRC Regional and Agreement State radioactive materials programs. These indicators are: (1) Technical Staffing and Training; (2) Status of Materials Inspection Program; (3) Technical Quality of Inspections; (4) Technical Quality of Licensing Actions; and (5) Technical Quality of Incident and Allegation Activities.

#### 3.1 Technical Staffing and Training

Evaluation of this performance indicator included a review of each agency's staffing level and staff turnover, as well as the technical qualifications and training histories of the staff. To evaluate these issues, the review team examined the respective program's response to the IMPEP questionnaire relative to this indicator, interviewed management and staff, reviewed job descriptions and training records, and considered any possible workload backlogs.

##### 3.1.1 New York City Department of Health and Mental Hygiene

NYC is staffed by the Office Director, the Unit Chief for the Materials Program, and seven technical staff members totaling of 4.7 full-time equivalents (FTE). There are currently no vacancies in this program. During the review period, one staff member transferred from the materials program to the Emergency Response Unit (ERU) and another individual was hired as a replacement.

Originally the ERU was an integral part of the NYC program and as part of the NYC program conducted Increased Controls (IC) inspections for the City of New York. However, when the ERU expanded and became an independent Bureau, they no longer assisted in conducting IC inspections. Now the NYC program conducts all IC inspections within the five boroughs of New York. With the advent of the Lower Manhattan Security Initiative, NYC inspectors in conjunction

with the New York City Police Department conduct joint IC inspections.

NYC requires a Bachelor's degree in engineering, physical or biological sciences for all technical positions. The review team reviewed the job descriptions as presented by the Office Director, for NYC Scientist I-III staff positions. The job descriptions identify the individual categories and describe typical tasks required for the position. The review team found that the job descriptions are consistent with requirements for equivalent NRC positions. The review team also reviewed a portion of the NYC Policy and Procedure Manual dated 2004 as presented by the Unit Chief. This document describes, in part, the requirements for training for new members of the field staff. New inspectors are required to attend the five week Applied Health Physics course offered by Oak Ridge Associated Universities (ORAU) or a similar series of courses unless the individual's background is such that they already have similar training and experience.

The Unit Chief provided the team with a breakdown of training that each inspector has completed. The review team noted that, with the exception of attending NRC's S-201, "Material's Control and Security Course" (IC training course), no member of the staff had attended any materials specific technical training courses in several years. The review team noted that NYC, through a cross-training initiative, has provided X-ray related training.

During interviews with two NYC inspectors, the inspectors indicated that they had not been to any materials training outside of the IC training course. However, the inspectors were considered fully qualified to perform all types of inspections independently. The review team found that in the case of the two newest inspectors, who upon their hire dates did not have technical backgrounds sufficient to exempt them from initial technical training, NYC did not follow its own training procedures and send the inspectors to the five-week health physics training course as required by their procedures. Based on the documentation provided to the review team by the Unit Chief, only two individuals have attended the five-week health physics training course, one with nearly 20 years experience and one with nearly 15 years experience. No other individuals have attended this training.

NRC staff conveyed concerns related to inspector training to the NYC Office Director and Unit Chief via email on May 12, 2011 (ML111990264). Subsequently, on May 25, 2011, NYC filed an application with the NRC Agreement State Training Coordinator to have three NYC inspectors attend three separate basic training courses (ML111990259).

The review team found that NYC staff has made requests for additional technical training which have, for the most part, not been acted upon until recently. As noted in Section 3.5.1 of this report, the review team identified additional training concerns, specifically regarding incident reporting requirements. The review team believes that NYC could benefit from SA-300 training (reporting requirements) as the team had concerns about the ability of NYC to accurately apply the reporting requirements to incidents that occur within their jurisdiction.

### 3.1.2 New York State Department of Health

DOH is managed by the Director, the Assistant Director, and four Section Chiefs. DOH has a total of 11.5 FTE in the materials program. There are currently no vacancies in this program. During the review period, one senior staff member was reassigned to the Laboratory and 10

other staff members left the program. These positions were permanently eliminated and represented an overall reduction of 6.2 FTE for the materials program. The review team noted that over the course of the review most, if not all, of the deficiencies (timeliness and resources for program improvements) found within the Program were related to a diminished staffing level, or loss of staff during the review period.

The Program has 36 total staff members who are responsible for licensing and inspection of approximately 1200 materials licensees, registration and inspection of approximately 11,000 X-Ray facilities, licensing and review of continuing education for approximately 20,000 licensed X-Ray technologists, supporting emergency response activities for three power reactor sites, environmental monitoring, and management of the Radon program. The Director and Assistant Director primarily conduct administrative activities. Program managers stated that they have been forced to take staff from the X-Ray program to maintain the materials program. They added that this movement of staff has reduced the effectiveness of the X-Ray program and some work remains uncompleted. The strain of the permanent staff losses has begun to erode the overall effectiveness of the Program and has resulted in reduced performance in some areas. While the review team did not note any performance issues where health, safety, and security was directly involved, the review team did note several areas within the Program where staff losses have resulted in deficiencies as noted throughout this report.

DOH staff is required to have a Bachelor's degree in physical or biological sciences. DOH reported that it does have a general training policy but not a formalized training process. While individual qualification type journals are maintained for the staff, they only attend training classes on an "as needed" basis. The Assistant Director stated that not all staff needs to attend all the training classes, and added that DOH evaluates the need for materials specific training based on the program's needs, an individual's prior training and experience, and the individual's assignments, and then tailors training to those needs. DOH also hosts training classes when the need arises or a class becomes available. DOH also utilizes a mentorship type program where new staff are trained one-on-one directly with senior staff. The review team determined that DOH staff is well-qualified, based on education and experience.

DOH also faces the possibility of more staff losses in the future due to retirements, and anticipates that these positions may also be eliminated. Further, DOH is currently operating under a hard hiring freeze, no staff can be added and no exceptions to the freeze are allowed. Additionally, the State recently announced the possibility of another 10,000 statewide layoffs. How these additional reductions in staff might affect the Program is unclear at this time.

### 3.1.3 New York State Department of Environmental Conservation

DEC is managed by the Bureau Director and two Section Chiefs. DEC has a total of 5.75 FTE. There have been two vacancies in the program since 2008: an Environmental Radiation Specialist 2 position (West Valley Environmental Monitor) and an Environmental Program Specialist 2 position (LLRW Transporter Program). The Department has not yet requested waivers to fill those positions due to budget constraints. During the review period, the Radiological Sites Section Chief and a staff member in charge of low-level radioactive waste and regulatory development left the program. The staff member who previously filled the West Valley Environmental Monitor position was promoted to Section Chief, and that vacated position currently remains open. Also during the review period DEC hired three new staff members.

The permitting and inspection activities of the program are performed by six staff members, with the rest of the staff dedicated primarily to contaminated sites as well as other activities not directly covered under the Agreement. All staff is involved in incident and emergency response activities.

DEC technical positions are required to have a Bachelor's degree in science or engineering and at least two years of experience in the environmental radiation field. From the review of the technical qualifications and discussions with current staff, the review team concluded that DEC has been able to hire qualified individuals.

Because of the small number of inspectors and permit reviewers, DEC has not developed a formal qualification program. DEC does have a documented training policy. Staff in the Radiation Control Permit Section must complete, at a minimum, the following courses: Applied Health Physics, Licensing Practices and Procedures, Inspection Procedures, and Air Sampling courses, as well as the 40-hour HAZWOPER course. All permit section staff have completed those minimum required courses. In addition, new Radiation Control Permit Section staff is trained individually by their supervisors in performing inspections and reviewing permit applications. Inspectors in training move through the following stages: (1) accompanying experienced inspectors, as observers; (2) assisting experienced inspectors; (3) taking the lead in inspections, assisted by experienced inspectors; and (4) performing inspections independently. Inspectors move through these stages based on the assessment of the Section Chief. The same staff is trained to review permit applications by first reviewing minor permit modifications and routine renewals, then applications of increasing complexity. All permitting decisions are reviewed by the Section Chief. The review team noted that DEC monitors training of personnel with a spreadsheet that is updated on a regular basis.

Environmental Radiation Specialist staff in the Radiological Sites Section must also complete courses in Applied Health Physics and 40-hour HAZWOPER, and additional courses in Environmental Monitoring, MARSSIM, and RESRAD, as appropriate for assignments.

DEC also faces the possibility of more staff losses in the future due to retirements and anticipates that these positions may also be eliminated. Further, DEC is currently operating under a hard hiring freeze, no staff can be added and no exceptions to the freeze are allowed. Additionally, the State recently announced the possibility of another 10,000 statewide layoffs. How these additional reductions in staff might affect the Program is unclear at this time.

#### 3.1.4 Indicator Summary

The review team determined that the only Program that was fully staffed during the review period was the NYC Program. DOH has experienced several permanent staff losses in many key areas which has started to affect the program's effectiveness and efficiency. While DEC is not fully staffed, they have been less affected by the staff losses. Regardless of the number of staff losses noted, the review team found no specific performance issues at this time where health, safety and security are concerned.

NYC has a documented training program; however, the review team determined that this procedure was not being implemented in all cases. Some NYC staff members interviewed have educational backgrounds in fields unrelated to the work performed and admit to being deficient

in knowledge of the license types/activities they inspect. Staff requests for training have only recently been approved by management.

Additionally, NYC staff has not demonstrated the ability to apply reporting criteria to incidents they have received. A serious event which was determined by the review team to meet the reporting criteria had been previously evaluated by NYC staff and found to not be reportable. The review team believes that NYC staff would benefit from training on NRC reporting requirements.

A balance in staffing for licensing and inspection, qualification criteria for technical staff, and management commitment to training are key features for a satisfactory performance in technical staffing and training. For one of the three agencies, the review team determined that permanent staff losses could adversely upset the balance in staffing and licensing. In another agency, training and qualification standards are not being followed and a commitment to materials training by management was not evident.

Based on the IMPEP evaluation criteria, the review team recommended, and the MRB agreed, that New York's performance with respect to the indicator, Technical Staffing and Training, be found satisfactory, but needs improvement.

### 3.2 Status of Materials Inspection Program

The review team focused on five factors in reviewing the status of the material inspection program: inspection frequency, overdue inspections, initial inspections of new licensees, timely dispatch of inspection findings to licensees, and the performance of reciprocity inspections. The review team's evaluation is based on the individual programs' questionnaire responses relative to this indicator, data gathered from each program's licensing and inspection database, the examination of completed licensing and inspection casework, and interviews with management and staff.

#### 3.2.1 New York City Department of Health and Mental Hygiene

The review team's assessment of NYC inspection priorities verified that inspection frequencies for various types of licenses are either the same as, or more frequent than, those listed in Inspection Manual Chapter (IMC) 2800.

In their response to the questionnaire, NYC indicated that there were no Priority 1, 2, or 3 inspections overdue by more than 25 percent of their respective inspection frequency. The examination of the data and inspection files provided by NYC during the review confirmed that there were no overdue inspections. During the review period no Priority 1,2, and 3 inspections, and no initial inspections were performed overdue by more than 25 percent of their respective inspection frequency.

The timeliness of the issuance of inspection findings to licensees was evaluated during the inspection casework review. The team found that NYC does not actively track the timeliness of its issuance of inspection findings to licensees. Two of the forty inspections files reviewed contained inspection findings letters issued greater than 30 days.

NYC does not grant reciprocity to out-of-State licensees; therefore, this element of the indicator was not reviewed for this program.

### 3.2.2 New York State Department of Health

The review team's assessment of DOH inspection priorities verified that inspection frequencies for various types of licenses are the same as, or more frequent than, those listed in IMC 2800.

In their response to the questionnaire, DOH indicated and the review team verified that seven Priority 1, 2, and 3 inspections were overdue at the time of the review. The review team determined that during the review period DOH performed 19 of its 556 Priority 1, 2, and 3 inspections overdue. All 25 initial inspections were performed within one year of license issuance. Overall, the review team calculated that DOH performed 4.3 percent of the Priority 1, 2, and 3, and initial inspections overdue.

The timeliness of the issuance of inspection findings to licensees was evaluated during the inspection casework review. The review team determined that 20 percent of all inspection findings letters to licensees were sent out greater than 30 days. The review team determined through discussions with Program staff, that issuance of inspection findings is not routinely tracked by the Program.

DOH only authorizes reciprocity for 30 days in a calendar year; as a result, many out-of-State licensees obtain a specific license. During the review period, DOH granted 101 out-of-State reciprocity approvals. The review team determined that DOH does not track the reciprocity inspections performed by its staff. When the review team requested reciprocity inspection files for the review period, DOH could only produce files for reciprocity inspections completed in calendar year 2010. Therefore, the review team could not determine the percentage of candidate reciprocity licensees that were inspected in 2007, 2008 and 2009. Upon examining the files for 2010, the review team found that two of seven candidate reciprocity licensees were inspected or 28 percent of candidate reciprocity licensees, which meets the 20 percent required by NRC Inspection Manual Chapter (IMC) 1220. The review team recommends that DOH develop and implement a process to track reciprocity inspections to ensure at least 20 percent of candidate licensees for reciprocity are inspected.

### 3.2.3 New York State Department of Environmental Conservation

DEC issues permits to facilities licensed by DOH to release radioactive effluents to the environment and inspects only those aspects of each facility's program affecting those releases. Due to the limited scope of DEC's program, they have established a policy of setting inspection frequencies for permittees based on the actual releases to the environment. Since the permittees are required to report their effluent releases to DEC annually, the Program may adjust their inspection frequency accordingly as releases to the environment change. The assigned frequencies for permittees can range from one to four years with most being inspected at three to four year intervals. The review team determined that these frequencies are adequate to protect public health and safety.

The review team confirmed that 5 of 72 inspections identified in the questionnaire were performed overdue and none of the three initial inspections were conducted overdue. The review team calculated that DEC performed six percent of its inspections overdue.

The timeliness of the issuance of inspection findings to licensees was evaluated during the inspection casework review. The review team discussed issuance of inspection findings with Program management and staff and found that the Program was mistakenly informed that inspection findings should be issued within 30 business days. The review team clarified that inspection findings should be issued within 30 calendar days. The review team evaluated letters transmitting the inspection findings to the licensees and found that all inspection letters reviewed were transmitted within 30 business days from the date of the inspection. The Program manager acknowledged the discrepancy and committed to ensuring that inspection findings are issued within 30 calendar days from this point forward.

DEC does not grant reciprocity to out-of-State licensees; therefore, this element of the indicator was not reviewed for this program.

