



Environment

Prepared for:
NYSDEC
Albany, NY

Prepared by:
AECOM
Latham, NY
60273289
November 2015

Periodic Review Report

September 16, 2013 through June 15, 2015

Korkay, Inc.
Site No. 5-18-014



Periodic Review Report

September 16, 2013 through June 15, 2015

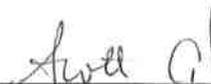
Korkay, Inc.
Site No. 5-18-014

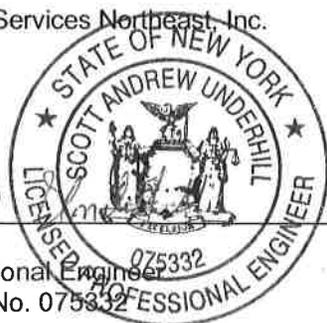
Engineering Certification

I, Scott A. Underhill, certify that I am currently a NYS registered professional engineer and that this Periodic Review Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the Technical Guidance for Site Investigation and Remediation (DER-10) and that all activities were performed in full accordance with the DER-approved scope of work and any DER-approved modifications.

Respectfully submitted,

AECOM Technical Services Northeast, Inc.


Scott Underhill
Registered Professional Engineer
New York License No. 075332



11-24-15
Date

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Acronyms and Abbreviations

µg/L	Micrograms per Liter
AS	Air Sparging
AST	Aboveground Storage Tank
bgs	Below Grade Surface
CDM	Camp, Dresser, and McKee
COCs	Contaminants of Concern
DER-10	NYSDEC Technical Guidance for Site Investigation and Remediation
EC	Engineering Controls
EN	Environmental Notice
FFS	Focused Feasibility Study
FS	Feasibility Study
ft	Foot/Feet
g	Grams
g/kg	Grams per Kilogram
IC	Institutional Controls
ISCO	<i>In Situ</i> Chemical Oxidation
kg	Kilogram
Korkay	Korkay, Incorporated
NYCRR	New York Codes, Rules and Regulations
NYS AWQS	New York State Ambient Water Quality Standards
NYSDEC	New York State Department of Conservation
NYSDOH	New York State Department of Health
OM&M	Operations, Maintenance and Monitoring
PCE	Tetrachloroethene
PID	Photo Ionization Detector
ppm	parts per million
PRR	Periodic Review Report
PSOD	Persulfate Soil Oxidant Demand
PVC	Polyvinylchloride
RI	Remedial Investigation
ROD	Record of Decision
RSO	Remedial System Optimization
SCGs	Standards, Criteria And Guidance Values
SCO	Soil Cleanup Objective
SMP	Site Management Plan
SVE	Soil Vapor Extraction
SVOCs	Semivolatile Organic Compound
TAGM	Technical and Administrative Guidance Memorandum
TCP	1,2,3-Trichloropropane
TOGS	NYSDEC Technical and Operational Guidance Series
TVOCs	Total Volatile Organic Compound

UST
VEWs
VOCs

Underground Storage Tank
Vapor Extraction Wells
Volatile Organic Compounds

Executive Summary

This Periodic Review Report (PRR) has been prepared for the Korkay, Incorporated (Site 518014) at the request of the New York State Department of Conservation (NYSDEC). The reporting period covered in this report is September 16, 2013 through June 15, 2015. This PRR was prepared by AECOM under Work Assignment number D007626-20.

Korkay, Incorporated (Korkay) was a supplier of detergents, solvents, and degreasers to the automotive industry. In addition, Korkay also operated as a drum reclamation facility. The drum reclamation process was conducted without appropriate containment, with residual chemicals and rinsate being discharged through the facilities septic system or directly to the ground surface.

Remedial Investigation (RI) and Feasibility Study (FS) activities were conducted between 1993 and 1995. A Record of Decision (ROD) was entered by the NYSDEC in March 1996.

In August 1997, a remedial action was conducted at the Site which included demolition of a building, and excavation and disposal of grossly contaminated soils. In November 1998, a soil vapor extraction/air sparging (SVE/AS) system was constructed and put into operation to address the residual soil contamination. The system was operated intermittently until 2003.

Post remediation groundwater sampling results indicated that groundwater in the former source area remained contaminated in excess of applicable standards. A remedial system optimization (RSO) study performed in 2007. The RSO included a focused feasibility study (FFS) which recommended the removal of the soil within 60 feet (ft) by 60 ft source area near the former SVE/AS.

In 2010, an investigation indicated widespread subsurface soil impacts remain at the Site, in comparison to the FFS. Using the excavation approach recommended in the FFS with the data collected in 2010, it was estimated that approximately 11,500 cubic yards of soil below 6 ft bgs would need to be shipped offsite for disposal.

An Environmental Notice (EN) for the Site was filed with Fulton County on January 25, 2013.

The previous PRR (AECOM, March 2014) demonstrated dissolved volatile organic compound (VOC) concentrations in many wells continuing to display a decreasing trend; however, wells near the source area maintained total VOCs (TVOCs) concentrations above 100 micrograms per liter ($\mu\text{g/L}$).

Site groundwater is monitored on a rotating 5 quarter basis with sampling events conducted on a network of wells installed on, and adjacent to the Site. The most recent groundwater samples were collected in July 2014. With NYSDEC approval, this event included the performance of an investigation to further evaluate on-Site and off-Site groundwater and soil impacts. The extent of dissolved-phase groundwater impacts on-Site and off-Site appeared to be greater than previous groundwater investigations and monitoring suggested. Soil impacts in the source area appeared to be consistent with previous investigations. The groundwater and soil impacts off-Site were not fully defined. A final report with the results of this sample event was submitted to the NYSDEC in November 2014.

Currently, certification that the Site Institutional Controls/Engineering Controls (IC/ECs) are in compliance with the requirements of the EN can be completed; however, the deficiencies identified and described in this PRR should be addressed.

AECOM recommends the following:

- Annual periodic review is recommended in order to determine the compliance of the facility with the IC/ECs in place.
- Continue 5 quarter groundwater sampling to monitor the plume.
- Conduct an additional investigation of off-Site soil and groundwater to assess the nature and extent of Site related impacts.
- The fence at the Site should be inspected frequently during the winter to limit damage from neighboring snow plowing activity. However, since data obtained from numerous soil borings drilled on-Site since 2010 did not identify elevated PID readings, staining or odor at depths shallower than 4 feet deep, site access restriction may no longer be needed and fence removal may be a consideration.
- Develop a SMP in accordance with Technical Guidance for Site Investigation and Remediation (DER-10) guidance to assure that appropriate and comprehensive site management is completed throughout the remaining post remediation monitoring period.
- Implement a remedial alternative utilizing ISCO to further remediate on-Site impacts to soil and groundwater.

A copy of the IC/EC certification is included in Appendix B.

1.0 Site Overview

Korkay, Incorporated (Korkay) located in Broadalbin, NY, was a supplier of detergents, solvents, and degreasers to the automotive industry from 1969 to 1980 (Figure 1). Korkay purchased bulk quantities of chemicals that were stored onsite for repackaging and/or blending into commercial products including automobile wax and hand cleaners. In addition to the production of commercial products, Korkay also operated as a drum reclamation facility. Drums were accepted containing a variety of chemicals for which limited documentation exists. The chemicals were received as residuals in drums being reclaimed making their quantity difficult to determine. The drums were emptied of any remaining chemicals, and were washed, rinsed and relined. This process was conducted without appropriate containment, such that the chemicals and chemical-laden rinsate were discharged through the facility's septic system, or directly to the ground surface. The New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH) inspected the Site in 1979 and documented the occurrence of these activities. In 1980, Korkay installed a 4,000 gallon aboveground storage tank (AST) to appropriately contain the residual chemicals and rinsate generated from drum reclamation. Reports and Site documentation indicate that the drums contained acetone, isopropyl alcohol, degreasers and perfumes, as well as other chemicals.

The NYSDEC conducted a Site inspection in 1992, at which time numerous drums of hazardous waste were found and secured for removal. Between 1993 and 1995, Camp, Dresser, and McKee (CDM) conducted a Remedial Investigation (RI) and Feasibility Study (FS) of the Site. The first phase of the RI, conducted from September 1993 until April 1994, included the collection of surface and subsurface soil samples and the installation and sampling of monitoring wells. The second phase of the RI, conducted between October 1994 and May 1995, included the collection of additional soil samples to delineate vertical extent of contamination and background levels, and the collection of a second round of groundwater samples.

Evaluations of remedial alternatives were presented in a Final Phase I & II FS (February 1995) and a detailed analysis FS (August 1995). Following submission of the FS, a Record of Decision (ROD) was issued in March 1996.

As outlined in the ROD, the overall remediation goals of the Site are:

1. To eliminate, to the greatest extent possible, on-Site soils as a source of groundwater contamination.
2. To eliminate or reduce human exposure to on-Site soils contamination.

To accomplish these goals based upon the results of the RI/FS and the evaluation of alternatives, the NYSDEC selected: excavation and off-Site disposal of the top six inches of contaminated surface soil; backfill excavated areas with clean, compacted and re-vegetated soil; install and operation a soil vapor extraction (SVE) system, with an optional air sparging (AS) system or Site dewatering; and Site environmental monitoring for five years.

The specific elements of the remedy were:

- A remedial design program to verify the components of the conceptual design, provide the details necessary for the construction, operation and maintenance, and monitoring (OM&M) of the remedial program and resolve uncertainties identified during the RI/FS.
- Excavation and off-Site disposal of approximately 145 cubic yards of contaminated surface soil.
- Backfilling excavated areas with clean fill, to be compacted, graded and covered with vegetation to reduce infiltration of precipitation and reduce erosion.
- Conduct SVE (with optional AS or Site dewatering) for a period of up to six months. The SVE system was to be installed in the area with the highest contamination level.
- Impose deed restrictions to exclude the use of Site groundwater for residential or industrial use.
- Demolition and disposal of the on-Site building.
- Annually monitor, for a period of five years, the groundwater from two wells for volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and pesticides. The Site was to be reevaluated at the end of the five year period to assess the effectiveness of the remedy.

Building demolition and excavation and off-site disposal of contaminated soils occurred between April and August 1997. Operation of the SVE system began in November 1998. In July 2000, the contract with CDM expired and the NYSDEC assumed responsibility for Site operations. The NYSDEC discontinued operation of the SVE system in 2003.

Post remediation groundwater sampling results indicated that groundwater in the former source area remained contaminated in excess of applicable standards. A remedial system optimization (RSO) study was initiated in 2007 in order to determine the most effective mechanism to address the groundwater contamination.

The RSO study determined that although the remediation efforts were effective at reducing Site contamination, subsurface soil and groundwater impacts still existed. The RSO included a focused feasibility study (FFS) which evaluated remedial alternatives to address the residual impacted soil and groundwater. The FFS recommended further soil excavation and off-site disposal along with continued groundwater monitoring and imposition of a deed restriction. The alternative included reuse of excavated soil from the ground surface to 6 feet below grade surface (bgs) and the off-Site disposal of soil excavated from 6 feet bgs to the top of a clay layer which is present at an average depth of 15 ft bgs. Excavation would require dewatering. The alternative presumed the removal and treatment of groundwater from the source area along with the excavation removal of the residual impacted soil would effectively remove the future contaminant load resulting in improved groundwater conditions at the Site and downgradient.

In 2010, 28 soil borings were installed at the Site to further characterize and delineate soil impacts in preparation for the soil removal activities. The field data and laboratory data collected as part of this investigation indicated that widespread subsurface soil impacts remained at the Site, in comparison to the FFS. Approximately 35,000 square feet (ft) of the Site may be impacted above Standards, Criteria and Guidance values (SCGs). Using the excavation approach recommended in the FFS with the data collected in 2010, approximately 7,600 cubic yards of soil from ground surface to 6 ft bgs would be excavated and used as fill and 11,500 cubic yards of soil below 6 ft bgs would need to be shipped offsite for disposal. Observations of impacted soil, in the form of odor, elevated PID readings and/or

contaminant staining was identified in several borings below a depth of 5 to 6 feet bgs. No such impacts were observed in any borings at depths less than 2 to 4 bgs.

The 2010 investigation also included a soil boring on the neighboring residential property to the west of the Site. Staining, odors, and elevated Photo Ionization Detector (PID) readings were detected in soil from 6.5 ft bgs to the bottom of the boring (10 ft bgs). Based on these findings, recommendations were provided to conduct additional soil and groundwater sampling to define the nature and extent of off Site impacts and that soil gas vapor intrusion sampling should be considered for properties near the Site.

An Environmental Notice (EN) for the Site was filed with Fulton County on January 25, 2013 (Appendix A).

In January 2012, a five-quarter groundwater sampling event was performed per requirements of the OM&M Plan that was documented in the AECOM January 2012 Groundwater Monitoring Report. Review of the shallow groundwater data demonstrated that groundwater contamination persisted in some of the same areas as discussed in the 1988 RI report, primarily beneath the southwest quadrant of the Site, in the former source area; groundwater results from the deep wells at the Site continued to be below New York State Ambient Water Quality Standards (NYS AWQS).

Similarly, the results of groundwater samples collected during the June 2013 five-quarter monitoring event, presented in the 2013 Groundwater Monitoring Report (AECOM, 2014), showed continued persistence of contaminated groundwater in the areas observed in January 2012.

Based on the findings of the 2010 soil boring investigation and June 2013 groundwater sampling event, the 2014 5-quarter monitoring event was conducted as a soil and groundwater investigation. The investigation was conducted to evaluate the nature and extent of off-Site impacts. The scope and results of this investigation are presented in Section 2.

2.0 Evaluate Remedy Performance, Effectiveness and Protectiveness

This section presents a summary of the effectiveness and protectiveness of the current IC/ECs in place at the Site.

