

RI DEM OFFICE OF EMERGENCY RESPONSE
Annual Report for 2002

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 731 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 773 inspections to carry out its responsibilities. Approximately 4 FTEs carried out this work.

ACCOMPLISHMENTS / PERFORMANCE

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

Petroleum and petroleum contaminated soils

- Removed 72,251 gallons of waste oil and 11,162 gallons of oil/water from the environment or from areas that posed an immediate threat to the environment or the public
- Removed 3613 cubic yards of petroleum contaminated soil from the environment.

Hazardous chemicals and soil contaminated by hazardous chemicals

- 17,801 gallons of hazardous chemicals removed from the environment or from areas that posed an immediate threat to the environment or the public.
- 2,500 cubic yards of hazardous waste contaminated soil removed from the environment.
- 3,739 pounds of hazardous chemicals removed.

Propane

- 325 pounds, plus 160 gallons and 32 tanks of propane.

Mercury

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

EXAMPLES OF THE ACCOMPLISHMENTS OF THE EMERGENCY RESPONSE PROGRAM IN 2002.

Mercury Spills and Recovery throughout RI

On January 3, 2002 personnel from this office responded to 100 Sachem Road, Narragansett. The resident broke a thermometer and the mercury rolled along the floor. The responders were able to find hidden beads of mercury on the bathroom floor by utilizing a Jerome Mercury Meter. On January 3 RIDEM personnel also picked up a broken thermometer at a residence at 961 Mendon Road in Woonsocket. On January 18 RIDEM personnel removed a container of 5lbs of mercury which was found in an elderly person's home. On January 22 personnel from this office responded to the City of Woonsocket to pick up another 5lbs of mercury. The mercury that was picked up by RIDEM personnel was put into a proper container and will be sent off to be recycled. On February 8, 2002 personnel from OC&I responded to a mercury spill at Winman Junior High School. A mercury barometer containing about 2 pounds of elemental mercury was dropped and the contents spilled onto the floor of the preparation room. Most of the mercury was cleaned up by the teacher and put into a glass jar. The DEM responder using the Jerome Meter discovered elevated levels of mercury vapors in the room. The school was told to hire a contractor to do a complete cleanup of the floor and hire an industrial hygienist to conduct confirmation air sampling to verify that the area was free from mercury. The school hired a contractor and the area was remediated to protect the students and the staff.

OTHER HAZARDOUS MATERIAL OR OIL/PETROLEUM INCIDENTS:

Bristol Industrial Park, 500 Wood Street, Bristol, RI

On January 10, 2002 personnel from this office responded to Bristol Industrial Park to determine the facility's compliance with the removal of 120 55-gallon drums. The investigation turned up a drum of ethyl ether anhydrous, which is both potentially explosive and highly reactive. The property owner was given six days to properly neutralize and stabilize this material. On January 16 the property owner hired a contractor to remove the drum to a safe location with a police escort in a specially designed trailer. The drum was then opened in the bomb trailer with a remote system in case of an explosion. Once opened a solution of ferrous sulfate was added to neutralize the ether peroxides and then hydroquinone was added to inhibit the formation of peroxides. The drum was then resealed and brought back to the industrial park to await disposal. The company then provided the owner a certificate of treatment proving that the drum was now safe for disposal.

IMH Power Plant, Power Road, Cranston, Pawtucket, RI

On January 26 a spill of about 300 gallons of heating oil occurred at IMH while their oil company was filling the UST. At that time, two of the power plant boilers failed and they only had one small boiler operating. This boiler was too small to provide the energy needed and as a result, they brought in about ten boilers to provide heat for the entire complex. Each boiler requires a fuel supply so they used tractor-trailer trucks to store the heating oil to power the boilers. On January 28, the oil company overfilled one of the tractor-trailers and about 100 gallons of oil covered the ground. That day RIDEM personnel conducted inspections of the

on-site tanks. The results of the inspection required the removal of the improper storage tanks and the installation of two proper ASTs. The new tanks will contain a total of 30,000 gallons of heating oil. The tanks were purchased by IMH that same week with an emergency Purchase Order.

