

**DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF ENVIRONMENTAL SAFETY AND HEALTH  
RADIATION PROTECTION AND RELEASE PREVENTION ELEMENT  
MONTHLY REPORT**

**MARCH 1, 2009 THROUGH MARCH 31, 2009**

**SECTION 1                      OFFICE OF THE ASSISTANT DIRECTOR**

**SECTION 11                    BUREAU OF RADIOLOGICAL HEALTH**

**SECTION 111                 BUREAU OF ENVIRONMENTAL RADIATION**

**SECTION 1V                 BUREAU OF NUCLEAR ENGINEERING**

**SECTION V                    BUREAU OF RELEASE PREVENTION**

# **RADIATION PROTECTION AND RELEASE PREVENTION ELEMENT MONTHLY REPORT**

**MARCH 1, 2009 THROUGH MARCH 31, 2009**

## **SECTION I - OFFICE OF THE ASSISTANT DIRECTOR**

### **Highlights of the Monthly Report**

#### **1. Industrial Reactor Laboratories (IRL)**

Staff visited the site of the former IRL after receiving a citizen inquiry regarding decommissioning activities performed in the 1970's. Staff reviewed the files and submitted a Freedom of Information Act request to the US Nuclear Regulatory Commission to determine the status of the terminated facility. Because documentation indicated that radioactive material remained onsite and because the current cleanup criteria is more stringent than when decommissioning was performed, staff contacted the facility, which now houses Jacobus Pharmaceutical Company, Inc. A gamma and alpha survey performed inside the facility confirmed that no residual radioactive materials were present above acceptable levels. A gamma survey was performed outside of the property where documents indicated radioactive material remained on site. Slightly elevated levels were detected at these locations, however, they were well below regulatory limits. In its current configuration, there is no concern regarding the health and safety of the employees or the public residing around the facility. Dose modeling was performed after decay correcting the concentrations remaining at IRL assuming that the cover was disrupted and someone built a house on the contaminated portion of the property. The results were slightly above those allowed in N.J.A.C. 7:28-12.10(e). Staff are pursuing the options for a deed notice.

#### **2. The Bureau of Radiological Health (Bureau) Confiscates medical X-Ray Equipment**

On March 10, 2009 inspectors removed and took possession of a diagnostic x-ray machine from a podiatric doctor who failed to correct ongoing radiation protection violations. In January, 2009 the Bureau embargoed the x-ray equipment to prevent its further use until such time as the facility can demonstrate compliance with radiation protection regulations. If the responsible party fails to correct the violations within 30 days of an embargo, the Radiation Protection Act, N.J.S.A. 26:2D-1 et seq., specifies that the equipment becomes the property of the State to be disposed of in a safe manner.

#### **3. The Alliance for Quality Medical Imaging and Radiation Therapy (Alliance)**

The Alliance met on March 29 – 31, 2009. Mr. Al Orlandi was invited to this meeting as the Conference of Radiation Control Program Directors, Inc. representative. The status of the "Consistency, Accuracy, Responsibility, and Excellence in Medical Imaging and Radiation Therapy Act" (CARE Bill) was discussed. The Bill was not passed prior to the adjournment of

the 110<sup>th</sup> Congress. The Alliance discussed its plans in support of the CARE Bill and strategies aimed at gaining support for its passage in the 111<sup>th</sup> Congress. Also discussed was the status of the rules for implementation of the Medicare Improvement for Patients and Providers Act (MIPPA) that was enacted in July 2008. MIPPA requires medical facilities that perform computed tomography, nuclear medicine, and magnetic resonance imaging procedures to be accredited by an organization that was recognized by the Department of Health and Human Services by January 1, 2012. The Alliance also discussed the recent enhancements to “Image Gently” initiatives and the national status regarding the recognition of radiologist assistants. The next meeting of the Alliance is scheduled for November 2009.



Paul Baldauf, P.E.  
Assistant Director

**DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF ENVIRONMENTAL SAFETY AND HEALTH  
RADIATION PROTECTION AND RELEASE PREVENTION ELEMENT**

**March 1 - 31, 2009**

**SECTION II – BUREAU OF RADIOLOGICAL HEALTH (BRH)**

**A. From the Chief’s Desk**

Contact: Paul Orlando (609) 984-5809

**Bureau Confiscates Medical X-ray Equipment**

On March 10, 2009, inspectors removed and took possession of a diagnostic x-ray machine from a podiatric doctor who failed to correct ongoing radiation protection violations. In January 2009, the Bureau embargoed the x-ray equipment to prevent its further use until such time as the facility can demonstrate compliance with radiation protection regulations. If the responsible party fails to correct the violations within 30 days of an embargo, the Radiation Protection Act, N.J.S.A. 26:2D-1 et seq., specifies that the equipment becomes the property of the State to be disposed of in a safe manner.

**B. Registration and Support Section**

Contact: Ann Martz Phone: (609) 984-5464

**Machine Source Registration and Renewal Fees**

The Registration and Support Section continues to invoice registrants for new x-ray equipment as it is installed. These invoice amounts contain initial application fees and prorated registration fees which are invoiced daily. The table below represents monthly and year to date activities.

| <b>Machine Source Fees Invoiced and Collected for FY 2009</b> |                   |                     |                      |                        |                   |
|---|-------------------|---------------------|----------------------|------------------------|-------------------|
| Monthly Invoiced  | Monthly Collected | Fiscal YTD Invoiced | Fiscal YTD Collected | Fiscal YTD Adjustments | Percent Collected |
| \$3,806   | 30,403            | \$2,795,729         | \$2,728,130          | \$9,077                | 97.5%             |

**Machine Source Unpaid Registration Fees**

In April 2008, the Bureau established a list of facilities that have not paid their FY 2008 annual registration fees revealing 198 registrants who had not paid their annual registration renewal fees. In June 2008, 72 registrants still had not paid their annual fees, of which 7 were repeat non-payment offenders. As of March 31, 2009, six registrants still owe fees, late fees and penalties for non-payment of registrations.

In January 2009, the Bureau established a new list of 365 facilities that are now delinquent in paying \$132,428.00 in FY 2009 registration renewals. The Bureau is actively pursuing the collection of these past due fees. To date, 183 registrants (50%) have paid their registration fees.

The remaining 182 registrants owe \$52,239.00 (40%) of the original \$132,428.00 in delinquent registration fees. In April 2009, the Bureau will be issuing enforcement actions against the remaining delinquent registrants.

**Technologist Certification License and Renewal Fees**

In October, the Registration and Support Section assisted the Technologist Certification Section in invoicing over 22,600 licensees their 2009-2010 license renewal. The Technologist Certification Section continues to invoice individuals for initial licenses and examinations as they occur. The table below represents monthly and year to date activities.

| <b>Technologist Certification Examination &amp; License Fees</b> |                         |                          |                            |                             |
|--|-------------------------|--------------------------|----------------------------|-----------------------------|
| <b>Invoiced &amp; Collected</b>                                  |                         |                          |                            |                             |
| <b>Invoice Type</b>  | <b>Monthly Invoiced</b> | <b>Monthly Collected</b> | <b>Fiscal YTD Invoiced</b> | <b>Fiscal YTD Collected</b> |
| Examinations   | \$320                   | \$420                    | \$27,500                   | \$27,380                    |
| Initial Licenses   | \$4,240                 | \$4,020                  | \$44,640                   | \$43,300                    |
| Renewal Licenses   | \$2,420                 | \$32,170                 | \$2,056,900                | \$1,796,295                 |
|  |                         |                          |                            |                             |
| <b>Totals</b>  | <b>\$6,980</b>          | <b>\$36,610</b>          | <b>\$2,129,040</b>         | <b>\$1,866,975</b>          |

**C. Machine Source Section**

Contact: Ray Papalski (609) 984-5370

The machine source section is charged with the responsibility of inspecting all x-ray machines used within the state. Below is a summary of the inspection initiatives that the section is engaged in.

**Image Quality**

One goal of the Bureau’s quality assurance program is to increase image quality (IQ) by fifteen percent by 2007. The Bureau has observed a greater than twenty percent increase in image quality scores since the inception of the quality assurance program and continues to monitor image quality scores as part of this program. When the Bureau conducts inspections to determine compliance with the quality assurance program, an image of our IQ phantom is taken and scored by the inspector during the inspection. Six criteria are evaluated (background density, high contrast resolution, noise and artifacts, density uniformity, low contrast detail and low contrast resolution). Additionally our database calculates an overall image quality score.

A report is generated and sent to each facility at which an IQ film was done. This report identifies which category (excellent, good, fair or poor) each of the six tests and the overall score the IQ falls into. The report explains IQ and its determining factors. Facilities with poor IQ scores are asked to consult with their physicist and determine the cause of the poor IQ, make changes to improve IQ, and send a report of their findings and corrective actions to the BRH within thirty days.

In March 2009, IQ evaluations were performed on one hundred and fifty one x-ray units with the following results:

Ninety-six units (63.6 %) had excellent image quality scores.

Fifty-one units (33.8 %) had good image quality scores.

Four units (2.6 %) had fair image quality scores.

No units (0 %) had a poor image quality score.

### **Entrance Skin Exposures**

Entrance skin exposure (ESE) is a measurement of the radiation exposure a patient receives from a single x-ray at skin surface. There are three main factors that affect ESE: technique factors, film-screen speed, and film processing. A key element of our strategy is to ensure that facilities are aware of their ESE and to encourage them to take steps to reduce their ESE if it is high.

When the Bureau conducts inspections to determine compliance with New Jersey Administrative Code 7:28, a measurement of entrance skin exposure (ESE) is taken. A report is generated and sent to each facility at which an ESE measurement was taken. This report gives the ESE and identifies which category the ESE falls into. The report explains ESE and its determining factors. Facilities with extremely high ESE readings are asked to consult with their physicist and determine the cause of the extremely high ESE, make changes to bring the ESE down, and send a report of their findings and corrective actions to the BRH within thirty days.

One goal of the Bureau's quality assurance program for medical facilities was to reduce entrance skin exposure (ESE) to patients from medical x-ray equipment by thirty-five percent by 2005. The Bureau met this goal in September 2004. We are continuing to monitor medical facilities' ESE to ensure these reductions remain in place and to encourage further improvements.

The Bureau did not set any goals for reduction of dental ESE because there is no quality assurance program required for dental facilities. However, we believe similar reductions in dental ESE are possible. The Bureau will track ESE averages and report on changes observed over time.

## **Medical Facilities**

The Bureau collected baseline ESE data on three major examinations (chest, lumbo-sacral spine and foot) for ten months before the start of the quality assurance program requirements in 2001. The Bureau divided ESE exposures into four categories: low, average, high and extremely high. When this baseline data was examined it showed that overall twenty-five percent of New Jersey facilities had extremely high ESE. These represent unnecessary radiation exposure to patients. The Bureau has documented a steady decrease in these unnecessary radiation exposures since the implementation of its quality assurance program.

In March 2009, ESE measurements were calculated on sixty-six x-ray units that performed lumbo-sacral spine x-rays. One unit (1.5%) had an extremely high ESE measurement.

In March 2009, ESE measurements were calculated on thirty seven x-ray units that performed chest x-rays. One unit (2.7%) had an extremely high ESE measurement.

In March 2009, ESE measurements were calculated on fifty one x-ray units that performed foot x-rays. No units (0%) had an extremely high ESE measurement.

## **Dental Facilities**

The Bureau collected baseline ESE data on dental x-ray machines for two years and after evaluating this data, established the ranges for four ESE categories similar to those in the medical quality assurance program (low, average, high and extremely high). When this data was examined it revealed that overall 19.6 percent of New Jersey dental machines had high or extremely high ESE, which represents unnecessary radiation exposure to patients.

Dental facilities use three speeds of film: D, E, F or *Insight*. (*Insight* is the branded name of Kodak's F speed film). Dental facilities also use two types of digital imaging: direct radiography (DR) or computed radiology (CR) – phosphor storage plates (PSP). Slower speed films require higher patient radiation dose to produce an acceptable image. D is the slowest speed and requires sixty percent more radiation than F to produce an acceptable image. Direct radiography requires the least radiation.

An inexpensive way to reduce radiation is to change to a faster speed film. Our research determined that F speed film costs only five cents more per film than D speed. No changes in equipment or processing are necessary to use a faster speed film. While direct radiography systems have the lowest average ESE, they do require the purchase of new more costly equipment.

