

Memorandum

To: Louis Casolo, City Engineer, City of Stamford
From: Sarah J. Trombetta, LEP, TRC
Date: 12/14/2009
Re: Scofieldtown Park Investigation Status Report

The following is a status report on the tasks that TRC is completing for the Scofieldtown investigation:

Task 1 – GPR Survey

The GPR survey of the former landfill area (park, recycling center and compost area) has been completed. TRC subcontracted Subsurface Information Surveys, Inc. (SIS) to complete the GPR survey of the known former landfill area. The geophysical survey was completed by a technician from SIS using a subsurface interface radar system (SIR-3000 and SIR-2000) between October 26 and November 3, 2009. The system consisted of a power supply, graphic recorder, video display unit, computer and transmitting/receiving antenna. SIS used a subsurface interface radar and computer with a depth setting of 30 feet to locate any existing and unknown anomalies. A grid spacing of 4 feet maximum in both north/south and east/west traverses was used during the survey.

The survey was conducted in three areas including the composting area on the northern half of the former landfill, the recycling area to the southwest and the park on the southeast. Traverses were conducted around all surface obstructions. Although the maximum depth of thirty feet was not reached due to interference from high organic content in the soil, the GPR survey was able to conclude the following: They “found no clustering of metallic anomalies characteristic of buried drums, parabolic features common to underground storage tanks or any unusual anomalies not characteristic of the surrounding geological conditions.”

Task 2 – Soil Sampling

The soil sampling associated with the three overburden borings installed within the former landfill has been completed. The results of the laboratory analysis of the soil samples (SB-1, SB-2 and SB-3 corresponding with wells 1, 2 and 3) are attached to this report. The results indicate that borings SB-1 and SB-3 contain varying concentrations of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), extractable petroleum hydrocarbons (ETPH), and metals with some exceedances of the Connecticut Remediation Standards Criteria for soils. Concentrations of PCBs were detected in the sample from SB-1 and a concentration (below regulatory criteria) of “4,4- DDD” (a pesticide) was detected in the sample from SB-3. No other pesticides were detected in the soil samples.

Task 3 – Surface Water Sampling

Five surface water samples were collected from the proposed locations on October 26, 2009. These locations included: three areas in the unnamed brook that flows along the northern edge of the landfill (SW-1, SW-2 and SW-3), one within the small pond located in Scofieldtown Park (SW-4) and one from the pond located south of Alma Rock Road (SW-5). The locations of these samples are shown on a map attached to this document. The results of this sampling have been received and a table with the results is attached to this report. Concentrations of benzene, chlorobenzene and barium were reported for sample SW-2, concentrations of barium and zinc were reported for sample SW-1 and barium only was reported in sample SW-3. No other analytes were reported above laboratory method detection limits. The concentration of benzene in sample SW-2 exceeds the Human Health Criteria for consumption of water and organisms as defined in the CT Water Quality Standards. Barium and zinc are typically found in surface water as these naturally occur in soil and rock.

Task 4 – Monitoring Well Installation

TRC began installing the monitoring well network on November 2, 2009. Thirteen wells were installed at seven locations within the study area. In addition to the six wells (three well pairs) already installed in the landfill and park, two more wells are currently in the process of being installed within the area of the former landfill as a measure to further confirm the results from the initial well testing. It is anticipated that the wells will be completed by December 15th. A map showing the surveyed locations of the already installed monitoring wells is attached.

Task 5- Monitoring Well Sampling

Sampling of the thirteen monitoring wells was completed on November 23 and 24th. The results of this sampling have been received and a table with the results is attached to this report. The results indicate the following:

Samples from a well located within the former landfill area (MW-1 (OB)) contained VOCs and ETPH generally related to petroleum hydrocarbons. The sample from well MW-1 (OB) also contained concentrations of arsenic and barium over regulatory criteria. The samples from the other wells within the former landfill contained lower concentrations of VOCs with the exception of the sample from well MW-2(R) which contained vinyl chloride over remediation criteria.

The samples from the wells (MW-4(OB) and MW-4(R)) at the Scofield Magnet School contained no analytes at concentrations over regulatory criteria. These results were similar to the well located off of Rock Rimmon Road (well MW-5(R)).

The sample from the well located in the Very Merry Road cul-de-sac (MW-7(R)) contained concentrations of 1,1,1,2 tetrachloroethane, chlordane and dieldrin over Connecticut ground water standards. The sample collected from well MW-8(R) located in the Alma Rock Road cul-de-sac also contained the same three compounds at similar concentrations over ground water standards.

There were no concentrations of PCBs or cyanide reported in any of the well samples. Concentrations of a variety of metals were also reported for the all of the well samples, with the concentrations of arsenic and barium in the sample from MW-1(OB) the only concentrations that exceeded the Remediation Standard ground water criteria. TRC

has not yet received gross alpha and gross beta analytical results. These compounds were analyzed to determine if the ground water has been impacted by radiological materials.

In addition to the sampling, the well locations were surveyed by the City of Stamford to obtain ground surface and ground water table elevations. A table with the well locations, well elevations and ground water table elevations is attached to this report.

Maps showing ground water elevations and flow contours for both the overburden and bedrock water tables are attached to this report. The flow contours indicate that ground water flow within the landfill area is toward the north and east with discharge likely to the unnamed stream to the north and Poorhouse Brook to the east. Ground water contours east of Poorhouse Brook (based on the ground water elevation in the Very Merry cul-de-sac monitoring well (MW-7(R))) indicate that ground water in this area flows to the west, also toward Poorhouse Brook. The ground water elevation in the Alma Rock Road cul-de-sac well (MW-8(R)) is lower than the Very Merry Road ground water elevation. This data indicates that the ground water table appears to rise and fall with the increases and decreases in the ground topography.

Task 6 – Reporting, Review and Meetings

This task is in progress and will continue as data is acquired from all aspects of the investigation.