2.1 Monitoring Well Description

The monitoring well network consists of four vapor extraction wells (VEWs) and one AS well (located in the former source area and no longer used for the decommissioned SVE/AS system), as well as four shallow aquifer monitoring wells and three deep aquifer monitoring wells. All wells are constructed of 2-inch diameter polyvinylchloride (PVC). All VEWs are installed to a depth of approximately 9-ft below ground surface. The screened interval is 5-ft in length, installed approximately 1-ft into the groundwater. The monitoring well network is presented on Figure 2. The monitoring well network is sampled on a five quarter basis.

During the July 2014 five-quarter sampling event, these wells were not sampled, and instead, a soil boring and groundwater investigation was conducted. This investigation was conducted with NYSDEC approval to further assess the nature and extent of contamination. Results of the 2014 soil and groundwater investigation are presented in Section 2.3.

2.2 Operation, Maintenance And Monitoring Plan Compliance Report

During this reporting period there was no active remediation performed at the Site. Operations, Maintenance and Monitoring (OM&M) Plan activities currently required are limited to inspections, soil monitoring, and groundwater monitoring. Inspections are performed concurrently with the sampling events and are documented in the sampling reports. Site groundwater and soil is monitored through sampling events conducted every fifth quarter on a network of wells installed on, and adjacent to the Site, as described in Section 2.1.

2.3 Monitoring Plan Compliance Report

2.3.1 Confirm Compliance with Monitoring Plan

One groundwater and soil sampling event was conducted during this reporting period. Groundwater samples were collected from 23 borings (GW-1 through GW-23) between July 7, 2014 and July 9, 2014. The locations of the on-Site and off-Site soil borings are presented on Figure 3. Soil was collected in 5 ft intervals in 1.5 inch core barrel with acetate liners. The cores were examined by an AECOM geologist and were screened with a photo ionization detector (PID) for the presence of VOCs. Observations and PID readings were recorded on boring logs (Appendix C). The borings were advanced below the groundwater table, typically found 5 to 8 ft bgs. Once at the desired depth, a 4 ft retractable screen (SP-10) was set to straddle the water table to collect grab groundwater samples utilizing a peristaltic pump. The SP-10 sampler was decontaminated by washing with a non-phosphate cleanser, and rinsing with potable water between samples. Dedicated tubing was used for the collection of each sample.

Groundwater samples were analyzed for VOCs (Method 8260B), SVOCs (Method 8270C) and organochlorine pesticides (Method 8081A). The samples were put on ice and were shipped under chain of custody for analysis at Test America in Buffalo, New York. Additionally, a soil sample was collected from boring GW-2 for analysis of persulfate soil oxidant demand (PSOD). This sample was sent to Regensis for analysis.

2.3.2 Confirm that Performance Standards are Being Met

2.3.2.1 Soil Remedial Performance

Stratigraphic and VOC Screening Observations

The geology observed was consistent with previous investigations conducted at the Site. The subsurface soil is a fine to coarse sand with some silt that becomes finer with depth. The sand and silt grades to a clay unit which generally dips from north to south with some variability. The clay was generally encountered at 12 ft bgs in high spots to a maximum depth of 18 ft bgs near the south and southeast boundaries of the Site. Historically, shallow groundwater has been reported to flow from north to south. Results of this investigation suggested that the groundwater may flow southwest and west. The 1995 Camp, Dresser, and McKee (CDM) Remedial Investigation (RI) characterized the clay unit as an aquitard which prevents or limits downward migration of impacted groundwater.

Black and gray staining was observed in 15 of the 23 borings and typically corresponded to elevated PID readings. This finding is consistent with historical observations of soil cores at the Site. Figure 4 presents the highest PID reading for each of the borings. Elevated readings were detected both on-Site and off-Site. The highest PID reading of 2,163 parts per million (ppm) was detected in the soil at 10 to 11 ft bgs collected from off-Site boring GW-19. This boring is located in the right of way south of the Site (Figure 4).

The areal extent of subsurface soil impacted with VOCs and/or pesticides above SCGs is unclear, as off-Site impacts still have not been fully defined. The approximate lateral extent of VOC-impacted soil on-site is shown on Figure 5. This map is based on the maximum PID readings in soil samples from soil borings drilled in March 2010 and July 2014.

Persulfate Soil Oxidant Demand

A soil sample was collected from boring GW-2 (Figure 3) for analysis of PSOD. The PSOD results are reported in Appendix D. The measurement of the PSOD is used to estimate the concentration of persulfate that will be consumed in 48 hours by naturally-occurring reducing agents present in soil. The result is used to determine the persulfate loading for ISCO remediation and to evaluate the cost risk of soil contribution to persulfate demand. In general, a PSOD result less than 10 grams (g) oxidant per kilogram (kg) of soil indicates that ISCO will be a cost effective remedial alternative. The result for the sample collected at this Site was 1.72 grams per kilogram (g/kg) indicating that ISCO will be a cost effective remedial alternative for the Site.

2.3.2.2 Groundwater Remedial Performance

VOCs

The groundwater results from the July 2014 temporary groundwater sample points are presented in Table 1 with total VOCs shown on Figure 6. Dissolved phase VOCs were detected above NYS AWQS in 10 of 12 groundwater samples collected On-Site. The detected constituents exceeding the NYS AWQS include primarily petroleum hydrocarbon VOCs and to a lesser extent chlorinated hydrocarbon VOCs such as 1,2,4-dichlorobenzene, 1,2,3-trichloropropane (TCP), tetrachloroethene (PCE), and

associated breakdown compounds. The highest detection of dissolved phase VOCs was 3,995 µg/L in the sample collected from point GW-7 located within the foot print of the former building. No exceedances were detected in samples collected from points GW-9 and GW-16 which were located on the eastern portion of the property.

Off-Site, VOCs were detected above the NYS AWQS in all of the samples collected at the property located west of the Site (GW-10, GW-11, and GW-12), two of the four samples (GW-19 and GW-20) in the right of way southwest of the Site, and in two of the three samples (GW-21 and GW-22) collected north of the Site. The same constituents found to exceed the NYS AWQS on-Site were detected in the off-Site samples. The highest total concentration of VOCs was 2,209 µg/L from the GW-10 sample collected on the western property line. This location is near the former fuel oil underground storage tank (UST) near the property line. Slight exceedances of petroleum related VOCs were detected in samples from GW-21 and GW-22 installed approximately north of the Site. No VOCs were detected above NYS AWQS in the sample collected from boring GW-1 on the property east of the Site.

Figure 7 presents isoconcentration contours of total VOC concentrations reported in samples collected from the July 2014 temporary groundwater sample points. This figure indicates the groundwater contaminant plume extends off-site to the south and southwest. The extent of off-site groundwater impact is not presently delineated.

SVOCs

Dissolved phase SVOC detections are reported on Table 2. The common laboratory contaminants bis (2-ethylhexyl) phthalate and di-n-butyl phthalate were detected in all of the samples. This compound was also detected in the laboratory blank and is not considered a Site-related contaminant of concern. Dissolved SVOCs, primarily naphthalene, were detected above NYS AWQS in samples from 13 borings. The SVOC impacts are similar in aerial extent to the VOC impacts.

Pesticides

Pesticide results are reported on Table 3. Pesticides were detected above NYS AWQS in 18 of the samples collected during this investigation. A majority of the pesticide detections were flagged with a "J" indicating that the result is less than the recording limit but greater than the detection limit and the result is considered estimated. This adds a level of uncertainty in comparing these data to the NYS AWQS. The pesticide results may be biased high due to the fact that these were temporary sampling points and the samples were relatively turbid and that the pesticides may more likely be adsorbed onto the soil particles. Chlordane (alpha-chlordane and gamma-chlordane) was detected at an order of magnitude or greater above the NYS AWQS of 0.005 µg/L at several locations both on-Site and off-Site. The highest concentration of chlordane (9.3 µg/L) was detected in the off-Site sample GW-10 installed at the property to the west of the Site. Similar concentrations were detected on-Site including 5.2 µg/L at location GW-7.

2.4 Remediation Goals and Site-Closure Criteria

The overall remedial goals as specified in the March 1996 ROD are:

1. To eliminate, to the greatest extent possible, on-Site soils as a source of groundwater contamination; and
2. To eliminate or reduce human exposure to on-Site soils contamination.

The Contaminants of Concern (COCs) for Site soils as identified in the ROD include VOCs, SVOCs and pesticides whose concentrations exceeded relevant SCGs. The SCGs for soils presented in the ROD were taken from NYSDEC Technical and Administrative Guidance Memorandum (TAGM) HWR-94-4046 dated January 24, 1994. In December 2006, the NYSDEC promulgated 6 NYCRR Part 375 that established new SCGs for sites administered under the State Superfund Program. The Part 375 regulations contain varying levels of cleanup criteria, the most conservative are for Unrestricted Use. The Unrestricted Use, which provides for protection of groundwater, human health and the environment, are considered appropriate for the soils.

The long-term goal for groundwater is to reduce concentrations “to the extent practical based on technological limitations” to levels below SCGs. Groundwater COCs as identified in the ROD are presented in Tables 1, 2 and 3 along with previous and current SCGs. The SCGs for groundwater presented in the ROD were taken from the NYSDEC Technical and Operational Guidance Series (TOGS 1.1.1) Ambient Water Quality Standards and Guidance Values dated October 22, 1993. The Ambient Water Quality Standards updated in June 1998 are considered to be the appropriate SCG for the groundwater at the Korkay Site for the Periodic Review Report (PRR).

2.5 Institutional and Engineering Controls Certification Plan Report

IC/EC controls at the Site currently consist of an EN on file with Fulton County and security fencing at the property boundaries to restrict unauthorized access. The EN restricts property and groundwater use at the Site. The EN was filed in January 2013 and a copy is attached as Appendix A.

2.5.1 Institutional and Engineering Controls Requirements and Compliance

Determination of compliance with the Institutional and Engineering controls at the Site is made based on the following criteria:

- The IC/ EC(s) applied at the Site are in place as documented in this report.
- Nothing has occurred that would impair the ability of such controls to protect the public health and the environment, or constitute a violation or failure to comply with any element of the SMP for such controls.
- Access to the Site will continue to be provided to the Department, to evaluate the remedy including access to evaluate the continued maintenance of such controls.

Currently certification that the Site IC/ECs are in compliance with the requirements stated above can be completed, however, the following deficiencies should be addressed:

The areal extent of off-Site impacts to downgradient groundwater has not been fully defined. Results from the July 2014 groundwater investigation suggest impacts west and southwest of the Site are related to the source areas at the Site. An additional investigation should be performed to define the off-Site impacts. Locations for additional groundwater sample points shown in Figure 8 are recommended with the objective to complete the off-Site delineation of the groundwater contaminant plume and provide the data necessary to select locations for new permanent off-Site monitoring wells. Figure 8 shows the approximate 2014 groundwater sample locations where VOC concentrations exceeded relevant NYS AWQS, the inferred off-site downgradient groundwater flow directions, and the resulting inferred off-Site projected contaminant plume limit. Additional monitoring wells should be installed off-Site once the extent of the plume has been defined. Proposed locations for 4 additional on-Site wells are also included on Figure 8.

There is evidence that snow plowing on the neighboring property has resulted in large snow banks being piled against the fence. This may cause the fence to break loose from the fence posts. The fence should be inspected frequently in the winter. However, since data obtained from numerous soil borings drilled on-Site since 2010 did not identify elevated PID readings, staining or odor at depths shallower than 2 to 4 feet deep, site access restriction may no longer be needed and fence removal may also be a consideration.

2.5.2 Institutional and Engineering Controls Certification Forms

Refer to Appendix B.

3.0 Evaluation of Costs and Observations

3.1 Summary of Costs

Total annual costs for continuation of the required monitoring associated with the current remedial strategy, monitored natural attenuation, is approximately \$20,500 based on costs incurred during the reporting period. Major cost-components are allocated through the annual PRR period are as follows:

· Long-term monitoring (every 5 quarters)	\$13,000
· PRR Reporting	\$5,500
· Site O&M	\$2,000

Site costs could be greatly increased to reflect extended monitoring requirements should the NYSDEC decide to forego additional remediation at the Site.

3.2 Observations

The Site fence may be under stress from neighboring properties particularly from snow piles. This is indicative of a slight problem based on the fact that the fence provides security and restricts access to the Site. The fence should be monitored during the winter to ensure it is not compromised, or removed if possible.

