

REED ROAD LANDFILL, (UNLISTED)

FRIENDSHIP, ALLEGANY COUNTY

STANDBY CONTRACTOR WORK ASSIGNMENT (SCWA)

PROJECT WORK PLAN

DECEMBER 2005

I. SITE HISTORY

The Reed Road Landfill site was operated as a permitted solid waste disposal facility for the disposal of foundry wastes including used mold sand, sand molds, slag and metal bindings from 1983 to 1987. This site was leased to Drake Manufacturing Company, a division of Macler Industries by the Allegany County Industrial Development Agency (IDA) during its operation as a landfill. In 1987, Macler Industries filed for bankruptcy. The facility was subsequently closed, however, it is not documented that closure of the facility was completed in accordance with the Department approved closure plan. No other industrial uses of the site are known.

The Allegany County Industrial Development Agency (IDA) maintains ownership of the site.

II. SITE DESCRIPTION

The Reed Road Landfill site is located in a rural portion of Allegany County in the Town of Friendship. The site is approximately 1.9 miles north west of Interstate 86 Exit 29 (Friendship Exit). This 5.3 acre site is currently inactive.

The site consists mainly of open field surrounded by forest and agricultural lands. According to existing file information, foundry waste was disposed in three trenches, each approximately 20-feet wide by 400-feet long by 10-feet deep (There are discrepancies in the file information as to the dimensions of each trench). Lateral piping conveys leachate from each trench into three manholes (one for each trench), which subsequently discharge into a header pipe. The header pipe terminates in a concrete storage tank. The tank discharges into a constructed pond that drains off the east end of the site.

Miscellaneous surface dumping of old vehicle gas tanks, tires/rims, drums, car parts, etc. is visible north of the trench disposal area. Also, there are several small areas where it appears tires have been burned. It is not clear if these miscellaneous disposal areas are within the property boundary of this site.

III. OBJECTIVES OF THE INVESTIGATION

The Department is the recipient of a USEPA funded Brownfield State Response Program Grant to complete a remedial investigation (RI) for this site. To date, no comprehensive

remedial investigation has been conducted at this site. The overall objective of the RI is to determine the nature and extent of contamination, if any, at the site. The specific objectives of this project are:

- Evaluate the integrity of the existing leachate collection system including lateral and header piping, manholes and concrete storage tank.
- Identify the approximate vertical and horizontal limits of the three foundry waste disposal trenches.
- Assess the soil type, permeability and thickness of the existing cover soils over each disposal trench.
- Characterize the waste material disposed in the trenches and the leachate discharging from the disposal trenches.
- Identify any areas of subsurface disposal in addition to the three disposal trenches.
- Understand groundwater flow direction and characterize the groundwater down gradient of the three disposal trenches.
- Characterize the soil and, if necessary, the groundwater in the vicinity of on-site surface dumping and in any areas of on-site subsurface dumping (if identified).
- Characterize any soil, surface water or groundwater that is suspected of potentially being impacted by contaminants.

IV. SCOPE OF WORK.

This SCWA consists primarily of five separate elements. These elements are: General Site Survey, Leachate Collection System Integrity Investigation, Geophysical Survey, Test Pitting and Monitoring Well Installation. The primary focus of this project is to determine the functionality of the existing landfill and identify any areas of concern that may need to be addressed with a remedial action. Information attained from the SCWA will allow the NYSDEC to address the aforementioned objectives. To attain this information, the Standby Work Assignment Contractor (SWAC), or their subcontractor, will provide limited services as detailed in the following sections. The Department will be responsible for directing field work, documenting the results of test pits/borings, sample collection, sample analysis and all data interpretation. Work completed as per this SCWA will be completed in a time frame acceptable to the Department. It is expected that work will be performed in an expeditious manner, however, given the time of year, some work may need to be postponed until the spring.

Prior to the use of invasive sampling methods such as test pit excavation and drilling, utility clearance will be obtained for the work area in accordance with 16 NYCRR Part 753. Clearance will be obtained by the excavation/drilling contractor/subcontractor.

