August 2011

NYS Brownfield Cleanup Program

Final Remedial Investigation Report

Old Champlain Mill
16-50 Poultney Street
Village of Whitehall
Washington County, New York
BCP Site No. C558036

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APPENDICES

EXHIBITS

1.0 INTRODUCTION

Poultney Street Partners, LLC submitted an application to the New York State Department of Environmental Conservation (DEC) for participation in the NYS Brownfield Cleanup Program (BCP) in relationship to the property known as the Old Champlain Mill located at 16-50 Poultney Street in the Village of Whitehall, Washington County, New York (herein "the Site"). A Site Location Map is presented as Figure 1. NYSDEC subsequently notified Poultney Street Partners, LLC of its eligibility to participate in the BCP and Poultney Street Partners, LLC executed a Brownfield Cleanup Agreement which required the submission, review, approval and implementation of investigative work plans under the BCP. A Draft Remedial Investigation Work Plan (RIWP) was submitted to DEC and the New York State Department of Health (DOH) for review and comment in November 2007. Regulatory comments to the Work Plan were satisfactorily addressed and the Work Plan was approved by the DEC in November 2008. The Draft Remedial Investigation (RI) Report was provided to DEC for review and comment in January 2011. The RI Report was accepted and approved as final per a July 1, 2011 letter from DEC (Exhibit 5).

The BCP investigation generally involved the collection and analysis of surface soil samples, the advancement of test pits and test borings for the collection and analysis of soil samples and to evaluate the Site's subsurface, the installation of monitoring wells for the collection and analysis of groundwater samples, collection and analysis of groundwater samples from existing monitoring wells installed during previous investigations of the Site, collection and analysis of sediment and surface water samples from on-site wetlands, a private well survey, and a Fish and Wildlife Impact Analysis (FWIA).

1.1 Modifications to the Work Plan

Modifications to the DEC-approved Work Plan included the following.

- The Work Plan included a non-emergency Interim Remedial Measure (IRM) for the removal and disposal of stockpiled wood that was generated when the Site building was demolished in 2003. However, DEC approved a Work Plan

Modification (EXHIBIT 1) allowing the wood to be processed (i.e., chipped) and left on the Site.

- A vapor intrusion survey was not conducted due to shallow groundwater conditions. Water levels obtained in March 2010 from the Site monitoring wells depicted groundwater at approximately the ground surface to four (4) feet beneath the ground surface. Per consultation with the DEC and DOH Project Managers, it was agreed that in lieu of such vapor intrusion survey, any future Site buildings will contain a vapor mitigation system.

- The Work Plan stipulated that groundwater be collected and analyzed from existing monitoring wells MW-2A, MW-3, MW-4A, MW-5A, MW-6A, MW-8A and MW-9A installed during previous investigations. During sampling, it was observed that monitoring wells MW-3 and MW-9A were destroyed. Subsequently, these destroyed wells were replaced with existing monitoring wells MW-3A and MW-8.

1.2 Purpose

The purpose of the Remedial Investigation report (RI) is to describe the investigations conducted at the site for defining the nature and extent of contamination in surface soil, subsurface soil, groundwater, surface water and sediment. From this data decisions regarding the need for remedial actions are made and remedial options are evaluated based in part on the intended Commercial Use of the Site. The investigation defines the site characteristics in terms of its historical use, geology, hydrogeology, known or suspected contaminants and contemplated future use. The target goals of this BCP investigation were to identify contaminants of concern, define the horizontal and vertical extent of such contamination, and to produce data of sufficient quantity and quality to support the development of potential remedial alternatives, and ultimately an acceptable Remedial Action Work Plan.

1.3 Site Background

1.3.1 Site Description

The subject Site is located at 16-50 Poultney Street (NYS Route 4) in the Village of Whitehall, Washington County, New York. The Site is located on the south side of Poultney Street and is bound to the east by Wood Creek and to the west by the Champlain Canal. The Site was identified on the Village of Whitehall tax maps as being within the parcel with section 60.6, block 1 and lot 5. A Site location map is included as Figure 1. A map showing the Site property boundaries is included as Figure 2.

The subject Site incorporates approximately 11.49 acres of fairly level land, though Poultney Street to the north of the Site sits at an elevation higher than that of the subject Site. With the exception of a brick smoke stack and small municipally owned and maintained sewage pump station, no buildings are currently located on the Site. Formerly, the Site was occupied by a 120,000 square foot manufacturing facility and an approximate 5,000 square foot power house. The manufacturing building was a one story brick structure which was reportedly constructed in 1916 and demolished in 2003. The building was constructed on a slab foundation. Much of the foundation of the former manufacturing building remains on the Site. The power house was a one story brick building located to the south of the factory building. The power house was also reportedly constructed in 1916 and formerly housed the boiler for the manufacturing building. Much of the concrete slab foundation for the power house also remains on the Site. A fenced-in sewage pump station occupies the southeastern portion of the Site. According to a Title Report prepared by Chicago Title Insurance Company, there is an easement to the Town of Whitehall for the underground sewage pump station and installation of sanitary sewer force main.

A paved driveway enters the Site from Poultney Street on the eastern portion of the Site. The driveway leads to a paved parking area located north of the location of the former manufacturing building. A gravel driveway traverses the eastern portion of the Site providing access to the sewage pump station.

A Boundary Survey Map for the Site entitled "Map of a 6 Lot Subdivision Made For Old Champlain Mill, Inc.", prepared by David J. Bolster, dated May 13, 2002 is presented as EXHIBIT 2.

1.3.2 Site History

The Site was reportedly first developed in the early 1900's as a silk knitting mill. The Site was used for this purpose until 1959 at which point the manufacturing building was used to manufacture newspaper vending machines. The Site was used for this purpose until 2001. The buildings formerly located on the Site are believed to have been demolished by other parties in 2003. These buildings reportedly had not been used since 2001.

1.3.3 Previous Investigations and Evaluation History

C.T. Male has conducted four (4) environmental investigations of the Site and has reviewed Site-related documentation contained in portions of environmental investigations conducted by others on the Site's south adjoining Poultney Street Inactive Hazardous Waste Site (DEC Site No. 5-58-019). Data obtained from these historic investigations, where applicable, have been incorporated into this RI report to provide a more comprehensive assessment of Site contaminants.

Previous environmental investigations conducted of the Site by C.T. Male and other Site-related documentation of environmental investigations conducted by others on the Site's south adjoining Poultney Street Inactive Hazardous Waste Site are listed below.

- Draft Phase I Environmental Site Assessment, Old Champlain Mill Site, prepared by C.T. Male Associates, P.C., dated June 28, 2002 (2002 C.T. Male Phase I ESA).
- Draft Phase I Environmental Site Assessment, Old Champlain Mill Site, prepared by C.T. Male Associates, P.C., dated August 8, 2006 (2006 C.T. Male Phase I ESA).
- Phase II Environmental Site Assessment, Old Champlain Mill, prepared by C.T. Male Associates, P.C., dated December 22, 2006 (2006 C.T. Male Phase II ESA).
- Supplemental Phase II Environmental Site Assessment, Old Champlain Mill, prepared by C.T. Male Associates, P.C., dated August 6, 2007 (2007 C.T. Male Supplemental Phase II ESA).
- Project Site specific portions of a Remedial Investigation/Feasibility Study Work Plan, Poultney Street Site, prepared by URS Corporation Group Consultants, dated November 2001 and Poultney Street Site Sampling Results letter

correspondence prepared by URS Corporation Group Consultants, dated June 19, 2002 (2001/2002 URS Investigations).

2002 and 2006 C.T. Male Phase I ESAs

Recognized environmental conditions presented in the findings of the 2002 and 2006 C.T. Male Phase I ESAs included: the Site's use for manufacturing purposes since the early 1900's; the Site's listing on several regulatory databases and lists as a petroleum bulk storage facility, spills site (since closed), NYSDEC emergency response notification system (ERNS) facility, and RCRA generator; the identification of approximately 20 empty drums, demolition debris, floor drains, outlet pipes and a potential dry well during the site reconnaissance; and the existence of a NYSDEC Inactive Hazardous Waste Disposal (IHWDS) facility on the Site's south adjoining property.

2006 C.T. Male Phase II ESA

The Phase II ESA investigation was completed through the advancement of 13 soil borings, of which 11 were converted to monitoring wells, to aid in the collection of soil and groundwater samples for subjective and laboratory analysis, and the collection of a surface water sample for laboratory analysis of pooled water beneath and within the confines of the former building foundation.

The findings of this investigation identified two (2) chlorinated volatile organic compounds (cis-1,2-dichloroethene and trichloroethene) and two (2) metals (lead and chromium) slightly above groundwater guidelines. These findings indicated that contaminants above regulatory guidelines were present on the project Site that may have either originated from past operations at the Site and/or from the Site's south adjoining Poultney Street Inactive Hazardous Waste Site, as this site was also impacted by chlorinated VOCs. However, upon presentation of the analytical results to the DEC, the DEC indicated that the data obtained was insufficient to determine if the Poultney Street Inactive Hazardous Waste Site was the source of the Site contaminants.

2007 C.T. Male Supplemental Phase II ESA

The Supplemental Phase II ESA was conducted to determine the quality of soil and groundwater at the Site with respect to the recognized environmental conditions identified through the 2002 and 2006 Phase I ESA activities, and to further define the

extent of VOC contamination identified during the Phase II ESA. The supplemental Phase II ESA activities were developed in part on the basis of a file review of the adjacent inactive hazardous waste site and a groundwater elevation survey to determine the direction of groundwater flow across the Site.

The Supplemental Phase II subsurface investigation included the advancement of 10 soil borings which were converted to groundwater monitoring wells that extended to the top of the confining clay layer, the collection of soil samples for field vapor screening and the collection and analysis of surface soil samples and groundwater samples for laboratory analysis.

Results of the Supplemental Phase II ESA revealed the following:

Elevated photoionization detector (PID) readings were noted in eight (8) soil samples at five (5) boring locations, generally within the soil samples recovered from 12 feet and deeper, mainly within sand layers situated between other layers of silt and clay. Petroleum or chemical odors or staining were not noted in these samples. The source area for this contamination had not been identified by this study. It was expected that if the source was a release to the near surface soils, there would be evidence of soil impacts at depths shallower than 12 feet below grade.

Seven (7) chlorinated volatile organic compounds (VOCs) were detected at concentrations exceeding DEC guidelines in the groundwater samples from the various monitoring wells. Chlorinated solvent compounds are most often denser than water and therefore have a tendency to sink within the aquifer until some form of hydraulic barrier (clay layer) is encountered.

Several semi-volatile organic compounds (SVOCs) were detected above their respective soil cleanup guidance values in the surface soil samples collected in the vicinity of the old boiler house. These detections were possibly related to traces of coal, ash and cinders within the surface soils.

Overall, groundwater was determined to be generally from the south to the north with a southeast to northwest trend on the western portion of the Site and a southwest to northeast trend on the eastern portion of the Site. The extent of groundwater impacts by the chlorinated compounds, both vertically and horizontally, was not defined within

the monitoring well array installed as part of the Phase II ESA and Supplemental Phase II ESA.

Based on the results of the Phase II ESA and Supplemental Phase II ESA investigations, the data did not suggest that groundwater impacts within the subject Site were related to those at the Poultney Street Inactive Hazardous Waste Site as the monitoring wells located between the two (2) areas of contamination did not exhibit groundwater impacts of the magnitude that could positively link the two (2) areas. However, the data was insufficient to rule out a possible contribution from the Poultney Street Inactive Hazardous Waste Site.

1.3.4 Contaminants of Concern

Petroleum fuels, solvents, dyes, paints, and products or other materials containing metals may have been used in association with past manufacturing uses at the Site.

1.4 Report Organization

This RI Report consists of seven (7) sections. Section 1 of the RI Report is an introduction, which presents the purpose of the project and background information such as project work tasks and modifications to the work plan, Site description, Site history and previous investigations and evaluations of the Site. Section 2 relates to the study area investigation and consists of a description (i.e., dates of completion, number of sampling locations, etc.) of the investigative tasks. Section 3 presents the physical characteristics of the study area as obtained during the Site investigation. This section includes Site conditions (i.e., soils, groundwater, regional geology, etc.) and surface features such as water bodies and drainage patterns. Section 4 discusses the nature and extent of the contamination in which the analytical results of soil (surface and subsurface), groundwater, surface water and sediment samples are compared to applicable regulatory standards and guidance values. Section 5 describes the contaminant fate and transport (routes of migration, and contaminant persistence and migration) for the remaining Site contamination. Section 6 presents the exposure assessment to evaluate the potential for human exposure and environmental impact from Site related contaminants. Section 7 presents the summary and conclusions of the entire report.

2.0 STUDY AREA INVESTIGATION

2.1 Site Characterization

The remedial investigations were conducted within the property boundaries of the subject Site, were completed in substantial accordance with the DEC-approved Remedial Investigation Work Plan (RIWP), and involved the following specific tasks:

- Site Survey;
- Private Well Survey;
- Surface Soil Sampling and Analysis;
- Wetland Surface Water, Sediment Sampling and Analysis;
- Exploratory Test Pitting;
- Test Boring and Monitoring Well Installations;
- Subsurface Soil Sampling and Analysis;
- Groundwater Sampling and Analysis;
- Fish and Wildlife Impact Analysis;
- Data Usability Summary Report (DUSR); and
- Disposal of Investigation Derived Wastes.

2.1.1 Summary of Investigative Tasks

Table 2.1.1 presents a summary of the investigative tasks that were carried out as part of the BCP RI. The table lists each task that was performed, along with the location where the task was performed, the media that was subject to investigation, sample identification nomenclature (if applicable), and the laboratory analyses performed on specific media that was sampled (if applicable). Data obtained from previous investigations (see Section 1.3.3) conducted on the Site prior to the RI, where applicable,

have been incorporated into this RI report to aid in providing a more comprehensive evaluation of Site contaminants.

TABLE 2.1.1: INVESTIGATIVE TASKS SUMMARY

Remedial Investigation Task	Sample ID	Media	Laboratory Analysis				
			TCL VOCs	TCL SVOCs	TCL PESTs	TCL PCBs	TAL Metals
Site Survey	NA	NA	NA	NA	NA	NA	NA
Private Well Survey	NA	NA	NA	NA	NA	NA	NA
Surface Soil Sampling	SS-11 to SS-23	Surface Soils	X	X	X	X	X
Wetland Surface Water Sampling	WSW-1 to WSW-4	Surface Water	X	X	X	X	X
Wetland Sediment Sampling	WS-1 to WS-4	Sediment	X	X	X	X	X
Subsurface Soil Sampling (Test Pits)	TP-1 to TP-4	Soil/Fill	X	X	X	X	X
Subsurface Soil Sampling (Test Boring)	BMW-11A to BMW-19A (Shallow Samples(1))	Soil	X	X	X	X	X
Subsurface Soil Sampling (Test Boring)	BMW-11A to BMW-19A (Deep Samples(2))	Soil	X				
Groundwater Sampling	BMW-11A to BMW-19A, MW-2A, MW-4A, MW-8A	GW	X	X	X	X	X
Groundwater Sampling	BMW-16A (2nd Round), MW-3A, MW-5A, MW-8A	GW	X				
Fish and Wildlife Impact Analysis	NA	NA	NA	NA	NA	NA	NA
Data Usability Summary Report	NA	NA	NA	NA	NA	NA	NA
Investigation Derived Wastes	NA	NA	NA	NA	NA	NA	NA

(1) Shallow subsurface soil samples were collected at either the 0 to 2 foot or 2 to 4 foot depth intervals.
(2) Deep subsurface soil samples were collected at the soil/groundwater interface.
NA denotes Not Applicable

2.1.2 Site Survey

The original survey for the Site, which identified the Site's property boundaries, was prepared by David J. Bolster, dated May 13, 2003 (EXHIBIT 2). A survey was conducted by C.T. Male (using the 2003 survey as a base map) to locate surface soil, test pits, soil borings, and monitoring well (new and existing) sampling locations completed as part of the RI for the project site. The survey was conducted in July 2010. Ground surface elevations were also determined at all test boring and monitoring well locations relative to an assumed benchmark of 500.00', including the top of PVC well casing (monitoring wells). All sampling locations are shown on the Site Plan in FIGURE 2.

2.1.3 Private Well Survey

Public municipal water provided by the Village of Whitehall is available to the Site and its surrounding properties. According to Village of Whitehall Department of Public Works foreman Jim Rozelle, the entirety of the Village of Whitehall, with the exception of Cliff Street, is connected to public water. Cliff Street is located more than ½-mile to the northeast of the Site. The Village's water supply is obtained from Pine Lake located in Dresden, New York; approximately 8 miles northwest of the Site.

2.1.4 Surface Soil Sampling

Thirteen (13) surface soil samples designated as SS-11 to SS-23 on FIGURE 2 were collected for laboratory analysis on March 19, 2010.

The samples were collected across the entire site at both biased and unbiased locations and were analyzed for the Target Compound List (TCL) for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), PCBs, pesticides, and the Target Analyte List (TAL) for metals.

Each surface soil sample was collected from either 0 to 2-inches below the ground surface or the vegetative root zone employing the sampling protocols as presented in the approved RIWP.

2.1.5 Wetland Surface Water and Sediment Sampling

Four (4) wetland surface water samples identified as WSW-1 to WSW-4 and four (4) wetland sediment samples identified as WS-1 to WS-4 were collected from Site

wetlands at the locations depicted in FIGURE 2. The wetland sediment samples were collected on March 19, 2010. The wetland surface water samples were collected on March 25, 2010.

The wetland surface water and sediment samples were collected in accordance with the approved RIWP and forwarded to the laboratory for analysis for the full TCL/TAL groups of compounds and analytes.

2.1.6 Exploratory Test Pitting

Four (4) exploratory test pits were completed within the project Site on March 18, 2010 and are depicted as TP-1 to TP-4 on FIGURE 2. The test pits were completed in an attempt to determine a source area(s) for impacts to groundwater by chlorinated VOCs during previous site investigations, to evaluate subsurface conditions in the areas explored, and to aid in the collection of soil samples for subjective and laboratory analysis.

Excavated soils were visually classified and logged by a C.T. Male representative and are presented in the Test Pit Logs in APPENDIX A. Representative samples of the excavated soils were screened for volatile organic vapors with a Photo Ionization Detector (PID). Results of the PID screening are presented in the Test Pit Organic Vapor Headspace Analysis Logs in APPENDIX B.

One soil sample was collected from each of the test pits employing approved sampling protocols and forwarded to the laboratory of record for analyses for the full TCL/TAL groups of compounds and analytes.

2.1.7 Test Borings and Monitoring Well Installations

Nine (9) exploratory test borings (BMW-11A to BMW-19A) were completed on the Site at the locations identified on FIGURE 2.

The test borings were advanced employing conventional drilling techniques utilizing $4^{1/4}$-inch inner diameter hollow stem auger casing. Subsurface soil was collected at continuous 2 foot intervals with a two-foot long stainless steel split spoon sampling barrel. Each recovered soil sample was screened for the presence of volatile organic compounds with a PID. The subsurface soil profiles are presented in the Subsurface

Exploration Logs in APPENDIX C. The PID results are presented on the Test Boring Organic Vapor Headspace Analysis Logs in APPENDIX D.

The test borings were advanced to depths that ranged from 20 feet bgs to 24 feet bgs and were advanced to the top of the confining clay layer. A total of two (2) soil samples (one shallow and one deep) were collected from each of the test borings for a total of 18 samples. The shallow soil sample was collected within the upper four (4) feet of each boring and analyzed for the full TCL/TAL groups of compounds and analytes. The deep soil samples were collected at the soil/groundwater interface (approximately 10 feet to 18 feet bgs) and analyzed for the TCL VOCs.

All nine (9) test borings were converted to 2-inch diameter PVC monitoring wells. Each monitoring well was protected with a metal guard pipe with locking hasp. Monitoring well construction logs are provided in APPENDIX E.

Table 2.1.7 provides a summary of the boring and monitoring well identification numbers, boring depths, depths at which the monitoring wells were set, monitoring well screened interval depths, and the depths at which soil samples were collected for laboratory analysis. As presented in the table, the bottom of the wells were established directly on or above the underlying clay layer above which were water bearing granular deposits of sands and sands and gravel.

TABLE 2.1.7: RI Soil Boring and Monitoring Well Summary

Boring/MW ID #	Boring Depth	MW Depth	MW Screened Interval	Soil Sample Depths
BMW-11A	20′ bgs	17′ bgs	3 to 17′ bgs	2′–4′ bgs/14′-16′ bgs
BMW-12A	24′ bgs	19′ bgs	9 to 19′ bgs	0-2′ bgs/16′-18′ bgs
BMW-13A	22′ bgs	17′ bgs	7 to 17′ bgs	0-2′ bgs/14′-16′ bgs
BMW-14A	20′ bgs	14′ bgs	4 to 14′ bgs	0-2′ bgs/12′-14′ bgs
BMW-15A	24′ bgs	18′ bgs	5 to 18′ bgs	2′-4′ bgs/12′-14′ bgs

TABLE 2.1.7: RI Soil Boring and Monitoring Well Summary

Boring/MW ID #	Boring Depth	MW Depth	MW Screened Interval	Soil Sample Depths
BMW-16A	20′ bgs	15′ bgs	5 to 15′ bgs	2′-4′ bgs/14′-16′ bgs
BMW-17A	22′ bgs	17′ bgs	5 to 17′ bgs	0-2′ bgs/16′-18′ bgs
BMW-18A	20′ bgs	14′ bgs	4 to 14′ bgs	0-2′ bgs/12′-14′ bgs
BMW-19A	20′ bgs	14′ bgs	4 to 14′ bgs	0-2′ bgs/10′-12′ bgs

Notes: bgs denotes below ground surface

2.1.8 Groundwater Sampling

Groundwater samples were collected from newly installed and existing monitoring wells on two (2) separate occasions. Newly installed monitoring wells BMW-11A to BMW-19A were sampled on February 10 and 11, 2010. Existing monitoring wells MW-2A, MW-3A, MW-4A, MW-5A, MW-8A and MW-8 were sampled on March 25, 2010. Newly installed monitoring well BMW-16A was also sampled a second time during sampling of the existing wells to confirm the analytical results for the groundwater sample first collected in February 2010. Prior to the collection of groundwater samples, each well was developed utilizing a surge block, bailer and peristaltic pump to restore the hydraulic connection between the wells and aquifer materials.

Following the development of all of the monitoring wells, each well was purged prior to sampling. The wells were then sampled in accordance with the RI Work Plan and forwarded to the laboratory of record for analyses. Groundwater samples obtained from the newly installed wells on February 10 and 11, 2010 were analyzed for the full TCL/TAL groups of compounds and analytes. Groundwater samples obtained from the existing wells and newly installed MW-16A on March 25, 2010 were analyzed for the following parameters.

- Existing monitoring wells MW-2A, MW-4A and MW-8 were analyzed for the full TCL/TAL groups of compounds and analytes.

- Existing monitoring wells MW-3A, MW-5A, MW-8A and newly installed monitoring well BMW-16A were analyzed for the TCL for VOCs.

2.1.9 Fish and Wildlife Impact Analysis (FWIA)

C.T. Male completed a Fish and Wildlife Impact Analysis (FWIA) (dated September 3, 2010) pursuant to the October 1994 NYSDEC FWIA for Inactive Hazardous Waste Sites. The purpose of the Step 1 FWIA is to identify fish and wildlife resources that presently exist and that existed before contaminant introduction, or to document their absence. This step includes a site description and map reviews, description of fish and wildlife resources, description of fish and wildlife resource value, and identification of applicable fish and wildlife regulatory criteria. Information for the site and the vicinity of the site was collected during a field visit and during off-site literature and mapping reviews. The FWIA is presented as EXHIBIT 3.

2.1.10 Data Usability Summary Report

A Data Usability Summary Report (DUSR) was completed of the analytical data developed during this investigation to confirm the data is of adequate quality for subsequent decision making purposes. The narrative portions of the DUSRs are presented as EXHIBIT4.

2.1.11 Investigation Derived Wastes

Wastes derived during the RI included soils generated from drill cuttings during advancement of the test borings, water from decontamination of excavator and drilling equipment, and groundwater generated from monitoring well development, purging and sampling. These materials were profiled and removed from the site for proper disposal.

3.0 PHYSICAL CHARACTERISTICS OF THE STUDY AREA

3.1 Results of the Study Area Investigation

A number of investigative tasks were completed by C.T. Male to characterize the project site. The results of the investigative tasks are supplemented with data obtained from previous Site investigations and published literature including soil, bedrock, and aquifer mapping to further assess the physical characteristics of the project Site. The physical characteristics of the Site are discussed in the following sections.

3.1.1 Surface Features

The Site consists of abandoned, vacant land that is partially overgrown with grasses, thickets and trees. The concrete slab remnants of a former manufacturing building and boiler house occupy central and southwestern portions of the Site. A fenced-in sewage pump station operated by the Town of Whitehall is located on southeast portions of the site. A gravel road enters the northeastern portion of the site and travels around the historic building slabs and provides access to the sewage pump station. Manmade earthen dikes are located on the Site's eastern and western property boundaries and serve to protect the Site from potential flooding from Wood Creek (adjacent east of the Site) and the Champlain Canal (adjacent west of the Site). Eight (8) wetlands are present on the Site, with their locations depicted on FIGURE 2. Wetlands 1 and 2 are federally regulated. The remaining wetlands are currently the subject of a Jurisdictional Wetland Determination by the U.S. Army Corps of Engineers.

3.1.2 Surface Water Bodies and Wetlands

Wood Creek abuts the Site to the east and the Champlain Canal abuts the Site to the west. These water bodies are separated from the Site by manmade earthen dikes along the Site's eastern and western property boundaries.

Eight (8) wetlands have been identified on the Site as shown on FIGURE 2. The Site was field reviewed for the presence of wetlands on November 7 and 21, 2006 and July 9, 2010 by C.T. Male field representatives. Additionally, a Jurisdictional Determination (JD) site walk was conducted by representatives of the U.S. Corps of Engineers and C.T. Male on June 10, 2010. The purpose of the JD site walk was to determine if the

identified wetlands were connected to known jurisdictional Waters of the U.S, and therefore, classified as federally regulated wetlands. Wetlands 1 and 2 are connected to Wood Creek and are federally regulated wetlands. The remaining wetlands are undergoing a JD by the Corps of Engineers, although Wetland 7 is expected to be a federally regulated wetland because it is connected to Wood Creek via an underground culvert pipe at the northeastern portion of the wetland. Remaining Wetlands 3, 3A, 5, 6 and 8/9 are currently viewed as isolated wetlands (i.e., not connected to Waters of the U.S.) until completion of the JD.

3.1.3 Surface Drainage Patterns

The Champlain Canal borders the Site to the west and Wood Creek borders the Site to the east. Man-made earthen dikes (constructed in the 1930's and amended in the 1980's) serve as flood barriers between the western portion of the Site and the Champlain Canal and the eastern portion of the Site and Wood Creek. Surface water generated through precipitation events appears to sheet flow into the wetlands and/or pools along the earthen dikes and ultimately discharges to Wood Creek through the culvert pipe connected to Wetland 7.

3.1.4 Site Soils and Bedrock

Soils are mapped by the Washington Soil Survey as Limerick silt loam with a small area of Saco silt loam. The Limerick series consists of deep, poorly drained medium-textured soils formed in alluvial deposits of silt and very fine sand. They are nearly level and are found in low areas on flood plains. The Saco series consists of deep, very poorly drained medium textured soils formed in silty alluvial sediments. They are nearly level and are in low areas on flood plains that are subject to frequent flooding. Based on a review of the Surficial Geologic Map of New York, Adirondack Sheet, the surficial geology in the vicinity of the site is mapped as Lacustrine deposits which generally consists of laminates of silt and clay deposited on proglacial lakes, generally calcareous, of low permeability, with a variable thickness of up to 50 meters. Bedrock was not encountered in the soil borings conducted as a function of this RI. The top of bedrock is reported in the remedial investigation of the Poultney Street IHWDS to be present at approximately 50 to 100 feet below existing grades.

The Site's geology, as detailed during the advancement of soil borings as part of the RI, through previous investigations of the Site conducted by C.T. Male and through review of investigations conducted on the Site's south adjoining Poultney Street IHWS by others, is as follows. The Site's geology, in terms of the overburden soils is relatively complex. Beneath the relative thin layer of fill materials mantling the Site, the native soils are characteristic of alluvial sediments (sands, silts and clays) deposited within the flood plain of a stream or river. Within the depths explored during the investigations, the soil stratigraphy is generally characterized as interlayered deposits of fine sand with little silt, silt and clay, and coarse sand with little silt above a basal clay deposit. Based on the sequencing of subsurface soils described above, three (3) depositional events resulted in the formation of the soils beneath the site. The deep basal clay (generally below a depth of approximately 13.5 feet to 19 feet) was formed in a calm water environment likely during the last glacial event within New York. Subsequent to the deposition of the clay strata, glacial outwash sands and sands and gravels were deposited on top of the clay likely in a fast moving water environment. The uppermost soil horizon (alluvium) was likely deposited during flooding events long before the construction of the site. During the RI, the silt and clay alluvium was encountered at the ground surface during advancement of test borings BMW-13A and BMW-19A. BMW-13A and BMW-19A are located adjacent to and within the Site's delineated wetlands. Based on the absence of the alluvium at the other test boring locations, the alluvium is not believed to be continuous across the site and may have been disturbed or removed during construction and other development activities within the site. Groundwater is present within each of the geologic units explored. The top of the gray clay layer was encountered at depths that ranged from 13.5 feet bgs at BMW-19A to 19 feet bgs at BMW-12A. Soils between the bottom of the silt and clay layer and top of the gray clay consisted of fine to coarse sand with varying percentages of silt and gravel.

The top of bedrock is reported in the remedial investigation of the Poultney Street IHWDS to be present at approximately 50 to 100 feet below existing grades and the basal clay layer present at depths of approximately 20 feet forming the bottom of the shallow overburden aquifer of the Site. According to DEC Region 5 representatives, several deep geotechnical test borings were completed within the Poultney Street IHWDS which documented the basal clay unit to extend from approximately 20 to 50 feet or more below existing grades.

3.1.5 Groundwater Characteristics

According to the map entitled "Unconsolidated Aquifers in Update New York, Adirondack Sheet" (Edward F. Bugliosi and Ruth A. Trudell, 1988`), the subject site is located within an unconfined aquifer having a potential yield of 10 to 100 gallons per minute.

Groundwater conditions were assessed through the advancement of test borings and test pits and the installation of permanent monitoring wells. Static groundwater levels were collected from new monitoring wells installed during the course of the RI and from existing wells installed during previous investigations of the Site. Based on the collected water level data, the water table across the site ranges in depth from the ground surface at monitoring wells BMW-19A and MW-10A to approximately 4.22 feet below existing site grades at monitoring well BMW-14A. The water levels were obtained on March 25, 2010. BMW-19A is located within Wetland 7 and MW-10A is located adjacent to Wetland 7 (FIGURE 2).

Water level measurements obtained on February 10 and March 25, 2010 were used in conjunction with the survey of the Site to generate a site wide groundwater contour map which is presented as FIGURE 3A and 3B. The site-wide contour maps show a groundwater ridge within the central portion of the site which trends from southwest to northeast. Groundwater movement away from the ridge is to the east, north and west. This pattern of flow is generally consistent with the groundwater level data collected from the site during the Phase II ESA. The groundwater elevation drop from the top of the ridge to the property boundaries is approximately one (1) to two (2) feet.

Based on the observed composition of the three major soil deposits within the Site, the apparent permeability of the near surface alluvium is expected to be lower than that of the underlying outwash deposits, but variable due to its non homogeneous composition. The basal clay, understanding that it is known to exist from depths of approximately 13.5 to greater than 50 feet, likely serves as an aquiclude, a formation that will not transmit water fast enough to furnish appreciable amounts of water, and also deters movement of water and contaminants in the water vertically downward.

Field observations and parameters (pH, conductivity, and temperature) were recorded during the groundwater sampling events completed on February 10 and 11, 2010, and

March 25, 2010 and were recorded on Groundwater Services Field Logs. The pH values for the collected groundwater samples were slightly alkaline for both sampling events with values ranging from 7.43 to 8.99 standard units during the February 10 and 11, 2010 sampling event, and ranging from 8.64 to 9.65 standard units during the March 25, 2010 sampling event. The groundwater temperature upon sample collection ranged from 6.1 to 11.8 degrees Celsius during the February 10 and 11, 2010 sampling event and 8.0 to 12.5 degrees Celsius during the March 25, 2010 sampling event. The conductivity for the groundwater samples ranged from 101µS to 371µS during the February 10 and 11, 2010 sampling event and 87 µS to 131 µS during the March 25, 2010 sampling event. The turbidity values for the groundwater samples ranged from 3.57 to 41 NTUs during the February 10 and 11, 2010 sampling event and from 4.46 to 189 NTUs during the March 25, 2010 sampling event. Table 3.1.5 lists the field parameter values for each well prior to sample collection.

