

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

AUGUST 1, 2009 THROUGH AUGUST 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

AUGUST 1, 2009 THROUGH AUGUST 31, 2009

SECTION I - OFFICE OF THE ASSISTANT DIRECTOR

Highlights of the Monthly Report

1. Leak in a Condensate Transfer Pipe at Oyster Creek

On August 25, 2009 Exelon investigated a water leak within the turbine building. Water was leaking near the penetration of the existing six-inch aluminum pipe inside the building, and running into a sump. To further pinpoint the location of the leak, Exelon excavated the ground outside of the turbine building in the area where the six-inch pipe penetrates the building. During the evening of August 25 leakage outside of the turbine building was discovered and notifications were made to the Department of Environmental Protection and to the Nuclear Regulatory Commission (NRC). Sump pumps were used to pump the leaking water into drums.

Exelon decided to reduce power to 50% to allow plant teams access to make repairs to a six-inch pipe that penetrates the turbine building. The leak was stopped on August 26, 2009 by isolating the pipe. A portion of the pipe was replaced. The plant returned to full power on August 29, 2009. Plant technicians also inspected seven other aluminum pipes that penetrate the turbine building wall and found no other issues.

Three NRC inspectors from Region I visited Oyster Creek to assess parts of Exelon's investigation.

Water samples taken daily from the plant's discharge canal continue to show no detectable levels of tritium. Samples taken from the excavation contain tritium levels up to 10 million Pico curies per liter of water. A Pico curie is one trillionth of a curie. The excavation is near the area where plant teams found and stopped two small leaks in April. At that time station operators replaced an eight-inch pipe and a ten-inch pipe.

2. Public Service Electric (PSEG) and Gas Applies to Extend the Operating Licenses for Salem 1 and 2 and Hope Creek

On August 18, 2009 PSEG Nuclear LLC submitted license renewal applications for the Salem and Hope Creek plants to the Nuclear Regulatory Commission (NRC). If

approved, the renewed licenses will expire as follows: Salem Unit 1 on August 13, 2036, Salem Unit 2 on April 18, 2040, and Hope Creek on April 11, 2046.

The NRC will perform a review to determine if the applications are complete and ready for a detailed NRC review. When the NRC determines the applications are complete, they will note it in the Federal Register. This should occur between 40 days and 90 days following the date of submittal which is August 18, 2009. At that time the public will have 60 days to file hearing requests and petitions for intervention.

The NRC projects that a decision will be reached on renewing these licenses within 22 months if there is not a public hearing and within 30 months if there is a public hearing.

The Bureau of Nuclear Engineering has copies of the license renewal applications and is in the process of reviewing them.

3. The Bureau of Radiological Health (Bureau) Reaches Settlement with Dental Facility

The Bureau entered into a settlement agreement with a Hudson County dental facility that had failed to pay its x-ray machine registration fees for the past fifteen years. The Bureau initiated enforcement actions beginning in November 2006 ordering the facility to pay its current and past due registration fees. Subsequent enforcement actions were issued as a result of the dental facilities non-response. Over time, late fees and penalties were assessed. As part of the August 2009 settlement agreement, the facility has made payment to the State in the following amounts: \$4,784.00 in past due registration fees dating back to 1995 and \$4,500.00 in assessed late fees. The settlement agreement also requires the dental facility to pay \$12,000.00 in penalties that will be collected in monthly installments over the next 24 months. The Bureau is actively pursuing collection of past due registration fees from the remaining delinquent facilities.

ORIGINAL SIGNED BY
Paul Baldauf, P.E.
Assistant

Director

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

August 1 - 31, 2009

SECTION II – BUREAU OF RADIOLOGICAL HEALTH (BRH)

A. From the Chief’s Desk

Contact: Paul Orlando (609) 984-5809

Settlement Reached with Dental Facility

The Bureau of Radiological Health entered into a settlement agreement with a Hudson County dental facility that had failed to pay its x-ray machine registration fees for the past fifteen years. The Bureau initiated enforcement actions beginning in November 2006 ordering the facility to pay its current and past due registration fees. Subsequent enforcement actions were issued as a result of the dental facilities non-response. Over time, late fees and penalties were assessed. As part of the August 2009 settlement agreement, the facility has made payment to the State in the following amounts: \$4,784.00 in past due registration fees dating back to 1995 and \$4,500.00 in assessed late fees. The settlement agreement also requires the dental facility to pay \$12,000.00 in penalties that will be collected in monthly installments over the next twenty-four months. The Bureau is actively pursuing collection of past due registration fees from the remaining delinquent facilities.

B. Registration and Support Section

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

Machine Source Registration and Renewal Fees

The Bureau has continued invoicing facilities their annual renewal registration fees for fiscal year 2010. Registrants with facility names starting with the letters G-L were invoiced during August. 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.

Machine Source Fees Invoiced and Collected for FY 2010					
Monthly Invoiced	Monthly Collected	Fiscal YTD Invoiced	Fiscal YTD Collected	Fiscal YTD Adjustments	Percent Collected
\$519,810.00	\$451,861.00	\$1,404,762.00	\$716,103.00	\$2,653.00	30%

Machine Source Unpaid Registration Fees

As of August 31, 2009, six registrants remain delinquent in paying their FY 2008 registration fees. The Bureau has issued enforcement actions and assessed late fees and penalties to these facilities.

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. As of May 2009, 274 registrants (66%) paid their registration fees totaling \$109,189.00 (83%). The remaining 91 registrants owe \$23,239.00 (17%) of the original \$132,428.00 in delinquent registration fees. In May 2009, the Bureau issued enforcement documents to these registrants. Seventy-seven first time violators were issued batch enforcement documents ordering them to pay their fees within 30 days of receipt of the document. Fourteen repeat violators were issued administrative orders and assessed late fees of \$25 per month, per machine.

As of August 31, 2009, 75 of the 77 first time violators have responded to the batch enforcement actions and the Bureau has collected \$19,020 or 95% of total due by these first time offenders. There is an outstanding balance of \$1,030.00. As of August 31, 2009, one of the fourteen repeat offenders has paid its registration and late fees, four of the thirteen repeat violators responded to the administrative order by paying past due registration fees. These four registrants still owe late fees.

Technologist Certification License and Renewal Fees

The Technologist Certification Section continues to invoice individuals for initial licenses and examinations as they occur. The table below represents monthly and fiscal year-to-date activities.

Technologist Certification Examination & License Fees FY 2010				
Invoiced & Collected				
Invoice Type	Monthly Invoiced	Monthly Collected	Fiscal YTD Invoiced	Fiscal YTD Collected
Examinations	\$320	\$220	\$480	\$380
Initial Licenses	\$8,840	\$7,600	\$18,900	\$17,580
Renewal Licenses	\$1,820	\$3,330	\$3,690	\$7,250
Totals	\$10,980	\$11,150	\$23,070	\$25,210

C. Machine Source Section

Contact: Ramona Chambus (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 August 2009, IQ evaluations were performed on eighteen (18) x-ray units with the following results:

- Seven units (39%) had excellent image quality scores.
- Eleven units (61%) had good image quality scores.
- No units (0%) 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.

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 August 2009, ESE measurements were calculated on nine x-ray units that performed lumbo-sacral spine x-rays. No units (0%) had extremely high ESE measurements.

In August 2009, there were no ESE measurements calculated on x-ray units that performed chest x-rays.

In August 2009, ESE measurements were calculated on nine 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 August 2009, ESE measurements were calculated on two hundred and eighty-nine dental x-ray units that used D speed film. Six units (2.1%) had an extremely high ESE measurement.

In August 2009, six ESE measurements were calculated on any x-ray units that used E speed film. One unit (17%) had an extremely high ESE measurement.

In August 2009, ESE measurements were calculated on forty-one dental x-ray units that use F or Insight speed film. Nine units (22%) had an extremely high ESE measurement.

In August 2009, ESE measurements were calculated on two hundred and fifty-five dental x-ray units that used DR digital imaging. Nineteen units (7%) had extremely high ESE measurements.

In August 2009, ESE measurements were calculated ten dental x-ray units that used CR digital imaging. One unit (10%) had an extremely high ESE measurement.