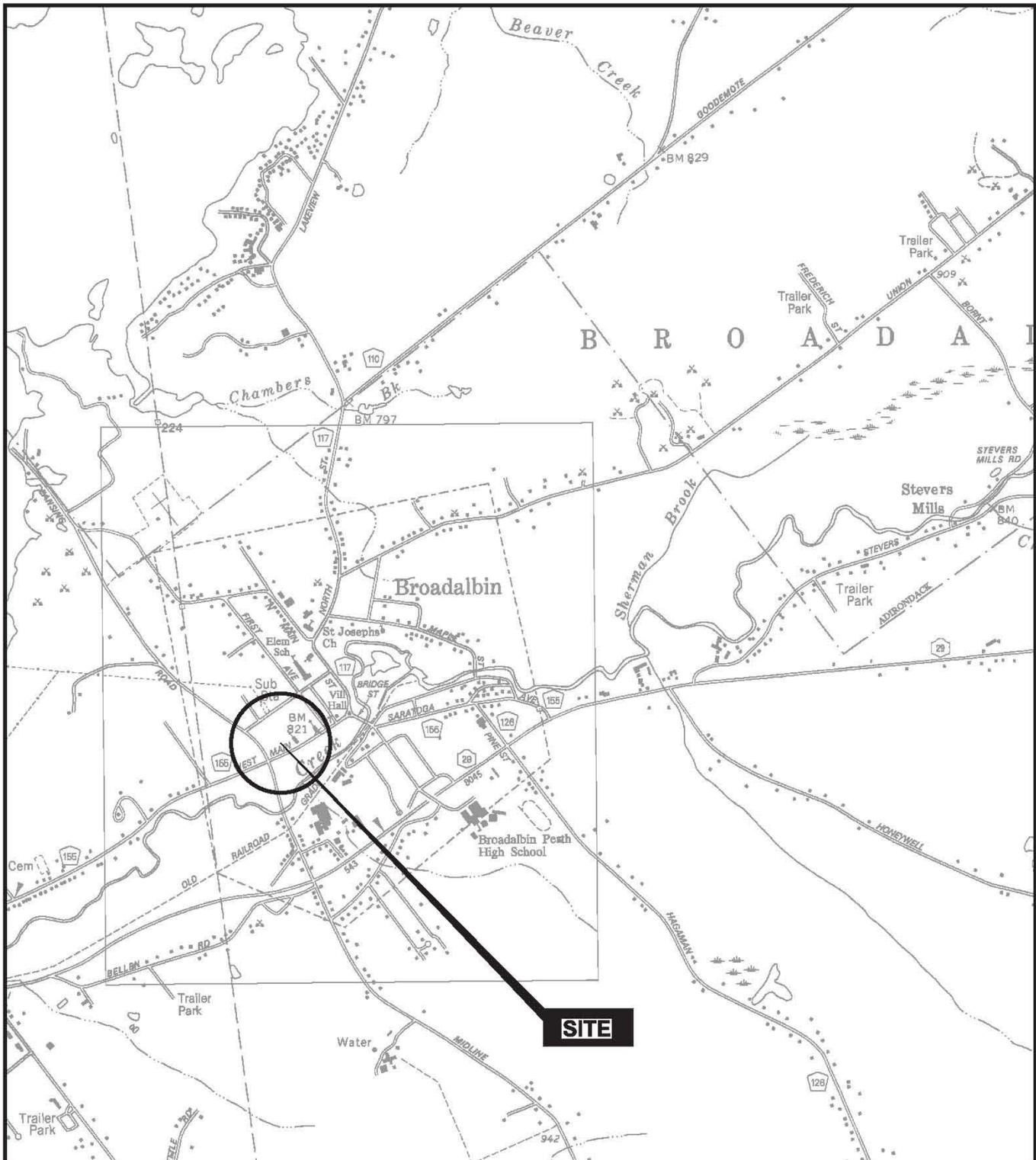
Residual contamination above unrestricted use SCOs remains in soil, at depths between 5 and 12 feet bgs, and the shallow groundwater aquifer at the Site and off-Site downgradient. Currently the remedial strategy for the Site is monitored natural attenuation, which is not likely to achieve Site closure in a timely manner consistent with expected protection of the environment and plume reduction. The 2010 soil sampling and 2014 groundwater sampling indicates that there is a significant mass of VOC and pesticide contamination in the subsurface soil across a majority of the Site and possibly off Site as well.

4.0 Recommendations and Conclusions

AECOM recommends the following:

- Annual periodic review is recommended in order to determine the compliance of the facility with the EC/IC's in place.
- Continue groundwater sampling to monitor the groundwater plume.
- Conduct an additional investigation of off-Site soil and groundwater to assess the nature and extent of Site-related impacts.
- The fence at the Site should be inspected frequently during the winter to limit damage from neighboring snow plowing activity. However, since data obtained from numerous soil borings drilled on-Site since 2010 did not identify elevated PID readings, staining or odor at depths shallower than 4 feet deep, site access restriction may no longer be needed and fence removal may be a consideration.
- Develop a SMP in accordance with current DER-10 guidance to assure that appropriate and comprehensive Site management is completed throughout the remaining post remediation monitoring period.
- Implement a remedy utilizing ISCO to further remediate on-Site impacts to soil and groundwater.

Figures



MAP REFERENCE: NYS DOT 7.5 MIN. QUADRANGLE
BROADALBIN SERIES

PLAN

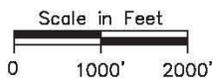
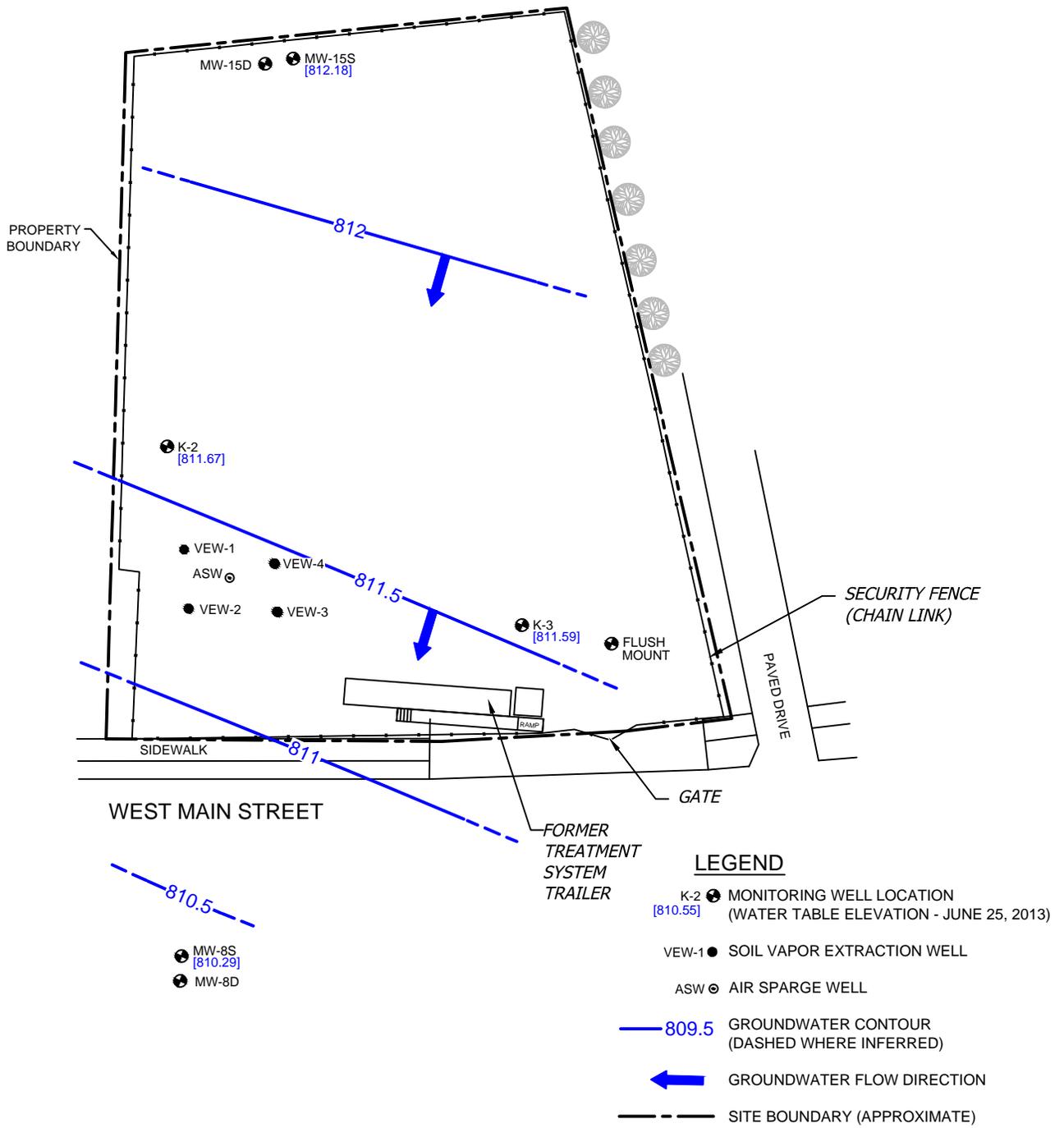


FIGURE 1
SITE LOCATION PLAN
 NYSDEC SITE ID: 5-18-014
KORKAY INC.
 70 WEST MAIN STREET
 BROADALBIN, NEW YORK

DATE: OCTOBER 2013

PROJECT NO.: 60273289



NOTE:
 FOR MAP REFERENCE INFORMATION,
 SEE FIGURE 1-2 "SITE LAYOUT".

PLAN



Scale in Feet



FIGURE 2
MONITORING WELL LOCATION MAP

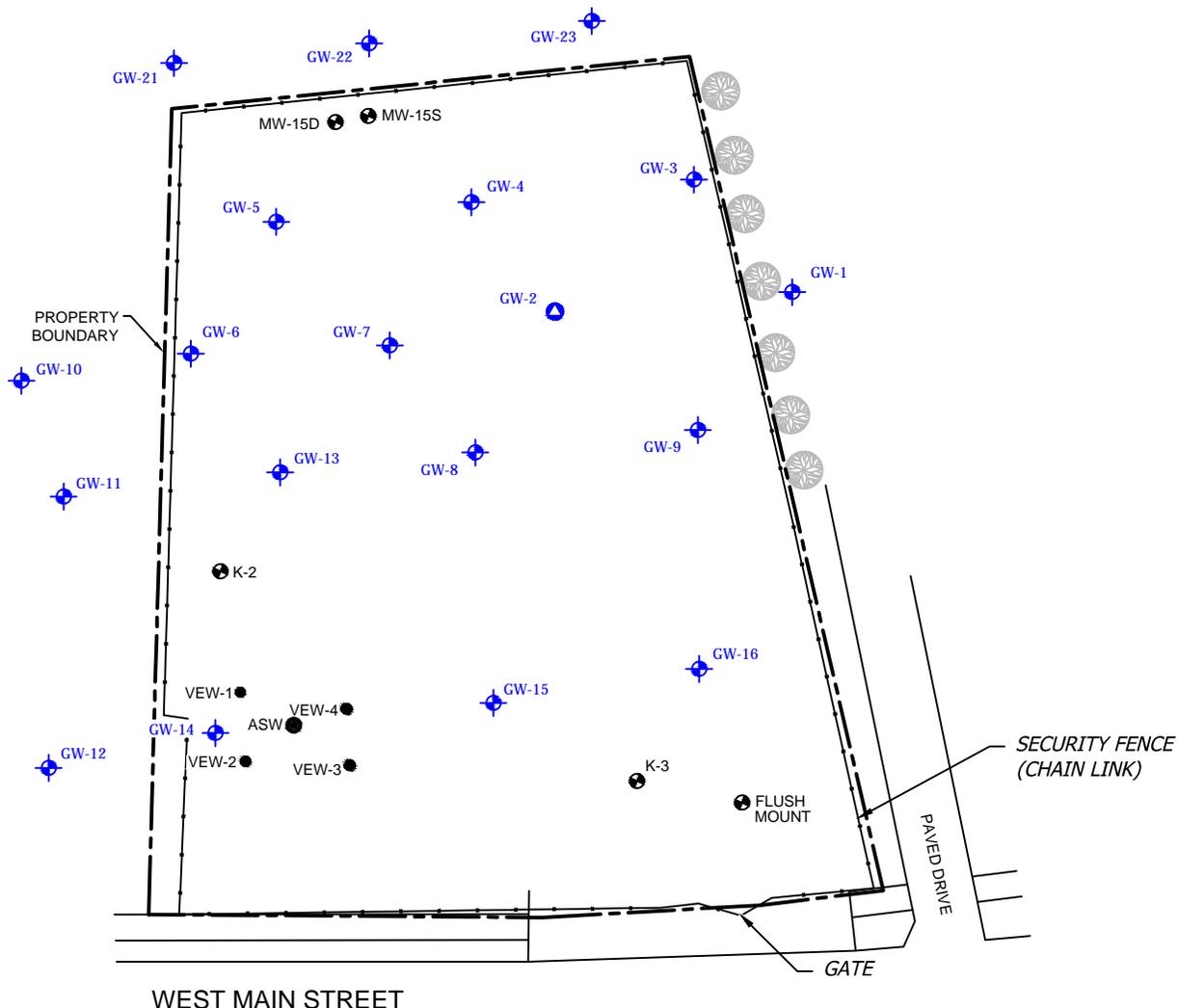
NYSDEC SITE ID: 5-18-014
KORKAY INC.
 70 WEST MAIN STREET
 BROADALBIN, NEW YORK

DATE: OCTOBER 2015

PROJECT NO.: 60273289

NOTES

1. ALL LOCATIONS ARE APPROXIMATE



LEGEND

- SITE BOUNDARY (APPROXIMATE)
- ◆ TEMPORARY GROUNDWATER SAMPLE LOCATION (2014)
- GROUNDWATER AND ISCO TREATABILITY LOCATION
- K-2 ● MONITORING WELL LOCATION
- VEW-1 ● SOIL VAPOR EXTRACTION WELL

NOTE:
FOR MAP REFERENCE INFORMATION,
SEE FIGURE 1 "SITE LAYOUT".

PLAN



Approx. Scale in Feet



FIGURE 3

JULY 2014 GROUNDWATER AND SOIL
TREATABILITY SAMPLE LOCATION MAP

NYSDEC SITE ID: 5-18-014

KORKAY INC.