TABLE 3.1.5: Summary of Field Observations During Groundwater Sampling

Samples Collected on 2/10 and 2/11/2010				Samples Collected on 3/25/2010			
Well ID	Turbidity(1)	pH & Temp.	Specific Conductance	Well ID	Turbidity (1)	pH & Temp.	Specific Conductance
BMW-11A	2.90 NTU	8.99 @ 8.5°C	114 µs	MW-2A	130 NTU	8.87 @ 12.5°C	94µs
BMW-12A	32.6 NTU	8.58 @ 8.9°C	117 µs	MW-3A	189 NTU	8.95 @ 10.2°C	101 µs
BMW-13A	9.36 NTU	7.91 @ 8.9°C	101 µs	MW-4A	33.7 NTU	8.87 @ 9.7°C	97 µs
BMW-14A	12.4 NTU	8.83 @ 7.8°C	371 µs	MW-5A	4.46 NTU	9.17 @ 8.7°C	103 µs
BMW-15A	41.0 NTU	7.54 @ 11.5°C	120 µs	MW-8A	18.5 NTU	8.93 @ 8.1°C	97 µs
BMW-16A	9.96 NTU	8.38 @ 8.9°C	119 µs	MW-8	41.5 NTU	8.64 @ 8.6°C	87 µs
BMW-17A	4.84 NTU	7.43 @ 11.8°C	118 µs	BMW-16A	10.68 NTU	9.65 @ 8.0°C	131 µs

TABLE 3.1.5: Summary of Field Observations During Groundwater Sampling							
Samples Collected on 2/10 and 2/11/2010				Samples Collected on 3/25/2010			
Well ID	Turbidity(1)	pH & Temp.	Specific Conductance	Well ID	Turbidity (1)	pH & Temp.	Specific Conductance
BMW-18A	3.57 NTU	8.06 @ 6.1°C	131 µs				
BMW-19A	12.0 NTU	8.47 @ 8.6°C	129.2 µs				

(1) – A LaMotte Model 2008 Turbidity Meter was used. Turbidity readings were collected after purging, but before collecting laboratory samples.

4.0 NATURE AND EXTEN OF CONTAMINATION

4.1 Sources

Petroleum fuels, solvents, dyes, paints and products or materials containing metals may have been used in association with past manufacturing activities at the Site.

4.2 Determination of Project Standards, Criteria and Guidance (SCGs)

Project SCGs were established for evaluation of analytical results for the four (4) media types that were sampled. The media types included surface and subsurface soils, groundwater, and surface water and sediments from the Site wetlands.

Laboratory analysis for the surface water and groundwater samples included TCL volatile and semi-volatile organic compounds, PCBs and Pesticides, and TAL metals; although some of the groundwater samples were analyzed for TCL volatile organic compounds only. The analytical results were compared to NYSDEC Groundwater Standards and Guidance Values promulgated in the NYSDEC Division of Water Technical and Operational Guidance Series (TOGS).

Laboratory analysis for the sediments included TCL volatile and semi-volatile organic compounds, PCBs and Pesticides, and TAL Metals. The analytical results were compared to the NYSDEC Technical Guidance for Screening Contaminated Sediments, Human Health Bioaccumulation. It should be noted that the SCGs for metals in sediments are divided into two categories; the Lowest Effect Level (LEL) and the Severe Effect Level (SEL). The LEL indicates a level of sediment contamination that can be tolerated by the majority of benthic organisms, but still causes toxicity to a few species. The SEL indicates the concentration at which pronounced disturbance of the sediment dwelling community can be expected.

Laboratory analysis for surface and subsurface soil samples were analyzed for TCL volatile and semi-volatile organic compounds, PCBs and Pesticides, and TAL Metals; although some of the subsurface soil samples were analyzed for TCL volatile organic compounds only. The analytical results were compared to NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs, Subpart 375-6 Restricted (Commercial) Use Soil Cleanup Objectives (SCOs). The restricted (commercial) use SCOs were utilized

because the intended future use of the Site if for commercial purposes. For comparative purposes, the analytical soil data was also be compared to SCOs for unrestricted use sites promulgated in the above referenced 6 NYCRR Part 375.

4.3 Incorporation of Previous Site Investigations

As discussed in Section 1.3.3, previous environmental investigations have been conducted on the Site and its southern adjoining property, and included: the 2001/2002 URS Investigation which encompassed the Site's southern adjoining property and extended onto southern portion of the Site; the Site-specific 2006 C.T. Male Phase II ESA which was Site-specific; and the Site specific 2007 C.T. Male Supplemental Phase II ESA.

Analytical data for media (i.e., soils and groundwater) sampled during the previous investigations are incorporated, where applicable, with analytical data obtained from the RI so that a more comprehensive evaluation is developed regarding the nature and extent of Site contaminants.

4.4 Surface Soils

4.4.1 General

Thirteen (13) surface soil samples depicted as SS-11 to SS-23 on FIGURE 2 were collected across the site as part of the RI and analyzed for the full TCL/TAL list of compounds and analytes.

The full analytical summary table of surface soil sampling results is presented in Table 4.4.1-1. Values in the table which are bolded have exceeded their corresponding SCGs for restricted (commercial) use sites.

4.4.2 Volatile Organic Compounds in Surface Soil

Two (2) VOCs were detected at concentrations exceeding the laboratory method detection limits, but below SCGs for restricted (commercial) use sites.

4.4.3 Semi-Volatile Organic Compounds in Surface Soil

Nineteen (19) SVOCs were detected at concentrations exceeding the laboratory method detection limits, but below SCGs for restricted (commercial) use sites. As a note,

analytical results of a soil sample obtained from the 0 to 2-foot depth interval at soil boring location BMW-17A (see Section 4.5.3) reveal the SVOCs benzo(a)anthracene, benzo(a)pyrene and benzo(b)fluoranthene at concentrations exceeding commercial use SCGs.

4.4.4 Pesticides and PCBs in Surface Soils

Pesticides and PCBs were not detected at concentrations exceeding the laboratory detection limit.

4.4.5 Metals in Surface Soils

Twenty (20) metals were detected at concentrations exceeding laboratory method detection limits, but below SCGs for restricted (commercial) use sites. As a note, analytical results of a soil sample obtained from the 0 to 2-foot depth interval at soil boring location BMW-17A (see Section 4.5.4) revealed the arsenic at concentrations exceeding commercial use SCGs.

4.4.6 Comparison to Unrestricted Use SCGs

The full analytical summary table for the surface soil samples is also tabulated against the unrestricted use SCGs, as presented in Table 4.4.6-1 for evaluating a remedial option that would remediate all compounds and analytes above the unrestricted use SCGs. Values on the table which are bolded have exceeded their corresponding SCGs for unrestricted use sites.

The metals arsenic, lead, selenium and zinc were the only analytes detected above the unrestricted SCGs. Arsenic (15.4 ppm) and lead (89.4 ppm) were detected above their SCG of 13 ppm and 63 ppm, respectively, at surface soil sampling location SS-23. Selenium (4.36 ppm) was detected above its SCG of 3.9 ppm at surface soil sampling location SS-22. Zinc (145 ppm) was detected above its SCG of 109 ppm at surface soil sampling location SS-20.

4.4.7 Previous Investigations Analytical Results Compared to Current SCGs

Five (5) surface soil samples, depicted as SS-1 to SS-5 on FIGURE 2, were collected for analysis for SVOCs during the 2007 C.T. Male Supplemental Phase II ESA. The analytical results at the time that the sampling was conducted were compared to the

recommended soil cleanup objectives and guidance values promulgated in the NYSDEC Technical Assistance Guidance Memorandum (TAGM) #4046. The analytical results, as compared to 6 NYCRR Part 375 SCOs for restricted (commercial) use sites are presented in TABLE 4.4.7-1. As depicted in the table, five (5) SVOCs have been detected at concentrations exceeding SCOs for restricted (commercial) use sites. The locations and concentration ranges for the detected SVOCs are depicted on FIGURE 4. As a note, these analytical results did not undergo data validation as these analyses were performed prior to acceptance of the Site into the BCP.

Two (2) surface soil samples were collected from southern portions of the Site as part of the 2001/2002 URS Investigation of the Site's south adjoining IHWS property. The locations where the samples were collected are unknown. The samples were analyzed for SVOCs only. The analytical results did not reveal any of the detected compounds at concentrations exceeding current SCGs for unrestricted use sites.

Surface soil sampling was not a component of the 2006 C.T. Male Phase II ESA.

4.5 Subsurface Soils

4.5.1 General

Twenty-two (22) subsurface soil samples were collected during the RI from nine (9) test boring (BMW-11A to BMW-19A) and four (4) test pit (TP-1 to TP-4) locations as shown in FIGURE 2.

All of the subsurface soil samples were analyzed for the full TCL/TAL list of compounds and analytes with the exception one (1) deep soil sample from each of the nine (9) test borings. Per the approved RIWP the deeper soil samples were only analyzed for TCL volatile organic compounds.

The full analytical summary tables are presented in Table 4.5.1-1 for the test borings and Table 4.5.1-2 for the test pits. Values on the tables which are bolded have exceeded their corresponding SCGs for restricted (commercial) use sites.

4.5.2 Volatile Organic Compounds in Subsurface Soils

Eleven (11) VOCs were detected at concentrations above the laboratory method detection limits from the test borings and test pits, but below their applicable SCGs for restricted (commercial) use sites. The detected VOCs were for the most part chlorinated in nature, although petroleum-related VOCs were also detected. The following Table 4.5.2 summarizes VOC detections in subsurface soils.

TABLE 4.5.2: SUMMARY OF VOC DETECTIONS IN SUBSURFACE SOILS

Sampling Location	Sampling Depth (feet beneath ground surface))	Chlorinated VOC Detections	Petroleum VOC Detections
Test Pit TP-1	5	6	0
Test Pit TP-2	2.75	1	0
Test Pit TP-3	1	1	0
Test Pit TP-4	3	1	0
Soil Boring BMW-12A	0-2	1	1
Soil Boring BMW-13A	14-16	2	0
Soil Boring BMW-14A	12-14	1	0
Soil Boring BMW-15A	2-4	2	0
	12-14	4	0
Soil Boring BMW-16A	2-4	1	0
	14-16	5	4
Soil Boring BMW-17A	16-18	2	0
Soil Boring BMW-18A	12-14	1	0
Soil Boring BMW-19A	10-12	2	0

As depicted on the table, the highest number of chlorinated and petroleum VOCs detections were in the 14 to 16 foot sampling depth interval at soil boring BMW-16A.

4.5.3 Semi-Volatile Organic Compounds in Subsurface Soils

Twenty-eight (28) SVOCs were detected at concentrations exceeding the laboratory method detection limits from the test borings and test pits. Of the detected compounds, three (3) SVOCs were detected above their corresponding SCGs for restricted (commercial) use sites. The SVOCs benzo(a)anthracene, benzo(a)pyrene and benzo(b)fluoranthene were detected above SCGs from shallow soil samples collected from test borings BMW-12A and BMW-17A only. As a note, the soil sample collected from BMW-17A was obtained from shallow soils at the 0 to 2-foot depth interval. The locations and concentration ranges for the detected SVOCs are presented in FIGURE 5.

4.5.4 Pesticides and PCBs in Subsurface Soils

Pesticides and PCBs were not detected at concentrations exceeding the laboratory method detection limits.

4.5.5 Metals in Subsurface Soils

Twenty-one (21) metals were detected at concentrations above the laboratory method detection limits. Arsenic was the only metal detected at concentrations above its SCG of 16 ppm at test boring sampling locations BMW-16A and BMW-17A only. As a note, the soil sample collected from BMW-17A was obtained from shallow soils at the 0 to 2-foot depth interval. The sampling locations where arsenic exceeded its SCG are depicted in FIGURE 5.

4.5.6 Comparison to Unrestricted Use SCGs

The full analytical summary tables for subsurface soil sampling results compared to unrestricted use SCGs is presented in Table 4.5.6-1 for the test borings and Table 4.5.6-2 for the test pits. Values on the tables which are bolded have exceeded their corresponding SCGs for unrestricted use sites.

A total of four (4) VOCs, four (4) SVOCs and six (6) metals were detected at concentrations above SCGs for unrestricted use sites at five (5) test boring and three (3)

test pit locations. The test boring locations include BMW-12A, BMW-13A, BMW-15A, BMW-16A and BMW-17A. The test pit locations include TP-1, TP-2 and TP-3.

4.5.7 Previous Investigations Analytical Results Compared to Current SCGs

No subsurface soil samples were submitted for laboratory analysis as part of the 2006 C.T. Male Phase II ESA and the 2007 C.T. Male Supplemental Phase II ESA.

One (1) subsurface soil sample was collected from southern portions of the Site during the 2001/2002 URS Remedial Investigation/Feasibility Study of the Site's south adjoining Poultney Street Inactive Hazardous Waste property. The soil sample location is unknown. The sample was analyzed for VOCs and SVOCs only. The analytical results showed three (3) VOCs detected above the laboratory method detection limits, but below SCOs for unrestricted use sites. The three (3) VOCs were cis-1,2-Dichloroethene, Toluene and Trichloroethene.

4.6 Groundwater

4.6.1 General

Groundwater samples were collected for analysis during the RI from newly installed monitoring wells BMW-11A to BMW-19A on February 10 and 11, 2010 and from existing monitoring wells MW-2A, MW-3A, MW-4A, MW-5A, MW-8A and MW-8 on March 25, 2010. Newly installed monitoring well BMW-16A was also sampled a second time during sampling of the existing wells. Groundwater samples obtained from the newly installed wells during the first sampling round were analyzed for the full TCL/TAL groups of compounds and analytes. Groundwater samples obtained from the existing wells and newly installed MW-16A during the second sampling round were analyzed for the following parameters.

- Monitoring wells MW-2A, MW-4A and MW-8 were analyzed for the full TCL/TAL groups of compounds and analytes.
- Monitoring wells MW-3A, MW-5A, MW-8A and BMW-16A were analyzed for the TCL VOCs.

The analytical summary table for the groundwater samples is presented in Table 4.6.1-1. Values on the table which are bolded have exceeded their corresponding SCGs. The locations and concentration ranges for parameters exceeding SCGs in groundwater is depicted in FIGURE 6.

4.6.2 Volatile Organic Compounds in Groundwater

Eight (8) VOCs were detected above the laboratory detection limit with five (5) VOCs detected above SCGs at nine (9) of the 15 sampled wells. The chlorinated VOCs above SCGs were 1,1-Dichloroethene, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, Trichloroethene and Vinyl Chloride (FIGURE 6). An isoconcentration map depicting total VOCs in groundwater is presented as FIGURE 7.

4.6.3 Semi-volatile Organic Compounds in Groundwater

Eight (8) SVOCs were detected above the laboratory method detection limits at two (2) of the 16 wells, with two (2) SVOCs detected at concentrations above SCGs. These included Benzo(a)pyrene and Indeno(1,2,3-cd)pyrene, which were both detected at monitoring well BMW-16A (FIGURE 6).

4.6.4 Pesticides and PCBs in Groundwater

Pesticides and PCBs were not detected at concentrations exceeding the laboratory method detection limits.

4.6.5 Metals in Groundwater

Fourteen (14) metals were detected at concentrations exceeding the laboratory method detection limits with four (4) metals detected at concentrations above SCGs. The metals detected above SCGs were Iron, Lead, Manganese and Sodium (FIGURE 6).

4.6.6 Previous Investigations Analytical Results

Groundwater sampling and analysis was conducted on monitoring wells installed during the 2001/2002 URS Remedial Investigation/Feasibility Study of the Poultney Street Inactive Hazardous Waste Site, the 2006 C.T. Male Phase II ESA and the 2007 C.T. Male Supplemental Phase II ESA.

One (1) monitoring well, depicted as URS-MW4 on FIGURE 2, was installed on the southern portion of the Site during the URS investigation of the Site's south adjoining property. Groundwater in URS-MW4 was sampled on one (1) occasion and analyzed for VOCs. The analytical results did not reveal the presence of VOCs above the laboratory method detection limits. This analytical data did not undergo data validation.

Twelve (12) shallow monitoring wells, depicted as MW-1 to MW-12 on FIGURE 2, were installed during the 2006 C.T. Male Phase II ESA. Groundwater samples collected from MW-1 to MW-11 were analyzed for VOCs, PCBs and Metals. The groundwater sample collected from MW-12 was only analyzed for VOCs and SVOCs. The analytical results identified the chlorinated VOCs cis-1,2-Dichloroethene (34 ppb) and Trichloroethene (13 ppb) at concentrations exceeding their respective SCG of 5 ppb at MW-2, and cis-1,2-Dichloroethene (12 ppb) above its SCG at MW-10. Otherwise, VOCs were not detected in the groundwater from the other monitoring wells. Six (6) metals were detected above the laboratory detection limit with Chromium and Lead detected slightly above their respective SCGs at MW-3 only. PCBs and SVOCs were not detected above the laboratory detection limit. The analytical data was not the subject of data validation, as these analyses were performed prior to acceptance of the Site into the BCP.

Ten (10) monitoring wells, depicted as MW-1A to MW-10A on FIGURE 2, were installed during the 2007 C.T. Male Supplemental Phase II ESA. Each of the wells was installed at depths greater than the initial set of wells installed in 2006. Groundwater samples collected from MW-1A, MW-2A, MW-3A, MW-5A and MW-10A were analyzed for VOCs. Groundwater samples collected from MW-4A and MW-6A to MW-9A were also analyzed for SVOCs. The analytical results are presented in TABLE 4.6.6-1. The analytical data did not undergo data validation. As shown, six (6) chlorinated VOCs and Naphthalene were detected at concentrations exceeding SCGs. Based on this analytical data, an isoconcentration map depicting total VOCs in groundwater during the 2007 sampling has been incorporated into this report as FIGURE 7A to show the overall distribution of total VOCs from the 2007 and 2010 investigations. As depicted, the highest concentration of total VOCs is trending towards the northwest. The area exhibiting the highest concentrations of VOCs is in and around the vicinity of monitoring wells MW-2A, MW-10A and BMW-19A which are located to the north of the central portions of the manufacturing building remains. Additionally, groundwater

analytical results from the RI show an isolated area of total VOCs on southeast portions of the Site at monitoring well BMW-13A (FIGURE 6). Based on the northwesterly trend of groundwater flow direction depicted in FIGURE 3 and the isoconcentration of total VOCs depicted on FIGURES 7 and 7A, it appears that contaminated groundwater has migrated off-site in northwest portions of the Site.

4.7 Wetland Surface Water

4.7.1 General

Four (4) surface water samples identified as WSW-1 to WSW-4 on FIGURE 2 were collected from the Site wetlands. The samples were analyzed for TCL volatile and semi-volatile organic compounds, pesticides and PCBs, and TAL metals.

The full analytical summary table of surface water sampling results is presented in Table 4.7.1-1. Values on the table which are bolded have exceeded their corresponding SCGs. FIGURE 8 depicts parameters in wetland surface water that have exceeded SCGs.

4.7.2 Volatile Organic Compounds in Surface Water

Seven (7) VOCs were detected at concentrations above the laboratory detection limit, with one (1) VOC detected above its SCG. Acetone (51 ppm) was detected above its SCG of 50 ppm at surface water sampling location WSW-3.

4.7.3 Semi-volatile Organic Compounds in Surface Water

SVOCs were not detected at concentrations exceeding the laboratory method detection limits.

4.7.4 Pesticides and PCBs in Surface Water

Pesticides and PCBs were not detected at concentrations exceeding the laboratory method detection limits.

4.7.5 Metals in Surface Water

Fourteen (14) metals were detected at concentrations exceeding the laboratory method detection limits with three (3) metals detected at concentrations above SCGs. The metals above SCGs were Iron, Manganese and Sodium.

4.7.6 Previous Investigations Analytical Results

Wetland surface water samples were not collected during previous investigations of the Site.

4.8 Wetland Sediments

4.8.1 General

Four (4) sediment samples identified as WS-1 to WS-4 were collected from the Site wetlands (Wetlands 2, 5, 6 and 7) and analyzed for the full TCL/TAL list of compounds and analytes.

The full analytical summary table of sediment sampling results is presented in TABLE 4.8.1-1. Values on the table which are bolded have exceeded their corresponding SCGs. FIGURE 9 depicts parameters in wetland sediments that have exceeded SCGs.

4.8.2 Volatile Organic Compounds in Sediment

Three (3) VOCs were detected at concentrations exceeding the laboratory method detection limits with none exceeding SCGs.

4.8.3 Semi-volatile Organic Compounds in Sediment

Eighteen (18) SVOCs were detected at concentrations exceeding the laboratory method detection limits with none exceeding SCGs.

4.8.4 Pesticides and PCBs in Sediment

No pesticides or PCBs were detected at concentrations exceeding the laboratory method detection limits.

4.8.5 Metals in Sediment

Twenty-one (21) metals were detected at concentrations exceeding the laboratory method detection limits with seven (7) metals detected at concentrations above the LEL SCGs, but below the SEL SCGs (see Section 4.2 for the definition of LEL and SEL). Metals detected above the LEL SCGs were Arsenic, Cadmium, Copper, Iron, Lead, Nickel and Zinc.

4.8.6 Previous Investigations Analytical Results

Wetland sediment samples were not collected during previous investigations of the Site.

4.9 Private Well Survey

Public municipal water provided by the Village of Whitehall is available to the site and its surrounding properties. The Village's water supply is obtained from Pine Lake located in Dresden, New York; approximately 8 miles northwest of the Site. There are no water supply wells identified in close proximity to the Site.

4.10 Fish and Wildlife Impact Analysis

C.T. Male completed Step 1 of a Fish and Wildlife Impact Analysis (FWIA) (dated September 3, 2010) pursuant to the October 1994 NYSDEC FWIA for Inactive Hazardous Waste Sites. The FWIA is presented as EXHIBIT 3. The FWIA report concluded that the value of the fish and wildlife resources to humans is very limited within the project Site. As a result, the value of these resources to humans was determined to be low.

4.11 Data Usability Summary Report

All of the remedial investigation analytical data has been independently validated and deemed usable in accordance with NYSDEC DUSR requirements. The analytical results tabulated herein reflect the results of the DUSR and have been appropriately qualified. The narrative portions of the DUSRs are presented in EXHIBIT 4 of this report.

4.12 Disposal of Investigation Derived Wastes

Wastes derived from the RI included soils generated from drill cuttings during advancement of the test borings, water from decontamination of excavation and drilling equipment, and groundwater from monitoring well development, purging and sampling.

The soils were placed in seven (7) 55-gallon drums and staged on the Site. The decontamination water and groundwater were placed in two (2) 55-gallon drums and staged on the Site. The drums containing the wastes were profiled and taken off-site by MC Environmental Services for disposal at Veolia ES Technical Solutions facility located in Schenectady, New York. Waste disposal documentation is provided in Appendix F.

4.13 Summary of Extent of Contamination

4.13.1 General Overview

Analytical results for sampled surface and subsurface soils, sediment, surface water, and groundwater were compared to Site specific SCGs identified in Section 4.2. The following table (Table 4.13.1-1) lists those compounds and analytes that exceeded project specific SCGs for restricted (commercial) use sites along with the frequency that the applicable SCG was exceeded per analyzed media.

TABLE 4.13.1-1: COMPOUNDS AND ANALYTES EXCEEDING SCGs PER MEDIA TYPE

Media	Class	Contaminant of Concern	Detected Concentration Range	Frequency of Exceeding Standard	Applicable SCG (1)
Surface Soils (mg/kg)	VOCs	None Detected Above SCGs			
	SVOCs(2)	Benzo(a)anthracene	20	1 of 18	5.6
		Benzo(a)pyrene	1.2 to 16	3 of 18	1
		Benzo(b)fluoranthene	19	1 of 18	5.6
		Dibenz(a,h)anthracene	2.5	1 of 18	0.56
		Indeno(1,2,3-cd)pyrene	9.4	1 of 18	5.6
	PESTs	None Detected Above the Laboratory Detection Limit			
	PCBs	None Detected Above the Laboratory Detection Limit			
	Metals	None Detected Above SCGs			
Subsurface Soils (mg/kg)	VOCs	None Detected Above SCGs			
	SVOCs	Benzo(a)anthracene	8	1 of 13	5.6
		Benzo(b)fluoranthene	7.7	1 of 13	5.6
		Benzo(a)pyrene	3.3 to 6.9	2 of 13	1

TABLE 4.13.1-1: COMPOUNDS AND ANALYTES EXCEEDING SCGs PER MEDIA TYPE						
Media	**Class**	**Contaminant of Concern**	**Detected Concentration Range**	**Frequency of Exceeding Standard**	**Applicable SCG [1]**	
	PESTs	None Detected Above SCGs				
	PCBs	None Detected Above the Laboratory Detection Limit				
	Metals	Arsenic	17.3 to 29.7	2 of 13	16	
Ground Water (ug/l)	VOCs[3]	1,1-Dichloroethene	7.4	1 of 15	5	
		cis-1,2-Dichloroethene	6 to 6,600	7 of 15	5	
		trans-1,2-Dichloroethene	5.2 to 35	4 of 15	5	
		Trichloroethene	5.5 to 69	4 of 15	5	
		Vinyl Chloride	2.1 to 1,800	9 of 15	2	
	SVOCs	Benzo(a)pyrene	0.17	1 of 15	Non Detect	
		Indeno(1,2,3-cd)pyrene	0.73	1 of 15	0.002	
	PESTs	None Detected Above the Laboratory Detection Limit				
	PCBs	None Detected Above the Laboratory Detection Limit				
	Metals	Iron	784 to 22,200	12 of 15	300	
		Lead	38.1	1 of 15	25	
		Manganese	569 to 4,850	11 of 15	300	
		Sodium	31,000 to 64,200	5 of 15	20,000	
Wetland Surface Water (ug/l)	VOCs	Acetone	51	1 of 4	50	
	SVOCs	None Detected Above the Laboratory Detection Limit				
	PESTs	None Detected Above the Laboratory Detection Limit				
	PCBs	None Detected Above the Laboratory Detection Limit				
	Metals	Iron	529 to 5,410	4 of 4	300	
		Manganese	383 to 491	2 of 4	300	
		Sodium	81,400	1 of 4	20,000	
Wetland Sediments (mg/kg)	VOCs	None Detected Above SCGs				
	SVOCs	None Detected Above SCGs				
	PESTs	None Detected Above the Laboratory Detection Limit				
	PCBs	None Detected Above the Laboratory Detection Limit				
	Metals				LEL[4]	SEL[4]
		Arsenic	6.04 to 6.05	2 of 4	6	33
		Cadmium	0.73	1 of 4	0.6	9
		Copper	20.9	1 of 4	16	110
		Iron	21,100 to 23,500	2 of 4	20,000	40,000
		Lead	40.4	1 of 4	31	110
		Nickel	16.7 to 22.5	3 of 4	16	50
		Zinc	146	1 of 4	120	270

Table Notes:

(1) NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs, Subpart 375-6 Restricted (Commercial) Use Soil Cleanup Objectives for soils. NYSDEC Technical Guidance for Screening Contaminated Sediments, Human Health Bioaccumulation for sediments. NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1), Ambient Water Quality Standards and Guidance Values and Effluent Limitations, June 1998 for groundwater and surface water.

(2) The total number of surface soil samples includes 13 samples collected during the RI and five (5) samples collected during the 2007 C.T. Male Supplemental Phase II ESA. The SVOCs detected above SCGs were from the surface soil samples

collected during the 2007 C.T. Male Supplemental Phase II ESA.[3] Represents VOCs detected in groundwater samples collected during the RI.

[4] LEL denotes Lowest Effect Level. SEL denotes Severe Effect Level. If the metals concentration is less than the LEL, the effects of the metal in the sediment are considered to be acceptable. If the concentration is greater than the LEL but less than the SEL concentration, the sediment is considered to be contaminated with moderate impacts to benthic life. If the concentration is greater than the SEL, the sediment is contaminated and significant harm to benthic aquatic life is anticipated.

GV Guidance Value
NA Not Applicable
MDL The Laboratory Minimum Detection Limit (MDL)
*** Background levels for lead vary widely. Average background levels in metropolitan areas near highways are much higher and typically range from 200 to 500 mg/kg or ppm. The EPA's Interim Lead Hazard Guidance (7/14/94) establishes a residential screening level of 400 mg/kg or ppm.

4.13.2 Surface Soils

2010 Remedial Investigation

None of the analyzed parameters were detected at concentrations exceeding SCGs for restricted (commercial) use sites. Analysis of a shallow (0 to 2 feet bgs) subsurface soil sample obtained from test boring BMW-17A detected three (3) SVOCs and Arsenic at concentrations exceeding commercial use SCGs.

In comparison to SCGs for unrestricted use sites, the metals Arsenic, Lead, Selenium and Zinc were the only parameters detected slightly above their applicable SCGs at four (4) of the 13 surface soil sampling locations. The Arsenic, Lead and Zinc detections were found in the vicinity of the Site's access road and parking lot for the former manufacturing facility. The Selenium detection was confined to a single sampling location (SS-22) within the boundaries of Wetland 7.

Previous Investigations

Five (5) SVOCs were detected above SCGs from five (5) surface soil sampling locations during the 2007 C.T. Male Supplemental Phase II ESA. These sampling locations are located in the vicinity of the former Boiler House (FIGURE 4).

4.13.3 Subsurface Soils

2010 Remedial Investigation

Three (3) SVOCs and one (1) metal (Arsenic) were detected at concentrations exceeding their applicable SCGs for restricted (commercial) use sites at three (3) of the 13

subsurface sampling locations (FIGURE 5). The SVOC detections were found at two (2) subsurface sampling locations in the vicinity of the Site's access road and parking lot for the former manufacturing building. The Arsenic detection was found at two (2) shallow subsurface soil sampling locations adjacent to the former manufacturing building's footprint.

In comparison to SCGs for unrestricted use sites, four (4) VOCs, four (4) SVOCs and six (6) metals were detected at concentrations above SCGs for unrestricted use sites, at five (5) test boring and two (2) test pit locations.

Previous Investigations

No subsurface soil samples were submitted for laboratory analysis as part of the 2006 C.T. Male Phase II ESA and the 2007 C.T. Male Supplemental Phase II ESA.

One (1) subsurface soil sample was collected from southern portions of the Site during the 2001/2002 URS Investigation of the Site's south adjoining property. The analytical results showed three (3) VOCs detected above the laboratory detection limit, but below SCOs for unrestricted use sites.

4.13.4 Groundwater

2010 Remedial Investigation

Five (5) chlorinated VOCs, two (2) SVOCs and four (4) metals were detected at concentrations exceeding SCGs (FIGURE 6). The most prevalent chlorinated VOCs in groundwater included Vinyl Chloride which exceeded its SCG in nine (9) of 15 sampled wells, and cis-1,2-Dichloroethene which exceeded its SCG in seven (7) of 15 sampled wells. The two (2) SVOCs were detected slightly above their SCG and were confined to monitoring well BMW-16A. The most prevalent metals in groundwater were Iron and Manganese.

Total VOCs in groundwater (FIGURE 7) are dispersed across the Site with the highest concentrations found within the northwestern portions of the Site in the general vicinity of monitoring well BMW-19A.

Previous Investigations

Similar chlorinated VOCs detected during the RI were also detected during the 2006 C.T. Male Phase II ESA and 2007 C.T. Male Supplemental Phase II ESA investigations. An isoconcentration map depicting total VOCs in groundwater during the 2007 investigation is presented in FIGURE 7A. Compared to total VOCs in groundwater during the RI (FIGURE 7), elevated VOC concentrations in groundwater are trending towards northwestern portions of the Site.

4.13.5 Wetland Surface Water

2010 Remedial Investigation

Acetone (VOC) and the metals Iron, Manganese and Sodium were the only parameters detected above SCGs. Acetone (51 ppb) was detected above its SCG of 50 ppb at one (1) sampling location only. Iron was detected above SCGs in all of the surface water samples. Sodium was detected above its SCG in the surface water sample collected from Wetland 7 (FIGURE 8), which is located in close proximity to NYS Route 4.

Previous Investigations

Wetland surface water samples were not collected during previous investigations of the Site.

4.13.6 Wetland Sediments

2010 Remedial Investigation

Seven (7) metals were detected above SCGs in sediments sampled from the on-site wetlands (FIGURE 9). The metals Arsenic, Cadmium, Copper, Iron, Lead, Nickel and Zinc were detected at concentrations above the LEL SCGs, but below the SEL SCGs (see Section 4.2 for SCG detail).

Previous Investigations

Wetland sediment samples were not collected during previous investigations of the Site.

5.0 CONTAMINANT FATE AND TRANSPORT

5.1 General Overview

The site related contaminants include SVOCs in surface soils, SVOCs and Arsenic in subsurface soils; chlorinated VOCs, SVOCs and metals in groundwater; Acetone and metals in surface water; and metals in sediment. Compounds and analytes detected above SCGs in surface soils, subsurface soils, groundwater, surface water, and sediment are presented in Table 4.13.1-1 in Section 4.13.1. Compounds and analytes which were detected at concentrations below SCGs are not included in the table.

The fate and transport of the contaminants are based on the physical and chemical properties of the compounds and analytes and the site characteristics. This section defines and discusses the general characteristics of the contaminants which affect the fate and transport, the specific characteristics of the contaminants identified at the site, the site conditions which impact fate and transport, the transport off-site of the contaminants in the surface water, groundwater and soil vapor, and the fate of the contaminants in terms of transformation and degradation.

5.2 Definition of Relevant Properties

Due to their composition, the site contaminants have some common general characteristics and behavior. Characteristics which affect fate and transport include density, organic carbon/water partition coefficient, solubility in water, volatility, and degradability.

Table 5.2-1 presents various properties of the contaminants of concern. The specific gravity of a contaminant describes the weight of the contaminant relative to water, where one (1) is the weight of water. Chlorinated volatile organic compounds, semi-volatile organic compounds and metals generally have a specific gravity value greater than 1 and would therefore tend to migrate vertically downward. At the subject site, the depth to groundwater ranged from approximately the ground surface to four (4) feet below the ground surface.

