Community Air Monitoring Plan

Interim Remedial Work Measures Scope

Taylors Lane Landfill ID No. 360021

213733.00
Village of Mamaroneck
Mamaroneck, NY
June 30, 2010

woodardcurran.com
COMMITMENT & INTEGRITY DRIVE RESULTS

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APPENDICES

1. INTRODUCTION

Woodard & Curran has prepared this Community Air Monitoring Plan (CAMP) for the proposed Interim Remedial Measure Work Plan (IRMWP) at the Taylors Lane Landfill Site (the Site) located on Taylors Lane in Mamaroneck, Westchester County, New York. The CAMP has been developed based on the New York State Department of Health (NYSDOH) Generic CAMP document dated January 6, 2000.

The purpose of this CAMP is to provide a measure of protection for the community from potential airborne contamination releases as a result of building demolition activities. In addition, a CAMP helps to confirm that work activities did not spread contamination off-site through the air. Woodard & Curran will conduct the procedures outlined in Section 2 during site activities.

1.1 SITE BACKGROUND

Historically, the Site was an aggregate mine. Findings from other studies and reports indicate that the Site was a former municipal solid waste management facility and allegedly received industrial waste including drums, industrial liquids, and incinerator ash from the 1950's to 1970's as well as composting activities.

The Site has undergone several remedial and hydrogeologic investigations since 1987. As a result of these investigations the Site has been well characterized for contaminants of concern and hydrogeological conditions. A Record of Decision was issued by the New York Department of Environmental Protection in 1993 and a final capping remedy was implemented in 1997.

In subsequent years, there were indications that Site impacted groundwater may be migrating to nearby residences. From 2008 through 2008 additional Site investigations were conducted to ascertain impacts related to the potential migration of impacted groundwater to nearby residences. Through these investigations, it was determined that some groundwater impacts exist and the leachate collection system required optimization to mitigate these impacts. The scope of work associated with this Health and Safety Plan has set objectives to improve the recovery of leachate at the Site.

Primary contaminants of concern are sporadically distributed in soil (fill) or groundwater (shallow impacted groundwater in fill areas) throughout the site. The primary contaminants of concern include the following:

- Volatile Organic Compounds (VOCs) including Vinyl Chloride and 1,2-Dichloroethane
- Semi-volatile Organic Compounds (SVOCs) including Napthalene
- Petroleum hydrocarbons
- PCBs
- Pesticides
- Various metals/inorganics including arsenic, barium, cadmium, chromium, copper, lead, mercury, zinc. And cyanide
- Methyl-tert butyl ether or MTBE, has been observed in ground water at the Site, but is believed to be impacting from another source (gas station) nearby.
- Low levels of landfill gases such as methane (less than 1% by air volume)

1.2 SCOPE OF WORK OVERVIEW

An IRMWP was developed by Woodard & Curran (Woodard & Curran, 2009) to implement an interim remedial measure as identified by the New York Department of Environmental Conservation (NYSDEC) in their August 24, 2009 letter to control leachate flow at the Site until an alternative remedial measure is implemented as specified in the November 1993 Record of Decision (ROD) issued by the NYSDEC for the Site. As presented in the IRMWP the objectives for this scope of work include the following:

- Installation of a passive (i.e., gravity flow) leachate recovery well. The leachate recovery well will be a large diameter well with a lateral discharge pipe at approximately elevation 9.2 feet above mean sea level (amsl). The discharge pipe will be connected to the sanitary sewer on Taylors Lane.

- Implementation of a water level monitoring program to measure the influence of the leachate recovery on local ground water levels during installation and operation of the proposed leachate recovery well; and

- Determine potential impacts to soil on an adjacent residential property from leachate. Soil sampling will be completed at the Markowitz residence on Shadow Lane to determine potential soil impacts from leachate migration at that location.

- A sampling program will be implemented to characterize the water being discharged to the sanitary sewer (i.e. the Westchester County Department of Environmental Facilities (WCDEF), Mamaroneck Waste Water Treatment Plant (MWWTP)) from the Site leachate recovery well.

2. COMMUNITY AIR MONITORING PLAN

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring.