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 August. The Section has begun and completed several initiatives identified in the Bureau's FY 2010 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:

School of Radiologic Technology Inspections:

Berd

Schools of radiologic technology that are approved by the Radiologic Technology Board of Examiners must comply with the Board's approved curriculum and N.J.A.C. 7:28-19. On August 18, 2009, the two dental radiography programs sponsored by the University of Medicine and Dentistry of New Jersey were inspected. The Bureau will soon issue its report to each program.

E. Mammography Section

Contact: Mark Sciranka (609) 984-5360

Stereotactic Facilities Inspected

The Mammography Section inspected one facility with a stereotactic/needle localization breast biopsy unit. There were no Administrative Orders and Notices of Prosecution issued. A total of one stereotactic facility inspection has been performed since July 1, 2009.

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 eight facilities in August. There were no facilities found to have non-compliance issues. A total of 8 of the 231 facilities scheduled to be inspected under the current FDA MQSA contract have been inspected to date. The contract will expire on July 31, 2010.

Facility Non-compliances Discovered

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

There were no **Level 2** non-compliances.

There were no **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

JULY 2009

Total Admin. Orders Issued	Admin. Orders Effective	Admin. Orders Pending	Total Notices of Prosecution Issued	Effective Notices of Prosecution	Pending Notices of Prosecution	Total Formal Enforcement Documents
7	6	1	7	6	1	14

AUGUST 2009

Total Admin. Orders Issued	Admin. Orders Effective	Admin. Orders Pending	Total Notices of Prosecution Issued	Effective Notices of Prosecution	Pending Notices of Prosecution	Total Formal Enforcement Documents
39	9	30	32	4	28	71

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

Total Amount Assessed for FY 10 to Date	Total Amount Collected for FY 10 Assessments	Total Amount Collected in FY 10 for Previous FY Assessments	Total Amount Collected in FY 10
\$ 13,050.00	\$ 1,400.00	\$ 25,650.00	\$ 27,050.00

**BUREAU OF ENVIRONMENTAL RADIATION ENFORCEMENT
ACTIONS**

JULY 2009

Total Admin. Orders Issued	Admin. Orders Effective	Admin. Orders Pending	Total Notices of Prosecution Issued	Effective Notices of Prosecution	Pending Notices of Prosecution	Total Formal Enforcement Documents
4	0	4	4	1	3	8

AUGUST 2009

Total Admin. Orders Issued	Admin. Orders Effective	Admin. Orders Pending	Total Notices of Prosecution Issued	Effective Notices of Prosecution	Pending Notices of Prosecution	Total Formal Enforcement Documents
5	0	5	4	0	4	9

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

Total Amount Assessed for FY 10 to Date	Total Amount Collected for FY 10 Assessments	Total Amount Collected in FY 10 for Previous FY Assessments	Total Amount Collected in FY 10
\$ 5,000.00	\$ 1,400.00	\$ 300.00	\$ 1,700.00

Inspector: ALL

Number of Inspections Performed

Inspection Type	Inspection Description	Facilities Inspected	Machines Inspected	Machines Audited	Machines Uninspected
1	ROUTINE INSPECTION	240	768		24
4	NEXT	1	1		17
8	NO SHOW	3	3		2
12	STEREOTACTIC INSPECTION	1	1		
15	QA INSPECTION ROUTINE LEVEL 1	24	19	18	2
22	NON-QA INSPECTION - HOSPITALS	2	17		17
Total On-Site Inspections:		271	809	18	62
6	OFFICE VIOLATION RESPONSE REVIEW	34		54	
7	OFFICE RADIATION SAFETY SURVEY	12		14	
18	OFFICE QA VIOLATION RESPONSE REVIEW	3		3	
23	OFFICE TECH CERT INSPECTION	11		11	
Total Office Inspections:		60		82	0

Number of Enforcement Documents Issued

NOV	18
AO	29
NOP	24
Amount of Penalties	\$8,400

Inspector: ALL

Violation Code	Glossary Information	Description Non-Compliance	Number of Violations	
			By DN	By Cod
Violations Cited Non-QA				
ACT				
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	11	11
Cabinet				
C-002	17.7(e)	Requirements for surveys not met:	2	2
Dental				
D-002	16.8(a)1	Survey of environs not available or not performed	6	6
D-016	16.3(a)7	kVp exceeds manufacturer's specifications (certified unit).	10	10
D-023	16.3(a)14	Timer reproducibility exceeds 5% for certified unit	2	2
D-025	16.3(a)16	Timer accuracy exceeds manufacture'rs specifications (certified units).	2	2
D-028	16.3(a)18	Radiation reproducibility exceeds 7% for noncertified unit	1	1
G				
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.	2	2
Radiographic				
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	4	4
Registration				
REG1	3.1 (a) and (b)	Failed to register the ionizing radiation producing machine within 30 days of acquisition.	1	1
Therapy 1 Mev and Above				
TA-112	14.4(u)6v	full calibration did not include uniformity of radiation field	1	1
Total Violations Cited Non-QA			46	

Violations Cited QA**Quality Assurance**

QA-011	22.5(a)2	QC tests from Table 1 (Radiographic) not performed at the required intervals.	4	4
QA-012	22.5(a)3	Medical Physicist's QC Survey not performed at required interval or all tests not performed.	2	2
QA-063	22.7(a)2	QC tests from Table 3 (CT) not performed at the required intervals.	1	1
QA-064	22.7(a)3	No Med Phys QC Survey for CT	1	1

Inspector: ALL

<u>Violation Code</u>	<u>Glossary Information</u>	<u>Description Non-Compliance</u>	<u>Number of Violations</u>	
			<u>By DN</u>	<u>By Cod</u>
Violations Cited QA				
Total Violations Cited QA				8
Total Violations				<u>54</u>

**TECHNOLOGIST CERTIFICATION SECTION
MONTH OF AUGUST**

LICENSE CATEGORY	D I A G N O S T I C R A D	N U C M E D I C I N E	R A D T H E R A P Y	D E N T A L R A D	C H E S T R A D	P O D I A T R I C R A D	O R T H O P E D I C R A D	U R O L O G I C R A D	T O T A L M O N T H	FY TO DATE	TOTAL DUE THIS FY
Initial Licenses Issued	49	3	1	59	-	1	-	-	113	274	N/A
Licenses Renewed	15	-	-	21	-	-	-	-	36	74	N/A
Total Licensed	8,820	1,156	765	10,839	152	42	6	-	N/A	21,780	N/A
Exams Scheduled	2	-	-	-	-	-	-	-	2	4	N/A
Investigations Conducted	3	-	-	2	-	-	-	-	5	10	45
Licenses Verified	351	-	-	462	1	1	-	-	853	1,309	8,000
Expired Licenses	0	-	-	3	-	-	-	-	3	5	N/A
Unlicensed	1	-	-	7	-	-	-	-	8	13	N/A
NOP's Issued	1	-	-	10	-	-	-	-	11	18	N/A
Penalty (\$)	\$300	-	-	\$1,500	-	-	-	-	\$1,800	\$3,200	N/A
Licenses Sanctioned	-	-	-	-	-	-	-	-	0	3	N/A
Approved Educational Programs	16	3	4	36	1	-	1	-	61	N/A	N/A
Program Applications Evaluated	-	-	-	-	-	-	-	-	0	0	3
Program On-site Evaluations	-	-	-	2	-	-	-	-	2	4	19
Total Programs Evaluated	-	-	-	2	-	-	-	-	2	4	19
Clinical Applications Approved	-	-	-	80	-	-	-	-	80	143	900

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

Type of Facility	INDUSTRY	PHYSICIAN	HOSPITAL	GOVERNMENT	TOTAL MONTH	FY TO DATE	TOTAL DUE THIS FY	
MQSA								
Facilities Inspected	0	7	1	0	8	8	231	
Machines Inspected	0	8	1	0	9	9		
FDA Violations Level 1	0	0	0	0	0	0		
FDA Violations Level 2	0	0	0	0	0	0		
FDA Violations Level 3	0	0	0	0	0	0		
Registrations	0	2	0	0	2	2		
Stored	0	5	1	0	6	6		
Canceled	0	0	0	0	0	0		
Stereotactic								
Facilities Inspected	0	1	0	0	1	1		60
Machines Inspected	0	1	0	0	1	1		
Notice of Violation	0	0	0	0	0	0		
Administrative Order	0	0	0	0	0	0		
Notice of Prosecution	0	0	0	0	0	0		
Registrations	0	0	1	0	1	1		
Stored	0	0	1	0	1	1		
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
AUGUST 1, 2009 THROUGH AUGUST 31, 2009

SECTION III - BUREAU OF ENVIRONMENTAL RADIATION

A. RADIOLOGICAL ASSESSMENT & DECOMMISSIONING SECTION

Contaminated Sites

DuPont

Staff provided comments to the Site Remediation Program on the Site Wide Investigation.