Fishing Trawler Forager, West Gap Harbor of Refuge, Narragansett, RI

On February 19, 2002 personnel from this office responded to Galilee to investigate the sinking of the Forager. The USCG from Point Judith rescued three men from the sinking vessel. The wooden hull vessel sunk inside the west gap of the Harbor of Refuge. The vessel contained 3,000 gallons of diesel when it went down. The USCG installed boom around the vessel to contain the oil. A contractor was hired to remove the oil from inside the boom and reinstall more boom around the vessel. The owners tried to move the vessel to a safer location and the prop wash ended up flushing some of the oil out from inside the boom resulting in an oil sheen that washed up on Wheeler Beach. There was also about three hundred oil contaminated surf clams found on the beach. The area was closed to fishing on February 21, 2002 by the RIDEM. The diesel tanks on the vessel were pumped out on February 23, 2002, but only a small amount of oil was pumped off because 3,000 gallons had already released to the environment. A re-inspection of the area allowed for the reopening of the harbor to fishing again on February 26, 2002. Sections of the Forager were removed by Conrad Roy Salvagers on March 8th and 9th.

Vishay Electro Films, 111 Gilbane Street, Warwick, RI

On February 13, 2002 personnel from this office responded to Vishay Electro Films concerning a fire in their plating room. The fire started as a result of an electrical malfunction on a cleaning machine in the clean room where they plate electronic equipment. The fire department put out the fire; however, they overfilled the plating tanks with water and the water/chemical flowed out the back door into a drain in the parking lot. The chemicals involved included: gold cyanide, acids, hydrochloric acid, sodium hydroxide, nitric acid, hydrofluoric acid and flammable developer. There was also an overhead pipeline that broke releasing liquid nitrogen. The company was required to call in a contractor. The contractor pumped 3,000 gallons of hazardous waste and water from the plating baths, the room and the outside storm drain. The company then hired a contractor to sample the building, storm drain and detention pond for the chemicals involved in the release. The confirmation analysis proved that the site had been cleaned to the OSHA standards.

Slater Print Screening, Diamond Hill Industrial Park, Cumberland, RI

On April 14, 2002 personnel from this office responded to 37 Crestwood Court to investigate an oil/grease material in Mill River. A contractor was hired by DEM to bring in a cusco to vacuum about 10 tons of oil/grease contained at a V-weir. An investigation of the area discovered that Slater Print Screening had been discharging this waste from their heat exchangers. The heat exchanger strips contaminants from their exhaust and discharges this material via a floor drain into the storm drain system. These connections to the storm system were severed and the source was stopped. A total of about 100 tons of oil/grease contaminated material was removed and disposed of properly. The responsible party contracted with a cleanup contractor to pay for DEM's bill for the site cleanup. The office has been reviewing the possibility of an enforcement action being

issued as a result of the release. The cleanup action stopped the further release of contaminants into a tributary to Robin Hollow Pond, which is part of the Pawtucket Reservoir.

Tugboat “Miss Yvette”, Promet, 242 Allens Avenue, Providence, RI

On May 7, 2002 personnel from this office responded to Promet at 242 Allens Avenue to investigate the partial sinking of the tugboat “Miss Yvette”. The 65 foot long, 150 gross ton tug was tied along the length of the pier. The Providence Fire Department was contacted to pump the water below the decks in the flooded engine room. The pump intake was below the water surface to avoid the pumping of oil floating on top. There was an oil sheen that traveled from the tug, to the front of the bulkhead along the side of the pier and into Narragansett Bay beyond the piers. The owners were told that they would have to install boom around the discharge area if they intended to keep pumping off the tug. As a result, the company decided to maneuver the vessel to the dry lift crane sling and remove it from the water. The vessel contained 5000 gallons of diesel oil. The facility agreed to pump off the oil and water into a 20,000-gallon frac tank and dispose of the material properly. The removal of the 5000 gallons of diesel and the 20,000 gallons of oil/water prevented a major release of petroleum into Narragansett Bay.

Cranston Police Station, Atwood Avenue, Cranston, RI

On May 9, 2002 personnel from OC&I were contacted by the Cranston Police for a chemical odor complaint. The fire department had responded earlier in the day and determined that the odors came from toilet bowl cleaners used in the urinals at the police station. They evacuated the building and allowed it to be reoccupied later in the day. At about 8:00 p.m. DEM was notified that Cranston Fire Department was returning to the police station for more odor complaints. The police chief requested assistance from DEM. The chief indicated that the situation began when a backed-up urinal was treated with sulfuric acid and they may have used bleach as well. DEM personnel suggested that the whole building be aired out by opening all the windows, every faucet in the building should be turned on to flush all drains including floor drains, which may not have traps, and the HVAC system should be immediately shut down and the filters replaced since the building has re-circulated air. The chief indicated that the sewer vent was about a foot away from the intake for the ventilation system on the roof. On the 10th of May, DEM personnel met at the site with the police department and found out several important facts. The police had used 93% sulfuric acid in the urinal. They had also used bleach or ammonia to clean the bathroom and washing it down the floor drain. The sewer line had been partially blocked due to the settling of the building. The prior morning several people in the building went to the hospital to be treated for exposure to an alkaline chemical (bleach or ammonia vapors). This information suggests that the problem was caused by the mixing of sulfuric acid and ammoniated cleaning agents in the blocked sewer line allowing vapors to back up the sewer line into the building and/or at the vent adjacent to the HVAC intake. The city had to move the HVAC intake, fix the broken sewer pipe, and hire a certified industrial hygienist to determine safe occupancy.