70 WEST MAIN STREET
BROADALBIN, NEW YORK

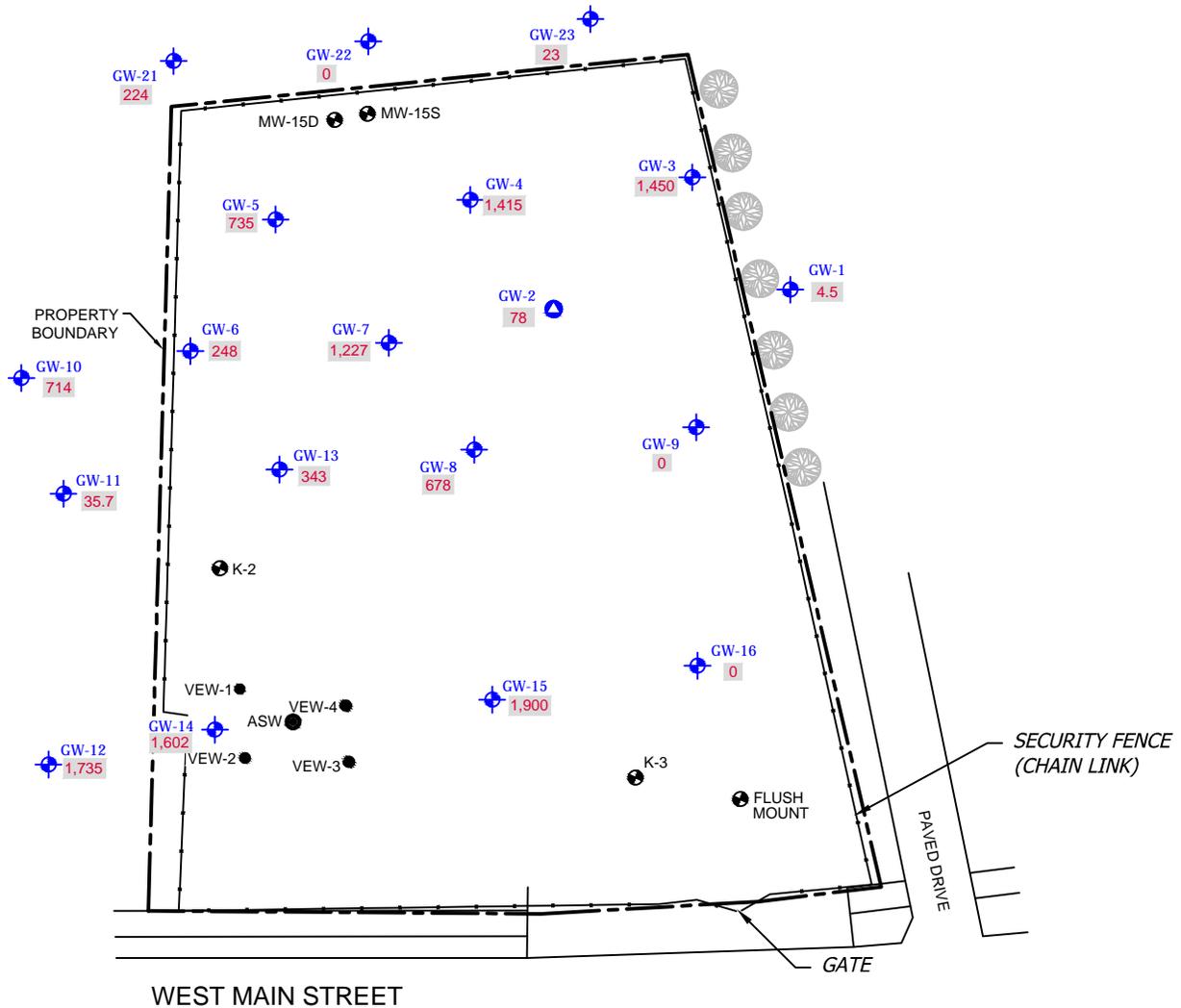


DATE: OCTOBER 2015

PROJECT NO.: 60273289

NOTES

1. ALL LOCATIONS ARE APPROXIMATE.



NOTE:
FOR MAP REFERENCE INFORMATION,
SEE FIGURE 1 "SITE LAYOUT".

PLAN



Approx. Scale in Feet



FIGURE 4

MAXIMUM PID READINGS FROM SOIL SAMPLES

JULY 2014

NYSDEC SITE ID: 5-18-014

KORKAY INC.

70 WEST MAIN STREET
BROADALBIN, NEW YORK



DATE: OCTOBER 2015

PROJECT NO.: 60273289

NOTES

1. ALL LOCATIONS ARE APPROXIMATE.



MW-8S
MW-8D

LEGEND

--- SITE BOUNDARY (APPROXIMATE)
MW-15D ● MONITORING WELL LOCATION

MAXIMUM PHOTOIONIZATION DETECTOR READINGS IN SOIL SAMPLES IN PARTS PER MILLION (ppm) (MARCH 2010 AND JULY 2014 SOIL BORINGS)

- 0 - 5 ppm
- 5 - 100 ppm
- 100 - 1,000 ppm
- > 1,000 ppm

NOTE:
FOR MAP REFERENCE INFORMATION,
SEE FIGURE 1 "SITE LAYOUT".

PLAN



Approx. Scale in Feet



FIGURE 5

APPROXIMATE LATERAL EXTENT OF
VOC IMPACTED SOILS
NYSDEC SITE ID: 5-18-014
KORKAY INC.
70 WEST MAIN STREET
BROADALBIN, NEW YORK

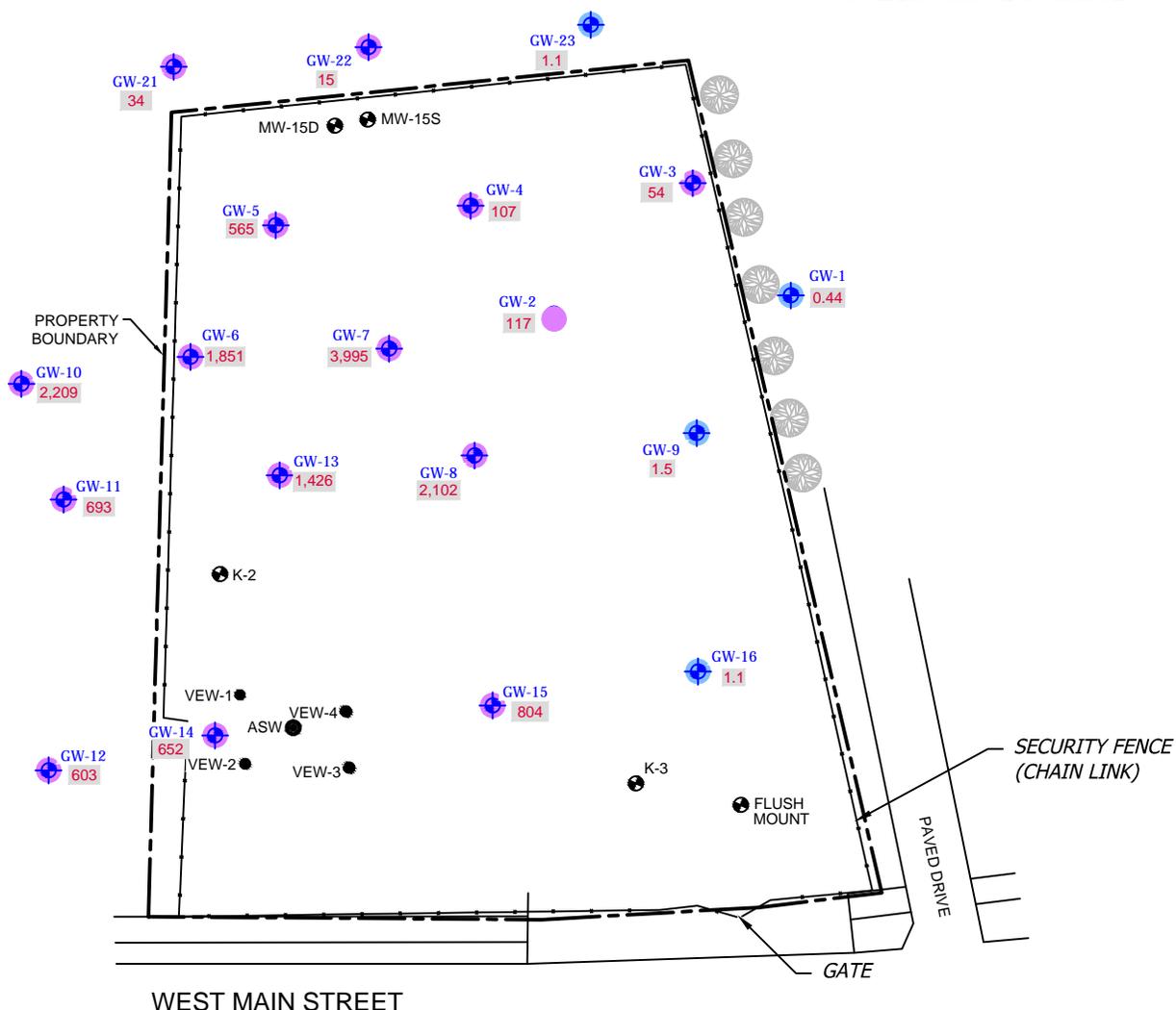


DATE: NOVEMBER 2015

PROJECT NO.: 60273289

NOTES

1. ALL LOCATIONS ARE APPROXIMATE.



NOTE:
FOR MAP REFERENCE INFORMATION,
SEE FIGURE 1 "SITE LAYOUT".

PLAN



Approx. Scale in Feet



FIGURE 6

TOTAL VOC's FROM TEMPORARY
GROUNDWATER SAMPLES - JULY 2014

NYSDEC SITE ID: 5-18-014

KORKAY INC.

70 WEST MAIN STREET
BROADALBIN, NEW YORK

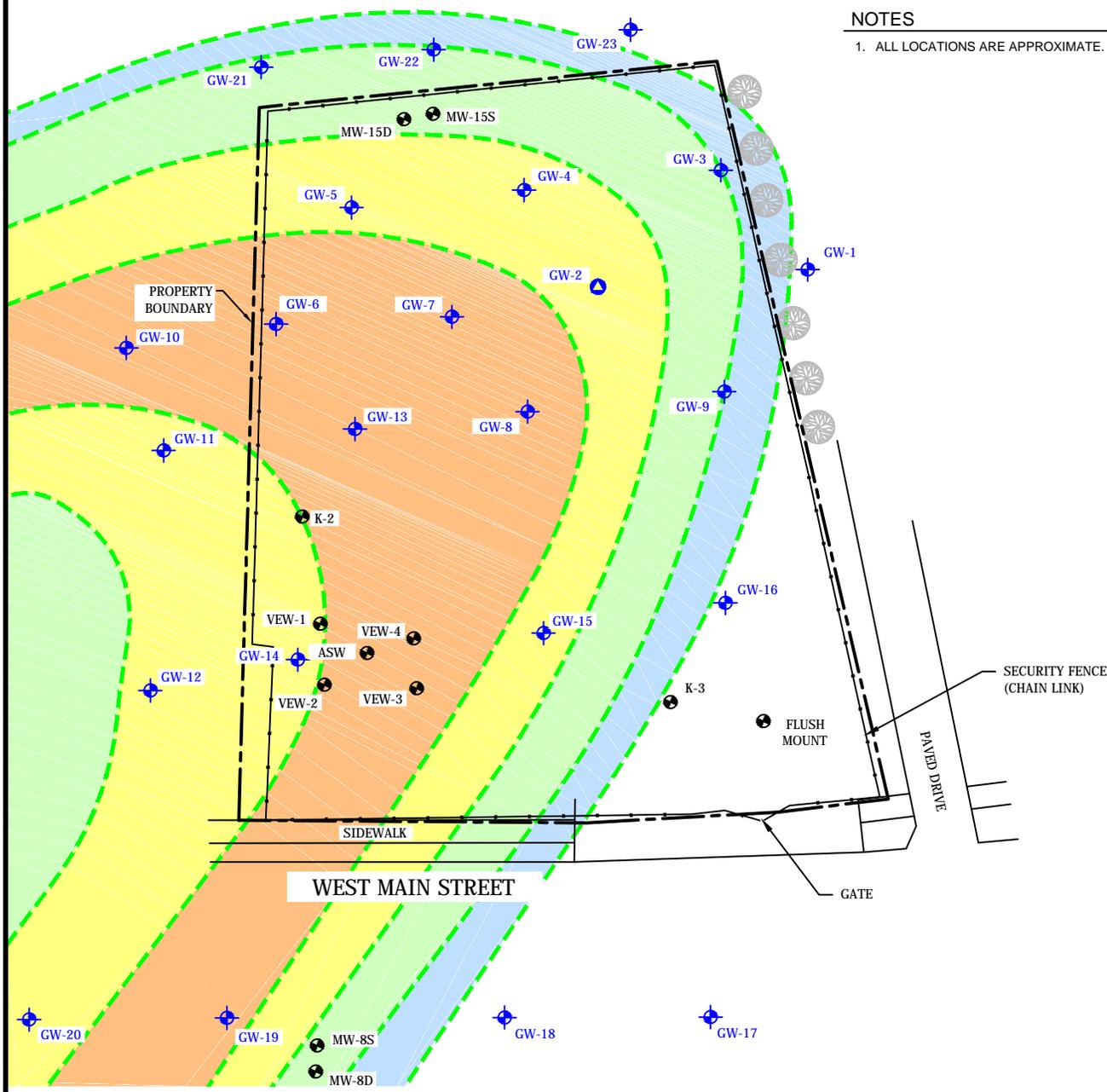


DATE: OCTOBER 2015

PROJECT NO.: 60273289

NOTES

1. ALL LOCATIONS ARE APPROXIMATE.



LEGEND

- SITE BOUNDARY (APPROXIMATE)
- TEMPORARY GROUNDWATER SAMPLE LOCATION (2014)
- MONITORING WELL LOCATION
- TOTAL VOC CONCENTRATION 5 ug/L - 10 ug/L
- TOTAL VOC CONCENTRATION 10 ug/L - 100 ug/L
- TOTAL VOC CONCENTRATION 100 ug/L - 1,000 ug/L
- TOTAL VOC CONCENTRATION > 1,000 ug/L

NOTE:
FOR MAP REFERENCE INFORMATION,
SEE FIGURE 1 "SITE LAYOUT".