TABLE 5.2-1: Physical and Chemical Properties of Site Contaminants					
Compound	Density	Kow[1]	Koc[2]	Water Solubility[3]	Henry's Law Constant[4]
Volatile Organic Compounds:					
Acetone	0.7906	-0.24	-2.69	1.00E+06	3.97E-05
1,1-Dichloroethene	1.218	2.13	148	0.25	3.01E-02
cis-1,2-Dichloroethene	1.28	1.86	34.7	800	265E-03
trans-1,2-Dichloroethene	1.26	2.07	52.5	6.30E+03	7.20E-03
Trichloroethene	1.46	2.42	158.5	1,100	6.32E-03
Vinyl Chloride	0.9106	0.60	2.5	1.10E+03	1.22E+00
Semi-Volatile Organic Compounds:					
Benzo(a)anthracene	1.2740	5.90	1,380,384	1.20E-02	2.30E-06
Benzo(a)pyrene	1.3510	6.00	1,000,000	3.90E-03	2.40E-06
Benzo(b)fluoranthene	NDA	6.57	549,540	1.20E-03	1.20E-05
Dibenz(a,h)anthracene	1.2820	6.36	1,659,586	5.00E-03	7.33E-09
Indeno(1,2,3-cd)pyrene	0.0620	7.70	30,902,954	6.20E-02	2.96E-20
Metals[5]:					
Aluminum	7.7	NDA	NA	NDA	NDA
Arsenic	5.73	NA	NA	0.3	NA
Cadmium	8.65	NDA	NA	NDA	NDA
Copper	8.94	NA	NA	0.12	NA
Iron	7.86	NA	NA	NDA	NA
Lead	11.35	NA	NA	0.001	NA
Manganese	7.43	NA	NA	NDA	NA
Nickel	8.9	NA	NA	6.1	NA
Sodium	0.97	NA	NA	Soluble	NA
Zinc	7.14	NA	NA	1.0E-4	NA

References:

Superfund Public Health Evaluation Manual; EPA/540/189/002; Hawley's Condensed Chemical Dictionary, Twelfth Edition; Howard, Philip H., Fate and Exposure Data for Organic Chemicals. Vols. 1&2. 1989; and Robert C. Knox and others, Subsurface Transport and Fate Processes, 1993; Wilson & Clarke, Hazardous Waste Site Soil Remediation, Theory and Application of Innovative Technologies, 1994; Groundwater Chemicals Desk Reference, Fourth Edition, 2007, Montgomery, John H.

NDA denotes no data available in cited references.

NA denotes not applicable.

(1) Log octanol/water partition coefficient.

(2) Organic carbon partition coefficient. Often a range is available rather than a single number.

(3) mg/l at 25 degrees C.

(4) Henry's Law constant, atm-m^3 / mole.

(5) The solubility of metals is highly dependent on the form of the metal compound present.

5.3 Contaminant Persistence

The organic carbon/water partition coefficient (Koc) indicates the tendency of an organic contaminant to sorb onto soil or sediment particles. Where the Koc is not experimentally available, it can be calculated based on the log octanol/water partition coefficient. The Koc multiplied by the organic carbon content of a given soil or sediment gives the estimated absorption partition coefficient (K_d) for that soil or sediment. Some absorption may occur between contaminants and inorganic soil or sediment particles, particularly clay. However, experimental data indicates that the absorption of nonionic, undisassociated chemicals to inorganic soil or sediment is low. Once the sorption sites in soil or sediment are used up, mobility in the water column and groundwater may increase to some extent.

Mobility is expected to be lowest in surface and near-surface soils, which tend to have some organic carbon. Below several feet in depth, the organic carbon content of soils is likely to be low, and even a compound with a high Koc will be moderately mobile. The chlorinated VOCs and SVOCs have a wide range of organic carbon partition coefficients, from 30,902,954 for Indeno(1,2,3-cd)pyrene, indicating high sorption and low mobility in soil, to2.5 for Vinyl Chloride, indicating low sorption and high mobility.

The mobility of metals is affected by geologic conditions, and is often gauged by the environment's oxidation/reduction (redox) potential. As the pH and dissolved oxygen vary, the solubility of metals can change substantially. Generally, but not always, reductive conditions favor the dissolved form of the metal, thus a change toward reducing conditions would make the metals more soluble and possibly more mobile.

Water solubility indicates the tendency of a compound to dissolve in and travel in water. The site contaminants (except for 6 of the 10 metals) have a wide range of solubilities, but are generally soluble. When contaminant concentrations are above approximately ten percent of the water solubility, a separate phase will tend to form. The water solubility values of the contaminants in groundwater vary, but are on the order of 0.25 to 1,000,000 mg/l for the VOCs and 0.0012 to 0.062 mg/l for the SVOCs. The majority of the metals of concern, with the exception of Arsenic, Copper, Lead, Nickel, Sodium and Zinc, are nearly insoluble in water. Since the concentration of the contaminants detected at the site are much less than their water solubility values, separate phase layers are not likely to exist within the site.

Volatility in diffuse aqueous conditions such as occur in groundwater at the subject site is quantified by Henry's constant (K_h). The rate of volatilization increases as K_h increases. Volatility increases with decreases in atmospheric pressure, increase in temperature and when the compound vapor pressure is low relative to saturation. The contaminants of concern (except for metals, which are not volatile) consist of volatile and semi-volatile organic compounds in groundwater and semi-volatile organic compounds in surface and subsurface soils, which will volatilize to some degree when unsaturated vapor, such as soil gas or the open atmosphere, are present. The density of the SVOCs is typically heavier than water (with the exception of indeno(1,2,3-cd)pyrene in groundwater, and so these compounds typically migrate vertically downward within the aquifer. In the subsurface soils, these compounds may dissolve in the groundwater in the saturated and vadose zone, as exemplified by the presence Benzo(a)pyrene and Indeno(1,2,3-cd)pyrene above SCGs in groundwater.

Due to the chemical composition of metals, they do not typically biodegrade. Volatile organic compounds biodegrade at an accelerated rate, primarily under aerobic conditions. Semi-volatile organic compounds biodegrade at a decelerated rate, primarily under anaerobic conditions. Biodegradation of VOCs and SVOCs in soil/groundwater has been found to occur under anaerobic and to a lesser extent aerobic conditions, such as occurs in groundwater. The presence of acclimatized microbes enhances biodegradation of the VOCs and SVOCs. Acclimatized microbes are soil micro-organisms which have adapted themselves to the contaminants by producing enzymes to withstand toxic effects and to allow metabolism of the contaminants. Addition of nutrients would be expected to increase the rate of biotic degradation.

5.4 Contaminant Migration

The potential routes of contaminant migration are through surface water, groundwater and the atmosphere. Depending on their solubility, contaminants could dissolve in surface water and groundwater and be transported in the direction of surface water and groundwater flow. The SVOC contaminants present in surface soils could be transported to the atmosphere as dust should this media be disturbed or through displacement of this media by excessive winds.

5.4.1 Surface Water Migration

The one (1) VOC and the metals in surface water will tend to migrate in the direction of surface water flow, which is generally towards Wood Creek to the east for wetlands 1, 2 and 7 identified in FIGURE 2. Wetland 7 discharges to Wood Creek via a culvert. Contaminants in stagnant surface water in the remaining isolated Site wetlands will tend to volatilize into the atmosphere. The rate of diffusion into the atmosphere depends on the differential in vapor saturation and on the atmospheric pressure. Within the water column beneath the water surface, the differential is expected to be low. At the surface water/atmosphere interface, the differential can change frequently, with great increases in differential causing the contaminant to transport rapidly from the surface water to the atmosphere.

Metals in the wetland sediments may be suspended in the surface water column should this material be subject to natural disturbances (i.e., precipitation events causing increased flow velocities) and/or man-made disturbances (disturbance of the wetland bottom).

5.4.2 Groundwater Migration

Because the site's groundwater contains VOCs, SVOCs and metals having densities greater than water (except for Acetone and Vinyl Chloride (VOCs), Indeno(1,2,3-cd)pyrene (SVOC), and Sodium (metal)), it is expected that the VOCs and SVOCs would migrate in the direction of the groundwater flow. The detected metals are for the most part insoluble in water and would tend to adsorb and absorb to soil particles, thus making it difficult for the metals to migrate with groundwater. Metals that are soluble in water (such as sodium) would readily migrate with groundwater. Based on monitoring well data, groundwater at the site appears to be flowing in an overall northwesterly direction within the northern sections of the Site and southeasterly in the southern portions of the Site. The vast majority of groundwater contamination has been identified in the area north of central portions of the former manufacturing building, and therefore, the migration of the groundwater contamination is generally in a northwestern direction.

5.4.2 Atmospheric Migration

The VOCs and SVOCs in the soil vapor originating from surface soils, subsurface soils

and groundwater may diffuse slowly upward and horizontally to unsaturated soil vapor. The rate of diffusion into the atmosphere depends on the differential in vapor saturation and on the atmospheric pressure. Under natural soil conditions, the differential is expected to be low within the soil and vadose zone. At the soil/atmosphere interface, the differential can change frequently, with great increases in differential causing contaminants to transport readily from surface soil to the atmosphere. Site contaminants which may volatilize from the site soils to the atmosphere will disperse or abiotically degrade, with rates dependent on wind speed and levels of atmospheric radicals, respectively. Since the levels of contaminants in surface soils and subsurface soils are relatively low and VOCs are generally confined to the groundwater, VOC and SVOC contaminants in the atmosphere are not expected to accumulate at detectable levels under existing conditions. Metals do not exhibit volatility and therefore would not likely enter the atmosphere unless Site soils were disturbed such that dust particles with metals adhered to them enter the atmosphere.

6.0 EXPOSURE ASSESSMENT

6.1 Qualitative Exposure Assessment

The purpose of the qualitative exposure assessment is to evaluate the potential for human exposure from site related contamination without any additional remedial action. In performing the qualitative exposure assessment, the potential site related contaminants were identified; and the actual or potential exposure pathways, potentially exposed populations, and extent of actual or potential exposures were evaluated.

The potential site related contaminants were identified as those contaminants detected in various media at the site above DEC regulatory levels including the 6NYCRR Part 375 soil cleanup objectives for restricted commercial use sites, the NYSDEC technical guidance for screening contaminated sediments and the NYSDEC groundwater standards and/or guidance values, as applicable. The potential site related contaminants that have been identified in various media at the site are presented in Table 4.13.1-1 in Section 4.13.1.

Exposure pathways for site contaminants are a function of the contaminant, the affected media, contaminant location and the potentially impacted population. The potential exposure routes and pathways include the following:

- inhalation, dermal contact and/or ingestion of contaminated soil on-site;
- dermal contact and/or ingestion of contaminated groundwater on-site;
- inhalation of vapors emanating from contaminated groundwater;
- dermal contact and/or ingestion of contaminated surface water and sediments on-site;

The potential impacted populations at the site and vicinity include residents in the neighboring community, site visitors and trespassers on the site, and workers which may be engaged in subsurface excavation during any future site development.

Exposure pathways are means by which contaminants move through the environment from a source to a point of contact with humans. A complete exposure pathway must have five (5) parts: 1) a source of contamination; 2) a mechanism for transport of a substance from the source to the air, surface water, groundwater and/or soil; 3) a point where people come in contact with contaminated air, surface water, groundwater or soil (point of exposure); 4) a route of entry (exposure) into the body; and 5) a receptor population. Routes of entry include ingesting contaminated materials, breathing contaminated air, or absorbing contaminants through the skin. If any part of an exposure pathway is absent, the pathway is said to be incomplete and no exposure or risk is possible. In some cases, although a pathway is complete, the likelihood that significant exposure will occur is small.

The potential site related contaminants were identified as those contaminants detected in various media at the site above SCGs. The potential site related contaminants that have been identified in various media at the site are presented in Table 6.1-1.

TABLE 6.1-1: PARAMETERS DETECTED ABOVE SCGs

Compound	Surface and Subsurface Soil	Surface Water	Sediment	Groundwater
Volatile Organic Compounds				
Acetone	**No**	**Yes**	**No**	**No**
1,1-Dichloroethene	No	No	No	Yes
cis-1,2-Dichloroethene	No	No	No	Yes
trans-1,2-Dichloroethene	No	No	No	Yes
Trichloroethene	No	No	No	Yes
Vinyl Chloride	No	No	No	Yes
Semi- Volatile Organic Compounds:				
Benzo(a)anthracene	Yes	No	No	No
Benzo(b)fluoranthene	Yes	No	No	No
Benzo(a)pyrene	Yes	No	No	Yes
Dibenz(a,h)anthracene	Yes	No	No	No
Indeno(1,2,3-cd)pyrene	Yes	No	No	Yes
Metals:				
Arsenic	Yes	No	Yes	No
Cadmium	No	No	Yes	No
Copper	No	No	Yes	No
Iron	No	Yes	Yes	Yes
Lead	No	No	Yes	Yes

TABLE 6.1-1: PARAMETERS DETECTED ABOVE SCGs				
Compound	Surface and Subsurface Soil	Surface Water	Sediment	Groundwater
Manganese	No	Yes	No	Yes
Nickel	No	No	Yes	No
Sodium	No	Yes	No	Yes
Zinc	No	No	Yes	No

Potential exposure pathways for site contaminants are a function of the contaminant, the affected media, contaminant location and the potentially impacted population. The potential exposure routes and pathways for the site include inhalation, dermal contact and/or ingestion of potentially contaminated soil on-site; dermal contact and/or ingestion of potentially contaminated groundwater on-site; dermal contact and/or ingestion of potentially contaminated surface water and sediments on-site; and inhalation of VOC vapors that may emanate from contaminated groundwater and enter occupied building envelopes.

The potential impacted populations at the site and vicinity include residents in the neighboring community, site visitors and trespassers on the site, and workers which may be engaged in work that would disturb the soils, surface water, sediments and groundwater.

Five (5) SVOCs were detected above SCGs in surface soils. The concentrations of these contaminants of concern may warrant remedial action as they are present within soil that is readily accessible to dermal contact and ingestion. Furthermore, disturbance of these soils could create airborne contaminants that may be inhaled. The potential for dermal contact (including ingestion and inhalation) with exposure to the impacted soil and the associated impact is, therefore, anticipated to be high.

Three (3) SVOCs and the metal Arsenic were detected slightly above SCGs in the Site's shallow (0 to 2' bgs) subsurface soils. The potential for exposure to contaminants in existing undisturbed subsurface soils is considered to be moderate as the contaminants are somewhat accessible to the public. In the event that the Site's soils are disturbed during future Site development and maintenance activities, the potential for inhalation, dermal contact and/or ingestion of contaminated soils would be viewed as moderate to high.

Groundwater impacts consist of five (5) chlorinated VOCs, two (2) SVOCs and four (4) metals exceeding SCGs. The VOCs and metals were dispersed across the Site while the SVOCs were confined to an isolated sampling location. The Site and vicinity are served by public water provided by the Village of Whitehall; however, shallow groundwater measured at the ground surface during the RI will likely be encountered by workers during any future site development. As such, the potential for ingestion and dermal contact of contaminated groundwater by potential future Site workers and occupants, and the surrounding community, is considered to be moderate. VOC vapor emanation from the contaminated groundwater into future occupied structures, depending on the location of the structures relative to the groundwater impacts relative in inhalation by workers and patrons is considered moderate to high.

Wetland surface water impacts consist of one (1) VOC and three (3) metals confined to Wetlands 5, 6 and 7 (FIGURE 5). Wetlands 5 and 6 are viewed as isolated wetlands containing stagnant surface water. Wetland 7 is connected to the Site's east adjoining Wood Creek via an underground culvert pipe. Metal contaminants include Iron, Manganese and Sodium. Iron and Manganese are viewed as naturally occurring in the environment. Sodium is attributed to application of road salt on the Site's northern adjoining US Route 4 and within the parking lots and roadways within the site when in use for manufacturing uses. The VOC Acetone (51 ppb) was detected slightly above its SCG of 50 ppb. Based on the above information, potential adverse effects from surface water contaminants to on and off-Site populations are considered to be low.

Sediments in Site wetlands 2, 5, 6 and 7 are impacted by several metals slightly exceeding the LEL SCG. There exists the potential for the sediment to become suspended in the water column in Wetlands 2 and 7 and be carried off-site into Wood Creek where human exposure may occur. The potential for the ingestion/dermal contact by human populations of the sediment contaminants is considered to be low.

7.0 SUMMARY AND CONCLUSIONS

7.1 Summary

The remedial investigation work tasks have been completed in substantial conformance with the DEC-approved Final Remedial Investigation Work Plan dated October 2008. Any deviations to the final approved work plan have been described within the body of this report. The following provides an overview of the RI at the project site.

7.1.1 Site Background

The subject Site is approximately 11.49 acres in size and is located at 16-50 Poultney Street (NYS Route 4) in the Village of Whitehall, Washington County, New York. The Site is located on the south side of Poultney Street and is bound to the east by Wood Creek and to the west by the Champlain Canal.

With the exception of a brick smoke stack and small municipal sewage pump station, no buildings are currently located on the Site. Formerly, the Site was occupied by a 120,000 square foot manufacturing facility and an approximate 5,000 square foot power house. The manufacturing building was a one story brick structure which was reportedly constructed in 1916 and demolished in 2003. The building was constructed on a slab foundation. Much of the foundation of the former manufacturing building remains on the Site. The power house was a one story brick building located to the south of the manufacturing building. The power house was also reportedly constructed in 1916 and formerly housed the boiler for the manufacturing building. Much of the concrete slab foundation for the power house also remains on the Site. The site was used as a silk knitting mill from 1916 to 1959, and later used for the manufacture of newspaper vending machines until 2001. The sewage pump station occupies the southeastern portion of the Site. According to a Title Report prepared by Chicago Title Insurance Company, there is an easement to the Town of Whitehall for the underground pump station and installation of sanitary sewer force main.

Previous environmental investigations of the Site by C.T. Male identified chlorinated VOCs in groundwater and SVOCs in surface soils which were likely attributed to past manufacturing activities at the Site.

Petroleum fuels, solvents, dyes, paints and products containing metals may have been used in association with past manufacturing uses of the Site.

7.1.2 Physical Characteristics of the Project Site

The Site consists of abandoned, vacant land that is partially overgrown with grasses, thickets and trees. The concrete slab remnants of a former manufacturing building and boiler house occupy central and southwestern portion of the Site. A fenced-in sewage pump station operated by the Town of Whitehall is located on southeast portions of the site. Manmade earthen dikes are located on the Site's eastern and western property boundaries and serve to protect the Site from potential flooding from Wood Creek (adjacent east of the Site) and the Champlain Canal (adjacent west of the Site).

The site soils, beneath the relative thin layer of fill materials mantling the Site, are characteristic of alluvial sediments (sands, silts and clays) deposited within the flood plain of a stream or river. The soil stratigraphy is generally characterized as interlayered deposits of fine sand with little silt, silt and clay, coarse sand with little silt, above a basal clay deposit that reportedly extends to depths of approximately 50 feet or more. The top of the gray clay layer unit was encountered at depths that ranged from 13.5 feet to 19 feet bgs. Soils between the bottom of the silt and clay layer unit and top of the gray clay unit consisted of fine to coarse sand with varying percentages of silt and gravel.

The top of bedrock is reported to be present at depth greater than 50 feet below existing grades.

7.1.3 Survey of Public and Private Wells

Public municipal water provided by the Village of Whitehall is available to the site and its surrounding properties. The Village's water supply is obtained from Pine Lake located in Dresden, New York; approximately 8 miles northwest of the Site.

7.1.4 Fish and Wildlife Impact Analysis (FWIA)

C.T. Male completed Step 1 of a Fish and Wildlife Impact Analysis (FWIA). The FWIA report concluded that the value of the fish and wildlife resources to humans is very

limited within the project Site. As a result, the value of these resources to humans was determined to be low.

7.1.5 Nature and Extent of Contamination

The primary contaminants of concern at the site are SVOCs and metals in subsurface soils, chlorinated VOCs, SVOCs and metals in groundwater, and metals in wetland surface water and sediments. The following summarizes the nature and extent of contamination for the project site.

Surface Soils

None of the parameters analyzed during the RI were detected at concentrations exceeding SCGs for restricted (commercial) use sites. Analysis of a shallow (0 to 2 feet bgs) subsurface soil sample obtained from test boring BMW-17A revealed three (3) SVOCs and Arsenic at concentrations exceeding commercial use SCGs.

In comparison to SCGs for unrestricted use sites, the metals Arsenic, Lead, Selenium and Zinc were detected above their applicable SCGs at four (4) of the 13 surface soil sampling locations.

Five (5) SVOCs were detected above SCGs from five (5) surface soil sampling locations during the 2007 C.T. Male Supplemental Phase II ESA. The sampling locations were located in the vicinity of the former Boiler House.

Subsurface Soils

Three (3) SVOCs and one (1) metal (Arsenic) were detected at concentrations exceeding their applicable SCGs for restricted (commercial) use sites at three (3) of the 13 subsurface sampling locations completed during the RI. The SVOC detections were confined to two (2) subsurface sampling locations in the vicinity of the Site's access road and parking lot for the former manufacturing building. The Arsenic detection was confined to two (2) shallow subsurface soil sampling locations adjacent to the former manufacturing building's footprint.

In comparison to SCGs for unrestricted use sites, four (4) VOCs, four (4) SVOCs and six (6) metals were detected at concentrations above the applicable SCGs at five (5) test boring and two (2) test pit locations.

No subsurface soil samples were submitted for laboratory analysis as part of the 2006 C.T. Male Phase II ESA and the 2007 C.T. Male Supplemental Phase II ESA. One (1) subsurface soil sample was collected from southern portions of the Site during the 2001/2002 URS Remedial Investigation/Feasibility Study of the Site's south adjoining property. The analytical results for this sample revealed three (3) VOCs above the laboratory method detection limits, but below SCOs for unrestricted use sites.

Groundwater

Five (5) chlorinated VOCs, two (2) SVOCs and four (4) metals were detected at concentrations exceeding SCGs during the RI. The most prevalent chlorinated VOCs in groundwater included Vinyl Chloride which exceeded its SCG in nine (9) of 15 sampled wells and cis-1,2-Dichloroethene which exceeded its SCG in seven (7) of 15 sampled wells. The two (2) SVOCs were detected slightly above their SCG and were confined to monitoring well BMW-16A. The most prevalent metals in groundwater were Iron and Manganese.

Total VOCs in groundwater are dispersed across the Site with the highest concentrations confined to northwestern portions of the Site in the general vicinity of monitoring well MW-2A and BMW-16A.

The same chlorinated VOCs detected during the RI were also detected during the 2006 C.T. Male Phase II ESA and 2007 C.T. Male Supplemental Phase II ESA investigations. Based on inferred groundwater flow direction, it appears that groundwater contaminants have migrated off-site in northwestern portions of the site.

Wetland Surface Water

The metals Iron, Manganese and Sodium were the only parameters detected above SCGs. Iron was detected above SCGs in all of the surface water samples. Sodium was detected above its SCG in the surface water sample collected from Wetland 7, which is located in close proximity to NYS Route 4 and may be attributed to application of road salt.

Wetland Sediments

Seven (7) metals were detected above SCGs in sediments sampled from the on-site wetlands. The metals Arsenic, Cadmium, Copper, Iron, Lead, Nickel and Zinc were detected at concentrations above the LEL SCGs, but below the SEL SCGs.

7.1.6 Fate and Transport

The primary contaminants of concern at the site are SVOCs in surface soils, SVOCs and metals in subsurface soils, chlorinated VOCs, SVOCs and metals in groundwater, and metals in wetland surface water and sediments.

The SVOCs in surface soils, and SVOCs and metals in subsurface soils will tend to adhere to surrounding soil and fill particles and not migrate into underlying groundwater. This is exemplified by the fact that Arsenic, which was the only metal detected in subsurface soils above SCGs, was not detected in groundwater at concentrations exceeding SCGs, and SVOCs were not detected in groundwater sampled from monitoring wells installed at the same boring location (BMW-16A) where SVOCs were detected above SCGs in subsurface soils.

The chlorinated VOCs and SVOCs in groundwater are in a dissolved phase and will tend to migrate to the bottom of the aquifer and migrate in the direction of groundwater flow. Metals in groundwater which are insoluble are expected to adhere to surrounding soil and fill particles and will not necessarily follow groundwater flow direction nor volatilize to the vadose zone. Metals in groundwater which are soluble (i.e., Sodium) will tend to follow groundwater flow direction.

The metals in the wetland surface water will likely fall out of solution when the wetland dries up (i.e., Sodium) and may precipitate and settle within the bottom sediments.

The metals in wetland sediment should not migrate unless natural and/or man-made actions cause the sediments to become suspended in the water column, where they could migrate into Wood Creek through the drainage culvert to Wood Creek.

7.2 Conclusions

Based upon the findings and conclusion of this Remedial Investigation, additional investigative activities are not warranted at this time. The Remedial Investigation has

adequately delineated the presence and extent of the contaminants of concern identified for the Site. The existing data is considered to be sufficient for the preparation of the Alternatives Analysis Report (AAR). The AAR presents and discusses potential options for addressing the contaminants of concern.

7.2.1 Data Limitations and Disclaimer

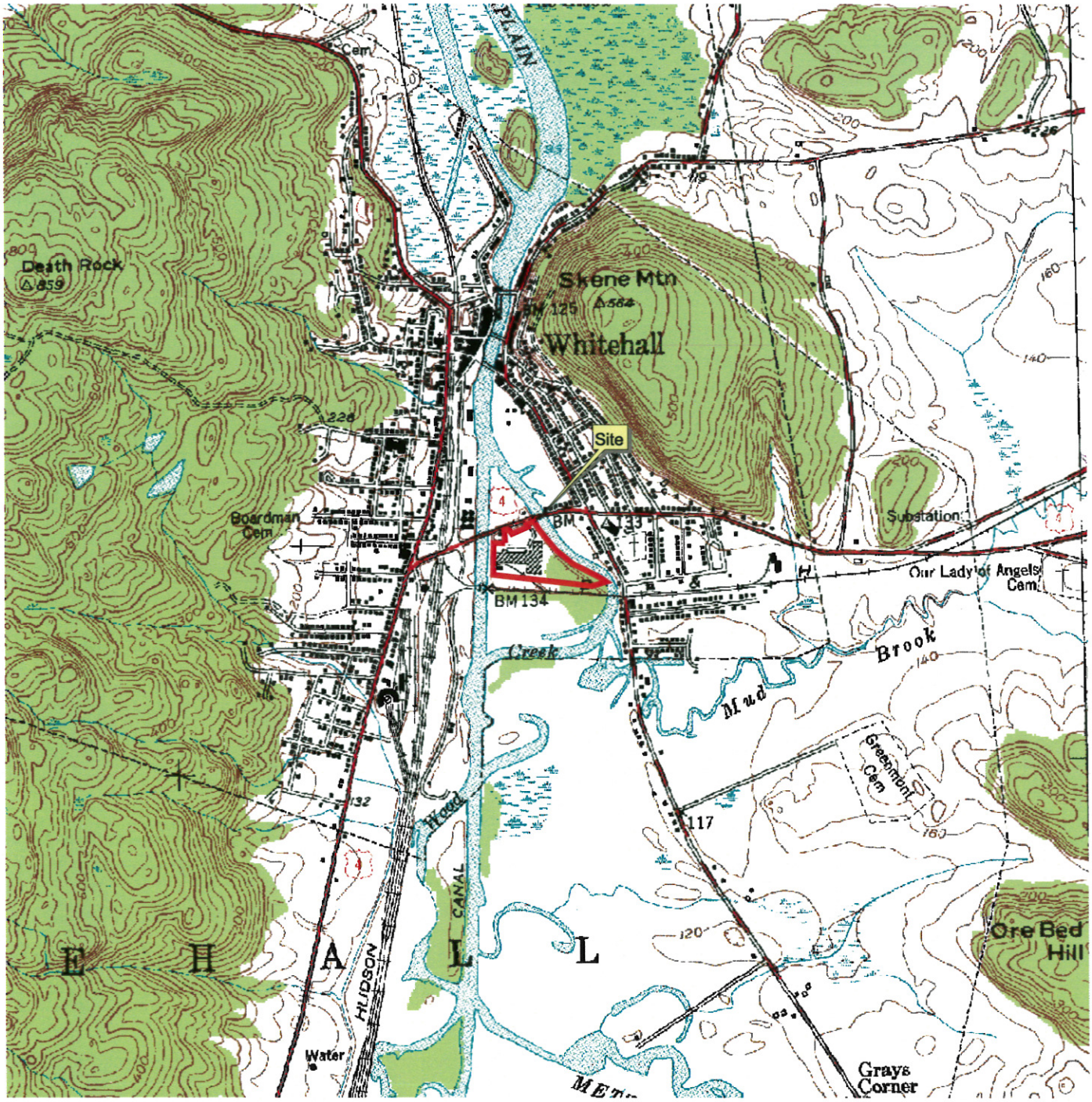
All of the Remedial Investigation analytical data has been independently validated in accordance with NYSDEC DUSR requirements. The analytical results tabulated herein reflect the results of the DUSR and have been appropriately qualified. The DUSRs are presented in EXHIBIT 4 of this report.

FIGURE 1

SITE LOCATION MAP

FIGURE 1

SITE LOCATION MAP



MAP REFERENCE
USGS Topographic Map
Whitehall, NY Quadrangle, Dated 2000
7.5 Minute Series, NAD 83 UTM18N
Topo downloaded from CUGIRon 7/8/10

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C.T.MALE ASSOCIATES, P.C.

50 CENTURY HILL DRIVE, PO BOX 727, LATHAM, NY 12110
PHONE (518) 786-7400 FAX (518) 786-7299

FIGURE 1 SITE LOCATION MAP

Old Champlain Mill

VILLAGE OF WHITEHALL	WASHINGTON COUNTY, NY
SCALE: 1"=1,000'	
DRAFTER: JLM	
PROJECT NO: 06.6448	

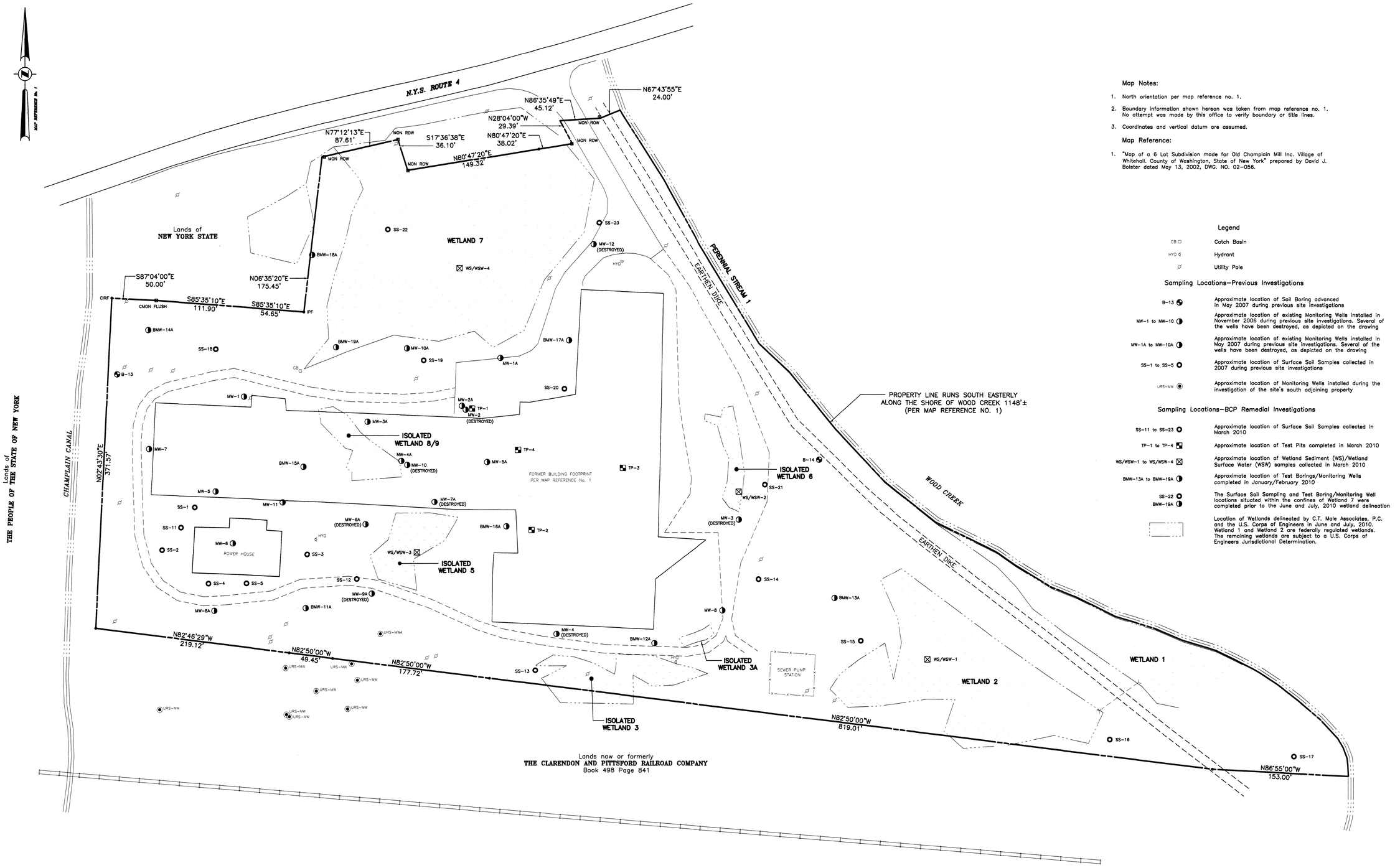
FIGURE 2

SITE PLAN

XREFS: NONE

PROJECT NUMBER:06.6448

CAD DWG. FILE NAME: FIGURE-2.DWG



Map Notes:

1. North orientation per map reference no. 1.
2. Boundary information shown hereon was taken from map reference no. 1. No attempt was made by this office to verify boundary or title lines.
3. Coordinates and vertical datum are assumed.

Map Reference:

1. "Map of a 6 Lot Subdivision made for Old Champlain Mill Inc. Village of Whitehall, County of Washington, State of New York" prepared by David J. Bolster dated May 13, 2002, DWG. NO. 02-056.

