DNREC/EPA

Fact Sheet #7

February 2003

Metachem Products, LLC
General Project Update – Winter 2003

Introduction

This fact sheet is the latest in a series published by EPA and DNREC to provide the community with progress reports on the different cleanup activities underway at the Metachem site.

Sampling Results Update

- ***Air Sampling*** – EPA continuously monitors air quality from fixed and mobile points across the site. Occasionally, EPA has detected short-term exceedances of air quality action levels beyond the facility fence line. In each case, EPA responded immediately with corrective action to eliminate the exceedance to ensure protection of human health and the environment.
- ***Process Area Chemical Sampling*** – EPA collected samples from various on-site tanks, railcars, and boilers to provide the necessary information to support cleanup decisions. The vessels contain the various process chemicals anticipated to be present, and no unexpected compounds were detected.
- ***Sediment and Soil Sampling*** – EPA collected sediment and soil samples from various locations at the facility during late fall 2002. Dioxins and volatile organics were found on the main process area pads, and many of these areas have been decontaminated.
- ***Ground-Water Sampling*** – DNREC resampled four of the site monitoring wells in January 2003 to investigate anomalous detections observed from the September 2002 sampling event. Preliminary results indicate that no chemicals of concern were detected in the second sampling event. EPA/DNREC believe the previously reported contaminant detections in these wells are a result cross-contamination during sampling activities. The final results are pending and will be available after validation.
- ***Water Supply Well Sampling*** – The State of Delaware Division of Public Health (DPH) sampled 16 water supply wells (4 public wells and 12 private wells) located within a 1.5 mile radius of the site. DPH has concluded that that contaminants from the Metachem site have not impacted the drinking water wells in the area. Therefore, the consumption of water from these wells does not expose individuals to an increased health risk from volatile organic compounds.
- ***Decontamination Process Monitoring*** – EPA monitored various parameters during the recent chemical process area decontamination operation to ensure that the equipment and vessels operated properly and efficiently. Temperature, pressure, pH, and air monitoring were conducted to track benzene capture. The monitoring indicated that satisfactory benzene capture was achieved throughout the decontamination process.

Many of the sample results referenced above are provided on the EPA On-Scene Coordinator's website: www.epaosc.net/Metachem. Sample results are also available, by request, from any of the EPA, DNREC, or Tetra Tech contacts listed at the end of this fact sheet.

Progress of the Removal Program

Since Metachem abandoned the facility on May 14, 2002, EPA and DNREC have conducted a wide variety of containment, decontamination, and stabilization activities. The removal program has made notable progress in several areas over the last few months.

Chemical Process Area Decontamination Project

After extensive planning and preparation throughout fall 2002, EPA tested the chemical process area systems by circulating the chemical reaction mass through the various tanks and columns in December 2002. Upon completion of the required system checks and operator training, EPA began decontamination of the chemical process area on January 6, 2003. The tanks and columns were emptied of the chemical mass by January 11, 2003, after which EPA initiated steam cleaning and triple rinsing of the chemical process area equipment. EPA has completed the steam cleaning of the reactors and associated piping, and is currently decontaminating the columns.

The decontamination process removed 110,000 gallons of chlorinated benzenes and 14,000 gallons of benzene. The chlorinated benzenes were moved from the chemical reactors and placed in suitable on-site storage tanks. The 14,000 gallons of benzene were shipped off-site for disposal.

SUCCESSFUL CONTINGENCY PLANNING AND ACTION QUICKLY ADDRESSES SMALL LEAK DETECTED DURING THE DECONTAMINATION PROCESS

EPA and DNREC spent months planning for the safe implementation of the decontamination process; this included a plan for redundant monitoring activities to quickly identify potential problems to ensure rapid corrective action. The following highlights an example of how EPA/DNREC successfully addressed a leak discovered during operations.

At approximately 10:30 a.m. on January 9, 2003, a estimated 10 gallon leak occurred from a gasket on a chemical process line during decontamination operations. Within two minutes, three of the monitoring systems used at the site alerted on-site workers that a leak was occurring. Concurrently, an air monitoring crew measured volatile organics in excess of 2000 ppm, and technicians making routine rounds visually observed the leak. In addition, a remote fixed air monitoring station detected elevated air readings in the vicinity of the leak.

In response to the leak, air monitoring was continued near the spill area and at the downwind fence line and outside fence line areas. A neighboring facility located downwind was immediately notified. The spill was remediated with carbon dioxide and foam, and a pump was turned off to isolate the process line to repair the leak. The wastewater treatment plant was also placed into recirculation mode to ensure no discharge from the site during the spill. By 11:00 a.m., the air readings at remote monitoring stations were normal. Finally, later that same day, EPA and DNREC notified the press to inform the public of the leak, which had no consequence on human health or the environment.

Plant Systems Operations

EPA continues to operate and maintain several critical components to the Metachem facility to support decontamination operations. Security and fire protection systems are maintained, and Boiler #2 is operated to provide steam power to the plant for systems and plant operations. The wastewater treatment plant is also operated to process water from site facilities, operations, and the ground-water pump and treat system. Since May 2002, the wastewater treatment plant has processed more than 22 million gallons of water.

Small Containers

As part of the removal action, DNREC is undertaking the identification, inventory, and waste characterization of more than 1,500 small containers that were located throughout the site. The small containers stored a variety of chemicals and wastes that were used when Metachem was in operation, and range in size from small laboratory vials to 55-gallon drums. Initially in late fall 2002, all containers were inventoried and secured throughout the site, and were staged in both indoor and outdoor locations pending further waste characterization for disposal. Waste characterization activities commenced in late January 2003, and more than 1,200 containers have been sampled so far for waste characterization purposes. The results of the waste characterization task are being used to identify off-site disposal options.