PLAN



Approx. Scale in Feet

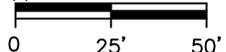


FIGURE 7

ISOCONCENTRATION CONTOUR MAP TOTAL
VOC's IN GROUNDWATER - JULY 2014

NYSDEC SITE ID: 5-18-014

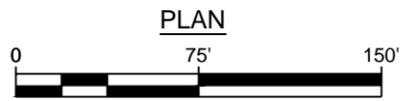
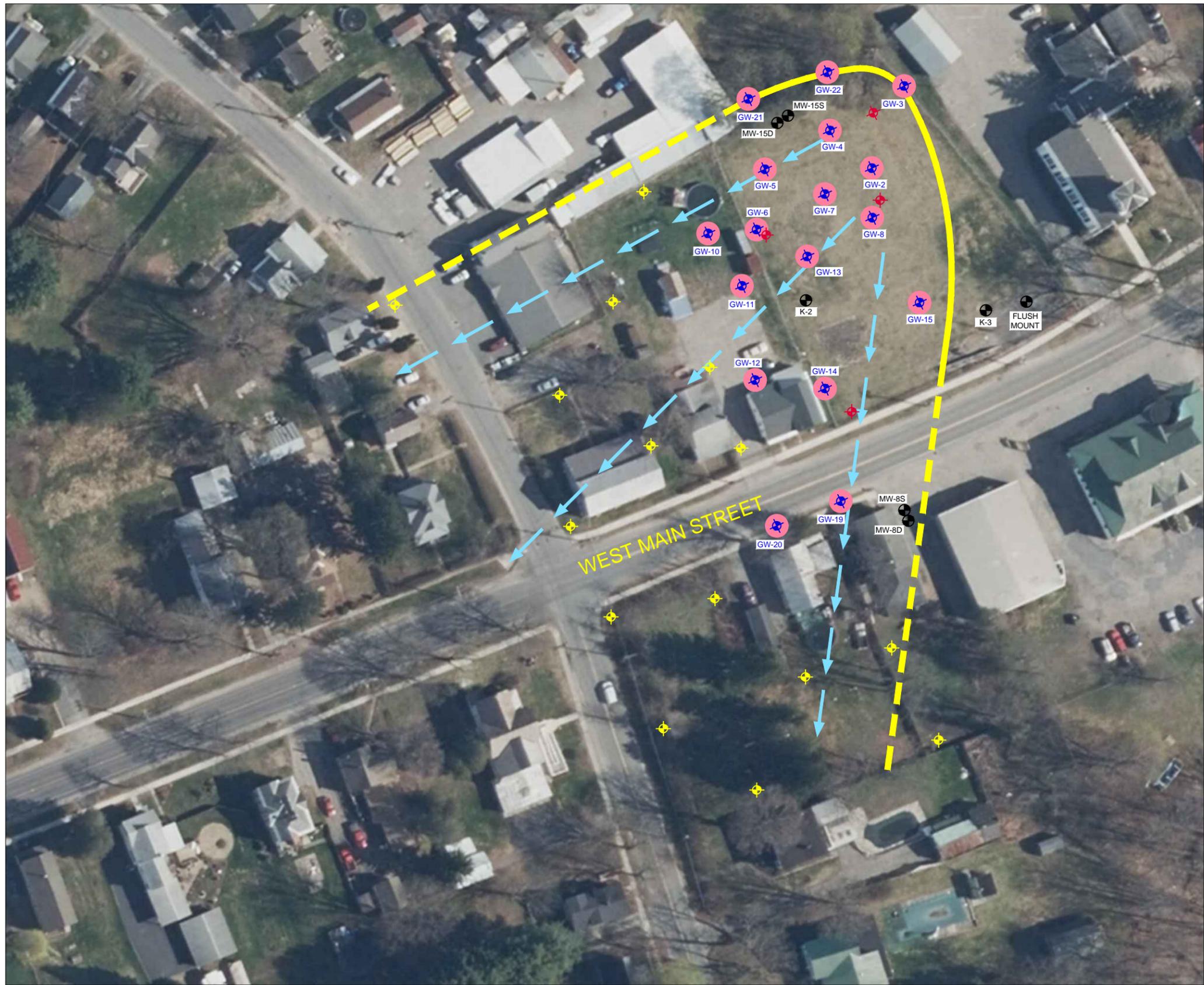
KORKAY INC.

70 WEST MAIN STREET
BROADALBIN, NEW YORK



DATE: NOVEMBER 2015

PROJECT NO.: 60273289



LEGEND	
	PROPOSED OFF-SITE GROUNDWATER SAMPLE LOCATION
	PROPOSED ON-SITE MONITORING WELL LOCATION
	APPROXIMATE LOCATION OF 2014 GROUNDWATER SAMPLE WITH RESULT GREATER THAN NYSAWQS
	EXISTING GROUNDWATER MONITORING WELL
	APPROXIMATE EXTENT OF PROJECTED AND INFERRED GROUNDWATER PLUME
	APPROXIMATE DIRECTION OF PROJECTED AND INFERRED GROUNDWATER FLOW PATH

Issue Status: DRAFT

PROPOSED OFF-SITE GROUNDWATER
 SAMPLE LOCATION
 PLAN

Tables

Table 1
VOC Results
Korkay July 2014 Groundwater Investigation

Sample Location		Off Site East	On-Site												Off Site West			Off Site Right of Way South				Off Site North			
Sample ID	NYSDEC AWQS & GV ug/L	GW-1 7/7/2014 1:18 PM	GW-2 7/7/2014 3:00 PM	GW-3 7/7/2014 4:00 PM	GW-4 7/7/2014 4:30 PM	GW-5 7/8/2014 7:45 AM	GW-6 7/8/2014 8:10 AM	GW-7 7/8/2014 8:40 AM	GW-8 7/8/2014 9:00 AM	GW-9 7/8/2014 10:00 AM	GW-13 7/8/2014 1:45 PM	GW-14 7/8/2014 2:45 PM	GW-15 7/8/2014 4:30 PM	GW-16 7/9/2014 7:45 AM	GW-10 7/8/2014 10:45 AM	GW-11 7/8/2014 11:00 AM	GW-12 7/8/2014 11:35 AM	GW-17 7/9/2014 8:30 AM	GW-18 7/9/2014 8:55 AM	GW-19 7/9/2014 9:20 AM	GW-20 7/9/2014 9:45 AM	GW-21 7/9/2014 10:25 AM	GW-22 7/9/2014 10:50 AM	GW-23 7/9/2014 11:30 AM	
VOCs ug/L																									
STARS List VOCs (Petroleum)																									
1,2,4-Trimethylbenzene	5	ND	35	33	540	240	490	1300	710	0.82 J	220	70	230	1.1	670	180	180	ND	ND	360	200	5.5	1.1	ND	
1,3,5-Trimethylbenzene	5	ND	16	21	220	120	220	390	250	ND	54	35	73	ND	290	53	110	ND	ND	110	35	0.92 J	ND	ND	
Ethylbenzene	5	ND	0.87 J	ND	49	2.1	48	69	46	ND	82	22	33	ND	63	17	8.2	ND	ND	53	63	2.9	2.7	1.1	
N-Propylbenzene	5	ND	3.8	7.1	63	30	44	76	55	ND	20	7.2	25	ND	92	23	20	ND	ND	46	30	1.1	0.76 J	ND	
n-Butylbenzene	5	ND	22	67	110	47	93	110	72	ND	27	23	30	ND	110	25	59	ND	ND	62	27	1.1	ND	ND	
sec-Butylbenzene	5	ND	ND	34	50	30	35	47	33	ND	15	7.6	18	ND	36	12	25	ND	ND	31	18	ND	ND	ND	
tert-Butylbenzene	5	ND	ND	3.2	6.1	4.4	4.7 J	ND	3.9	ND	ND	ND	ND	ND	ND	1.6 J	ND	ND	ND	ND	ND	ND	ND	ND	
Isopropylbenzene	5	ND	1.8	1.4	28	7.4	24	30	24	ND	13	3.8	14	ND	35	11	6.8	ND	ND	24	17	ND	ND	ND	
Toluene	5	ND	ND	ND	7.2	ND	3.6 J	16	7.3	ND	2.8 J	11	ND	ND	ND	ND	ND	ND	ND	ND	4.2 J	ND	ND	ND	
4-Isopropyltoluene	5	ND	14	47	70	44	52	69	47	ND	21	15	24	0.31 J	50	16	35	ND	ND	32	8.2	0.35 J	ND	ND	
o-Xylene	5	ND	3.7	ND	140	6.8	140	340	140	ND	180	95	55	0.76 J	150	34	35	1	ND	100	120	4.8	3.2	0.99 J	
m,p-Xylene	5	ND	4.1	ND	210	5.3	230	490	230	ND	260	85	92	0.86 J	180	58	24	1.0 J	ND	170	110	4.6	2.4	0.72 J	
Xylenes, Total	5	ND	7.8	ND	350	12	370	830	370	ND	440	180	150	1.6 J	330	92	59	2	ND	270	230	9.4	5.6	1.7 J	
Naphthalene	10	ND	4.3	1.6	65	6.6	64	130	76	1.5	67	22	42	0.56 J	190	160	22	0.43 J	ND	44	22	1	0.89 J	0.48 J	
TCL List VOCs Non-STARS List																									
1,1-Dichloroethane	5	ND	0.96 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND								
1,2-Dichlorobenzene	3	ND	2.2	ND	23	ND	8.3	35	12	ND	ND	ND	12	ND	ND	5.3	ND	ND	16	9.1	ND	ND	ND	ND	
1,2,3-Trichlorobenzene	5	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,2,3-Trichloropropane	0.04	ND	ND	ND	ND	2.2	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,1,2,2-Tetrachloroethane	5	ND	ND	ND	ND	ND	ND	ND	4.7 J	ND	ND	ND	ND	ND	ND	ND									
1,2,4-Trichlorobenzene	5	ND	ND	4.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
1,4-Dichlorobenzene	3	ND	ND	ND	ND	ND	ND	2.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
2-Butanone (MEK)	NS	ND	5.2 J	2.5 J	ND	5.0 J	20 J	ND	16	ND	10 J	20	5.5 J	1.4 J	ND	2.8 J	ND	1.4 J	ND	ND	ND	ND	ND	ND	
Acetone	50	11	27	11	22 J	19	48 J	31 J	24	6.0 J	21 J	52	12 J	16	ND	9.1 J	16 J	11	4.9 J	ND	20 J	9.6 J	4.5 J	12	
Bromodichloromethane	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.99 J	ND									
Carbon disulfide	60	0.44 J	1.1	1.3	1.5 J	1.3	ND	3.7 J	2.2	0.50 J	ND	ND	ND	ND	ND	1.5 J	ND	1.6	ND	ND	3.3	ND	ND	ND	
Chloroform	7	ND	ND	ND	ND	ND	ND	0.69 J	ND	ND	ND	ND	ND	ND	ND	ND									
cis-1,2-Dichloroethene	5	ND	ND	ND	ND	ND	8	11	5.5	ND	ND	39	ND	ND	ND	ND	8.2	ND	ND	ND	17	ND	ND	ND	
Cyclohexane	NS	ND	3.6 J	ND	3.2 J	ND	ND	2.4	ND	ND	ND	7.0 J	4.3 J	ND	ND	ND									
Dichlorodifluoromethane	5	ND	ND	ND	ND	ND	ND	ND	ND	0.79 J	ND	ND	ND	ND	ND	ND									
Methylcyclohexane	NS	ND	2.8	16	16	10	16	4.4 J	7.6	ND	10	3.1	6.1	0.78 J	13	5.8	5	ND	ND	15	7.7	0.82 J	0.76 J	ND	
Tetrachloroethene	5	ND	1.2	ND	14	3.6	16	52	15	ND	8.5	ND	3.6 J	0.69 J	7.6 J	1.8 J	ND	0.85 J	0.61 J	ND	ND	ND	ND	ND	
Trichloroethene	5	ND	ND	ND	ND	1.8	8.8	ND	1.2	ND	8.3	2.3	ND	ND	ND	5.7	ND	ND	ND	ND	ND	ND	ND	ND	