General Site Survey

At least 10 days prior to the start of the intrusive work, the SWAC will arrange for delineation of all underground utilities. The SWAC will obtain the services of a New York State Department of Education licenced professional land surveyor to provide a survey of the Reed Road Property. The site boundary must clearly be identified in the field including all corners and, at a minimum, every 300 feet along straight sides. The site should also be surveyed on a 50' by 50' grid to establish general site contours, including any significant contour changes and features. The locations of the three concrete manholes, the concrete storage tank, the pond immediately down gradient of the tank and the drainage ditch at the outlet of the pond (from the pond to the property boundary) must also be defined. If possible, invert elevations of each manhole and the tank should be provided. Also, the two existing monitoring well locations must be identified.

Deliverables for this portion of the work will include (2) complete property and contour maps with the above information stamped by a licenced PLS, an electronic copy of this map readable in a format compatible with AutoCAD LT (2005 or newer), any raw data used in compilation of the map and any field notes.

The surveyor will be required to return to the site during, or after, the investigation is complete (at the Department's direction) to survey the locations of the disposal trenches, test pits, monitoring wells, etc. The Department will place stakes with the appropriate information at the locations to be added to the survey.

Leachate Collection System Integrity Investigation

The leachate collection system integrity investigation is intended to assess the integrity of the leachate collection system. The SWAC will arrange for the removal of sediment/leachate from the three manholes and the leachate collection tank prior to flushing, high pressure flushing of the three lateral collection pipes and header pipe, a video survey of the interior of each lateral and header pipe and the removal of leachate and sediment generated during the flushing event.

Deliverables for this portion of the work will include a log of the flushing activities, a log of the video activities and (2) DVD discs containing the recording of the pipe video. The flushing log must include the location of access to each pipe section, the flushed length of each pipe section, the reason for terminating the flushing of each section (i.e. obstruction encountered, visually confirmed entire pipe length was flushed, etc.) and any applicable field notes or problems encountered. The video log must include the access location of each pipe section, the video length, the reason for terminating the videoing of each section, any applicable field notes or problems encountered and a summary of what is contained on the DVD. The DVD of the video work must show the length of entry into the pipe to facilitate precise excavations in order to further investigate areas of concern, if necessary.

Work completed under this section will generate leachate that will need to be disposed. Leachate will be generated from the manholes, and possibly the tank, prior to and after flushing activities. The liquid currently in the tank will be analyzed to determine if discharge to the on-site pond will be acceptable. The contractor will need to inform this Department of the proposed

disposal location and required characterization testing prior to mobilizing on-site. When this information is received, the Department will promptly sample the manholes and the leachate tank to verify disposal requirements are satisfied and direct the contractor to mobilize on-site.

The contractor will be responsible for providing potable water for flushing/video activities.

Geophysical Survey

The geophysical investigation program will consist of a reconnaissance-level near surface geophysical survey across the site. The purpose of the survey is to determine the presence and locations of any underground structures, utilities, and/or buried debris within the survey area that may be associated with historical site uses. The survey will also be used to identify the approximate horizontal and vertical limits of the three disposal trenches. The results of the investigation may be used to identify structures requiring additional investigation using intrusive methods. The target exploration depth is the upper 12-14 feet of soil in the vicinity of the disposal trenches and the upper 8-10 feet of soil elsewhere on-site. The SWAC will arrange the geophysical subcontractor.

The subcontractor shall identify and interpret anomalous areas, including suspected discrete areas of fill, underground utility lines, piping, and any other structures located by the survey. All transects and station nodes will be identified and referenced to the site survey and established grid coordinate system. All preliminary measurements will be plotted on a base map and the results and interpretive maps will be provided to the Department by the subcontractor in hard copy (2 copies) and digital file format (1 copy).

Equipment:

The geophysical survey will be completed with a dual-phase EM-31. The subcontractor is at liberty, and encouraged, to suggest alternative equipment and methods, if based on their professional experience, the results of the investigation would be enhanced. The SWAC and/or their subcontractor will assist the Department in developing specific work plan details that will achieve the goals of the survey. The Department reserves the right to accept or reject any modifications or alterations to the scope.

Reporting:

The draft final report shall be submitted to the Department for review and comment within one week of the completion of the field survey. The subcontractor shall revise the report as necessary and submit the final report two weeks after receipt of the Department's written comments on the draft.

The report shall include a description of the methodology and equipment used, transect and station spacing, surveying difficulties encountered, a site location map, a map(s) of results, a color interpretive map(s), a discussion of findings and interpretations relative to project objectives, and an assessment of data reliability.