Arlon Engineering, 199 Amaral Street, East Providence, RI

On July 2 personnel from this office responded to this site for a runaway chemical reaction in a 55 gallon drum. The employees had poured off a catalyst into a drum of solvents and resin causing a reaction to begin. The employees were not trained in the proper storage of these chemicals. The company moved the drum into a safe storage location, which was fire rated. The fire department arrived and evacuated the building. The company decided to call in their environmental contractor to address the situation. DEM personnel had the fire department put a water spray on the drum to keep it from overheating. The cleanup contractor arrived and entered the area in their SCBAs. They found that the drum was solid and the reaction had ended. The drum was then put in their hazardous waste disposal area to await proper disposal. The DEM required that the company provide a training program for the personnel handling the chemical products and waste.

Metals Recycling, Johnston, RI

On July 13, 2002 personnel from OC&I were contacted by the Johnston Fire Department concerning an auto fluff fire at Metals Recycling. DEM responded and met with the incident commander. There was heavy black smoke drifting into the neighborhood so it was decided at that time to evacuate some houses, conduct voluntary evacuation, and shelter in place. Buttonhole Golf Club was also shut down. The fire started in the auto fluff pile, which encompassed hundreds of crushed cars. The fire occurred due to spontaneous combustion due to the heat of the fluff. The fluff is usually kept cool with sprinklers but, due to the dry weather, the company was unable to keep the piles wet. The four-alarm fire was pulled apart car by car so that it could be extinguished. The runoff water was contained on the site. The EPA was contacted to complete air monitoring. The fire was put out by 7:30 PM. The EPA air monitoring results, which were completed by 8:30 PM, indicated that their readings were all negative for vinyl chloride, hydrogen sulfide and all air contaminants they sampled. The fire department was then informed that it was safe for the evacuated residents to return to their homes.

Delta Flight, TF Green Airport, Warwick, RI

On July 24, 2002 personnel from this office responded to TF Green Airport for a box that was discovered to contain leaking chemicals. The owner of the box was found and he explained that it contained screen-printing chemicals. The owner indicated that he had just returned from a screen-printing course in Mexico City, and that he had brought back containers of color pigments and solvents used in the screen-printing operation. The main ingredient in the chemicals was petroleum-based kerosene naphtha. The material was classified as combustible with a flash point of over 100 degrees F. The material was improperly packaged and never should have been allowed on the plane. The material leaked while in flight and contaminated the cargo hold and several pieces of luggage. The plane was decontaminated with a mild soap solution. The owner repackaged the chemicals so he could transport them to his facility. The DEM properly disposed of the contaminated box. The Delta personnel separated the contaminated luggage so that it could be properly cleaned. Information concerning the situation was forwarded to the FAA.

NEED, 23 Green Hill Road, Johnston, RI

On August 13, 2002 personnel from this office responded to NEED at the request of the Johnston Fire Department concerning a fire at the transfer facility. The company originally tried to extinguish the fire with their own personnel, but they were unsuccessful and had to contact the local fire department. The fire department contacted DEM to analyze runoff water that they felt might impact their fire fighters and the environment. The fire department was told to contact RI Analytical to sample for contaminants that may impact their fire fighters. DEM contacted Lincoln Environmental to obtain water samples, which would verify if there had been an impact to the Simonsville Reservoir. When Mr. Louis Vinagro arrived at the site he yelled at the DEM employee that he wanted him off the property. The DEM employee explained that the Johnston Fire Department requested his assistance for the emergency and he had the authority to be there. Mr. Vinagro then punched the DEM employee in the face. The police responded and wanted to know if the State employee wanted to press charges. He did not, but indicated that the State of Rhode Island might. After the punching incident, the samples were obtained and split samples were provided to NEED.

Last Street, Tiverton, RI

On August 26, 2002 personnel from OC&I responded to Last Street concerning the disposal of contaminated soil on residential property. The town of Tiverton hired Ahlborg Construction to install a sewer main for the town. Ahlborg Construction had worked out an arrangement with a property owner on Last Street to dump the excavated material from the installation of the sewer line in a low spot on his property. Ahlborg had the material sampled and the results indicated 830-PPM TPH and elevated levels of cyanide. The DEM responder identified the material as that found from a coal gasification operation. A sample of the material was obtained by DEM, and the analysis indicated that the material was a reactive waste according to the EPA Regulations. The material had to be removed and disposed of properly. The town has hired an environmental contractor to develop a health and safety plan for further encounters with this material and for the proper disposal of the waste.