Data collected between January 18, 2002 and June 30, 2005 shows the following:

| Film Speed | Number of Measurements | Average ESE | Range           |
|------------|------------------------|-------------|-----------------|
| D          | 5586                   | 232.6 mR    | 3 mR to 1557 mR |
| E          | 559                    | 176.1 mR    | 12 mR to 666 mR |
| F & I      | 1352                   | 145.6 mR    | 7 mR to 731 mR  |

| Digital Imaging | Number of Measurements | Average ESE | Range           |
|-----------------|------------------------|-------------|-----------------|
| DR              | 1416                   | 99.0 mR     | 4 mR to 610 mR  |
| CR-PSP          | 71                     | 159.8 mR    | 34 mR to 444 mR |

When the Bureau conducts inspections to determine compliance with New Jersey Administrative Code 7:28, a measurement of entrance skin exposure (ESE) is taken. A report is generated and sent to each facility at which an ESE measurement was taken. This report gives the ESE and identifies which category the ESE falls into. The report explains ESE and its determining factors. Facilities with extremely high ESE readings are asked to consult with their film representative or physicist and determine the cause of the extremely high ESE, make changes to bring the ESE down, and send a report of their findings and corrective actions to the BRH within thirty days.

In March 2009, ESE measurements were calculated on sixty-two dental x-ray unit that used D speed film. Four units (6.4%) had an extremely high ESE measurement.

In March 2009, No ESE measurements were calculated on any x-ray units that used E speed film.

In March 2009, ESE measurements were calculated on twenty-five dental x-ray units that use F or Insight speed film. Three units (12.0%) had extremely high ESE measurements.

In March 2009, ESE measurements were calculated on thirty-five dental x-ray units that used DR digital imaging. One unit (2.8%) had an extremely high ESE measurement.

In March 2009, ESE measurements were not calculated on any dental x-ray units that used CR digital imaging.

## **Inspection Activity and Items of Non-compliance**

A three-page Inspector Activity Report of inspections performed, enforcement documents issued and a description of the non-compliances found follows this report.

### **D. Technologist Certification Section**

Contact: Al Orlandi (609) 984-5890

The Section continued to process license and examination applications, investigate complaints and respond to inquiries during the month of March. The Section has begun and completed several initiatives identified in the Bureau's FY 2009 work plan. Statistical information is attached at the end of the Bureau report. In addition to its regular business functions, the following highlights are reported:

#### **2009-2010 License Renewal Update:**

On December 31, 2008, 22,651 radiologic technology and nuclear medicine technology licenses expired. On October 7, 2008, renewal invoices totaling \$1,973,000 were generated. As of March 31, 2009, 19,928 invoices were received and processed. This represents an 88% renewal rate. 1,899 (9%) of these invoices needed a change of address and/or name change prior to processing. 1,208 (5%) invoices were returned to the Bureau as undeliverable. \$1,743,795 in renewal fees has been collected.

#### **New Annual School Fee Assessed:**

On October 30, 2008, all 57 Radiologic Technology Board of Examiners approved schools of radiologic technology were invoiced for their 2009 annual fee. The total assessment to all radiologic technology schools is \$34,400. Payment of the annual fee is required by January 1, 2009. As of March 31, 2009, \$33,600 in annual fees has been collected.

On March 25, 2009, Administrative Orders were issued to five schools that failed to pay the annual fee as required by N.J.A.C. 7:28-19.14(e).

#### **Limited Dental radiography School Inspection:**

As a Radiologic Technology Board of Examiners (Board) approved school in dental radiologic technology, schools must comply with the Board's approved curriculum and regulations relating to schools of dental radiologic technology. On March 16, 2009, staff conducted an inspection at Dr. Suzanne Gilman's D.D.S. dental radiography program. The Bureau will soon issue its report to the school.

### **Nuclear Emergency Response Drill:**

On March 17, 2009, Al Orlandi participated in the State Evaluated Nuclear Emergency Response Drill at Artificial Island in Salem County. Mr. Orlandi was assigned to the Forward Command Post as Lead.

### **Radiologic Technology License Suspension**

The Commission on Radiation Protection (Commission), at its March 18, 2009 meeting, reviewed the Radiologic Technology Board of Examiners' February 2009 report and Bureau's March 5, 2009 investigation report and ruled that on six dates in July and August 2008, a diagnostic radiologic technologist falsified mammography phantom image quality control tests while employed as a diagnostic radiologic technologist. The Commission found the technologist guilty of unethical conduct in violation of N.J.S.A. 26:2D-34(a)7 and negligent in her activities as a radiologic technologist in violation of N.J.S.A. 26:2D-34(a)13. The Commission voted to suspend the diagnostic radiologic technologist's license for a minimum of ninety days and placed specific conditions for reinstatement of her license.

On March 31, 2009, an Administrative Order and Notice of License Suspension and License Sanction and a Notice of Prosecution were issued.

### **The Alliance for Quality Medical Imaging and Radiation Therapy (Alliance):**

The Alliance represents 23 professional, accreditation and certification organizations involved in the technical use of medical imaging and radiation therapy equipment by non-physicians in the health care setting. For over ten years, the Alliance has worked to develop and implement education and certification standards for diagnostic radiologic technologists, nuclear medicine technologists, radiation therapy technologists, magnetic resonance imaging technologists, medical sonographers, medical dosimetrists and physicists who perform, plan, deliver and evaluate medical imaging procedures and radiation therapy treatments in the United States. The CRCPD is a contributing member of the Alliance.

The Alliance met on March 29-31, 2009. Al Orlandi was invited to this meeting as the Conference of Radiation Control Program Directors (CRCPD) representative. The status of the "Consistency, Accuracy, Responsibility, and Excellence in Medical Imaging and Radiation Therapy Act" (CARE Bill) was discussed. The Bill was not passed prior to the adjournment of the 110<sup>th</sup> Congress. The Alliance discussed its plans in support of the CARE bill and strategies aimed at gaining support for its passage in the 111<sup>th</sup> Congress. Also, discussed was the status of the rules for implementation of the Medicare Improvement for Patients and Providers Act (MIPPA) that was enacted in July 2008. MIPPA requires medical facilities that perform computed tomography, nuclear medicine and magnetic resonance imaging procedures to be accredited by an organization that was recognized by the Department of Health and Human Services by January 1, 2012. The Alliance also discussed the recent enhancements to "Image Gently" initiative and the national status regarding the recognition of radiologist assistants. The next meeting of the Alliance is scheduled for November 2009.

“Image Gently” is a national campaign that was originally launched on January 22, 2008, by the Alliance for Radiation Safety in Pediatric Imaging. “Image Gently” encourages doctors, medical physicists, and radiologic technologists to evaluate their existing exposure protocols and to ensure that lower doses are delivered when imaging pediatric patients. This is particularly important with computed tomography (CT) procedures as they are high radiation procedures. By “child-sizing” the technical factors used in pediatric CT procedures, radiation dose can be reduced. In March 2009, a series of free parent education documents that discuss the “Risk – Benefit” of ionizing radiation medical procedures and steps that can be taken to minimize the risk and maximize the benefit were added. It was also noted that, since the launch of “Image Gently”, the number of healthcare organizations in the Alliance for Radiation Safety in Pediatric Imaging has increased from 10 to 34. Additional information about this important campaign can be obtained at [www.imagegently.org](http://www.imagegently.org)

#### **E. Mammography Section**

Contact: Ramona Chambus (609) 984-5356

#### **Stereotactic Facilities Inspected**

The Mammography Section inspected four facilities with stereotactic/needle localization breast biopsy units. There were no Administrative Orders and Notices of Prosecution issued. A total of thirty-eight stereotactic facility inspections have been performed since July 1, 2008.

#### **Mammography Facilities Inspected**

Mammography facilities are inspected by the Bureau’s certified MQSA inspectors under the Mammography Quality Standards Act (MQSA). Any areas of non-compliance discovered during MQSA facility inspections are classified into one of three categories: Level 1, Level 2 and Level 3. Level 1 and Repeat Level 2 non-compliances are the most serious and the facility may receive a warning letter from the FDA. The facility has fifteen days from the date of the inspection to respond to the FDA detailing the corrective actions they have taken. Level 2 and Repeat Level 3 non-compliances are considered serious. The facility must respond with their corrective actions within thirty days. Level 3 non-compliances are considered less serious and the facility is expected to correct the non-compliance in a timely manner. Inspectors will review facility corrective actions at the next annual inspection.

The Mammography Section inspected twenty-four facilities in March. Four facilities were found to have non-compliance issues which are summarized below. A total of 141 of the 239 facilities scheduled to be inspected under the current FDA MQSA contract have been inspected to date. The contract will expire on July 31, 2009.

**Facility Non-compliances Discovered**

There were no facilities with **Level 1** non-compliances.

There were four facilities with **Level 2** non-compliances which consisted of the following:

Failed to produce documents verifying that the radiologic technologist met the continuing experience requirement of having performed 200 mammography examinations in 24 months.  
(Two facilities)

Failed to produce documents verifying that the radiologic technologist met the requirement of having 8 hours of training in each mammographic modality.

Five out of five random reports reviewed did not contain an acceptable assessment category.

There were no facilities with **Level 3** non-compliances.

A table of inspection details can be found at the end of the BRH report.

**F. Enforcement Services Section**

Contact: Jennifer Daino (609) 984-5359

**BUREAU OF RADIOLOGICAL HEALTH ENFORCEMENT ACTIONS FOR MARCH 2009**

| <b>Total Admin. Orders Issued</b> | <b>Admin. Orders Effective</b> | <b>Admin. Orders Pending</b> | <b>Total Notices of Prosecution Issued</b> | <b>Effective Notices of Prosecution</b> | <b>Pending Notices of Prosecution</b> | <b>Total Formal Enforcement Documents</b> |
|-----------------------------------|--------------------------------|------------------------------|--|---|---------------------------------------|---|
| 54                                | 30                             | 24                           | 41   | 23                                      | 18                                    | 95  |

**PENALTY AMOUNT ASSESSED AND COLLECTED FOR ACTIONS ISSUED**

| <b>Total Amount Assessed in March 2009</b> | <b>Total Amount Assessed for the Year to Date</b> | <b>Total Amount Collected Year to Date</b> |
|--|---|--|
| \$ 25,550.00                               | \$ 168,950.00                                     | \$ 78,025.00                               |

**BUREAU OF ENVIRONMENTAL RADIATION ENFORCEMENT ACTIONS**  
**FOR MARCH 2009**

| <b>Total Admin. Orders Issued</b> | <b>Admin. Orders Effective</b> | <b>Admin. Orders Pending</b> | <b>Total Notices of Prosecution Issued</b> | <b>Effective Notices of Prosecution</b> | <b>Pending Notices of Prosecution</b> | <b>Total Formal Enforcement Documents</b> |
|-----------------------------------|--------------------------------|------------------------------|--|---|---------------------------------------|---|
| 4                                 | 0                              | 4                            | 5  | 0                                       | 5                                     | 9   |

**PENALTY AMOUNT ASSESSED AND COLLECTED FOR ACTIONS ISSUED**

| <b>Total Amount Assessed in March 2009</b> | <b>Total Amount Assessed for the Year to Date</b> | <b>Total Amount Collected Year to Date</b> |
|--|---|--|
| \$ 2,975.00                                | \$ 18,575.00                                      | \$ 11,550.00                               |

Inspector: ALL

**Number of Inspections Performed**

| <u>Inspection Type</u>            | <u>Inspection Description</u>         | <u>Facilities Inspected</u> | <u>Machines Inspected</u> | <u>Machines Audited</u> | <u>Machines Uninspected</u> |
|-----------------------------------|---------------------------------------|-----------------------------|---------------------------|-------------------------|-----------------------------|
| 1                                 | ROUTINE INSPECTION                    | 66                          | 175                       |                         | 52                          |
| 4                                 | NEXT                                  | 2                           |                           |                         | 104                         |
| 11                                | INVESTIGATION                         | 4                           |                           |                         |                             |
| 12                                | STEREOTACTIC INSPECTION               | 4                           | 4                         |                         |                             |
| 15                                | QA INSPECTION ROUTINE LEVEL 1         | 91                          | 160                       | 220                     | 14                          |
| 17                                | QA VIOLATION INSPECTION ON SITE       | 1                           |                           | 1                       |                             |
| 22                                | NON-QA INSPECTION - HOSPITALS         | 10                          | 49                        |                         | 19                          |
| <b>Total On-Site Inspections:</b> |                                       | <b>178</b>                  | <b>388</b>                | <b>221</b>              | <b>189</b>                  |
| 6                                 | OFFICE VIOLATION RESPONSE REVIEW      | 8                           |                           | 12                      |                             |
| 7                                 | OFFICE RADIATION SAFETY SURVEY INSPEC | 16                          |                           | 28                      |                             |
| 18                                | OFFICE QA VIOLATION RESPONSE REVIEW   | 24                          |                           | 44                      |                             |
| 23                                | OFFICE TECH CERT INSPECTION           | 5                           |                           | 5                       |                             |
| <b>Total Office Inspections:</b>  |                                       | <b>53</b>                   |                           | <b>89</b>               | <b>0</b>                    |