#### 3.2.4 Indicator Summary

Overall, the review team found that the State performed less than 10 percent of Priority 1, 2, and 3, and initial inspections overdue.

The issuance of inspection findings to licensees for NYC was found to be timely. DOH issued approximately 20 percent of its inspection findings letters past 30 days. DEC was found to be timely with issuance of inspection findings; however there was a misconception with regards to 30 business days versus 30 calendar days.

For reciprocity performance, the review team determined that DOH met the criteria in IMC 2800 for calendar year 2010, but was unable to make determinations for calendar years 2007, 2008 and 2009. As indicated in Section 3.2.2, the review team recommends that DOH develop and implement a process to track reciprocity inspections to ensure that at least 20 percent of candidate licensees for reciprocity are inspected.

Based on the IMPEP evaluation criteria, the review team recommended, and the MRB agreed, that New York's performance with respect to the indicator, Status of Materials Inspection Program, be found satisfactory.

#### 3.3 Technical Quality of Inspections

The review team evaluated 48 inspection files, including enforcement documentation and letters to licensees, and interviewed inspectors who were responsible for radioactive material inspections conducted during the review period. The casework reviewed included inspections performed by each of the State's three programs, and covered inspections of various types of licenses including medical institutions-with/without written directives required, high dose-rate remote afterloaders, gamma knife, brachytherapy, gauges, industrial radiography, radiopharmacy, manufacturing and distribution, research and development, academic and medical broad scope institutions, and irradiators. Appendix C lists the inspection casework files

reviewed, with case-specific comments, as well as the results of the review team's inspector accompaniments.

The inspection procedures and techniques utilized by all programs were evaluated by the review team and were determined to be generally consistent with the inspection guidance provided in IMC 2800. Specific guidance for the various license types/activities is also included in the respective procedures manuals and/or checklists.

Based on the evaluation of the casework, the review team determined that inspection documentation for each of the three programs was sufficient to ensure that licensees' performance with respect to health and safety and security was acceptable. Documentation adequately supported the cited violations, recommendations made to the licensee, unresolved safety issues, and discussions held with the licensee during exit interviews. Team inspections were performed when appropriate and were also utilized for training purposes.

Review team members accompanied 11 inspectors from all three programs during the period of May 2 through June 3, 2011. The accompaniments included inspections of medical institutions, medical broad scope, industrial radiography, gauges, open air irradiators, effluent monitoring, Increased Controls and an accompaniment of an inspector during a waste site inspection. The facilities inspected are identified in Appendix C. During the accompaniments, each inspector demonstrated appropriate inspection techniques and knowledge of the regulations. The inspectors were prepared for the inspections, and thorough in their reviews of the licensees' radiation safety programs. Each inspector conducted confirmatory measurements and utilized good health physics practices. The inspections adequately assessed radiological health, safety and security at the licensed facilities.

The review team noted that all three programs had an adequate supply of portable radiation detection instruments for use during routine inspections and response to incidents and emergencies. Each program uses an outside vendor for instrument service and calibration, and/or has in-house capability to perform instrument calibrations. The portable instruments used during the inspector accompaniments were operational and calibrated. All three programs have the capability to analyze alpha, beta, and gamma contamination samples.

### 3.3.1 New York City Department of Health and Mental Hygiene

The NYC inspection staff consists of four staff members plus a supervisor. Three of these individuals are being cross-trained to perform machine source (X-Ray) inspections. The inspectors are typically in the field Monday through Thursday of each week and in the office on Fridays.

The inspection field notes contained adequate, consistent documentation of inspection findings. NYC divides its licenses into seven categories (limited non-human use, broad non-human use, broad human use, limited human use, teletherapy, and gamma knife). There are separate inspection field notes and checklist forms for each category except gamma knife, as well as a form for Increased Controls security inspections. NYC management noted that they are considering a change to performance-based inspections and agreed that inspection field notes forms will be updated, as needed, to correspond to the ongoing regulation revisions.



To ensure consistency of inspection documentation and findings, the inspection supervisor conducts reviews of the staff member's field notes. Although the inspection supervisor independently performed inspections, his work was not consistently reviewed by another supervisor or manager.

NYC has a policy of performing annual supervisory accompaniments of each inspector. Based on a review of records provided by NYC, the review team concluded that each inspector was accompanied by the supervisor at least once a year during the review period. Although the inspection supervisor independently performed inspections, he was not consistently accompanied each year by another supervisor or manager. NYC management agreed that, in the future, annual accompaniments will be performed for the inspection supervisor.

The review team determined that inspection files for Increased Controls security inspections are stored in a secure location. The review team noted that these file folders are not marked as containing security-related information. In addition, letters to licensees containing security-related inspection information are not marked to indicate this. NYC management agreed to develop a system to distinguish file folders containing security-related inspection information and to begin marking letters to licensees containing security-related information.

### 3.3.2 New York State Department of Health

The DOH inspection staff is split between the central office and field offices. A field supervisor and 11 staff members are based in the central office, with 50 percent of the field supervisor's time and no more than 25 percent of each staff member's time assigned to radioactive materials compliance. Seven staff members are based in field offices, with four individuals assigned to devote at least 50 percent of their time to radioactive materials.

The inspection field notes contained adequate and consistent documentation of inspection findings. DOH uses a series of forms to record field notes for different types of inspections, including medical, laboratory, PET cyclotron, nuclear pharmacy, other unsealed source, irradiator, fixed radioactive material device, portable radioactive material device, and Increased Controls. The review team determined that there are no formal inspection procedures; staff stated that the field note forms serve as inspection procedures and inspectors use NRC inspection procedures as references.

To ensure consistency and quality of inspection documentation and findings, the field supervisor conducts reviews of the staff members' inspection documentation. For central office staff, the field supervisor reviews the inspection field notes. For field office staff, the inspectors call the supervisor to discuss issues identified during inspections. The supervisor reviews a faxed copy of inspection letters sent by field office staff to licensees; however, this is somewhat inconsistent for inspections in which no violations are identified. The supervisor agreed to develop a system to review inspection field notes for field office staff.

DOH has a policy of performing annual supervisory accompaniments of inspectors; however, these have been inconsistently performed. In the year preceding the on-site IMPEP review, 10 of 18 active inspectors were accompanied by a supervisor.

### 3.3.3 New York State Department of Environmental Conservation

The DEC inspection staff is split between two Sections, the Radiological Sites Section and the Radiation Control Permits Section. At the time of the review, the Radiological Sites Section had a Chief and six staff members. The Radiation Control Permits Section had a Chief and four staff members.

During the review period, 72 inspections were conducted; 3 of those were initial inspections of new permits. The review team evaluated 10 completed inspection reports and found the reports to be very thorough with inspection findings well documented. Inspection findings were consistently compared to the permit and regulatory requirements. Prior to the inspection, a full briefing is held between the inspectors and the Section Chief to discuss the inspection. The review team found that unresolved issues, recent changes to the permit, and specific concerns of the inspector were well documented in the inspection reports. The completed reports were reviewed by supervisory personnel. Escalated enforcement procedures are in place and followed, as needed.

The review team evaluated the latest version of DEC's permit inspection and enforcement procedures and all current inspection forms. In general, all procedures and forms appear to be consistent with the applicable guidance found in IMC 2800.

The review team determined that supervisory accompaniments of DEC inspectors are conducted on an annual basis.

### 3.3.4 Indicator Summary

Team accompaniments of inspectors from the three programs demonstrated competent, thorough, safety-oriented inspections. The inspection processes and documentation for all programs were well implemented.

Based on the IMPEP evaluation criteria, the review team recommended, and the MRB agreed, that New York's performance with respect to the indicator, Technical Quality of Inspections, be found satisfactory.

## 3.4 Technical Quality of Licensing Actions

The review team examined completed licensing casework and interviewed the reviewers for specific licenses for each of the New York programs. A total of 48 licensing actions were examined, including new license issuances, terminations, amendments (including financial assurance and Increased Controls amendments), renewals, and modifications to permits (DEC). The actions reviewed encompassed the work of license reviewers currently with each Program as well as those who have left each Program during the review period. The sample included a variety of license types, including broad scope academic, broad scope medical, broad scope research and development, gamma knife, high dose-rate remote afterloaders, industrial radiography, irradiators, nuclear pharmacy, portable gauge, radioactive waste brokers, and veterinary teletherapy. A listing of the licensing casework reviewed, with case-specific comments, may be found in Appendix D.

Licensing actions were evaluated for completeness, consistency, proper radioisotopes and quantities used, qualifications of radiation safety officers and authorized users, adequate facilities and equipment, sufficient operating and emergency procedures, consideration of enforcement history on renewals, pre-licensing visits, peer or supervisory review as indicated, proper signature authorities, and overall technical quality. The casework was also checked for retention of necessary documents and supporting data.

#### 3.4.1 New York City Department of Health and Mental Hygiene

The review team examined a random sample of completed casework and interviewed license reviewers for 758 licensing actions performed by NYC over the review period. Licensing actions were reviewed for completeness, consistency, proper radioisotopes and quantities, qualifications of authorized users, adequacy of facilities and equipment, adherence to good health physics practices, financial assurance, security requirements, operating and emergency procedures, appropriateness of license conditions, and overall technical quality. The casework was also reviewed for use of appropriate correspondence, reference to appropriate regulations, supporting documentation, consideration of enforcement history, pre-licensing visits, peer and supervisory review, and proper signatures. These items were generally found to be adequately performed unless specifically noted below.

The review team noted that NYC does not use licensing check-lists designed to ensure consistency in licensing actions, and that licensing guidance documents used by NYC were developed in 1991. The review team discussed the advantages of using the most current guidance including the NUREG 1556 series of licensing guidance. However, no inconsistencies were noted by the review team. Licenses are being amended by using the previous license issued and incorporating the requested changes.

The review team found that noted deficiencies in licensee submissions are often handled by undocumented telephone calls and e-mail. The review team discussed the importance of fully documenting licensee requests in response to license application deficiencies with NYC management and staff, noting that a complete and well documented licensing action assists the inspectors and demonstrates the steps taken by the license writer and the licensee, in order to issue an amended license.

The review team assessed NYC's implementation of NRC's pre-licensing guidance issued on September 22, 2008, and transmitted to the Agreement States via RCPD-08-020, "Requesting Implementation of the Checklist to Provide a Basis for Confidence That Radioactive Material Will Be Used as Specified on a License and the Checklist for Risk-Significant Radioactive Material." States were given 6 months from the date of the letter to incorporate the essential objectives of the revised pre-licensing guidance into their respective licensing programs. Based on the licensing casework reviewed, the review team found that NYC had not implemented the essential elements of the pre-licensing guidance for any licensing actions initiated during the review period. Furthermore, NYC had not performed any pre-licensing visits. Since NYC failed to apply the guidance as required, NYC had no indication what licensees might require a pre-licensing visit. The review team suggested that NYC audit those licensing actions performed between the implementation dates of the guidance through the last date of the review and apply the guidance to determine if any licensing actions had been inappropriately issued. The review team also discussed the need to apply the pre-licensing

guidance to all future licensing actions to determine and document the basis for confidence, that radioactive materials will be used as intended and as described in the application or amendment request, prior to authorizing the material on the license. On June 30, 2011, the review team received notification from NYC indicating they had retroactively applied the pre-licensing criteria to all new licenses issued since the November 2006 IMPEP review and found that none had met the threshold requirements requiring a pre-licensing site visit. NYC committed to using the pre-licensing guidance in the future.

The review team observed that NYC did not typically review the enforcement history during the license renewal process. The review team expressed to the reviewer that license renewals are opportunities for the staff to review the licensee's history and to evaluate the historical licensing and inspection documentation and perform a quality assurance assessment of the license file.

The review team reviewed the license files for those licensees subject to the ICs. In 2005, in order to meet compatibility requirements, NYC submitted to the NRC, a proposed license condition and letter to implement the ICs. NRC approved the submitted license condition and letter; however, NYC chose not to implement the ICs by license condition but through the issuance of a Commissioner's Order to their IC licensees requiring them to implement the provisions of the IC Order. This Commissioner's order was never submitted to NRC for compatibility purposes. The team discussed the importance of this matter with Program management and presented two options to either add the originally approved license condition to the IC licenses referencing the Commissioner's Order or submit the Commissioner's Order to NRC for a compatibility review. In an email dated June 16, 2011, the NYC AC stated that these IC license amendments were completed on June 17, 2011 (ML111990186).

#### 3.4.2 New York State Department of Health

The review team found that a random sampling of DOH's 1,094 licensing actions completed during the review period were thorough, complete, consistent, and of high quality with health and safety issues properly addressed. The licensee's compliance history is taken into account when reviewing renewal applications.

The review team noted that license conditions, including tie-down conditions, are stated clearly, backed by information contained in the file, and they appear enforceable. Deficiency letters are well-written, clearly indicate DOH's regulatory position, and are used at the appropriate times. License reviewers appropriately used DOH's licensing guides and standard license conditions. The review team found that the terminated licensing actions were well-documented, showing appropriate transfer and survey records. License reviewers have the proper signature authority for the cases they review. All licensing actions are peer reviewed by license reviewers for content, grammar, and format. Pre-licensing guidance is applied and pre-licensing visits are being performed where necessary.

The review team examined the licensees that DOH determined met the criteria for the ICs, per COMSECY-05-0028. The review team determined that DOH had correctly identified the licensees that require ICs based on these criteria, and will continue to issue ICs to any additional licensees, as appropriate. Each license was amended to include the IC requirements as license conditions. DOH issued the ICs in accordance with the timeline established by the NRC in the SRM for COMSECY-05-0028.

The review team noted that DOH currently has a total of 73 licenses that have been under timely renewal for more than one year. One license has been under timely renewal for the past 21 years, and 10 have been under timely renewal for more than 5 years. This issue was discussed with DOH managers who stated they will get the renewals completed. DOH attributed this backlog to a staffing issue. DOH added that this is an area where they have been forced to choose how to apply their limited resources and that they will try to finish them as soon as they can.

### 3.4.3 New York State Department of Environmental Conservation

The review team found that DEC's permitting actions were thorough, complete, consistent, and of high technical quality with health and safety issues properly addressed. Permit files contain extensive documentation of the permitting process, including memorandum and electronic mail messages between permit reviewers and senior management. Permit reviewers routinely conduct confirmatory inspections and calculations to verify permit holder status, commitments, and findings presented by permit holders during the permitting process. Permits issued by DEC often incorporate references and conditions related to other permits required by DEC. The review team determined that the permit holder's compliance history appeared to always be taken into account when reviewing renewal applications, as determined from documentation in the permit files and discussion with the permit reviewers.