Contact: Jenny Goodman (609) 984-5498

Gloucester Titanium Company

Staff provided comments to the Site Remediation Program on the Remedial Investigation Workplan.

Contact: Jenny Goodman (609) 984-5498

Teterboro

Staff provided comments to the Site Remediation Program on the Remedial Investigation Report.

Contact: Jenny Goodman (609) 984-5498

Agreement State

Regulations

The Notice that our adopted regulations will be effective on September 30, 2009 was prepared for the September 21, 2009 New Jersey Register.

Contact: Jenny Goodman (609) 984-5498

Radioactive Materials

Staff conducted two nuclear medicine inspections and created corresponding reports in NJEMS.

Contact: Nancy Stanley (609) 984-5452

Radionuclides in Water

Inspections

Washington Township MUA

Staff performed an inspection of licensed activities at Washington Township MUA. No items of non-compliance were identified.

Contact: Karen Flanigan (609) 292-1938
 Nancy Stanley (609) 984-5452

Graver Technology

Staff visited Graver Technology to discuss current operations. Graver Technology is currently licensed for receipt and processing of resin beads that contain uranium. The licensee determined that the process is not economically viable and plans to request the termination of their license. The consultant will provide information to demonstrate that the tanks used to process the beads meet regulatory requirements. The tanks will remain on-site.

Contact: Karen Flanigan (609) 292-1938
 Nancy Stanley (609) 984-5452

United Water

Staff performed an inspection of licensed activities at United Water. No items of non-compliance were identified.

Contact: Karen Flanigan (609) 292-1938
 Nancy Stanley (609) 984-5452

Training

A member of the RAS staff attended the two-week NRC Basic Health Physics Technology course.

Contact: Karen Flanigan (609) 292-1938

B. RADIOACTIVE MATERIALS SECTION

During the month of August, 2009 the Radioactive Materials Section (RMS) responded to four (4) radiation incidents:

1. On August 10, 2009, Trenton Dispatch informed the Radioactive Materials Section (RMS) that a load of municipal solid waste (MSW) from a waste hauler had set off the radiation alarm at an incinerator in Newark. The load was rejected and returned to the hauler's facility. It was secured there for a few days to allow for decay. The load was then returned to the incinerator where it was processed without incident.
2. On August 11, 2009, Trenton Dispatch informed the RMS that a load of MSW from a waste hauler had set off the radiation alarm at an incinerator in Newark. The load was rejected and returned to the hauler's facility. Since the identity of the nuclide causing the elevated readings was unknown, two members of the Bureau of Environmental Radiation arranged to survey the load. The material in the load was identified as I-131 and the hauler was provided with a list of consultants. However, the hauler secured the load at their location for two weeks, with Solid Waste's permission, and then returned to the incinerator on August 25, 2009 to see if it would trip the incinerator's alarm. The load did set off the alarm again and was returned to the hauler's facility.

Since the hauler's facility is not a transfer station, they will arrange to bring the load to another waste disposal business. They have hired a contractor to oversee the dumping and sorting of the load. The cause of the elevated readings will be isolated from the rest of the load. It will then be properly packaged and returned to the hauler's facility to allow for decay in storage. The rest of the load will be processed as usual.

3. On August 17, 2009, Trenton Dispatch informed the RMS that a piece of scrap metal had set off the radiation alarm at a scrap facility in Sayreville. The material was discovered on the conveyor belt, rather than while entering the facility, so the facility does not know who brought it there. It will be secured at their location pending proper disposal through a waste broker.
4. On August 25, 2009, Trenton Dispatch informed a member of the RMS that a load of MSW from a waste hauler in Fairview had set off the radiation alarm at a landfill in Pennsylvania. The load was rejected and was being returned to the hauler's facility. It will be secured there pending dumping and sorting of the load, as supervised by a contractor, and proper disposition of the cause of the elevated readings.

Contact: William Csaszar (609) 984-5555

Police Pager Incidents

On August 12, 2009, Trenton Dispatch notified the RMS that a State trooper had detained a vehicle at a truck stop due the activation of their radiation pager. The truck in question was hauling a load of sewage sludge from Rahway to Pennsylvania. Based upon discussions with members of the Bureau of Environmental Radiation, the trooper was advised to allow the truck to proceed, since sewage sludge can cause elevated radiation readings.

On August 14, 2009, Trenton Dispatch informed a member of the RMS that the Newark Fire Department had requested our assistance due to a radiation pager alarm near City Hall. The reading could not be re-produced, but they still requested our assistance. A member of the Bureau of Emergency Response responded to the incident. The area was surveyed, but no readings of concern were discovered; only some slightly elevated readings off of some brickwork.

On August 25, 2009, Trenton Dispatch informed the RMS that a police officer had detained a vehicle in Paramus due to the activation of the officer's radiation pager. It was discovered that the occupant of the vehicle had recently undergone a nuclear medicine study. The vehicle was then allowed to proceed. No assistance was required.

Contact: William Csaszar (609) 984-5555

Courses

A member of the RMS attended a week-long NRC course on Brachytherapy and Gamma Knife procedures. Attendance at this course was in support of the Agreement State initiative.

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

The Radon Program partnered with the Ocean County Solid Waste Office who exhibited and distributed radon information at "9 Innings for Nature" held at FirstEnergy Park-Blue Claws Stadium in Lakewood on August 2, 2009.

The Radon Program attended a Webinar discussion on 8-11-09 and 8-13-09 on EPA's Long-Term Strategy for Radon - Increased Resources and Increased Authority scenario.

Paperwork was completed and submitted for approval to attend an employee health fair at Hoffman-LaRoche in Nutley, NJ on September 17, 2009.

Paperwork was completed and submitted for approval for attendance at the 19th National Radon Training Conference which will be held on September 20-23, 2009 in St .Louis, Missouri.

Paperwork was completed and submitted for approval for carpet and electric at the New Jersey School Board Association Workshop and Exhibition to be held on October 28-30 in Atlantic City.

Paperwork was finalized and an order was placed with Management and Budget for the printing of 20,000 Healthy Living “Green Sox” health cards which should be completed in 3-4 weeks.

Comments were received and revisions are being conducted on a Child Care Center Guidance document which will be posted on our website and is planned for possible distribution by DCF upon receipt of initial and renewal applications for child care licenses.

Radon Awareness Program (RAP) - The Essex County Cancer Coalition has agreed to purchase test kits through RAP for distribution at the “Choosing Health” health fair at Hoffmann-LaRoche located in Nutley on September 17, 2009. Test kits will be distributed free of charge to employees who are New Jersey residents.

Radon Poster Contest- The website was updated to include information about the contest. Quotes were obtained for the purchase of 300 drawstring backpacks to be distributed to all contest participants.

Information about the Poster Contest was sent out to various organizations including Art Educators of New Jersey, Boy Scouts of New Jersey, Girl Scouts of New Jersey, New Jersey Home School Association, and Johns Hopkins-Center for Talented Youth-List of Contests. The New Jersey Science Teachers Association has agreed to include this information in their September newsletter, and information was posted on the On State Environmental Education Directory (SEEDS) Website.

Contact: Linda Jordan (609) 984-5434

Program Administration Fee Billing Report

On June 16, 2009, the Program Administration Fee (PAF) billing for the semiannual period from July 1, 2008 to December 31, 2008 was sent to Treasury for printing and mailing. The total amount billed was \$84,751.00. All bills were paid, leaving no balance due.

Contact: Herb Roy (609) 984-5433

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, twelve electret devices were mailed to four homeowners. One set is still outstanding. The results are below:

Home #1	basement	1.1 pCi/L
	basement	1.5 pCi/L
Home #2	basement	1.1 pCi/L
	Basement	1.1 pCi/L
	first floor	0.7 pCi/L
	first floor	0.9 pCi/L
Home #3	basement	2.0 pCi/L
	basement	2.1 pCi/L

A result letter was sent accordingly to all of the homeowners.