**Number of Enforcement Documents Issued**

|                     |          |
|---------------------|----------|
| NOV                 | 11       |
| AO                  | 29       |
| NOP                 | 28       |
| Amount of Penalties | \$11,300 |

Inspector: ALL

| Violation Code                       | Glossary Information | Description Non-Compliance  | Number of Violations |         |
|--------------------------------------|----------------------|---|----------------------|---------|
|                                      |                      |   | By DNC               | By Code |
| <b>Violations Cited Non-QA</b>       |                      |   |                      |         |
| <b>ACT</b>                           |                      |   |                      |         |
| ACT-002                              | 26:2D-23             | No person shall obstruct, hinder, delay or interfere with Dept. inspections   | 1                    | 1       |
| ACT-003                              | 26:2D-35             | X-rayed humans without a valid NJ license   | 6                    | 6       |
| <b>Dental</b>                        |                      |   |                      |         |
| D-002                                | 16.8(a)1             | Survey of environs not available or not performed   | 20                   | 20      |
| D-003                                | 16.8(a)2             | Survey not available upon relocation or changes to shielding  | 2                    | 2       |
| D-016                                | 16.3(a)7             | kVp exceeds manufacturer's specifications (certified unit).   | 3                    | 3       |
| D-020                                | 16.3(a)11            | Exposure control switch does not permit operator to stand at least 6 feet from patient or behind a protective barrier                                 | 1                    | 1       |
| D-024                                | 16.3(a)15            | Timer reproducibility exceeds 7% for noncertified unit  | 1                    | 1       |
| <b>G</b>                             |                      |   |                      |         |
| G-003                                | NJAC 7:28-2.11(a)    | Failed to afford the Dept an opportunity to inspect x-ray equipment being used or stored on premises.   | 1                    | 1       |
| <b>Radiographic</b>                  |                      |   |                      |         |
| R-326                                | 15.10(b)1            | Initial survey completed and submitted within 60 days   | 3                    | 3       |
| R-327                                | 15.10(b)2            | Survey completed and submitted within 60 days   | 2                    | 2       |
| <b>Registration</b>                  |                      |   |                      |         |
| REG1                                 | 3.1 (a) and (b)      | Failed to register the ionizing radiation producing machine within 30 days of acquisition.  | 2                    | 2       |
| <b>Therapy 1 Mev and Above</b>       |                      |   |                      |         |
| TA-004                               | 7:28-14.4(a)3        | Therapeutic x-ray and therapeutic accelerator installation system with energies of One MeV, registrant must obtain the leakage radiation information. | 1                    | 1       |
| TA-113                               | 14.4(u)6vi           | failed to ensure that calibration records maintained by the registrant are made available for inspection five years of the calibration.               | 1                    | 1       |
| TA-118                               | 14.4(v)              | Requirements for spot-checks not met:   | 1                    | 1       |
| <b>Veterinary</b>                    |                      |   |                      |         |
| V-001                                | 7.1(a)               | veterinary unit no radiation safety survey of the environs  | 3                    | 3       |
| <b>Total Violations Cited Non-QA</b> |                      |   | <b>48</b>            |         |
| <b>Violations Cited QA</b>           |                      |   |                      |         |
| <b>Quality Assurance</b>             |                      |   |                      |         |
| QA-009                               | 22.3(a)              | Failed to develop and continuously implement QA program.  | 1                    | 1       |

04/02/2009

NJDEP BUREAU OF RADIOLOGICAL HEALTH  
INSPECTOR ACTIVITY REPORT  
03/01/2009 THROUGH 03/31/2009

Page 3 of 3

Inspector: ALL

| Violation Code                   | Glossary Information | Description Non-Compliance   | Number of Violations |           |
|----------------------------------|----------------------|--|----------------------|-----------|
|                                  |                      |  | By DNC               | By Code   |
| <b>Violations Cited QA</b>       |                      |  |                      |           |
| <b>Quality Assurance</b>         |                      |  |                      |           |
| QA-011                           | 22.5(a)2             | QC tests from Table 1 (Radiographic) not performed at the required intervals.                | 8                    | 8         |
| QA-012                           | 22.5(a)3             | Medical Physicist's QC Survey not performed at required interval or all tests not performed. | 5                    | 5         |
| QA-025                           | 22.5(f)              | Failed to immediately bring laser film printer into compliance.                              | 2                    | 2         |
| QA-037                           | 22.6(a)2             | QC tests from Table 2 (Fluoroscopic) not performed at the required intervals.                | 2                    | 2         |
| QA-063                           | 22.7(a)2             | QC tests from Table 3 (CT) not performed at the required intervals.                          | 1                    | 1         |
| QA-069                           | 22.7(e)              | Failed to immediately initiate steps to repair CT equipment.                                 | 1                    | 1         |
| <b>Total Violations Cited QA</b> |                      |  |                      | <u>20</u> |
| <b>Total Violations</b>          |                      |  |                      | <u>68</u> |

**TECHNOLOGIST CERTIFICATION SECTION**

**MONTH OF MARCH**

| <b>LICENSE CATEGORY</b>               | <b>D<br/>I<br/>A<br/>G<br/>N<br/>O<br/>S<br/>T<br/>I<br/>C<br/><br/>R<br/>A<br/>D</b> | <b>N<br/>U<br/>C<br/><br/>M<br/>E<br/>D<br/>I<br/>C<br/>I<br/>N<br/>E</b> | <b>R<br/>A<br/>D<br/><br/>T<br/>H<br/>E<br/>R<br/>A<br/>P<br/>Y</b> | <b>D<br/>E<br/>N<br/>T<br/>A<br/>L<br/><br/>R<br/>A<br/>D</b> | <b>C<br/>H<br/>E<br/>S<br/>T<br/><br/>R<br/>A<br/>D</b> | <b>P<br/>O<br/>D<br/>I<br/>A<br/>T<br/>R<br/>I<br/>C<br/><br/>R<br/>A<br/>D</b> | <b>O<br/>R<br/>T<br/>H<br/>O<br/>P<br/>E<br/>D<br/>I<br/>C<br/><br/>R<br/>A<br/>D</b> | <b>U<br/>R<br/>O<br/>L<br/>O<br/>G<br/>I<br/>C<br/><br/>R<br/>A<br/>D</b> | <b>T<br/>O<br/>T<br/>A<br/>L<br/><br/>M<br/>O<br/>N<br/>T<br/>H</b> | <b>FY<br/>TO<br/>DATE</b> | <b>TOTAL<br/>DUE<br/>THIS<br/>FY</b> |
|---------------------------------------|---|---|---|---|---|---|---|---|---|---------------------------|--------------------------------------|
| <b>Initial Licenses Issued</b>        | <b>23</b>   | <b>5</b>  | <b>3</b>  | <b>61</b>   | <b>-</b>  | <b>1</b>  | <b>-</b>  | <b>-</b>  | <b>93</b>   | <b>926</b>                | <b>N/A</b>                           |
| <b>Licenses Renewed</b>               | <b>37</b>   | <b>5</b>  | <b>7</b>  | <b>146</b>  | <b>2</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>197</b>  | <b>19,928</b>             | <b>N/A</b>                           |
| <b>Total Licensed</b>                 | <b>8,442</b>  | <b>1,132</b>  | <b>734</b>  | <b>10,395</b>   | <b>151</b>  | <b>35</b>   | <b>5</b>  | <b>-</b>  | <b>20,894</b>   | <b>N/A</b>                | <b>N/A</b>                           |
| <b>Exams Scheduled</b>                | <b>1</b>  |   |   |   | <b>1</b>  | <b>1</b>  | <b>1</b>  |   | <b>4</b>  | <b>201</b>                | <b>N/A</b>                           |
| <b>Investigations Conducted</b>       | <b>2</b>  | <b>-</b>  | <b>-</b>  | <b>4</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>6</b>  | <b>39</b>                 | <b>30</b>                            |
| <b>Licenses Verified</b>              | <b>389</b>  | <b>38</b>   | <b>15</b>   | <b>408</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>850</b>  | <b>6,106</b>              | <b>8,000</b>                         |
| <b>Expired Licenses</b>               | <b>1</b>  | <b>-</b>  | <b>-</b>  | <b>1</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>2</b>  | <b>11</b>                 | <b>N/A</b>                           |
| <b>Unlicensed</b>                     | <b>3</b>  | <b>-</b>  | <b>-</b>  | <b>2</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>5</b>  | <b>35</b>                 | <b>N/A</b>                           |
| <b>NOP's Issued</b>                   | <b>4</b>  | <b>-</b>  | <b>-</b>  | <b>3</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>7</b>  | <b>46</b>                 | <b>N/A</b>                           |
| <b>Penalty (\$)</b>                   | <b>\$1,200</b>  |   |   | <b>\$300</b>  |   |   |   |   | <b>\$1,500</b>  | <b>\$15,250</b>           | <b>N/A</b>                           |
| <b>Licenses Sanctioned</b>            | <b>1</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>1</b>  | <b>9</b>                  | <b>N/A</b>                           |
| <b>Approved Educational Programs</b>  | <b>16</b>   | <b>3</b>  | <b>4</b>  | <b>34</b>   | <b>1</b>  | <b>-</b>  | <b>1</b>  | <b>-</b>  | <b>-</b>  | <b>59</b>                 | <b>N/A</b>                           |
| <b>Program Applications Evaluated</b> | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>0</b>  | <b>1</b>                  | <b>11</b>                            |
| <b>Program On-site Evaluations</b>    | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>1</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>1</b>  | <b>5</b>                  | <b>12</b>                            |
| <b>Total Programs Evaluated</b>       | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>1</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>-</b>  | <b>1</b>  | <b>6</b>                  | <b>23</b>                            |
| <b>Clinical Applications Approved</b> |   |   |   | <b>74</b>   |   |   |   |   | <b>74</b>   | <b>613</b>                | <b>900</b>                           |

avo-6299 monthly status

**Bureau of Radiological Health  
Mammography Section  
March 2009**

| Type of Facility       | INDUSTRY | PHYSICIAN | HOSPITAL | GOVERNMENT | TOTAL MONTH | FY TO DATE | TOTAL DUE THIS FY |
|------------------------|----------|-----------|----------|------------|-------------|------------|-------------------|
| <b>MQSA</b>            |          |           |          |            |             |            |                   |
| Facilities Inspected   | 0        | 17        | 7        | 0          | 24          | 141        | 239               |
| Machines Inspected     | 0        | 20        | 13       | 0          | 33          | 196        |                   |
| FDA Violations Level 1 | 0        | 0         | 0        | 0          | 0           | 4          |                   |
| FDA Violations Level 2 | 0        | 2         | 1        | 0          | 3           | 27         |                   |
| FDA Violations Level 3 | 0        | 0         | 0        | 0          | 0           | 15         |                   |
| Registrations          | 0        | 3         | 1        | 0          | 4           | 31         |                   |
| Stored                 | 0        | 4         | 3        | 0          | 7           | 45         |                   |
| Canceled               | 0        | 0         | 0        | 0          | 0           | 0          |                   |
| <b>Stereotactic</b>    |          |           |          |            |             |            |                   |
| Facilities Inspected   | 0        | 1         | 3        | 0          | 4           | 38         | 60                |
| Machines Inspected     | 0        | 1         | 3        | 0          | 4           | 40         |                   |
| Notice of Violation    | 0        | 0         | 0        | 0          | 0           | 0          |                   |
| Administrative Order   | 0        | 0         | 0        | 0          | 0           | 1          |                   |
| Notice of Prosecution  | 0        | 0         | 0        | 0          | 0           | 1          |                   |
| Registrations          | 0        | 0         | 1        | 0          | 1           | 3          |                   |
| Stored                 | 0        | 0         | 0        | 0          | 0           | 5          |                   |
| Canceled               | 0        | 0         | 0        | 0          | 0           | 0          |                   |

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
DIVISION OF ENVIRONMENTAL SAFETY AND HEALTH  
RADIATION PROTECTION AND RELEASE PREVENTION ELEMENT  
BUREAU OF ENVIRONMENTAL RADIATION  
MARCH 1, 2009 THROUGH MARCH 31, 2009

SECTION III - BUREAU OF ENVIRONMENTAL RADIATION

**A. RADIOLOGICAL ASSESSMENT & DECOMMISSIONING SECTION**

Contaminated Sites and License Terminations

**Welsbach/General Gas Mantle Building Superfund Site**

Staff reviewed the Final Status Survey Report for study area 3 properties of Concern: 607 Brown Street, 615 Brown Street, 617 Brown Street, 822 Essex Street, and 830 Essex Street. The report was acceptable. BER recommended that EPA's and Army Corp's review of future final status survey reports are adequate and BER does not need to review them.