The review team found that permit cancellation actions were well-documented, showing either survey findings or documentation that the permit holder's effluents did not exceed the 10 percent exemption limit. The casework review indicated that permitting staff follow their guidance during the review process to ensure that the permit holders submit the information necessary to support a permit. The review team found the checklists and the worksheets for each type of permit to be comprehensive and incorporated excellent notes to reviewers to assist in the review of the applications. Permit tie-down conditions were stated clearly, backed by information contained in the file, and enforceable. Each permitting action receives a supervisory chain review. Letters of deficiency clearly stated regulatory positions, are used at appropriate times, and are signed by upper management.

Once DEC completes the permit review and drafts the permit document, DEC forwards the draft permit to one of nine permit administrators located throughout the State. The actual permit is then signed and issued by the permit administrator. The Section Chief monitors the status of permits sent to the regional permit administrator for issuance, documents the status in monthly reports, and maintains contact with the regional permit administrator until the permit is issued. In the case of an excessive delay, metrics for the outstanding permit are communicated to DEC's Chief Permit Administrator for follow-up action.

### 3.4.4 Indicator Summary

The review team identified the following performance concerns related to licensing that were discussed in the Sections for the individual Programs.

The review team found that NYC had not implemented the pre-licensing guidance to determine if any licensing actions had been issued inappropriately, nor have they performed any pre-licensing visits. The team also noted that NYC did not review past enforcement history during

the license renewal process as a means of performing quality assurance on the license file. The review team found follow-up questions to licensing actions are often performed via undocumented telephone calls and email.

In the case of DOH, the review team found that DOH consistently applies the most current guidance, uses checklists to ensure consistency, and has implemented the pre-licensing guidance. However, the review team noted that licensing was another area within the DOH materials program where the lack of staff has affected or diminished the Program's performance. At the time of the 2006 review DOH had 33 licenses under timely renewal for more than one year. During the 2011 review, DOH now had 73 licenses under timely renewal for more than one year. Ten licenses have been under timely renewal for more than 5 years with one of those being under timely renewal for 21 years.

In the case of DEC, the review team found the unit to be producing high quality work with little difficulty. While DEC is slightly down on staff, it has been able to keep up with the workload.

Reviews of inspection and enforcement history, application of guidance documents, and consideration of health and safety issues are key features for a satisfactory performance in technical quality of licensing. For one of the three agencies, the review team noted repeated examples where licensing actions did not apply required guidance and documentation supporting licensing actions was not complete.

Based on the IMPEP evaluation criteria, the review team recommended, and the MRB agreed, that New York's performance with respect to the indicator, Technical Quality of Licensing Actions, be found satisfactory, but needs improvement.

### 3.5 Technical Quality of Incident and Allegation Activities

In evaluating the effectiveness of each program's actions in responding to incidents and allegations, the review team examined each program's response to the questionnaire relative to this indicator, evaluated selected incidents reported for New York in the Nuclear Materials Events Database (NMED) against those contained in the respective program's files, and evaluated the casework and supporting documentation for 18 radioactive materials incidents. A listing of the incident casework examined, with case-specific comments, may be found in Appendix E. The review team also assessed the responsible program's response to three allegations involving radioactive materials, including three allegations referred to the responsible program by the NRC during the review period.

The review team discussed incident and allegation procedures, file documentation, each program's event and allegation tracking system, NMED, and notification of incidents to the NRC's Headquarters Operations Center based on the guidance in NRC's Office of Federal and State Materials and Environmental Management Programs (FSME) Procedure SA-300, "Reporting Materials Incidents", with the Program Managers and selected staff. The incidents included: lost/stolen materials, equipment failures/disconnects, contamination/spills, damaged devices and packages, and medical events.

### 3.5.1 New York City Department of Health and Mental Hygiene

The review team noted that NYC's questionnaire response indicated that no reportable incidents were received during the review period. Following discussions of this indicator with NYC staff and review of files, the team found that this was not correct.

NYC staff informed the review team that in 2009, NYC Department of Health and Mental Hygiene issued an Information Notice (2009-03) to remind Licensees and Certified Registrants of the requirements specified in Article 175 of the NYC Health Code for reporting medical events involving radiation. The reporting requirements apply to all radiation equipment and radioactive material use. Subsequent to the Information Notice, NYC sent Orders to licensees in 2009 and 2010, requesting information on the total number of treatments performed, and the number of recordable and reportable errors between the years 2006 and 2009, as required by Health Code 175. Approximately 90 licensees responded. The review team reviewed the file of responses and identified two incidents that were reportable under NRC regulations: one report of a dose to an embryo/fetus and one medical event. The review team also noted that NYC had not identified these two incidents as being reportable to NRC. NYC staff reported that they had performed follow-up by e-mail to one of the two incidents and no follow-up to the other incident. Following discussion with the IMPEP team, NYC reported these incidents to the NRC Operations Center on June 15, 2011, during the IMPEP review.

Based on the response to the request for information from their licensees, NYC staff developed a summary document entitled "Summary of Misadministrations for NYC 2006-2009". This document included statistical information from 14 licensees of reportable/recordable incidents between 2006 and 2009 and included both radiation equipment and radioactive materials incidents. While on site, the review team made several requests for documentation to determine how NYC evaluated the statistical information received from licensees, what type of follow-up they performed, and if any follow-up was performed in accordance with their Policy and Procedure Manual for Incident Response.

On June 28, 2011, NYC submitted, in retrospect, a tabular summary of "Institutions with Confirmed Incident Reports for NYC 2006-2009." This table showed a total of 14 reported events with seven of them being subject to reporting. The summary did not contain any information as to whether additional reports will be made to the NRC or if NYC performed any follow-up investigations/inspections in accordance with NYC incident follow-up procedures. On August 8, 2011, NYC provided the review team with an updated table reflecting 13 reportable events with 2 of them being subject to reporting.

Based on the above noted issues related to incident identification and follow-up, the review team is recommending the following:

- NYC respond to each incident received in accordance with its established Incident Response Procedure.
- NYC modify its Incident Response Procedure to add timely notifications to the NRC Operations Center in accordance with the timelines identified in SA-300.

- NYC evaluate all incident statistical information received from licensees, both retrospectively and prospectively, and follow-up in a manner to ensure that each incident is properly evaluated for health, safety, and security implications.

Additionally, the review team assessed NYC's response to one allegation involving radioactive material during the review period. The review team noted that NYC performed a prompt and appropriate on-site investigation. The alleged radiation safety concerns were not substantiated, and proper follow-up, notification and close-out were made.

### 3.5.2 New York State Department of Health

During the review period, DOH investigated 279 incidents. The review team evaluated 13 incidents requiring reporting to the NRC and three allegations. DOH utilizes an automated incident/event tracking system called "Incident." This database is tied directly to DOH's licensing/inspection database and prompts the user to investigate the root cause or contributing factors surrounding each incident. There is also a reminder to notify NRC, as appropriate. The "Incident" database permits the staff to identify incidents and to follow trends. Incidents and allegations are posted to the individual licensing and inspection files for follow-up action, as appropriate. DOH's response to incidents and allegations are investigated based on their radiological health and safety significance. On-site investigations are well-documented, prompt, and comprehensive. Initial responses were coordinated and complete, and the level of effort was commensurate with the health and safety significance. Inspectors were promptly dispatched for on-site investigations, when appropriate, and took suitable enforcement action. Corrective actions were appropriately followed up during the course of the incident's investigation and prior to closure.

The review team reviewed the files for approximately half of all incidents (414) that were reported to DOH during the review period. These include both material and non-material incidents. During the review period, DOH reported 26 incidents (not including Wal-Mart Exit Signs) to the NRC Operation Center. Of those 26 reported incidents, only three were reported in accordance with the timeliness requirements found in SA-300. Of approximately 200 incident files reviewed, the review team identified eight incidents that should have been reported to the NRC but were not. The review team notified DOH of the eight unreported incidents and before the review was completed, DOH was already working on reporting these incidents. The review team also informed DOH that they needed to perform a review of the additional 200 incident files to determine if additional incidents should be reported to NRC. DOH agreed to begin that review and notify NRC when it was completed. In reviewing incident and allegation response procedures, the team found that DOH does not have a documented incident response procedure, nor does DOH have a documented allegation response procedure. The review team recommends that DOH develop comprehensive incident response and allegation procedures, and ensure that reportable incidents are reported to the NRC Operations Center in accordance with the timelines identified in SA-300.

### 3.5.3 New York State Department of Environmental Conservation

The review team evaluated DEC's response to two radioactive material incidents. DEC's response to incidents was complete and comprehensive. The staff's initial responses were prompt, well-coordinated and at a level commensurate with the health and safety



significance of the incident. DEC dispatched inspectors for on-site investigations, as appropriate, and took enforcement and follow-up action, as needed. DEC did not have any incidents that met the criteria for reporting to NMED. The review team assessed DEC's response to one allegation involving radioactive material. Prompt and appropriate investigations were conducted through on-site and telephone contact with the alleged. The alleged radiation safety concerns were not substantiated and proper follow-up, notification, and close-out were made.

#### 3.5.4 Indicator Summary

The review team found several issues related to incident identification, application of reporting regulations, and timeliness in reporting that were discussed with the individual Programs.

In 2009, NYC issued Information Notice 2009-03 reminding its licensees of the regulatory requirement to report incidents. Subsequently, NYC issued Orders to its licensees to get them to report statistical incident information. Once the information was received, NYC did not promptly perform a review to determine whether these incidents were reportable. For events they were aware of, staff was unable to accurately apply the reporting criteria as they failed to report events that were reportable. Additionally, subsequent to the review, NYC again demonstrated its inability to apply the reporting criteria by reporting an incident that was not reportable.

While DOH is able to apply the reporting criteria to incidents under its jurisdiction, DOH experienced difficulties in timely reporting. During the review period, DOH reported 26 incidents of which 23 were not reported in a timely manner. DOH attributes this issue to the lack of staff. Additionally, DOH has also experienced difficulty in identifying reportable events. Of approximately 200 incident files reviewed by the review team, eight reportable incidents were found to have not been reported. DOH has another 200 files to review to determine if any additional incidents should have been reported.

While DEC has far fewer incidents to respond to, DEC responded in a timely and efficient manner. The team found no issues with DEC's incident response or allegation processes.

The team is making the following recommendations: NYC: 1) NYC respond to each incident received in accordance with their established Incident Response Procedure; 2) NYC modify their Incident Response Procedure to add timely notifications to the NRC Operations Center in accordance with the timelines identified in SA-300; 3) NYC evaluate all incident statistical information received from licensees, both past and future, and follow-up in a manner to ensure that each incident is properly evaluated for health, safety, and security implications; and 4) DOH develop comprehensive incident response and allegation procedures, and ensure that reportable incidents are reported to the NRC Operations Center in accordance with the timelines identified in SA-300.

Identification of corrective actions, timely incident response, follow-up inspections, and event notifications of the NRC are key features for a satisfactory performance in technical quality of incidents and allegations. One of the three agencies demonstrated response to incidents to be incomplete, inappropriate, and poorly coordinated. Another agency was delinquent with several notifications.

Based on the IMPEP evaluation criteria, the review team recommended, and the MRB agreed, that New York's performance with respect to the indicator, Technical Quality of Incident and Allegation Activities, be found unsatisfactory

#### 4.0 NON-COMMON PERFORMANCE INDICATORS

IMPEP identifies four non-common performance indicators to be used in reviewing Agreement State programs: (1) Compatibility Requirements; (2) Sealed Source and Device Evaluation Program; (3) Low-Level Radioactive Waste Disposal Program; and (4) Uranium Recovery Program. New York State does not currently have a Uranium Recovery Program, therefore, only the first three non-common performance indicators were applicable to this review.

#### 4.1 Compatibility Requirements

##### 4.1.1 Legislation

New York became an Agreement State on October 15, 1962. Historically, there have been four separate programs regulating ionizing radiation in the State of New York; NYC, DOH, New York State Department of Labor (DOL), and DEC. Due to the merging of DOH and DOL in 2006 there are now only three programs; NYC, DOH, and DEC. Legislative authority for NYC's portion of the Agreement State program is granted in Chapter 22 of the New York City Charter, specifically Section 556(s). NYC regulatory authority is delegated from DOH under Part 16 of the New York State Health Code, which provides for delegation to local governments when covering greater than two million individuals. DOH's legislative authority to administer its portion of the Agreement with the NRC is granted in New York Public Health Law, Article 2, Title II, Sections 201 and 225. Effective July 1, 2006, Part B of Chapter 58 of the Laws of 2006 (S6458/A9558-B) merged the radioactive materials program of DOL with DOH. Articles 1, 3, 17, 19, 29, and 37 of the Environmental Conservation Law provide DEC with the authority to implement its radiation program.

##### 4.1.2 Program Elements Required for Compatibility

The review team assessed the status of the regulations required for adoption, evaluated each program's response to the questionnaire, reviewed the status of regulations required to be adopted by the State under the Commission's adequacy and compatibility policy, and verified the adoption of regulations with data obtained from the NRC's State Regulation Status Data Sheet. Interviews were conducted with the staff and files were reviewed to confirm the use of license conditions when regulations were not adopted within the 3-year time frame.

The review team found that all programs provide the opportunity for public comment during the regulatory adoption process. The regulations for all programs are not subject to sunset provisions.

NYC regulations are found in Article 175 of the New York City Health Code. NYC's regulatory adoption process can take upwards of two years to complete, depending on the complexity of the rule change.

Since the 2006 IMPEP review, NYC has adopted thirteen NRC amendments.

