RI DEM OFFICE OF EMERGENCY RESPONSE
Annual Report for 2003

INTRODUCTION

Staff of the Office of Emergency Response provide initial on-site response and support to State and municipal fire and emergency teams handling petroleum and hazardous materials/waste releases or spills. At incidents, the emergency responder provides advice and oversight for clean-ups to ensure that the environment is protected and remediation work is completed to remove hazardous contaminants and pollutants. In some instances, the emergency responders will remove waste from sites for disposal and conduct small cleanups. Examples of this may include removal of mercury, removal of small containers or clean up of small oil spills. On larger scale spills and releases, emergency responders will call in contract environmental clean up companies to handle removal and remediation of spilled or released petroleum products and hazardous wastes that threaten the environment and the public's health and safety. Reports are completed and cost recovery for clean up work is tracked and sought. This year, the emergency response program responded to 909 incidents that threaten the environment from pollutants and hazardous materials. This response was necessary to contain pollutants and hazardous materials from spreading further into the environment and to monitor clean up. This program conducted 909 inspections to carry out its responsibilities. Staff of this program also responded to incidents concerning possible weapons of mass destruction (WMD). These responses include investigating incidents where such items as anthrax, ricin, nerve agents, blister agents, radioactive material and other biological/chemical materials are alleged to be involved. Personnel from the Office inspected over 250 items, suspected of containing anthrax, at the central processing facility set up by the State Fire Marshal's Office. The items were evaluated at that location and then delivered to the Rhode Island Department of Health Laboratory for final analyses. Items were evaluated for radioactivity, volatile organic compounds, chemical nerve agents, pH analysis, bioassay results, ricin and other toxin screening using field screening devices. The Office responded to six other locations where individuals came into direct contact with the suspected material and required on-site assistance. Approximately 4 FTEs are available to carry out this work. This includes a full time supervisor.

ACCOMPLISHMENTS / PERFORMANCE

The Emergency Response program had another busy year of performance. Some of the major accomplishments include:

Petroleum and petroleum contaminated soils

- Removed 825,602 gallons of waste oil and 83,763 gallons of oil/water from the environment or from areas that posed an immediate threat to the environment or the public
- Removed 2,956 cubic yards and 644,900 tons of petroleum contaminated soil from the environment.
- Removed 76 tons of oily debris

Hazardous chemicals and soil contaminated by hazardous chemicals

- 15,462 gallons of hazardous chemicals removed from the environment or from areas that posed an immediate threat to the environment or the public.

- 282 cubic yards of hazardous waste contaminated soil removed from the environment.
- 18,729 pounds of hazardous chemicals removed.

Propane

- 600 pounds and 140 tanks of propane.

Mercury

- 41.25 pounds of mercury. (This material will go to a recycler in New York for reuse.)

Asbestos

- 1,000 pounds of asbestos was removed

Non-Hazardous pollutants

- 25,930 cubic yards plus 21,281 pounds of non-hazardous pollutants were removed

Vehicle Batteries

- 46 batteries were collected and removed

EXAMPLES OF ACCOMPLISHMENTS FROM THE HUNDREDS OF RESPONSES OF THE EMERGENCY RESPONSE PROGRAM IN 2003.

Technic, Inc., 1 Spectacle Street, Cranston

On February 7, 2003 personnel from this office responded to Technic, Inc concerning an explosion, which resulted in a fire. Several people had been exposed to chemicals and one person was seriously injured. The Cranston HazMat Team requested assistance because the area where the explosion originated contained nitric acid and potassium cyanide. (When mixed, these chemicals produce a deadly gas.) The fire and police departments had secured the area and evacuated nearby residents due to the potential risk from toxic chemicals emanating from the site. The injured workers were decontaminated and transported to the hospital. The fire suppression system put out the fire, and a fire line was rigged up to insure that the fire did not restart. The fire suppression system in the building was then shut down so that the water and chemicals inside would not be flushed out of the building into Spectacle Pond approximately fifty feet away. An entry team in Level A Suits were then sent into the building with equipment to determine the pH of the water on the floor, and check the indoor air for pH, nitric acid byproducts and cyanide gas. Sampling tubes and a multigas meter were used to assess the building. The results of the investigation indicated that there was no longer a toxic atmosphere inside the building. It appears that the gases produced by the incident went through the air scrubber system for the building. The company and their contractor were then allowed into the building to shut down all chemical operations and begin to assess the damage. The investigation into the cause of the incident began with a Unified Command group entailing US OSHA, Chemical Safety Board, US EPA, RI DEM, RI Fire Marshal.s Office, and the Cranston Fire Prevention Office. The cause of the explosion and fire remains under investigation.

