Scovill

June 2003

EPA New England

Superfund Site Activity Update

Remedial Investigation Progress Report: Phase I Results

The Superfund process, conducted in several steps over multiple years, leads to the ultimate goal of providing a safe environment for the people living and working around the Scovill Industrial Landfill. The current step in the Superfund process is to better understand the site's contamination and potential risks. A detailed study, the Remedial Investigation, is occurring in phases and is identifying the type and extent of the site's contamination. This investigation is also collecting the type and amount of information needed to conduct human health and ecological risk assessments.

Drill Rig During Phase I Sub-Surface Soil Sampling

Drill For Phase I Sub-Surface Soil Sampling

Phase I of the Remedial Investigation began in September 2002 with the following work:

1. Surface (0-3 inches) Soil Sampling;
2. Sub-surface (4 inches-25 feet) Soil Sampling;
3. Surface Water & Sediment Sampling;
4. Geophysical Survey;
5. Utility Line Identification.

Phase I Results

Surface Soil Samples

Thirty-six samples were taken across the site. Nine had low levels of PAHs. Two were analyzed for dioxin and a low level was detected in one.

Sub-Surface Soil Samples

From the thirty holes drilled across the site, PAHs and metals such as copper, cadmium, arsenic and lead were detected most often. Pesticides and PCBs were frequently found at low to moderate levels. Of the five dioxin samples, one was detected at a low level. In general, VOCs were found infrequently and at low levels.

Surface Water & Sediment Samples

PAHs, PCBs, chromium, copper and zinc were detected in some of the ten sediment samples.

Geophysical Survey

In order to know where to drill holes to gather sub-surface soil samples, EPA took surveys to better understand the depth to bedrock and the approximate water table elevation.

Utility Line Identification

Identifying and marking utility lines prevented them from being damaged by EPA's field equipment. Having a clear understanding of where utilities are will also be helpful in understanding where contamination exists in relationship to utility lines. This is important for protecting utility workers who must dig into soil to install or repair utility lines.

Overview of Site's Contaminants

PAHs: Polycyclic Aromatic Hydrocarbons are a group of over 100 different chemicals that are formed during the incomplete burning of any organic material such as gasoline, coal, oil, garbage or meat. At levels much higher than found to-date at the Scovill site, PAHs in animal studies may cause cancer or harmful effects on skin and immune and reproductive systems.