For NYC, the following eight NRC amendments are overdue for adoption:

- “Notification of Incidents,” 10 CFR Parts 20, 30, 31, 34, 39, 40, and 70 amendments (56 FR 64980), that became effective on October 15, 1991 and was due for Agreement State adoption by October 15, 1994.
- “Decommissioning Recordkeeping and License Termination: Documentation Additions,” 10 CFR Parts 30 and 40 amendments (58 FR 39628), that became effective on October 25, 1993 and was due for Agreement State adoption by October 25, 1996.
- “Preparation, Transfer for Commercial Distribution, and Use of Byproduct Material for Medical Use,” 10 CFR Parts 30, 32, and 35 amendments (59 FR 61767; 59 FR 65243; 60 FR 322), that became effective on January 1, 1995 and was due for Agreement State adoption by January 1, 1998.
- “Minor Corrections, Clarifying Changes, and a Minor Policy Change,” 10 CFR Parts 20, 35, and 36 amendments (63 FR 39477; 63 FR 45393), that became effective on October 26, 1998 and was due for Agreement State adoption by October 26, 2001.
- “Transfer for Disposal and Manifests: Minor Technical Conforming Amendment,” 10 CFR Part 20 amendment (63 FR 50127), that became effective on November 20, 1998 and was due for Agreement State adoption by November 20, 2001.
- “Exemptions From Licensing, General Licenses, and Distribution of Byproduct Material: Licensing and Reporting Requirements,” 10 CFR Parts 30, 31, 32, and 150 amendments (72 FR 58473), that became effective on December 17, 2007 and was due for Agreement State adoption by December 17, 2010.
- “Requirements for Expanded Definition of Byproduct Material,” Parts 20, 30, 31, 32, 33, 35, 61, and 150 amendments (72 FR 55864), that became effective on November 30, 2007 and was due for Agreement State adoption by November 30, 2010.
- “Occupational Dose Records, Labeling Containers, and Total Effective Dose Equivalent,” 10 CFR Parts 19 and 20 amendments (72 FR 68043), that became effective February 15, 2008 and was due for Agreement State adoption by February 15, 2011.

For NYC, the following NRC amendment will need to be addressed in upcoming rulemakings or by adopting alternate legally binding requirements:

- “Medical Use of Byproduct Material – Authorized User Clarification,” 10 CFR Part 35 amendment (74 FR 33901), that became effective on September 28, 2009 and is due for Agreement State adoption by September 28, 2012.

DOH regulations are found in 10 NYCRR Chapter 1, Part 16 (Ionizing Radiation), Part 76 (Public Health Administrative Tribunal), and Part 405 (Hospitals-Minimum Standards) of the New York State Public Health Code. DOH’s regulatory adoption process takes approximately two years, dependent on the complexity of the rule change.

Since the 2006 IMPEP, DOH adopted eleven NRC amendments.

For DOH, the following 16 NRC amendments are overdue for adoption:

- “Quality Management Program and Misadministrations,” 10 CFR Part 35 amendment (56 FR 34104), that became effective on January 27, 1992 and was due for Agreement State adoption by January 27, 1995.
- “Medical Administration of Radiation and Radioactive Materials,” 10 CFR Parts 20 and 35 amendments (60 FR 48623), that became effective on October 20, 1995, and was due for Agreement State adoption by October 20, 1998.
- “Termination or Transfer of Licensed Activities: Recordkeeping Requirements,” 10 CFR Parts 20, 30, 40, 61, and 70 amendments (61 FR 24669), that became effective on June 17, 1996 and was due for Agreement State adoption by June 17, 1999.
- “Radiological Criteria for License Termination,” 10 CFR Parts 20, 30, 40, and 70 amendments (62 FR 39057), that became effective August 20, 1997 and was due for Agreement State adoption on August 20, 2000.
- “Deliberate Misconduct by Unlicensed Persons,” 10 CFR Parts 30, 40, and 70 amendments (63 FR 1890, 63 FR 13773), that became effective on February 12, 1998, and was due for Agreement State adoption by February 12, 2001.
- “Minor Corrections, Clarifying Changes, and a Minor Policy Change,” 10 CFR Parts 20, 30, 40, and 70 amendments (63 FR 39477, 63 FR 45393), that became effective on October 26, 1998, and was due for Agreement State adoption by October 26, 2001.
- “Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct Material,” 10 CFR Parts 30, 31, and 32 amendments (65 FR 79162), that became effective on February 16, 2001 and was due for Agreement State adoption on February 16, 2004.
- “Revision of the Skin Dose Limit,” 10 CFR Part 20 amendment (67 FR 16298), that became effective on April 5, 2002, and was due for Agreement State adoption by April 5, 2005.
- “Medical Use of Byproduct Material,” 10 CFR Parts 20, 32, and 35 amendments (67 FR 20249), that became effective on April 24, 2002, and was due for Agreement State adoption by October 24, 2005.
- “Financial Assurance for Materials Licensees,” 10 CFR Parts 30, 40, and 70 amendments (68 FR 57327), that became effective on December 3, 2003, and was due for Agreement State adoption by December 3, 2006.
- “Medical Use of Byproduct Material,” 10 CFR Parts 20, 32, and 35 amendments (67 FR 20249), that became effective on April 24, 2002, and was due for Agreement State adoption by April 24, 2005.

- “Minor Amendments,” 10 CFR Parts 20, 30, 32, 35, 40, and 70 amendments (71 FR 15005), that became effective on March 27, 2006, and is due for Agreement State adoption by March 27, 2009.
- “Medical Use of Byproduct Material – Minor Corrections and Clarifications,” 10 CFR Parts 32 and 35 amendments (72 FR 45147, 72 FR 54207), that became effective on October 29, 2007 and were due for Agreement State adoption on October 29, 2010.
- “Exemptions From Licensing, General Licenses, and Distribution of Byproduct Material: Licensing and Reporting Requirements,” 10 CFR Parts 30, 31, 32, and 150 amendments (72 FR 58473), that became effective on December 17, 2007 and was due for Agreement State adoption by December 17, 2010.
- “Requirements for Expanded Definition of Byproduct Material,” Parts 20, 30, 31, 32, 33, 35, 61, and 150 amendments (72 FR 55864), that became effective on November 30, 2007 and was due for Agreement State adoption by November 30, 2010.
- “Occupational Dose Records, Labeling Containers, and Total Effective Dose Equivalent,” 10 CFR Parts 19 and 20 amendments (72 FR 68043), that became effective February 15, 2008 and was due for Agreement State adoption by February 15, 2011.

For DOH, the following NRC amendment will need to be addressed in upcoming rulemakings or by adopting alternate legally binding requirements:

- “Medical Use of Byproduct Material – Authorized User Clarification,” 10 CFR Part 35 amendment (74 FR 33901), that became effective on September 28, 2009 and is due for Agreement State adoption by September 28, 2012.

DEC regulations are found in 6 NYCRR Chapter IV, Subchapter C, Parts 380, 381, 382 and 383, and apply to environmental releases and disposal of radioactive material. DEC requires a permit for release of radioactive material to the environment, including the disposal of radioactive material, for all radioactive material. These regulations also cover the transportation and manifesting of LLRW shipments into, within, and through New York State. DEC’s regulatory adoption process takes approximately two years to complete if there are no mitigating factors.

Since the 2006 IMPEP, DEC adopted two NRC amendments.

For DEC, the following eight NRC amendments are overdue for adoption:

- “Notification of Incidents,” 10 CFR Parts 20, 30, 31, 34, 39, 40, and 70 amendments (58 FR 64980), that became effective on October 15, 1991, and was due for Agreement State adoption by August 15, 1994.
- “Timeliness in Decommissioning Material Facilities,” 10 CFR Parts 30, 40, and 70 amendments (59 FR 36026), that became effective on August 15, 1994 and was due for Agreement State adoption by August 15, 1997.

- “Radiation Protection Requirements: Amended Definitions and Criteria,” 10 CFR Parts 19 and 20 amendments (60 FR 36038), that became effective on August 14, 1995, and was due for Agreement State adoption by August 14, 1998.
- “Radiological Criteria for License Termination,” 10 CFR Parts 20, 30, 40, and 70 amendments (62 FR 39057), that became effective on August 20, 1997, and was due for Agreement State adoption by August 20, 2000.
- “Minor Corrections, Clarifying Changes, and a Minor Policy Change,” 10 CFR Parts 20, 30, 40, and 70 amendments (63 FR 39477, 63 FR 45393), that became effective on October 26, 1998, and was due for Agreement State adoption by October 26, 2001.
- “Revision of the Skin Dose Limit,” 10 CFR Part 20 amendment (67 FR 16298), that became effective on April 5, 2002, and was due for Agreement State adoption by April 5, 2005.
- “Requirements for Expanded Definition of Byproduct Material,” Parts 20, 30, 31, 32, 33, 35, 61, and 150 amendments (72 FR 55864), that became effective on November 30, 2007 and was due for Agreement State adoption by November 30, 2010.
- “Occupational Dose Records, Labeling Containers, and Total Effective Dose Equivalent,” 10 CFR Parts 19 and 20 amendments (72 FR 68043), that became effective February 15, 2008 and was due for Agreement State adoption by February 15, 2011.

#### 4.1.3 Indicator Summary

The review team noted that all programs continue to have an extensive number of overdue NRC amendments. The review team concluded that the delay in the promulgation of regulations was caused in part by the need to address higher priority issues that may affect public health and safety, and the State’s lengthy promulgation process. All three Programs currently have in place a performance improvement plan (PIP) that addresses each Program’s plan for adopting overdue NRC regulations. The team reviewed these plans and noted that some overdue regulations were not incorporated into the current PIPs. The PIP for each Program should be revised to incorporate any missing overdue NRC amendments and to incorporate each Program’s plan for adoption.

Based upon the IMPEP evaluation criteria, the review team recommended, and the MRB agreed, that New York’s performance with respect to the indicator, Compatibility Requirements, be found unsatisfactory.

#### 4.2 Sealed Source and Device (SS&D) Evaluation Program

The New York State Department of Health has sole responsibility for performing SS&D evaluations in the State of New York. Three sub-indicators were used to evaluate the Department’s performance regarding the SS&D Evaluation Program. These sub-indicators are: (1) Technical Staffing and Training; (2) Technical Quality of the Product Evaluation Program; and (3) Evaluation of Defects and Incidents Regarding SS&Ds.

In assessing the Department's SS&D Evaluation Program, the review team examined information gathered from data contained in the National Sealed Source and Device Registry. In the IMPEP questionnaire response, the Department indicated that three SS&D evaluations had been performed since the previous IMPEP. However, during the review, the team determined that actually four SS&D evaluations had been performed since the previous IMPEP. The review team assessed the documentation for the four SS&D evaluations performed and interviewed staff and management involved in SS&D evaluations.

#### 4.2.1 Technical Staffing and Training

The team found that DOH currently has two reviewers who are considered qualified by the Program to conduct and sign safety evaluations of SS&D applications. Both have attended training the Program requires for qualification. The team also noted that the current manager responsible for oversight of the SS&D program is not a qualified reviewer and is therefore not qualified to perform secondary reviews. The team noted that for each of the reviews conducted during the review period, secondary reviews had been performed by a former Program Manager who had been qualified to perform the reviews.

The review team interviewed the current SS&D reviewers and found them to be familiar with the SS&D evaluation process, as well as available guidance and reference documents. While the team did not note any performance issues associated with the Program's SS&D reviews, the review team found that DOH does not have a formal qualification program. They also do not have a set number of reviews to be conducted by each individual prior to being considered qualified to independently perform SS&D reviews. This is mainly due to the low number of evaluations performed annually. Program management authorizes signature authority after the individual has completed required training classes.

DOH provided the training policy used by the Program for SS&D reviewers in training. The review team determined, based on Program requirements for qualification, that the reviewers appear qualified to review and sign SS&D evaluations, and that the DOH appears to have a sufficient number of qualified reviewers to adequately handle their workload. DOH noted that they have one additional individual qualified to perform SS&D reviews. This individual now works for another part of DOH, but can be called upon to assist if needed.

#### 4.2.2 Technical Quality of the Product Evaluation Program

DOH processed four new SS&D applications since the last review and performed no amendments to existing SS&D evaluations. A listing of the SS&D certificates evaluated by the review team, with case specific comments, can be found in Appendix F. The casework review indicated that DOH staff followed NRC guidance during the review process to ensure that licensees submit the information necessary to support the product. The tie-down conditions on the certificates were stated clearly and are enforceable. Deficiency letters clearly stated regulatory positions and were used at the appropriate time. A concurrence review was performed by a second SS&D evaluation-qualified reviewer. The review team found no health and safety issues relative to the SS&D evaluations.

#### 4.2.3 Evaluation of Defects and Incidents Regarding SS&Ds

DOH staff was not aware of any defects or incidents involving sources and devices evaluated by their program. The review team confirmed the lack of defects or incidents by a search of NMED and DOH files.

#### 4.2.4 Indicator Summary

DOH performed four SS&D evaluations since the last IMPEP review. These evaluations adequately addressed health and safety issues and were of sufficient technical quality.

Based on the IMPEP evaluation criteria, the review team recommended, and the MRB agreed, that New York's performance with respect to the indicator, Sealed Source and Device Evaluation Program, be found satisfactory.

#### 4.3 Low-Level Radioactive Waste (LLRW) Disposal Program

New York has two former radioactive waste disposal sites: the State-Licensed Disposal area (SDA) on the Western New York Nuclear Service Center at West Valley (West Valley site), and the University of Cornell Radiation Disposal Site (RDS) in Lansing.

The SDA has been owned by the State of New York since its creation in 1963, and was operated by Nuclear Fuel Services from inception until they turned over control of the site to the New York State Energy Research and Development Authority (NYSERDA) in 1976. Disposal of radioactive wastes was originally authorized by DOH. In 1974, regulation of the site passed from DOH to the newly created DEC Radiation program. In 1975, DEC required the closure of the SDA due to uncontrolled leachate releases. Approximately 2.4 million cubic feet of waste received from various places such as nuclear power plants, government facilities, industries, waste brokers, decontamination companies, and the adjacent West Valley spent nuclear fuel reprocessing center were placed in 14 parallel disposal trenches capped with compacted native clay. With the exception of two smaller special purpose trenches, the trenches range from approximately 350 to nearly 700 feet in length and were approximately 33 feet wide and 20 feet deep. In addition to the trenches, the SDA contains three excavated lagoons (now filled) which were formerly used to manage water pumped from the trenches during operation.

Currently NYSERDA holds one permit for the SDA from the DEC, which regulates monitoring and maintenance of the facility. NYSERDA also holds a radioactive materials license from the Industrial Unit for the West Valley Site.

Disposal operations at the Cornell RDS occurred between 1956 and 1978. The trenches cover an area roughly 290 by 300 feet in size. Wastes were buried in narrow trenches 6 to 12 feet deep. Low-level radioactive laboratory wastes were disposed of at the RDS, including scintillation solvents such as paradioxane. Cornell currently operates under a broad scope radioactive materials license from DOH.

The RDS has been closed pursuant to a closure plan developed under a Consent Order issued by DEC. As part of the conditions of that Consent Order, Cornell operates a groundwater treatment system for the non-radioactive contaminants. The review team reviewed a



substantive permit issued by DEC in April 2002 authorizing discharges of radioactive materials, the presence of which is incidental to discharges of the groundwater treatment system. When remedial activities required by the Consent Order have ended, DEC will issue a permit through the radiation program for monitoring and maintenance activities at the RDS.