The maps shall show the aerial extent of the survey, the exact locations of grid nodes, and areas of interference where the survey either could not be performed or was affected by surface objects or other possible causes. The maps shall also include a complete and accurate legend, bar scale, north arrow, title and date of survey. The report's interpretive maps shall be annotated to show both anomalous and non-anomalous (background) areas, and discrete anomalies that may be indicative of buried features.

In addition to the final report, the subcontractor will deliver to the Department complete copies of the original downloaded digital files of all survey data (in ASCII text file format), copies of field notes, and logs.

The Department will provide an electronic base map (AutoCad LT (2005 or newer) compatible) of the site for the subcontractor's use prior to the subcontractor mobilizing to the site. The base map will include the results of the topographic survey and all relevant structural features included in the initial site survey. All subcontractor's mapping overlays will be appended as layers within this master file.

Test Pitting

A test pit program will be implemented to further explore anomalies identified during the leachate collection system investigation and geophysical survey, explore the limits of the three disposal trenches, assess the trench cover materials, facilitate sampling of the waste material and facilitate other subsurface sampling as directed by this Department. The SWAC must provide clearance with respect to underground utilities prior to digging.

The SWAC will arrange a tracked backhoe and an operator to perform test pits as directed by this Department. It is anticipated that the test pit investigation will last between two and five days depending on the results of the leachate investigation and geophysical survey. Logs of test pits and sampling will be completed by this Department, however, the contractor is expected to cooperate with the Department to facilitate these activities. The contractor will be required to backfill all test pit locations as directed by this Department.

Monitoring Well Installation

The drilling program will consist of installing up to six soil borings using hollow stem auger drilling techniques under the direct technical oversight and guidance of Department personnel. Specific drilling, sampling, testing and monitoring well installation procedures to be performed by the subcontractor are provided in the following sections. The SWAC will arrange the drilling services.

Drilling and Soil Sampling:

The soil borings will be advanced from grade to not more than 50-feet below grade using 4.25" inner diameter hollow stem augers. 2" diameter split spoon samples will be collected in advance of the augers. The borings will be advanced and spoon samples collected in general

accordance with ASTM 1586-92. Samples will be collected at five foot intervals or continuously based upon the discretion of the DEC.

The approximate locations of the borings will be determined by this Department. A sketch map of the site and proposed locations will be provided to the subcontractor prior to mobilization.

Monitoring Well Installation:

Soil borings will be converted to groundwater monitoring wells upon completion of installation and sampling. Monitoring wells will be constructed of 2-inch inner diameter; threaded, flush-jointed, Schedule 40 with machine slotted 0.010-inch well screens. The depth to base and length of screen to be used will be determined in the field by the Department's on-site representative.

A well filter pack consisting of industrial/commercial grade Moire#1 quartz sand will be tremied into the annular space between the well screen and the boring wall as the auger flights are slowly removed. The sand filter pack will be placed from the base of the boring to approximately 2-feet above the top of the well screen.

A 3.0' thick bentonite seal (tremied slurry is preferred) will be placed in the annulus above the sand filter pack.

A cement/bentonite grout, consisting of portland cement mixed with 5%-powdered bentonite, will be tremied into the annular space for the remaining depth of the well up to approximately 3' below grade. The well seals will be allowed to cure for a minimum of 24 hours before completing the construction.

A locking protective casing will be installed to 3 feet above grade with an aluminum protective cover and locking cap. A concrete surface seal will be constructed by pouring concrete into a cylindrical Sontotube® with a minimum 1.5' radius and 4' deep. The concrete shall fill the annular space of the borehole between the ground surface and top of the bentonite/cement seal.

The Department will be responsible for developing the well.

Drill cuttings may be disposed on-site in an area approved by this Department. The area around the well will be restored, to the extent practical, to its appearance prior to installation.

V. GENERAL SCWA COMMENTS

The following comments apply to all work completed on site:

- ➔ Water and sanitary facilities are not accessible on-site and therefore Subcontractors must make their own arrangements for these amenities.
- ➔ Any damage to off-site property or on-site property will be corrected at the expense of Standby Work Assignment Contractor (SWAC).

- ✈ All work will adhere to health and safety procedures in accordance with the generic health and safety standards established by the SWAC. Subcontractors shall provide their own safety equipment.