Contact: Jenny Goodman (609) 984-5498  
Ed Truskowski (609) 984-5542

Staff reviewed Discharge Monitoring Reports for January 2009 for the Trans-Shipments and South Branch Newton Creek outfalls.

Contact: Nancy Stanley (609) 984-5452

Staff reviewed the January 2009 Concrete Recycling Document and found it to be acceptable.

Contact: Nancy Stanley (609) 984-5452

**Industrial Reactor Laboratories (IRL)**

Staff visited the site of the former IRL after receiving a citizen inquiry regarding decommissioning activities performed in the 1970's. Staff reviewed the files and submitted a Freedom of Information Act request to the US Nuclear Regulatory Commission to determine the status of the terminated facility. Because documentation indicated that radioactive material remained onsite and because the current cleanup criteria is more stringent than when decommissioning was performed, staff contacted the facility, which now houses Jacobus Pharmaceutical Company, Inc. A gamma and alpha survey performed inside the facility confirmed that no residual radioactive materials were present above acceptable levels. A gamma survey was performed outside of the property where documents indicated radioactive material remained on site. Slightly elevated levels were detected at these locations, however, they were well below

regulatory limits. In its current configuration, there is no concern regarding the health and safety of the employees or the public residing around the facility. Dose modeling was performed after decay correcting the concentrations remaining at IRL assuming that the cover was disrupted and someone built a house on the contaminated portion of the property. The results were slightly above those allowed in N.J.A.C. 7:28-12.10(e). Staff are pursuing the options for a deed notice.

Contact: Jenny Goodman (609) 984-5498  
Nancy Stanley (609) 984-5452

### **BOMARC Missile Site**

Staff participated in a conference call regarding the latest review of the Scoping Survey of the Missile Shelters. An agreement was reached on how to present the data so that it can be determined that they meet the release criteria.

Contact: Jenny Goodman (609) 984-5498

### **Shielalloy Metallurgical Corporation**

Staff participated in several conference calls regarding SMC's decommissioning plan. Various parts of the plan are submitted to the Nuclear Regulatory Commission (NRC) staff that provides preliminary comments in these conference calls. Periodically, Department staff informs SMC that their plan will not meet New Jersey decommissioning regulations. New Jersey is scheduled to become an Agreement State and assume regulatory authority over SMC before the NRC approves the SMC decommissioning plan.

Contact: Jenny Goodman (609) 984-5498

### **Prologis Teterboro, Inc**

Staff reviewed and approved a remedial investigation plan for the former Allied Signal site in Teterboro.

Contact: Jenny Goodman (609) 984-5498

### Agreement State

### **Inspections**

Staff accompanied a NRC Region I inspector and the director of Federal and State Materials and Environment on an inspection of Booth Radiology in Sewell, NJ. No violations were observed.

Contact: Ed Truskowski (609) 984-5542

Staff accompanied a NRC Region I inspector on March 30<sup>th</sup> to observe routine inspections of the Medical Institute of New Jersey in Cedar Knolls, and Union County Cardiology Associates in Union. No violations were observed.

Contact: Nancy Stanley (609) 984-5452

### **Training**

Staff attended the NRC's Licensing Practices and Procedures course, held at the NJ State Police Communications Center in Hamilton during the week of March 9<sup>th</sup>.

Contact: Nancy Stanley (609) 984-5452  
Jenny Goodman (609) 984-5498  
Ed Truskowski (609) 984-5542

### Conferences

Staff attended a conference on the History of Radium in Pennsylvania sponsored by the Delaware Valley Chapter of the Health Physics Society held at the College of Physicians building in Philadelphia. The presentations included silent movies of radium production operations from the mines in Colorado to the production facility in Cannonsburg, photographs of Marie Curie's visit to the United States, and many interesting facts. Did you know that Marie Curie is the only person ever to refuse an honorary degree from Harvard? Why? Because they didn't accept women at that time. Marie Curie had to move to France (and learn French) to go to college because her native Poland did not admit women into their universities.

Contact: Jenny Goodman (609) 984-5498

### Emergency Response

### **Salem II**

Staff participated in the Salem II Nuclear Generating Station's training exercise at the Emergency Operations Facility.

Contact: Ed Truskowski (609) 984-5542  
Nancy Stanley (609) 984-5452

## **B. RADIOACTIVE MATERIALS SECTION**

During the month of March 2009 the Radioactive Materials Section (RMS) responded to eight (8) radiation incidents:

1. On March 9, 2009, Trenton Dispatch informed a member of the Radioactive Materials Section (RMS) that the State Police had detected radiation readings from a vehicle during a traffic stop. The vehicle was carrying a gauge that was licensed by the U.S. Nuclear Regulatory Commission (NRC). Since the paperwork was in order and the gauge was properly stored, no further action was taken.
2. On March 11, 2009, Trenton Dispatch informed the RMS that a load of municipal solid waste (MSW) from a waste hauler in Fairfield had set off the radiation alarm at an incinerator in Newark. The load was rejected and returned to the waste hauler so that it could be secured pending proper disposition. After being secured for a few days to allow for decay, the load was returned to the incinerator where it was processed without incident.
3. On March 13, 2009, Trenton Dispatch informed the RMS that a load of MSW from the New York City Department of Sanitation (NYCDOS) had set off the radiation alarm at an incinerator in Newark. The load was rejected and returned to the NYCDOS. New York City radiation control officials were notified.
4. On March 13, 2009, Trenton Dispatch also notified the RMS that a load of MSW from a waste hauler in East Brunswick had set off the radiation alarm at an incinerator in Newark. The load was rejected and returned to the hauler's facility in East Brunswick where it was secured pending proper disposition. After being secured to allow for decay, the load was subsequently returned to the incinerator where it was processed without incident.
5. On March 18, 2009, Trenton Dispatch informed the RMS that a load of MSW from the NYCDOS had set off the radiation alarm at an incinerator in Newark. The load was rejected and returned to the NYCDOS. New York City radiation control officials were notified.
6. At 7:45 p.m. on Saturday, March 21, 2009, Trenton Dispatch informed a member of the RMS that a load of MSW from the NYCDOS had set off the radiation alarm at an incinerator in Newark. The load was secured and a DOT exemption form was issued on March 23, 2009, allowing the truck to return to the NYCDOS. New York City radiation control officials were notified.

7. At 8:15 p.m. on Saturday, March 21, 2009, Trenton Dispatch informed a member of the RMS that two police officers had pulled over a truck that had set off their radiation pager. The truck was carrying waste from a licensee. Since all paperwork was in order and the shipper was confirmed to be a licensee, no further action was taken.
8. At 7:42 a.m. on March 24, 2009, Trenton Dispatch informed a member of the RMS that a vehicle had been stopped by the State Police after it had activated the trooper's radiation pager. The vehicle was carrying a nuclear gauge. Since all paperwork was in order, and the vehicle was owned and operated by an NRC licensee, no further action was taken.

Contact: William Csaszar (609) 984-5555

#### Accompaniments

A member of the RMS accompanied the NRC on inspections of a portable gauge facility and an irradiator facility. This was done to observe NRC inspection methodologies in preparation of New Jersey becoming an Agreement State.

Contact: William Csaszar (609) 984-5555

#### Courses

Members of the RMS staff attended a week-long NRC course on Root Cause Analysis, while another member attended a Department of Homeland Security week-long course on Gamma Spectroscopy Analysis for personnel who would be engaged in radiation alarm reach back activities. Staff members also attended a week-long NRC course on Licensing Procedures, one staff member attended a week-long course on Brachytherapy and Gamma Knife procedures, while another attended a week-long course on Nuclear Medicine. Attendance at these courses was in support of the Agreement State initiative.

Contact: William Csaszar (609) 984-5555

#### Drills

Staff members participated in the state-graded exercise at one of the State's nuclear power plants. Members participated in activities at the Forward Command Post.

Contact: William Csaszar (609) 984-5555

#### Routine Activities of the Radioactive Materials Section

Summarized at the end of the Monthly Report.

## C. **RADON SECTION**

### Outreach

An article highlighting New Jersey's National Radon Action Month activities was published in the Conference of Radiation Control Program Directors (CRCPD) March 2009 Radon Bulletin.

We met with representatives of NJDEP Communications –Press Office to discuss three new radon outreach pieces (Information You Should Know brochure, Radon- Resistant New Construction Brochure, and a Family Health card). They will be used as a general radon piece, a piece to target construction code officials, new construction, and realtors, and a piece to target physician offices, health food stores, and general health, respectively. All are currently under review by the Communications Office.

Radon Awareness Program (RAP) - Middlesex County Public Health Department has shown an interest in participating in the RAP Program. An SOP is being prepared for RAP.

Newborn Pilot Program - Essex County Cancer Coalition was approved to move forward with the purchase of test kits.

Approval was received for the purchase of a banner stand. The purchase order was sent to the vendor for signature.

Contact: Linda Jordan (609) 984-5434

### **Program Administration Fee Billing Report**

On December 8, 2008, the Program Administration Fee (PAF) billing for the semiannual period from January 1, 2008 through June 30, 2008 was sent to Treasury for printing and mailing. The total amount billed was \$84,052.00. Thus far, we have payments of \$76,055.00 leaving a balance due of \$7,997.00. Enforcement actions were taken against the delinquent businesses.

Contact: Herb Roy (609) 984-5433

### **Measurement and Mitigation Radon Certifications**

A total of 108 radon professional applications were approved. They consisted of four measurement specialists, three mitigation specialists, 99 measurement technicians and two mitigation technicians. A total of three professionals were moved from provisional to full certification status. Business application approvals consisted of two measurement businesses.

Contact: Anita Kopera (609) 984-5543

Confirmation of 100 pCi/ L or greater radon reading

During last month, one home with an elevated radon level participated in the confirmatory testing program. The home was located in Lawrence Township, a previously participating municipality. Therefore, there was no ERAP invitation extended.

Home #1      Initial radon result - 110.5 pCi/L using a charcoal canister in the basement.

|                           |          |            |
|---------------------------|----------|------------|
| NJDEP confirmatory tests: | Basement | 66.5 pCi/L |
|                           | Basement | 68.4 pCi/L |

Contact:      Charles Renaud (609) 984-5423

Post-mitigation radon testing

Free post-mitigation tests are offered to any homeowner that has a mitigation system installed. We will send test devices to verify the post-mitigation radon concentration. During this month, twenty electret devices were mailed to five homeowners for post-mitigation confirmatory testing. None have been returned yet.

The DEP and the Environmental Protection Agency (EPA) both recommend that you take action to mitigate your home if your test results indicate radon levels of 4.0 pCi/L of radon or more.

If the post-mitigation radon test result is greater than 4 pCi/L, a long-term (>90 days) radon test must be conducted in the lowest living area of the house. If the result of this test is at or below 4 pCi/L, the mitigation is deemed effective.

If the long-term radon test result is greater than 4 pCi/L, the homeowner must contact the certified radon mitigation business that installed the system or any certified mitigation business, to make appropriate corrections. A list of certified radon mitigation businesses is also enclosed with the test results.

Contact:      Charles Renaud (609) 984-5423

## Inspections

Three mitigation businesses were inspected during the month. The businesses and dates were as follows:

Professional Radon Systems, Inc. - March 6  
American Remedial Service, Inc. - March 18  
Airon Radon Systems, Inc. - March 25

The inspection reports have been issued to each of the businesses.

Contact: Charles Renaud (609) 984-5423

Two measurement businesses were inspected during the month. The businesses and dates were as follows:

Lewis Home Inspection, Inc. - March 11  
AOG Environmental, LLC - March 23

The inspection reports are being prepared for each of the businesses.

Contact: Herbert Roy (609) 984-5433

## **D. NONIONIZING RADIATION SECTION**

### Radiofrequency and Microwave Heaters, Sealers and Industrial Ovens

No sources were registered or inspected this month.