Bold- Analyte was detected in laboratory analysis

Highlight- Analyte was detected above the NYSDEC AWQS or Guidance Value

NS- No Standard

ND- Not detected above MDL

J - Result is estimated, detection was below the RL but above the MDL

Table 2
SVOC Results
Korkay July 2014 Groundwater Investigation

Sample Location	NYSDEC AWQS & GV ug/L	Off Site East	On-Site												Off Site West			Off Site Right of Way South					Off Site North				
		GW-1 7/7/2014 1:18 PM	GW-2 7/7/2014 3:00 PM	GW-3 7/7/2014 4:00 PM	GW-4 7/7/2014 4:30 PM	GW-5 7/8/2014 7:45 AM	GW-6 7/8/2014 8:10 AM	GW-7 7/8/2014 8:40 AM	GW-8 7/8/2014 9:00 AM	GW-9 7/8/2014 10:00 AM	GW-13 7/8/2014 1:45 PM	GW-14 7/8/2014 2:45 PM	GW-15 7/8/2014 4:30 PM	GW-16 7/9/2014 7:45 AM	GW-10 7/8/2014 10:45 AM	GW-11 7/8/2014 11:00 AM	GW-12 7/8/2014 11:35 AM	GW-17 7/9/2014 8:30 AM	GW-18 7/9/2014 8:55 AM	GW-19 7/9/2014 9:20 AM	GW-20 7/9/2014 9:45 AM	GW-21 7/9/2014 10:25 AM	GW-22 7/9/2014 10:50 AM	GW-23 7/9/2014 11:30 AM			
SVOCs ug/L																											
2,4-Dimethylphenol	1*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND								
2-Methylnaphthalene	NS	ND	ND	4.1	11	4.8	13	50	9.8	ND	7.1	2.9	1.3	9	ND	3.2	ND	ND	ND	ND	14	1	ND	ND	ND	ND	ND
2-Methylphenol	1*	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2 J	ND	ND	ND	ND	ND	ND								
Acetophenone	NS	2.6 J B	ND	2.0 B	ND	ND	ND	ND	ND	ND	2.7 J B	2.1 B	2.0 B	ND	62 B	1.7 B	1.7 B	2.2 B	ND	ND	ND						
Benzaldehyde	NS	ND	ND	ND	ND	ND	ND	ND	9.1 J B	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND								
Benzo(a)anthracene	0.002	ND	ND	ND	0.19 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	Non-Detect	ND	ND	ND	0.14 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene	0.002	ND	ND	ND	0.32	ND	ND	ND	ND	ND	ND	0.30 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	NS	ND	ND	ND	0.24	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	0.002	ND	ND	ND	0.31	ND	ND	ND	ND	ND	ND	0.34 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Biphenyl	5	ND	ND	ND	ND	ND	1	ND	0.67 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bis(2-ethylhexyl) phthalate	5	100 B	410 B	350 B	39 B	31 B	18 B	69 B	10 B	20 B	6.3 B	81 B	12 B	5.6 B	34 J B	25 B	90 B	27 B	32 B	36 B	50 B	20 B	19 B	11 B	ND	ND	ND
Butyl benzyl phthalate	50	ND	ND	ND	0.80 J B	0.46 J B	ND	ND	0.59 J B	0.39 J B	0.51 J B	0.69 J B	ND	ND	ND	ND	ND	ND	0.27 J B	0.33 J B	ND	ND	ND	ND	ND	ND	ND
Caprolactam	NS	2.3 J	7.0 J	ND	ND	ND	ND	ND	ND	1.7 J	ND	2.5 J	ND	ND	ND	ND	1.6 J	1.3 J	ND	ND	ND	ND	1.1 J B	3.0 J B	ND	ND	ND
Chrysene	0.002	ND	ND	ND	0.24	ND	ND	ND	ND	ND	ND	0.32 J	ND	ND	ND	ND	1.9 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethyl phthalate	5	0.64 J B	ND	0.50 J B	ND	ND	ND	ND	ND	ND	ND	ND	0.39 J B	ND	ND	0.47 J	ND	0.59 J	ND	ND	ND						
Di-n-butyl phthalate	50	3.2 J B	6.1 J B	4.6 J B	4.3 B	ND	ND	ND	4.2 B	4.0 B	9.2 B	4.3 B	12 B	4.3 B	93 B	5.1 B	4.9 B	3.3 B	3.0 B	4.8 B	3.9 B	3.1 B	1.9 B	3.4 B	ND	ND	ND
Di-n-octyl phthalate	5	ND	ND	ND	0.50 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluoranthene	50	ND	ND	ND	0.13 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	50	ND	ND	ND	ND	ND	1.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	0.002	ND	ND	ND	0.22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	10	ND	ND	ND	31	3.9	39	88	25	ND	46	76	5.8	16	7.4	18	0.48 J	0.14 J	0.14 J	31	17	0.26	0.3	0.4	ND	ND	ND
Phenanthrene	50	ND	ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenol	1*	0.72 J	ND	0.42 J	ND	ND	ND	ND	35	ND	ND	ND	0.56 J	ND	ND	1.4	ND	1.6	ND	ND	ND						
Pyrene	50	ND	ND	ND	0.11 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Bold- Analyte was detected in laboratory analysis
 Highlight- Analyte was detected above the NYSDEC AWQS or Guidance Value
 *Sum of all Phenols
 NS- No Standard
 ND- Not detected above MDL
 B-Compound detected in laboratory control blank.
 J - Result is estimated, detection was below the RL but above the MDL

Appendix A
Environmental Notice

FULTON COUNTY CLERK

WILLIAM E. ESCHLER

Receipt

Receipt Date: 02/01/2013 11:38:20 AM
RECEIPT # 2013229249

Recording Clerk: FC
Cash Drawer: CASH1
Rec'd Frm: INDEPENDENT

Instr#: 2013-18049
DOC: MISC DOCUMENT
OR Party: NEW YORK STATE DEPARTMENT OF
ENVIRONMENTAL CONSERVATION DEPARTMENT
EE Party: PERMA GLAZE CHEMICAL
CORPORATION

STANDARD	
Cover Page	\$5.00
Recording Fee	\$50.00
Cultural Ed	\$14.25
Records Management - County	\$1.00
Records Management - State	\$4.75

DOCUMENT TOTAL: ----> \$75.00

Receipt Summary	
TOTAL RECEIPT: ---->	\$75.00
TOTAL RECEIVED: ---->	\$75.00

CASH BACK: ---->	\$0.00
------------------	--------

PAYMENTS	
Check # 3612 ->	\$75.00

COPY

FILED
FULTON COUNTY
CLERK'S OFFICE

Korkay, Incorporated
Site No. 518014
70 West Main Street
Broadalbin, Fulton County, NY
Tax Map: 137.15-5-25

2013 FEB -1 AM 11:38
ENVIRONMENTAL NOTICE

RECEIVED

THIS ENVIRONMENTAL NOTICE is made the 25th day of January, 2013 by the New York State Department of Environmental Conservation (Department), having an office for the transaction of business at 625 Broadway, Albany, New York 12233.

WHEREAS, that parcel of real property located at the address of 70 West Main Street in the Village of Broadalbin, County of Fulton and State of New York, known and designated on the tax map of the County Clerk of the County of Fulton as tax map parcel number: Section 137.15 Block 5 Lot 25 which is part of lands conveyed by Kaldar, Inc. to the Perma Glaze Chemical Corporation by deed dated March 31, 1970 and recorded on October 4, 1971, in Book Liber 515 of Deeds at page 238 from the County of Fulton, the property being more particularly described in the metes and bounds and tax map and attached hereto as Appendix "A" to this notice and made a part hereof, and hereinafter referred to as "the Property" and is the subject of a remedial program performed by the Department; and

WHEREAS, the Department approved a cleanup to address contamination disposed at the Property and such cleanup was conditioned upon certain limitations.

NOW, THEREFORE, the Department provides notice that:

FIRST, the part of lands subject to this Environmental Notice is as shown on a map attached to this Notice as Appendix "B" and made a part hereof.

SECOND, unless prior written approval by the Department or, if the Department shall no longer exist, any New York State agency or agencies subsequently created to protect the environment of the State and the health of the State's citizens, hereinafter referred to as "the Relevant Agency," is first obtained, where contamination remains at the Property subject to the provisions of the Operation and Maintenance ("O&M"), Plan there shall be no disturbance or excavation of the Property which threatens the integrity of the engineering controls or which results or may result in a significantly increased threat of harm or damage at any site as a result of exposure to soils. A violation of this provision is a violation of 6 NYCRR 375-1.1 1(b)(2).

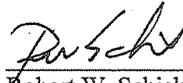
THIRD, no person shall disturb, remove, or otherwise interfere with the installation, use, operation, and maintenance of engineering controls required for the Remedy, including but not limited to those engineering controls described in the O&M Plan and listed below, unless in each instance they first obtain a written waiver of such prohibition from the Department or Relevant Agency.

FOURTH, the remedy was designed to be protective for Commercial or Industrial uses. Therefore, any use for purposes other than Commercial or Industrial uses without the express written waiver of such prohibition by the Relevant Agency may result in a significantly increased threat of harm or damage at the site.

FIFTH, no person shall use the groundwater underlying the Property without treatment rendering it safe for drinking water or industrial purposes, as appropriate, unless the user first obtains permission to do so from the Department or Relevant Agency. Use of the groundwater without appropriate treatment may result in a significantly increased threat of harm or damage at the site.

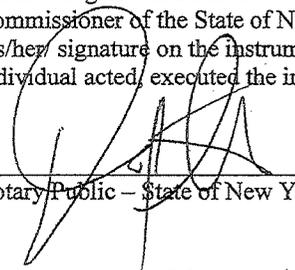
SIXTH, it is a violation of 6 NYCRR 375-1.11(b) to use the Property in a manner inconsistent with this environmental notice.

IN WITNESS WHEREOF, the undersigned has executed this instrument the day written below.

By: 
Robert W. Schick, P.E., Director
Division of Environmental Remediation

STATE OF NEW YORK) ss:
COUNTY OF ALBANY)

On the 2nd day of JANUARY, in the year 2013, before me, Robert. W. Schick, the undersigned, personally appeared, and is personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name is (are) subscribed to the within instrument and acknowledged to me that he/she/ executed the same in his/her/ capacity as Designee of the Commissioner of the State of New York Department of Environmental Conservation, and that by his/her/ signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.


Notary Public - State of New York

David J. Chiusano
Notary Public, State of New York
No. 01CH5032146
Qualified in Schenectady County
Commission Expires August 22, 2014

Korkay, Incorporated
Site No. 518014
70 West Main Street
Broadalbin, Fulton County, NY
Tax Map: 137.15-5-25

Appendix A

METES and BOUNDS Description

ALL THAT TRACT, PIECE OR PARCEL OF LAND, situate, in the Town of Broadalbin, County of Fulton, and State of New York, bounded and described as follows:

PARCEL NO. 1.

Beginning at an iron post on Main Street, 640 feet westerly from the inside of the sidewalk on First Avenue, in the Village of Broadalbin, County of Fulton and State of New York; running thence north $11^{\circ}10'$ west, to an iron post, and continuing thence northerly to an iron post which is 222 feet more or less northerly from the iron post on Main Street heretofore mentioned; running thence in a westerly direction along the lands now or formerly belonging to the Estate of George W. Hughest, deceased; running thence in a southerly direction along the lands formerly owned by William Kennedy, now or formerly owned by Etta Perkins; and running thence in an easterly direction along Main Street in said Village to the first mentioned iron post and point and place of beginning.

PARCEL NO. 2.

COMMENCING at a point on the northerly side of West Main Street in said Village at a point approximately 640 feet westerly from the inside of the sidewalk on First Avenue in said Village; running thence Northeasterly, along the east line of lands now owned or supposed to be by Crossley Glove Co., Inc., a distance of approximately 250 feet to the south line of lands of E. C. and K. Tanner; running thence EASTERLY along the south line of land of said E. C. and K. Tanner a distance of approximately 90 feet to the west line of the lands now owned or supposed to be by the First Presbyterian Church of Broadalbin, New York; running thence SOUTHEASTERLY along the westerly line of lands of said First Presbyterian Church a distance of approximately 250 feet to the north line of West Main Street in said Village; running thence WESTERLY along the north line of West Main Street a distance of approximately 120 feet to the point and place of beginning, together with dwelling-house thereon.

All measurements in the above description being the same more or less.

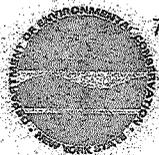
Being the same premises conveyed to Kaldar, Inc. by Warranty Deed from M&W Glove Corp., formerly known as Crossley Glove Co., Inc. dated May 26, 1969, and recorded May 27, 1969, in the Fulton County Clerk's Office in Book 502 of Deeds at Page 1129.

Korkay, Incorporated
Site No. 518014
70 West Main Street
Broadalbin, Fulton County, NY
Tax Map: 137.15-5-25

Appendix B

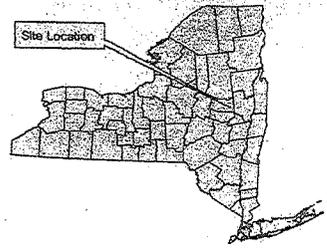
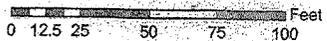


Korkay Site Location



518014
70 West Main Street
Broadalbin, NY

Project Manager: Payson Long
Map Created By: Payson Long
Date Created: February 17, 2012



Appendix B
Enclosure 1-IC/EC Certification
Forms



Enclosure 1
Engineering Controls - Engineering Standby Contractor Certification Form



Site Details		Box 1	
Site No.	518014		
Site Name Korkay, Incorporated			
Site Address: 70 West Main Street	Zip Code: 12025		
City/Town: Broadalbin			
County: Fulton			
Site Acreage: 1.2			
Reporting Period: September 16, 2013 to June 15, 2015			
		YES	NO
1. Is the information above correct?		<input checked="" type="checkbox"/>	<input type="checkbox"/>
If NO, include handwritten above or on a separate sheet.			
2. To your knowledge has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. To your knowledge has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. To your knowledge have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.			
5. To your knowledge is the site currently undergoing development?		<input type="checkbox"/>	<input checked="" type="checkbox"/>
		Box 2	
		YES	NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial		<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Are all ICs/ECs in place and functioning as designed?		<input checked="" type="checkbox"/>	<input type="checkbox"/>
IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.			
_____ Signature of Engineering Standby Contractor		_____ Date	

SITE NO. 518014

Box 3

Description of Institutional Controls

Parcel

137.15-5-25

Owner

PERMA GLAZE CHEMICAL CORP

Institutional Control

Ground Water Use Restriction

Landuse Restriction

The ICs at the site are groundwater use restriction and and land use restrictions.