#### 4.3.1 Technical Staffing and Training

Currently, one DEC inspector is assigned to conduct inspections and environmental monitoring at the West Valley site, and inspections at Cornell disposal site. At times, the staff from DEC regional offices accompanies the inspector to observe and to assist with inspections and sampling. The review team evaluated the training, experience, and the educational qualifications for this inspector. DEC uses a mentor approach for training inspectors. The Section Chief will accompany the inspector and verify that inspection procedures and protocol are followed on the inspection. The DEC inspectors have the proper education qualifications and experience and take the necessary courses to prepare them for the job. While the review team noted no performance issues, they did note that DEC had no formal training program to document and track staff training. While DEC inspectors were well qualified and well trained, DEC managers determined their program could benefit from formally documenting training within the Program and immediately began developing a process to document and track training for DEC inspectors.

DOH's low-level waste inspectors are also trained in a manner similar to DEC inspectors. While the review team again noted no performance issues, they noted that DOH also had no formal training program to document and track staff training. While DOH inspectors are also well qualified and well trained, DOH management believes that the current manner in which they develop staff is sufficient and did not see a need to make any changes at this time.

#### 4.3.2 Status of Low-Level Radioactive Waste Disposal Inspections

Both DEC and DOH have one year inspection frequencies at West Valley. DEC has a one year frequency for the Cornell site as well. The review team confirmed that DOH inspected the West Valley license annually.

DEC inspected the West Valley site four times during the review period of November 2006 to June 2011. West Valley was inspected October 2006, September 2009, October 2010 and June 2011. DEC did not have a documented inspection of the West Valley site in 2007 or 2008. The DEC staff admitted they did not have an official site inspection for a 25 month period. They explained that most efforts were involved with participating in a DOE, NRC and EPA working group focused on the development of an Environmental Impact Statement for West Valley. In 2007, the West Valley environmental monitor position was occupied with an individual who was responsible for both the West Valley and Cornell sites. In 2007, DEC hired an additional inspector who, in 2008, was assigned to assist the West Valley environmental monitor. In 2009, the West Valley monitor position became vacant and since that time, the inspector hired in 2007 has continued to work both the West Valley and Cornell sites until the West Valley position is filled.

DEC acknowledged that it missed two inspections and has taken actions to correct its program with yearly inspections being performed as required in 2009, 2010 and 2011. Regarding the timeliness of inspection reports, the review team noted that three of the inspection reports were issued greater than 30 days after the completion of the inspection. It was noted that DEC was issuing its inspection reports within 30 business days rather than 30 calendar days as required due to a miscommunication. The review team clarified the requirement and DEC has made the necessary change.

The review team also reviewed DOH's inspections for its Radiological Environmental Monitoring Program at West Valley. The inspections were completed on time throughout the review period. The team found that DOH issued its inspection reports to NYSERDA within 30 business days of completion of the inspection. DOH expressed interest in changing the frequency of its inspection or asking for assistance from DEC. However with any change to its program, DOH will need to develop a technical justification and update its inspection procedures.

#### 4.3.3 Technical Quality of Inspections

The review team evaluated all DEC and DOH inspection reports and found the scope and quality of the reports to be complete and thorough and emphasized public health and safety, as well as protection of the environment. Overall, the inspection reports were of high technical quality. DEC inspects the burial sites for fence and trench cover integrity. Drainage basins, storage buildings, surrounding land surfaces, and surface water drainage pathways are also inspected. In addition to the routine inspections, pre-operational and follow-up inspections, as well as site visits in conjunction with various stakeholders, are conducted by DEC staff.

DEC conducts environmental monitoring at the burial sites, including surface water and sediment sampling. In 2005 DEC discontinued deployment of thermoluminescent dosimeters (TLDs) at the West Valley site. Since that time, the site operator NYSERDA has deployed TLDs at West Valley. TLDs are placed along the boundary fence line, at each of the three off-site creeks, the nearest residence, Sardinia and Rock Spring Road. Surface water and sediment samples are collected from the three creeks. Cornell University has always deployed TLDs at the Cornell site.

The DEC inspector has been accompanied by a supervisor annually during the last three field inspections. The review team found this frequency acceptable given the small number of inspections performed by the DEC staff.

#### 4.3.4 Technical Quality of Licensing

DOH has issued a radioactive material license to NYSERDA authorizing possession of the wastes previously disposed of at West Valley, management and maintenance of West Valley, and possession and treatment of radioactive solids and liquids generated as a result of management and maintenance activities. The license covers the on-site radiation control program, occupational exposure of individuals, and control of radioactive material as it affects occupational exposures. The review team evaluated a Radioactive Materials License renewal issued by the DOH for this license and found all associated licensing actions thorough, complete, and of high technical quality.

DEC has issued one permit to NYSERDA that authorizes the maintenance and monitoring of West Valley and the operation of the West Valley facilities for the purpose of controlling discharges of radionuclides to the environment. The permit was issued in 2009 in accordance with applicable provisions of the Environmental Conservation Law. The review team evaluated the permit and found all associated actions thorough, complete and of high technical quality.

#### 4.3.5 Technical Quality of Incidents and Allegations

DEC had one incident at the West Valley disposal site during the review period. West Valley's trench 5, 6 and 7 suffered a tear in the geomembrane that covers the disposal cells. The review team evaluated the procedures and protocols for reporting incidents as well as the follow-up actions.

The licensee, NYSERDA, notified DEC of the incident shortly after the problem was discovered. DEC followed up with communication to their regional office, DOH, DOE West Valley and all necessary entities that have any authority at West Valley. The review team noted that DEC conducted an inspection of the trenches, met with the licensee to develop a strategic plan and was present during repairs. DEC was very timely with their documentation, communication, and associated inspections and follow-up. The review team found that DEC procedures and protocol in handling incidents to be very thorough, complete and of high quality.

#### 4.3.6 Indicator Summary

The review team found that oversight of the two former radioactive waste disposal sites by DEC and the DOH is suitable and thorough.

Based on the IMPEP evaluation criteria, the review team recommended, and the MRB agreed, that New York's performance with respect to the indicator, Low-Level Radioactive Waste Disposal Program, be found satisfactory.

## 5.0 SUMMARY

Overall, the review team recommended, and the MRB agreed, that the New York Agreement State Program be found adequate to protect public health and safety, but needs improvement, and not compatible with NRC's program. As noted in Sections 2.0, 3.0, and 4.0 above, the review team recommended, and the MRB agreed, that New York's performance be found unsatisfactory for the performance indicators, Technical Quality of Incident and Allegation Activities and Compatibility Requirements; and satisfactory, but needs improvement for the performance indicators, Technical Staffing and Training and Technical Quality of Licensing Actions. The review team found, and the MRB agreed, New York's performance to be satisfactory for the other indicators reviewed. The review team made five recommendations regarding the performance of the State.

Based on the results of the current IMPEP review, and in accordance with the criteria in NRC Management Directive 5.6, the review team recommended, and the MRB agreed, that the period of Heightened Oversight continue for the State of New York. The review team further recommended, and the MRB agreed, that a Periodic Meeting be held within 1 year to assess the State's progress in addressing the open recommendations and that the next IMPEP review

be performed in approximately two years.

One recommendation from the 2006 IMPEP remains open. The recommendation concerns the development and implementation of an action plan by NYC, DOH and DEC to adopt NRC regulations in accordance with the current NRC policy on adequacy and compatibility. (Section 2.0)

Below are the review team's recommendations, as mentioned in the report, for evaluation and implementation by the State:

## RECOMMENDATIONS

1. The review team recommends that DOH develop and implement a process to track reciprocity inspections to ensure at least 20 percent of candidate licensees for reciprocity are inspected. (Section 3.2.2)
2. The review team recommends that NYC respond to each incident received in accordance with its established Incident Response Procedure. (Section 3.5.1)
3. The review team recommends that NYC modify the Incident Response Procedure to add timely notifications to the NRC Operations Center in accordance with the timelines identified in SA-300. (Section 3.5.1)
4. The review team recommends that NYC evaluate all incident statistical information received from licensees, both retrospectively and prospectively, and follow-up in a manner to ensure that each incident is properly evaluated for health, safety, and security implications. (Section 3.5.1)
5. The review team recommends that DOH develop comprehensive incident response and allegation procedures, and ensure that reportable incidents are reported to the NRC Operations Center in accordance with the timelines identified in SA-300. (Section 3.5.2)

## LIST OF APPENDICES

Appendix A	IMPEP Review Team Members
Appendix B	New York Organization Charts
Appendix C	Inspection Casework Reviews
Appendix D	License Casework Reviews
Appendix E	Incident Casework Reviews
Appendix F	Sealed Source and Device Casework Reviews

## APPENDIX A

### IMPEP REVIEW TEAM MEMBERS

<b>Name</b>	<b>Area of Responsibility</b>
Randy Erickson, Region IV	Team Leader Technical Staffing and Training (NYC) Inspector Accompaniments (DOH and NYC)
Monica Orendi, Region I	Status of Materials Inspection Program Compatibility Requirements
Sandra Gabriel, Region I	Technical Quality of Inspections (DOH and NYC)
Shirley, Xu, FSME	Technical Quality of Licensing Actions (DEC) Technical Quality of Inspections (DEC) Technical Quality of Incident and Allegation Activities
Stephen Poy, FSME	Technical Staffing and Training (DOH and DEC) Sealed Source and Device Evaluation Program
Maurice Heath, FSME	Low-Level Radioactive Waste Disposal Program
James Thompson, Region IV	Inspector Accompaniments (DOH and DEC)
Ann Troxler, Louisiana	Technical Quality of Licensing Actions (DOH and NYC)

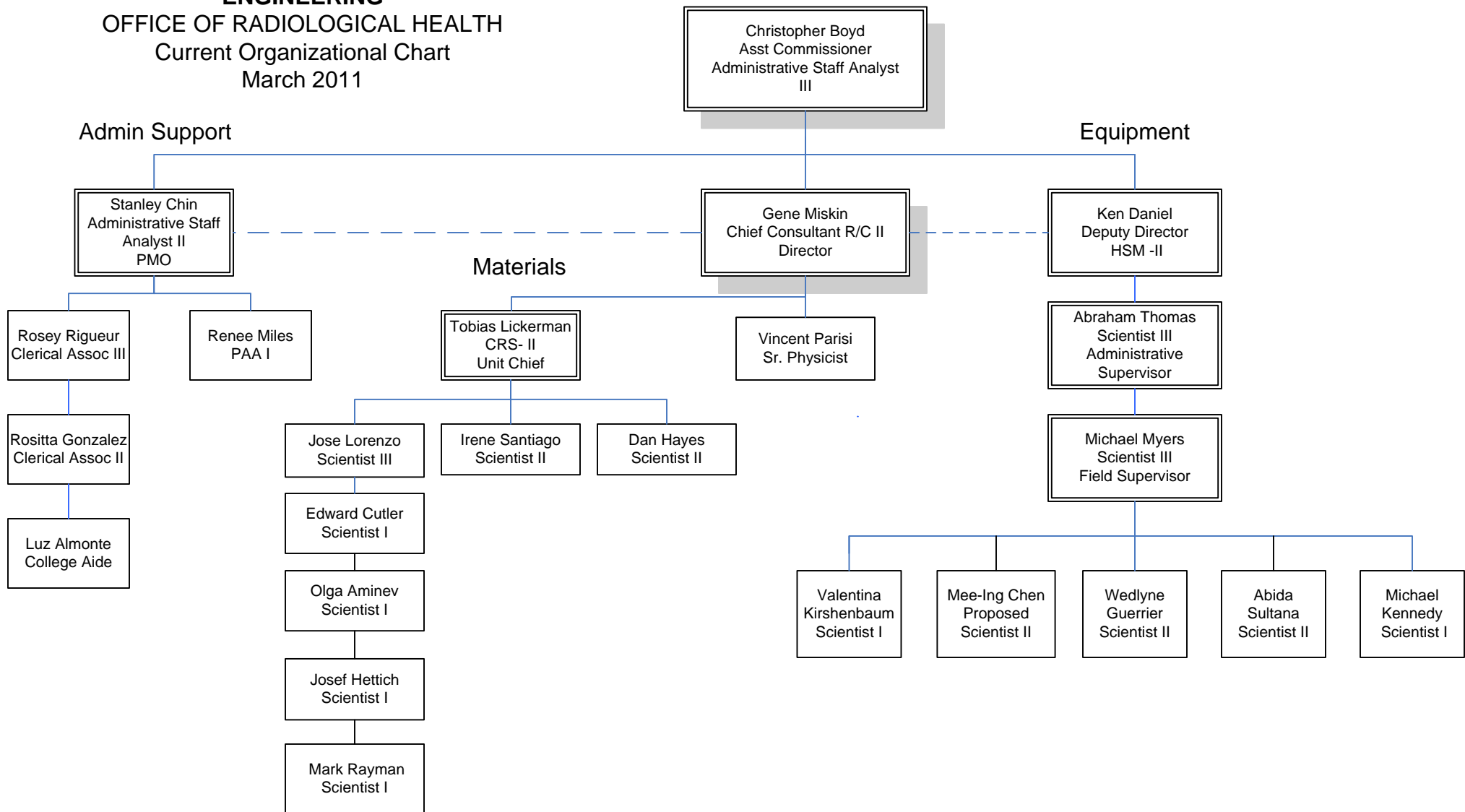
APPENDIX B

NEW YORK ORGANIZATION CHARTS

ADAMS ACCESSION NOS.:

ML111460433 – New York City Department of Health and Mental Hygiene  
ML111460503 – New York State Department of Health  
ML111290559 – New York State Department of Environmental Conservation

**BUREAU OF ENVIRONMENTAL SCIENCES &  
ENGINEERING**  
OFFICE OF RADIOLOGICAL HEALTH  
Current Organizational Chart  
March 2011





# BUREAU OF ENVIRONMENTAL RADIATION PROTECTION

Bureau Director  
 S. Gavitt  
Assistant Bureau Director  
 R. Dansereau  
 ARHS, J. Krishnaoorthy  
 Sec 1, L. Schriener

Environmental Radon/Emergency Response Section  
 Section Chief, C. Costello  
 ARHS, J. Collins  
 ARHS, O. Osman  
 A. DeAngelo (0.6 FTE)  
 K. Kraus (0.4 FTE)  
 SRHS, N. Webster  
 Sec. 1, Frisino-Napoli