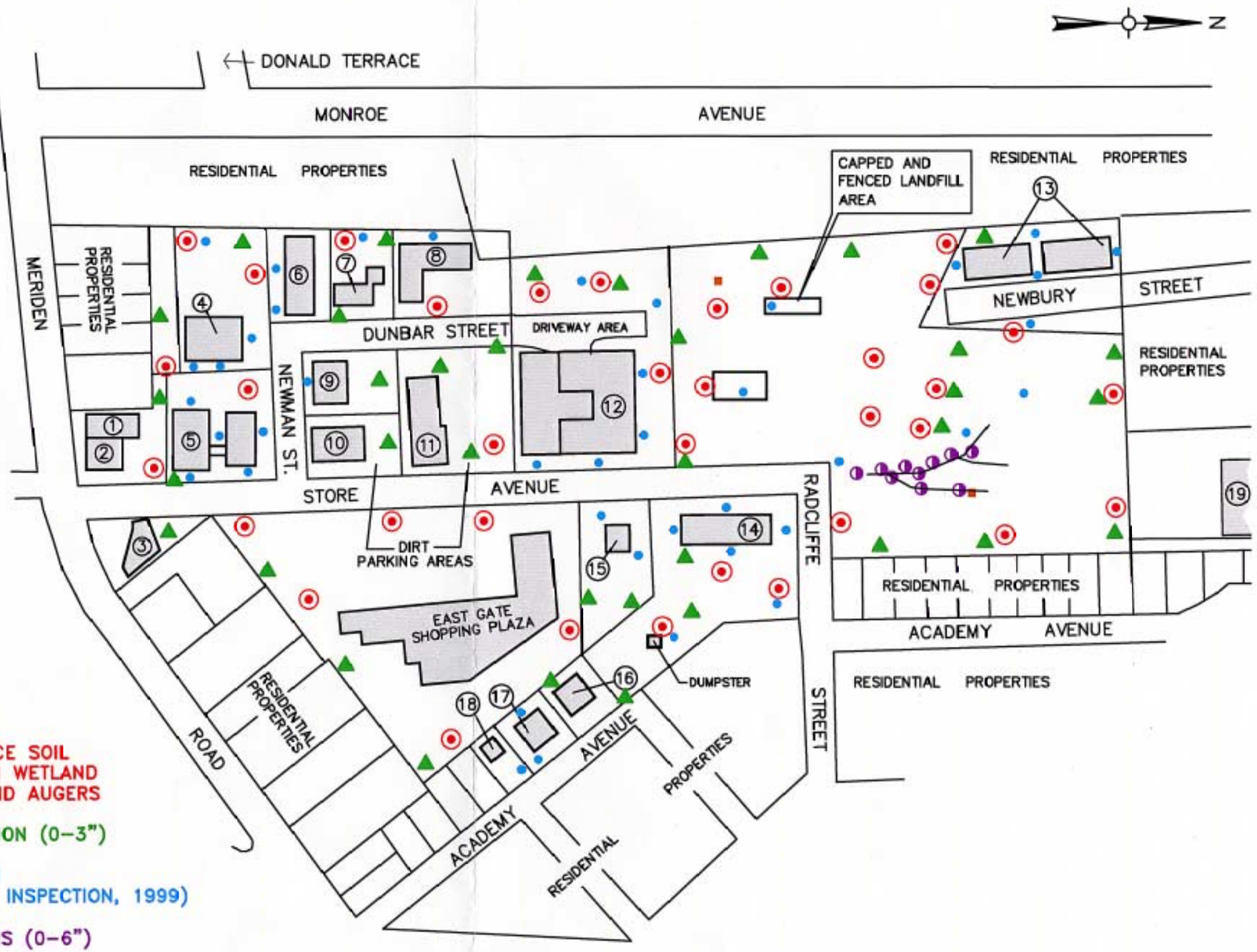
PCBs: Polychlorinated Biphenyls are man-made chemicals that were used in electrical manufacturing. At very high levels (much higher than levels found during Phase I studies), PCBs may cause nose and lung irritation, cancer and skin rashes. Eating PCB-contaminated fish may cause learning problems in the developing fetus.

Metals (arsenic, copper, lead, cadmium, vanadium, beryllium, chromium and zinc) may cause potential health impacts at levels higher than those detected thus far at the Scovill site. Lung, nose or throat irritation can be caused by breathing metals in dust particles or fumes. Some metals may cause lung cancer after breathing high levels for a long time. Skin irritation and stomach and intestinal problems may occur from touching or eating some metals. Lead can harm children's mental and physical development and can affect adult central nervous, kidney, and immune systems.

Dioxins are a family of 75 chemically related compounds. A very high level, much higher than any detected at the site, may cause skin disease in humans and some studies suggest they may increase the risk of some cancers. Animals exposed to dioxins have shown effects such as liver damage, hormone disruption, immune system damage, reproductive damage and birth defects. It is not known if it can cause these effects in humans. The levels at which these effects have occurred in animals is significantly higher than the dioxin level detected at the Scovill site.

BUILDING LEGEND

1. SPARKS TUNE & LUBE SHOP
2. VAL-U-MART
3. MANUEL NUNES (MEDICAL OFFICE)
4. STORE AVENUE APARTMENTS (UNIT NO. 3)
5. STORE AVENUE APARTMENTS (UNIT NOS. 1 AND 2)
6. K & K EAST CONDOMINIUMS
7. EAST PINES APARTMENTS
8. DUNBAR COVE APARTMENTS
9. AGRICARE (LAWN CARE COMPANY)
10. FRANCO AMERICAN SOCIAL CLUB OF WATERBURY
11. WATERBURY YELLOW CAB CO. & CURTIN LIVERY SERVICE
12. 119 EAST ELDERLY HOUSING APARTMENTS
13. MERIDIAN APARTMENTS
14. LAUR-RAY APARTMENTS
15. CHILD DAY CARE FACILITY
16. MATTE RESIDENCE – 67 ACADEMY AVE.
17. EVON RESIDENCE – 55 ACADEMY AVE.
18. ZANETT GARAGE – ACADEMY AVENUE
19. SANFORD CONDOMINIUMS



