

**Public Open House**  
**Greenwich High School Environmental Evaluation**  
**Wednesday, September 7, 2011**

**Summary of Environmental Testing and Remediation Conducted & Overseen by**  
**Diversified Technology Consultants, Inc. (DTC) of Hamden, CT**

DTC is providing environmental consulting services to the Town. DTC's State of Connecticut Licensed Environmental Professionals (LEPs) have been coordinating with the Federal Environmental Protection Agency (EPA), State of Connecticut Departments of Energy & Environmental Protection (DEEP) and Public Health (DPH), and the Town Health Department throughout the recent environmental testing and remediation work completed at the GHS.

**Source of Contamination**

The likely source of contamination at the GHS facility is the placement of contaminated fill material at the time the facility was constructed in the late 1960s / early 1970s. The source(s) of the contaminated fill has not been conclusively identified.

**Emergency Response Actions Completed to Date**

- PCB-contaminated soil excavated during the MISA construction project was securely stockpiled in the western parking lot. All of this soil was properly disposed of at a permitted landfill in New York State.
- All athletic fields were closed by the Town immediately upon discovery of PCBs in topsoil adjacent to the utility trench along the western parking lot.
- The asphalt upon which the soil stockpiles were placed will be tested to determine if removal or capping is required, in accordance with EPA regulations.
- The construction contractor for the MISA project, Cherry Hill Construction (CHC), has nearly completed the capping of the PCB contaminated soil that was found in the utility trench along the western parking lot.

**Short Term Environmental Goals**

- Develop and implement temporary remedial measures to open each of the athletic fields as soon as possible in a manner that protects human health and that is acceptable to the EPA, DEEP, DPH, and the Town Health Department.
- Complete testing within the limits of the MISA project to evaluate potential environmental impacts on the project budget and engineering design.
- Develop and implement cost effective remedial measures to facilitate the MISA project. Such remedial measures will be developed in coordination with the EPA, DEEP, DPH, and Town Health Department.

## **Long Term Environmental Goals**

- Develop and implement permanent measures to remediate all contaminated areas of the facility (athletic fields, western parking lot, etc) to permanently protect human health and the surrounding environment.
- The permanent remedial measures will be developed in coordination with the EPA, DEEP, DPH, and Town Health Department.
- The permanent measures will likely include securely capping the contaminated soil in grass areas with clean soil and/or other barriers and using the existing synthetic turf fields as caps to avoid removing and replacing the fields.

## **Surficial Soil Sampling in the Athletic Fields**

- To date, DTC has collected over 400 surficial soil samples throughout topsoil areas within and surrounding Fields 1 through 7 and adjacent to the west side of the school building.
- The goal of the surficial sampling is to obtain enough data to plan for and execute remedial actions to safely open the fields to the public. All contaminated surficial soil will be removed and replaced with clean soil, or access to the soil will be minimized by other means (fencing, grass, asphalt, mulch, etc). All remedial actions will be reviewed and approved by EPA, DEEP, and DPH.
- PCBs were not detected in topsoil adjacent to the school building.
- Field 1 (Cardinal Stadium & Tennis Courts)
  - On September 1<sup>st</sup>, EPA, DEEP, and DPH approved an Interim Remedial Measure (IRM) to allow the general public to access this entire area of the site (south of the stream).
  - Trace PCBs were only detected in 2 samples.
  - Arsenic (a heavy metal) was detected at concentrations above Connecticut (CT) cleanup standards. Direct contact with arsenic containing soil will be minimized by maintaining grass, asphalt, or mulch cover and by installing a snow fence along a portion of the south bank of the stream.
- Field 2 (Baseball Field)
  - PCBs have not been detected at concentrations above regulatory standards in the shallow soil (0-3”) within Field 2.
  - Chlordane (a banned chlorinated pesticide), was detected in a single topsoil sample in the outfield at a level above CT cleanup standards and above its Significant Environmental Hazard (SEH) reporting limit. The chlordane contaminated soil in Field 2 is limited to a well defined area.
  - The chlordane contaminated soil will be excavated and properly disposed.
  - Field 2 is scheduled to be opened in time for the start of baseball practice.
- Fields 3 & 4 (Soccer & Lacrosse)
  - Topsoil with PCBs above the CT cleanup standard is present to the west, south, and east of both fields.
  - PCBs are present at levels above its SEH reporting limit to the east of the fields, between the parking lot and the fields.
  - These fields may soon be opened for play either by installing fencing around the fields to restrict access to the surrounding soil or by excavating the soil and replacing with clean material. A “clean walkway” will be constructed to provide safe access from the parking lot to the fields.
  - Costs and benefits of both options are being evaluated.

- Field 5 (Softball Field)
  - PCBs have not been detected at concentrations above regulatory standards in the shallow soil (0-3”) within Field 5.
  - Topsoil with chlordane above the CT cleanup standards is present in the deep outfield in two samples from the 0-1 foot interval, to the east of Field 4.
  - Additional shallow topsoil samples (0-3”) from the deep outfield were collected for lab analysis for chlordane on 8/31. Results are pending.
  - Field 5 is scheduled to be opened in time for the start of softball practice.
- Fields 6 & 7 (Practice and Soccer Fields)
  - Topsoil with PCBs above the CT cleanup standard is present to the north, east, and west of these fields in four well defined areas.
  - DEEP and DPH have approved an IRM to allow the general public to access this area of the site. EPA currently is reviewing the request and will issue a written response in a few days.
  - The IRM will include excavating the four areas of PCB contaminated soil around these fields and then replacing with clean fill.

### **Deep Soil and Groundwater Sampling in Western Parking Lot & Fields**

- 16 soil borings have been completed to date in the western parking lot and in Field 5.
- Soil sampling results from these borings indicate the presence of elevated levels of PCBs, petroleum hydrocarbons, heavy metals (arsenic, lead, and thallium), and chlorinated pesticides.
- Approximately 150 more borings will be completed in the coming months within the western parking lot, within the limits of the MISA project, and within all of the athletic fields (Fields 1 through 7).
- The purpose of the borings is to determine how deep the contaminated soil is below the surface. Testing is required by both EPA and DEEP to satisfy those agencies’ requirements and to develop a plan to remediate the site to the applicable State and Federal standards.
- Testing within the limits of the MISA project will determine if contaminated soil is present within the project limits, whether contaminated soil requires remediation prior to construction, and to estimate costs associated with remediation, if necessary.
- Groundwater monitoring wells will be installed to test groundwater beneath the site. This testing will allow us to determine if groundwater is contaminated and whether there is the potential for contaminants to be migrating away from the contaminated areas.