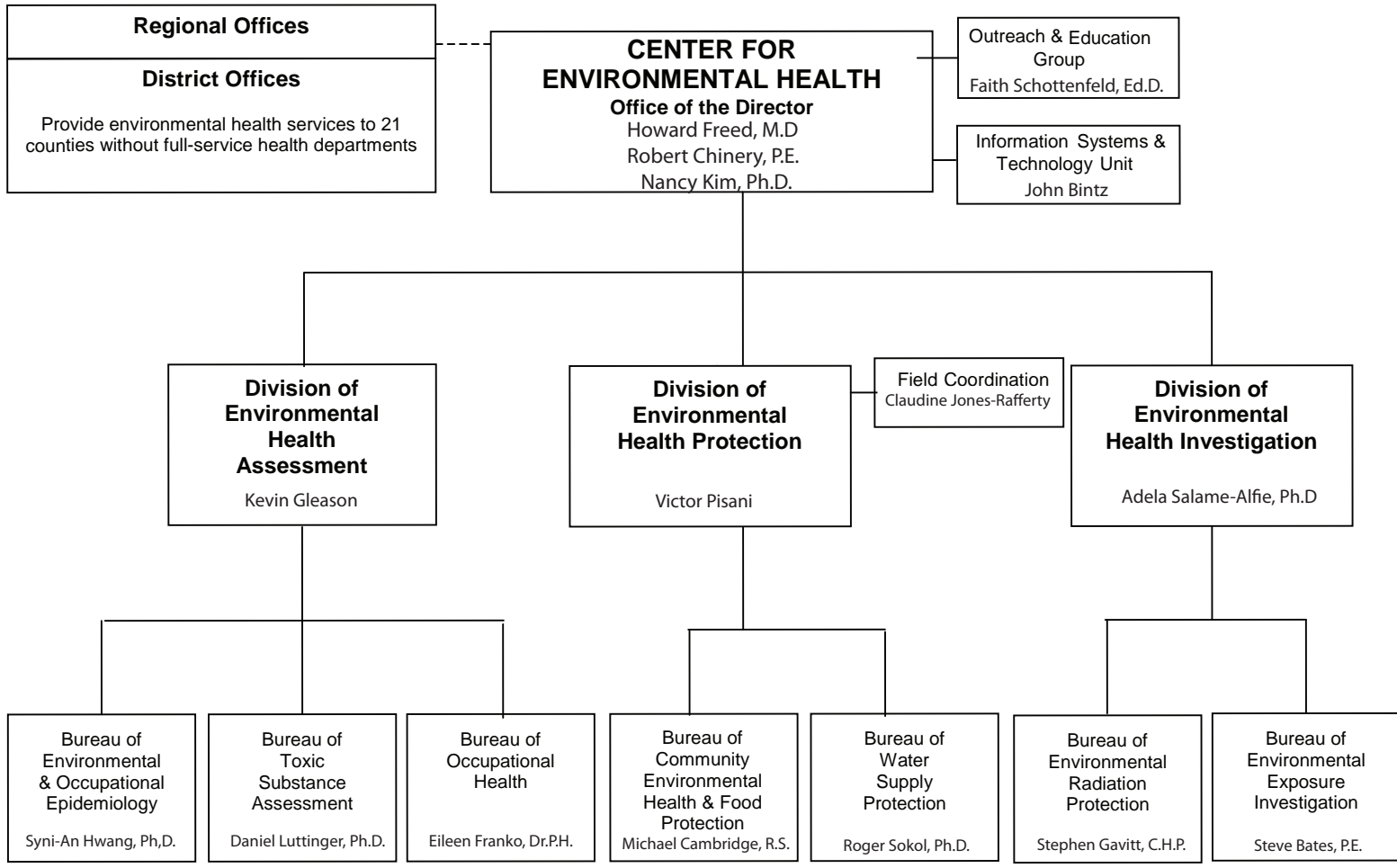
Radioactive Materials Section  
 Acting Section Chief, C. Burns  
 ARP, D. Gordon  
 ARP, D. Samson  
 ARP, M. Chaudry  
 ARHS, M. Harmon  
 ARHS, M. Soucie  
 KBS 2, G. Durgadas  
 KBS 2., K. Stankus

Radiation Equipment/ X-ray Section  
 Section Chief, A. Damiani  
 ARHS, M. Dreibelbis  
 ARHS, J. O'Connor  
 ARTS J. O'Connell  
 SRHS, T. Thayer  
 SRHS, D. Nadas  
 SRHS, D. Ludlum  
 PHR-1, C. Stephenson  
 Clerk 2, M. Dreibelbis  
 Clerk 2, C. Robinson  
 Clerk 1, K. Burl

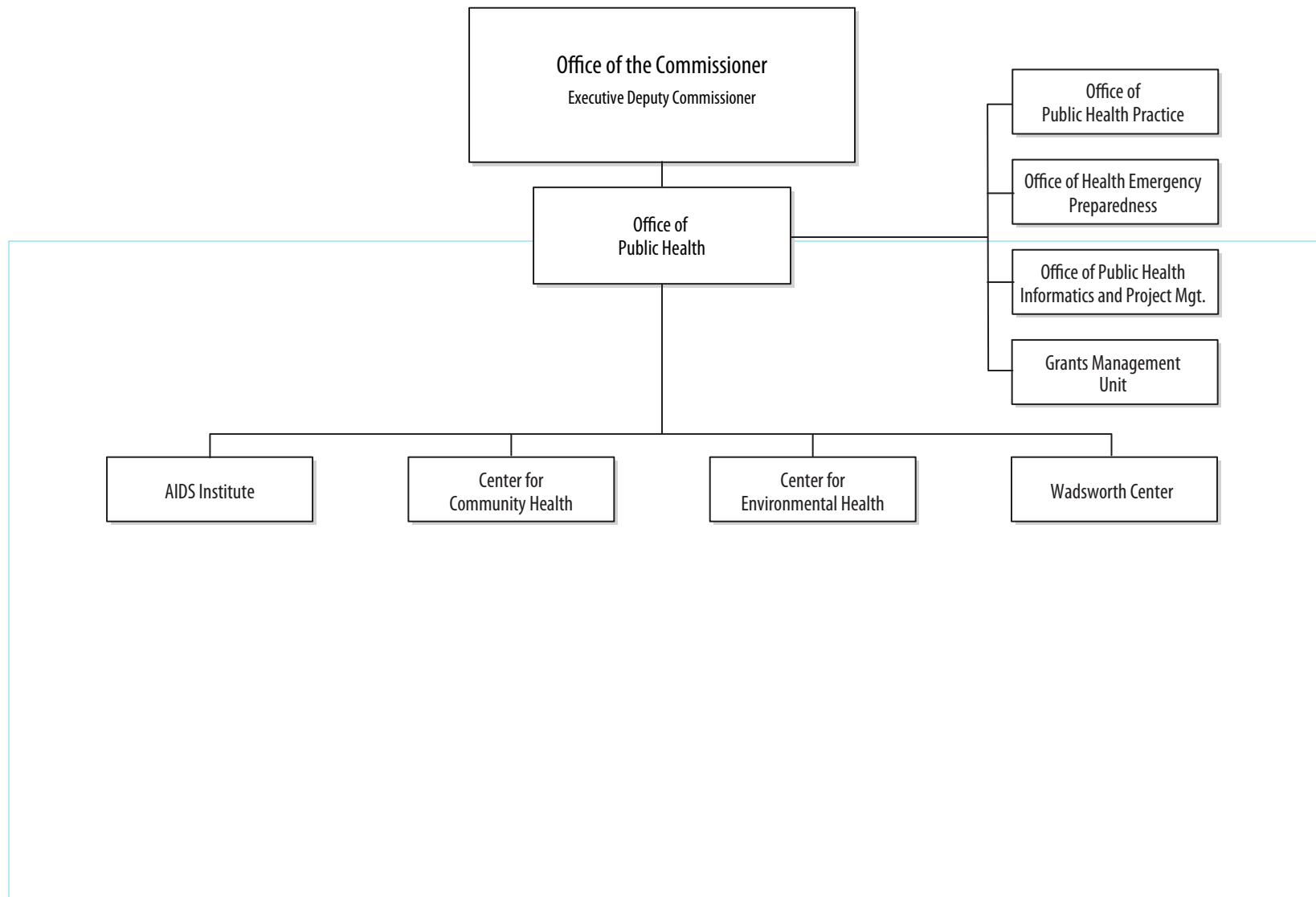
Inspection and Enforcement Section  
 Section Chief, R. Snyder  
 ARHS, G-23, WRO, M. Tran  
 ARHS, G-23, WRO, S. Koch  
 ARHS, G-23, CNYRO, V. Goyal  
 ARHS, G-23, CNYRO, W. Kelleher  
 ARHS, G-23, MARO, N. Warren  
 ARHS, CHP, G-23, MARO, A. Bass  
 ARP, G-23, MARO, J. Mull  
 ARP, G-23, MARO, B. Kothari  
 Hourly Consultant, M. Harvey  
 Hourly Consultant, B. Bochniewicz

PRHS - Principal Radiological Health Specialist  
 ARHS - Associate Radiological Health Specialist    ARP - Associate Radiophysicist  
 SRHS - Senior Radiological Health Specialist    RHS Trainee  
 KBS - Keyboard Specialist    Sec. - Secretary

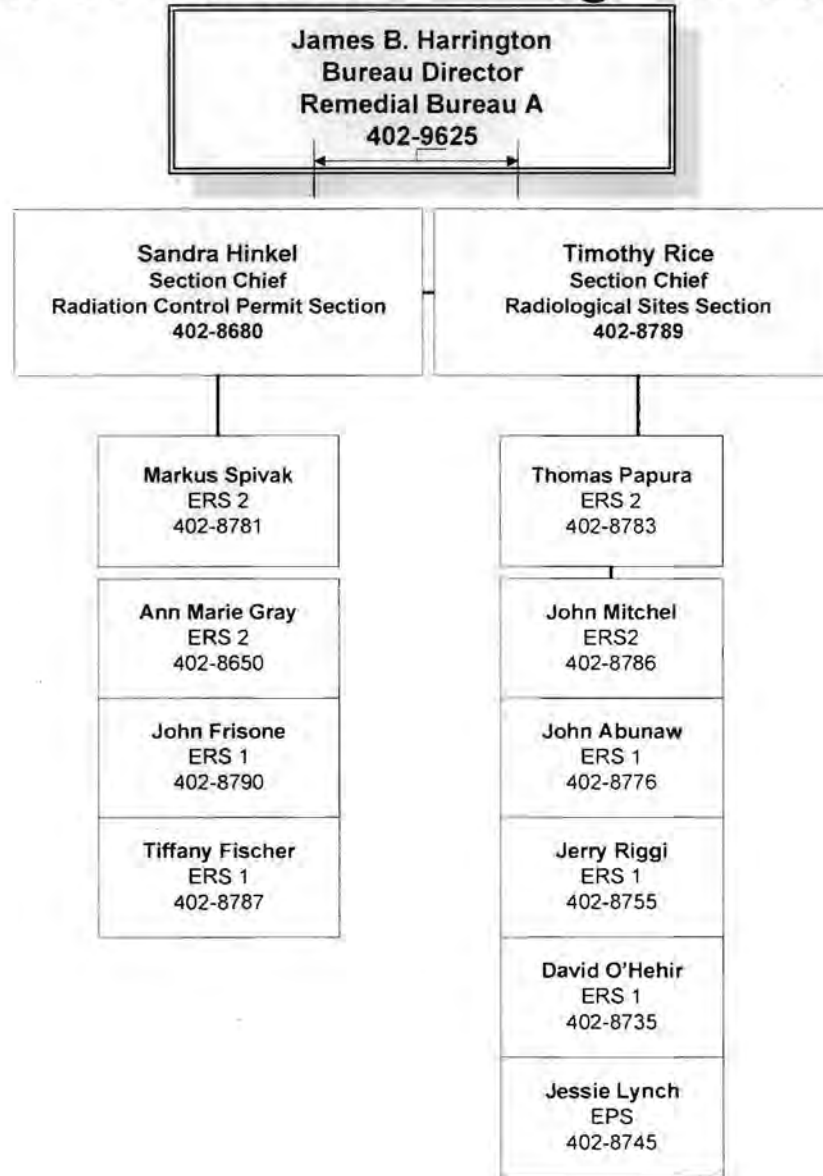
MARO - Metropolitan Area Regional Office  
 WRO - Western Regional Office  
 CNYRO - Central Regional Office



# Organization of Public Health Programs New York State Department of Health



# NYS DEC Radiation Program Staff



# GOVERNOR

**Joseph Martens**  
**COMMISSIONER**  
**ENVIRONMENTAL CONSERVATION**

**Eugene Leff**  
**DEPUTY COMMISSIONER**

**Dale Desnoyers**  
**DIVISION DIRECTOR**  
**Environmental**  
**Remediation**

**James B. Harrington**  
**BUREAU DIRECTOR**  
**DIVISION OF ENVIRONMENTAL**  
**REMEDATION**

**RADIATION PROGRAM**

## APPENDIX C

### INSPECTION CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT ARE INCLUDED FOR COMPLETENESS ONLY.

#### New York City Department of Health and Mental Hygiene

File No.: 1  
Licensee: Staten Island University Hospital  
Inspection Type: Routine, Unannounced  
Inspection Date: 4/13/10  
License No.: 91-2840-01  
Priority: 2  
Inspector: OA

File No.: 2  
Licensee: Weill Medical College of Cornell University  
Inspection Type: Routine, Unannounced  
Inspection Date: 6/23/08  
License No.: 91-3197-01  
Priority: 3  
Inspector: EC

File No.: 3  
Licensee: Columbia-Presbyterian Medical Center  
Inspection Type: Routine, Announced  
Inspection Date: 12/14/06  
License No.: 52-2878-04  
Priority: 3  
Inspector: JH

File No.: 4  
Licensee: Lenox Hill Hospital  
Inspection Type: Special, Announced  
Inspection Date: 5/11/11  
License Nos.: 91-2926-01  
92-2926-02  
Priority: 2  
Inspector: MR

File No.: 5  
Licensee: Columbia-Presbyterian Medical Center  
Inspection Type: Special, Announced  
Inspection Date: 1/26/10  
License Nos.: 74-2878-03  
75-2878-01  
93-2878-05  
Priority: 2  
Inspector: MR

File No.: 6  
Licensee: The Museum of Modern Art  
Inspection Type: Routine, Unannounced  
Inspection Date: 5/22/08  
License No.: 52-2851-01  
Priority: 5  
Inspector: JL

Comment:  
No supervisory review.