ATTACHMENT 1: Figures

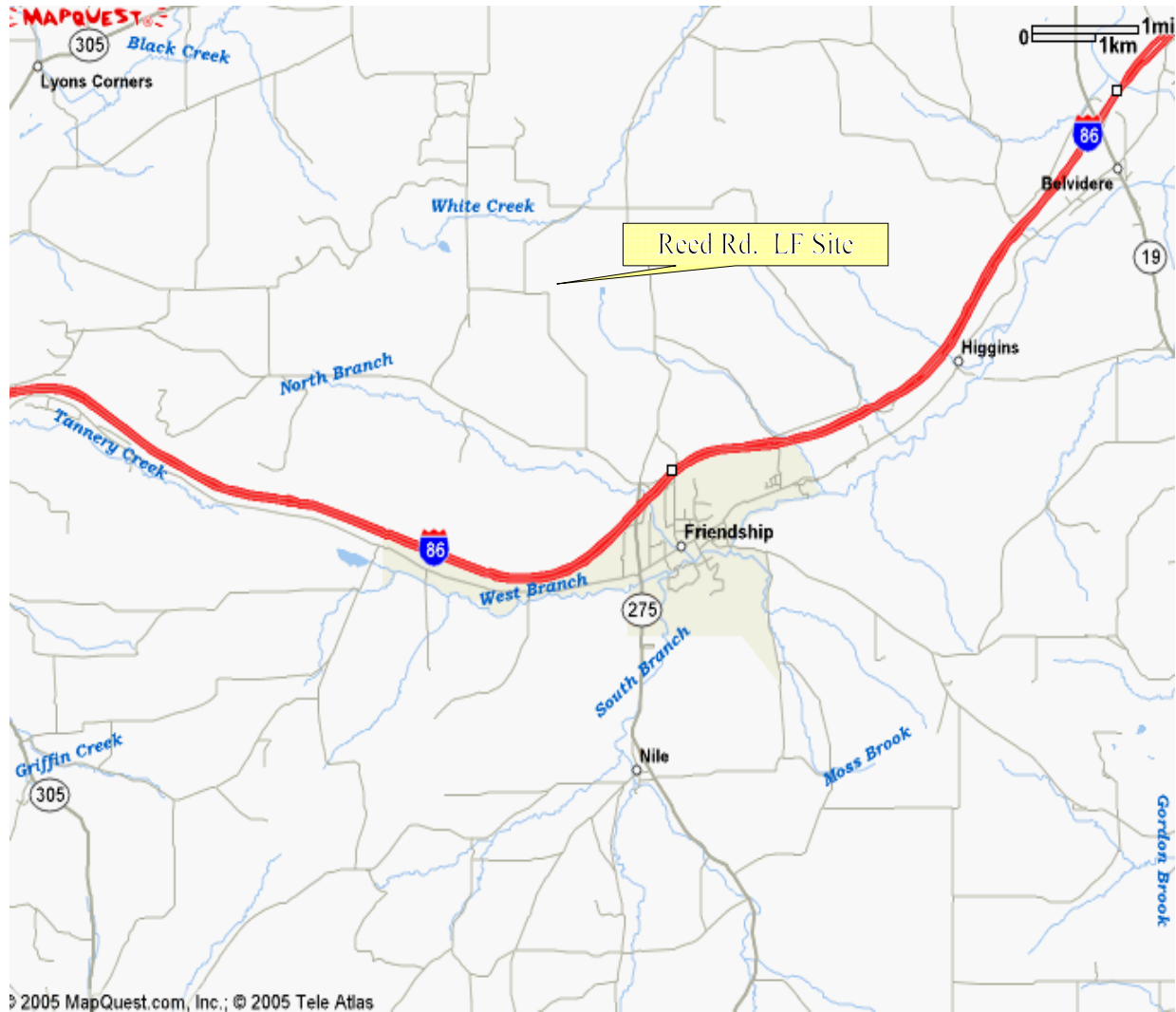


Figure 1 Street Map Location of Site



Figure 2 Tax Map Location of Site

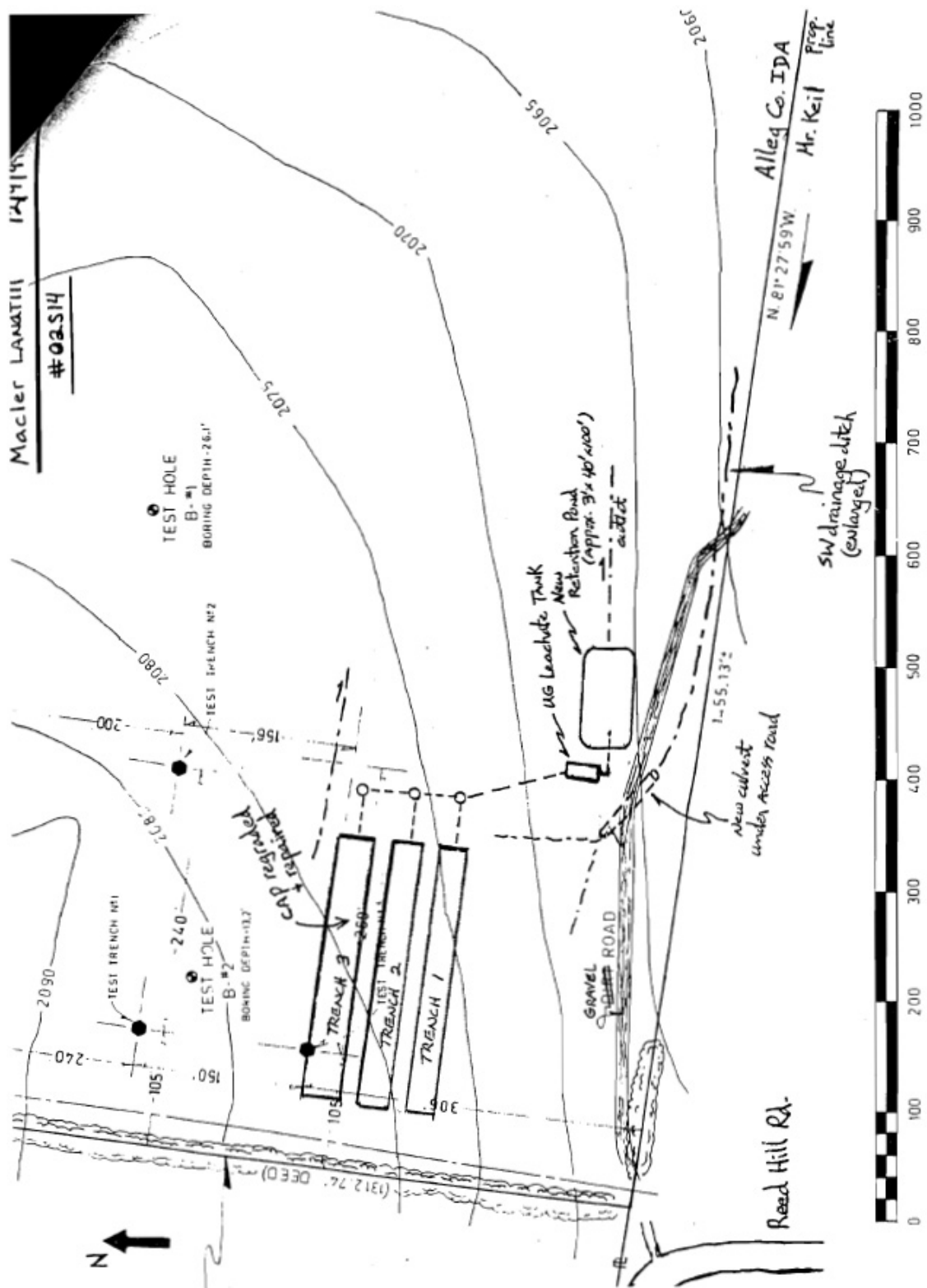


Figure 3 Site Map Sketch; Not To Scale; For Reference Only

ATTACHMENT 2: Pictures



Picture 1: East End of Property



Picture 2: Central Portion of Property



Picture 3: South End of Property



Picture 4: Storage Tank



Picture 5: Storage Tank / Pond



Picture 6: Manhole #1



Picture 7: Manhole #2



Picture #8: Manhole #3

ATTACHMENT 3: Cost Estimates

Estimate Subcontractor Costs:

<u>Task</u>	<u>Estimated Cost</u>
1. Site Survey	\$5,000
2. Leachate System Investigation (Pipe Flushing/Video)	\$4,500
3. Geophysical Survey	\$5,000
4. Test Pits (assume 5 days work)	\$3,800
5. Monitoring Well Installation (assume (6) 45 foot wells)	\$15,000
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Total Estimate:	\$ 33,300