Legend

CB □	Catch Basin
HYD ◁	Hydrant
	Utility Pole

Sampling Locations–Previous Investigations

B-13	Approximate location of Soil Boring advanced in May 2007 during previous site investigations
MW-1 to MW-10	Approximate location of existing Monitoring Wells installed in November 2006 during previous site investigations. Several of the wells have been destroyed, as depicted on the drawing
MW-1A to MW-10A	Approximate location of existing Monitoring Wells installed in May 2007 during previous site investigations. Several of the wells have been destroyed, as depicted on the drawing
SS-1 to SS-5	Approximate location of Surface Soil Samples collected in 2007 during previous site investigations
URS-MW	Approximate location of Monitoring Wells installed during the investigation of the site's south adjoining property

Sampling Locations–BCP Remedial Investigations

SS-11 to SS-23	Approximate location of Surface Soil Samples collected in March 2010
TP-1 to TP-4	Approximate location of Test Pits completed in March 2010
WS/WSW-1 to WS/WSW-4	Approximate location of Wetland Sediment (WS)/Wetland Surface Water (WSW) samples collected in March 2010
BMW-13A to BMW-19A	Approximate location of Test Borings/Monitoring Wells completed in January/February 2010
SS-22 / BMW-19A	The Surface Soil Sampling and Test Boring/Monitoring Well locations situated within the confines of Wetland 7 were completed prior to the June and July, 2010 wetland delineation
	Location of Wetlands delineated by C.T. Male Associates, P.C. and the U.S. Corps of Engineers in June and July, 2010. Wetland 1 and Wetland 2 are federally regulated wetlands. The remaining wetlands are subject to a U.S. Corps of Engineers Jurisdictional Determination.

BAR SCALE
50 0 25 50 100
1 inch = 50 ft.

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APPROVED:
DRAFTED : S.WUNSCH
CHECKED : S.BEIBER
PROJ. NO: 06.6448
SCALE : 1"=50'
DATE : OCT. 25, 2010

FIGURE-2
SITE PLAN

OLD CHAMPLAIN MILL SITE

VILLAGE OF WHITEHALL — WASHINGTON COUNTY, NEW YORK

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
518.786.7400 * FAX 518.786.7299
ARCHITECTURE & BUILDING SYSTEMS ENGINEERING * CIVIL ENGINEERING
ENVIRONMENTAL SERVICES * SURVEY & LAND INFORMATION SERVICES

SHEET 1 OF 1
DWG. NO: 10-XXX

CAD DWG. FILE NAME: FIGURE-2.DWG

FIGURE 3A

GROUNDWATER CONTOUR MAP

(FEBRUARY 10, 2010)

XREFS: NONE

PROJECT NUMBER: 06.6448

CAD DWG. FILE NAME: FIGURE-3A.DWG

MAP REFERENCE No. 1

N.Y.S. ROUTE 4

N67°43'55"E 24.00'

N86°35'49"E 45.12'

N28°04'00"W 29.39'

N80°47'20"E 38.02'

N80°47'20"E 149.32'

S17°36'38"E 36.10'

N77°12'13"E 87.61'

MON ROW

Lands of
NEW YORK STATE

WETLAND 7

493.0

493.5

SS-22

SS-23

MW-12 (DESTROYED)

BMW-18A WLE=493.35

WS/WSW-4

HYD

PERENNIAL STREAM 1

EARTHEN DIKE

S87°04'00"E 50.00'

S85°35'10"E 111.90'

S85°35'10"E 54.65'

N06°35'20"E 175.45'

CIRF

CMON FLUSH

IPF

BMW-14A WLE=492.63

BMW-19A WLE=493.66

BMW-17A WLE=493.66

MW-10A

SS-18

SS-19

MW-1A

B-13

CB

SS-20

MW-1

MW-2A

TP-1

MW-2 (DESTROYED)

MW-3A

ISOLATED WETLAND 8/9

MW-7

MW-4A

MW-10 (DESTROYED)

BMW-15A WLE=493.50

MW-5A

TP-4

TP-3

FORMER BUILDING FOOTPRINT PER MAP REFERENCE No. 1

ISOLATED WETLAND 6

B-14

SS-21

WS/WSW-2

MW-5

MW-11

SS-1

MW-7A (DESTROYED)

MW-3 (DESTROYED)

PROPERTY LINE RUNS SOUTH EASTERLY ALONG THE SHORE OF WOOD CREEK 1148'± (PER MAP REFERENCE NO. 1)

WOOD CREEK

EARTHEN DIKE

Lands of
THE PEOPLE OF THE STATE OF NEW YORK

CHAMPLAIN CANAL

N02°43'30"E 371.57'

MW-8A (DESTROYED)

SS-11

MW-6

POWER HOUSE

SS-2

SS-3

TP-2

BMW-16A WLE=494.53

WS/WSW-3

ISOLATED WETLAND 5

SS-14

BMW-13A WLE=493.67

SS-4

SS-5

SS-12

MW-9A (DESTROYED)

BMW-11A WLE=493.86

MW-8

MW-4 (DESTROYED)

BMW-12A WLE=493.83

SS-15

WS/WSW-1

WETLAND 1

WETLAND 2

ISOLATED WETLAND 3A

SEWER PUMP STATION

SS-13

494.0

494.5

URS-MW4

URS-MW

N82°46'29"W 219.12'

N82°50'00"W 49.45'

N82°50'00"W 177.72'

N82°50'00"W 819.01'

ISOLATED WETLAND 3

SS-16

SS-17

N86°55'00"W 153.00'

Lands now or formerly
THE CLARENDON AND PITTSFORD RAILROAD COMPANY
Book 498 Page 841

BAR SCALE
50 0 25 50 100
1 inch = 50 ft.

Map Notes:

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Legend

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- HYD ◊ — Hydrant
- Utility Pole

Sampling Locations–Previous Investigations

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- MW-1A to MW-10A — Approximate location of existing Monitoring Wells installed in May 2007 during previous site investigations. Several of the wells have been destroyed, as depicted on the drawing
- SS-1 to SS-5 — Approximate location of Surface Soil Samples collected in 2007 during previous site investigations
- URS-MW — Approximate location of Monitoring Wells installed during the investigation of the site's south adjoining property

Sampling Locations–BCP Remedial Investigations

- SS-11 to SS-23 — Approximate location of Surface Soil Samples collected in March 2010
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- WLE=493.67 — Water level elevation in feet based on assumed benchmark elevation of 500.00'.
- Groundwater contour line (dashed where inferred) based on water table depths measured on March 25, 2010 and converted to water table elevations based on an assumed benchmark elevation of 500.00'. Arrow depicts inferred direction of groundwater flow.

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APPROVED:

DRAFTED : S.WUNSCH

CHECKED : S.BEIBER

PROJ. NO: 06.6448

SCALE : 1"=50'

DATE : DEC. 9, 2010

FIGURE-3A
GROUNDWATER CONTOUR MAP (2/10/10)

OLD CHAMPLAIN MILL SITE

VILLAGE OF WHITEHALL — WASHINGTON COUNTY, NEW YORK

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
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ENVIRONMENTAL SERVICES * SURVEY & LAND INFORMATION SERVICES

SHEET 1 OF 1

DWG. NO: 10-XXX

CAD DWG. FILE NAME: FIGURE-3A.DWG

FIGURE 3B

GROUNDWATER CONTOUR MAP

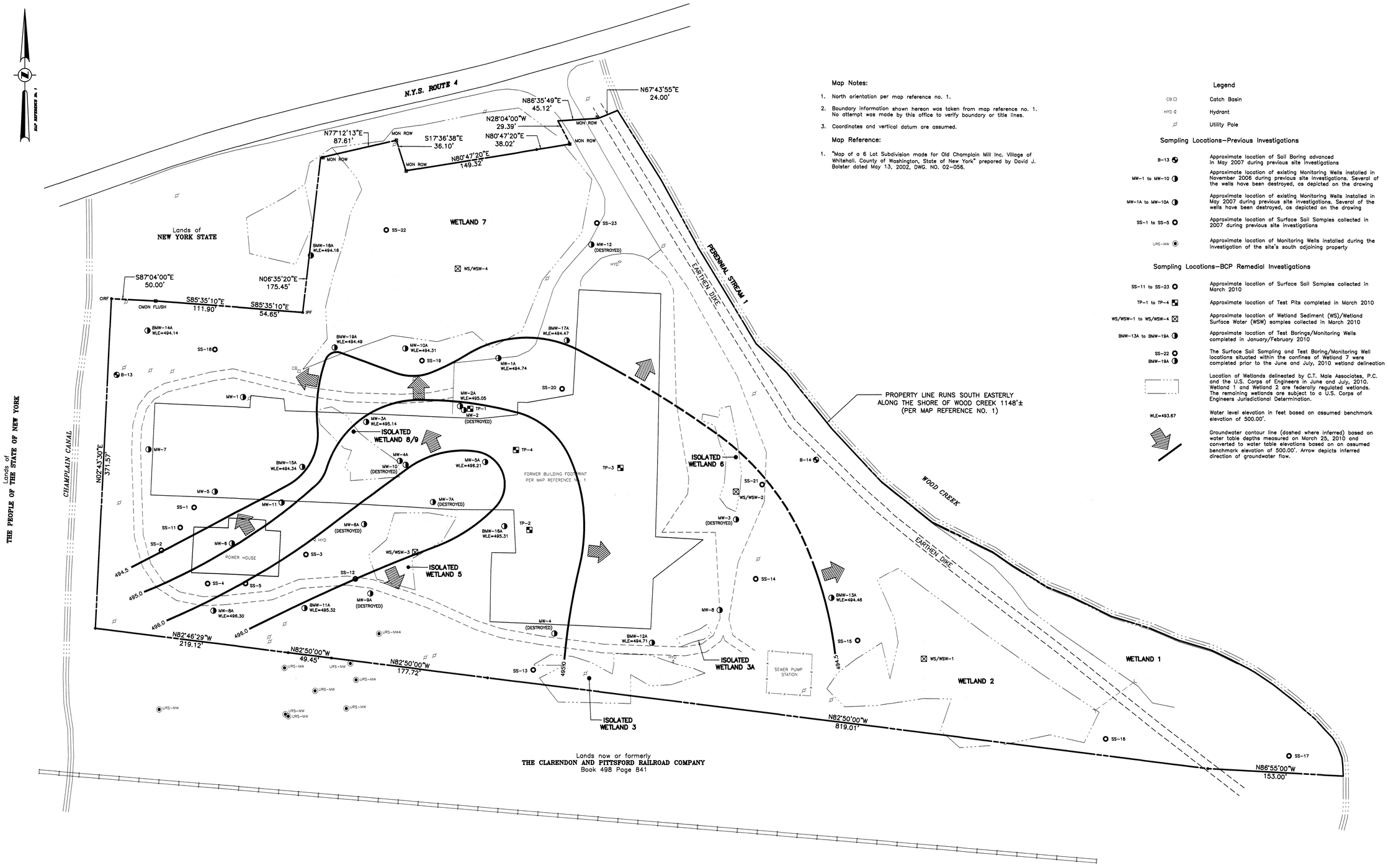
(MARCH 25, 2010)

XREFS: NONE

PROJECT NUMBER: 06.6448

CAD DWG. FILE NAME: FIGURE-3B.DWG

OLD DWG. FILE NAME: FIGURE-3B.DWG



Map Notes:

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Map Reference:

1. "Map of a 6 Lot Subdivision made for Old Champlain Mill Inc. Village of Whitehall. County of Washington, State of New York" prepared by David J. Bolster dated May 13, 2002, DWG. NO. 02-056.

Legend

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- ∅ — Utility Pole

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- SS-1 to SS-5 — Approximate location of Surface Soil Samples collected in 2007 during previous site investigations
- URS-MW — Approximate location of Monitoring Wells installed during the investigation of the site's south adjoining property

Sampling Locations–BCP Remedial Investigations

- SS-11 to SS-23 — Approximate location of Surface Soil Samples collected in March 2010
- TP-1 to TP-4 — Approximate location of Test Pits completed in March 2010
- WS/WSW-1 to WS/WSW-4 — Approximate location of Wetland Sediment (WS)/Wetland Surface Water (WSW) samples collected in March 2010
- BMW-13A to BMW-19A — Approximate location of Test Borings/Monitoring Wells completed in January/February 2010
- SS-22 / BMW-19A — The Surface Soil Sampling and Test Boring/Monitoring Well locations situated within the confines of Wetland 7 were completed prior to the June and July, 2010 wetland delineation
- Location of Wetlands delineated by C.T. Male Associates, P.C. and the U.S. Corps of Engineers in June and July, 2010. Wetland 1 and Wetland 2 are federally regulated wetlands. The remaining wetlands are subject to a U.S. Corps of Engineers Jurisdictional Determination.
- WLE=493.67 — Water level elevation in feet based on assumed benchmark elevation of 500.00'.
- Groundwater contour line (dashed where inferred) based on water table depths measured on March 25, 2010 and converted to water table elevations based on an assumed benchmark elevation of 500.00'. Arrow depicts inferred direction of groundwater flow.

BAR SCALE
50 0 25 50 100
1 inch = 50 ft.

"ONLY COPIES OF THIS MAP SIGNED IN RED INK AND EMBOSSED WITH THE SEAL OF AN OFFICER OF C.T. MALE ASSOCIATES, P.C. OR A DESIGNATED REPRESENTATIVE SHALL BE CONSIDERED TO BE A VALID TRUE COPY".

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APPROVED:
DRAFTED : S.WUNSCH
CHECKED : S.BEIBER
PROJ. NO: 06.6448
SCALE : 1"=50'
DATE : DEC. 9, 2010

FIGURE-3B
GROUNDWATER CONTOUR MAP (3/25/10)

OLD CHAMPLAIN MILL SITE

VILLAGE OF WHITEHALL — WASHINGTON COUNTY, NEW YORK

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
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ENVIRONMENTAL SERVICES • SURVEY & LAND INFORMATION SERVICES

SHEET 1 OF 1
DWG. NO: 10-XXX

FIGURE 4

PARAMETERS IN SURFACE SOILS EXCEEDING SCGS FOR COMMERCIAL USE SITES

XREFS: NONE

PROJECT NUMBER:06.6448

CAD DWG. FILE NAME: FIGURE-4.DWG

MAP REFERENCE No. 1

N.Y.S. ROUTE 4

N67°43'55"E 24.00'

N86°35'49"E 45.12'

N28°04'00"W 29.39'

N80°47'20"E 38.02'

S17°36'38"E 36.10'

N80°47'20"E 149.32'

N77°12'13"E 87.61'

MON ROW

Lands of NEW YORK STATE

WETLAND 7

BMW-18A

N06°35'20"E 175.45'

S87°04'00"E 50.00'

S85°35'10"E 111.90'

S85°35'10"E 54.65'

CIRF

CMON FLUSH

IPF

PERENNIAL STREAM 1

EARTHEN DIKE

PROPERTY LINE RUNS SOUTH EASTERLY ALONG THE SHORE OF WOOD CREEK 1148'± (PER MAP REFERENCE NO. 1)

WOOD CREEK

SS-22

SS-23

MW-12 (DESTROYED)

WS/WSW-4

HYD

BMW-14A

BMW-19A

MW-10A

SS-18

SS-19

MW-1A

BMW-17A

SS-20

B-13

MW-1

MW-2A

TP-1

MW-2 (DESTROYED)

MW-3A

ISOLATED WETLAND 8/9

MW-7

MW-4A

MW-10 (DESTROYED)

MW-5A

TP-4

TP-3

BMW-15A

B-14

ISOLATED WETLAND 6

SS-21

WS/WSW-2

MW-3 (DESTROYED)

MW-5

SS-1

MW-11

MW-7A (DESTROYED)

FORMER BUILDING FOOTPRINT PER MAP REFERENCE No. 1

MW-6A (DESTROYED)

BMW-16A

TP-2

SS-11

MW-6 POWER HOUSE

SS-2

SS-3

WS/WSW-3

ISOLATED WETLAND 5

SS-4

SS-5

SS-12

MW-9A (DESTROYED)

MW-8A

BMW-11A

SS-14

BMW-13A

MW-8

N82°46'29"W 219.12'

N82°50'00"W 49.45'

N82°50'00"W 177.72'

MW-4 (DESTROYED)

BMW-12A

SS-15

WS/WSW-1

WETLAND 1

WETLAND 2

SS-13

ISOLATED WETLAND 3A

SEWER PUMP STATION

ISOLATED WETLAND 3

N82°50'00"W 819.01'

SS-16

SS-17

N86°55'00"W 153.00'

URS-MW4

URS-MW

Lands of THE PEOPLE OF THE STATE OF NEW YORK

CHAMPLAIN CANAL

N02°43'30"E 371.57'

Lands now or formerly THE CLARENDON AND PITTSFORD RAILROAD COMPANY Book 498 Page 841

SURFACE SOIL SS-1		
PARAMETER	CONC.	SCG
BENZO(a)ANTHRACENE	20	5.6
BENZO(a)PYRENE	16	1
BENZO(b)FLUORANTHENE	19	5.6
DIBENZ(a,h)ANTHRACENE	2.5	0.56
INDENO(1,2,3-cd)PYRENE	9.4	5.6

SURFACE SOIL SS-5		
PARAMETER	CONC.	SCG
BENZO(a)PYRENE	1.2	1

SURFACE SOIL SS-3		
PARAMETER	CONC.	SCG
BENZO(a)PYRENE	2	1

SURFACE SOIL SS-20		
PARAMETER	CONC.	SCG
ZINC	145	109

Map Notes:

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3. Coordinates and vertical datum are assumed.

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Legend

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- HYD ◁ — Hydrant
- Utility Pole

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- URS-MW — Approximate location of Monitoring Wells installed during the investigation of the site's south adjoining property

Sampling Locations–BCP Remedial Investigations

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- SS-22 / BMW-19A — The Surface Soil Sampling and Test Boring/Monitoring Well locations situated within the confines of Wetland 7 were completed prior to the June and July, 2010 wetland delineation
- Location of Wetlands delineated by C.T. Male Associates, P.C. and the U.S. Corps of Engineers in June and July, 2010. Wetland 1 and Wetland 2 are federally regulated wetlands. The remaining wetlands are subject to a U.S. Corps of Engineers Jurisdictional Determination.
- Depicts surface soil sampling location where parameters exceeded SCGs for commercial use sites. Parameter concentration and SCGs are in mg/kg or parts per million (ppm). All parameters exceeding SCGs are from surface soil samples collected during the 2007 C.T. Male Supplemental Phase II ESA.

BAR SCALE

50 0 25 50 100

1 inch = 50 ft.

"ONLY COPIES OF THIS MAP SIGNED IN RED INK AND EMBOSSED WITH THE SEAL OF AN OFFICER OF C.T. MALE ASSOCIATES, P.C. OR A DESIGNATED REPRESENTATIVE SHALL BE CONSIDERED TO BE A VALID TRUE COPY".

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APPROVED:

DRAFTED : S.WUNSCH

CHECKED : S.BEIBER

PROJ. NO: 06.6448

SCALE : 1"=50'

DATE : OCT. 25, 2010

FIGURE-4
PARAMETERS IN SURFACE SOILS EXCEEDING SCGs FOR COMMERCIAL USE SITES
OLD CHAMPLAIN MILL SITE

VILLAGE OF WHITEHALL — WASHINGTON COUNTY, NEW YORK

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
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SHEET 1 OF 1

DWG. NO: 10-XXX

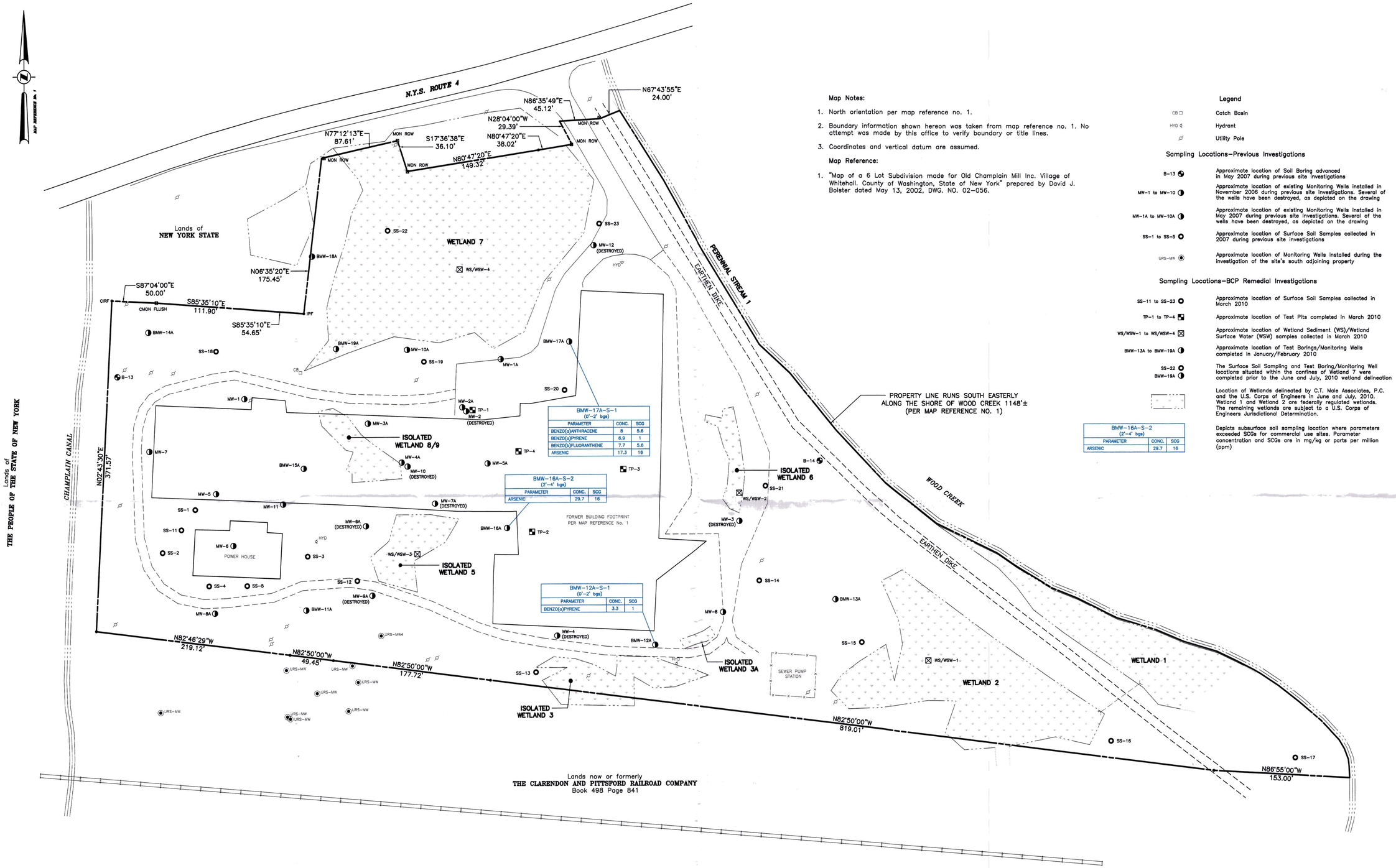
FIGURE 5

PARAMETERS IN SUBSURFACE SOILS EXCEEDING SCGS FOR COMMERCIAL USE SITES

XREFS: NONE

PROJECT NUMBER: 06.6448

CAD DWG. FILE NAME: FIGURE-5.DWG



BMW-17A-S-1 (0'-2' bgs)		
PARAMETER	CONC.	SCG
BENZO(a)ANTHRACENE	8	5.6
BENZO(a)PYRENE	6.9	1
BENZO(b)FLUORANTHENE	7.7	5.6
ARSENIC	17.3	16

BMW-16A-S-2 (2'-4' bgs)		
PARAMETER	CONC.	SCG
ARSENIC	29.7	16

BMW-12A-S-1 (0'-2' bgs)		
PARAMETER	CONC.	SCG
BENZO(a)PYRENE	3.3	1

Map Notes:

1. North orientation per map reference no. 1.
2. Boundary information shown hereon was taken from map reference no. 1. No attempt was made by this office to verify boundary or title lines.
3. Coordinates and vertical datum are assumed.

Map Reference:

1. "Map of a 6 Lot Subdivision made for Old Champlain Mill Inc. Village of Whitehall, County of Washington, State of New York" prepared by David J. Bolster dated May 13, 2002, DWG. NO. 02-056.

Legend

- CB □ — Catch Basin
- HYD ◁ — Hydrant
- ⌀ — Utility Pole

Sampling Locations–Previous Investigations

- B-13 — Approximate location of Soil Boring advanced in May 2007 during previous site investigations
- MW-1 to MW-10 — Approximate location of existing Monitoring Wells installed in November 2006 during previous site investigations. Several of the wells have been destroyed, as depicted on the drawing
- MW-1A to MW-10A — Approximate location of existing Monitoring Wells installed in May 2007 during previous site investigations. Several of the wells have been destroyed, as depicted on the drawing
- SS-1 to SS-5 — Approximate location of Surface Soil Samples collected in 2007 during previous site investigations
- URS-MW — Approximate location of Monitoring Wells installed during the investigation of the site's south adjoining property

Sampling Locations–BCP Remedial Investigations

- SS-11 to SS-23 — Approximate location of Surface Soil Samples collected in March 2010
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- Depicts subsurface soil sampling location where parameters exceeded SCGs for commercial use sites. Parameter concentration and SCGs are in mg/kg or parts per million (ppm)

BMW-16A-S-2 (2'-4' bgs)		
PARAMETER	CONC.	SCG
ARSENIC	29.7	16

BAR SCALE
50 0 25 50 100
1 inch = 50 ft.

"ONLY COPIES OF THIS MAP SIGNED IN RED INK AND EMBOSSED WITH THE SEAL OF AN OFFICER OF C.T. MALE ASSOCIATES, P.C. OR A DESIGNATED REPRESENTATIVE SHALL BE CONSIDERED TO BE A VALID TRUE COPY".

CAD DWG. FILE NAME: FIGURE-5.DWG

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APPROVED:
DRAFTED : S.WUNSCH
CHECKED : S.BEIBER
PROJ. NO: 06.6448
SCALE : 1"=50'
DATE : OCT. 25, 2010

FIGURE-5
PARAMETERS IN SUBSURFACE SOILS EXCEEDING SCGs FOR COMMERCIAL USE SITES
OLD CHAMPLAIN MILL SITE

VILLAGE OF WHITEHALL — WASHINGTON COUNTY, NEW YORK

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SHEET 1 OF 1
DWG. NO: 10-XXX

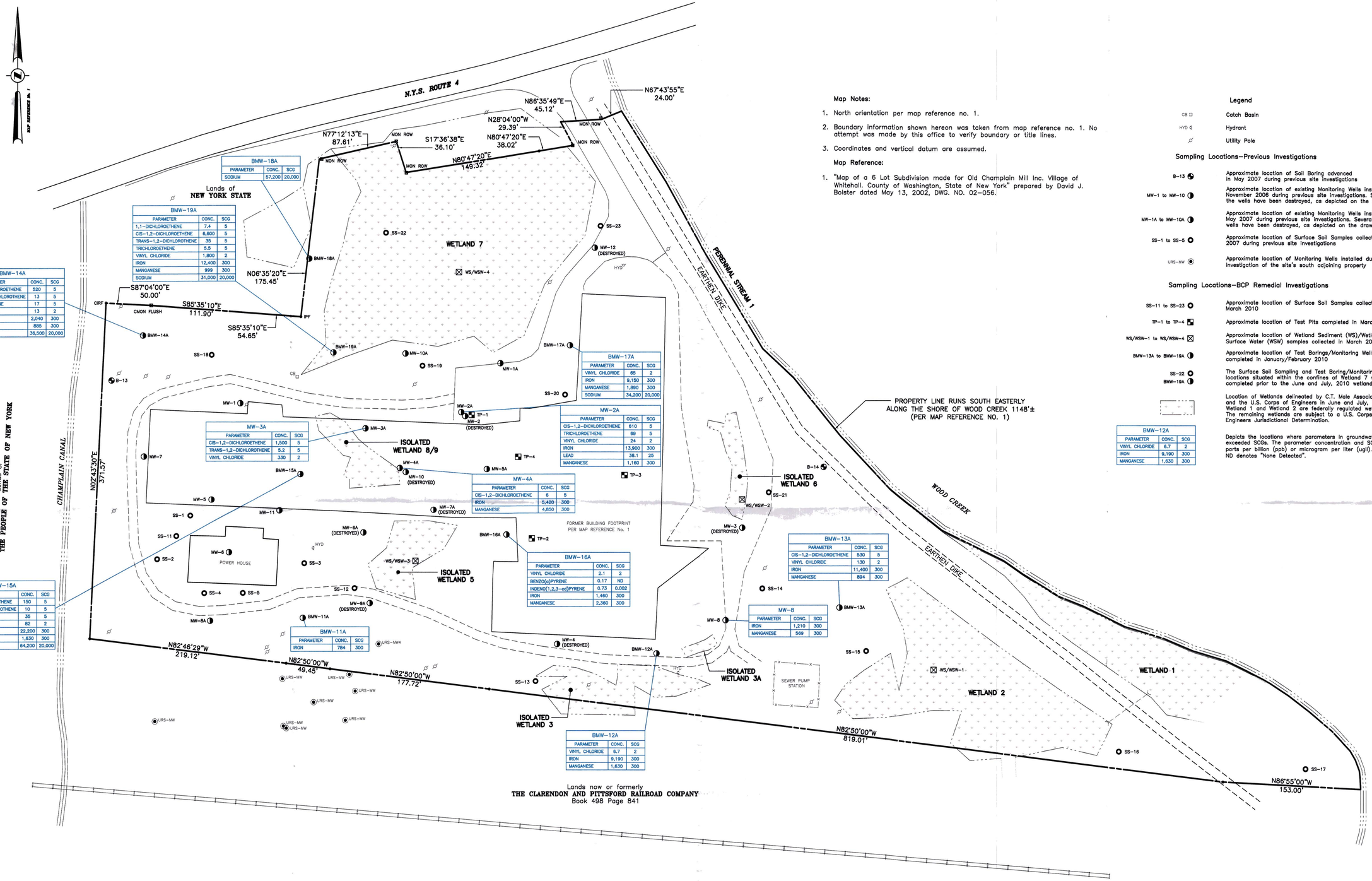
FIGURE 6

PARAMETERS EXCEEDING SCGs IN GROUNDWATER

XREFS: NONE

PROJECT NUMBER: 06.6448

CAD DWG. FILE NAME: FIGURE-6.DWG



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- ∅ — Utility Pole

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BMW-12A

PARAMETER	CONC.	SCG
VINYL CHLORIDE	6.7	2
IRON	9,190	300
MANGANESE	1,630	300

Depicts the locations where parameters in groundwater have exceeded SCGs. The parameter concentration and SCG are in parts per billion (ppb) or microgram per liter (ug/l). ND denotes "None Detected".

BAR SCALE
50 0 25 50 100
1 inch = 50 ft.

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DRAFTED : S.WUNSCH

CHECKED : S.BEIBER

PROJ. NO: 06.6448

SCALE : 1"=50'

DATE : OCT. 25, 2010

FIGURE-6
PARAMETERS EXCEEDING SCGs IN GROUNDWATER
OLD CHAMPLAIN MILL SITE

VILLAGE OF WHITEHALL — WASHINGTON COUNTY, NEW YORK

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SHEET 1 OF 1

DWG. NO: 10-XXX

FIGURE 7

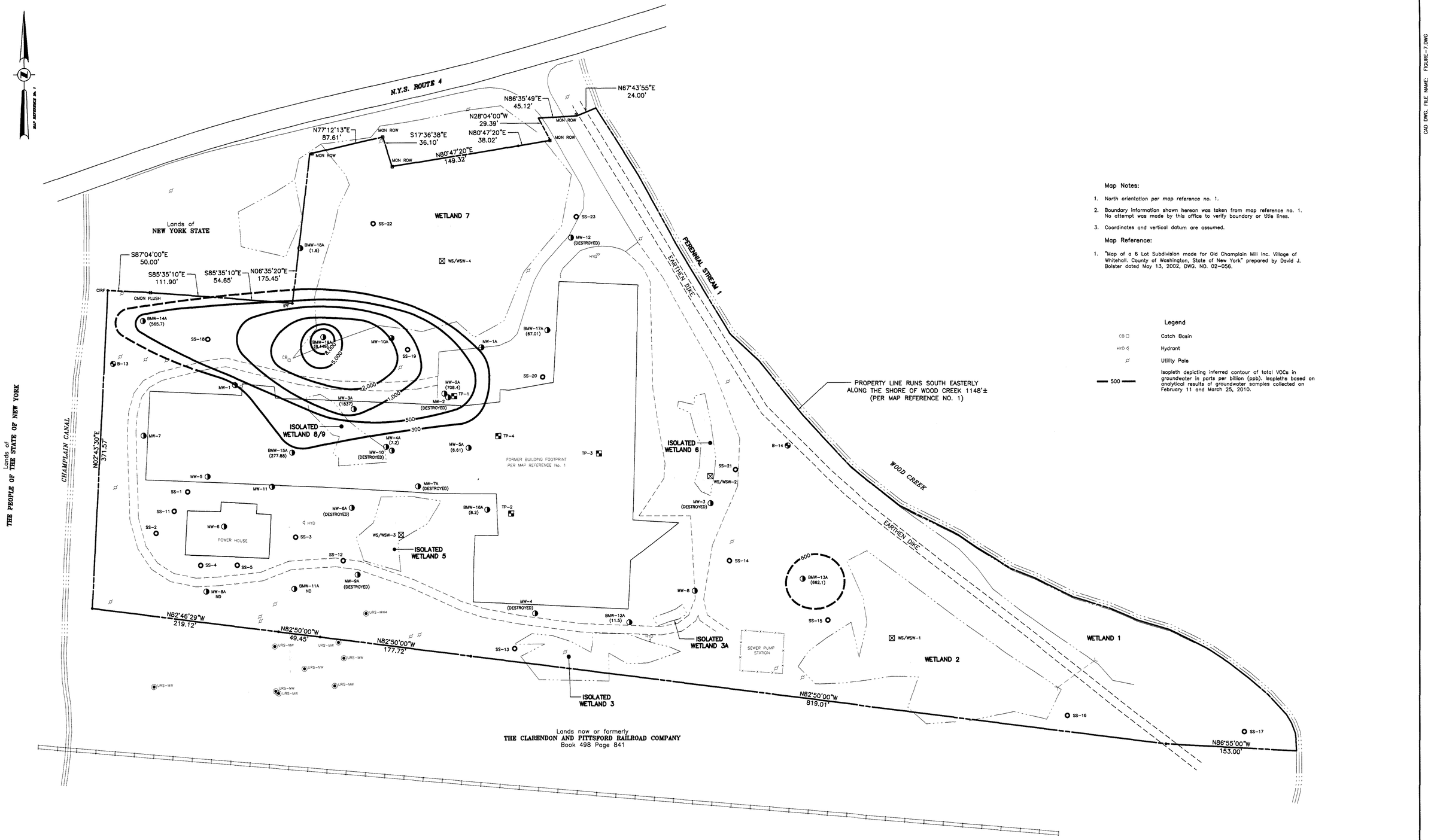
TOTAL VOCS IN GROUNDWATER ISOCONCENTRATION MAP

(REMEDIAL INVESTIGATION)

XREFS: NONE

PROJECT NUMBER:06.6448

CAD DWG. FILE NAME: FIGURE-7.DWG



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Legend

CB □	Catch Basin
HYD ◇	Hydrant
⌀	Utility Pole
500	Isopleth depicting inferred contour of total VOCs in groundwater in parts per billion (ppb). Isopleths based on analytical results of groundwater samples collected on February 11 and March 25, 2010.