Contact: Deborah Riggs Wenke (609)984-5521

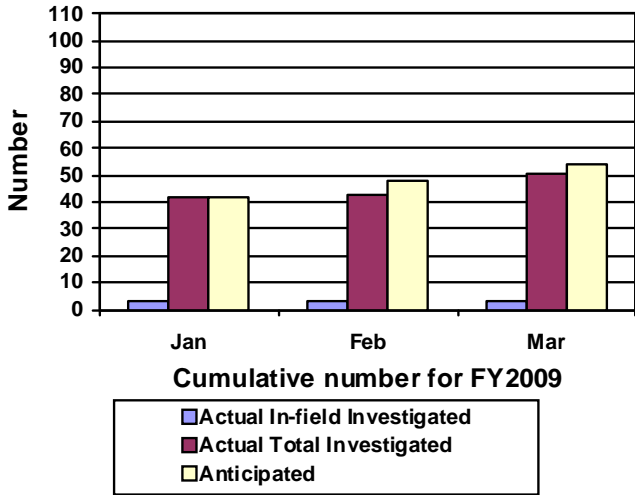
### Mercury Vapor Lamps

This month, an inspection was conducted of towable light towers used at the construction site of the new University Medical Center of Princeton at Plainsboro. All of the lights were housed in completely enclosed fixtures and are therefore in compliance with N.J.A.C. 7:28-41, Mercury Vapor Lamps.

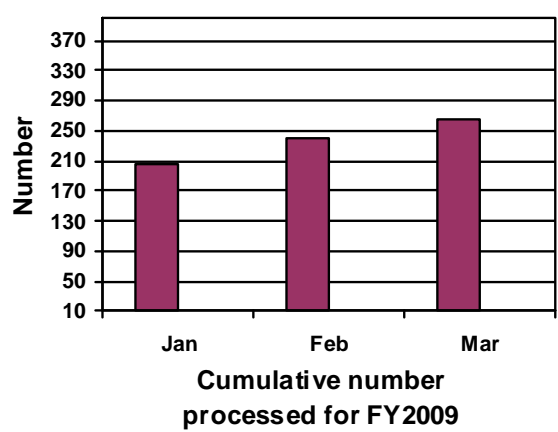
Contact: Deborah Riggs Wenke (609) 984-5521

**SUMMARY OF THE ROUTINE ACTIVITIES OF THE  
RADIOACTIVE MATERIALS SECTION**

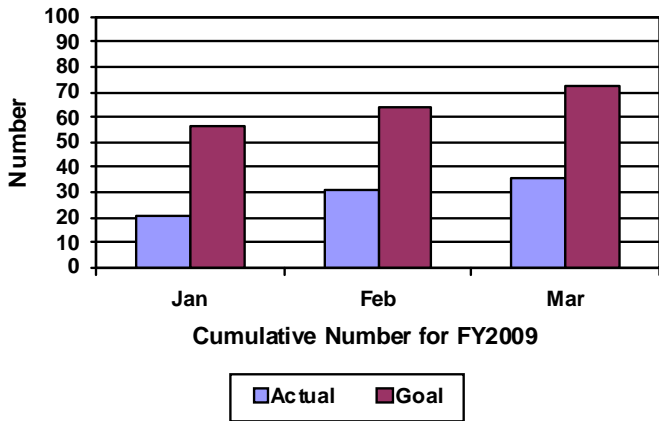
**Responses to Radiation Incidents**



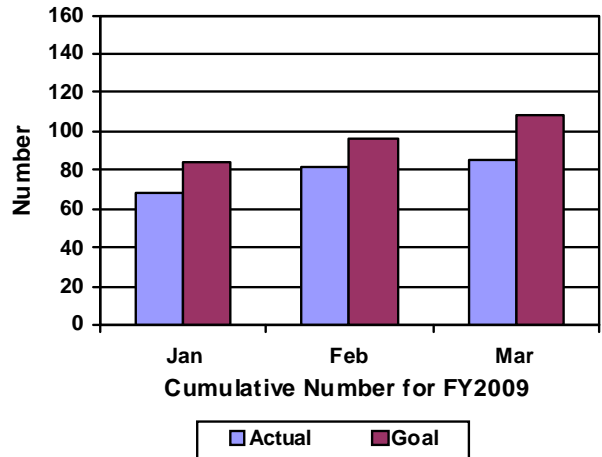
**Licensing Actions Performed**



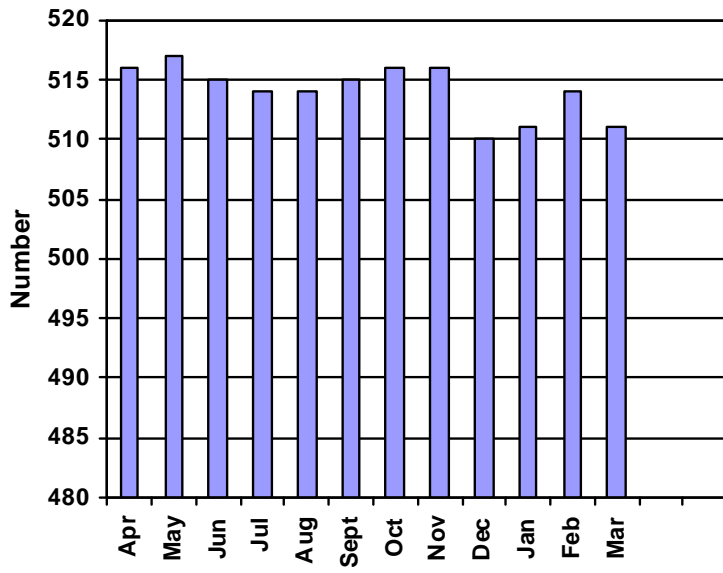
**Priority I License Inspections Performed**



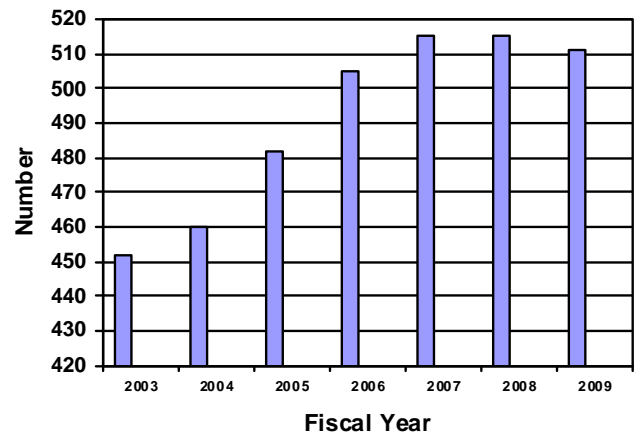
**Priority II & III License Inspections Performed**



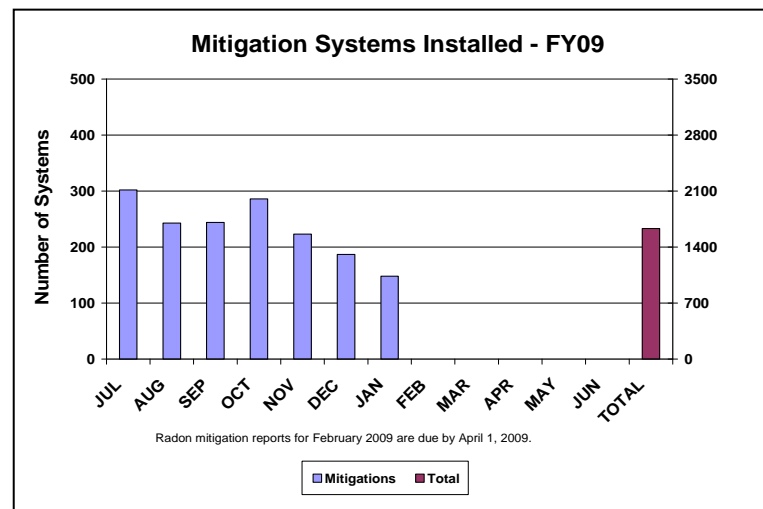
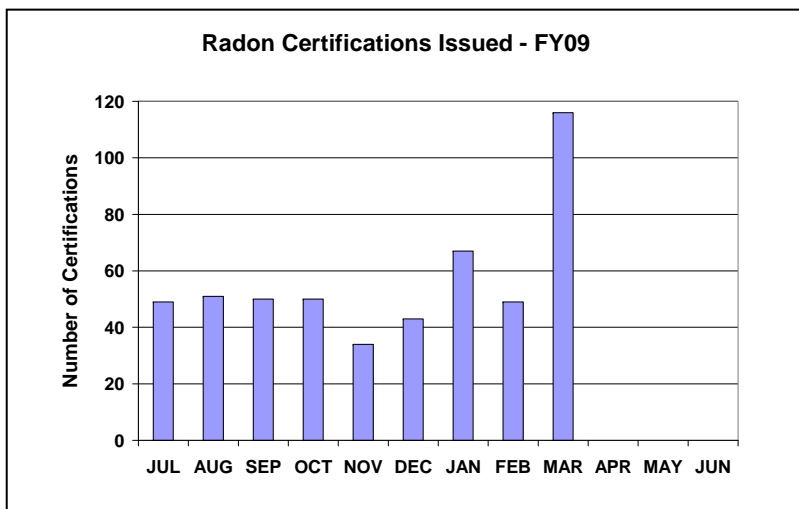
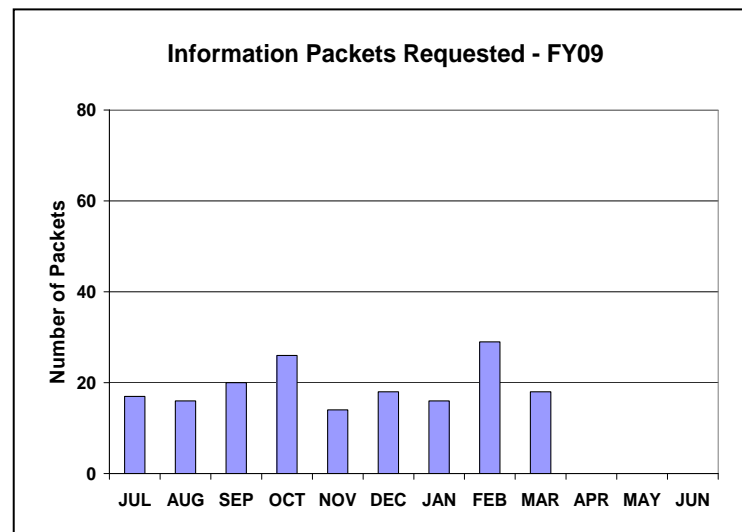
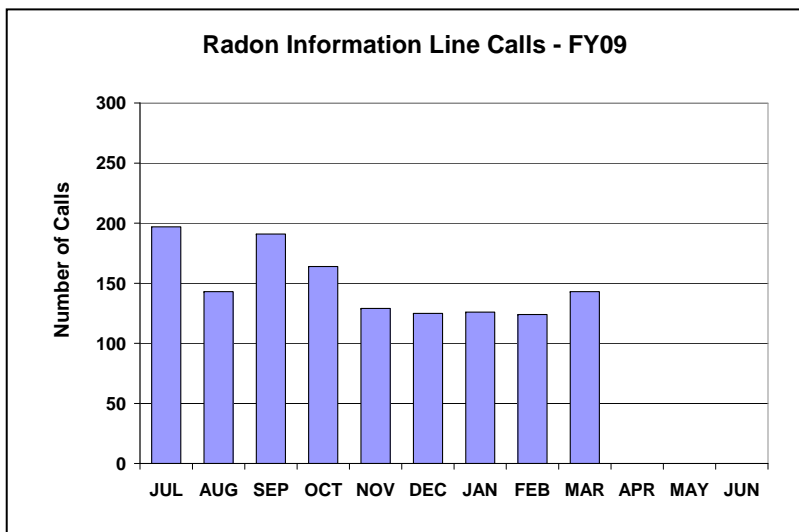
### Active Licenses

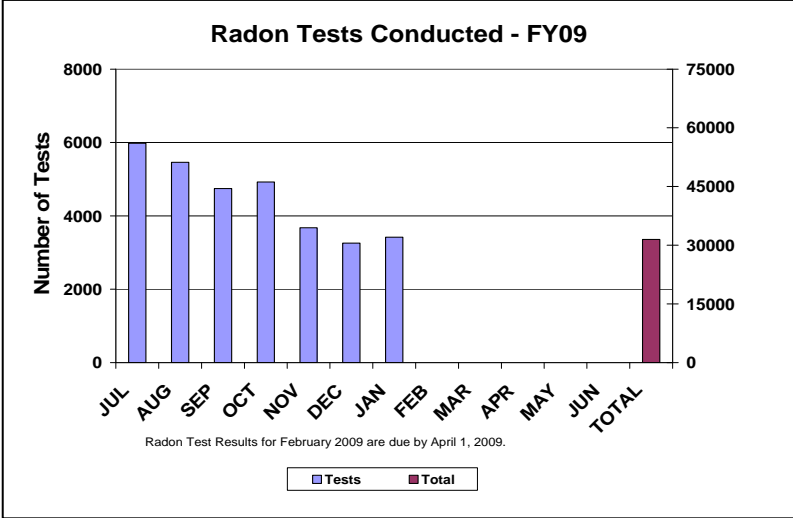


### Annual Report of Licenses Maintained



# BUREAU OF ENVIRONMENTAL RADIATION SUMMARY OF STATISTICS





DIVISION OF ENVIRONMENTAL SAFETY AND HEALTH  
RADIATION PROTECTION AND RELEASE PREVENTION ELEMENT  
MONTHLY REPORT  
MARCH 01, 2009 TO MARCH 31, 2009

**IV - BUREAU OF NUCLEAR ENGINEERING**

**SIGNIFICANT ACCOMPLISHMENTS/ISSUES**

**NRC Commissioners Uphold Atomic and Safety Licensing Board in Oyster Creek License Renewal Decision**

On April 1, 2009, the NRC Commissioners voted 3-1 to reject the appeal of the Citizens' group that had jointly raised a contention regarding the aging management of the Oyster Creek drywell. The dissenting vote was a dissent in part. In his dissent, Commissioner Jazko, expressed the position that the Oyster Creek drywell should be inspected in 2010 rather than 2012, based on issues with water intrusion as raised in an NRC inspection report. The concerns were similar to ones raised by the DEP in earlier correspondence with Exelon and the NRC.