Other Miscellaneous Removal Activities

EPA has completed a variety of other removal related activities at the site:

- Fifty-three railcars were on site when EPA responded to the Metachem site in May 2002. To date, EPA has removed 46 railcars from the site, and the remaining railcars currently store product pending further off-site disposal evaluation.
- Over 630,000 pounds of chemicals and products previously in Metachem inventory have been sold and removed from the facility.
- A variety of wastes generated from EPA and DNREC's removal actions have been sent off-site to permitted facilities for hazardous waste treatment, recycling, or disposal. This includes: 1) several roll off containers of hazardous debris, sludge cake, and used personal protection equipment (landfill disposal); 2) six truckloads of bromochlorobenzene (energy recovery by fuel blending for boiler and industrial furnace applications); and 3) ten truckloads of ethylene glycol (purification treatment and recycling/reuse).
- Since May 2002, EPA has addressed 44 releases from pipes, containers, vessels, etc. that were unrelated to the chemical process decontamination process. This illustrates the continual effort required to maintain the safety and integrity of the facility.

What's Next for the Removal Program?

In the coming months, EPA and DNREC will identify the next plant area to be decontaminated, and will continue plant system operations. It is expected that 15 more decontamination projects will be initiated at the site during the next 18 months, culminating in the total decontamination of the manufacturing area. Concurrently, DNREC will continue with the small container characterization and removal operation. The community will be notified about future decontamination and removal plans through future fact sheets and/or additional public availability sessions.

As part of the bankruptcy proceedings, Metachem sold all of the machinery, equipment, scrap, stores and warehouse spares, maintenance equipment, etc. to International ProcessPlants and Equipment Corporation (IPPE) based in Hamilton, NJ. Once EPA has decontaminated each piece of equipment, IPPE will come in and dismantle it for resale or scrap. IPPE may also eventually demolish all buildings at the site except for the main office building, the guard shack and gate area, and the main warehouse. Ultimately, the entire plant may be dismantled after the completion of all EPA and DNREC decontamination and waste removal efforts.

Progress of the Remedial Design Program

The Superfund remedial design program continues to move forward to address the soil and ground-water contamination resulting from the 1986 and other site related spills. EPA's contractor is now conducting the remedial design, which was originally started by Metachem's consultant. The remedial design program currently has three major components: Treatment of Soil Piles; Treatment of Ground Water; and Treatment of Sediment. During the last few months, an extensive supplemental data gathering task has been undertaken to provide the necessary information to complete the remedial design.

Treatment of Soil Piles

- EPA collected 37 surface soil and 24 subsurface soil samples from the facility to further identify the extent of soil contamination. Results of this sampling are still pending.

Treatment of Ground Water

- EPA collected ground-water samples from 17 wells at the facility and adjacent areas in late fall 2002. Results of this sampling are still pending.
- The existing ground-water pump and treat system was renovated and returned to operation on January 29, 2003; it is currently pumping 30,000 gallons per day. This water is initially treated with a carbon treatment system, and is then discharged for further treatment to the on-site wastewater treatment plant. Since the system was restarted, it has extracted 185,000 gallons of water, recovering more than 40 pounds of chlorobenzenes and nearly 2 pounds of benzene.
- EPA conducted additional subsurface geologic studies to investigate the lateral and vertical extent of the ground-water contamination. The results of the supplemental geologic investigation are being used to evaluate the continuity of the clay layer separating the Columbia and Potomac aquifers. This information is critical for determining the most optimum location and depth for extraction wells.

Treatment of Sediment

- EPA collected 47 sediment samples from the wetlands adjacent to the facility. Results of this sampling are still pending. These data are being used to identify the wetland area in need of remedial action.
- A confirmatory ecological risk assessment sampling event was conducted, which included the collection of 21 additional sediment samples. Results of this sampling are still pending. These data are being used to conduct bioaccumulation and toxicity studies to evaluate the impact on ecological receptors.

Community Outreach Update

DNREC/EPA is conducting additional Metachem Community Outreach efforts. An essential element of this program is to inform the community of outreach activities. The community relations outreach program has made the following progress:

- DNREC contracted with Tetra Tech, Inc. in November 2002 to provide technical assistance for the Metachem site as part of the long-term community outreach efforts. In addition to EPA and DNREC, Tetra Tech is now part of the Community Outreach team and available to assist EPA and DNREC with responding to community concerns.
- Community surveys were conducted in late November 2002 to gather community input for the community outreach program.
- EPA and DNREC published Fact Sheet #5 and conducted a public availability session regarding the Chemical Process Area Decontamination Project and Groundwater Issues on December 10, 2002. The session included a brief presentation and poster displays about the decontamination operation, as well as a display about the ground-water data and contaminant plume.
- EPA and DNREC released Fact Sheet #6 in January 2003, and included responses to the questions and inquiries from the December 10, 2002 session, as well as provided an update on the chemical reaction decontamination process.
- EPA and DNREC finalized a Long-Term Community Involvement Strategy specific to the Metachem site in early January 2003, based on the community surveys and on-going community involvement activities.

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For additional information about the project, visit the following websites:
EPA's web sites: www.epaosc.net/Metachem and www.epa.gov/reg3hwmd/super/DE/standard-chlorine-de/
DNREC's web site: www.dnrec.state.de.us/DNREC2000/Divisions/AWM/do/metachem.asp