BAR SCALE
50 0 25 50 100
1 inch = 50 ft.

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APPROVED:
DRAFTED : S.WUNSCH
CHECKED : S.BEIBER
PROJ. NO: 06.6448
SCALE : 1"=50'
DATE : DEC. 9, 2010

FIGURE-7
TOTAL VOCs IN GROUNDWATER ISOCONCENTRATION MAP
OLD CHAMPLAIN MILL SITE

VILLAGE OF WHITEHALL — WASHINGTON COUNTY, NEW YORK

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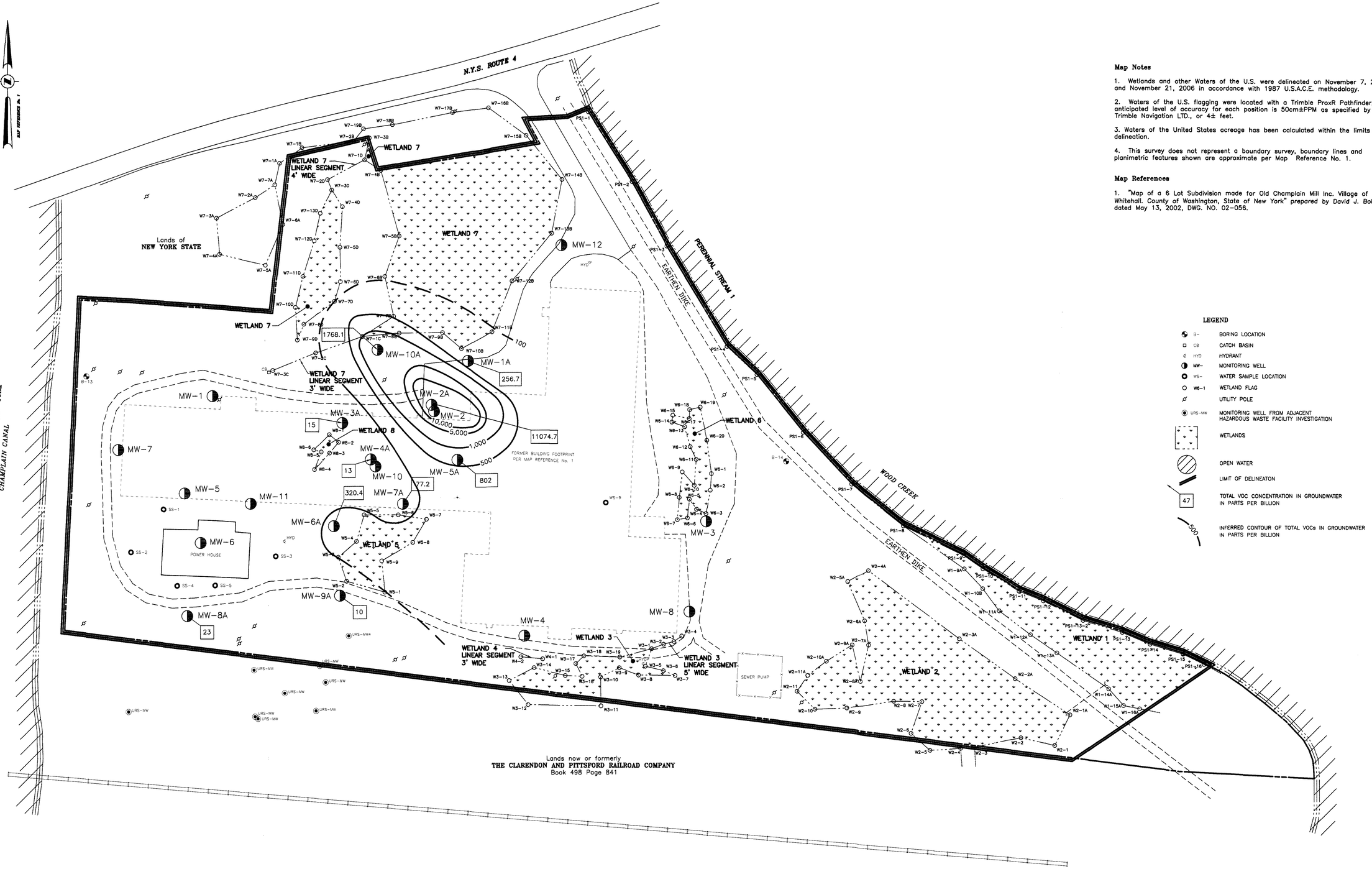
DWG. NO: 10-XXX

FIGURE 7A

TOTAL VOCS IN GROUNDWATER ISOCONCENTRATION MAP

(2007 C.T. MALE SUPPLEMENTAL PHASE II ESA)



Map Notes

1. Wetlands and other Waters of the U.S. were delineated on November 7, 2006 and November 21, 2006 in accordance with 1987 U.S.A.C.E. methodology.

2. Waters of the U.S. flagging were located with a Trimble ProxR Pathfinder, anticipated level of accuracy for each position is 50cm±PPM as specified by Trimble Navigation LTD., or 4± feet.

3. Waters of the United States acreage has been calculated within the limits of the delineation.

4. This survey does not represent a boundary survey, boundary lines and planimetric features shown are approximate per Map Reference No. 1.

Map References

1. "Map of a 6 Lot Subdivision made for Old Champlain Mill Inc. Village of Whitehall. County of Washington, State of New York" prepared by David J. Bolster dated May 13, 2002, DWG. NO. 02-056.

LEGEND

- B- BORING LOCATION
- CB CATCH BASIN
- HYD HYDRANT
- MW- MONITORING WELL
- WS- WATER SAMPLE LOCATION
- W6-1 WETLAND FLAG
- UTILITY POLE
- URS-MW MONITORING WELL FROM ADJACENT HAZARDOUS WASTE FACILITY INVESTIGATION
- WETLANDS
- OPEN WATER
- LIMIT OF DELINEATON
- 47 TOTAL VOC CONCENTRATION IN GROUNDWATER IN PARTS PER BILLION
- 500 INFERRED CONTOUR OF TOTAL VOCs IN GROUNDWATER IN PARTS PER BILLION

BAR SCALE
50 0 25 50 100
1 inch = 50 ft.

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APPROVED:
DRAFTED : SMW
CHECKED : DGD
PROJ. NO: 06.6448
SCALE : 1"=50'
DATE : DEC. 9, 2010

FIGURE 7A
TOTAL VOC's IN GROUNDWATER ISOCONCENTRATION MAP
2007 C.T. MALE SUPPLEMENTAL PHASE II ESA

VILLAGE OF WHITEHALL — WASHINGTON COUNTY, NEW YORK

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ENVIRONMENTAL SERVICES ▪ SURVEY & LAND INFORMATION SERVICES

SHEET 1 OF 1
DWG. NO: 10-XXX

CAD DWG. FILE NAME:FIGURE 7A.DWG

CAD DWG. FILE NAME:FIGURE 7A.DWG

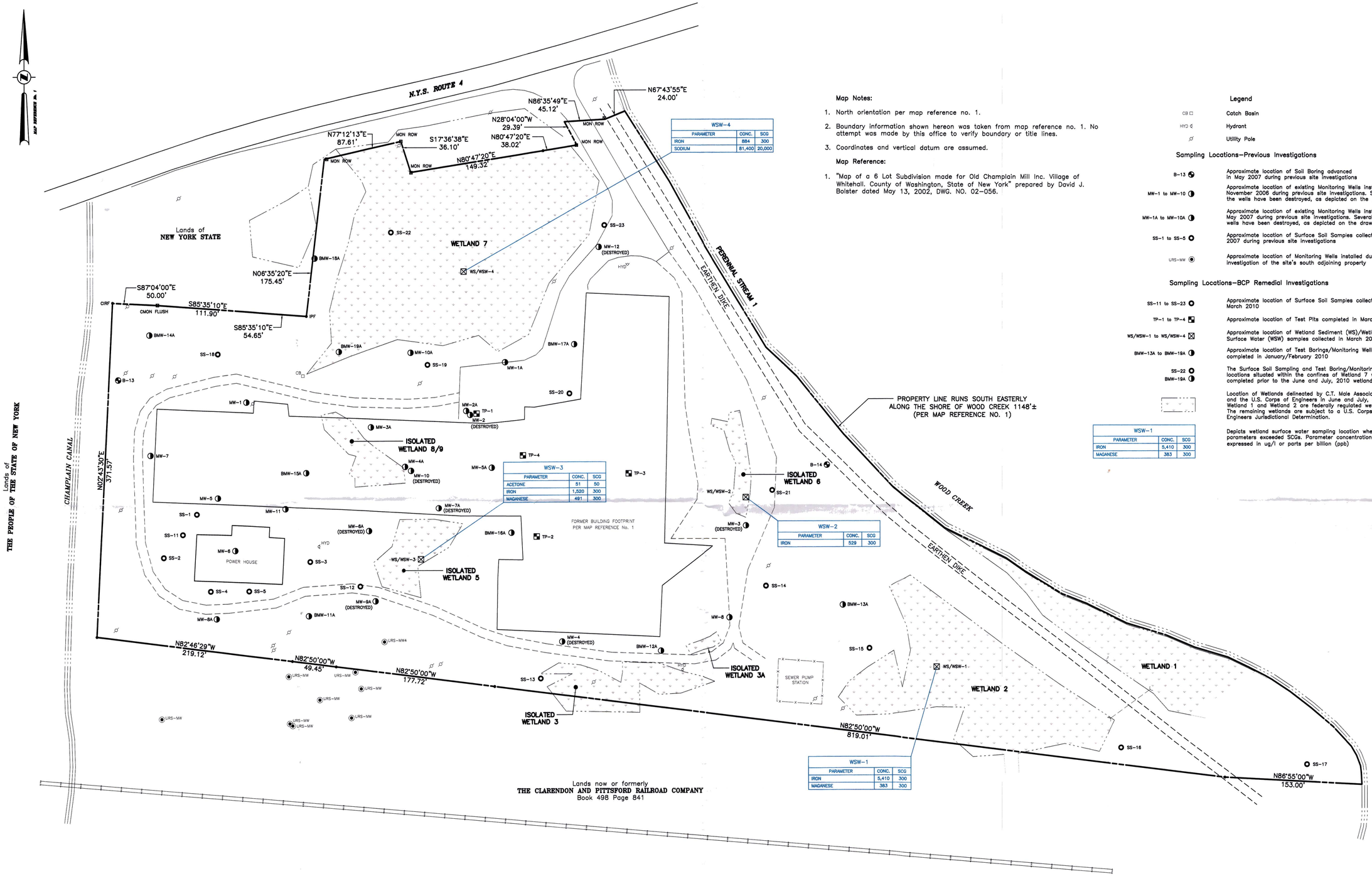
FIGURE 8

PARAMETERS IN WETLAND SURFACE WATER EXCEEDING SCGS

XREFS: NONE

PROJECT NUMBER: 06.6448

CAD DWG. FILE NAME: FIGURE-8.DWG



WSW-4		
PARAMETER	CONC.	SCG
IRON	884	300
SODIUM	81,400	20,000

WSW-3		
PARAMETER	CONC.	SCG
ACETONE	51	50
IRON	1,520	300
MAGANESE	491	300

WSW-2		
PARAMETER	CONC.	SCG
IRON	529	300

WSW-1		
PARAMETER	CONC.	SCG
IRON	5,410	300
MAGANESE	383	300

Map Notes:

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Map Reference:

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- HYD ⊄ — Hydrant
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- Depicts wetland surface water sampling location where parameters exceeded SCGs. Parameter concentration and SCG expressed in ug/l or parts per billion (ppb)

BAR SCALE
50 0 25 50 100
1 inch = 50 ft.

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APPROVED:
DRAFTED : S.WUNSCH
CHECKED : S.BEIBER
PROJ. NO: 06.6448
SCALE : 1"=50'
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FIGURE-8
PARAMETERS IN WETLAND SURFACE WATER EXCEEDING SCGs
OLD CHAMPLAIN MILL SITE

VILLAGE OF WHITEHALL — WASHINGTON COUNTY, NEW YORK

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DWG. NO: 10–XXX

FIGURE 9

PARAMETERS IN WETLAND SEDIMENT EXCEEDING SCGS

XREFS: NONE

PROJECT NUMBER: 06.6448

CAD DWG. FILE NAME: FIGURE-9.DWG

THE PEOPLE OF THE STATE OF NEW YORK
by deed
Lands of

MAP REFERENCE No. 1

N.Y.S. ROUTE 4

Lands of
NEW YORK STATE

N67°43'55"E
24.00'

N86°35'49"E
45.12'

N28°04'00"W
29.39'

N80°47'20"E
38.02'

N80°47'20"E
149.32'

S17°36'38"E
36.10'

N77°12'13"E
87.61'

MON ROW

N06°35'20"E
175.45'

S87°04'00"E
50.00'

S85°35'10"E
111.90'

S85°35'10"E
54.65'

CIRF

CMON FLUSH

IPF

N02°43'30"E
371.57'

CHAMPLAIN CANAL

WETLAND 7

PERENNIAL STREAM 1

EARTHEN DIKE

PROPERTY LINE RUNS SOUTH EASTERLY
ALONG THE SHORE OF WOOD CREEK 1148'±
(PER MAP REFERENCE NO. 1)

WOOD CREEK

ISOLATED
WETLAND 8/9

ISOLATED
WETLAND 6

ISOLATED
WETLAND 5

ISOLATED
WETLAND 3A

ISOLATED
WETLAND 3

WETLAND 2

WETLAND 1

FORMER BUILDING FOOTPRINT
PER MAP REFERENCE No. 1

POWER HOUSE

SEWER PUMP
STATION

N82°46'29"W
219.12'

N82°50'00"W
49.45'

N82°50'00"W
177.72'

N82°50'00"W
819.01'

N86°55'00"W
153.00'

Lands now or formerly
THE CLARENDON AND PITTSFORD RAILROAD COMPANY
Book 498 Page 841

B-13 B-14 BMW-10A BMW-11A BMW-12A BMW-13A BMW-14A BMW-15A BMW-16A BMW-17A BMW-18A BMW-19A MW-1 MW-2 (DESTROYED) MW-3 (DESTROYED) MW-4 (DESTROYED) MW-5 MW-6 MW-7A (DESTROYED) MW-8A MW-8 MW-9A (DESTROYED) MW-10 (DESTROYED) MW-11 MW-12 (DESTROYED) MW-1A MW-2A MW-3A MW-4A MW-5A MW-6A (DESTROYED) SS-1 SS-2 SS-3 SS-4 SS-5 SS-11 SS-12 SS-13 SS-14 SS-15 SS-16 SS-17 SS-18 SS-19 SS-20 SS-21 SS-22 SS-23 TP-1 TP-2 TP-3 TP-4 WS/WSW-1 WS/WSW-2 WS/WSW-3 WS/WSW-4 URS-MW CB HYD

WS-4

PARAMETER	CONC.	SCG	
METALS		LEL	SEL
CADMIUM	0.73	0.6	9
COPPER	17.7	16	110
IRON	21,000	20,000	40,000
LEAD	40.4	31	110
NICKEL	22.5	16	50

WS-3

PARAMETER	CONC.	SCG	
METALS		LEL	SEL
COPPER	20.3	16	110
ZINC	146	120	270

WS-2

PARAMETER	CONC.	SCG	
METALS		LEL	SEL
ARSENIC	6.05	6	33
COPPER	20.9	16	110
NICKEL	16.7	16	50

WS-1

PARAMETER	CONC.	SCG	
METALS		LEL	SEL
ARSENIC	6.04	6	33
IRON	23,500	20,000	40,000
NICKEL	21	16	50

WS-1

PARAMETER	CONC.	SCG	
METALS		LEL	SEL
ARSENIC	6.04	6	33
IRON	23,500	20,000	40,000
NICKEL	21	16	50

Map Notes:

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Legend

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- Depicts wetland sediment sampling location where parameter exceeds the LEL and/or SEL SCG. LEL denotes Lowest Effect Level. SEL denotes Severe Effect Level. If the metals concentration is less than the LEL, the effects of the metal in the sediment are considered to be acceptable. If the concentration is greater than the LEL but less than the SEL concentration, the sediment is considered to be contaminated with moderate impacts to benthic life. If the concentration is greater than the SEL, the sediment is contaminated and significant harm to benthic aquatic life is anticipated. Parameter concentration and SCG expressed in mg/kg or parts per million (ppm)

BAR SCALE
50 0 25 50 100
1 inch = 50 ft.

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DRAFTED : S.WUNSCH
CHECKED : S.BEIBER
PROJ. NO: 06.6448
SCALE : 1"=50'
DATE : OCT. 25, 2010

FIGURE-9
PARAMETERS IN WETLAND SEDIMENTS EXCEEDING SCGs
OLD CHAMPLAIN MILL SITE

VILLAGE OF WHITEHALL — WASHINGTON COUNTY, NEW YORK

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SHEET 1 OF 1
DWG. NO: 10-XXX

TABLES

TABLE 4.4.1-1

SURFACE SOILS ANALYTICAL RESULTS SUMMARY COMPARED TO RETSRICTED (COMMERCIAL) USE SCGS

TABLE 4.4.1-1: SURFACE SOIL ANALYTICAL RESULTS SUMMARY COMPARED TO RESTRICTED (COMMERCIAL) USE SCGS
OLD CHAMPLAIN MILL BCP SITE
VILLAGE OF WHITEHALL, WASHINGTON COUNTY
(VALIDATED DATA)

PARAMETER	Part 375 Commercial Use SCOs[1] (mg/kg)	SS-11 mg/kg		SS-12 mg/kg		SS-13 mg/kg		SS-14 mg/kg		SS-15 mg/kg		SS-16 mg/kg		SS-17 mg/kg		SS-18 mg/kg		SS-19 mg/kg		SS-20 mg/kg		SS-21 mg/kg		SS-22 mg/kg		FDSS031910 mg/kg		SS-23 mg/kg	
		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCS																													
cis-1,2-Dichloroethene	500	0.0064	U	0.0064	U	0.0069	U	0.007	U	0.0071	U	0.008	U	0.0069	U	0.0054	U	0.0076	U	0.0019	J	0.0061	U	0.0082	U	0.0076	U	0.007	U
Trichloroethene	200	0.0064	U	0.0064	U	0.0034	J	0.007	U	0.0071	U	0.008	U	0.0069	U	0.0054	U	0.0076	U	0.0038	J	0.0061	U	0.0082	U	0.0076	U	0.007	U
SVOCS																													
2-Methylnaphthalene	No Standard	0.42	U	0.42	U	0.058	J	0.46	U	0.47	U	0.53	U	0.46	U	0.36	U	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.46	U
Acenaphthene	500	0.074	J	0.14	J	0.072	J	0.46	U	0.47	U	0.53	U	0.46	U	0.36	U	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.08	J
Anthracene	500	0.17	J	0.29	J	0.21	J	0.46	U	0.47	U	0.53	U	0.46	U	0.36	U	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.11	J
Benzo(a)anthracene	5.6	0.48		0.88		0.41	J	0.46	U	0.47	U	0.53	U	0.46	U	0.28	J	0.086	J	21	U	0.4	U	0.54	U	0.5	U	0.3	J
Benzo(a)pyrene	1	0.4	J	0.74		0.32	J	0.46	U	0.47	U	0.53	U	0.46	U	0.28	J	0.069	J	21	U	0.4	U	0.54	U	0.5	U	0.24	J
Benzo(b)fluoranthene	5.6	0.54		0.99		0.35	J	0.46	U	0.47	U	0.53	U	0.46	U	0.38		0.093	J	21	U	0.4	U	0.54	U	0.5	U	0.33	J
Benzo(g,h,i)perylene	500	0.27	J	0.47		0.2	J	0.46	U	0.47	U	0.53	U	0.46	U	0.21	J	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.15	J
Benzo(k)fluoranthene	56	0.15	J	0.28	J	0.14	J	0.46	U	0.47	U	0.53	U	0.46	U	0.14	J	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.093	J
bis(2-Ethylhexyl)phthalate	No Standard	0.094	J	0.42	U	0.46	U	0.46	U	0.47	U	0.53	U	0.46	U	0.078	J	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.46	U
Carbazole	No Standard	0.07	J	0.12	J	0.061	J	0.46	U	0.47	U	0.53	U	0.46	U	0.36	U	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.46	U
Chrysene	56	0.43		0.75		0.37	J	0.46	U	0.47	U	0.53	U	0.46	U	0.28	J	0.088	J	21	U	0.4	U	0.54	U	0.5	U	0.28	J
Dibenz(a,h)anthracene	0.56	0.077	J	0.15	J	0.46	U	0.46	U	0.47	U	0.53	U	0.46	U	0.052	J	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.46	U
Di-n-octyl phthalate	No Standard	0.21	J	0.42	U	0.46	U	0.46	U	0.47	U	0.53	U	0.46	U	0.36	U	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.46	U
Fluoranthene	500	1		2		0.85		0.46	U	0.47	U	0.53	U	0.46	U	0.46		0.18	J	4	J	0.4	U	0.54	U	0.5	U	0.7	
Fluorene	500	0.061	J	0.11	J	0.086	J	0.46	U	0.47	U	0.53	U	0.46	U	0.36	U	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.46	U
Indeno(1,2,3-cd)pyrene	5.6	0.27	J	0.47		0.19	J	0.46	U	0.47	U	0.53	U	0.46	U	0.23	J	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.16	J
Naphthalene	500	0.42	U	0.42	U	0.075	J	0.46	U	0.47	U	0.53	U	0.46	U	0.36	U	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.46	U
Phenanthrene	500	0.74		1		0.78		0.46	U	0.47	U	0.53	U	0.46	U	0.19	J	0.15	J	21	U	0.4	U	0.54	U	0.5	U	0.51	
Pyrene	500	0.91		2		0.86		0.46	U	0.47	U	0.53	U	0.46	U	0.45		0.18	J	3	J	0.4	U	0.54	U	0.5	U	0.58	
PESTICIDES (None Detected Above the Laboratory Detection Limit)																													
PCBS (None Detected Above the Laboratory Detection Limit)																													
METALS																													
Aluminum	No Standard	8,930		7,660		3,640		13,500		16,200		12,800		8,580		3,690		14,600		2,460		7,120		14,800		14,200		8,720	
Antimony	No Standard	2.22	U	1.4	J	0.71	J	2.5	U	0.72	J	0.85	J	0.63	J	2.71	UJ	0.81	J	2.6	U	2.43	U	1.14	J	0.99	J	0.73	J
Arsenic	16	4.22		10.5		4.09		3.84		5.96		3.67		3.79		2.62		5.55		5.59		4.42		8.93	J	6.05	J	15.4	
Barium	400	109		96.6		61.2		118		138		112		61.1		37.4		140		64		38.5		105		104		113	
Beryllium	590	0.53		0.62		0.35	J	0.69		0.89		0.61		0.39		0.31	J	0.78		0.34		0.58		0.9		0.63		0.69	
Cadmium	9.3	0.51		0.99		0.38	U	0.88		0.86		0.43		0.35		0.46		0.89		0.4		0.24	J	0.96	J	0.43	J	0.63	
Calcium	No Standard	8,010		24,100		2,720		38,600		1,140		1,970		1,550		92,200		17,100		36,100		4,070		1,440		1,360		7,090	
Chromium	1,500	14.9		15.8		6.96		22.2		19.2		16.3		11.5		7.15		23.3		6.23		9.45		18.7		17.6		12.7	
Cobalt	No Standard	9.26		8.64		4.34		8.9		17.8		9.99		8.68		4.03		11.4		2.42		8.44		10.8		9.14		6.2	
Copper	270	9.63		35.4		19.2		15.5		15.7		23.4		11.2		10.6		18.6		10.3		16.2		6.99	J	9.12	J	17.4	
Iron	No Standard	16,000		24,000		9,380		20,800		31,500		22,300		18,200		10,100		24,900		7,910		17,200		42,300	J	28,000	J	20,700	
Lead	1,000	13.6		57.1		26.9		29.4		22.1		24.6		19.8		14.2		30.2		27.6		13.5		30.6	J	22.3	J	89.4	
Magnesium	No Standard	4,460		8,500		1,340		16,100		5,590		5,140		3,710		27,000		6,790		14,400		3,920		4,850		4,790		3,250	
Manganese	10,000	435		243		165		415		1,060		347		501		225		479		135		325		734	J	498	J	268	
Mercury	2.8	0.049	J	0.16	J	0.037	J	0.042	J	0.058	J	0.08	J	0.078	J	0.017	J	0.067	J	0.048	J	0.025	U	0.01	UJ	0.087	J	0.06	J
Nickel	310	16.8		19.7		8.59		22.8		24.7		21.2		16		9.48		25.6		6.31		13.5		18.3		18.3		13	
Potassium	No Standard	1,060		548		264		1,650		556		604		498		487		1,690		153		315		652		647		739	
Selenium	1,500	2.18		3.1		1.67		1.93		3.86		2.89		2.43		0.96	J	2.45		0.76	J	2.3		4.36		3.47		3.49	
Vanadium	No Standard	18.7		18.3		9.35		26.5		19.7		16.1		11.8		9.05		26.3		11.9		8.23		22.1	J	17.4	J	19.8	
Zinc	10,000	60.9		116		57.5		58.2		80.3		73.9		56.3		36.9		75.6		145		44.8		75.6		74.7		77.1	

Notes
(1) NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs, Subpart 375-6, Dated December 14, 2006
Concentrations expressed in mg/kg or parts per million (ppm)
U indicates that the parameter was analyzed but not detected
J indicates an estimated value
UJ indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
Analytical results in bold have exceeded their respective SCO
FDSS031910 is a field duplicate of SS-22

TABLE 4.4.6-1

SURFACE SOILS ANALYTICAL RESULTS SUMMARY COMPARED TO UNRESTRICTED USE SCGS

TABLE 4.4.6-1: SURFACE SOIL ANALYTICAL RESULTS SUMMARY COMPARED TO UNRESTRICTED USE SCGS
OLD CHAMPLAIN MILL BCP SITE
VILLAGE OF WHITEHALL, WASHINGTON COUNTY
(VALIDATED DATA)

PARAMETER	Part 375 Unrestricted Use SCOs[1] (mg/kg)	SS-11 mg/kg Result	Qualifier	SS-12 mg/kg Result	Qualifier	SS-13 mg/kg Result	Qualifier	SS-14 mg/kg Result	Qualifier	SS-15 mg/kg Result	Qualifier	SS-16 mg/kg Result	Qualifier	SS-17 mg/kg Result	Qualifier	SS-18 mg/kg Result	Qualifier	SS-19 mg/kg Result	Qualifier	SS-20 mg/kg Result	Qualifier	SS-21 mg/kg Result	Qualifier	SS-22 mg/kg Result	Qualifier	FDSS031910 mg/kg Result	Qualifier	SS-23 mg/kg Result	Qualifier
VOCS																													
cis-1,2-Dichloroethene	0.25	0.0064	U	0.0064	U	0.0069	U	0.007	U	0.0071	U	0.008	U	0.0069	U	0.0054	U	0.0076	U	0.0019	J	0.0061	U	0.0082	U	0.0076	U	0.007	U
Trichloroethene	0.47	0.0064	U	0.0064	U	0.0034	J	0.007	U	0.0071	U	0.008	U	0.0069	U	0.0054	U	0.0076	U	0.0038	J	0.0061	U	0.0082	U	0.0076	U	0.007	U
SVOCS																													
2-Methylnaphthalene	No Standard	0.42	U	0.42	U	0.058	J	0.46	U	0.47	U	0.53	U	0.46	U	0.36	U	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.46	U
Acenaphthene	20	0.074	J	0.14	J	0.072	J	0.46	U	0.47	U	0.53	U	0.46	U	0.36	U	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.08	J
Anthracene	100	0.17	J	0.29	J	0.21	J	0.46	U	0.47	U	0.53	U	0.46	U	0.36	U	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.11	J
Benzo(a)anthracene	1	0.48		0.88		0.41	J	0.46	U	0.47	U	0.53	U	0.46	U	0.28	J	0.086	J	21	U	0.4	U	0.54	U	0.5	U	0.3	J
Benzo(a)pyrene	1	0.4	J	0.74		0.32	J	0.46	U	0.47	U	0.53	U	0.46	U	0.28	J	0.069	J	21	U	0.4	U	0.54	U	0.5	U	0.24	J
Benzo(b)fluoranthene	1	0.54		0.99		0.35	J	0.46	U	0.47	U	0.53	U	0.46	U	0.38		0.093	J	21	U	0.4	U	0.54	U	0.5	U	0.33	J
Benzo(g,h,i)perylene	100	0.27	J	0.47		0.2	J	0.46	U	0.47	U	0.53	U	0.46	U	0.21	J	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.15	J
Benzo(k)fluoranthene	0.8	0.15	J	0.28	J	0.14	J	0.46	U	0.47	U	0.53	U	0.46	U	0.14	J	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.093	J
bis(2-Ethylhexyl)phthalate	No Standard	0.094	J	0.42	U	0.46	U	0.46	U	0.47	U	0.53	U	0.46	U	0.078	J	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.46	U
Carbazole	No Standard	0.07	J	0.12	J	0.061	J	0.46	U	0.47	U	0.53	U	0.46	U	0.36	U	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.46	U
Chrysene	1	0.43		0.75		0.37	J	0.46	U	0.47	U	0.53	U	0.46	U	0.28	J	0.088	J	21	U	0.4	U	0.54	U	0.5	U	0.28	J
Dibenz(a,h)anthracene	0.33	0.077	J	0.15	J	0.46	U	0.46	U	0.47	U	0.53	U	0.46	U	0.052	J	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.46	U
Di-n-octyl phthalate	No Standard	0.21	J	0.42	U	0.46	U	0.46	U	0.47	U	0.53	U	0.46	U	0.36	U	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.46	U
Fluoranthene	100	1		2		0.85		0.46	U	0.47	U	0.53	U	0.46	U	0.46		0.18	J	4	J	0.4	U	0.54	U	0.5	U	0.7	
Fluorene	30	0.061	J	0.11	J	0.086	J	0.46	U	0.47	U	0.53	U	0.46	U	0.36	U	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.46	U
Indeno(1,2,3-cd)pyrene	0.5	0.27	J	0.47		0.19	J	0.46	U	0.47	U	0.53	U	0.46	U	0.23	J	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.16	J
Naphthalene	12	0.42	U	0.42	U	0.075	J	0.46	U	0.47	U	0.53	U	0.46	U	0.36	U	0.5	U	21	U	0.4	U	0.54	U	0.5	U	0.46	U
Phenanthrene	100	0.74		1		0.78		0.46	U	0.47	U	0.53	U	0.46	U	0.19	J	0.15	J	21	U	0.4	U	0.54	U	0.5	U	0.51	
Pyrene	100	0.91		2		0.86		0.46	U	0.47	U	0.53	U	0.46	U	0.45		0.18	J	3	J	0.4	U	0.54	U	0.5	U	0.58	
PESTICIDES (None Detected Above the Laboratory Detection Limit)																													
PCBS (None Detected Above the Laboratory Detection Limit)																													
METALS																													
Aluminum	No Standard	8,930		7,660		3,640		13,500		16,200		12,800		8,580		3,690		14,600		2,460		7,120		14,800		14,200		8,720	
Antimony	No Standard	2.22	U	1.4	J	0.71	J	2.5	U	0.72	J	0.85	J	0.63	J	2.71	UJ	0.81	J	2.6	U	2.43	U	1.14	J	0.99	J	0.73	J
Arsenic	13	4.22		10.5		4.09		3.84		5.96		3.67		3.79		2.62		5.55		5.59		4.42		8.93	J	6.05	J	**15.4**	
Barium	350	109		96.6		61.2		118		138		112		61.1		37.4		140		64		38.5		**105**		104		113	
Beryllium	7.2	0.53		0.62		0.35	J	0.69		0.89		0.61		0.39		0.31	J	0.78		0.34		0.58		0.9		0.63		0.69	
Cadmium	2.5	0.51		0.99		0.38	U	0.88		0.86		0.43		0.35		0.46		0.89		0.4		0.24	J	0.96	J	0.43	J	0.63	
Calcium	No Standard	8,010		24,100		2,720		38,600		1,140		1,970		1,550		92,200		17,100		36,100		4,070		1,440		1,360		7,090	
Chromium	30	14.9		15.8		6.96		22.2		19.2		16.3		11.5		7.15		23.3		6.23		9.45		18.7		17.6		**12.7**	
Cobalt	No Standard	9.26		8.64		4.34		8.9		17.8		9.99		8.68		4.03		11.4		2.42		8.44		10.8		9.14		6.2	
Copper	50	9.63		35.4		19.2		15.5		15.7		23.4		11.2		10.6		18.6		10.3		16.2		6.99	J	9.12	J	17.4	
Iron	No Standard	16,000		24,000		9,380		20,800		31,500		22,300		18,200		10,100		24,900		7,910		17,200		42,300	J	28,000	J	20,700	
Lead	63	13.6		57.1		26.9		29.4		22.1		24.6		19.8		14.2		30.2		27.6		13.5		30.6	J	22.3	J	**89.4**	
Magnesium	No Standard	4,460		8,500		1,340		16,100		5,590		5,140		3,710		27,000		6,790		14,400		3,920		4,850		4,790		3,250	
Manganese	1,600	435		243		165		415		1,060		347		501		225		479		135		325		734	J	498	J	268	
Mercury	0.18	0.049	J	0.16	J	0.037	J	0.042	J	0.058	J	0.08	J	0.078	J	0.017	J	0.067	J	0.048	J	0.025	U	0.01	UJ	0.087	J	0.06	J
Nickel	30	16.8		19.7		8.59		22.8		24.7		21.2		16		9.48		25.6		6.31		13.5		18.3		18.3		13	
Potassium	No Standard	1,060		548		264		1,650		555		604		498		487		1,690		153		315		652		647		739	
Selenium	3.9	2.18		3.1		1.67		1.93		3.86		2.89		2.43		0.96	J	2.45		0.76	J	2.3		**4.36**		3.47		3.49	
Vanadium	No Standard	18.7		18.3		9.35		26.5		19.7		16.1		11.8		9.05		26.3		11.9		8.23		22.1	J	17.4	J	19.8	
Zinc	109	60.9		**116**		57.5		58.2		80.3		73.9		56.3		36.9		75.6		**145**		44.8		75.6		74.7		77.1	