In their decision, the Commissioners state that they will require the NRC staff to fully review the three dimensional analysis of the drywell that is required as a license condition.

Contact: Rich Pinney (609) 984-7558

**OTHER INFORMATION**

**Nuclear Power Plant Operation**

**Oyster Creek**

The plant operated at full power for the month.

Contact: Rich Pinney (609) 984-7558

**Hope Creek**

Hope Creek began the month increasing power to 100% following the successful repair of a condenser tube leak. The plant operated at 100% power until March 24 at which time the plant began the end-of-cycle coast down in preparation for the upcoming refueling outage in April. On March 31, Hope Creek was operating at 97.4% power.

Contact: Jerry Humphreys (609) 984-7469

### **Salem Unit 1**

Salem Unit 1 ran at essentially full power until 9:30 AM on March 27 when the unit was manually shutdown due to high cation conductivity and high sulfates in the main feedwater to the Steam Generators. The unit was returned to service at 2:33 PM on March 28.

Contact: Elliot Rosenfeld (609) 984-7548

### **Salem Unit 2**

Salem Unit 2 ran at essentially full power for the entire month.

Contact: Elliot Rosenfeld (609) 984-7548

### **NRC Inspection of License Renewal Programs and Commitments at Oyster Creek**

During the weeks of March 9, 16, and 23, 2008, the NRC performed an inspection at Oyster Creek following Inspection Procedure 71003, "Post-Approval Site Inspection for License Renewal." This was the first time this particular inspection has been completed under the NRC inspection program.

The NRC inspection team consisted of six full or part time inspectors. Two state personnel observed parts of the inspection. The results of the inspection will be described in a future NRC inspection report.

Contact: Rich Pinney (609) 984-7558 or Ron Zak at (609) 984-7458

### **Salem and Hope Creek Site Activities**

A BNE engineer attended the Management Review Committee (MRC) meetings at Salem on March 5 & 11. The MRC determines the significance levels on new notifications and approves root cause, common cause and apparent cause evaluations performed in the Corrective Action Program.

A BNE engineer met with the Salem Plant Manager on March 11<sup>th</sup>. Among the topics discussed were current plant issues and plant staffing.

On March 25, one BNE engineer met separately with Hope Creek Regulatory Assurance, In-Service Inspection (ISI) and Integrated Leak Rate Test (ILRT) personnel to discuss upcoming RF15 activities.

Contact: Elliot Rosenfeld (609) 984-7548 or Jerry Humphreys (609) 984-7469

### **Salem and Hope Creek Public Meeting with NRC regarding License Renewal**

Four (4) BNE personnel participated in an NRC public meeting with PSEG Nuclear, on March 16<sup>th</sup>, via teleconference. The purpose of the meeting was to discuss the licensee's schedule and logistics requirements for the submittal of the license renewal applications for the Salem and Hope Creek Stations. The application will be a joint one for all three plants. The presentation included a summary of aging management and environmental programs showing which ones will be common and which ones will be unique. Two members of the public and one person from the press participated in the call. The application is scheduled to be submitted on August 18, 2009.

Contact: Elliot Rosenfeld (609) 984-7548 or Jerry Humphreys (609) 984-7469

### **Radioactive Materials Shipment Notifications**

The Bureau of Nuclear Engineering is responsible for tracking certain radioactive materials that are transported in New Jersey. Advance notification for these radioactive materials are in three categories: 1) Spent Fuel and Nuclear Waste; 2) Highway Route Control Quantity Shipments; and 3) Radionuclides of Concern. Each category has to meet certain packaging and notification requirements established by the federal government. Below is a table representing the number of shipments completed in March 2009.

| Spent Fuel and Nuclear Waste | Highway Route Control Quantity Shipments | Radionuclides of Concern |
|------------------------------|--|--------------------------|
| 0                            | 0  | 0                        |

Contact: Rich Pinney (609) 984-7558

### **Reception Center Managers Training**

On March 13th, the BNE in cooperation with the State Police Office of Emergency Management (OEM) presented Reception Center Managers Training in Ocean County. The course is designed to provide county and local emergency response personnel with the necessary information required for setting up and operating Reception and Emergency Worker Decontamination Centers. The training also provided an overview of procedures and operation at Reception Centers and Emergency Worker Decontamination Centers. BNE staff provided training modules that covered basic radiation physics, an overview of power plant operations, biological effects of ionizing radiation and emergency worker self protection concepts. Reception Centers and Emergency Worker Decontamination Centers are located beyond the ten mile emergency planning zone and are designed to receive and monitor the evacuated public and emergency workers during a nuclear incident. Participants successfully completed the course and received

certification to become trainers and center managers for the Radiological Emergency Preparedness Program.

Contact: Nick DePierro (609) 984-7442

### **Salem Unit 1 State Graded Exercise**

On March 17th, DEP emergency response personnel participated with the State Police Office of Emergency Management (SPOEM), Salem and Cumberland counties, the Delaware Emergency Management Agency (DEMA), and Public Service Enterprise Group (PSEG) in a state graded exercise at the Salem Nuclear Generating Station in Lower Alloway's Creek. DEP staff activated the Emergency Operations Center (EOC), the Emergency Operations Facility (EOF), the Emergency News Center (ENC), the Forward Command Post (FCP), and two Field Monitoring Teams (FMTs).

During the evaluated exercise, engineering and dose assessment was conducted at the EOF in order to formulate protective action recommendations (PARs). DEP staff presented accident assessment data and PARs at the EOC where the Governor's designee formulated protective action decisions for the public. Accident information and protective action decisions for the public were disseminated to the press at the ENC. Field monitoring teams characterized the extent of the radioactive plume and provided the FCP with field data. Each facility was evaluated by state controllers against six evaluation areas outlined in FEMA's evaluation methodology. The self evaluated exercise is a requirement of the Radiological Emergency Response Plan (RERP). The RERP requires that each site in the state exercise the plan annually.

Contact: Nick DePierro (609) 984-7442

### **Oyster Creek Quarterly Exercise**

On March 18th, Department of Environmental Protection nuclear emergency response personnel participated with the State Police Office of Emergency Management (SPOEM), and Exelon in a quarterly exercise at the Oyster Creek Nuclear Generating Station. The Emergency Operations Facility (EOF) and Joint Information Center (JIC) co-located in Toms River, were activated during the exercise. DEP and State Police personnel staffed a control cell representing the State Emergency Operations Center (EOC). Engineering assessment, dose assessment, and protective action recommendations were conducted at the EOF. BNE and State Police staff discussed protective action recommendations and made final protective action decisions for the public at the EOC. BNE, State Police and AmerGen staff presented accident updates and disseminated information to the public at the JIC.

Contact: Nick DePierro (609) 984-7442

### **Seaside Heights Emergency Worker Decontamination Center Training**

Emergency Worker Decontamination Center training was conducted on March 31st at the Seaside Heights Fire Station in Ocean County. The session was the first of three training classes prior to an evaluation by the Federal Emergency Management Agency (FEMA). BNE's Nuclear

Emergency Preparedness Section staff in cooperation with the State Police Office of Emergency Management, Ocean County Office of Emergency Management, and AmerGen assisted in training local volunteers. Training included radiological monitoring and decontamination techniques, facility set up and concept of operations, radiological instrumentation, and emergency worker exposure control. Emergency Worker Decontamination Centers would be activated to monitor and decontaminate emergency workers, vehicles, and equipment used during a nuclear emergency response.

Contact: Nick DePierro (609) 984-7442

### **Hostile Action Based Drill**

Nuclear Regulatory Bulletin 2005-02 “Emergency Preparedness and Response Actions for Security-Based Events” suggests that licensees should periodically test and exercise threat-based emergency capabilities. It is recommended that each site perform one threat-based drill between September 2006 and December 2009. In preparation for the drill, on March 31st the Artificial Island nuclear generating station conducted a Hostile Action Based Drill table-top at the Woodstown Emergency News Center. PSEG, the BNE, the State Police Office of Emergency Management, the FBI, and local law enforcement and emergency agencies participated in the table-top exercise. The Emergency Operations Facility, Emergency News Center, Emergency Operations Center and the Incident Command Post were staffed by responders. The purpose of the exercise was to test the Incident Command System and integrate local, state and federal law enforcement, fire, medical and hazmat agencies. The table-top drill was in preparation for the Hostile Action Based Exercise scheduled for May 19th.

Contact: Nick DePierro (609) 984-7442

### **Facility Inspections**

|  |         |
|--|---------|
| Woodstown Forward Command Post           | 3/09/09 |
| Salem Emergency News Center              | 3/09/09 |
| Salem Emergency Operations Facility      | 3/12/09 |
| Berkeley Forward Command Post            | 3/25/09 |
| Toms River Emergency Operations Facility | 3/30/09 |
| Toms River Joint Information Center      | 3/30/09 |

Contact: Nick DePierro (609) 984-7442

### **Radiological Environmental Monitoring Program**

The BNE conducts a comprehensive Radiological Environmental Monitoring Program (REMP) in the environs surrounding New Jersey's four nuclear generating stations. The program collected 55 samples during the month of March 2009. The number and type of samples collected are given in the table below.

Sample results are entered into the BNE's database for tracking and trending of environmental results. Data obtained from these analyses are used to determine the effect, if any, of the operation of New Jersey's nuclear power plants on the environment and the public. BNE staff investigates any results exceeding any state or federal radiological discharge limits or any anomalous data. The data are compared to on-site utility discharge point data.

BNE staff reviews all results to ensure that required levels of detection have been met and that state and federal radiological discharge limits have not been exceeded. The program includes a written Annual Environmental Surveillance and Monitoring Report for the environs of the Oyster Creek and Salem/Hope Creek nuclear power plants. The report covers sampling results conducted during the calendar year. These reports are available on the NJDEP website at <http://www.nj.gov/dep/rpp/bne/index.htm>.

Questions regarding specific test results or the annual environmental report can be directed to Karen Tuccillo. Results of specific analyses can be obtained by request.

| <b>COUNT OF SAMPLES COLLECTED IN MARCH 2009</b> |                          |
|---|--------------------------|
| <u>SAMPLE MEDIUM</u>                            | <u>NUMBER OF SAMPLES</u> |
| AIR FILTER                                      | 24                       |
| CHARCOAL  | 24                       |
| MILK  | 3                        |
| SURFACE WATER                                   | 4                        |
| <b>TOTAL SAMPLES</b>                            | <b>55</b>                |

Contact(s): Karen Tuccillo (609) 984-7443, Compton Alleyne (609) 984-7455 or Paul E. Schwartz (609) 984-7539

**NJDEP/PSEG Nuclear License Renewal Meeting**

BNE staff hosted a meeting on March 26, 2009 between various programs within the NJDEP and PSEG Nuclear on the environmental review of the U.S. NRC license renewal for the Salem/Hope Creek nuclear generating stations. The purpose of the meeting was to provide the programs with an overview of the NRC license renewal process and the generic contents of an environmental report. PSEG plans to submit their application for license renewal on August 18, 2009.