Station Night Club, Cowesett Avenue, West Warwick

On February 21, 2003 personnel from this office responded to the aftermath of the Station Fire where numerous victims were lost due to the fire and destruction. The Fire Chief requested assistance on how to decontaminate the parking lot. The biological material was sanded and bleached where necessary. A responder then went to the Emergency Operation Center in Cranston to develop the Planning Section of the Unified Command System. The Planning Section brought in lighting, which was obtained from DOT. They obtained donated refrigeration trailers for the storage of bodies for proper care and handling. DEM also contracted Clean Harbors to provide equipment and decontamination of the donated trailers.

URI Chemistry Department, Pastore Building, South Kingstown

On March 10, 2003 personnel from this office responded to URI when several containers of explosive chemicals were discovered while they were conducting a chemical inventory. The material was uninhibited tetra hydro furan (THF), which is potentially explosive. The State Fire Marshal was contacted and agreed to meet DEM personnel at the site. The three gallons of THF were transported to the safety area located on the old landfill. The material was then detonated and allowed to burn. No contamination resulted from the action. The procedure used could have possibly prevented the accidental explosion of this material inside the chemistry building.

Residence at 124 Lakeview Drive, Chepachet

On March 18, 2003 personnel from this office responded to 124 Lakeview Drive as a result of a home heating oil release into Keach Pond. The resident discovered that oil was emanating from a french drain system for their house. The DEM contacted Lincoln Environmental to remove the oil from Keach Pond. The EPA was also contacted to cover the State's expenses until the responsible party accepted responsibility for the cleanup. Approximately 1,882 gallons of oil and water were removed from the ice and water via a vacuum truck. It was later determined that about 150 gallons of the mixture was pure home heating oil. The insurance companies for the resident and the oil company took responsibility for the cleanup and the bills will be sent to them. If the State encounters any problems, the National Pollution Fund Center can reimburse the State and seek restitution through the responsible party. The department's action protected Keach Pond and the waters of the State by removing the oil from the environment.

Bouchard Barge No. 120, #6 Oil spill, Buzzards Bay, MA

On April 27, 2003 DEM Enforcement was notified that the Bouchard Barge No. 120 struck the bottom off the coast of RI and MA. The vessel kept moving up the coast towards Buzzards Bay as it leaked #6 oil. The vessel was en route from Philadelphia to Massachusetts. The USCG was notified of the incident and sent a helicopter and a patrol boat to the area to assess the damage. The command center was established at Otis Air Force Base in Falmouth, MA. The responsible party (RP) contracted Clean Harbors to stop the leak while the vessel was anchored at anchorage Lima about 12 miles south of the entrance to Cape Cod Canal. The winds were blowing out of the southwest pushing the 15,000 gallons oil up towards the canal. On April 28, 2003 DEM personnel responded to the Command Center to obtain projections for the spilt oil. Permission for the

contractor to use the DEM JBF skimmers was provided and the DEM rate scale would be applied. DEM personnel responded to the command center and the beaches in Little Compton for the remainder of the month of April. Arrangements were made for Fish & Wildlife personnel to transport oiled wildlife to the rehabilitation center in New Bedford. A Press Release was also issued indicating that people ought to contact DEM Enforcement if oiled wildlife or oil was found on beaches.