Box 4

Description of Engineering Controls

Parcel

137.15-5-25

Engineering Control

Fencing/Access Control

ECs include Site Fencing/Access Control. Must ensure the perimeter fence is intact.

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification, including data and material prepared by previous contractors for the current certifying period, if any;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) nothing has occurred that would constitute a failure to comply with the Site Management Plan, or equivalent if no Site Management Plan exists.

YES NO

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.

Signature of Engineering Standby Contractor

Date

IC/EC CERTIFICATIONS
SITE NO. 518014

Box 6

Qualified Environmental Professional Signature

I certify that all information and statements in Boxes 1 through 4 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I SCOTT A. UNDERHILL at 40 BRITISH AMERICAN BLVD, LATHAM, NY 12110
print name print business address

am certifying as the Engineering Standby Contractor for the site named in the Site Details section

of this form.

Scott A. Underhill
Signature of Qualified Environmental Professional
Rendering Certification



11-24-15
Date

Appendix C

Boring Logs



AECOM, Inc.
40 British American Boulevard
Latham, New York 12110
Phone: (518) 951-2200
Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: GW-2

START DATE: 7/7/14 END DATE: 7/7/14

PROJECT NAME: **Korkay** PROJECT NO.: **60273289** PROJECT MANAGER: **John Santacroce**
 SITE LOCATION: **70 W. Main Street Broadalbin, NY** BORING LOCATION:
 DRILLING CO.: **Parratt Wolff** DRILLER:
 BOREHOLE DIAMETER: **3"** DEPTH TO BEDROCK: DRILLING METHOD: **Geoprobe**
 TOTAL DEPTH REACHED: INSPECTOR: **Ross McCredy** TOTAL DEPTH DRILLED: **12'**
 LATITUDE: LONGITUDE: WEATHER CONDITIONS: **Sunny, 80**
 ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							WEIGHT(S)	HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	FALL			CASING	TUBE	CORE	RIG TYPE:
							TYPE						
ID/OD													
GEOLOGIC DESCRIPTION												LITHOLOGY/ SOIL TYPE	WATER LEVEL REMARKS
0.0							0-0.6: Topsoil/Overburden 0.6-2: Dark Brown Fine-Medium SAND					Dry/Loose	
2.0		2.7'	HS = 0										
4.0			HS = 0				4-5.5: SAA 5.5-6: Light Gray/Brown Fine SAND					Wet/Firm	
6.0		3'	HS = 72				6-7: Dark Gray Medium-Fine SAND, no odor					Wet/Firm	
8.0			HS = 76	Y			8-8.5: Gray SILTY SAND, Staining					Wet	
10.0		0.6'											
12.0							*Collected GW-I2 @ 15:00 Set Screen from 6'-10' *Collected soil sample for analysis						
14.0													
16.0													
18.0													
20.0													



AECOM, Inc.
 40 British American Boulevard
 Latham, New York 12110
 Phone: (518) 951-2200
 Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **GW-4**

START DATE: 7/7/14 END DATE: 7/7/14

PROJECT NAME: Korkay	PROJECT NO.: 60273289	PROJECT MANAGER: John Santacroce
SITE LOCATION: 70 W. Main Street Broadalbin, NY	BORING LOCATION:	
DRILLING CO.: Parratt Wolff	DRILLER:	DRILLING METHOD: Geoprobe
BOREHOLE DIAMETER: 3"	DEPTH TO BEDROCK: N/A	TOTAL DEPTH DRILLED: 12'
TOTAL DEPTH REACHED:	INSPECTOR: Ross McCredy	WEATHER CONDITIONS: Sunny, 80
LATITUDE:	LONGITUDE:	ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	WEIGHT(S)		CASING	TUBE	CORE	RIG TYPE:
							FALL TYPE					
							ID/OD					
GEOLOGIC DESCRIPTION											LITHOLOGY/ SOIL TYPE	WATER LEVEL REMARKS
0.0												
2.0		1.5	HS = 0									
4.0			HS = 0 HS = 7.5	Y								
6.0		2.5										
8.0			HS = 1415									
10.0		0.0										
12.0												
14.0												
16.0												
18.0												
20.0												

*Collected GW-14 @ 16:30
 Set Screen from 8'-12'



AECOM, Inc.
 40 British American Boulevard
 Latham, New York 12110
 Phone: (518) 951-2200
 Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **GW-8**

START DATE: 7/8/14 END DATE: 7/8/14

PROJECT NAME: Korkay	PROJECT NO.: 60273289	PROJECT MANAGER: John Santacroce
SITE LOCATION: 70 W. Main Street Broadalbin, NY	BORING LOCATION:	
DRILLING CO.: Parratt Wolff	DRILLER:	DRILLING METHOD: Geoprobe
BOREHOLE DIAMETER: 3"	DEPTH TO BEDROCK: N/A	TOTAL DEPTH DRILLED: 12'
TOTAL DEPTH REACHED:	INSPECTOR: Ross McCredy	WEATHER CONDITIONS: Cloudy, 80
LATITUDE:	LONGITUDE:	ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	WEIGHT(S)		CASING	TUBE	CORE	RIG TYPE:
							FALL TYPE					
							ID/OD					
GEOLOGIC DESCRIPTION											LITHOLOGY/ SOIL TYPE	WATER LEVEL REMARKS
0.0												
2.0		2.5	HS = 0									
4.0			HS = 0.7 HS = 691									
6.0		2.5										
8.0			HS = 678 HS = 20									
10.0		3.0										
12.0												
14.0												
16.0												
18.0												
20.0												

*Collected GW-18 @ 9:00
 Set Screen from 8'-12'



AECOM, Inc.
 40 British American Boulevard
 Latham, New York 12110
 Phone: (518) 951-2200
 Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **GW-9**

START DATE: 7/8/14 END DATE: 7/8/14

PROJECT NAME: Korkay	PROJECT NO.: 60273289	PROJECT MANAGER: John Santacroce
SITE LOCATION: 70 W. Main Street Broadalbin, NY	BORING LOCATION: Near fence at church	
DRILLING CO.: Parratt Wolff	DRILLER:	DRILLING METHOD: Geoprobe
BOREHOLE DIAMETER: 3"	DEPTH TO BEDROCK: N/A	TOTAL DEPTH DRILLED: 16'
TOTAL DEPTH REACHED:	INSPECTOR: Ross McCredy	WEATHER CONDITIONS: Cloudy, 80
LATITUDE:	LONGITUDE:	ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:	
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	WEIGHT(S)			DATE 2:	DEPTH 2:	TIME 2:	
							FALL TYPE			CASING	TUBE	CORE	RIG TYPE:
							ID/OD						
GEOLOGIC DESCRIPTION											LITHOLOGY/ SOIL TYPE	WATER LEVEL REMARKS	
0.0													
2.0		2.0	HS = 0										
4.0													
6.0		3.0	HS = 0										
8.0													
10.0		4.0	HS = 0										
12.0		4.0											
14.0													
16.0													
18.0													
20.0													

*Collected GW-19 @ 10:00 and MS/MSD
 Set Screen from 7.5'-11.5'



AECOM, Inc.
 40 British American Boulevard
 Latham, New York 12110
 Phone: (518) 951-2200
 Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **GW-10**

START DATE: 7/8/14 END DATE: 7/8/14

PROJECT NAME: Korkay	PROJECT NO.: 60273289	PROJECT MANAGER: John Santacroce
SITE LOCATION: 70 W. Main Street Broadalbin, NY	BORING LOCATION: On Harris Property nearest pool	
DRILLING CO.: Parratt Wolff	DRILLER:	DRILLING METHOD: Geoprobe
BOREHOLE DIAMETER: 3"	DEPTH TO BEDROCK: N/A	TOTAL DEPTH DRILLED: 12'
TOTAL DEPTH REACHED:	INSPECTOR: Ross McCredy	WEATHER CONDITIONS: Cloudy, 80
LATITUDE:	LONGITUDE:	ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	WEIGHT(S)		CASING	TUBE	CORE	RIG TYPE:
							FALL TYPE					
							ID/OD					
GEOLOGIC DESCRIPTION											LITHOLOGY/ SOIL TYPE	WATER LEVEL
												REMARKS
0.0												
		2.5	HS = 0									
2.0												
			HS = 0 HS = 714									
4.0												
		3.0										
4.0												
			HS = 4.1 HS = 0									
6.0												
		4.0										
8.0												
8.0												
10.0												
12.0												
14.0												
16.0												
18.0												
20.0												

*Collected GW-110 @ 10:45
 Set Screen from 4'-8'



AECOM, Inc.
 40 British American Boulevard
 Latham, New York 12110
 Phone: (518) 951-2200
 Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **GW-11**

START DATE: 7/8/14 END DATE: 7/8/14

PROJECT NAME: Korkay	PROJECT NO.: 60273289	PROJECT MANAGER: John Santacroce
SITE LOCATION: 70 W. Main Street Broadalbin, NY	BORING LOCATION: On Harris Property	
DRILLING CO.: Parratt Wolff	DRILLER:	DRILLING METHOD: Geoprobe
BOREHOLE DIAMETER: 3"	DEPTH TO BEDROCK: N/A	TOTAL DEPTH DRILLED: 12'
TOTAL DEPTH REACHED:	INSPECTOR: Ross McCredy	WEATHER CONDITIONS: Cloudy, 80
LATITUDE:	LONGITUDE:	ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:	
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	WEIGHT(S)			DATE 2:	DEPTH 2:	TIME 2:	
							FALL TYPE			CASING	TUBE	CORE	RIG TYPE:
							ID/OD						
GEOLOGIC DESCRIPTION											LITHOLOGY/ SOIL TYPE	WATER LEVEL	
												REMARKS	
0.0													
2.0		2.0	HS = 0										
4.0													
6.0		3.0	HS = 0										
8.0			HS =35.7 HS = 1.4										
10.0		4.0											
12.0													
14.0													
16.0													
18.0													
20.0													

*Collected GW-I11 @ 11:00
 **Collected soil sample per DEC Request (SS-I11) @ 11:00
 Set Screen from 5'-9'



AECOM, Inc.
 40 British American Boulevard
 Latham, New York 12110
 Phone: (518) 951-2200
 Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **GW-12**

START DATE: 7/8/14 END DATE: 7/8/14

PROJECT NAME: Korkay	PROJECT NO.: 60273289	PROJECT MANAGER: John Santacroce
SITE LOCATION: 70 W. Main Street Broadalbin, NY	BORING LOCATION: Between Harris House and Korkay Fence	
DRILLING CO.: Parratt Wolff	DRILLER:	DRILLING METHOD: Geoprobe
BOREHOLE DIAMETER: 3"	DEPTH TO BEDROCK: N/A	TOTAL DEPTH DRILLED: 12'
TOTAL DEPTH REACHED:	INSPECTOR: Ross McCredy	WEATHER CONDITIONS: Cloudy, 80
LATITUDE:	LONGITUDE:	ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	WEIGHT(S)		CASING	TUBE	CORE	RIG TYPE:
							FALL TYPE					
							ID/OD					
GEOLOGIC DESCRIPTION											LITHOLOGY/ SOIL TYPE	WATER LEVEL
												REMARKS
0.0												
2.0		2.5	HS = 0									
4.0												
6.0		3.0	HS = 0.4									
8.0			HS = 1735 HS = 1086									
10.0		3.0										
12.0												
14.0												
16.0												
18.0												
20.0												

*Collected GW-112 @ 11:35
 Set Screen from 8'-12'



AECOM, Inc.
 40 British American Boulevard
 Latham, New York 12110
 Phone: (518) 951-2200
 Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **GW-13**

START DATE: 7/8/14 END DATE: 7/8/14

PROJECT NAME: Korkay	PROJECT NO.: 60273289	PROJECT MANAGER: John Santacroce
SITE LOCATION: 70 W. Main Street Broadalbin, NY	BORING LOCATION:	
DRILLING CO.: Parratt Wolff	DRILLER:	DRILLING METHOD: Geoprobe
BOREHOLE DIAMETER: 3"	DEPTH TO BEDROCK: N/A	TOTAL DEPTH DRILLED: 12'
TOTAL DEPTH REACHED:	INSPECTOR: Ross McCredy	WEATHER CONDITIONS: Cloudy, 80
LATITUDE:	LONGITUDE:	ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	WEIGHT(S)		CASING	TUBE	CORE	RIG TYPE:
							FALL TYPE					
							ID/OD					
GEOLOGIC DESCRIPTION											LITHOLOGY/ SOIL TYPE	WATER LEVEL REMARKS
0.0												
2.0		2.0	HS = 0									
4.0			HS = 8.9 HS = 294									
6.0		1.5										
8.0			HS = 343 HS = 180									
10.0		4.0										
12.0												
14.0												
16.0												
18.0												
20.0												

*Collected GW-113 @ 13:45
 Set Screen from 5'-9'



AECOM, Inc.
 40 British American Boulevard
 Latham, New York 12110
 Phone: (518) 951-2200
 Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **GW-14**

START DATE: 7/8/14 END DATE: 7/8/14

PROJECT NAME: Korkay	PROJECT NO.: 60273289	PROJECT MANAGER: John Santacroce
SITE LOCATION: 70 W. Main Street Broadalbin, NY	BORING LOCATION:	
DRILLING CO.: Parratt Wolff	DRILLER:	DRILLING METHOD: Geoprobe
BOREHOLE DIAMETER: 3"	DEPTH TO BEDROCK N/A	TOTAL DEPTH DRILLED: 12'
TOTAL DEPTH REACHED:	INSPECTOR: Ross McCredy	WEATHER CONDITIONS: Cloudy, 80
LATITUDE:	LONGITUDE:	ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	WEIGHT(S)		CASING	TUBE	CORE	RIG TYPE:
							FALL TYPE					
							ID/OD					
GEOLOGIC DESCRIPTION											LITHOLOGY/ SOIL TYPE	WATER LEVEL REMARKS
0.0												
2.0		0.0	HS = 0									
4.0			HS = 1558									
6.0		1.2										
8.0			HS = 1602									
10.0		0.5										
12.0												
14.0												
16.0												
18.0												
20.0												