NJDEP participants included staff from the following programs: (1) Division of Air Quality's Operating Permits; (2) Office of Permit Coordination & Environmental Review; (3) Division of Water Quality's Watershed Permitting Element; (4) Division of Fish & Wildlife's Bureau of Endangered and Nongame Species, Office of Environmental Review, and Bureau of Shellfisheries; (5) Division of Land Use Regulation's Bureau of Coastal Regulation and Bureau of Watershed Regulation. Other NJDEP programs that were unable to attend the meeting but

will be participating in the review include the Office of Historic Preservation; the Office of Natural Lands Management; and the Office of Environmental Justice.

Contact: Karen Tuccillo (609) 984-7443

### **Update on Salem 1 Tritium Leak Remediation**

During the month, 18 samples were collected and shipped to the BNE's contract laboratory for radiological analysis.

Contact: Tom Kolesnik (609) 984-7575 or Compton Alleyne (609) 984-7455

### **Update on the Oyster Creek Groundwater Protection Program (GWPP)**

During the month, 32 samples were collected and shipped to the BNE's contract laboratory for radiological analysis. The GWPP is part of the Exelon Annual Environmental Monitoring Report for the Oyster Creek Nuclear Generating Station. This report is available at any branch of the Ocean County Library system.

Contact: Compton Alleyne (609) 984-7455 or Paul E. Schwartz (609) 984-7539

### **Nuclear Threat Response CREST Maintenance Support**

A staff member provided support to the Nuclear Threat Response Section (NTRS) regarding Envista software utilized in the monitoring of the BNE's CREST system. Additional information on the CREST system can be found in the NTRS portion of this monthly summary report.

Contact(s): Compton Alleyne (609) 984-7455

### **Emergency Planning**

Staff members participated in the Annual State Graded exercise on March 17<sup>th</sup>, 2009 at the Salem Unit 2 Nuclear Generating Station and in a quarterly drill/exercise on March 18<sup>th</sup>, 2009 for the Oyster Creek Nuclear Generating Station at the Emergency Operations Facility in Toms River, NJ.

Contact: Karen Tuccillo (609) 984-7443

### **NRC Occupational Radiation Safety Inspection at the Oyster Creek Nuclear Generating Station**

A Nuclear Regulatory Commission (NRC) inspection of Occupational Radiation Safety at the Oyster Creek Nuclear Generating Station was conducted from March 23<sup>rd</sup>, 2009 through March

27<sup>th</sup>, 2009. The inspection team was composed of one NRC inspector and one representative of the New Jersey Bureau of Nuclear Engineering (BNE). The objective of the inspection was to gather information to determine whether a licensee is meeting the objective of this NRC cornerstone, which is to ensure adequate protection of worker health and safety from exposure to radiation from radioactive material during routine nuclear reactor operation. The inspection was performed in accordance with NRC Inspection Procedure (IP) 71121.03, "Occupational Radiation Safety". Inspection objectives include the determination of (1) the accuracy and operability of radiation monitoring instruments that are used for the protection of occupational workers; and (2) the adequacy of the program to provide self-contained breathing apparatus (SCBA) for personnel entering and working in areas of unknown radiological hazards. Further details on this type of inspection can be found on the USNRC website at, <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/ip71121.pdf>. NRC inspection reports are available at [http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/listofrpts\\_body.html](http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/listofrpts_body.html).

Contact: Paul E. Schwartz (609) 984-7539

### **Effluent Release Data**

The BNE monitors the effluents released from all four (4) nuclear generating stations each month. The reported effluents include gaseous, total iodine, total particulate and tritium released to the atmosphere and water.

The Oyster Creek Generating Station in Forked River, NJ does not routinely release activity in liquids to the environment. In the event of an unplanned release, the resulting activity will be included in the licensee's Annual Effluent Release Report, available through the USNRC website at, <http://www.nrc.gov> or the county public library system. Releases to the atmosphere are from the 112-meter stack or various monitored building vents. At Hope Creek and Salem Generating Stations, releases to the air and water are monitored each month and compared to historic releases. Releases to the atmosphere are from various monitored building vents.

Effluent data for the Salem and Hope Creek Generating Stations and the Oyster Creek Nuclear Generating Station for February 2009 are included below. January 2009 effluent data for the Oyster Creek Nuclear Generating Station, which were not available last month, have been included as well.

**PSEG Nuclear  
Radioactive Effluent Releases  
Nuclear Environmental Engineering Section  
For the Period of 02-01-09 to 02-28-09**

**Hope Creek  
Gaseous Effluents**

| <u>Effluent</u> |          |    |  |
|-----------------|----------|----|--|
| Fission Gases   | 8.74E-01 | Ci |  |
| Iodines         | 1.00E-03 | Ci |  |
| Particulates    | 3.51E-04 | Ci |  |
| Tritium         | 0.00E+00 | Ci |  |

**Hope Creek  
Liquid Effluents**

| <u>Effluent</u>  |          |    |  |
|------------------|----------|----|--|
| Fission Products | 2.30E-04 | Ci |  |
| Tritium          | 2.98E-02 | Ci |  |

**Salem Unit I  
Gaseous Effluents**

| <u>Effluent</u> |          |    |  |
|-----------------|----------|----|--|
| Fission Gases   | 2.53E-02 | Ci |  |
| Iodines         | 0.00E+00 | Ci |  |
| Particulates    | 0.00E+00 | Ci |  |
| Tritium         | 1.86E+01 | Ci |  |

**Salem Unit I  
Liquid Effluents**

| <u>Effluent</u>  |          |    |  |
|------------------|----------|----|--|
| Fission Products | 6.07E-04 | Ci |  |
| Tritium          | 1.72E-01 | Ci |  |

**Salem Unit II  
Gaseous Effluents**

| <u>Effluent</u> |          |    |  |
|-----------------|----------|----|--|
| Fission Gases   | 3.83E-02 | Ci |  |
| Iodines         | 0.00E+00 | Ci |  |
| Particulates    | 0.00E+00 | Ci |  |
| Tritium         | 5.31E+01 | Ci |  |

**Salem Unit II  
Liquid Effluents**

| <u>Effluent</u>  |          |    |  |
|------------------|----------|----|--|
| Fission Products | 2.17E-04 | Ci |  |
| Tritium          | 2.20E-01 | Ci |  |

Ci = curies of activity

**Exelon Nuclear  
Radioactive Effluent Releases  
Nuclear Environmental Engineering Section  
For the Period of 01-01-09 to 01-31-09**

| <u>Oyster Creek<br/>Gaseous Effluent<br/>Elevated Releases</u> |          |    | <u>Oyster Creek<br/>Gaseous Effluent<br/>Ground Releases</u> |          |    |
|--|----------|----|--|----------|----|
| <u>Effluent</u>  |          |    | <u>Effluent</u>  |          |    |
| Fission Gases  | 0.00E+00 | Ci | Fission Gases  | 0.00E+00 | Ci |
| Iodines  | 7.42E-06 | Ci | Iodines  | 0.00E+00 | Ci |
| Particulates   | 0.00E+00 | Ci | Particulates   | 0.00E+00 | Ci |
| Tritium  | 3.53E-01 | Ci | Tritium  | 9.95E-02 | Ci |

Ci = curies of activity

**Exelon Nuclear  
Radioactive Effluent Releases  
Nuclear Environmental Engineering Section  
For the Period of 02-01-09 to 02-28-09**

| <u>Oyster Creek<br/>Gaseous Effluent<br/>Elevated Releases</u> |          |    | <u>Oyster Creek<br/>Gaseous Effluent<br/>Ground Releases</u> |          |    |
|--|----------|----|--|----------|----|
| <u>Effluent</u>  |          |    | <u>Effluent</u>  |          |    |
| Fission Gases  | 0.00E+00 | Ci | Fission Gases  | 1.29E-07 | Ci |
| Iodines  | 1.15E-05 | Ci | Iodines  | 2.20E-08 | Ci |
| Particulates   | 0.00E+00 | Ci | Particulates   | 0.00E+00 | Ci |
| Tritium  | 3.19E-02 | Ci | Tritium  | 1.53E-01 | Ci |

Ci = curies of activity

Contact: Paul E. Schwartz (609) 984-7539

**Continuous Radiological Environmental Surveillance Telemetry System**

Thirty-two Continuous Radiological Environmental Surveillance Telemetry (CREST) sites are located in the environs of Oyster Creek, Salem I, II, and Hope Creek nuclear generating stations. CREST is a part of the Air Pollution/Radiation Data Acquisition and Early Warning System, a remote data acquisition system whose central computer is located in Trenton, New Jersey. Sites are accessed via dedicated phone lines or cellular communication and polled for radiological and meteorological data every minute.

The Air Pollution/Radiation Data Acquisition and Early Warning System is equipped with a threshold alarm of twenty-five (25) microRoentgens per hour. The system notifies staff via text messages and email alerts if the threshold is exceeded, providing 24-hour coverage of potential radiological abnormalities surrounding each nuclear facility.

There were no alarms during the month of March.

Contact: Ann Pfaff (609) 984-7451

The following tables include the average ambient radiation levels at each site for the month of March:

| Artificial Island CREST System Ambient Radiation Levels<br>March 2009 Derived From One Minute Averages<br>UNITS = mR/Hr |       |       |       |       |
|---|-------|-------|-------|-------|
| AI1   | AI2   | AI3   | AI4   | AI5   |
| .0065   | .0068 | .0069 | .0075 | .0068 |
| AI6   | AI7   | AI8   | AI9   | AI10  |
| ****  | .0061 | .0057 | .0072 | .0060 |

| Oyster Creek CREST System Ambient Radiation Levels<br>March 2009 Derived From One Minute Averages<br>UNITS = mR/Hr |       |       |       |
|--|-------|-------|-------|
| OC1  | OC2   | OC3   | OC4   |
| .0070  | .0058 | .0059 | .0053 |
| OC5  | OC6   | OC7   | OC8   |
| .0059  | .0057 | .0053 | ****  |
| OC9  | OC10  | OC11  | OC12  |
| .0061  | .0092 | .0056 | .0057 |
| OC13   | OC14  | OC15  | OC16  |
| .0054  | .0058 | .0075 | .0076 |

\*\*\*\* indicates no data

Contact: Ann Pfaff (609) 984-7451

### **CREST Status**

CREST staff successfully upgraded sites OC9 (on Oyster Creek Nuclear Generating Station's back lot) and OC13 (at the public restrooms adjacent to the marina at Forked River) to wireless data transmission. These sites had not communicated radiation data for an extended period because of failed telephone lines. The upgrades have restored these sites, bringing the total number of CREST stations transmitting data wirelessly from around Oyster Creek to three. Additionally, CREST staff successfully upgraded AI9 to wireless data transmission at the end of

March. This is a significant accomplishment because the wireless service coverage in Salem and Cumberland Counties is less consistent than in Ocean County.

On March 30, 2009, CREST staff met with Oyster Creek's IT Manager and his staff to discuss the installation of dial-up telephone service to monitoring station OC9. Dial-up telephone service will be a secondary means of transmitting data should the primary means, wireless communication, become unavailable. OC9 resides on JCP&L property, on the back site of Oyster Creek Nuclear Generating Station, but its telephone service comes through the Oyster Creek telephone room. The Bureau of Nuclear Engineering has made the request through the Department's telephone support group to the State Office of Information Technology for Verizon to convert the four-wire leased line to dial-up service. As soon as Verizon assigns a system engineer to design the specifications for the project, Oyster Creek IT staff will facilitate design and completion of the project.

In March, CREST sites OC1, OC2, OC14 and OC16 went down for several hours. AT&T and Verizon restored communications after identifying the cause of the failure. AI3 and AI8 also experienced several intermittent down periods, and Verizon repaired AI10 after it lost communications.

Contact: Ann Pfaff (609) 984-7451

### **Air Pollution/Radiation Data Acquisition and Early Warning System**

Envitech has provided a proposal for design, installation and training for two modem banks to support dial-up communications to sixteen CREST sites in tandem should the wireless network become unavailable. The associated equipment (modems, device servers and cabling) will be purchased from separate vendors who provided the lowest cost proposal. One modem bank will support the primary system and a second will support the back-up system at the designated offsite location.

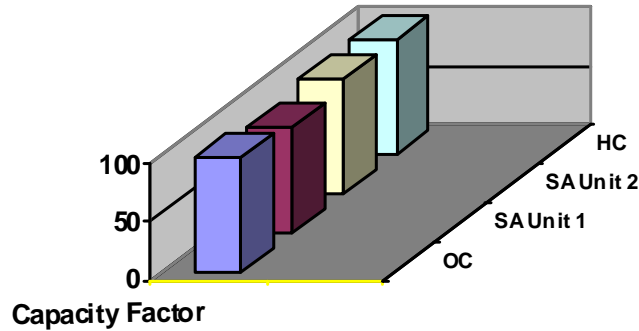
The Office of Information Resource Management (OIRM) has resolved the wireless router configuration problem that had surfaced after determining it was an internal IP address forwarding issue. Service agreements with Verizon have been arranged for eight wireless routers, and OIRM has requested that the State Office of Information Technology open associated firewall ports into the New Jersey secure network for these routers. After this is completed, OIRM will configure the routers for deployment.