2.1 CONTINUOUS MONITORING

Continuous monitoring for dust, VOCs, and landfill gases will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities for this project include, but are not limited to, soil excavation during discharge pipe installation, installation of the leachate recovery well, and the completion of soil borings for soil sampling and/or monitoring well installations.

2.2 PERIODIC MONITORING

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil samples or the collection of ground water samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities.

2.3 VOC MONITORING, RESPONSE LEVELS, AND ACTIONS

VOCs will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations will be measured at the start of each workday to establish background conditions. The monitoring work will be performed using a photoionization detection meter appropriate to measure the types of contaminants known or suspected to be present. The PID will be calibrated at least daily. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds five (5) parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- Due to the low level concentrations of VOCs in ground water and soil characterized at the Site, the action level of five (5) ppm is not anticipated to be exceeded. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of five (5) ppm work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is below five (5) ppm over background for the 15-minute average.

2.4 PARTICULATE MONITORING, RESPONSE LEVELS, AND ACTIONS

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone. During intrusive activities at the site, monitoring will be archived through the use of a temporary particulate monitoring station using a TSI Dust Trak or equivalent meter located upwind of the exclusion zone and a Data Mini Ram or equivalent to be maintained by Woodard & Curran personnel downwind of the work area. This particulate monitoring equipment is capable of real-time monitoring of particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. All equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) (0.1 mg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m3 of the upwind level and in preventing visible dust migration.

2.5 LANDFILL GAS MONITORING

Historical landfill gas monitoring results indicate that levels of methane are lower than that of a concern for explosive hazards (less than 1% by volume), but have been detected at the Site. Therefore continual atmospheric monitoring for oxygen, lower explosive limit, carbon monoxide, and hydrogen sulfide will be conducted during drilling and excavation activities at the exclusion zone. Atmospheric will be monitored using a four gas multi-meter. The action levels for the monitored constituents are as follows:

Constituent of Concern	Action Level
Oxygen	< 19.5%
Lower Explosive Limit	> 5%
Carbon Monoxide	> 25 ppm
Hydrogen Sulfide	> 10 ppm

Work will cease at any point the above action levels are exceeded and will not continue until levels have been reduced to a safe level correlative to the stated action limits.

2.6 DOCUMENTATION

All readings from the monitoring instrumentation (including calibration data), shall be recorded in a daily activity log book or air monitoring log form. All readings must be recorded and be available for State (DEC and DOH) personnel to review.