Contact: Charles Renaud (609) 984-5423

Inspections

One mitigation and one mitigation business were inspected.

Contact: Charles Renaud (609) 984-5423

Measurement and Mitigation Radon Certifications

A total of 38 radon professional applications were approved; all were measurement technicians. A total of four professionals were moved from provisional to full certification status. Business application approvals consisted of two measurement businesses.

Contact: Anita Kopera (609) 984-5543

D. NON-IONIZING RADIATION SECTION

Radiofrequency and Microwave Heaters, Sealers and Industrial Ovens

Registrations

One source was registered this month.

Contact: Deborah Riggs Wenke (609) 984-5521

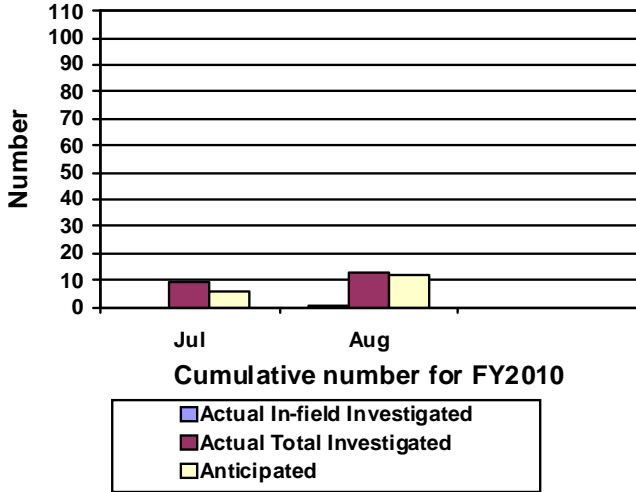
Inspections

This month, Ms. Wenke inspected two central New Jersey pharmaceutical companies for compliance with the regulatory limits specified in N.J.A.C. 7:28-42, Radio Frequency Radiation. Between the two facilities, the total number of units inspected was eight. All fields detected were in compliance with Subchapter 42 exposure limits.

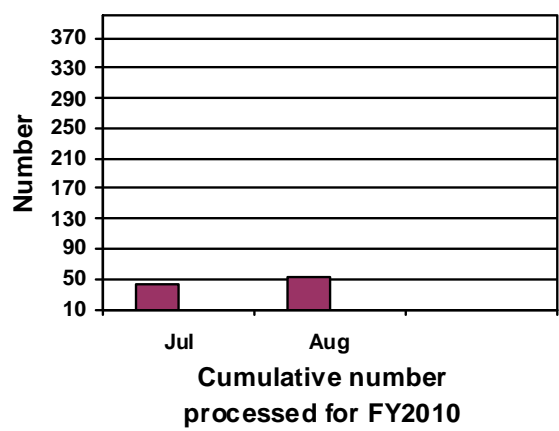
Contact: Deborah Riggs Wenke (609) 984-5521

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

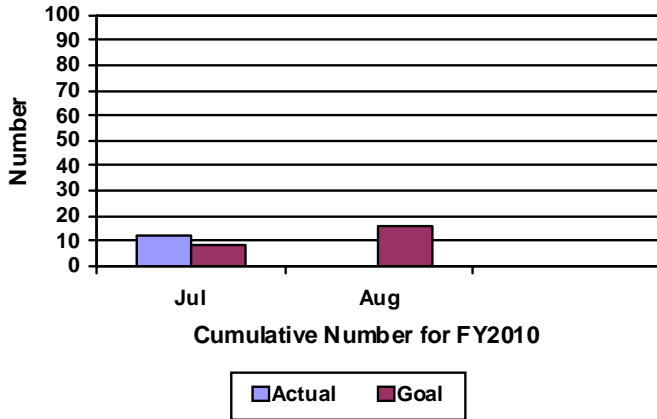
Responses to Radiation Incidents



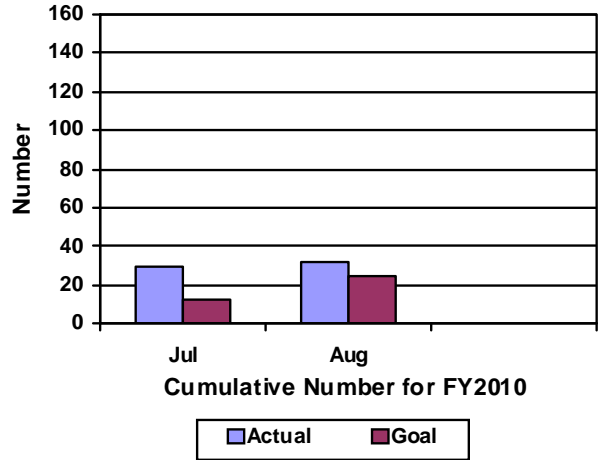
Licensing Actions Performed



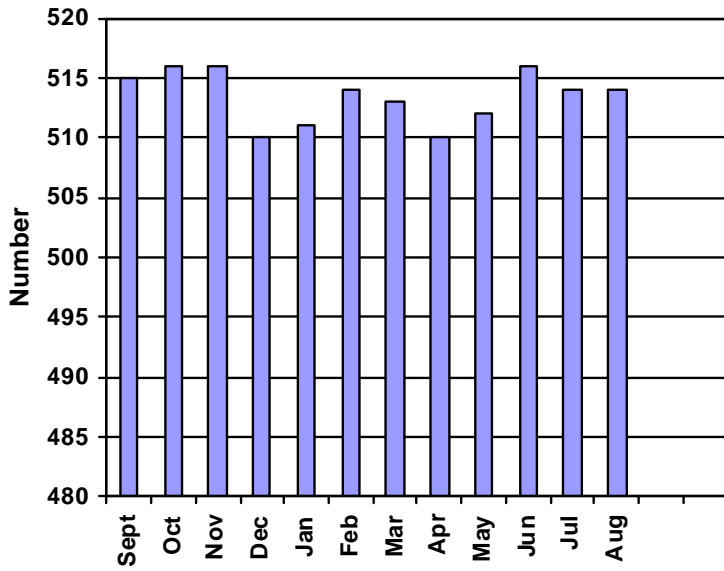
Priority I License Inspections Performed



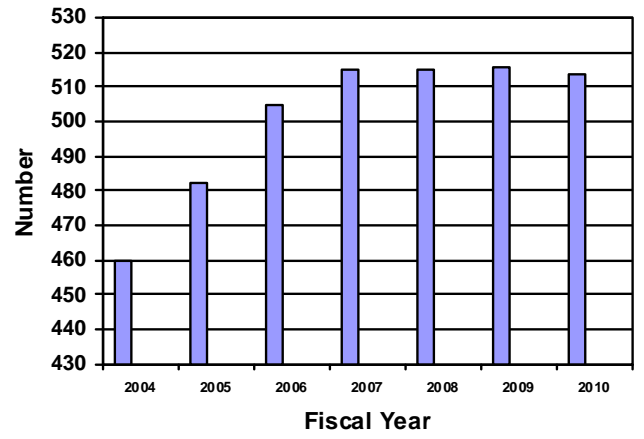
Priority II & III License Inspections Performed