File No.: 7  
Licensee: George Varsos, M.D.  
Inspection Type: Routine, Announced  
Inspection Date: 6/11/09  
License No.: 91-3126-01  
Priority: 2  
Inspector: JH

File No.: 8

Licensee: Frederick Feuerbach, M.D.  
Inspection Type: Routine, Announced  
Inspection Date: 12/12/06

License No.: 91-3231-01  
Priority: 5  
Inspector: HT

File No.: 9

Licensee: New York City Veterinary Specialists  
Inspection Type: Routine, Announced  
Inspection Date: 5/3/07

License No.: 52-3334-01  
Priority: 5  
Inspector: HT

Comment:

Report states inspection performed on 5/3/07. Letter to licensee refers to inspection performed on 5/10/07.

File No.: 10

Licensee: K. Peter Rentrop, M.D.  
Inspection Type: Routine, Unannounced  
Inspection Date: 6/10/09

License No.: 91-3262-01  
Priority: 5  
Inspector: JH

File No.: 11

Licensee: Long Island Jewish Medical Center  
Inspection Type: Routine, Unannounced  
Inspection Date: 3/10/09 to 3/23/09

License No.: 75-2986-01  
Priority: 2  
Inspector: JH

File No.: 12

Licensee: Shirish Thanawala, M.D.  
Inspection Type: Routine, Unannounced  
Inspection Date: 11/10/09

License No.: 91-2866-01  
Priority: 5  
Inspector: OA

File No.: 13

Licensee: Memorial Sloan-Kettering Cancer Center  
Inspection Type: Routine, Announced  
Inspection Date: 12/21/06

License No.: 75-2968-01  
Priority: 2  
Inspector: EC

File No.: 14

Licensee: Beth Israel Medical Center  
Inspection Type: Routine, Announced  
Inspection Date: 2/5/08

License No.: 91-2897-01  
Priority: 2  
Inspector: OA

File No.: 15

Licensee: The New York Hospital Medical Center of Queens  
Inspection Type: Routine, Unannounced  
Inspection Date: 10/24/07

License No.: 91-2894-01  
Priority: 2  
Inspector: JH

File No.: 16

Licensee: Lenox Hill Hospital  
Inspection Type: Follow-up, Unannounced  
Inspection Date: 3/22/07

License No.: 91-2926-01  
Priority: 2  
Inspector: JL

Comment:

No supervisory review.

File No.: 17

Licensee: Lenox Hill Hospital  
Inspection Type: Routine, Unannounced  
Inspection Date: 5/3/10

License No.: 92-2926-02  
Priority: 5  
Inspector: JH

New York State Department of Health

File No.: 18

Licensee: Massena Memorial Hospital  
Inspection Type: Routine, Unannounced  
Inspection Date: 10/30/07

License No.: 3248  
Priority: 5  
Inspector: SG

File No.: 19

Licensee: William Bradley, DVM  
Inspection Type: Routine, Unannounced  
Inspection Date: 5/13/08

License No.: 3114  
Priority: 5  
Inspector: AD

File No.: 20

Licensee: Able Testing & Inspection, Inc.  
Inspection Type: Routine, Special, Announced  
Inspection Date: 12/21/09

License No.: C2555  
Priority: 1  
Inspector: DG

Comment:

Inspection performed 44 days overdue. Inspection documentation issued to licensee  
59 days after inspection.

File No.: 21

Licensee: Utica College  
Inspection Type: Routine, Unannounced  
Inspection Date: 12/10/09

License No.: 1143  
Priority: 5  
Inspector: WV

File No.: 22

Licensee: Northern Westchester Hospital Center  
Inspection Type: Routine, Special, Unannounced  
Inspection Date: 5/22-5/23/07

License No.: 0585  
Priority: 2  
Inspector: AB

File No.: 23

Licensee: Buffalo Cancer Center  
Inspection Type: Routine, Special, Unannounced  
Inspection Date: 6/11/10

License No.: 5041  
Priority: 2  
Inspector: CB/SK

File No.: 24

Licensee: SJB Services, Inc.  
Inspection Type: Routine, Announced  
Inspection Date: 9/11/08

License No.: C2542  
Priority: 5  
Inspector: BK



File No.: 25

Licensee: Newburgh SPECT Imaging  
Inspection Type: Routine, Unannounced  
Inspection Date: 3/13/07

License No.: 5088  
Priority: 5  
Inspector: CB

File No.: 26

Licensee: SUNY College at Geneseo  
Inspection Type: Routine, Announced  
Inspection Date: 10/8/09

License No.: 1042  
Priority: 5  
Inspector: MT

Comment:

No supervisory review.

File No.: 27

Licensee: New York Oncology Hematology  
Inspection Type: Routine, Unannounced  
Inspection Date: 12/17/10

License No.: 5107  
Priority: 5  
Inspector: MS

File No.: 28

Licensee: PB Americas, Inc.  
Inspection Type: Routine, Unannounced  
Inspection Date: 12/2/09

License No.: C3235  
Priority: 5  
Inspector: AC

File No.: 29

Licensee: Steris Isomedix Services, Inc.  
Inspection Type: Routine, Unannounced  
Inspection Date: 12/17/10

License No.: C2583  
Priority: 2  
Inspectors: RS,CB

File No.: 30

Licensee: St. Elizabeth Medical Center  
Inspection Type: Routine, Unannounced  
Inspection Date: 3/8/07

License No.: 457-1  
Priority: 3  
Inspector: OO

File No.: 31

Licensee: Faxton St. Luke's Healthcare  
Inspection Type: Routine, Unannounced  
Inspection Date: 4/4/11

License No.: 0462  
Priority: 2  
Inspector: VG

Comment:

No supervisory review.

File No.: 32

Licensee: Cornell University  
Inspection Type: Routine, Announced  
Inspection Date: 8/11-8/14/09

License No.: 0005-3A  
Priority: 3  
Inspector: WK

File No.: 33

Licensee: Regenron Pharmaceuticals  
Inspection Type: Routine, Unannounced  
Inspection Date: 3/25/11

License No.: 2904  
Priority: 5  
Inspector: JM

File No.: 34

Licensee: SUNY at Stony Brook  
Inspection Type: Routine, Unannounced  
Inspection Date: 5/14, 5/28, and 6/10/09

License No.: 0455  
Priority: 2  
Inspectors: AB/JM

File No.: 35

Licensee: Saint-Gobain Performance Plastics Corporation  
Inspection Type: Routine, Unannounced  
Inspection Date: 5/21/09

License No.: C2889  
Priority: 5  
Inspector: MH

File No.: 36

Licensee: Pharmalogic Syracuse, LLC  
Inspection Type: Routine, Unannounced  
Inspection Date: 5/26/11

License No.: C3231  
Priority: 2  
Inspector: AC

File No.: 37

Licensee: W.M. Burke Medical Research Institute  
Inspection Type: Routine, Unannounced  
Inspection Date: 2/27/08

License No.: 1859  
Priority: 5  
Inspector: CB

File No.: 38

Licensee: Eastman Kodak Company  
Inspection Type: Routine, Unannounced  
Inspection Date: 11/3-11/4/09

License No.: C1347  
Priority: 2  
Inspector: WV

File No.: 39

Licensee: NRD, LLC  
Inspection Type: Routine, Unannounced  
Inspection Date: 1/23-1/24/07

License No.: C1391, C1429  
Priority: 5  
Inspector: WV

Comment:

- a) Inspection documentation issued to licensee 43 days after inspection.
- b) No supervisory review.

File No.: 40

Licensee: Reviss Services, Inc.  
Inspection Type: Reciprocity  
Inspection Date: 4/9/10

License No.: IL-0205801  
Priority: N/A  
Inspector: JM

New York State Department of Environmental Conservation

File No.: 41  
Permittee: Triad Isotope, Inc. Permit Nos.: 1-2824-00545/00001  
Inspection Type: Announced, Special Priority: 4  
Inspection Date: 8/30/2010 Inspector: AG

File No.: 42  
Licensee: PharmaLogic, Syracuse Permit No.: 4-0126-00642/00002  
Inspection Type: Routine, Unannounced Priority: 4  
Inspection Date: 2/15/2008 Inspector: AG

File No.: 43  
Permittee: IBA Molecular North America, Inc. Permit Nos.: 4-0126-00502/00007 & /00001  
Inspection Type: Routine, Unannounced Priority: 2  
Inspection Date: 9/29/2010 Inspectors: TF, MS

File No.: 44  
Permittee: PETNET Solutions, Inc. Permit Nos.: 4-0126-00501/00001  
Inspection Type: Routine, Announced Priority: 2  
Inspection Date: 5/25/2007 Inspector: MS

File No.: 45  
Permittee: North American Philips Lighting Permit Nos.: 8-4624-00022/00018  
Inspection Type: Routine, Announced Priority: 3  
Inspection Date: 11/17/2010 Inspectors: JF, AG

Comment:  
Inspection documentation issued to licensee 6 days late.

File No.: 46  
Permittee: University of Rochester Permit Nos.: 8-2699-00059/00003  
Inspection Type: Routine, Announced Priority: 4  
Inspection Date: 10/07/2009 Inspectors: AG, TF

Comment:  
Inspection documentation issued to licensee 14 days late.

File No.: 47  
Permittee: Cardinal Health 420, LLC Permit No.: 8-2614-00811/00001  
Inspection Type: Announced, Special Priority: 3  
Inspection Date: 11/4/2008 Inspectors: AG, MS

Comment:  
Inspection documentation issued to licensee 13 days late.

File No.: 48  
Permitee: NRD, Inc.  
Inspection Type: Special, Announced  
Inspection Date: 4/8/2009

Permit No.: 9-1446-00018/00001  
Priority: 4  
Inspectors: SH, JF

### INSPECTOR ACCOMPANIMENTS

The following inspector accompaniments were performed prior to the on-site IMPEP review:

#### New York City Department of Health and Mental Hygiene

Accompaniment No.: 1  
Licensee: New York University Hospital Center  
Inspection Type: Routine, Announced  
Inspection Date: 5/5/11  
License No.: 75-2955-01  
Priority: 2  
Inspector: EC

Accompaniment No.: 2  
Licensee: New York University Hospital Center  
Inspection Type: Special, Announced  
Inspection Date: 5/6/11  
License No.: 75-2955-01  
75-2955-02  
92-2955-03  
93-2955-05  
Priority: 2  
Inspector: MR

#### New York State Department of Health

Accompaniment No.: 3  
Licensee: Good Samaritan Hospital  
Inspection Type: Routine, Unannounced  
Inspection Date: 5/2/11  
License No.: 0575  
Priority: 3  
Inspector: AB

Accompaniment No.: 4  
Licensee: Pall Hauppauge  
Inspection Type: Routine/Special, Unannounced  
Inspection Date: 5/3/11  
License No.: C1935  
Priority: 2  
Inspector: BK

Accompaniment No.: 5  
Licensee: Meade Testing Labs  
Inspection Type: Routine/Special, Unannounced  
Inspection Date: 5/4/11  
License No.: C2697  
Priority: 1  
Inspector: JM

Accompaniment No.: 6  
Licensee: Noyes Memorial Hospital  
Inspection Type: Routine, Unannounced  
Inspection Date: 5/16/11  
License No.: 1831  
Priority: 5  
Inspector: MT

Accompaniment No.: 7  
Licensee: Quality Inspection Services  
Inspection Type: Routine, Unannounced  
Inspection Date: 5/17/11

License No.: C2700  
Priority: 1  
Inspector: SK

Accompaniment No.: 8  
Licensee: Radiotherapy Associates, LLC  
Inspection Type: Routine, Unannounced  
Inspection Date: 5/18/11

License No.: 3111  
Priority: 2  
Inspector: VG

Accompaniment No.: 9  
Licensee: Clough, Harbor & Associates  
Inspection Type: Routine, Unannounced  
Inspection Date: 5/19/11

License No.: C2844  
Priority: 5  
Inspector: MH

New York State Department of Environmental Conservation

Accompaniment No.: 10  
Permittee: Albany Medical Center  
Inspection Type: Routine, Unannounced  
Inspection Date: 5/20/11

Permit No.: 4-0101-00036/00006  
Priority: 2  
Inspector: JF

Accompaniment No.: 11  
Permittee: NYS Energy Research & Development Authority  
Inspection Type: Routine, Unannounced  
Inspection Date: 6/1/11

Permit No.: 9-0422-00011/00011  
Priority: 3  
Inspector: DO

## APPENDIX D

### LICENSE CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS ONLY.

#### New York City Department of Health and Mental Hygiene

File No.: 1 Licensee: Centenary Hospital Type of Action: Termination Date Issued: 10/22/08	License No.: 92-2848-01 Amendment No.: 9 License Reviewer: DH
File No.: 2 Licensee: Cabrini Medical Center Types of Action: Termination Date Issued: 4/01/09	License No.: 92-2922-02 Amendment No.: 9 License Reviewer: DH
File No.: 3 Licensee: Lenox Hill Hospital Type of Action: Amendment Date Issued: 6/22/10	License No.: 91-2926-01 Amendment No.: 25 License Reviewer: DH
File No.: 4 Licensee: Albert Einstein College of Medicine. Type of Action: Amendment Dates Issued: 6/4/08	License No.: 91-2919-01 Amendment No.: 3 License Reviewer: DH
File No.: 5 Licensee: Fordham University Type of Action: Amendment Date Issued: 3/02/09	License No.: 52-2964-01 Amendment No.: 7 License Reviewer: DH
File No.: 6 Licensee: Keith Tobin, M D Type of Action: Amendment Date Issued: 3/9/11	License No.: 91-2979-01 Amendment No.: 8 License Reviewer: DH
File No.: 7 Licensee: SUNY Health Service Center Type of Action: Renewal Date Issued: 11/15/10	License No.: 74-2934-02 Amendment No.: 4 License Reviewer: DH
File No.: 8 Licensee: Polytechnic Institute of New York University Type of Action: Renewal Date Issued: 9/24/08	License No.: 52-2903-01 Amendment No.: 6 License Reviewer: DH

File No.: 9

Licensee: New York Presbyterian Hospital

Type of Action: New

Date Issued: 2/17/11

License No.: 75-2960-04

Amendment No.: 0

License Reviewer: DH

Comments

- a) License issued without the required security license condition.
- b) No pre-licensing determination performed.

File No.: 10

Licensee: New York Eye & Ear Infirmary

Type of Action: Amendment

Dates Issued: 11/03/10

License No.: 91-2936-01

Amendment No.: 6

License Reviewer: DH

File No.: 11

Licensee: Columbia Presbyterian Medical Center

Type of Action: Amendment

Dates Issued: 10/26/10

License No.: 93-2878-05

Amendment No.: 8

License Reviewer: DH

File No.: 12

Licensee: Albert Einstein College of Medicine

Type of Action: Amendment

Dates Issued: 5/21/08

License No.: 74-2919-02

Amendment No.: 11

License Reviewer: DH

Comments:

License issued without the required security license condition.