Abandoned Drums, Route 6, Scituate

On May 13, 2003 personnel from this office responded to a wooded area in Scituate to investigate the abandonment of eleven containers of hazardous waste. There were three 55 gallon drums, two 35 gallon containers, five 15 gallon containers and one 10 gallon container. The drums contained waste oil, paint, and solvents. The Office of Criminal Investigation was notified, but they could not find any evidence to pin point a responsible party. They contacted the Providence Journal to request assistance from anyone that may have seen the illegal disposal of these chemicals. The DEM hired a contractor to containerize and dispose of the hazardous waste properly. Approximately one cubic yard of contaminated soil was also removed from some of the leaking drums. The disposal site was about fifty feet from Vernal Pond.

Arkwright Performance Papers and Films, 538 Main Street, Cranston

On June 27, 2003 DEM personnel responded to Arkwight for a release of hazardous waste into the environment. Employees pumped off 55-gallon drums of waste into a 6,000 gallon AST. The tank was overfilled when the emergency electric shutoff failed to engage allowing 600 gallons of flammable, toxic hazardous waste to release. The waste came out of the emergency vent and into a drain in the bottom of their containment area. The waste then discharged into a dry stone detention area. Approximately 30 cubic yards of contaminated soil were excavated for disposal and stored in a sealed rolloff. The size of the contamination was larger than originally thought, so a contractor was hired to assess the extent of the contamination. Borings were completed to determine the extent of the contamination. Following evaluation of the borings, the owner excavated 300 cubic yards of contaminated soil for proper handling or disposal. Confirmatory sampling of the excavation indicated the contaminated soil had been removed.

Woonsocket Mill Fire, Villanova and Florence Street, Woonsocket

During the months of June and July 2003 personnel from this office responded to the mill fire where chemicals were stored at ACS Industries and Florence Dye. The building contained large quantities of calcium hydroxide, chrome, hydrogen gas, nitrogen gas, nickel, acetic acid, formic acid, hydrogen peroxide, sodium hydrosulfite, citric acid, #6 oil and mineral oil. The EPA was contacted to conduct air monitoring and obtain water samples from the fire fighting runoff water. The air samples showed elevated levels of benzene. As a result, some of the public was sheltered in place and over time the levels came down. BOC Gas was contacted in regards to the hydrogen tank, and they determined the tank must be offloaded to the atmosphere. Once completed they then offloaded the nitrogen tank. The operation was completed without any mishaps. Then the building owners hired Clean Harbors to remove eight drums of hazardous waste, and 20,000 gallons of #6 oil were removed from the onsite storage tanks. An

oil/water mixture on the floor was pumped into two fractation tanks. After being analyzed it was determined that the material had to be treated through a carbon filtration system and then it could be discharged in accordance with their RIPDES Permit. The actions taken helped protect human health and the environment. The Blackstone River is adjacent to the Mill.

Suburban Propane, 2030 Flat River Road, Coventry

On October 30, 2003 personnel from this office responded to Suburban Propane for a major fire. The fire occurred while they were emptying a 250 lb. cylinder adjacent to the loading dock. The fire spread to several drums of methyl alcohol that were on the loading dock. Approximately 300 gallons of methanol was involved in the fire, and a couple of these drums exploded. The fire escalated and encompassed an area where they stored propane tanks. Several of these containers exploded and rocketed into the air. A propane truck became involved in the fire, and the local fire chief jumped into the truck and drove it away from the conflagration. The truck suffered heavy damage but did not explode. The fire was put out several hours later. Five drums of methanol remained intact after the fire, and Suburban Propane hired a contractor to pump the remaining 225 gallons into new drums for reuse. OSHA and the State Fire Marshal's Office were called in to make their determinations.

Methamphetamine Laboratory, 985 East Main Road, Middletown

On October 18, 2003 DEM personnel responded to a cabin in a motel complex where an illegal drug lab was established. The Middletown Police and Fire Departments carried out a drug raid in conjunction with the Rhode Island Attorney General's Office. The Boston DEA was called in to provide analysis and dispose of the waste chemicals. When the DEA contacted their contractor they would not respond because the DEA had not paid their bill. As a result, they left the Town to dispose of the chemicals. The Town contacted the DEM for assistance. The DEM took the chemicals for proper disposal. No further action was required.