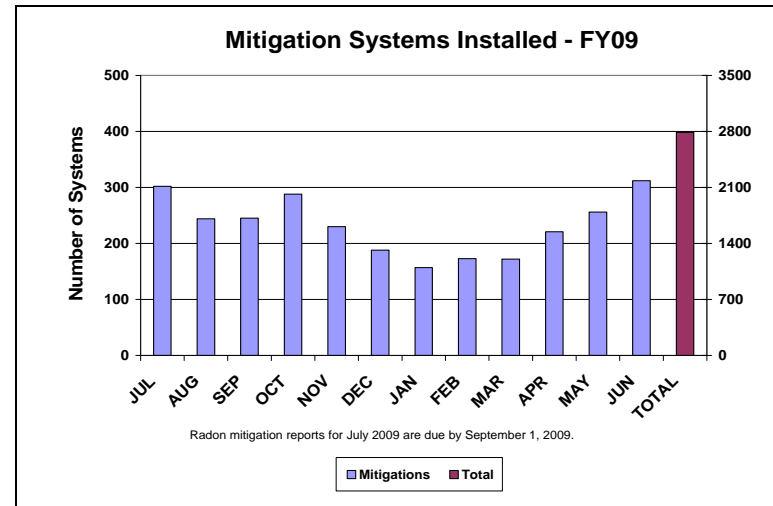
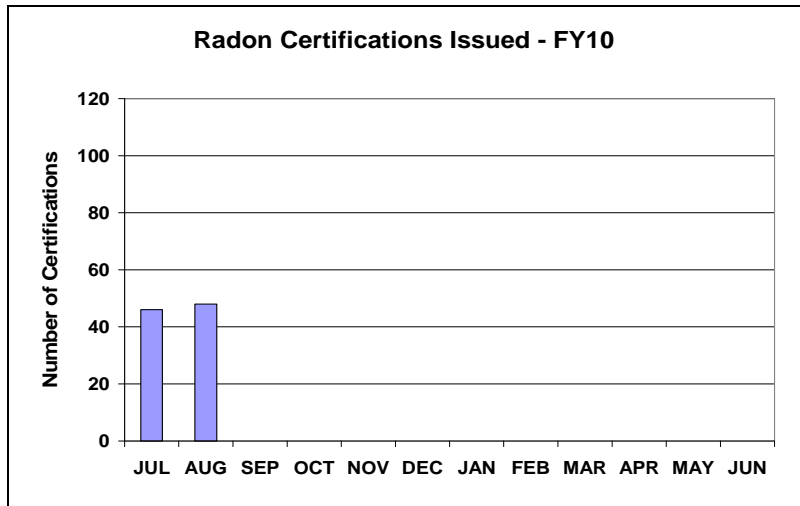
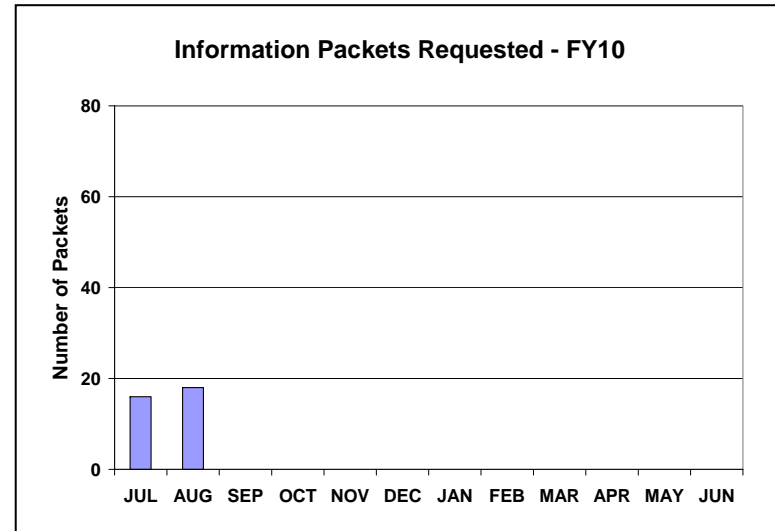
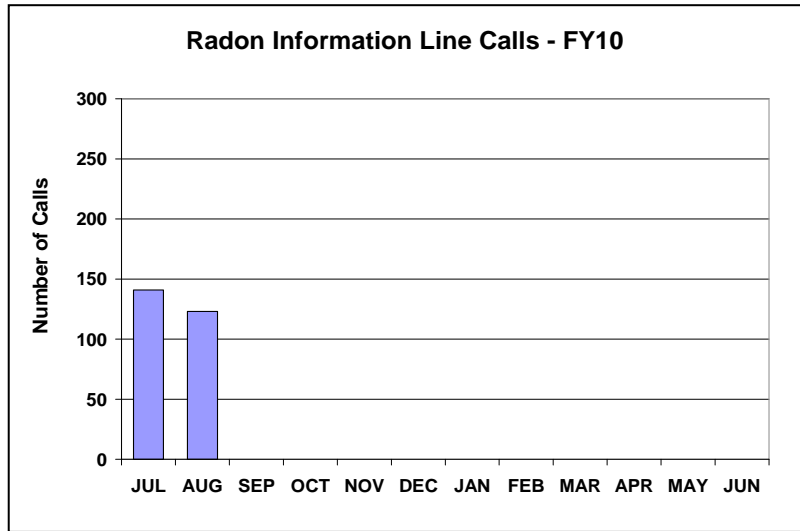
Active Licenses

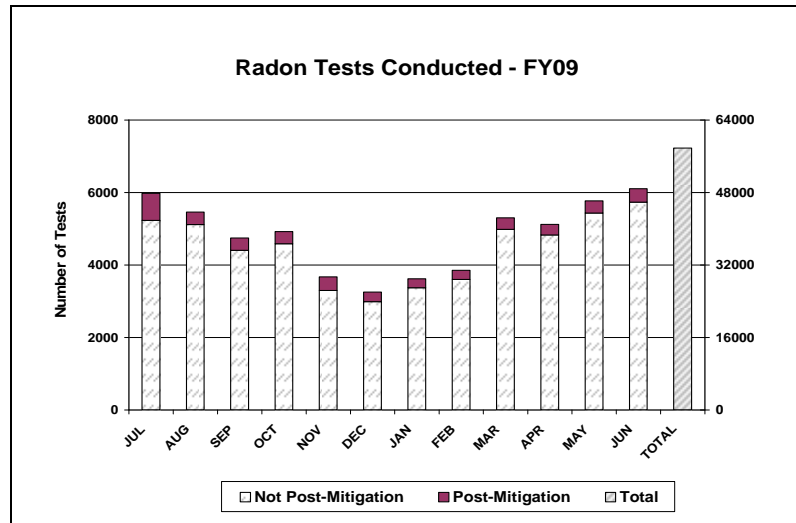
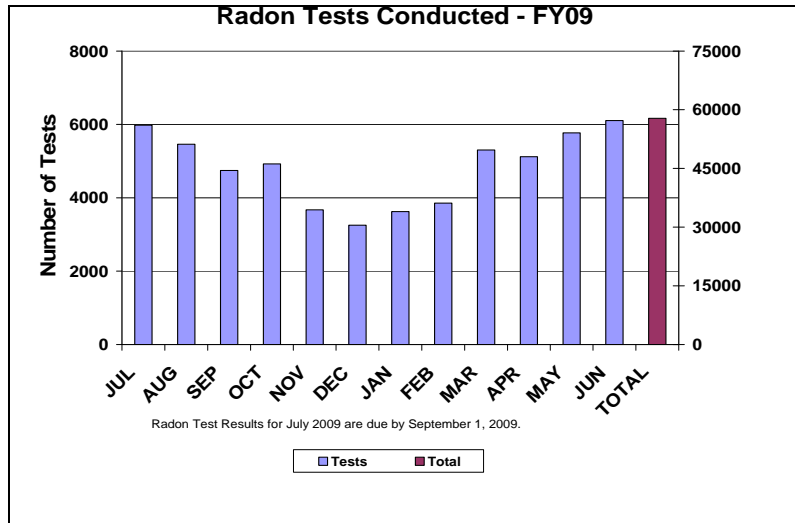


Annual Report of Licenses Maintained



BUREAU OF ENVIRONMENTAL RADIATION SUMMARY OF STATISTICS





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

IV - BUREAU OF NUCLEAR ENGINEERING

SIGNIFICANT ACCOMPLISHMENTS/ISSUES

NRC Special Inspection at Oyster Creek

The NRC continued a Special Inspection at the Oyster Creek nuclear power plant in response to a shutdown of the reactor on July 12. The inspection began on July 16, 2009.

The team of four NRC inspectors reviewed whether any equipment issues, design deficiencies, communication challenges and/or operator performance issues complicated the event.

Several equipment anomalies were observed during the shutdown, including: a switchyard breaker that is used to isolate the off-site electrical distribution system failing to open to clear an electrical fault, which resulted in the loss of off-site power; an emergency diesel generator taking longer than expected to start and load its respective power distribution system; and problems involving level indication equipment for an isolation condenser, a component used to help cool down the reactor during shutdowns.

The exit meeting for the inspection was held on August 13, 2009. The NRC will issue a report on the results of the Special Inspection within 45 days of its completion.