*Collected GW-114 @ 14:45
 Set Screen from 8'-12'



AECOM, Inc.
 40 British American Boulevard
 Latham, New York 12110
 Phone: (518) 951-2200
 Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **GW-15**

START DATE: 7/8/14 END DATE: 7/8/14

PROJECT NAME: Korkay	PROJECT NO.: 60273289	PROJECT MANAGER: John Santacroce
SITE LOCATION: 70 W. Main Street Broadalbin, NY	BORING LOCATION: Center of Korkay property, nearest row near road	
DRILLING CO.: Parratt Wolff	DRILLER:	DRILLING METHOD: Geoprobe
BOREHOLE DIAMETER: 3"	DEPTH TO BEDROCK: N/A	TOTAL DEPTH DRILLED: 12'
TOTAL DEPTH REACHED:	INSPECTOR: Ross McCredy	WEATHER CONDITIONS: Cloudy, 80
LATITUDE:	LONGITUDE:	ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:	
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	WEIGHT(S)			DATE 2:	DEPTH 2:	TIME 2:	
							FALL TYPE			CASING	TUBE	CORE	RIG TYPE:
							ID/OD						
GEOLOGIC DESCRIPTION											LITHOLOGY/SOIL TYPE	WATER LEVEL	
												REMARKS	
0.0													
2.0		2.0	HS = 0										
4.0			HS = 0										
6.0		1.0											
8.0			HS = 168 HS = 1900 HS = 51										
10.0		3.0											
12.0													
14.0													
16.0													
18.0													
20.0													

*Collected GW-115 @ 16:30
 Set Screen from 8'-12'



AECOM, Inc.
 40 British American Boulevard
 Latham, New York 12110
 Phone: (518) 951-2200
 Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **GW-16**

START DATE: 7/9/14 END DATE: 7/9/14

PROJECT NAME: Korkay	PROJECT NO.: 60273289	PROJECT MANAGER: John Santacroce
SITE LOCATION: 70 W. Main Street Broadalbin, NY	BORING LOCATION:	
DRILLING CO.: Parratt Wolff	DRILLER:	DRILLING METHOD: Geoprobe
BOREHOLE DIAMETER: 3"	DEPTH TO BEDROCK: N/A	TOTAL DEPTH DRILLED: 12'
TOTAL DEPTH REACHED:	INSPECTOR: Ross McCredy	WEATHER CONDITIONS: Sunny, 65
LATITUDE:	LONGITUDE:	ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	WEIGHT(S)		CASING	TUBE	CORE	RIG TYPE:
							FALL TYPE					
							ID/OD					
GEOLOGIC DESCRIPTION											LITHOLOGY/SOIL TYPE	WATER LEVEL
												REMARKS
0.0												
		2.5	HS = 0									
2.0												
			HS = 0									
4.0												
		3.2										
6.0												
			HS = 0									
8.0												
		3.0										
10.0												
12.0												
14.0												
16.0												
18.0												
20.0												

*Collected GW-116 @ 07:45
 Set Screen from 8'-12'



AECOM, Inc.
 40 British American Boulevard
 Latham, New York 12110
 Phone: (518) 951-2200
 Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **GW-17**

START DATE: 7/9/14 END DATE: 7/9/14

PROJECT NAME: Korkay	PROJECT NO.: 60273289	PROJECT MANAGER: John Santacroce
SITE LOCATION: 70 W. Main Street Broadalbin, NY	BORING LOCATION: Across street in front of Restaurant	
DRILLING CO.: Parratt Wolff	DRILLER:	DRILLING METHOD: Geoprobe
BOREHOLE DIAMETER: 3"	DEPTH TO BEDROCK: N/A	TOTAL DEPTH DRILLED: 12'
TOTAL DEPTH REACHED:	INSPECTOR: Ross McCredy	WEATHER CONDITIONS: Sunny, 65
LATITUDE:	LONGITUDE:	ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:	
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	WEIGHT(S)			DATE 2:	DEPTH 2:	TIME 2:	
							FALL TYPE			CASING	TUBE	CORE	RIG TYPE:
							ID/OD						
GEOLOGIC DESCRIPTION											LITHOLOGY/SOIL TYPE	WATER LEVEL	
												REMARKS	
0.0													
		3.5	HS = 0										
2.0													
4.0			HS = 0										
		3.5											
6.0													
8.0			HS = 0										
		4.0											
10.0													
12.0													
14.0													
16.0													
18.0													
20.0													

*Collected GW-117 @ 08:30
 Set Screen from 8'-12'



AECOM, Inc.
 40 British American Boulevard
 Latham, New York 12110
 Phone: (518) 951-2200
 Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **GW-18**

START DATE: 7/9/14 END DATE: 7/9/14

PROJECT NAME: Korkay	PROJECT NO.: 60273289	PROJECT MANAGER: John Santacroce
SITE LOCATION: 70 W. Main Street Broadalbin, NY	BORING LOCATION:	
DRILLING CO.: Parratt Wolff	DRILLER:	DRILLING METHOD: Geoprobe
BOREHOLE DIAMETER: 3"	DEPTH TO BEDROCK: N/A	TOTAL DEPTH DRILLED: 12'
TOTAL DEPTH REACHED:	INSPECTOR: Ross McCredy	WEATHER CONDITIONS: Sunny, 70
LATITUDE:	LONGITUDE:	ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:	
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	WEIGHT(S)			DATE 2:	DEPTH 2:	TIME 2:	
							FALL TYPE			CASING	TUBE	CORE	RIG TYPE:
							ID/OD						
GEOLOGIC DESCRIPTION											LITHOLOGY/ SOIL TYPE	WATER LEVEL REMARKS	
0.0													
2.0		2.5	HS = 0										
4.0			HS = 0 HS = 0										
6.0		3.5											
8.0			HS = 0										
10.0		4.0											
12.0													
14.0													
16.0													
18.0													
20.0													

*Collected GW-118 @ 08:55
 Set Screen from 8'-12'



AECOM, Inc.
 40 British American Boulevard
 Latham, New York 12110
 Phone: (518) 951-2200
 Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **GW-21**

START DATE: 7/9/14 END DATE: 7/9/14

PROJECT NAME: Korkay	PROJECT NO.: 60273289	PROJECT MANAGER: John Santacroce
SITE LOCATION: 70 W. Main Street Broadalbin, NY	BORING LOCATION: Behind Fence nearest garage	
DRILLING CO.: Parratt Wolff	DRILLER:	DRILLING METHOD: Geoprobe
BOREHOLE DIAMETER: 3"	DEPTH TO BEDROCK: N/A	TOTAL DEPTH DRILLED: 12'
TOTAL DEPTH REACHED:	INSPECTOR: Ross McCredy	WEATHER CONDITIONS: Sunny, 75
LATITUDE:	LONGITUDE:	ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:	
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	WEIGHT(S)			DATE 2:	DEPTH 2:	TIME 2:	
							FALL TYPE			CASING	TUBE	CORE	RIG TYPE:
							ID/OD						
GEOLOGIC DESCRIPTION											LITHOLOGY/SOIL TYPE	WATER LEVEL	
												REMARKS	
0.0													
2.0		2.5	HS = 0										
4.0			HS = 0 HS = 224										
6.0		4.0											
8.0			HS = 0.2										
10.0		4.0											
12.0													
14.0													
16.0													
18.0													
20.0													

*Collected GW-I21 @ 10:25
 Set Screen from 6'-10'



AECOM, Inc.
 40 British American Boulevard
 Latham, New York 12110
 Phone: (518) 951-2200
 Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **GW-22**

START DATE: 7/9/14 END DATE: 7/9/14

PROJECT NAME: Korkay	PROJECT NO.: 60273289	PROJECT MANAGER: John Santacroce
SITE LOCATION: 70 W. Main Street Broadalbin, NY	BORING LOCATION: Behind Fence, center	
DRILLING CO.: Parratt Wolff	DRILLER:	DRILLING METHOD: Geoprobe
BOREHOLE DIAMETER: 3"	DEPTH TO BEDROCK: N/A	TOTAL DEPTH DRILLED: 12'
TOTAL DEPTH REACHED:	INSPECTOR: Ross McCredy	WEATHER CONDITIONS: Sunny, 75
LATITUDE:	LONGITUDE:	ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:	
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	WEIGHT(S)			DATE 2:	DEPTH 2:	TIME 2:	
							FALL TYPE			CASING	TUBE	CORE	RIG TYPE:
							ID/OD						
GEOLOGIC DESCRIPTION											LITHOLOGY/SOIL TYPE	WATER LEVEL	
												REMARKS	
0.0													
2.0		2.5	HS = 0										
4.0			HS = 0										
6.0		4.0											
8.0			HS = 0										
10.0		4.0											
12.0													
14.0													
16.0													
18.0													
20.0													

*Collected GW-I22 @ 10:50
 Set Screen from 6'-10'



AECOM, Inc.
 40 British American Boulevard
 Latham, New York 12110
 Phone: (518) 951-2200
 Fax: (518) 951-2300

BOREHOLE LOG

BORING ID #: **GW-23**

START DATE: 7/9/14 END DATE: 7/9/14

PROJECT NAME: Korkay	PROJECT NO.: 60273289	PROJECT MANAGER: John Santacroce
SITE LOCATION: 70 W. Main Street Broadalbin, NY	BORING LOCATION: NE point behind fence	
DRILLING CO.: Parratt Wolff	DRILLER:	DRILLING METHOD: Geoprobe
BOREHOLE DIAMETER: 3"	DEPTH TO BEDROCK: N/A	TOTAL DEPTH DRILLED: 12'
TOTAL DEPTH REACHED:	INSPECTOR: Ross McCredy	WEATHER CONDITIONS: Sunny, 75
LATITUDE:	LONGITUDE:	ELEVATION AND DATUM:

FIELD SAMPLE INFORMATION							HAMMER	SAMPLER	ST. WATER LEVELS	DATE 1:	DEPTH 1:	TIME 1:
DEPTH (feet bgs)	Blow Count	RECOVERY	PID (ppm)	ODOR OBSERVED	LAB ANALYSIS	VISIBLE PRODUCT	WEIGHT(S)		CASING	TUBE	CORE	RIG TYPE:
							FALL TYPE					
							ID/OD					
GEOLOGIC DESCRIPTION											LITHOLOGY/ SOIL TYPE	WATER LEVEL REMARKS
0.0												
2.0		3.0	HS = 0									
4.0			HS = 0									
6.0		3.5										
8.0			HS = 0									
10.0		4.0										
12.0												
14.0												
16.0												
18.0												
20.0												

*Collected GW-I23 @ 11:30
 Set Screen from 6'-10'

Appendix D
Persulfate Soil Oxidant
Demand Results



P. 949-366-8000
F. 949-366-8090
Hours: M-F 8-5 pm, PST

CATALYZED PERSULFATE

Persulfate Soil Oxidant Demand (SOD) Testing

To: John Santacroce
AECOM
40 British American Blvd.
Latham, NY 12110

From: Melinda Pham, Regenesis
Cc: Maureen Dooley, Regenesis

Site Name: Korkay

Site Location: 70 W. Main Street
Broadalbin, NY

OXIDANT DEMAND RESULTS

Soil Oxidant Demand of the Site

<u>Sample Name</u>	<u>SOD (g_{oxidant}/kg_{soil})</u>
Korkay GW-I2	1.72

After forty eight hours, the oxidant demand of the soil and water was measured and the results are shown in the above table.

DESCRIPTION OF EXPERIMENTAL METHODS

The oxidant demand test is typically performed to determine the amount of oxidant consumed in the presence of site soil. Samples of soil and groundwater are collected in the field. If site water is not provided, distilled water will be used in its place. In this case, the oxidant demand test was performed with distilled water. Reactor was set up with 250 grams of site soil and 250 grams of distilled water. A known amount of sodium persulfate (10 g_{oxidant}/kg_{soil}) was added to the reaction vessel and the oxidant concentration was measured as an initial time point. After 48 hours, a filtered sample of the supernatant was measured by potassium permanganate titration and the remaining persulfate concentration was calculated.



P: 949-366-8000
 F: 949-366-8090
 Hours: M-F 8-5pm, PST

REGENESIS

CHAIN OF CUSTODY FORM

- 1) Alert your RegenesiS Sales Representative of the shipping and arrival information of your samples.
- 2) Send this completed Chain of Custody form along with the samples.

Ship samples to:

RegenesiS
 1011 Calle Sombra
 San Clemente, CA
 92673
 949.366.8000

Consulting Firm AECOM
 Project name Korkay
 Project location 70 W. Main Street Broadalbin, NY
 Primary contact (name, phone #, email) John Santacrose (510) 951-2265
 Consultant address 40 British American BLVD Latham, NY
 RegenesiS technical manager or contact _____

Sample Name	Date	Type	Analysis	Notes
Korkay GW-12	7/10/14	Soil	SOD	Samples were shipped ground + not on ice.

+ specify "S" for soil or "W" for water

Please send a copy of this COC by fax or email to Joy Gravitt at RegenesiS.

jgravitt@regenesiS.com

Fax: 949.366.8090

For lab use only:

Condition upon receipt (includes completeness of COC):

- Acceptable
 Unacceptable

Received by: Melinda Pham *Melinda Pham*

Date received: 7/17/2014