3. REFERENCES

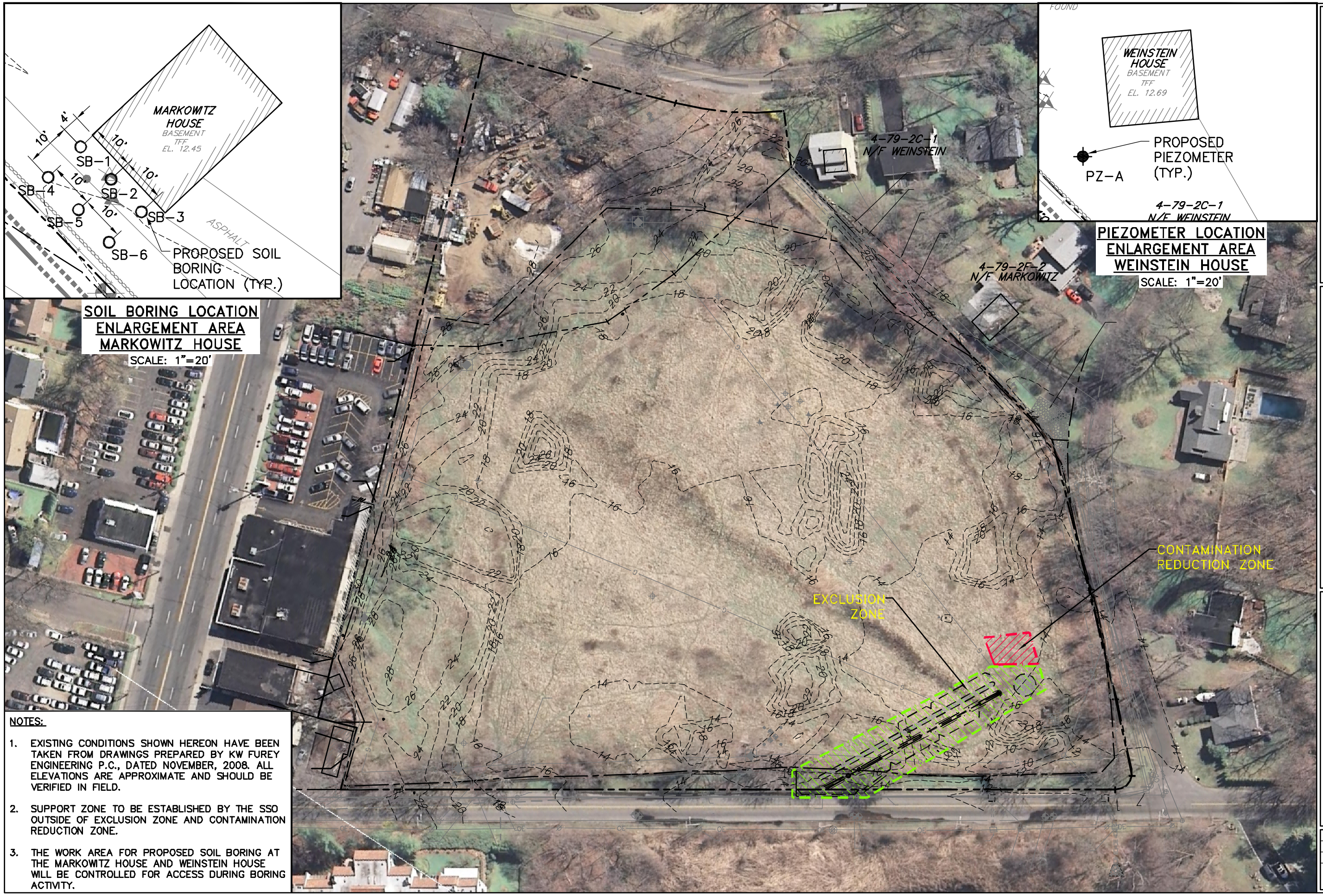
Woodard & Curran, 2009. Interim Remedial Measure Work Plan –Taylors Lane Landfill ID No. 360021

Woodard & Curran, 2010. Health and Safety Plan Interim Remedial Measure Work Scope - Taylors Lane Landfill ID No. 360021

APPENDIX A: SITE PLAN AND WORK ZONE DETAILS

SOIL BORING LOCATION
ENLARGEMENT AREA
MARKOWITZ HOUSE
SCALE: 1"=20'

PIEZOMETER LOCATION
ENLARGEMENT AREA
WEINSTEIN HOUSE
SCALE: 1"=20'



NOTES:

1. EXISTING CONDITIONS SHOWN HEREON HAVE BEEN TAKEN FROM DRAWINGS PREPARED BY KW FUREY ENGINEERING P.C., DATED NOVEMBER, 2008. ALL ELEVATIONS ARE APPROXIMATE AND SHOULD BE VERIFIED IN FIELD.
2. SUPPORT ZONE TO BE ESTABLISHED BY THE SSO OUTSIDE OF EXCLUSION ZONE AND CONTAMINATION REDUCTION ZONE.
3. THE WORK AREA FOR PROPOSED SOIL BORING AT THE MARKOWITZ HOUSE AND WEINSTEIN HOUSE WILL BE CONTROLLED FOR ACCESS DURING BORING ACTIVITY.

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COMMITMENT & INTEGRITY DRIVE RESULTS

WOODARD & CURRAN

SITE PLAN AND WORK ZONE DETAILS

DESIGNED BY:
DRAWN BY:
CHECKED BY:
213733_Site.dwg

VILLAGE OF MAMARONECK
123 MAMARONECK AVENUE
MAMARONECK, NEW YORK 10543

TAYLORS LANE LANDFILL
INTERIM REMEDIAL MEASURE
VILLAGE OF MAMARONECK, NEW YORK

JOB NO: 213733
DATE: June 30, 2010
SCALE: 1"=80'

FIGURE 1

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