Notes
(1) NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs, Subpart 375-6, Dated December 14, 2006
Concentrations expressed in mg/kg or parts per million (ppm)
U indicates that the parameter was analyzed but not detected
J indicates an estimated value
UJ indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
Analytical results in bold have exceeded their respective SCO
FDSS031910 is a field duplicate of SS-22

TABLE 4.4.7-1

SURFACE SOILS ANALYTICAL RESULTS SUMMARY

(2007 C.T. MALE SUPPLEMENTAL PHASE II ESA)

TABLE 4.4.7-1
SURFACE SOIL ANALYTICAL RESULTS SUMMARY
2007 C.T. MALE SUPPLEMENTAL PHASE II ESA
(UNVALIDATED DATA)

PARAMETER	SAMPLE LOCATION AND CONCENTRATION					Part 375 Commercial Use SCOs[1]
	SS-1 mg/Kg	SS-2 mg/Kg	SS-3 mg/Kg	SS-4 mg/Kg	SS-5 mg/Kg	mg/kg
SEMI VOLATILE ORGANIC COMPOUNDS						
2-Methylnaphthalene	1.4	ND	ND	0.75	1	No Standard
Acenaphthene	4.6	ND	ND	ND	ND	500
Anthracene	10	ND	ND	ND	ND	500
Benz(a)anthracene	**20**	0.61	1.9	0.83	1.3	5.6
Benzo(a)pyrene	**16**	0.84	2	0.82	1.2	1
Benzo(b)fluoranthene	**19**	1	2.4	1.1	1.6	5.6
Benzo(ghi)perylene	9.9	0.56	1.2	0.57	0.73	500
Benzo(k)fluoranthene	9.8	ND	0.96	0.44	0.67	56
Chrysene	18	0.6	1.9	0.84	1.2	56
Dibenz(a,h)anthracene	**2.5**	ND	ND	ND	ND	0.56
Fluoranthene	46	1.1	2.9	1.4	2	500
Fluorene	5.2	ND	ND	ND	ND	500
Indeno(1,2,3-cd)pyrene	**9.4**	0.54	1.2	0.53	0.68	5.6
Naphthalene	6	ND	ND	0.61	0.8	500
Phenanthrene	38	0.95	1.5	1.2	1.8	500
Pyrene	35	0.89	2.4	1.2	1.7	500

(1) NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs, Subpart 375-6, dated December 14, 2006
Concentrations expressed in mg/kg or parts per million (ppm)
ND = Below Method Detection Limit
Analytical results in bold have exceeded their respective SCO

TABLE 4.5.1-1

SUBSURFACE SOILS (BORINGS) ANALYTICAL RESULTS SUMMARY COMPARED TO RESTRICTED (COMMERCIAL) USE SCGS

TABLE 4.5.1-1: SUBSURFACE SOIL (BORINGS) ANALYTICAL RESULTS SUMMARY COMPARED TO RESTRICTED (COMMERCIAL) USE SCGS
OLD CHAMPLAIN MILL BCP SITE
VILLAGE OF WHITEHALL, WASHINGTON COUNTY
(VALIDATED DATA)

PARAMETER	Part 375 Commercial Use SCOs[1] (mg/kg)	BMW-15A-S-6 (12' - 14' bgs)		BMW-16A-S-2 (2' - 4' bgs)		BMW-16A-S-8 (14' - 16' bgs)		BMW-17A-S-1 (0 - 2' bgs)		BMW-17A-S-9 (16' - 18' bgs)		BMW-18A-S-1 (0 - 2' bgs)		BMW-FD-1 (0 - 2' bgs)		BMW-18A-S-7 (12' - 14' bgs)		BMW-19A-S-1 (0 - 2' bgs)		BMW-19A-S-6 (10' - 12' bgs)	
		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCS																					
Acetone	500	0.01	J	0.008	J	0.031	U	0.031	U	0.039	U	0.032	U	0.03	U	0.03	U	0.034	U	0.029	U
Carbon Disulfide	No Standard	0.0062	U	0.0071	U	0.0051	J	0.0062	U	0.0078	U	0.0065	U	0.0061	U	0.0061	U	0.0068	U	0.0058	U
cis-1,2-Dichloroethene	500	0.013		0.0071	U	3.3	J	0.0062	U	0.0045	J	0.0065	U	0.0061	U	0.017		0.0068	U	0.22	
Ethyl Benzene	390	0.0062	U	0.0071	U	0.012		0.0062	U	0.0078	U	0.0065	U	0.0061	U	0.0061	U	0.0068	U	0.0058	U
m/p-Xylenes	500	0.012	U	0.014	U	0.0065	J	0.012	U	0.016	U	0.013	U	0.012	U	0.012	U	0.014	U	0.012	U
o-Xylene	500	0.0062	U	0.0071	U	0.0098		0.0062	U	0.0078	U	0.0065	U	0.0061	U	0.0061	U	0.0068	U	0.0058	U
Toluene	500	0.0062	U	0.0071	U	0.075		0.0062	U	0.0078	U	0.0065	U	0.0061	U	0.0061	U	0.0068	U	0.0058	U
trans-1,2-Dichloroethene	500	0.0021	J	0.0071	U	0.045		0.0062	U	0.0078	U	0.0065	U	0.0061	U	0.0061	U	0.0068	U	0.0058	U
Trichloroethene	200	0.0062	U	0.0071	U	12	J	0.0062	U	0.0078	U	0.0065	U	0.0061	U	0.0061	U	0.0068	U	0.0058	U
Vinyl Chloride	13	0.0065		0.0071	U	0.1	J	0.0062	U	0.41		0.0065	U	0.0061	U	0.0061	U	0.0068	U	0.02	
SVOCS																					
2,4,5-Trichlorophenol	No Standard	NA		0.47	U	NA		0.61	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
2,4-Dinitrophenol	No Standard	NA		0.47	U	NA		3.3	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
2,4-Dinitrotoluene	No Standard	NA		0.47	U	NA		2.1	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
2,6-Dinitrotoluene	No Standard	NA		0.47	U	NA		1.3	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
2-Nitroaniline	No Standard	NA		0.47	U	NA		0.92	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
3,3-Dichlorobenzidine	No Standard	NA		0.47	U	NA		2	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
3-Nitroaniline	No Standard	NA		0.47	U	NA		1.5	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
4,6-Dinitro-2-methylphenol	No Standard	NA		0.47	U	NA		1.4	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
4-Bromophenyl-phenylether	No Standard	NA		0.47	U	NA		1.5	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
4-Chloro-3-methylphenol	No Standard	NA		0.47	U	NA		0.46	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
4-Chlorophenyl-phenylether	No Standard	NA		0.47	U	NA		0.99	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
4-Nitroaniline	No Standard	NA		0.47	U	NA		2.1	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
4-Nitrophenol	No Standard	NA		0.47	U	NA		1.9	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
Acenaphthene	500	NA		0.098	J	NA		1.3	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
Anthracene	500	NA		0.12	J	NA		4.1		NA		0.43	U	0.4	U	NA		0.45	U	NA	
Atrazine	No Standard	NA		0.47	U	NA		1.7	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
Benzo(a)anthracene	5.6	NA		0.26	J	NA		**8**		NA		0.43	U	0.4	U	NA		0.45	U	NA	
Benzo(a)pyrene	1	NA		0.22	J	NA		**6.9**		NA		0.0099	J	0.4	UJ	NA		0.45	U	NA	
Benzo(b)fluoranthene	5.6	NA		0.29	J	NA		**7.7**		NA		0.43	U	0.4	U	NA		0.45	U	NA	
Benzo(g,h,i)perylene	500	NA		0.12	J	NA		4.6		NA		0.43	U	0.4	U	NA		0.45	U	NA	
Benzo(k)fluoranthene	56	NA		0.11	J	NA		5.2		NA		0.43	U	0.4	U	NA		0.45	U	NA	
bis(2-Ethylhexyl)phthalate	No Standard	NA		0.032	U	NA		3	J	NA		0.042	U	0.13	U	NA		0.025	U	NA	
Butylbenzylphthalate	No Standard	NA		0.47	U	NA		3.1	J	NA		0.43	U	0.4	U	NA		0.45	U	NA	
PESTICIDES (None Detected Above the Laboratory Detection Limit)																					
PCBs (None Detected Above the Laboratory Detection Limit)																					
METALS																					
Aluminum	No Standard	NA		19,000		NA		3,690		NA		15,300		13,900		NA		18,100		NA	
Antimony	No Standard	NA		1.58	J	NA		3.09	U	NA		3.04	UJ	0.65	J	NA		3.32	U	NA	
Arsenic	16	NA		**29.7**		NA		**17.3**		NA		3.26		3.09		NA		3.9		NA	
Barium	400	NA		133		NA		**61.8**		NA		101		95.6		NA		146		NA	
Beryllium	590	NA		**1.37**		NA		0.63		NA		0.48		0.5		NA		0.62		NA	
Cadmium	9.3	NA		**1.85**		NA		0.18	U	NA		0.37	U	0.49	U	NA		0.37	U	NA	
Calcium	No Standard	NA		3,410		NA		4,270		NA		2,030		1,870		NA		3,230		NA	
Chromium	1,500	NA		28		NA		**7.51**		NA		15.9		14.2		NA		21.2		NA	
Cobalt	No Standard	NA		**16.2**		NA		3.94		NA		8.48	J	10.8	J	NA		10.5		NA	
Copper	270	NA		1.37	U	NA		20.5	J	NA		6.36	J	4.92	J	NA		11.1		NA	
Iron	No Standard	NA		96,500		NA		10,800		NA		25,600		24,500		NA		28,600		NA	
Lead	1,000	NA		32.1		NA		31		NA		24.7	J	18.2	J	NA		**16.9**		NA	
Magnesium	No Standard	NA		6,220		NA		1,010		NA		4,230		3,970		NA		5,700		NA	
Manganese	10,000	NA		1,130		NA		124		NA		370	J	472	J	NA		294		NA	
Mercury	2.8	NA		0.014	U	NA		0.03		NA		0.049	U	0.04	U	NA		0.07	U	NA	
Nickel	310	NA		26.7		NA		10.9		NA		15.5		14.9		NA		21.1		NA	
Potassium	No Standard	NA		1,220		NA		496		NA		935	J	760	J	NA		971		NA	
Selenium	1,500	NA		3.43		NA		2.15	U	NA		1.2	J	1.57		NA		1.59		NA	
Sodium	No Standard	NA		169	U	NA		353	J	NA		153	U	108	U	NA		207	U	NA	
Vanadium	No Standard	NA		42.9		NA		15.3		NA		24.8		23.4		NA		26.4		NA	
Zinc	10,000	NA		132		NA		35.9		NA		87.6		72.2		NA		85.3		NA	

Notes
(1) NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs, Subpart 375-6, Dated December 14, 2006
Concentrations expressed in mg/kg or parts per million (ppm)
U indicates that the parameter was analyzed but not detected
J indicates an estimated value
NA denotes that the sample was not analyzed for the corresponding parameter .
UJ indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
Analytical results in bold have exceeded their respective SCO
BMW-FD-1 is a duplicate of BMW-18A S-1

TABLE 4.5.1-1: SUBSURFACE SOIL (BORINGS) ANALYTICAL RESULTS SUMMARY COMPARED TO RESTRICTED (COMMERCIAL) USE SCGS
OLD CHAMPLAIN MILL BCP SITE
VILLAGE OF WHITEHALL, WASHINGTON COUNTY
(VALIDATED DATA)

PARAMETER	Part 375 Commercial Use SCOs[1] (mg/kg)	BMW-11A-S-2 (2' - 4' bgs)		BMW-11A-S-8 (14' - 16' bgs)		BMW-12A-S-1 (0 - 2' bgs)		BMW-12A-S-9 (16' - 18' bgs)		BMW-13A-S-1 (0 - 2' bgs)		BMW-13A-S-8 (14' - 16' bgs)		BMW-14A-S-1 (0 - 2' bgs)		BMW-14A-S-7 (12' - 14' bgs)		BMW-15A-S-1 (2' - 4' bgs)	
		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCS																			
Acetone	500	0.036	U	0.03	U	0.42		0.016	J	0.033	U	0.03	U	0.028	U	0.029	U	0.035	U
Carbon Disulfide	No Standard	0.0072	U	0.0059	U	0.0066	U	0.0064	U	0.0065	U	0.006	U	0.0055	U	0.0059	U	0.007	U
cis-1,2-Dichloroethene	500	0.0072	U	0.0059	U	0.0066	U	0.0064	U	0.0065	U	0.046		0.0055	U	0.0058	J	0.0033	J
Ethyl Benzene	390	0.0072	U	0.0059	U	0.0066	U	0.0064	U	0.0065	U	0.006	U	0.0055	U	0.0059	U	0.007	U
m/p-Xylenes	500	0.014	U	0.012	U	0.013	U	0.013	U	0.013	U	0.012	U	0.011	U	0.012	U	0.014	U
o-Xylene	500	0.0072	U	0.0059	U	0.0066	U	0.0064	U	0.0065	U	0.006	U	0.0055	U	0.0059	U	0.007	U
Toluene	500	0.0072	U	0.0059	U	0.018		0.0064	U	0.0065	U	0.006	U	0.0055	U	0.0059	U	0.007	U
trans-1,2-Dichloroethene	500	0.0072	U	0.0059	U	0.0066	U	0.0064	U	0.0065	U	0.006	U	0.0055	U	0.0059	U	0.007	U
Trichloroethene	200	0.0072	U	0.0059	U	0.0066	U	0.0064	U	0.0065	U	0.006	U	0.0055	U	0.0059	U	0.025	
Vinyl Chloride	13	0.0072	U	0.0059	U	0.0066	U	0.0064	U	0.0065	U	0.0042	J	0.0055	U	0.0059	U	0.007	U
SVOCS																			
2,4,5-Trichlorophenol	No Standard	0.48	U	NA		4.2	U	NA		0.43	U	NA		0.37	U	NA		0.46	U
2,4-Dinitrophenol	No Standard	0.48	U	NA		4.2	U	NA		0.43	U	NA		0.37	U	NA		0.46	U
2,4-Dinitrotoluene	No Standard	0.48	U	NA		4.2	U	NA		0.43	U	NA		0.37	U	NA		0.46	U
2,6-Dinitrotoluene	No Standard	0.48	U	NA		4.2	U	NA		0.43	U	NA		0.37	U	NA		0.46	U
2-Nitroaniline	No Standard	0.48	U	NA		4.2	U	NA		0.43	U	NA		0.37	U	NA		0.46	U
3,3-Dichlorobenzidine	No Standard	0.48	U	NA		4.2	U	NA		0.43	U	NA		0.37	UJ	NA		0.46	U
3-Nitroaniline	No Standard	0.48	U	NA		4.2	U	NA		0.43	U	NA		0.37	U	NA		0.46	U
4,6-Dinitro-2-methylphenol	No Standard	0.48	U	NA		4.2	U	NA		0.43	U	NA		0.37	U	NA		0.46	U
4-Bromophenyl-phenylether	No Standard	0.48	U	NA		4.2	U	NA		0.43	U	NA		0.37	U	NA		0.46	U
4-Chloro-3-methylphenol	No Standard	0.48	U	NA		4.2	U	NA		0.43	U	NA		0.37	U	NA		0.46	U
4-Chlorophenyl-phenylether	No Standard	0.48	U	NA		4.2	U	NA		0.43	U	NA		0.37	U	NA		0.46	U
4-Nitroaniline	No Standard	0.48	U	NA		4.2	U	NA		0.43	U	NA		0.37	U	NA		0.46	U
4-Nitrophenol	No Standard	0.48	U	NA		4.2	U	NA		0.43	U	NA		0.37	U	NA		0.46	U
Acenaphthene	500	0.48	U	NA		1.1	J	NA		0.43	U	NA		0.016	J	NA		0.46	U
Anthracene	500	0.48	U	NA		2	J	NA		0.43	U	NA		0.037	J	NA		0.46	U
Atrazine	No Standard	0.48	U	NA		4.2	U	NA		0.43	U	NA		0.37	U	NA		0.46	U
Benzo(a)anthracene	5.6	0.48	U	NA		4.3		NA		0.43	U	NA		0.17	J	NA		0.46	U
Benzo(a)pyrene	1	0.48	U	NA		3.3	J	NA		0.43	U	NA		0.15	J	NA		0.46	U
Benzo(b)fluoranthene	5.6	0.48	U	NA		4.6		NA		0.43	U	NA		0.19	J	NA		0.46	U
Benzo(g,h,i)perylene	500	0.48	U	NA		1.6	J	NA		0.43	U	NA		0.09	J	NA		0.46	U
Benzo(k)fluoranthene	56	0.48	U	NA		1.7	J	NA		0.43	U	NA		0.076	J	NA		0.46	U
bis(2-Ethylhexyl)phthalate	No Standard	0.48	U	NA		0.45	J	NA		0.43	U	NA		0.087	J	NA		0.021	U
Butylbenzylphthalate	No Standard	0.48	U	NA		4.2	U	NA		0.43	U	NA		0.37	U	NA		0.46	U
PESTICIDES (None Detected Above the Laboratory Detection Limit)																			
PCBs (None Detected Above the Laboratory Detection Limit)																			
METALS																			
Aluminum	No Standard	5,920		NA		7,360		NA		19,100		NA		8,640		NA		28,100	
Antimony	No Standard	2.63	J	NA		0.94	J	NA		0.63	J	NA		2.78	U	NA		0.82	J
Arsenic	16	5.79		NA		8.16		NA		4.61		NA		6.61		NA		6.16	
Barium	400	76.2		NA		222		NA		140		NA		67.3		NA		200	
Beryllium	590	0.37		NA		0.66		NA		0.75		NA		0.41		NA		0.54	
Cadmium	9.3	0.1	U	NA		0.81		NA		0.82		NA		0.53	U	NA		0.34	
Calcium	No Standard	1,780		NA		15,900		NA		1,090		NA		50,100		NA		3,030	
Chromium	1,500	10.5		NA		13.3		NA		20.7		NA		12		NA		57.7	
Cobalt	No Standard	4.71		NA		6.85		NA		14.5		NA		6.25		NA		6.58	
Copper	270	13.4		NA		26.7		NA		13.6		NA		10.6		NA		42.1	
Iron	No Standard	14,900		NA		21,900		NA		33,700		NA		16,700		NA		25,400	
Lead	1,000	14		NA		46.1		NA		17		NA		19.3		NA		56.6	
Magnesium	No Standard	1,580		NA		5,210		NA		6,950		NA		12,700		NA		5,160	
Manganese	10,000	158		NA		259		NA		862		NA		284		NA		171	
Mercury	2.8	0.07		NA		0.58		NA		0.029		NA		0.045	U	NA		0.208	U
Nickel	310	11.6		NA		15.5		NA		30.4		NA		14.3		NA		22.4	
Potassium	No Standard	554		NA		935		NA		703		NA		901		NA		1,970	
Selenium	1,500	2.02	U	NA		1.82	U	NA		2.01	U	NA		0.85	J	NA		1.39	
Sodium	No Standard	157		NA		662		NA		123		NA		109	U	NA		331	U
Vanadium	No Standard	16		NA		23.5		NA		22.2		NA		14.1		NA		45.7	
Zinc	10,000	69.2		NA		141		NA		82.7		NA		59.9		NA		165	

TABLE 4.5.1-2

SUBSURFACE SOILS (TEST PITS) ANALYTICAL RESULTS SUMMARY COMPARED TO RESTRICTED (COMMERCIAL) USE SCGS

TABLE 4.5.1-2: SUBSURFACE SOIL (TEST PITS) ANALYTICAL RESULTS SUMMARY COMPARED TO RESTRICTED (COMMERCIAL) USE SCGS OLD CHAMPLAIN MILL BCP SITE VILLAGE OF WHITEHALL, WASHINGTON COUNTY (VALIDATED DATA)

PARAMETER	Part 375 Commercial Use SCOs[1] (mg/kg)	TP-1-S-4 (5') mg/kg		TP-2-S-5 (2.75') mg/kg		TP-3-S-2 (1') mg/kg		TP-4-S-3 (3') mg/kg	
		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCS									
1,1-Dichloroethene	500	0.0023	J	0.007	U	0.0067	U	0.0066	U
Acetone	500	0.0064	J	0.035	U	0.033	U	0.026	J
cis-1,2-Dichloroethene	500	0.88		0.0015	J	0.0067	U	0.0066	U
trans-1,2-Dichloroethene	500	0.0045	J	0.007	U	0.0067	U	0.0066	U
Trichloroethene	200	0.16		0.007	U	0.0058	J	0.0066	U
Vinyl Chloride	13	0.021		0.007	U	0.0067	U	0.0066	U
SVOCS									
Benzo(a)anthracene	5.6	0.056	J	0.46	U	0.44	U	0.43	U
Benzo(b)fluoranthene	5.6	0.058	J	0.46	U	0.44	U	0.43	U
Chrysene	56	0.056	J	0.46	U	0.44	U	0.43	U
Diethylphthalate	No Standard	0.44	U	0.46	U	0.059	J	0.43	U
Dimethylphthalate	No Standard	0.21	U	0.36	U	0.22	U	0.2	U
Fluoranthene	500	0.088	J	0.46	U	0.44	U	0.43	U
Pyrene	500	0.093	J	0.46	U	0.44	U	0.43	U
PESTICIDES (None Detected Above the Laboratory Detection Limit)									
PCBS (None Detected Above the Laboratory Detection Limit)									
METALS									
Aluminum	No Standard	13,300		21,800		12,000		15,300	
Antimony	No Standard	1.04	J	2.51	U	0.99	J	0.64	J
Arsenic	16	7.82		3.36		8.06		2.9	
Barium	400	106		199		137		129	
Beryllium	590	0.63		0.88		0.66		0.73	
Calcium	No Standard	2,260		5,820		5,930		28,000	
Chromium	1,500	20.8		31.5		16.5		21.8	
Cobalt	No Standard	13.5		12.3		16.3		8.9	
Copper	270	23.2		10.7		21.1		11.4	
Iron	No Standard	29,600		30,000		25,500		23,900	
Lead	400	49.4		17		73.6		14.2	
Magnesium	No Standard	4,680		5,560		5,770		16,400	
Manganese	10,000	912		299		1,280		323	
Mercury	2.8	0.03	U	0.046	U	2.3		0.028	U
Nickel	310	27.6		27.1		23.2		24.3	
Potassium	No Standard	896		1,530		847		1,010	
Selenium	1,500	2.35		1.78		2.39		1.06	J
Vanadium	No Standard	22.8		27.1		18		23	
Zinc	10,000	84.9		69.7		84		62.4	

Notes

(1) NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs, Subpart 375-6, Dated December 14, 2006

Concentrations expressed in mg/kg or parts per million (ppm)

U indicates that the parameter was analyzed but not detected

J indicates an estimated value

UJ indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.

Analytical results in bold have exceeded their respective SCO

TABLE 4.5.6-1

SUBSURFACE SOILS (BORINGS) ANALYTICAL RESULTS SUMMARY COMPARED TO UNRESTRICTED USE SCGS

TABLE 4.5.6-1: SUBSURFACE SOIL (BORINGS) ANALYTICAL RESULTS SUMMARY COMPARED TO UNRESTRICTED USE SCGS
OLD CHAMPLAIN MILL BCP SITE
VILLAGE OF WHITEHALL, WASHINGTON COUNTY
(VALIDATED DATA)

PARAMETER	Part 375 Unrestricted Use SCOs[1] (mg/kg)	BMW-15A-S-6 (12' - 14' bgs)		BMW-16A-S-2 (2' - 4' bgs)		BMW-16A-S-8 (14' - 16' bgs)		BMW-17A-S-1 (0 - 2' bgs)		BMW-17A-S-9 (16' - 18' bgs)		BMW-18A-S-1 (0 - 2' bgs)		BMW-FD-1 (0 - 2' bgs)		BMW-18A-S-7 (12' - 14' bgs)		BMW-19A-S-1 (0 - 2' bgs)		BMW-19A-S-6 (10' - 12' bgs)	
		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCS																					
Acetone	0.05	0.01	J	0.008	J	0.031	U	0.031	U	0.039	U	0.032	U	0.03	U	0.03	U	0.034	U	0.029	U
Carbon Disulfide	No Standard	0.0062	U	0.0071	U	0.0051	J	0.0062	U	0.0078	U	0.0065	U	0.0061	U	0.0061	U	0.0068	U	0.0058	U
cis-1,2-Dichloroethene	0.25	0.013		0.0071	U	**3.3**		0.0062	U	0.0045	J	0.0065	U	0.0061	U	0.017		0.0068	U	0.22	
Ethyl Benzene	1	0.0062	U	0.0071	U	0.012		0.0062	U	0.0078	U	0.0065	U	0.0061	U	0.0061	U	0.0068	U	0.0058	U
m/p-Xylenes	0.26	0.012	U	0.014	U	0.0065	J	0.012	U	0.016	U	0.013	U	0.012	U	0.012	U	0.014	U	0.012	U
o-Xylene	0.26	0.0062	U	0.0071	U	0.0098		0.0062	U	0.0078	U	0.0065	U	0.0061	U	0.0061	U	0.0068	U	0.0058	U
Toluene	0.7	0.0062	U	0.0071	U	0.075		0.0062	U	0.0078	U	0.0065	U	0.0061	U	0.0061	U	0.0068	U	0.0058	U
trans-1,2-Dichloroethene	0.19	0.0021	J	0.0071	U	0.045		0.0062	U	0.0078	U	0.0065	U	0.0061	U	0.0061	U	0.0068	U	0.0058	U
Trichloroethene	0.47	0.0062	U	0.0071	U	**12**	J	0.0062	U	0.0078	U	0.0065	U	0.0061	U	0.0061	U	0.0068	U	0.0058	U
Vinyl Chloride	0.02	0.0065		0.0071	U	**0.1**	J	0.0062	U	**0.41**		0.0065	U	0.0061	U	0.0061	U	0.0068	U	0.02	
SVOCS																					
2,4,5-Trichlorophenol	No Standard	Not Analyzed		0.47	U	Not Analyzed		0.61	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
2,4-Dinitrophenol	No Standard	Not Analyzed		0.47	U	Not Analyzed		3.3	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
2,4-Dinitrotoluene	No Standard	Not Analyzed		0.47	U	Not Analyzed		2.1	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
2,6-Dinitrotoluene	No Standard	Not Analyzed		0.47	U	Not Analyzed		1.3	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
2-Nitroaniline	No Standard	Not Analyzed		0.47	U	Not Analyzed		0.92	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
3,3-Dichlorobenzidine	No Standard	Not Analyzed		0.47	U	Not Analyzed		2	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
3-Nitroaniline	No Standard	Not Analyzed		0.47	U	Not Analyzed		1.5	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
4,6-Dinitro-2-methylphenol	No Standard	Not Analyzed		0.47	U	Not Analyzed		1.4	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
4-Bromophenyl-phenylether	No Standard	Not Analyzed		0.47	U	Not Analyzed		1.5	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
4-Chloro-3-methylphenol	No Standard	Not Analyzed		0.47	U	Not Analyzed		0.46	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
4-Chlorophenyl-phenylether	No Standard	Not Analyzed		0.47	U	Not Analyzed		0.99	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
4-Nitroaniline	No Standard	Not Analyzed		0.47	U	Not Analyzed		2.1	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
4-Nitrophenol	No Standard	Not Analyzed		0.47	U	Not Analyzed		1.9	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
Acenaphthene	20	Not Analyzed		0.098	J	Not Analyzed		1.3	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
Anthracene	100	Not Analyzed		0.12	J	Not Analyzed		4.1		Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
Atrazine	No Standard	Not Analyzed		0.47	U	Not Analyzed		1.7	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
Benzo(a)anthracene	1	Not Analyzed		0.26	J	Not Analyzed		**8**		Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
Benzo(a)pyrene	1	Not Analyzed		0.22	J	Not Analyzed		**6.9**		Not Analyzed		0.0099	J	0.4	UJ	Not Analyzed		0.45	U	Not Analyzed	
Benzo(b)fluoranthene	1	Not Analyzed		0.29	J	Not Analyzed		7.7		Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
Benzo(g,h,i)perylene	100	Not Analyzed		0.12	J	Not Analyzed		4.6		Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
Benzo(k)fluoranthene	0.8	Not Analyzed		0.11	J	Not Analyzed		**5.2**		Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
bis(2-Ethylhexyl)phthalate	No Standard	Not Analyzed		0.032	U	Not Analyzed		3	J	Not Analyzed		0.042	U	0.13	U	Not Analyzed		0.025	U	Not Analyzed	
Butylbenzylphthalate	No Standard	Not Analyzed		0.47	U	Not Analyzed		3.1	J	Not Analyzed		0.43	U	0.4	U	Not Analyzed		0.45	U	Not Analyzed	
PESTICIDES (None Detected Above the Laboratory Detection Limit)																					
PCBs (None Detected Above the Laboratory Detection Limit)																					
METALS																					
Aluminum	No Standard	Not Analyzed		19,000		Not Analyzed		3,690		Not Analyzed		15,300		13,900		Not Analyzed		18,100		Not Analyzed	
Antimony	No Standard	Not Analyzed		1.58	J	Not Analyzed		3.09	U	Not Analyzed		3.04	UJ	0.65	J	Not Analyzed		3.32	U	Not Analyzed	
Arsenic	13	Not Analyzed		**29.7**		Not Analyzed		**17.3**		Not Analyzed		3.26		3.09		Not Analyzed		3.9		Not Analyzed	
Barium	350	Not Analyzed		133		Not Analyzed		61.8		Not Analyzed		101		95.6		Not Analyzed		146		Not Analyzed	
Beryllium	7.2	Not Analyzed		1.37		Not Analyzed		0.63		Not Analyzed		0.48		0.5		Not Analyzed		0.62		Not Analyzed	
Cadmium	2.5	Not Analyzed		1.85		Not Analyzed		0.18	U	Not Analyzed		0.37	U	0.49	U	Not Analyzed		0.37	U	Not Analyzed	
Calcium	No Standard	Not Analyzed		3,410		Not Analyzed		4,270		Not Analyzed		2,030		1,870		Not Analyzed		3,230		Not Analyzed	
Chromium	30	Not Analyzed		28		Not Analyzed		7.51		Not Analyzed		15.9		14.2		Not Analyzed		21.2		Not Analyzed	
Cobalt	No Standard	Not Analyzed		16.2		Not Analyzed		3.94		Not Analyzed		8.48	J	10.8	J	Not Analyzed		10.5		Not Analyzed	
Copper	50	Not Analyzed		1.37	U	Not Analyzed		20.5	J	Not Analyzed		6.36	J	4.92	J	Not Analyzed		11.1		Not Analyzed	
Iron	No Standard	Not Analyzed		96,500		Not Analyzed		10,800		Not Analyzed		25,600		24,500		Not Analyzed		28,600		Not Analyzed	
Lead	63	Not Analyzed		32.1		Not Analyzed		31		Not Analyzed		24.7	J	18.2	J	Not Analyzed		16.9		Not Analyzed	
Magnesium	No Standard	Not Analyzed		6,220		Not Analyzed		1,010		Not Analyzed		4,230		3,970		Not Analyzed		5,700		Not Analyzed	
Manganese	1,600	Not Analyzed		1,130		Not Analyzed		124		Not Analyzed		370	J	472	J	Not Analyzed		294		Not Analyzed	
Mercury	0.18	Not Analyzed		0.014	U	Not Analyzed		0.03		Not Analyzed		0.049	U	0.04	U	Not Analyzed		0.07	U	Not Analyzed	
Nickel	30	Not Analyzed		26.7		Not Analyzed		10.9		Not Analyzed		15.5		14.9		Not Analyzed		21.1		Not Analyzed	
Potassium	No Standard	Not Analyzed		1,220		Not Analyzed		496		Not Analyzed		935	J	760	J	Not Analyzed		971		Not Analyzed	
Selenium	3.9	Not Analyzed		3.43		Not Analyzed		2.15	U	Not Analyzed		1.2	J	1.57		Not Analyzed		1.59		Not Analyzed	
Sodium	No Standard	Not Analyzed		169	U	Not Analyzed		353	J	Not Analyzed		153	U	108	U	Not Analyzed		207	U	Not Analyzed	
Vanadium	No Standard	Not Analyzed		42.9		Not Analyzed		15.3		Not Analyzed		24.8		23.4		Not Analyzed		26.4		Not Analyzed	
Zinc	109	Not Analyzed		**132**		Not Analyzed		35.9		Not Analyzed		87.6		72.2		Not Analyzed		85.3		Not Analyzed	