SAMPLE KEY

- BORING LOCATION (SUBSURFACE SOIL SAMPLES 6"–20') BORINGS IN WETLAND AREAS COMPLETED USING HAND AUGERS
- SURFACE SOIL SAMPLE LOCATION (0–3")
- START SOIL SAMPLE LOCATION (ROY F. WESTON, START SITE INSPECTION, 1999)
- SEDIMENT SAMPLING LOCATIONS (0–6")
- START SEDIMENT SAMPLE LOCATION (ROY F. WESTON, START SITE INSPECTION, 1999)

SAMPLE LOCATIONS

Exposure can occur when people eat, drink, breathe or have direct skin contact with landfill waste material.

At present, much of the Scovill Landfill material is covered either with a building, paved road, parking lot, or grass.

The site doesn't present an immediate public health risk, in its current condition, because direct contact with landfill waste materials is unlikely.

Digging, gardening or other activities that might expose landfill material should not occur.

VOCs (Volatile Organic Compounds) are found in products such as gasoline, glues, paints, and solvents. At very high levels (levels much higher than what has been found at the Scovill site), VOCs can cause central nervous system effects such as dizziness, headaches and loss of consciousness. If exposed to high levels for long periods of time, VOCs can cause liver, kidney and lung damage.

Although some contaminants were detected, this does not mean the levels are high enough to cause health problems. So far, surface soil results are consistent with samples taken in 1999 and support the conclusion that the site isn't an immediate public health risk in its current condition because direct contact with landfill waste materials is unlikely.

Background Levels of Contamination

It is not surprising in urban areas to be able to detect a range of chemicals in the air, water, or soil, even if the property isn't a hazardous waste site. Chemicals are present simply because of the urban nature of the area. Because of the mixed use of land in developed areas, chemicals either historically or currently get released into the environment. These chemicals become part of the "background levels" that are detected in an area. It is unknown at this point how the levels of contamination being detected at the Scovill Industrial Landfill compare to the background levels of chemicals one would expect to find in the Waterbury area. During Phase II investigation activities, EPA will establish what the background levels of chemicals are in the area by collecting samples from a similar location that also has residential and commercial land uses.

Next Steps: Phase II Investigation Activities

Phase I sampling helped identify areas that either need testing or more investigation. Phase II will continue to gather information about the extent and type of contamination that exists at the site. Additional testing of surface and sub-surface soil as well as surface water and sediment will happen during Phase II. Sampling of groundwater and soil gases will be done in Phase II as will more sampling to confirm the site's boundaries, since Phase I results point to the site being larger than what was originally thought.

Phase II activities will likely start this fall. If it is determined that there is still a need for more information, a Phase III investigation would be undertaken. Otherwise, the information gathered from Phase I and II will be used to develop human health and ecological risk assessments. These assessments and the information from the complete investigation will help EPA decide if any action is needed at the site and if so, what needs to be done.

After EPA finished Phase I, it issued an Administrative Order to Saltire Industrial, Inc. (a successor to Scovill Manufacturing Co.) and three other parties, requiring them to finish the rest of the investigation. On May 12, 2003, Saltire Industrial notified EPA that it was taking steps to comply with the Order. EPA will supervise Saltire as it performs any investigation work at the Scovill Industrial Landfill Superfund site.

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Site History

Located north of Meriden Road in Waterbury, CT, the former Scovill Industrial Landfill was used by the Scovill Manufacturing Company from 1919 until the mid-1970s for disposal of ash, cinder, and other wastes. Roughly 23 of the site's 30 acres have been developed with residential structures and small commercial buildings.

Spring 1998	CT Dept. of Environmental Protection removed 2,300 tons of polychlorinated biphenyls (PCB) contaminated soil & an additional 18 capacitors. Temporarily capped area & fenced & posted four acres.
April 1999	EPA took soil samples 0 to 24 inches deep from 57 locations — found elevated levels of organic chemicals; metals such as cadmium, nickel, silver, and zinc; & PCBs. Indoor air sampling in limited number of homes didn't detect contamination.
August 2000	Added to EPA's National Priorities List (NPL - is a list of hazardous waste sites that are eligible for Federal funding to pay for extensive, long-term cleanup actions under the Superfund program).
September 2002	Phase I of the Remedial Investigation began.