The primary Air Pollution/Radiation Data Acquisition and Early Warning System computer system has been moved to the DEP "nerve center" from an adjacent computer room. Plans are being devised to move the secondary computer system to the designated offsite location with 24/7 support and back-up power supply that will provide protection against catastrophic failure.

Contact: Ann Pfaff (609) 984-7451

**BUREAU OF NUCLEAR ENGINEERING**

**Plant Operating Performance - March 2009**



**STATISTICAL INFORMATION**

EMERGENCY AND NON-EMERGENCY EVENT NOTIFICATIONS FOR MARCH 2009

Emergency events (EEs) at nuclear power plants are classified, in increasing order of severity, as an Unusual Event (UE), Alert, Site Area Emergency (SAE), and General Emergency (GE). Non-emergency events (NEEs) are less serious events that require notification of the NRC within one to four hours. The nuclear power plants operating in New Jersey also notify the BNE of NEEs. The BNE analyzes the NEEs as part of its surveillance of nuclear power plant operation.

|              | MAR 2009 |     | JAN - MAR 2009 |     | JAN - MAR 2008 |     |
|--------------|----------|-----|----------------|-----|----------------|-----|
|              | EE       | NEE | EE             | NEE | EE             | NEE |
| OYSTER CREEK | 0        | 0   | 1              | 0   | 0              | 1   |
| SALEM 1      | 0        | 0   | 0              | 0   | 0              | 1   |
| SALEM 2      | 0        | 0   | 0              | 0   | 0              | 0   |
| SALEM SITE   | 0        | 0   | 0              | 0   | 0              | 0   |
| HOPE CREEK   | 0        | 1   | 0              | 3   | 0              | 2   |

**Bureau of Release Prevention - DPHS  
Monthly Report – March 2009**

| <b><u>Priority / Demand</u></b>                    | <b><u>DPCC Output</u></b>                     | <b>This Month</b> | <b>FY 2009 to date</b> |
|--|---|-------------------|------------------------|
| <u>1. Plan Submission, Renewals and Amendments</u> | Plans Received                                | 1                 | 2                      |
|  | Plans Initially Approved                      | 0                 | 1                      |
|  | Plans Denied                                  | 0                 | 0                      |
|  | Plan Renewals Received                        | 6                 | 78                     |
|  | Plan Renewals Approved                        | 8                 | 75                     |
|  | Plan Renewals Denied                          | 0                 | 3                      |
|  | Plan Amendments Received                      | 4                 | 29                     |
|  | Plan Amendments Approved                      | 8                 | 37                     |
| <u>2. Inspections</u>                              | Annual Audits                                 | 20                | 126                    |
|  | Technical Review Inspections                  | 10                | 98                     |
|  | Compliance Inspections                        | 2                 | 21                     |
|  | Follow-up Site Visits                         | 2                 | 22                     |
|  | Follow-up Document Reviews                    | 1                 | 25                     |
|  | Incident/Complaint Investigations             | 0                 | 0                      |
| <u>3. Information Requests</u>                     | OPRA  | 33                | 213                    |
| <u>4. Discharge Confirmation Reports</u>           | Submitted                                     | 18                | 119                    |
|  | Assigned                                      | 0                 | 0                      |
|  | Accepted                                      | 0                 | 0                      |
| <u>5. Enforcement Actions</u>                      | AO/NOCAPA                                     | 1                 | 34                     |
|  | Notice of Violation                           | 7                 | 35                     |
|  | Settlements                                   | 2                 | 20                     |
| <u>6. Penalties</u>                                | New Penalty Assessments (Total Dollar Amount) | \$20,000          | \$249,425              |
|  | Payments Received                             | \$5,150           | \$128,175              |
|  | Cancelled (Current total)                     | n.a.              | \$48,750               |
|  | Suspended (Current total)                     | n.a.              | \$254,250              |
| <u>7. Respond to referrals, etc.</u>               | Requests received                             | 0                 | 1                      |
|  | Responses issued                              | 0                 | 1                      |

## Additional Activities

### Training

none

### Other Items

Work continues on SOPs. The Filing SOP (Yefim Kantor) went through final review. The Confidential Information SOP (Carl Ochs) was completed, but will be issued in conjunction with the Filing SOP.

The amendment guidance document was completed and will be posted on the bureau's website.

### Task Progress

The current backlog of plan renewals past their renewal date is 52, an increase of five from last month.

**Bureau of Release Prevention - TCPA Program - Risk Management & Technical Support  
Sections  
Monthly Report – March 2009**

| <b>Priority / Demand</b>  | <b>Output</b>   | <b>This Month</b> | <b>3<sup>rd</sup> Qtr. To date</b> | <b>FY 2009 to date</b> |
|---|---|-------------------|------------------------------------|------------------------|
| 1. <u>Assistance to Office of Homeland Security &amp; Preparedness</u>  | Inspections/Reviews   | 1                 | 4                                  | 5                      |
|   | Support (data, training, etc.)  | 0                 | 0                                  | 0                      |
| 2. <u>Rulemaking</u>  | NJAC 7:31 readoption with amendments:<br>a) propose rule - published in NJR 9/15/08         | 0                 | 0                                  | 1                      |
|   | b) public hearing   | 0                 | 0                                  | 1                      |
|   | c) complete adoption (in NJR)   | 1                 | 1                                  | 1                      |
| 3. <u>Registrant Fee Collection</u>                                     | Bills issued  | 87                | 87                                 | 87                     |
|   | Bills collected   | 25                | 25                                 | 26                     |
|   | Fee report published & mailed   | -                 | 1                                  | 1                      |
| 4. <u>New Covered Process Application Reviews</u>                       | <b><i>Applications received</i></b>   | 0                 | 3                                  | 5                      |
|   | Applications reviewed & decision letters issued   | 0                 | 3                                  | 5                      |
| 5. <u>Procedures &amp; Guidance Docs, Maintenance &amp; Development</u> | New & revised technical guidance docs. prepared & distributed                               | 0                 | 0                                  | 0                      |
|   | New & revised SOPs prepared   | 0                 | 1                                  | 10                     |
|   | Form letters revised (update NJEMS template documents)                                      | 14                | 14                                 | 16                     |
| 6. <u>Review of submitted IST review reports</u>                        | <b><i>IST review reports received</i></b>   | 1                 | 3                                  | 92                     |
|   | IST Reports reviewed and letters issued   | 13                | 14                                 | 14                     |
| 7. <u>Risk Management Program audits/inspections</u>                    | 1.a. Standard inspections of existing RMPs completed  | 4                 | 12                                 | 41                     |
|   | 1.b. Audits of new & existing facilities completed (scheduled)                              | 0                 | 0                                  | 1                      |
|   | 1.c. Unannounced Brief Compliance Inspections   | 0                 | 0                                  | 0                      |
|   | 2. Preliminary determination letters (DCA or DCAA) sent                                     | 0                 | 0                                  | 2                      |
|   | 3. Signed CA, CAA or RMP-OK letters issued (as of 8/14/08 no longer issuing RMP-OK letters) | 0/0/0             | 0/0/0                              | 3/3/7                  |
| 8. <u>Enforcement Actions and Case Management</u>                       | Issue enforcement actions in accordance with NJEMS procedures (issue PEAs)                  | 2                 | 6                                  | 14                     |
|   | Provide case management to settle disputed violations (issue NEAs)                          | 0                 | 1                                  | 1                      |

| <b>Priority / Demand</b>                    | <b>Output</b>  | <b>This Month</b> | <b>3<sup>rd</sup> Qtr. To date</b> | <b>FY 2009 to date</b> |
|---|--|-------------------|------------------------------------|------------------------|
| 9. Risk Management Plan Reviews             | RMPlan diskettes received and loaded to FACITS (new, updates, corrections)             | 5                 | 20                                 | 56                     |
|   | RMPlans reviewed and determination letters sent.                                       | 2                 | 15                                 | 46                     |
| 10. Annual / Triennial Reports Reviews      | Reminder letters issued  | 5                 | 14                                 | 55                     |
|   | <b>Reports received</b>  | 10                | 21                                 | 53                     |
|   | Reports reviewed and letters or enforcement actions issued                             | 5                 | 13                                 | 49                     |
| 11. Compliance Inspections (not RMP audits) | 1.b. Non-registered sites inspected for TCPA compliance                                | 1                 | 11                                 | 48                     |
|   | 2. Follow-up inspections for compliance with signed CAs, CAAs, and enforcement actions | 6                 | 17                                 | 31                     |
|   | 3. Accident investigations   | 0                 | 0                                  | 0                      |
|   | 4. Multimedia/GreenStart referrals   | 0                 | 0                                  | 0                      |
| 12. Communications and Outreach             | Prepare responses to OPRA requests & management referrals                              | 8                 | 15                                 | 17                     |
|   | Conduct presentations, workshops, etc.   | 0                 | 0                                  | 0                      |

**TCPA Program Penalties, Fees and Activities:**

| <b>TCPA Penalties</b> | <b>This Month</b> |   | <b>FY 2009 to date</b> |    | <b>Notes</b>                                 |
|-----------------------|-------------------|---|------------------------|----|--|
| Assessed              | \$14,000          | 2 | \$169,900              | 17 | (2 AOs dated June 30, 2008)                  |
| Collected             | \$2000            | 1 | \$55,100               | 11 | (2 from FY2008)                              |
| Pending Payment       | \$14,000          | 2 | \$56,067.50            | 7  | (1 from FY2008)                              |
| Open (suspended)      | \$56,500          | 3 | \$152,000              | 10 | PEAs with hearing requests (3-FY08 & 1-FY06) |
| Cancelled             | 0                 | 0 | \$102,000              | 7  | PEAs rescinded or superceded by NEAs         |

| <b>TCPA Annual Fees</b> | <b>Amount</b>  | <b>Registrants</b> | <b>Notes</b>                          |
|-------------------------|----------------|--------------------|---------------------------------------|
| Total Billed            | \$1,510,770.26 | 87                 |                                       |
| Collected to date       | \$419,407.76   | 25(+1*)            | (*One from FY2008 billing-\$8,171.75) |
| Percentage              | 27.2%          | 28.7%              | (doesn't include the one from FY2008) |

1) March Audits and Inspections:

- a) Approved risk management program audits: Spectrum Laboratory Products, Dow Chemical Company, Cogen Technologies - Linden Venture, and Johanna Foods.
- b) Follow-up inspections: PolyOne, New Jersey American Water Company-Canoe Brook Station, and Sunoco (R&M).
- c) Spot-check compliance inspections: PSEG Fossil - Hudson Generating Station.

- d) Deregistration inspections: EMC Packaging, Geo Specialty Chemicals, Ferro Corp.- South Plainfield.
- e) SVA inspections: Readington Farms.
- 2) The TCPA rule readoption with amendments was published in the N.J. Register on March 16, 2009. The adoption document and updated TCPA Consolidated Rule Document were prepared and posted on the TCPA webpage for downloading. .
- 3) The FY 2009 TCPA Fee Notice was published in the N.J. Register on March 2, 2009. The invoices (87) were mailed out by Treasury the first week of March.
- 4) Preparations were begun for the June 11, 2009 TCPA Rule Amendments Workshop.
- 5) The NJEMS database was updated for the amended rule requirements.
- 6) Prepared 14 (8 new and 6 revised) NJEMS template letters.
- 7) OSHA/TCPA training was confirmed for April 30, 2009.
- 8) A settlement conference meeting between Crest Foam Industries and Art Robinson and Paul Komosinsky was held on March 24, 2009.
- 9) A discussion about the technical review of the PSEG Hudson Generating Station new process application was held at Shaw Engineering, Cherry Hill, NJ, on March 12, 2009 by Art Robinson.
- 10) At the March 30, 2009 TCPA staff meeting, Asit Ray made a presentation on relief system design and design basis.
- 11) The TCPA Chemical Safety Engineers continue review of the IST reports. Disposition letters were sent 13 water treatment companies.
- 12) Work continues on the Bureau and TCPA SOPs and guidance documents. Drafts of the following have been prepared and are under review:
  - a) TCPA SOP E16, "Temporary Discontinuence" was developed. (Al Drabnis)
  - b) TCPA SOP E15, "BCI" was modified. (Al Drabnis)
  - c) Guidance on Applicability of RHS Covered Processes was revised. (Asit Ray)