Notes
(1) NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs, Subpart 375-6, Dated December 14, 2006
Concentrations expressed in mg/kg or parts per million (ppm)
U indicates that the parameter was analyzed but not detected
J indicates an estimated value
UJ indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.
Analytical results in bold have exceeded their respective SCO
BMW-FD-1 is a duplicate of BMW-18A S-1

TABLE 4.5.6-1: SUBSURFACE SOIL (BORINGS) ANALYTICAL RESULTS SUMMARY COMPARED TO UNRESTRICTED USE SCGS
OLD CHAMPLAIN MILL BCP SITE
VILLAGE OF WHITEHALL, WASHINGTON COUNTY
(VALIDATED DATA)

PARAMETER	Part 375 Unrestricted Use SCOs[1] (mg/kg)	BMW-11A-S-2 (2' - 4' bgs)		BMW-11A-S-8 (14' - 16' bgs)		BMW-12A-S-1 (0 - 2' bgs)		BMW-12A-S-9 (16' - 18' bgs)		BMW-13A-S-1 (0 - 2' bgs)		BMW-13A-S-8 (14' - 16' bgs)		BMW-14A-S-1 (0 - 2' bgs)		BMW-14A-S-7 (12' - 14' bgs)		BMW-15A-S-1 (2' - 4' bgs)	
		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCS																			
Acetone	0.05	0.036	U	0.03	U	**0.42**		0.016	J	0.033	U	0.03	U	0.028	U	0.029	U	0.035	U
Carbon Disulfide	No Standard	0.0072	U	0.0059	U	0.0066	U	0.0064	U	0.0065	U	0.006	U	0.0055	U	0.0059	U	0.007	U
cis-1,2-Dichloroethene	0.25	0.0072	U	0.0059	U	0.0066	U	0.0064	U	0.0065	U	0.046		0.0055	U	0.0058	J	0.0033	J
Ethyl Benzene	1	0.0072	U	0.0059	U	0.0066	U	0.0064	U	0.0065	U	0.006	U	0.0055	U	0.0059	U	0.007	U
m/p-Xylenes	0.26	0.014	U	0.012	U	0.013	U	0.013	U	0.013	U	0.012	U	0.011	U	0.012	U	0.014	U
o-Xylene	0.26	0.0072	U	0.0059	U	0.0066	U	0.0064	U	0.0065	U	0.006	U	0.0055	U	0.0059	U	0.007	U
Toluene	0.7	0.0072	U	0.0059	U	0.018		0.0064	U	0.0065	U	0.006	U	0.0055	U	0.0059	U	0.007	U
trans-1,2-Dichloroethene	0.19	0.0072	U	0.0059	U	0.0066	U	0.0064	U	0.0065	U	0.006	U	0.0055	U	0.0059	U	0.007	U
Trichloroethene	0.47	0.0072	U	0.0059	U	0.0066	U	0.0064	U	0.0065	U	0.006	U	0.0055	U	0.0059	U	0.025	
Vinyl Chloride	0.02	0.0072	U	0.0059	U	0.0066	U	0.0064	U	0.0065	U	0.0042	J	0.0055	U	0.0059	U	0.007	U
SVOCS																			
2,4,5-Trichlorophenol	No Standard	0.48	U	Not Analyzed		4.2	U	Not Analyzed		0.43	U	Not Analyzed		0.37	U	Not Analyzed		0.46	U
2,4-Dinitrophenol	No Standard	0.48	U	Not Analyzed		4.2	U	Not Analyzed		0.43	U	Not Analyzed		0.37	U	Not Analyzed		0.46	U
2,4-Dinitrotoluene	No Standard	0.48	U	Not Analyzed		4.2	U	Not Analyzed		0.43	U	Not Analyzed		0.37	U	Not Analyzed		0.46	U
2,6-Dinitrotoluene	No Standard	0.48	U	Not Analyzed		4.2	U	Not Analyzed		0.43	U	Not Analyzed		0.37	U	Not Analyzed		0.46	U
2-Nitroaniline	No Standard	0.48	U	Not Analyzed		4.2	U	Not Analyzed		0.43	U	Not Analyzed		0.37	U	Not Analyzed		0.46	U
3,3-Dichlorobenzidine	No Standard	0.48	U	Not Analyzed		4.2	U	Not Analyzed		0.43	U	Not Analyzed		0.37	UJ	Not Analyzed		0.46	U
3-Nitroaniline	No Standard	0.48	U	Not Analyzed		4.2	U	Not Analyzed		0.43	U	Not Analyzed		0.37	U	Not Analyzed		0.46	U
4,6-Dinitro-2-methylphenol	No Standard	0.48	U	Not Analyzed		4.2	U	Not Analyzed		0.43	U	Not Analyzed		0.37	U	Not Analyzed		0.46	U
4-Bromophenyl-phenylether	No Standard	0.48	U	Not Analyzed		4.2	U	Not Analyzed		0.43	U	Not Analyzed		0.37	U	Not Analyzed		0.46	U
4-Chloro-3-methylphenol	No Standard	0.48	U	Not Analyzed		4.2	U	Not Analyzed		0.43	U	Not Analyzed		0.37	U	Not Analyzed		0.46	U
4-Chlorophenyl-phenylether	No Standard	0.48	U	Not Analyzed		4.2	U	Not Analyzed		0.43	U	Not Analyzed		0.37	U	Not Analyzed		0.46	U
4-Nitroaniline	No Standard	0.48	U	Not Analyzed		4.2	U	Not Analyzed		0.43	U	Not Analyzed		0.37	U	Not Analyzed		0.46	U
4-Nitrophenol	No Standard	0.48	U	Not Analyzed		4.2	U	Not Analyzed		0.43	U	Not Analyzed		0.37	U	Not Analyzed		0.46	U
Acenaphthene	20	0.48	U	Not Analyzed		1.1	J	Not Analyzed		0.43	U	Not Analyzed		0.016	J	Not Analyzed		0.46	U
Anthracene	100	0.48	U	Not Analyzed		2	J	Not Analyzed		0.43	U	Not Analyzed		0.037	J	Not Analyzed		0.46	U
Atrazine	No Standard	0.48	U	Not Analyzed		4.2	U	Not Analyzed		0.43	U	Not Analyzed		0.37	U	Not Analyzed		0.46	U
Benzo(a)anthracene	1	0.48	U	Not Analyzed		**4.3**		Not Analyzed		0.43	U	Not Analyzed		0.17	J	Not Analyzed		0.46	U
Benzo(a)pyrene	1	0.48	U	Not Analyzed		**3.3**	J	Not Analyzed		0.43	U	Not Analyzed		0.15	J	Not Analyzed		0.46	U
Benzo(b)fluoranthene	1	0.48	U	Not Analyzed		**4.6**		Not Analyzed		0.43	U	Not Analyzed		0.19	J	Not Analyzed		0.46	U
Benzo(g,h,i)perylene	100	0.48	U	Not Analyzed		1.6	J	Not Analyzed		0.43	U	Not Analyzed		0.09	J	Not Analyzed		0.46	U
Benzo(k)fluoranthene	0.8	0.48	U	Not Analyzed		**1.7**	J	Not Analyzed		0.43	U	Not Analyzed		0.076	J	Not Analyzed		0.46	U
bis(2-Ethylhexyl)phthalate	No Standard	0.48	U	Not Analyzed		0.45	J	Not Analyzed		0.43	U	Not Analyzed		0.087	J	Not Analyzed		0.021	U
Butylbenzylphthalate	No Standard	0.48	U	Not Analyzed		4.2	U	Not Analyzed		0.43	U	Not Analyzed		0.37	U	Not Analyzed		0.46	U
PESTICIDES (None Detected Above the Laboratory Detection Limit)																			
PCBs (None Detected Above the Laboratory Detection Limit)																			
METALS																			
Aluminum	No Standard	5,920		Not Analyzed		7,360		Not Analyzed		19,100		Not Analyzed		8,640		Not Analyzed		28,100	
Antimony	No Standard	2.63	J	Not Analyzed		0.94	J	Not Analyzed		0.63	J	Not Analyzed		2.78	U	Not Analyzed		0.82	J
Arsenic	13	5.79		Not Analyzed		8.16		Not Analyzed		4.61		Not Analyzed		6.61		Not Analyzed		6.16	
Barium	350	76.2		Not Analyzed		222		Not Analyzed		140		Not Analyzed		67.3		Not Analyzed		200	
Beryllium	7.2	0.37		Not Analyzed		0.66		Not Analyzed		0.75		Not Analyzed		0.41		Not Analyzed		0.54	
Cadmium	2.5	**0.1**	U	Not Analyzed		0.81		Not Analyzed		0.82		Not Analyzed		0.53	U	Not Analyzed		0.34	
Calcium	No Standard	1,780		Not Analyzed		15,900		Not Analyzed		1,090		Not Analyzed		50,100		Not Analyzed		3,030	
Chromium	30	10.5		Not Analyzed		13.3		Not Analyzed		20.7		Not Analyzed		**12**		Not Analyzed		**57.7**	
Cobalt	No Standard	4.71		Not Analyzed		6.85		Not Analyzed		14.5		Not Analyzed		6.25		Not Analyzed		6.58	
Copper	50	13.4		Not Analyzed		26.7		Not Analyzed		13.6		Not Analyzed		10.6		Not Analyzed		42.1	
Iron	No Standard	14,900		Not Analyzed		21,900		Not Analyzed		33,700		Not Analyzed		16,700		Not Analyzed		25,400	
Lead	63	14		Not Analyzed		46.1		Not Analyzed		17		Not Analyzed		19.3		Not Analyzed		56.6	
Magnesium	No Standard	1,580		Not Analyzed		5,210		Not Analyzed		6,950		Not Analyzed		12,700		Not Analyzed		5,160	
Manganese	1,600	158		Not Analyzed		259		Not Analyzed		862		Not Analyzed		284		Not Analyzed		171	
Mercury	0.18	0.07		Not Analyzed		**0.58**		Not Analyzed		0.029		Not Analyzed		0.045	U	Not Analyzed		**0.208**	U
Nickel	30	11.6		Not Analyzed		15.5		Not Analyzed		**30.4**		Not Analyzed		14.3		Not Analyzed		22.4	
Potassium	No Standard	554		Not Analyzed		935		Not Analyzed		703		Not Analyzed		901		Not Analyzed		1,970	
Selenium	3.9	2.02	U	Not Analyzed		1.82	U	Not Analyzed		2.01	U	Not Analyzed		0.85	J	Not Analyzed		1.39	
Sodium	No Standard	157		Not Analyzed		662		Not Analyzed		123		Not Analyzed		109	U	Not Analyzed		331	U
Vanadium	No Standard	16		Not Analyzed		23.5		Not Analyzed		22.2		Not Analyzed		14.1		Not Analyzed		45.7	
Zinc	109	69.2		Not Analyzed		141		Not Analyzed		82.7		Not Analyzed		59.9		Not Analyzed		**165**	

TABLE 4.5.6-2

SUBSURFACE SOILS (TEST PITS) ANALYTICAL RESULTS SUMMARY COMPARED TO UNRESTRICTED USE SCGS

TABLE 4.5.6-2: SUBSURFACE SOIL (TEST PITS) ANALYTICAL RESULTS SUMMARY
COMPARED TO UNRESTRICTED USE SCGS
OLD CHAMPLAIN MILL BCP SITE
VILLAGE OF WHITEHALL, WASHINGTON COUNTY
(VALIDATED DATA)

PARAMETER	Part 375 Unrestricted Use SCOs[1] (mg/kg)	TP-1-S-4 (5') mg/kg		TP-2-S-5 (2.75') mg/kg		TP-3-S-2 (1') mg/kg		TP-4-S-3 (3') mg/kg	
		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCS									
1,1-Dichloroethene	0.33	0.0023	J	0.007	U	0.0067	U	0.0066	U
Acetone	0.05	0.0064	J	0.035	U	0.033	U	0.026	J
cis-1,2-Dichloroethene	0.25	**0.88**		0.0015	J	0.0067	U	0.0066	U
trans-1,2-Dichloroethene	0.19	0.0045	J	0.007	U	0.0067	U	0.0066	U
Trichloroethene	0.47	0.16		0.007	U	0.0058	J	0.0066	U
Vinyl Chloride	0.02	**0.021**		0.007	U	0.0067	U	0.0066	U
SVOCS									
Benzo(a)anthracene	1	0.056	J	0.46	U	0.44	U	0.43	U
Benzo(b)fluoranthene	1	0.058	J	0.46	U	0.44	U	0.43	U
Chrysene	1	0.056	J	0.46	U	0.44	U	0.43	U
Diethylphthalate	No Standard	0.44	U	0.46	U	0.059	J	0.43	U
Dimethylphthalate	No Standard	0.21	U	0.36	U	0.22	U	0.2	U
Fluoranthene	100	0.088	J	0.46	U	0.44	U	0.43	U
Pyrene	100	0.093	J	0.46	U	0.44	U	0.43	U
PESTICIDES (None Detected Above the Laboratory Detection Limit)									
PCBS (None Detected Above the Laboratory Detection Limit)									
METALS									
Aluminum	No Standard	13,300		21,800		12,000		15,300	
Antimony	No Standard	1.04	J	2.51	U	0.99	J	0.64	J
Arsenic	13	7.82		3.36		8.06		2.9	
Barium	350	106		199		137		129	
Beryllium	7.2	0.63		0.88		0.66		0.73	
Calcium	No Standard	2,260		5,820		5,930		28,000	
Chromium	30	20.8		**31.5**		16.5		21.8	
Cobalt	No Standard	13.5		12.3		16.3		8.9	
Copper	50	23.2		10.7		21.1		11.4	
Iron	No Standard	29,600		30,000		25,500		23,900	
Lead	63	49.4		17		**73.6**		14.2	
Magnesium	No Standard	4,680		5,560		5,770		16,400	
Manganese	1,600	912		299		1,280		323	
Mercury	0.18	0.03	U	0.046	U	**2.3**		0.028	U
Nickel	30	27.6		27.1		23.2		24.3	
Potassium	No Standard	896		1,530		847		1,010	
Selenium	3.9	2.35		1.78		2.39		1.06	J
Vanadium	No Standard	22.8		27.1		18		23	
Zinc	109	84.9		69.7		84		62.4	

Notes

(1) NYSDEC 6 NYCRR Part 375 Environmental Remediation Programs, Subpart 375-6, Dated December 14, 2006

Concentrations expressed in mg/kg or parts per million (ppm)

U indicates that the parameter was analyzed but not detected

J indicates an estimated value

UJ indicates the presence of a compound that meets the identification criteria; however the result is less than the quantitation limit but greater than zero.

Analytical results in bold have exceeded their respective SCO

TABLE 4.6.1-1

GROUNDWATER ANALYTICAL RESULTS SUMMARY

TABLE 4.6.1-1: GROUNDWATER ANALYTICAL RESULTS SUMMARY
OLD CHAMPLAIN MILL BCP SITE
VILLAGE OF WHITEHALL, WASHINGTON COUNTY
(VALIDATED DATA)

PARAMETER	NYSDEC GROUNDWATER STANDARD OR GUIDANCE VALUE (ug/L)[1]	BMW-11A 2/11/2010		BMW-12A 2/11/2010		BMW-13A 2/11/2010		BMW-14A 2/11/2010		BMW-15A 2/11/2010		BMW-16A 2/11/2010		BMW-16A 3/25/2010		BMW-FD-2 2/11/2010		BMW-17A 2/11/2010	
		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs																			
1,1-Dichloroethene	5	1	U	1	U	1	U	1.5		1	U	1	U	1	U	1	U	1	U
Acetone	50 (GV)	5	U	15	U	5	U	5	UJ	5	U	5	U	5	U	5	UJ	5	U
Chloroform	7	1	U	1	U	1	U	1.2		0.88	J	1	U	1	U	1	U	0.71	J
cis-1,2-Dichloroethene	5	1	U	4.8		**530**		**520**		**150**		4.2		1.2		3.7		1.3	
o-Xylene	5	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	5	1	U	1	U	2.1		**13**		**10**		1	U	1	U	1	U	1	U
Trichloroethene	5	1	U	1	U	1	U	**17**		**35**		1.9		1	U	2		**1**	U
Vinyl Chloride	2	1	U	**6.7**		**130**		**13**		**82**		**2.1**		**2.1**		1.8		**65**	
TOTAL VOCs		***0***		***11.5***		***662.1***		***565.7***		***277.88***		***8.2***		***3.3***		***7.5***		***67.01***	
SVOCs																			
Acenaphthene	20 (GV)	11	U	0.24	J	11	U	11	U	11	U	11	UJ	NA		1.2	J	11	U
Anthracene	50 (GV)	11	U	11	U	11	U	11	U	11	U	11	UJ	NA		0.53	J	11	U
Benzo(a)pyrene	Non Detect	11	U	11	U	11	U	11	U	11	U	11	U	NA		**0.17**	J	11	U
Benzo(g,h,i)perylene	No Standard	11	U	11	U	11	U	11	U	11	U	11	U	NA		2.5	J	11	U
bis(2-Ethylhexyl)phthalate	5	11	U	11	U	11	U	11	U	0.24	U	11	U	NA		**11**	U	0.95	U
Indeno(1,2,3-cd)pyrene	0.002 (GV)	11	U	11	U	11	U	11	U	11	U	11	U	NA		**0.73**	J	11	U
Naphthalene	10 (GV)	11	U	11	U	11	U	11	U	11	U	11	UJ	NA		0.31	J	11	U
Phenanthrene	50 (GV)	11	U	0.28	J	11	U	11	U	11	U	11	U	NA		11	U	11	U
PESTICIDES (None Detected Above the Laboratory Detection Limit)																			
PCBs (None Detected Above the Laboratory Detection Limit)																			
METALS																			
Aluminum	No Standard	19.2	U	269		221		676		1,170		117		NA		121		189	
Arsenic	25	10	U	10	U	10	U	10	U	10	U	10	U	NA		10	U	10	U
Barium	1,000	31.9	J	56.3		81.4		68.6		62.9		40	J	NA		40.6	J	102	
Calcium	No Standard	56,000		35,900		67,300		58,800		56,900		57,100		NA		58,600		68,600	
Iron	300	**784**		**9,190**		**11,400**		**2,040**		**22,200**		**1,420**		NA		**1,460**		**9,150**	
Lead	25	5.64	J	5.4	J	5.76	J	7.65		7.53		6	UJ	NA		3.12	J	7.86	
Magnesium	35,000 (GV)	8,730		12,400		17,000		19,700		16,100		10,100		NA		10,300		15,900	
Manganese	300	115		**1,630**		**894**		**885**		**1,630**		**2,280**		NA		**2,360**		**1,890**	
Nickel	100	20	U	20	U	20	U	14.2	J	12.2	J	20	U	NA		20	U	20	U
Potassium	No Standard	2,290		913	J	1,060		916	J	2,950		3,410		NA		3,480		1,100	
Selenium	10	10	U	10	U	10	U	10	U	10	U	10	UJ	NA		5.82	J	10	U
Sodium	20,000	10,500		10,800		19,600		**36,500**		**64,200**		13,000		NA		13,000		**34,200**	
Vanadium	No Standard	20	U	20	U	20	U	20	U	6.18	J	20	U	NA		20	U	20	U
Zinc	2,000 (GV)	59.9	U	32.4	U	21.6	U	26.5	U	35.9	U	21	U	NA		23	U	28.6	U

Qualifiers and Notes

[1] TOGS 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, New York State Department of Environmkental Conservation, June 1998 and Addendum, April 2000.

Concentrations expressed in ug/l or parts per billion (ppb)

U indicates that the compound was analyzed for but not detected

J indicates an estimated value

GV denotes a Guidance Value

ND denotes "Non-Detect"

NA denotes "Not Analyzed"

BMW-FD-2 is a duplicate of BMW-16A

FDGW032510 is a duplicate of MW-2A

TABLE 4.6.1-1: GROUNDWATER ANALYTICAL RESULTS SUMMARY
OLD CHAMPLAIN MILL BCP SITE
VILLAGE OF WHITEHALL, WASHINGTON COUNTY
(VALIDATED DATA)

PARAMETER	NYSDEC GROUNDWATER STANDARD OR GUIDANCE VALUE (ug/L)[1]	BMW-18A 2/11/2010		BMW-19A 2/11/2010		MW-2A 3/25/2010		FDGW032510 3/25/2010		MW-3A 3/25/2010		MW-4A 3/25/2010		MW-5A 3/25/2010		MW-8A 3/25/2010		MW-8 3/25/2010		BMW-EB-02 2/11/2010	
		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs																					
1,1-Dichloroethene	5	1	U	**7.4**		3.2		3.3		1.7		1	U	1	U	1	U	1	U	1	U
Acetone	50 (GV)	5	U	5	UJ	4.2	J	5	UJ	5	U	5	U	5	U	5	U	5	U	16	
Chloroform	7	1	U	0.94	J	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
cis-1,2-Dichloroethene	5	1.6		**6,600**		**580**		**610**		**1,500**		**6**		4.6		1	U	1	U	1	U
o-Xylene	5	1	U	0.55	J	1	U	1	U	1	U	1	U	1	U	1	U	1	U	1	U
trans-1,2-Dichloroethene	5	1	U	**35**		3.8		**4.1**		**5.2**		1	U	1	U	1	U	1	U	1	U
Trichloroethene	5	1	U	**5.5**		**69**		**67**		1	U	1.2		1.2		1	U	1	U	1	U
Vinyl Chloride	2	1	U	**1,800**		**23**		**24**		**330**		1	U	0.81	J	1	U	1	U	1	U
TOTAL VOCs		***1.6***		***8,449***		***683.2***		***708.4***		***1,837***		***7.2***		***6.61***		***0***		***0***			
SVOCs																					
Acenaphthene	20 (GV)	11	U	11	U	11	U	11	U	NA		11	U	NA		NA		12	U	11	U
Anthracene	50 (GV)	11	U	11	U	11	U	11	U	NA		11	U	NA		NA		12	U	11	U
Benzo(a)pyrene	Non Detect	11	U	11	U	11	U	11	U	NA		11	U	NA		NA		12	U	11	U
Benzo(g,h,i)perylene	No Standard	11	U	11	U	11	U	11	U	NA		11	U	NA		NA		12	U	11	U
bis(2-Ethylhexyl)phthalate	5	11	U	11	U	11	U	11	U	NA		11	U	NA		NA		12	U	0.2	J
Indeno(1,2,3-cd)pyrene	0.002 (GV)	11	U	11	U	11	U	11	U	NA		11	U	NA		NA		12	U	11	U
Naphthalene	10 (GV)	11	U	11	U	11	U	11	U	NA		11	U	NA		NA		12	U	11	U
Phenanthrene	50 (GV)	11	U	11	U	11	U	11	U	NA		11	U	NA		NA		12	U	11	U
PESTICIDES (None Detected Above the Laboratory Detection Limit)																					
PCBs (None Detected Above the Laboratory Detection Limit)																					
METALS																					
Aluminum	No Standard	85.4	U	494		5,560		5,680		NA		474		NA		NA		485		9.67	J
Arsenic	25	10	U	5.5	J	9.47	J	6.95	J	NA		10	U	NA		NA		10	U	10	U
Barium	1,000	55		84		107	U	105	U	NA		28.8	U	NA		NA		137	U	50	U
Calcium	No Standard	52,800		58,600		41,500		41,300		NA		57,400		NA		NA		67,100		437	J
Iron	300	162		**12,400**		**13,900**		**13,700**		NA		**5,420**		NA		NA		**1,210**		50	U
Lead	25	2.7	J	7.51		**38.1**		**36.2**		NA		2.86	J	NA		NA		7.68		6	U
Magnesium	35,000 (GV)	17,000		16,600		7,850		7,840		NA		12,600		NA		NA		10,800		77.5	J
Manganese	300	195		**999**		**1,160**		**1,140**		NA		**4,850**		NA		NA		**569**		10	U
Nickel	100	20	U	32.7		9.86	J	10.7	J	NA		20	U	NA		NA		20	U	20	U
Potassium	No Standard	3,290		941	J	5,540		5,490		NA		998	U	NA		NA		4,320		1,000	U
Selenium	10	10	U	10	U	6.7	J	10	UJ	NA		10	U	NA		NA		10	U	10	U
Sodium	20,000	**57,200**		**31,000**		9,810	U	9,760	U	NA		13,400		NA		NA		7,890	U	793	J
Vanadium	No Standard	20	U	20	U	12.7	J	11.8	J	NA		20	U	NA		NA		20	U	20	U
Zinc	2,000 (GV)	24.6	U	29.7	U	59.6		60.4		NA		20	U	NA		NA		68.7		21.1	

Qualifiers and Notes

[1] TOGS 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, New York State Department of Environmkental Conservation, June 1998 and Addendum, April 2000.

Concentrations expressed in ug/l or parts per billion (ppb)

U indicates that the compound was analyzed for but not detected

J indicates an estimated value

GV denotes a Guidance Value

ND denotes "Non-Detect"

NA denotes "Not Analyzed"

BMW-FD-2 is a duplicate of BMW-16A

FDGW032510 is a duplicate of MW-2A

TABLE 4.6.6-1

GROUNDWATER ANALYTICAL RESULTS SUMMARY

(2007 C.T. MALE SUPPLEMENTAL PHASE II ESA)

TABLE 4.6.6-1
GROUNDWATER ANALYTICAL RESULTS SUMMARY
2007 C.T. MALE SUPPLEMENTAL PHASE II ESA
(UNVALIDATED DATA)

PARAMETER	SAMPLE LOCATION AND CONCENTRATION										6NYCRR PART 703.5 GROUNDWATER STANDARD (1)
	MW-1A ug/l	MW-2A ug/l	MW-3A ug/l	MW-4A ug/l	MW-5A ug/l	MW-6A ug/l	MW-7A ug/l	MW-8A ug/l	SW-9A ug/l	MW-10A ug/l	ug/l
VOLATILE ORGANIC COMPOUNDS											
1,1 Dichlroethene	ND	**8.4**	ND	ND	ND	ND	ND	ND	ND	ND	0.7*
Cis-1,2-dichloroethene	**160**	**7500**	**15**	**13**	**530**	**160**	**17**	**12**	ND	**1300**	5
Methylene chloride	**9.7**	**9.3**	ND	ND	**10**	**11**	**11**	**11**	**10**	**9.2**	5
Naphthalene	ND	ND	ND	ND	ND	ND	**42**	ND	ND	ND	10
Trans-1,2-Dicholoroethene	ND	**47**	ND	ND	**14**	ND	ND	ND	ND	**8.9**	5
Trichloroethene	ND	**3300**	ND	ND	**88**	**140**	**7.2**	ND	ND	**10**	5
Vinyl chloride	**87**	**210**	ND	ND	**160**	**9.4**	ND	ND	ND	**440**	2
Total VOCs	**256.7**	**11074.7**	15	13	**802**	**320.4**	77.2	23	10	**1768.1**	

(1) TOGS 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, New York State Department of Environmental Conservation, June 1998 and Addendum, April 2000.
ug/l=Parts Per Billion
ND=Below Method Detection Limit
Values which exceed their respective groundwater standard are depicted in bold type.
*This is a Guidance Value

TABLE 4.7.1-1

WETLAND SURFACE WATER ANALYTICAL RESULTS SUMMARY

TABLE 4.7.1-1: WETLAND SURFACE WATER ANALYTICAL RESULTS SUMMARY
OLD CHAMPLAIN MILL BCP SITE
VILLAGE OF WHITEHALL, WASHINGTON COUNTY
(VALIDATED dATA)

PARAMETER	NYSDEC GROUNDWATER STANDARD OR GUIDANCE VALUE (ug/L)[1]	WSW-1 ug/L		WSW-2 ug/L		WSW-3 ug/L		WSW-4 ug/L		EBGW032510 ug/L	
		Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier	Result	Qualifier
VOCs											
2-Butanone (MEK)	50 (GV)	5	U	5	U	7		5	U	5	U
2-Hexanone	50 (GV)	5	U	5	U	3.8	J	5	U	5	U
4-Methyl-2-Pentanone	No Standard	5	U	5	U	3.3	J	5	U	5	U
Acetone	50 (GV)	5	U	6.4	J	**51**	J	5	U	5	U
cis-1,2-Dichloroethene	5	1	U	1	U	1.3		1	U	1	U
o-Xylene	5	1	U	0.62	J	1	U	1	U	1	U
Trichloroethene	5	1	U	1	U	1.4		1	U	1	U
SVOCS (None Detected Above the Laboratory Detection Limit)											
PESTICIDES (None Detected Above the Laboratory Detection Limit)											
PCBs (None Detected Above the Laboratory Detection Limit)											
METALS											
Aluminum	100	2,750		219		660		75.7	U	8.63	J
Barium	1,000	50.6	U	83.1	U	99.1	U	33.8	U	28.5	J
Calcium	No Standard	32,400		73,000		71,300		36,500		4,740	
Chromium	50	3.99	J	3.78	J	1.52	J	5	U	5	U
Copper	200	9.97	J	16.5		10	U	10	U	10	U
Iron	300	**5,410**		**529**		**1,520**		**884**		50	U
Lead	25	10.2		8.33		5.57	J	6	U	6	U
Magnesium	35,000 (GV)	7,800		7,360		6,580		7,390		870	J
Manganese	300	**383**		28.8		**491**		295		6.52	J
Nickel	100	9.69	J	20	U	20	U	20	U	20	U
Potassium	No Standard	1,270	U	12,500		5,070		1,870	U	805	J
Sodium	20,000	6,570	U	16,800		5,740	U	**81,400**		2,500	
Vanadium	No Standard	20	U	21.1		20	U	20	U	20	U
Zinc	2,000	123		45.3	U	31	U	13.3	U	9.67	J

Qualifiers and Notes

[1] TOGS 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, NYSDEC, June 1998 and Addendum, April 2000. Based on Groundwater Standards and Guidance Values.

U denotes that the compound was not detected at the indicated concentration.

J Indicates an estimated value.

ug/L - Micrograms per Liter (or parts per billion)

Values in **bold** print denote exceedence of SCG.

TABLE 4.8.1-1

WETLAND SEDIMENTS ANALYTICAL RESULTS SUMMARY

TABLE 4.8.1-1: WETLAND SEDIMENTS ANALYTICAL RESULTS SUMMARY
OLD CHAMPLAIN MILL BCP SITE
VILLAGE OF WHITEHALL, WASHINGTON COUNTY
(VALIDATED DATA)

PARAMETER	Sediment Criteria For Non-Polar Organic Contaminants[1] (mg/kg) Acute[2]	Chronic[2]	WS-1 mg/kg Result	Qualifier	WS-2 mg/kg Result	Qualifier	WS-3 mg/kg Result	Qualifier	WS-4 mg/kg Result	Qualifier	FDWS031910 mg/kg Result	Qualifier
VOCS												
2-Butanone (MEK)	No Standard	No Standard	0.04	U	0.035	U	0.012	J	0.042	U	0.045	U
cis-1,2-Dichloroethene	No Standard	No Standard	0.0079	U	0.0069	U	0.003	J	0.0085	U	0.0091	U
o-Xylene	833	92	0.0079	U	0.002	J	0.0071	U	0.0085	U	0.0091	U
SVOCS												
3+4-Methylphenols	No Standard	No Standard	0.52	U	0.46	U	0.18	J	0.56	U	0.6	U
Acenaphthene	No Standard	140	0.52	U	0.46	U	0.17	J	0.56	U	0.6	U
Anthracene	986	107	0.52	U	0.46	U	0.45	J	0.56	U	0.6	U
Benzo(a)anthracene	94	12	0.52	U	0.12	J	0.84		0.56	U	0.6	U
Benzo(a)pyrene	No Standard	No Standard	0.52	U	0.1	J	0.64		0.56	U	0.6	U
Benzo(b)fluoranthene	No Standard	No Standard	0.52	U	0.13	J	0.8		0.56	U	0.6	U
Benzo(g,h,i)perylene	No Standard	No Standard	0.52	U	0.072	J	0.39	J	0.56	U	0.6	U
Benzo(k)fluoranthene	No Standard	No Standard	0.52	U	0.46	U	0.28	J	0.56	U	0.6	U
Carbazole	No Standard	No Standard	0.52	U	0.46	U	0.18	J	0.56	U	0.6	U
Chrysene	No Standard	No Standard	0.52	U	0.11	J	0.72		0.56	U	0.6	U
Dibenz(a,h)anthracene	No Standard	No Standard	0.52	U	0.46	U	0.1	J	0.56	U	0.6	U
Dibenzofuran	No Standard	No Standard	0.52	U	0.46	U	0.12	J	0.56	U	0.6	U
Fluoranthene	No Standard	1,020	0.52	U	0.25	J	2		0.56	U	0.6	U
Fluorene	73	8	0.52	U	0.46	U	0.2	J	0.56	U	0.6	U
Indeno(1,2,3-cd)pyrene	No Standard	No Standard	0.52	U	0.077	J	0.41	J	0.56	U	0.6	U
Naphthalene	258	30	0.52	U	0.46	U	0.11	J	0.56	U	0.6	U
Phenanthrene	No Standard	120	0.52	U	0.16	J	2		0.56	U	0.6	U
Pyrene	8,775	961	0.52	U	0.21	J	2		0.56	U	0.6	U
METALS	**Sediment Criteria For Metals[1] (mg/kg) LEL[3]**	**SEL[3]**	**WS-1 mg/kg Result**	**Qualifier**	**WS-2 mg/kg Result**	**Qualifier**	**WS-3 mg/kg Result**	**Qualifier**	**WS-4 mg/kg Result**	**Qualifier**	**FDWS031910 mg/kg Result**	**Qualifier**
Aluminum	No Standard	No Standard	13,300		8,320		5,100		13,000		14,100	
Antimony	2	25	2.91	U	3.5	U	0.89	J	3.39	U	3.44	U
Arsenic	6	33	**6.04**		**6.05**		5.65		3.9		3.67	
Barium	No Standard	No Standard	99.5		72.8		80.9		112		116	
Beryllium	No Standard	No Standard	0.64		0.51		0.37		0.67		0.73	
Cadmium	0.6	9	0.6		0.44		0.51		0.58		**0.73**	
Calcium	No Standard	No Standard	2,000		10,700		37,300		2,030		2,320	
Chromium	26	110	16.9		12		10.6		17.2		19	
Cobalt	No Standard	No Standard	11		7.97		5.52		9.11		9.99	
Copper	16	110	13.5		**20.9**		**20.3**		16		**17.7**	
Iron	20,000	40,000	**23,500**		18,700		12,100		**20,200**		**21,100**	
Lead	31	110	20.8		21.8		53.5		**33.4**		**40.4**	
Magnesium	No Standard	No Standard	4,850		6,920		6,270		4,560		4,890	
Manganese	460	1,100	454		284		274		271		284	
Mercury	0.15	1.3	0.075	J	0.062	J	0.092	J	0.078	J	0.095	J
Nickel	16	50	**21**		**16.7**		11.7		**20.6**		**22.5**	
Potassium	No Standard	No Standard	661		440		554		633		644	
Selenium	No Standard	No Standard	3.33		1.96		2.22		2.76		3.4	
Sodium	No Standard	No Standard	120	U	198	U	128	U	441		509	
Vanadium	No Standard	No Standard	15.7		21.4		10.7		16.7		19.4	
Zinc	120	270	80.3		85.3		**146**		82.7		90.6	

Qualifiers and Notes

(1) NYSDEC Technical Guidance for Screening Contaminated Sediments, Human Health Bioaccumulation, November 22, 1993 .
(Reprinted with changes July 1994, March 1998, and January 1999)
Concentrations expressed in mg/kg or parts per million (ppm)

(2) The concentration of the contaminant in sediment that may cause acute/chronic toxicity in benthic aquatic life.