Greenhalgh Mill, Kenyon and Cottage Street, Pawtucket

On November 14, 2003 personnel from this office responded to the Greenhalgh Mill for a major mill fire. The building contained gasoline, paint, corrosives and PCBs. The fire started in the vacant mill during a windstorm with gusts over 45 mph. The wind pushed embers as far as a mile away. A total of 19 homes were damaged, nine of which were destroyed. There were about forty drums on the loading dock when the fire occurred. Three drums contained gasoline and paint, nine drums contained waste oil and water, fourteen drums contained PCB ballast and nine were plastic drums containing hydrochloric acid. When the area could be checked it was determined the only drums of waste that remained were the fourteen drums that contained PCB ballast. All other waste on the loading dock was consumed in the fire. Several tons of oil contaminated soil was also removed after a pole mounted transformer was knocked down during the cleanup operation. OC&I is overseeing the cleanup operations at the site. The Office of Waste Management will be determining if an environmental assessment and cleanup is warranted.

Helicopter Crash, Pontiac Avenue, Cranston

On November 26, 2003 DEM personnel responded Pepsi Cola Bottling Plant for a helicopter crash in the middle of the parking lot. The Channel 10 helicopter crashed when it lost lift but personnel were able to walk away from the crash. About 60 gallons of Jet A fuel spilled on the asphalt parking lot. Pepsi personnel quickly deployed speedy dry and a boom to contain the fuel on the asphalt and away form any drains. The spill covered an area approximately 120 feet by 10 feet. Clean Harbors was hired to remove the fuel for proper disposal. DEM supervised the cleanup and used field equipment to determine if there was a flammable atmosphere during cleanup operations. Once the cleanup was completed, the contractor replaced the equipment used by Pepsi and the local fire department to contain the spill.

Slater Dye, 725 School Street, Pawtucket

On December 31, 2003 personnel from this office responded to Slater Dye for a chemical reaction involving sodium hydroxide and hydrogen peroxide. A truck from Univar USA Inc. was delivering a solution of 50% sodium hydroxide to the plant. Unfortunately, the driver put 900 gallons of sodium hydroxide in the hydrogen peroxide tank. The 6,000 gallon tank contained about 5,000 gallons of hydrogen peroxide at the time he attempted to fill it. The resulting mixture created an exothermic reaction, which caused the material in the tank to boil violently. The material was forcibly ejected through the manway on the top of the tank, .looking like Old Faithful. said one fire fighter. The material was blown into the air where the winds blew the vapor cloud about a half a mile in a southeasterly direction. The most heavily-impacted area was the roof of Slater Dye, which began to smoke from the chemical reaction with the tar due to the caustic release. The Fire department then soaked the roof to keep it from igniting. The caustic contaminated runoff generated by keeping the roof from catching fire migrated to a drain that discharges into the Blackstone River. Approximately 100 minnows swimming in the discharge stream, which flows into the river, were killed. The pH of the river was checked and remained around neutral, but the pH of the stream that flowed into the river was at about 11. Slater Dye called in a contractor to clean the streets and some of the buildings. Approximately 4 cubic yards of sand that had been used to clean the streets and about 6,000 gallons of contaminated water all had to be disposed of properly. Approximately 4,400 gallons of material was left in the tank to be removed after the reaction in the AST subsided. On January 5, 2004 the tank was cleaned and a few thousand gallons of waste were generated. However, it appears that some of the liquid leaked from the fill pipe on the tank due to the caustic material having corroded the aluminum fill pipe. The fill pipe is loaded below the tank and runs into the top to the bottom and fills from the bottom. Some of the material must have siphoned out of the tank through the fill pipe, and the rain that weekend must have diluted the material because the pH near the river was neutral.