File No.: 13

Licensee: Memorial Sloan Kettering Cancer Center

Type of Action: Amendment

Date Issued: 5/02/11

License No.: 75-2968-01

Amendment No.: 13

License Reviewer: DH

Comment:

License issued without the required security license condition.

File No.: 14

Licensee: New York Blood Center

Type of Action: Amendment

Date Issued: 3/04/09

License No.: 74-2946-01

Amendment No.: 10

License Reviewer: DH

Comment:

License issued without the required security license condition.

New York State Department of Health

File No.: 15	Licensee: Good Samaritan Hospital	License No.: 490
Type of Action: Amendment	Date Issued: 5/04/06	Amendment No.: 53
		License Reviewer: OO
File No.: 16	Licensee: Roswell Park	License No.: 2923
Types of Action: Amendment	Date Issued: 12/05/07	Amendment No.: 28
		License Reviewer: CB
File No.: 17	Licensee: Regeneron Pharmaceuticals	License No.: 2904
Type of Action: Amendment	Date Issued: 1/17/08	Amendment No.: 16
		License Reviewer: CB
File No.: 18	Licensee: Northshore Radiology at Glen Cove	License No.: 5307
Type of Action: New	Dates Issued: 2/13/08	Amendment Nos.: 0
		License Reviewer: CB
File No.: 19	Licensee: Comprehensive Cardiology of Long Island	License No.: 5330
Type of Action: New	Date Issued: 2/24/09	Amendment No.: 0
		License Reviewer: AC
File No.: 20	Licensee: Melville Surgery Center	License No.: 5361
Type of Action: Termination	Date Issued: 3/19/09	Amendment No.: 1
		License Reviewer: CB
File No.: 21	Licensee: Quality Inspection Services	License No.: C2514
Type of Action: Amendment	Date Issued: 1/21/09	Amendment No.: 10
		License Reviewer: VD
File No.: 22	Licensee: Corning Hospital	License No.: 0421
Type of Action: Amendment	Date Issued: 2/23/10	Amendment No.: 53
		License Reviewer: AC
File No.: 23	Licensee: Westchester PET and Medical	License No.: 5081
Type of Action: Amendment	Dates Issued: 3/7/11	Amendment Nos.: 12
		License Reviewer: AC



File No.: 24

Licensee: Arnot Health  
Type of Action: Amendment  
Dates Issued: 9/28/08

License No.: 5182  
Amendment No.: 6  
License Reviewer: AD

File No.: 25

Licensee: SUNY College  
Type of Action: Amendment  
Dates Issued: Pending

License No.: 1064  
Amendment No.: NA  
License Reviewers: RD/CB

File No.: 26

Licensee: Benedictine Hospital  
Type of Action: Amendment  
Date Issued: 3/30/07

License No.: 1181  
Amendment No.: 42  
License Reviewer: RD

File No.: 27

Licensee: Pepsi Cola  
Type of Action: Renewal  
Date Issued: 12/26/06

License No.: C3078  
Amendment No.: 2  
License Reviewer: DG

File No.: 28

Licensee: Eastman Kodak  
Type of Action: Amendment  
Date Issued: 9/9/09

License No.: C1347  
Amendment No.: 3  
License Reviewer: DG

File No.: 29

Licensee: Warren & Panzer Engineering  
Type of Action: Renewal  
Date Issued: 8/7/09

License No.: C2631  
Amendment No.: 2  
License Reviewer: DG

File No.: 30

Licensee: Medical Arts Radiology  
Types of Action: New  
Date Issued: 6/13/07

License No.: 5291  
Amendment No.: 0  
License Reviewer: MH

File No.: 31

Licensee: Glen Falls Hospital  
Type of Action: Amendment  
Date Issued: 12/5/08

License No.: 0481  
Amendment No.: 74  
License Reviewer: MH

File No.: 32

Licensee: Sheehan Memorial Hospital  
Type of Action: Renewal  
Dates Issued: Pending

License No.: 1847  
Amendment No.: N/A  
License Reviewer: MH

File No.: 33

Licensee: Glen Falls Hospital  
Type of Action: Amendment  
Date Issued: 1/14/08

License No.: 0481  
Amendment No.: 72  
License Reviewer: JK

File No.: 34  
Licensee: Buffalo Medical Group  
Type of Action: Renewal  
Date Issued: 7/8/11

License No.: 2902  
Amendment No.: 18  
License Reviewer: AC

File No.: 35  
Licensee: Sky Testing Services  
Type of Action: Amendment  
Date Issued: 7/02/10

License No.:  
Amendment No.: 2  
License Reviewer: WV

File No.: 36  
Licensee: Roswell Park Cancer Institute  
Type of Action: Renewal  
Date Issued: Pending

License No.: 2923  
Amendment No.: N/A  
License Reviewers: RD/CB

Comments:  
Under timely renewal for 6075 days.

File No.: 37  
Licensee: Ciba Specialty Chemicals  
Types of Action: Termination  
Dates Issued: 7/17/07

License No.: C2730  
Amendment No.: 3  
License Reviewer: DH

File No.: 38  
Licensee: American Red Cross  
Type of Action: Renewal  
Dates Issued: 3/10/10

License No.: 1761  
Amendment Nos.: 24  
License Reviewer: AC

New York State Department of Environmental Conservation

File No.: 39  
Permittee: North American Philips Lighting  
Type of Action: Modification  
Date Issued: 7/27/06

Permit No.: 8-4624-00022/00018  
Facility/Program No.:  
Permit Reviewer: JF

File No.: 40  
Permittee: PETNET Solutions, Inc.  
Type of Action: Modification  
Date Issued: 8/6/08

Permit No.: 4-0126-00501/00001  
Facility/Program No.:  
Permit Reviewer: TF

File No.: 41  
Permittee: Mirion Technologies  
Type of Action: New  
Date Issued: 1/24/07

Permit No.: 8-0724-00139/00003  
Facility/Program No.: Not used since 2008  
Permit Reviewer: TF

File No.: 42  
Permittee: University of Rochester  
Type of Action: Modification  
Date Issued: 1/12/10

Permit No.: 8-2699-00059/00003  
Facility/Program No.: 170-3  
Permit Reviewer: TF

File No.: 43  
Permittee: University of Rochester  
Type of Action: Renewal  
Date Issued: 2/21/08

Permit No.: 8-2699-00059/00003  
Facility/Program No.: 170-3  
Permit Reviewer: TF

File No.: 44  
Permittee: NRD, LLC  
Type of Action: Modification  
Date Issued: 11/10/09

Permit No.: 9-1446-00018/00001  
Facility/Program No.: 53-3  
Permit Reviewer: JF

File No.: 45  
Permittee: Cardinal Health 420  
Type of Action: Modification  
Date Issued: 2/17/08

Permit No.: 8-2614-00811/00001  
Facility/Program No.: 188-3  
Permit Reviewer: AG

File No.: 46  
Permittee: IBA Molecular North America, Inc.  
Type of Action:  
Date Issued: 2/7/10

Permit Nos.: 4-0126-00502 /00001  
Facility/Program No.: 182-3  
Permit Reviewer: TF

File No.: 47  
Permittee: PharmaLogic Syracuse  
Type of Action: New  
Date Issued: 12/10/07

Permit No.: 4-0126-00642-00002  
Facility/Program No.: 192-3  
Permit Reviewer: AG

File No.: 48  
Permittee: Triad Isotopes, Inc.  
Type of Action: Modification  
Date Issued: 7/23/09

Permit No.: 1-2824-00545/00001  
Facility/Program No.: 131-3  
Permit Reviewer: AG

## APPENDIX E

### INCIDENT CASEWORK REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS ONLY.

#### New York City Department of Health and Mental Hygiene

File No.: 1  
Licensee: Redacted  
Date of Incident: 9/22/06  
Investigation Date: 6/16/11

Comments:

- a) Licensee reported event to NYC on January 3, 2007 and in 2009. NYC took no follow-up action.
- b) Event met requirements for an Abnormal Occurrence.
- c) This incident was reported to NRC on June 15, 2011.

File No.: 2  
Licensee: Redacted  
Date of Incident: 10/6/09  
Investigation Date: N/A

Comments:

- a) Licensee reported event to NYC on October 9, 2009 . NYC took no follow-up action.
- b) This incident was reported to NRC on June 15, 2011.

File No.: 3  
Licensee: Redacted  
Date of Incident: 6/24/09  
Investigation Date: 7/16/09

Comment:

- a) Licensee reported event to NYC on June 24, 2009
- b) NYC conducted a follow-up on July 16, 2009. No inspection report available.
- c) Event was non-reportable but reported to NRC on June 24, 2011..

#### New York State Department of Health

File No.: 4  
Licensee: Redacted  
Date of Incident: 3/6/07  
Investigation Date: 3/9/07

License No.: N/A  
Incident Log No.: 520  
Type of Investigation: On-Site

File No.: 5  
Licensee: Redacted  
Date of Incident: 6/19/07  
Investigation Date: 6/20/07

License No.: N/A  
Incident Log No.: 548  
Type of Investigation: On-Site

File No.: 6

Licensee: Redacted

Date of Incident: 6/21/07

Investigation Date: 6/22/07

License No.: N/A

Incident Log No.: 550

Type of Investigation: On-Site

File No.: 7

Licensee: Redacted

Date of Incident: 5/23/07

Investigation Date: 6/8/07

License No.: N/A

Incident Log No.: 522

Type of Investigation: On-Site

File No.: 8

Licensee: Redacted

Date of Incident: 7/2/07

Investigation Date: 7/2/07

License No.: N/A

Incident Log No.: 553

Type of Investigation: On-Site

File No.: 9

Licensee: Redacted

Date of Incident: 10/2/07

Investigation Date: 10/3/07

License No.: N/A

Incident Log No.: 566

Type of Investigation: On-Site

File No.: 10

Licensee: SJB Services, Inc.

Date of Incident: 11/1/07

Investigation Date: 11/2/07

License No.: C2500

Incident Log No.: 572

Type of Investigation: Phone

File No.: 11

Licensee: Xerox Corporation

Date of Incident: 3/1/08

Investigation Date: 11/17/08

License No.: C3155

Incident Log No.: 662

Type of Investigation: On-Site

File No.: 12

Licensee: Redacted

Date of Incident: 7/31/09

Investigation Date: 7/31/09

License No.: N/A

Incident Log No.: 740

Type of Investigation: Phone

File No.: 13

Licensee: Redacted

Date of Incident: 5/26/10

Investigation Date: 5/28/10

License No.: N/A

Incident Log No.: 837

Type of Investigation: Phone

File No.: 14

Licensee: Certified Testing Laboratory

Date of Incident: 8/30/09

Investigation Date: 8/31/09

License No.: C2639

Incident Log No.: 749

Type of Investigation: On-Site

File No.: 15

Licensee: Dominion Resources, Inc.

Date of Incident: 4/19/10

Investigation Date: 4/19/10

License No.: N/A

Incident Log No.: 822

Type of Investigation: Phone

File No.: 16  
Licensee: Cole Consulting Corporation  
Date of Incident: 2/25/08  
Investigation Date: 2/25/08

License No.: C2937  
Incident Log No.: 590  
Type of Investigation: On-Site

New York State Department of Environmental Conservation

File No.: 17  
Permittee: Cardinal Health 41  
Date of Incident: 12/6/06  
Investigation Date: 12/7/06

Permit No.: 8-2614-00812/2  
Incident Log No.: N/A  
Type of Investigation: Phone

File No.: 18  
Permittee: SUNY Buffalo  
Date of Incident: 12/1/06  
Investigation Date: 12/14/06

Permit No.: 9-1402-00680/29  
Incident Log No.: N/A  
Type of Investigation: Phone

## APPENDIX F

### SEALED SOURCE AND DEVICE REVIEWS

NOTE: CASEWORK LISTED WITHOUT COMMENT IS INCLUDED FOR COMPLETENESS ONLY.

File No.: 1

Registry No.: NY-1271-S-101-S

Manufacturer: mb-microtec ag

Date Issued: 12/14/06

Type of Action: New Registration

SS&D Reviewers: DS, CB

SS&D Type: Gaseous Light Source

Model Nos.: 400/1, 400/2, 400/3, 400/4, 400/5, and 400/6

File No.: 2

Registry No.: NY-1210-D-102-G

Manufacturer: Inficon, Inc.

Date Issued: 03/02/10

Type of Action: New Registration

SS&D Reviewers: DS, CB

SS&D Type: Ion Generators, Chromatography

Model Nos.: CMS5000

Comments:

- a) Information regarding radiation profiles, leak testing, prototype testing, conditions of use, quality control/quality assurance can be found in case file for SSD NY-1210-D-101-B. Model CMS5000 is very similar to Model CMS500 found in SSD NY-1210-D-101-B.
- b) Drawings used in the registration did not specify overall dimensions to describe the overall size of the device.

File No.: 3

Registry No.: NY-0502-D-112-G

Manufacturer: NRD, LLC

Date Issued: 12/30/2009

Type of Action: New Registration

SS&D Reviewers: DS, CB

SS&D Type: Static Eliminator

Model Nos.: Nuclecel Ionizer Model P-2035

Comment:

Drawings used in the registration did not specify overall dimensions to describe the overall size of the device.

File No.: 4

Registry No.: NY-0502-D-111-G

Manufacturer: NRD, Inc.

Date Issued: 11/23/2009

Type of Action: New Registration

SS&D Reviewers: DS, CB

SS&D Type: Static Eliminator

Model Nos.: Nuclecel Ionizer Model P-2060 and Model P-2062

Comment:

Drawings used in the registration did not specify overall dimensions to describe the overall size of the device.

ATTACHMENT

August 4, 2011 Letter from Sandra Hinkel  
DEC's Response to the Draft Report  
ADAMS Accession No.: ML11216A261

August 8, 2011 Letter from Sandra Hinkel  
DEC's Follow-up Response to the Draft Report  
ADAMS Accession No.: ML112201338

August 10, 2011 Letter from Christopher Boyd  
NYC's Response to the Draft Report  
ADAMS Accession No.: ML11222A252

August 15, 2011 Letter from Stephen Gavitt  
DOH's Response to the Draft Report  
ADAMS Accession No.: ML11227A287

and

NRC's Comment Resolution Document  
ADAMS Accession No.: ML112450318