Contact: Richard Pinney (609) 984-7558

Leak in a Condensate Transfer Pipe at Oyster Creek

On August 25, 2009, Exelon investigated a water leak within the turbine building. Water was leaking near the penetration of the existing 6-inch aluminum pipe inside the building, and running into a sump. To further pinpoint the location of the leak, Exelon excavated the ground outside of the Turbine Building in the area where the 6-inch pipe penetrates the building. During the evening of August 25, leakage outside of the Turbine Building was discovered and notifications were made to the DEP and the NRC. Sump pumps were used to pump the leaking water into drums.

Exelon decided to reduce power to 50% to allow plant teams access to make repairs to a six-inch pipe that penetrates the turbine building. The leak was stopped on August 26, 2009 by isolating the pipe. A portion of the pipe was replaced. The plant returned to full power on August 29, 2009. Plant technicians also inspected seven other aluminum pipes that penetrate the turbine building wall and found no other issues.

Three NRC inspectors from Region I visited Oyster Creek to assess parts of Exelon's investigation.

Water samples taken daily from the plant's discharge canal continue to show no detectable levels of tritium. Samples taken from the excavation contain tritium levels up to 10 million picocuries per liter of water. A picocurie is one trillionth of a curie. The excavation is near the area where plant teams found and stopped two small leaks in April. At that time, station operators replaced an eight-inch pipe and a ten-inch pipe.

Contact: Rich Pinney (609) 984-7558

PSEG Applies to Extend the Operating Licenses for Salem 1 and 2 and Hope Creek

On August 18, 2009, PSEG Nuclear LLC submitted license renewal applications for the Salem and Hope Creek plants to the Nuclear Regulatory Commission (NRC). If approved, the renewed licenses will expire as follows: Salem Unit 1 on August 13, 2036, Salem Unit 2 on April 18, 2040, and Hope Creek on April 11, 2046.

The NRC will perform a review to determine if the applications are complete and ready for a detailed NRC review. When the NRC determines the applications are complete, they will note it in the Federal Register. This should occur between 40 days and 90 days following the date of submittal (August 18). At that time the public will have 60 days to file hearing requests and petitions for intervention.

The NRC projects that a decision will be reached on renewing these licenses within 22 months if there is not a public hearing and within 30 months if there is a public hearing.

The Bureau of Nuclear Engineering has copies of the license renewal applications and is in the process of reviewing them.

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

OTHER INFORMATION

Nuclear Power Plant Operation

Oyster Creek

Due to repairs to the condensate transfer pipe leak, the plant operated at 55% power from August 26 through August 29, 2009.

Contact: Rich Pinney (609) 984-7558

Hope Creek

Hope Creek operated at 100% throughout the month.

Contact: Jerry Humphreys (609) 984-7469

Salem Unit 1

Salem Unit 1 ran at essentially full power for the entire month.

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

Salem and Hope Creek Site Activities

A BNE engineer attended the Management Review Committee (MRC) meeting at Salem on August 12. 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 recently appointed Salem Plant Manager on August 12th. Among the subjects discussed were: planning for the Fall 2009 refueling outage at Unit 2, status of staffing and staff development, and plant issues.

On August 25, one BNE engineer met with the Hope Creek Plant Manager to discuss the operations of the plant during July and August.

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

PSEG Plans to Revise the Emergency Action Levels for Hope Creek and Salem

PSEG advised the BNE that they will be revising the Emergency Action Levels contained in the Emergency Plan for Hope Creek and Salem. Two (2) BNE engineers participated in a meeting at Artificial Island, on August 25, to discuss the revisions. Representatives of both plants attended the meeting. The latest revision to the NRC-accepted standard format will be the basis of the change. This format is contained in Nuclear Energy Institute's NEI 99-01, Rev. 5, Methodology for Development of Emergency Action Levels, dated February 2008.

PSEG plans to forward draft revisions for BNE review in October for Hope Creek and in November for Salem. BNE will then review the revisions and meet with PSEG for resolution of any comments. PSEG plans to submit the revisions to the NRC for approval by the end of 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 August 2009.

Spent Fuel and Nuclear Waste	Highway Route Control Quantity Shipments	Radionuclides of Concern
0	3	3

Contact: Rich Pinney (609) 984-7558

Ocean County Field Team Training

On August 3rd, the BNE conducted a training session for Ocean County field monitoring teams (FMTs) at the Berkeley Forward Command Post at the Ocean County Office of Emergency Management. The training session was in preparation for the October 6th FEMA evaluated plume phase exercise at the Oyster Creek Nuclear Generating Station. Training included a review of the SOP-302, “Off-site Radiological Field Monitoring and Sampling” procedure. The purpose of the training was to review roles and the responsibilities for each assigned response position. Additional modules included command and control, communications and data reporting, instrumentation, monitoring, and emergency worker exposure control. In the event of a radiological release from a nuclear generating station, county field monitoring teams, directed by the FCP, would characterize the radioactive plume and identify the extent of contamination that may have occurred. The Federal Emergency Management Agency requires emergency responders to receive training annually.

Contact: Nick DePierro (609) 984-7442

Forward Command Post and Field Monitoring Team Training

On August 19th, the BNE conducted training sessions for state field monitoring teams (FMT) and Forward Command Post (FCP) personnel at the BNE/HQ. The two training sessions were in preparation for the October 6th FEMA evaluated plume phase exercise at the Oyster Creek Nuclear Generating Station. Training included a review of the SOP302, “Off-site Radiological Field Monitoring and Sampling” and SOP-206, “Forward Command Post” procedures. The purpose of the training was to review roles and the responsibilities for each assigned response position. Additional modules included command and control, communications and data reporting, instrumentation, monitoring, and emergency worker exposure control. In the event of a radiological release from a nuclear generating station, state field monitoring teams, directed by the FCP, would characterize the radioactive plume and identify the extent of contamination that may have occurred. The Federal Emergency Management Agency requires emergency responders to receive training annually. The BNE provides training at least twice each year scheduled to coincide with exercises.

Contact: Nick DePierro (609) 984-7442

Emergency Operations Facility (EOF) and Joint Information Center (JIC) Training

On August 11th, NEPS staff presented Emergency Operations Facility (EOF), and Emergency News Center (ENC) training to nuclear emergency response staff. Training included a review of Standard Operating Procedures SOP-205 (Emergency Operations Facility) and SOP-604 (Emergency News Center/Joint Information Center). EOF training covered individual facility positions and responsibilities, communications, dose and engineering assessment and formulating protective action recommendations. During a nuclear incident the EOF staff is responsible for accident assessment which includes engineering and dose assessment, and protective action recommendations for the public. BNE staff is co-located with Exelon's assessment team at the Toms River EOF. JIC training covered a review of roles and responsibilities, communicating information from the DEP to the Joint Information Center (co-located with the EOF in Toms River), and preparing briefs for the news media. DEP staff, along with representatives from the State Police, county and licensee, present updated event briefings to the public at the JIC. In addition to training, each session provided an opportunity to address comments from previous exercises and receive input from facility participants.

Contact: Nick DePierro (609) 984-7442

Facility Inspections

Woodstown Forward Command Post	8/27/09
Salem Emergency News Center	8/27/09
Salem Emergency Operations Facility	8/27/09
Berkeley Forward Command Post	8/18/09
Toms River Emergency Operations Facility	8/18/09
Toms River Joint Information Center	8/18/08

Contact: Nick DePierro (609) 984-7442

Emergency Operations Center (EOC) Training

On August 7th, the BNE and State Police Training Team conducted an operations course for Emergency Operations Center managers at the Ocean County Office of Emergency Management in Berkeley Township. Training topics included mobilization and activation, communications, facility setup, equipment and supplies, command and coordination, direction and control, and exposure control. The intent of the training is to enable the EOC managers to train their local volunteers on EOC operations. During a nuclear emergency, each municipality within the ten mile emergency planning zone (EPZ) would activate their EOC, communicate with the State EOC, and implement protective actions when necessary. The EOC course is part of the continual training process conducted by the State's Radiological Emergency Response, Preparedness and Training Unit.

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 73 samples during the month of August 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. The Annual Environmental Surveillance and Monitoring Reports for 2008 (along with previous years) are found 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.

