



DNREC/EPA
Fact Sheet #5
December 9, 2002



Metachem Products, LLC Start of Major Site Decontamination Effort – Chemical Process Area Decontamination Project

Background

- Since Metachem abandoned its manufacturing facility on May 14, 2002, DNREC/EPA have been actively conducting a wide variety of containment, decontamination, and stabilization activities. As part of these activities, DNREC has stabilized 1500 small containers and is in the process of inventorying the contents in preparation for disposal. DNREC has also inventoried and disposed of more than 2000 containers from the on-site laboratories. EPA has completed an inventory of all site chemicals and a comprehensive inspection of the condition and integrity of plant equipment, piping, tanks, and controls. EPA has also removed millions of pounds of chemicals from rail tank cars and leaky tanks, and disposed of approximately 500,000 pounds of chemicals from the site. More than 15 million gallons of wastewater have been treated and discharged.
- The plant evaluation indicated that there is a substantial quantity of chemicals (over one million pounds of a mixture of chlorinated benzene compounds, benzene, anhydrous hydrogen chloride and chlorine, referred to as the *chemical reaction mass* that are currently stored in the various chemical process equipment and related plant equipment at the site (Main Plant Reactor and Scrubber Area – see photo).

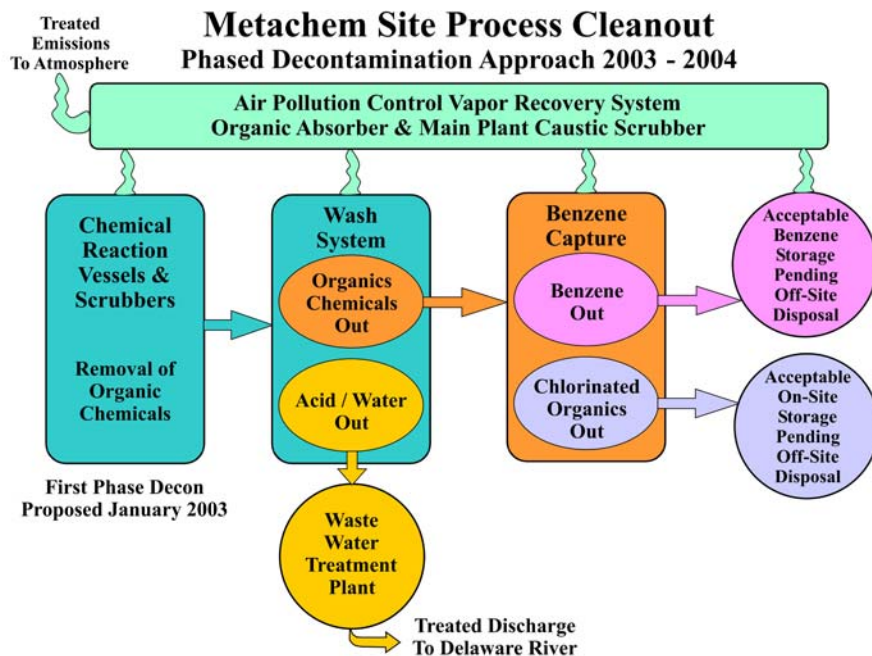
However, these chemical reaction vessels and related equipment were not designed for long-term storage of chemicals, and have already had some leakage problems that have been successfully repaired by EPA contractors in the last few months.

Consequently, DNREC/EPA have determined that the chemical reaction mass must be removed from the chemical reaction vessels and related plant equipment, and stored in more suitable tanks for future off-site disposal of chemicals.



Chemical Reaction Mass Removal and Decontamination Project

- DNREC/EPA are planning on removing approximately one million pounds of chemical reaction mass from the chemical reaction vessels and scrubbers and treating and transferring the chemicals to more appropriate on-site storage tanks. The removal process will utilize existing equipment to separate acid and benzene from the mixture so that the material can be handled and stored more safely. After the chemical reaction mass is removed from the chemical reaction vessels, they will be decontaminated with water and steam.
- DNREC/EPA evaluated two options for the safe removal and transfer of the chemical reaction mass and chemical process area decontamination: (1) Modification and operation of the chemical process units and other related plant units (including wash system and benzene capture unit) to expedite chemical removal and chemical process area decontamination; and (2) Individual chemical reaction tanks, vessel, pump, line, equipment dismantling, chemical removal, and decontamination.
- After a detailed evaluation that included considerations for process safety management, potential for accidental releases, and other health & safety and environmental concerns, DNREC/EPA selected Option #1. This would allow the chemical reaction mass to be removed more safely and efficiently than Option #2, thereby minimizing emissions and reducing the overall risk to site workers, neighboring businesses and communities, and the environment.
- The chemical reaction mass removal and decontamination project is tentatively expected to proceed in January 2003, and should take 3 to 5 weeks to complete. However, the project **WILL NOT PROCEED** until all the critical decision points have been satisfied, including completion of the operations manual, completion of staff training, successful testing of all critical process equipment (pumps, valves, controls, instrumentation, etc., which started in mid-November 2002), and other critical tasks.



Process Preparation

- All materials removed from the chemical process area will only be stored in tanks suitable for long-term storage of the benzene and chlorinated organic materials until off-site disposal can be arranged.
- DNREC/EPA, with the help of former Metachem operators hired for their expertise, have done extensive inspection and evaluation, and modification and repair, if necessary, of every single pipe, tank, valve, flange, instrumentation and other related equipment associated with the Main Plant Chemical Process Area and Scrubber Area. This was also performed for the other parts of the plant that will be used for the decontamination process, including the wash system, air pollution vapor recovery system, and wastewater treatment plant.
- An Operations Manual is being developed with standard operating procedures for the chemical reaction mass removal and decontamination effort. A special emphasis of this Operating Manual is the development of emergency shutdown procedures.
- A Training Program is also being developed to ensure that all site workers are aware of the objectives of the removal/decontamination project, health and safety requirements, and all required standard operating procedures.
- The original site Health & Safety Plan and Emergency Response Plan are undergoing amendment to include health and safety procedures during decontamination operation and updated to include critical shutdown procedures, and emergency responder contacts.
- DNREC/EPA will implement an Air Monitoring Plan and conduct extensive air monitoring throughout the project. Unacceptable emissions, as defined by the Operations Manual, will result in modifications to the process or shutdown of the process.

Other Planned Plant Decontamination Efforts

- The chemical reaction mass removal and decontamination project is just the first phase of the overall plant decontamination plan. Over the next 18 months, remaining materials in the other piping and tanks will also be removed and the related equipment decontaminated. Once all the materials in storage are removed and properly disposed off-site (which is not expected until at least 2004), the storage tanks will also be decontaminated. The Waste Water Treatment Plant will eventually be the last unit decontaminated after all other site work has been completed.

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For additional information about this upcoming phase of the project, visit the following websites:

EPA's web site: www.epaosc.net/Metachem

DNREC's web site: www.dnrec.state.de.us/DNREC2000/Divisions/AWM/do/metachem.asp