Ultra Scientific, 250 Smith Street, North Kingstown, RI

On September 20, 2002 Personnel from EPA, USCG, the local fire marshal, and DEM conducted a joint inspection of Ultra Scientific for a complaint concerning their chemical storage. The company makes hazardous standards for quality assurance testing. They have all the material needed to make the most toxic substances known to man. They store their waste in a couple of sea containers located in the back of the facility. The local fire marshal indicated that the company did not obtain permits for sea containers and they would have to be removed. At this time, they need to determine what materials are considered waste and what materials are considered product. The company hired Clean Harbors to help them make this determination and properly dispose the material determined to be waste. EPA is investigating the matter for possible enforcement action.

Vinagro East, 252 Green Hill Road, Johnston, RI

On October 21, 2002 personnel from this office responded to a processed construction and demolition debris (C&D) fire at 252 Green Hill Road. The Johnston Fire Chief and the State Fire Marshals office contacted DEM for assistance. The pile has been estimated to be about one million cubic yards of C&D. An infrared camera was used to try to identify the hot spots in the pile. On the following day, a boring was completed into the pile to try to determine the extent of the underground fire. A boring to about 40 feet below the surface of the pile showed levels of gases exhausting from the pile that are above the recommended exposure levels for NIOSH/OSHA. The level for hydrogen sulfide was also twice the level that is considered immediately dangerous to life and health (IDLH) as per NIOSH/OSHA. The temperature at the top of the boring was about 170 degrees. The Department hired a contractor to cover the burning area of the pile with a heavy wet silt soil and install cut off trenches to try to contain the fire. This appears to have worked since the subterranean temperatures of the soil-covered pile have reduced below the level of incineration. However, the areas not covered with soil have begun to burn and now the EPA has been called in to cover the remaining portion of the pile.

Osram Sylvania, 1193 Broad Street, Central Falls, RI

On November 9, 2002 personnel from this office responded to the boat landing on the Blackstone River. The responders tracked an oil spill upstream about two miles to around High Street in Central Falls. The oil was a #6 oil that would indicate that it would be used as an industrial fuel. The United States Coast Guard (USCG) and the EPA were contacted to assist the DEM with the search for the source. The USCG hired Clean Harbors to install boom at the boat landing to recover the fuel. Several industrial buildings and locations were inspected to try to determine the source of the release. On November 12 the office received a call from the Narragansett Bay Commission (NBC) that they discovered oil in their system. The oil was tracked through the system to Osram Sylvania. The #6 oil is preheated by steam that flows through coils. The condensate from the steam, which discharges into NBC's system, contained #6 oil and discharged into the river at the end of Courtland Street. The discharge pipe was in the middle of the river at a depth of about six feet under water. Osram accepted all cleanup cost and repaired their system. The work eliminated the continued release to the Blackstone River.

Dryvit, One Energy way, West Warwick, RI

On November 20, 2002 Dryvit Systems Inc. had a release of over 2000 gallons of Dryvit #3, an acrylic polymer. The material is non-hazardous and similar to a white latex paint; however, it is considered a pollutant. The polymer escaped their secondary containment and ran into a wetland located northwest of the building. That night, there was a significant rainfall that flooded the wetland and flushed some material into the detention pond to the northeast. A larger portion of the material flowed through the wetland toward the northwest to the Pawtuxet River. The company was ordered to hire a contractor to pump the water/polymer liquid from the wetland. Approximately 50,000 gallons of this material was pumped from the wetland. The West Warwick Sewer Authority has denied permission to dispose of it into the sewers. Dryvit hired another company to develop a formula to separate the polymer from the water so that the water can be discharged and the sludge can be disposed of properly.

Alpha International, 32 Mechanic Street, Woonsocket, RI

On December 20, 2002, personnel from this office responded to Alpha International concerning a release of an epoxy resin that sent three employees to the hospital for chemical burns. The owner and two employees were blending a drum of methylenebiscyclohexanamine and benzyl alcohol, two corrosive chemicals. The owner removed the stirrer while it was moving and the material on it was flung all over him and his workers. They went to the hospital that night for chemical burns and DEM met with him in the morning. DEM had the company solidify the spilled material into a non-hazardous solid epoxy so that it would be disposed of properly. No further action has been required.