COUNT OF SAMPLES COLLECTED IN AUGUST 2009	
<u>SAMPLE MEDIUM</u>	<u>NUMBER OF SAMPLES</u>
AIR FILTER	26
CHARCOAL	26
MILK	3
AQUATIC BIOTA	4
VEGETABLES	10
SURFACE WATER	4
TOTAL SAMPLES	73

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

Environmental Report for License Renewal of Salem/Hope Creek

PSEG Nuclear LLC submitted an application for license renewal of Salem and Hope Creek nuclear generating stations to the Nuclear Regulatory Commission (NRC) on August 18, 2009. The license renewal process requires the NRC to perform a plant-specific review of environmental impacts of operating life extension in accordance with the National Environmental Policy Act and the requirements of 10CFR51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions." A copy of

Environmental Report for the Salem and Hope Creek nuclear generating stations has been submitted to the NJDEP's (DEP) Office of Permit Coordination and Environmental Review and is under review by various programs within the DEP. A copy of the Environmental Report for Salem and Hope Creek can be obtained at the following NRC website address: <http://www.nrc.gov/reactors/operating/licensing/renewal/applications.html>. This site also includes a schedule of milestones for the license renewal review.

Contact: Karen Tuccillo (609) 984-7443

Update on Salem 1 Tritium Leak Remediation

During the month of August 2009, 13 samples were collected and shipped to the BNE's contract laboratory for radiological analysis.

Contact: Tom Kolesnik - (609) 984-7575
Paul E. Schwartz - (609) 984-7539

Update on Oyster Creek Tritium Leak Monitoring

During the month of August, 74 onsite well water samples and 86 surface water samples were collected and shipped to the BNE's contract laboratory for radiological analysis. Additional information regarding the tritium leak at the Oyster Creek Nuclear Generating Station can be found at <http://www.nj.gov/dep/rpp/bne/FinalOCH3.pdf>.

Contact: Compton Alleyne (609) 984-7455

Annual Emergency Response Training

Staff members attended various in-house training on Emergency Planning. Topics included dose assessment, field monitoring team and emergency facility coordination.

Contact(s): Karen Tuccillo (609) 984-7443, Tom Kolesnik - (609) 984-7575, or Paul E. Schwartz (609) 984-7539

USEPA Training on Radiochemical Laboratory Protocols (MARLAP)

Two staff members attended the Multi-Agency Radiological Laboratory Analytical Protocols (MARLAP) training session from August 18, 2009 through August 20, 2009 at the USEPA regional headquarters, Philadelphia, Pennsylvania. The goal of MARLAP is to provide guidance on assuring that a laboratory's radio-analytical data meet the specific needs of a program or project. In addition, the performance-based MARLAP process provides guidance on obtaining and evaluating laboratory services.

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

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 July 2009 are included below.

**PSEG Nuclear
Radioactive Effluent Releases
Nuclear Environmental Engineering Section
For the Period of 07-01-09 to 07-31-09**

**Hope Creek
Gaseous Effluents**

<u>Effluent</u>			
Fission Gases	0.00E+00	Ci	
Iodines	2.37E-04	Ci	
Particulates	4.35E-05	Ci	
Tritium	0.00E+00	Ci	

**Hope Creek
Liquid Effluents**

<u>Effluent</u>			
Fission Products	3.01E-03	Ci	
Tritium	5.57E-01	Ci	

**Salem Unit I
Gaseous Effluents**

<u>Effluent</u>			
Fission Gases	1.60E-02	Ci	
Iodines	0.00E+00	Ci	
Particulates	4.09E-07	Ci	
Tritium	1.72E+01	Ci	

**Salem Unit I
Liquid Effluents**

<u>Effluent</u>			
Fission Products	3.92E-04	Ci	
Tritium	2.95E+01	Ci	

**Salem Unit II
Gaseous Effluents**

<u>Effluent</u>			
Fission Gases	7.41E-02	Ci	
Iodines	0.00E+00	Ci	
Particulates	0.00E+00	Ci	
Tritium	2.15E+00	Ci	

**Salem Unit II
Liquid Effluents**

<u>Effluent</u>			
Fission Products	4.57E-04	Ci	
Tritium	2.26E+01	Ci	

Ci = curies of activity

**Exelon Nuclear
Radioactive Effluent Releases
Nuclear Environmental Engineering Section
For the Period of 07-01-09 to 07-31-09**

<u>Oyster Creek Gaseous Effluent Elevated Releases</u>			<u>Oyster Creek Gaseous Effluent Ground Releases</u>		
<u>Effluent</u>			<u>Effluent</u>		
Fission Gases	5.18E+00	Ci	Fission Gases	0.00E+00	Ci
Iodines	2.22E-05	Ci	Iodines	0.00E+00	Ci
Particulates	0.00E+00	Ci	Particulates	1.36E-04	Ci
Tritium	8.22E-02	Ci	Tritium	1.09E-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 several alarms at OC6 during the month of August. These were investigated and determined to be from a radiographer working on natural gas pipe replacement project adjacent to the monitor.

Contact: Ann Pfaff (609) 984-7451

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

Artificial Island CREST System Ambient Radiation Levels August 2009 Derived From One Minute Averages UNITS = mR/Hr				
AI1	AI2	AI3	AI4	AI5
****	.0070	.0070	.0077	.0070
AI6	AI7	AI8	AI9	AI10
****	.0062	.0059	.0079	.0057

Oyster Creek CREST System Ambient Radiation Levels August 2009 Derived From One Minute Averages UNITS = mR/Hr			
OC1	OC2	OC3	OC4
.0071	.0059	.0060	.0054
OC5	OC6	OC7	OC8
.0059	.0184	.0053	****
OC9	OC10	OC11	OC12
****	.0056	.0056	.0057
OC13	OC14	OC15	OC16
.0054	.0057	.0076	****

**** indicates no data

Contact: Ann Pfaff (609) 984-7451

CREST Status

CREST site OC7 was restored in August after failing due to electrical storm activity. Sites AI3, AI4 and AI10 went down mid-month; the former two are up and polling again, but AI10 needs diagnostic evaluation. OC16 suffered a direct hit and requires extensive work by an electrician to provide electrical service to the site.

Contact: Ann Pfaff (609) 984-7451

Air Pollution/Radiation Data Acquisition and Early Warning System

During August, some initial testing of failover scenarios for the Air Pollution/Radiation Data Acquisition and Early Warning System was conducted. The early phases helped devise more complete testing scripts that will determine the ultimate testing protocol that must be satisfied before the contract with Envitech expires at the end of the year. Testing revealed several configuration issues that must be resolved, including the ability to poll the radiation sites that communicate via wireless technology from the back-up communications server. Firewall security settings prohibited successful communications with these devices. The Office of Information Resource Management is working to resolve the problem. The vendor is working on enhancements to the software to allow the communication center to automatically switch to the

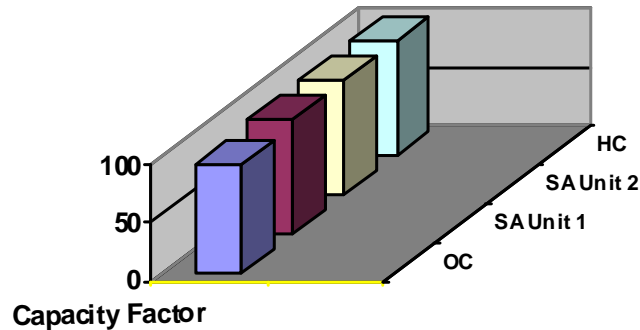
next available server in the event of a failure. At this point, the database must be manually switched to the back-up database.

The Bureau of Nuclear Engineering is investigating the use of the Staff Augmentation Contract to bring in qualified staff to complete the upgrades of the radiation monitoring sites to wireless communications. Department of Treasury has established a contract with Computer Aid, Inc. to bring in IT staff with specified credentials to complete existing projects for which no current staff is available and/or qualified. BNE staff is working with the designated CAI representative to define the required skills for the position and create a job description. Once that is completed and the state Office of Information Technology approves the requisition, CAI will provide three qualified candidates for the program to interview.

Contact: Ann Pfaff (609) 984-7451

BUREAU OF NUCLEAR ENGINEERING

Plant Operating Performance - August 2009



STATISTICAL INFORMATION

EMERGENCY AND NON-EMERGENCY EVENT NOTIFICATIONS FOR AUGUST 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.

	AUG 2009		JAN - AUG 2009		JAN - AUG 2008	
	EE	NEE	EE	NEE	EE	NEE
OYSTER CREEK	0	1	2	4	0	2
SALEM 1	0	0	0	2	0	1
SALEM 2	0	0	0	0	0	3
SALEM SITE	0	0	0	1	0	0
HOPE CREEK	0	0	0	9	0	5

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

Priority / Demand	Output	This Month	1st Qtr. To date	FY 2010 to date
1. <u>Assistance to Office of Homeland Security & Preparedness</u>	Inspections/Reviews	0	0	0
	Support (data, training, etc.)	0	0	0
2. <u>Rulemaking</u>	Hold quarterly work group meeting	0	0	0
3. <u>Registrant Fee Collection</u>	Bills issued	0	0	0
	Bills collected	0	1	1
	Fee report published & mailed	-	-	-
4. <u>New Covered Process Application Reviews</u>	<i>Applications received</i>	1	1	1
	Applications reviewed & decision letters issued	0	1	1
5. <u>Procedures & Guidance Docs, Maintenance & Development</u>	New & revised technical guidance docs. prepared & distributed	0	0	0
	New & revised SOPs prepared	0	0	0
	Form letters revised (update NJEMS template documents)	0	0	0
6. <u>Review of submitted IST review reports</u>	<i>New & revised IST review reports received</i>	1	3	3
	IST Reports reviewed and letters issued	0	7	7
7. <u>Risk Management Program audits/inspections</u>	1.a. Unannounced standard inspections of existing RMPs (Program 3 processes) completed	7	12	12
	1.b. Audits of newly registered, new covered processes, or existing facilities completed (scheduled)	0	1	1
	1.c. Unannounced Brief Compliance Inspections	0	0	0
	2. Preliminary determination letters (DCA or DCAA) sent	0	1	1
	3. Signed CA, CAA or RMP-OK letters issued (as of 8/14/08 no longer issuing RMP-OK letters)	0/0/0	0/1/0	0/1/0
8. <u>Enforcement Actions and Case Management</u>	Issue enforcement actions in accordance with NJEMS procedures (issue PEAs)	5	12	12
	Provide case management to settle disputed violations (issue NEAs)	0	0	0
	Issue NOV's for minor violations	0	0	0
9. <u>Risk</u>	RMPlan diskettes received and loaded to FACITS (new, updates, corrections)	4	8	8

Priority / Demand	Output	This Month	1st Qtr. To date	FY 2010 to date
Management Plan Reviews	RMPlans reviewed and determination letters sent.	12	16	16
10. Annual / Triennial Reports Reviews	Reminder letters issued	5	14	14
	<i>Reports received</i>	4	7	7
	Reports reviewed and letters or enforcement actions issued	7	11	11

11. Compliance Inspections (not RMP audits)	1.b. Non-registered sites inspected for TCPA compliance	7	22	22
	2. Follow-up inspections for compliance with signed CAs, CAAs, and enforcement actions	1	3	3
	3. Accident investigations	0	1	1
	4. Multimedia/GreenStart referrals	0	0	0
12. Communications and Outreach	Prepare responses to OPRA requests & management referrals	3	3	3
	Conduct presentations, workshops, etc.	0	0	0

TCPA Program Penalties, Fees and Activities:

TCPA Penalties	This Month		FY 2010 to date		Notes
Assessed	\$83,730.61	5	\$204,521.16	12	
Collected	\$5000.00	1	\$5000.00	1	
Pending Payment	\$83,730.61	5	\$170,614.11	14	(3 from FY2009)
Open (suspended)	\$74,707.05	5	\$231,207.05	15	PEAs with hearing req. (5-FY10, 7-FY09, 2-FY08 & 1-FY06)
Cancelled	\$0	0	\$0	0	PEAs rescinded or superceded by NEAs

FY2010 TCPA Ann. Fees	Amount	Registrants	Notes
Total Billed	\$0.00	0	
Collected to date	\$15,157.74	1+	(*One full and one partial fee from FY2009 billing)
Percentage	0%	0%	(doesn't include the ones from FY2009)

IST Reports Review Status

- | | | | |
|----|--|----|--|
| 1. | Facilities subject | 91 | |
| 2. | BPS facilities | 47 | |
| | A. BPS facilities subject before 5/08 IST rule | 44 | |
| | B. New BPS facilities subject after IST rule | 3 | |
| 3. | A. In Compliance letters sent to 2.A. BPS facilities | 40 | Expect to issue IC letter to 1 (2.A.) facility (Mallincrodt Baker) the week of 9/8 |

B.	In Compliance letters sent to 2.B. BPS facilities	0	Expect to issue IC letter to 1 (2.B.) facility (COIM) the week of 9/8
B.	Deregistered facilities sent review discontinued letter	3	
4.	BPS facilities (2.A.) issued letter requiring additional information	0	Expect 2 (Spectra and Welco) additional information letters to be issued the week of 9/8
5.	All other facilities (non-BPS)	44	
6.	Non-BPS reports found deficient, information request letters issued	21	
7.	Non-BPS reports submitted in response to information request	16	Plus 1 facility (North Jersey District Water Supply Commission) that subsequently deregistered
8.	Non-BPS reports submitted in response to information request that have been reviewed	0	
A.	Non-BPS reports submitted in response to information request, in compliance letter issued	0	
B.	Non-BPS reports submitted in response to information request, deficient letter issued	0	

Plan for completing reviews:

1. Ammonia refrigeration facilities (14, 13 existing and 1 new facility (Al & Johns recently received): Issue letters by 9/30/09, (anticipate most or all to be information request letters)
2. Refineries (4): Issue letters by 10/30/09
3. Other (miscellaneous sector) facilities (7): Issue letter by 10/30/09
4. Review and issue determination letters for water and power generation reports submitted to respond to information requests by 11/30/09.

1) August Inspections and Audits:

- a) Approved Risk Management Program Standard Compliance Inspections (SCI): New Jersey American Water-Canal Road WTP, Cape May County MUA, Deltech Resin Company, Mallinckrodt Baker, IQE RF LLC, Aeropres Corporation, and Voltaix LLC.
- b) Follow-up inspections: Dupont Chambers Works.

- c) New process audit: Siegfried (USA) Inc.
 - d) Deregistration inspection: Wacker Polymers LP.
 - e) Spot-check compliance: Snows Doxsee Inc., Cumberland Dairy Inc., Penta Manufacturing Company, Camfil Farr, Cord Crafts LLC, and Holland Manufacturing Co., Inc.
 - f) SVA inspections: (none).
- 2) Asit Ray is on extended sick leave until at least November 1, 2009.
- 3) On August 18, 2009, Paul Komosinsky and John Notta attended a meeting at the Pedricktown site with the former industrial complex facilities of PolyOne, OxyVinyls, and Lubrizol to discuss issues with the deletion of the industrial complex provisions from the TCPA rule.

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

Priority / Demand	DPCC Output	This Month	FY 2010 to date
<u>1. Plan Submission, Renewals and Amendments</u>	Plans Received	0	0
	Plans Initially Approved	0	0
	Plans Denied	0	0
	Plan Renewals Received	6	8
	Plan Renewals Approved	2	11
	Plan Renewals Denied	0	0
	Plan Amendments Received	4	9
	Plan Amendments Approved	6	9
2. Inspections	Annual Audits	12	26
	Technical Review Inspections	11	23
	Compliance Inspections	2	6
	Follow-up Site Visits	0	1
	Follow-up Document Reviews	2	2
	Incident/Complaint Investigations	0	0
3. Information Requests	OPRA	21	36
<u>4. Discharge Confirmation Reports</u>	Submitted	19	34
	Assigned	0	0
	Accepted	0	0
5. Enforcement Actions	AO/NOCAPA	0	0
	Notice of Violation	3	8
	Settlements	0	2
6. Penalties	New Penalty Assessments (Total Dollar Amount)	\$5,000	\$9,000
	Payments Received	\$4,500	\$31,000
	Cancelled	\$5,000	\$5,000
	Suspended	n.a.	\$246,250
7. Respond to referrals, etc.	Requests received	0	0
	Responses issued	0	0

Additional Activities

Training

Supervising Engineer Priit Pals and Section Chief Beth Reddy attended Response Resource Strategy training sponsored by EPA Region 2.

Other Items

Section Chief Beth Reddy gave a presentation on the DPHS rules at EPA Region 2's FRP seminar, attended by approximately 50 people.

Task Progress

The current backlog of plan renewals past their renewal date is 61, an increase of five from last month.