(3) LEL denotes Lowest Effect Level. SEL denotes Severe Effect Level. If the metals concentration is less than the LEL, the effects of the metal in the sediment are considered to be acceptable. If the concentration is greater than the LEL but less than the SEL concentration, the sediment is considered to be contaminanted with moderate impacts to benthic life. If the concentration is greater than the SEL, the sediment is contaminanted and significant harm to benthic aquatic life is anticipated.

U indicates that the compound was analyzed for but not detected

J indicates an estimated value

Analytical results in BOLD have exceeded the LEL standard. Analytical results in BOLD underline have exceeded the SEL standard

FDWS031910 is a duplicate of WS-4

APPENDIX A

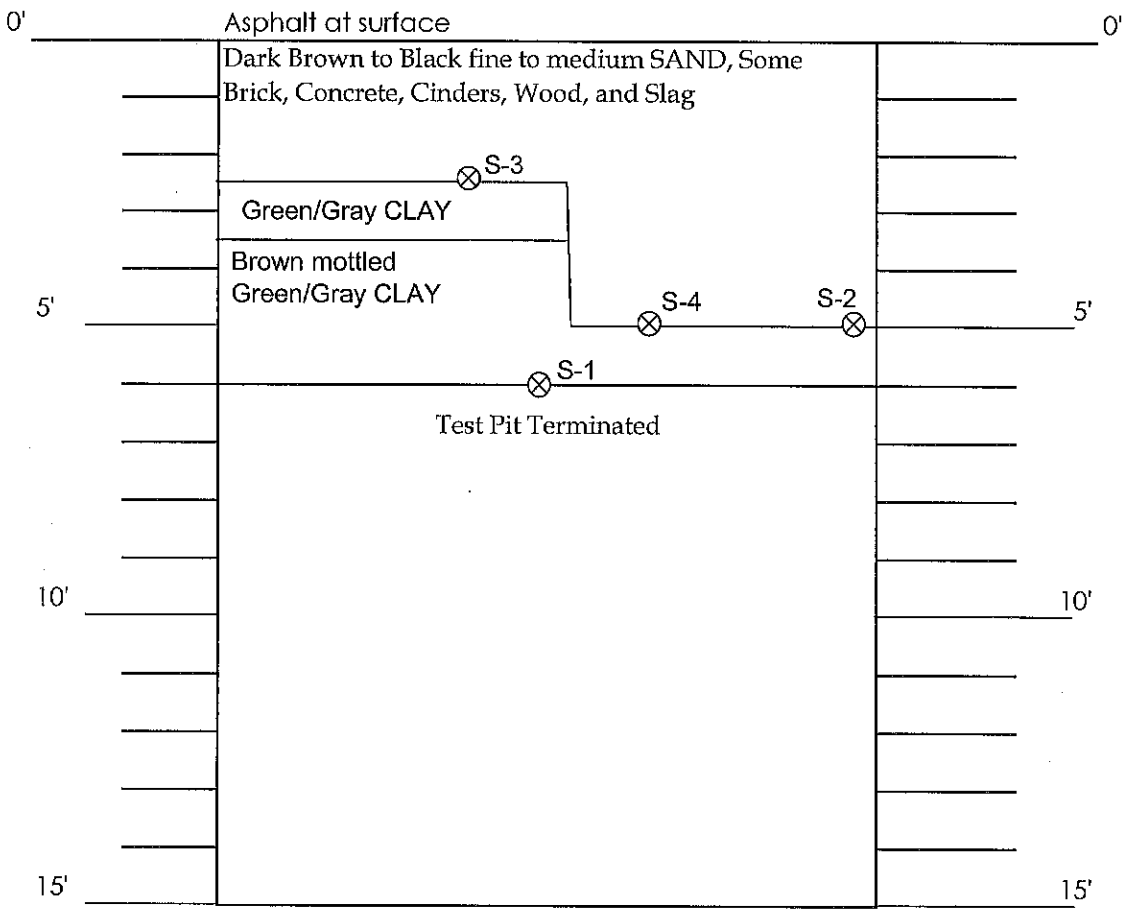
TEST PIT LOGS

TEST PIT LOG

C.T. MALE ASSOCIATES, P.C.
50 Century Hill Drive, P.O. Box 727
Latham, NY 12110-0727
(518) 786-7400 • FAX (518) 786-7299
Building Systems • Engineering • Environmental Services • Land Information Services

PROJECT NAME:	Old Champlain Mill	EXCAVATOR:	MCES
PROJECT NUMBER:	06.6448	EQUIPMENT:	Bobcat excavator
LOGGED BY:	Jonathan Dippert	DATE:	3/18/2010

Test Pit - 1



TOTAL DEPTH:	6'
WATER AT:	1' (in fill material)
SIZE OF TEST PIT:	3'x6'

NOTES: S-1 at bottom of test pit in clay material
S-2, S-3, and S-4 at fill material and clay interface

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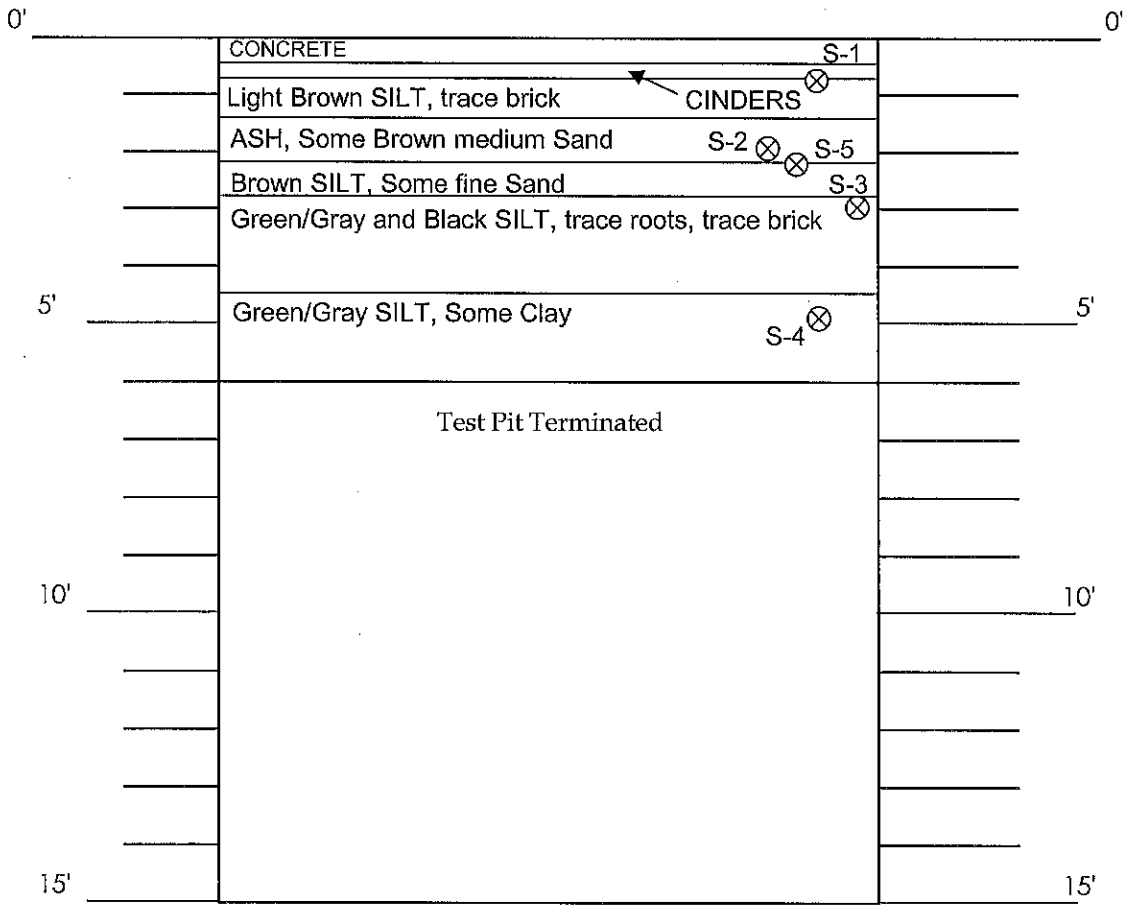
PROJECT NAME:	Old Champlain Mill	EXCAVATOR:	MCES
PROJECT NUMBER:	06.6448	EQUIPMENT:	Bobcat excavator
LOGGED BY:	Jonathan Dippert	DATE:	3/18/2010

Test Pit - 2



TOTAL DEPTH:	6'
WATER AT:	1.5' (very moist at 3')
SIZE OF TEST PIT:	2'x6'

NOTES: S-1 at 0.75' bgs at cinders and silt interface; S-2 at 2' bgs, sample of ash
S-3 at 3' bgs, sample of top of silt layer; S-4 at 5' bgs, sample of lower silt layer
S-5 at 2.75' at interface of silt layers

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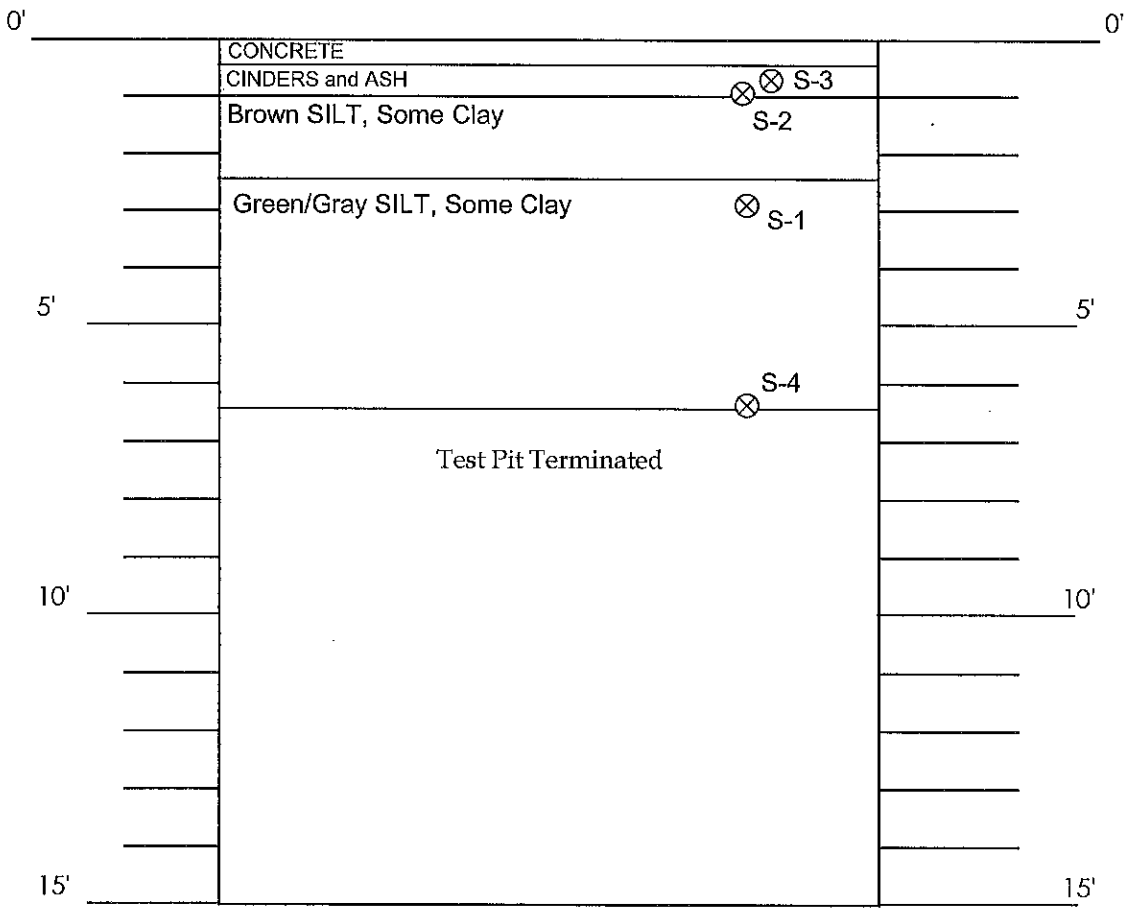
PROJECT NAME:	Old Champlain Mill	EXCAVATOR:	MCES
PROJECT NUMBER:	06.6448	EQUIPMENT:	Bobcat excavator
LOGGED BY:	Jonathan Dippert	DATE:	3/18/2010

Test Pit - 3



TOTAL DEPTH:	6.5'
WATER AT:	2.5' (seam between layers of silt)
SIZE OF TEST PIT:	2.5'x6'

NOTES: S-1 at 3' bgs at top of lower silt layer; S-2 at 1.0' bgs at cinders and silt interface
S-3 at 0.75, sample of cinders and ash; S-4 at 6.5' bgs at bottom of test pit

TEST PIT LOG

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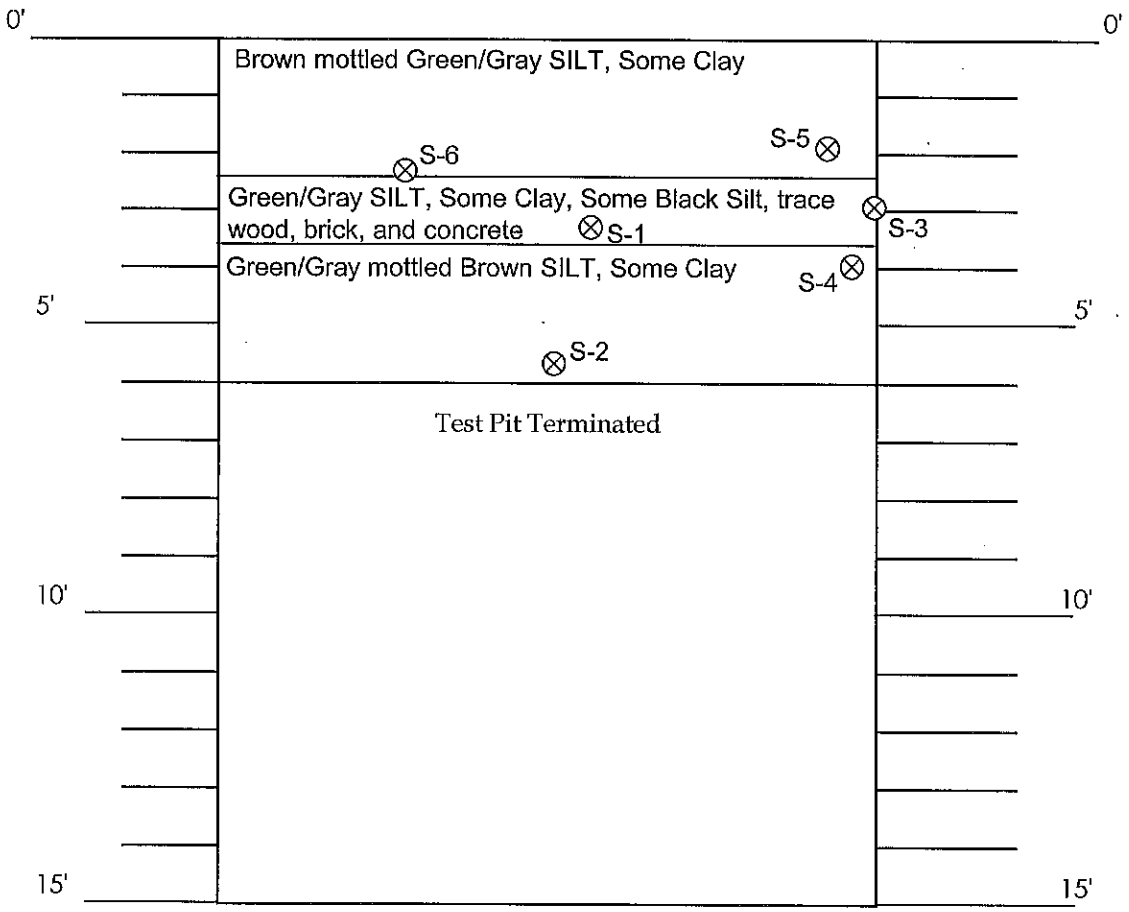
Building Systems • Engineering • Environmental Services • Land Information Services

PROJECT NAME:	Old Champlain Mill	EXCAVATOR:	MCES
PROJECT NUMBER:	06.6448	EQUIPMENT:	Bobcat excavator
LOGGED BY:	Jonathan Dippert	DATE:	3/18/2010

Test Pit - 4



TOTAL DEPTH:	6'
WATER AT:	3.5' (seam between layers of silt)
SIZE OF TEST PIT:	2.5'x6'

NOTES: S-1 at 3' bgs, sample of silt layer; S-2 at 5.5' bgs at bottom of test pit
S-3 at 3' bgs, sample of silt layer; S-4 at 4' bgs, sample of lower silt layer
S-5 at 2' bgs, sample of surface silt layer; S-6 at 2.5' bgs at interface of silt layers

APPENDIX B

TEST PIT ORGANIC VAPOR HEADSPACE ANALYSIS LOGS

ORGANIC VAPOR HEADSPACE ANALYSIS LOG

PROJECT: Old Champlain Mill		PROJECT #: 06.6448	PAGE 1 OF 1
CLIENT: Donnelly Industries, Inc.			DATE COLLECTED: 3/18/2010
LOCATION: Village of Whitehall, Washington County, New York			
INSTRUMENT USED: Mini Rae 2000	LAMP 10.6	EV	DATE ANALYZED: 3/18/2010
DATE INSTRUMENT CALIBRATED: 3/18/2010		BY: JD	
TEMPERATURE OF SOIL: Ambient			ANALYST: JD

EXPLORATION NUMBER	SAMPLE NUMBER	DEPTH (FT.)	SAMPLE TYPE	SAMPLE READING (PPM)**	BACKGROUND READING (PPM)**	REMARKS
TP-1	S-1	6	soil	7.7	0.4	no odor, no staining
	S-2	5	soil	6.5	0.4	organic odor, no staining
	S-3	2.5	soil	1.4	0.4	septic odor, no staining
	S-4	5	soil	5.2	0.2	organic odor, no staining
TP-4	S-1	3	soil	2.5	0.0	septic odor, no staining
	S-2	5.5	soil	1.2	0.0	organic odor, no staining
	S-3	3	soil	2.4	0.1	septic odor, no staining
	S-4	4	soil	1.8	0.1	organic odor, no staining
	S-5	2	soil	1.9	0.2	organic odor, no staining
	S-6	2.5	soil	1.7	0.4	septic odor, no staining
TP-2	S-1	0.75	soil	3.4	0.0	organic odor, no staining
	S-2	2	soil	3.6	0.2	organic odor, no staining
	S-3	3	soil	4.9	0.0	organic odor, no staining
	S-4	5	soil	3.1	0.0	organic odor, no staining
	S-5	2.75	soil	5.2	0.3	organic odor, no staining
TP-3	S-1	3	soil	4.4	0.5	septic odor, no staining
	S-2	1	soil	8.8	0.2	organic odor, no staining
	S-3	0.75	soil	4.1	0.1	no odor, no staining
	S-4	6.5	soil	5.6	0.1	no odor, no staining

*Instrument was calibrated in accordance with manufacturer's recommended procedure using a calibration gas supplied by the manufacturer.
**PPM represents concentration of detectable volatile and gaseous compounds in parts per million of air.

APPENDIX C

SUBSURFACE EXPLORATION LOGS

C.T. MALE ASSOCIATES, P.C.

SUBSURFACE EXPLORATION LOG

BORING NO.: BMW-11A
ELEV.: DATUM:
START DATE: 1/28/10 FINISH DATE: 1/28/10
SHEET 1 OF 1

PROJECT: Old Champlain Mill — CTM PROJECT NO.: 06.6448

LOCATION: Village of Whitehall, New York — CTM INSPECTOR: J. Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		1	WOH	WOH	4	2	-	0.5	ORGANICS, Dark Brown to Black fine SAND and SILT, Some Brick and Concrete	wet
		2	3	2	3	3	5	1.0	±3.0'	
5		3	3	3	4	4	7	0.8	Green Gray and Brown mottled SILT and CLAY	moist at ±3' bgs
		4	WOH	WOH	WOH	WOH	-	1.0	±6.0' Brown and Green Gray mottled fine SAND and SILT	wet at ±6' bgs
		5	2	2	1	1	3	1.4	±7.5' Gray fine SAND and SILT ±8.0'	
10		6	1	2	1	2	3	1.0	Brown fine to coarse SAND, little gray silt	
		7	WOH	2	2	2	4	1.4	Grades to Gray fine to coarse SAND, trace silt	lens of Brown silt and clay at 12.5 - 13.0' bgs
15		8	1	2	4	5	6	1.3		
		9	3	2	1	2	3	1.7	±16.5' Gray CLAY, Some Silt	
20		10	WOH	1	-	1	-	1.0		
									Boring Terminated at ±20.0'	Boring abandoned due to running sand
25										
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: SJB Services, Inc. DRILL RIG TYPE: CME 55

METHOD OF INVESTIGATION: 4.25" hollow stem auger, 2' split spoon sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: JD

C.T. MALE ASSOCIATES, P.C.

SUBSURFACE EXPLORATION LOG

BORING NO.: BMW-11B
ELEV.: DATUM:
START DATE: 1/29/10 FINISH DATE: 1/29/10
SHEET 1 OF 1

PROJECT: Old Champlain Mill CTM PROJECT NO.: 06.6448

LOCATION: Village of Whitehall, New York CTM INSPECTOR: J. Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
0									Reference BMW-11A for soil classifications -2.5' offset to the west of BMW-11A -Augered down to depth and set monitoring well	Monitoring Well installed: See "Monitoring Well Construction Log" for MW-11A
5										
10										
15										
20									Boring Terminated at ±17.0'	
25										
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: SJB Services, Inc. DRILL RIG TYPE: CME 55

METHOD OF INVESTIGATION: 4.25" hollow stem auger, 2' split spoon sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: JD

C.T. MALE ASSOCIATES, P.C.

SUBSURFACE EXPLORATION LOG

BORING NO.: BMW-12A
ELEV.: DATUM:
START DATE: 1/27/10 FINISH DATE: 1/27/10
SHEET 1 OF 1

PROJECT: Old Champlain Mill — CTM PROJECT NO.: 06.6448

LOCATION: Village of Whitehall, New York — CTM INSPECTOR: J. Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		1	4	5	7	7	12	0.8	Very Dark Brown fine and medium SAND, Some Silt, Some Cinders, little brick and wood	very moist
		2	16	11	10	7	21	1.4	±3.75'	wet at ±3' bgs moist at ±3.75' bgs
5		3	3	4	4	6	8	0.5	Green Gray and Brown mottled SILT and CLAY	
		4	7	9	9	8	18	1.5		wet at ±6' bgs
		5	4	4	4	4	8	1.6		
10									±10.0'	
		6	2	2	2	3	4	1.4	Green Gray and Brown mottled fine SAND and SILT, trace clay	
		7	2	2	3	2	5	2.0	±13.0'	
									Gray fine to coarse SAND, trace silt	
15		8	WOH	WOH	1	2	-	1.7		
		9	3	4	3	3	7	2.0	Same as above, little medium gravel	
		10	WOR	1	WOR	1	-	1.7	±19.0'	
20									Gray CLAY, Some Silt	
		11	2	1	1	1	2	1.0		Monitoring Well installed: See "Monitoring Well Construction Log" for MW-12A
		12	WOH	WOH	WOH	1	-	1.0		
25									Boring Terminated at ±24.0'	
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: SJB Services, Inc. DRILL RIG TYPE: CME 55

METHOD OF INVESTIGATION: 4.25" hollow stem auger, 2' split spoon sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: JD

C.T. MALE ASSOCIATES, P.C.

SUBSURFACE EXPLORATION LOG

BORING NO.: BMW-13A
ELEV.: DATUM:
START DATE: 1/28/10 FINISH DATE: 1/28/10
SHEET 1 OF 1

PROJECT: Old Champlain Mill — CTM PROJECT NO.: 06.6448

LOCATION: Village of Whitehall, New York — CTM INSPECTOR: J. Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		1	WOH	2	3	4	5	1.4	Green Gray and Brown mottled SILT and CLAY	moist
		2	5	5	5	5	10	1.6		very moist at ±2' bgs
5		3	WOH	WOH	2	2	-	1.2	±5.0'	
		4	2	2	3	2	5	1.0	Brown and Green Gray mottled fine SAND and SILT	wet at ±5' bgs
		5	WOH	WOH	2	3	-	1.5	±8.0' Brown and Gray mottled SILT and CLAY ±9.0'	moist at ±8' bgs
10		6	WOH	WOH	2	2	-	1.4	Brown and Green Gray mottled fine SAND and SILT ±10.5'	wet at ±9' bgs
		7	WOH	1	1	2	2	1.0	Gray fine and medium SAND and SILT, trace wood	
15		8	2	2	2	3	4	1.2	Gray fine to coarse SAND, little fine and medium gravel, trace silt	
		9	WOH	1	1	2	2	1.4	±17.0'	
		10	WOR	WOR	1	1	-	0.0	Gray CLAY, Some Silt	
20		11	WOH	WOH	WOH	1	-	1.8		Monitoring Well installed: See "Monitoring Well Construction Log" for MW-13A
									Boring Terminated at ±22.0'	
25										
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: SJB Services, Inc. DRILL RIG TYPE: CME 55

METHOD OF INVESTIGATION: 4.25" hollow stem auger, 2' split spoon sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: JD

C.T. MALE ASSOCIATES, P.C.

SUBSURFACE EXPLORATION LOG

BORING NO.: BMW-14A
ELEV.: DATUM:
START DATE: 2/2/10 FINISH DATE: 2/2/10
SHEET 1 OF 1

PROJECT: Old Champlain Mill — CTM PROJECT NO.: 06.6448

LOCATION: Village of Whitehall, New York — CTM INSPECTOR: J. Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		1	6	5	4	6	9	1.6	Brown SILT, ORGANICS, Some fine Sand, Some fine and medium Gravel ±1.0'	very moist
		2	4	5	5	5	10	0.9	Brown and Gray mottled fine SAND and SILT, Some fine and medium Gravel ±4.0'	
5		3	3	3	3	4	6	1.4	Gray and Brown mottled SILT and CLAY, little organics	moist at ±4' bgs
		4	7	7	8	8	15	1.5		
		5	5	6	6	8	12	1.6	±9.0'	
10		6	8	6	7	6	13	0.6	Gray fine to coarse SAND, trace fine and medium gravel	wet at ±9' bgs
		7	9	8	5	3	13	1.2	±14.0'	
15		8	WOH	WOH	WOH	WOH	-	1.0	Gray CLAY, Some Silt	
		9	WOH	WOH	WOH	WOH	-	1.2		
20		10	WOR	WOR	WOR	WOR	-	1.1		Monitoring Well installed: See "Monitoring Well Construction Log" for MW-14A
									Boring Terminated at ±20.0'	
25										
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: SJB Services, Inc. DRILL RIG TYPE: CME 55

METHOD OF INVESTIGATION: 4.25" hollow stem auger, 2' split spoon sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: JD

C.T. MALE ASSOCIATES, P.C.

SUBSURFACE EXPLORATION LOG

BORING NO.: BMW-15A
ELEV.: DATUM:
START DATE: 2/2/10 FINISH DATE: 2/2/10
SHEET 1 OF 1

PROJECT: Old Champlain Mill CTM PROJECT NO.: 06.6448

LOCATION: Village of Whitehall, New York CTM INSPECTOR: J. Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
									CONCRETE ±1.5'	
		1	2	2	2	2	4	1.2	Brown medium SAND and GRAVEL, CINDERS ±2.5'	very moist at ±2.5' bgs
5		2	1	2	3	3	5	1.3	Green Gray and Brown mottled SILT and CLAY, little fine sand ±5.0'	
									Black SILT, ROOTLETS ±5.1'	
		3	3	4	4	5	8	1.2	Gray and Dark Gray mottled SILT and CLAY ±7.75'	
		4	4	6	7	8	13	1.4	Green Gray and Brown mottled SILT and	
10									CLAY, little organics ±10.0'	
		5	4	4	2	2	6	0.8	Gray fine SAND and SILT	wet at ±10' bgs
		6	3	4	3	1	7	1.0	Grades to	
									Gray fine to coarse SAND ±14.0'	
15		7	3	4	6	7	10	0.6	Green Gray fine to coarse SAND ±15.0'	
									Orange Brown fine to coarse SAND	
		8	8	9	2	2	11	0.9	±17.0'	
									Gray fine to coarse SAND ±18.0'	
		9	WOH	WOH	WOH	WOH	-	1.0	Gray CLAY, Some Silt	
20										
		10	WOH	WOH	WOH	WOH	-	1.3		
										Monitoring Well installed: See "Monitoring Well Construction Log" for MW-15A
		11	WOH	WOH	WOH	WOH	-	1.7		
25									Boring Terminated at ±24.0'	
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: SJB Services, Inc. DRILL RIG TYPE: CME 55

METHOD OF INVESTIGATION: 4.25" hollow stem auger, 2' split spoon sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: JD

C.T. MALE ASSOCIATES, P.C.

SUBSURFACE EXPLORATION LOG

BORING NO.: BMW-16A
ELEV.: DATUM:
START DATE: 2/3/10 FINISH DATE: 2/3/10
SHEET 1 OF 1

PROJECT: Old Champlain Mill CTM PROJECT NO.: 06.6448

LOCATION: Village of Whitehall, New York CTM INSPECTOR: J. Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		1	2	1	2	2	3	0.3	Brown and Dark Brown fine SAND and SILT, little brick and concrete ±2.0'	very moist
		2	3	2	4	3	6	1.3	Gray fine SAND and SILT, Some medium Sand	wet at ±2' bgs
5		3	2	5	8	8	13	1.4	Green Gray and Brown mottled SILT and CLAY, little organics, trace fine gravel	moist at ±3' bgs
		4	7	10	9	8	19	1.0		
10		5	3	3	4	4	7	1.0	Same As Above, little fine sand ±10.0'	wet at ±8' bgs
		6	WOH	1	1	4	2	1.2	Green Gray and Brown mottled fine SAND and SILT ±12.0'	
		7	WOH	WOH	WOH	2	-	1.0	Gray fine to coarse SAND, trace silt, trace fine and medium gravel	
15		8	WOH	1	3	2	4	0.8	±15.5'	
		9	WOH	WOH	WOH	1	-	1.5	Gray CLAY, Some Silt	
20		10	WOH	WOH	WOH	WOH	-	0.0		Monitoring Well installed: See "Monitoring Well Construction Log" for MW-16A
									Boring Terminated at ±20.0'	
25										
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: SJB Services, Inc. DRILL RIG TYPE: CME 55

METHOD OF INVESTIGATION: 4.25" hollow stem auger, 2' split spoon sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: JD

C.T. MALE ASSOCIATES, P.C.

SUBSURFACE EXPLORATION LOG

BORING NO.: BMW-17A
ELEV.: DATUM:
START DATE: 1/29/10 FINISH DATE: 1/29/10
SHEET 1 OF 1

PROJECT: Old Champlain Mill — CTM PROJECT NO.: 06.6448

LOCATION: Village of Whitehall, New York — CTM INSPECTOR: J. Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		1	-	3	4	4	7	1.0	ASPHALT ±0.5'	
									Black fine SAND and SILT, GRAVEL, BRICK,	moist
		2	3	3	3	2	6	0.5	CINDERS ±2.0'	
									Green Gray SILT and CLAY	
5		3	4	6	5	5	11	0.0		
		4	7	7	6	4	13	1.2	Green Gray and Brown mottled SILT and	very moist to wet at ±6' bgs
									CLAY ±8.0'	
		5	2	2	2	2	4	1.4	Green Gray and Brown mottled fine SAND and	wet at ±8' bgs
10									SILT	
		6	2	2	2	1	4	0.0		
		7	2	1	2	1	3	1.4	Gray fine to coarse SAND, trace silt	
15		8	5	4	3	2	7	0.8		
		9	3	2	2	1	4	1.5	±16.75'	
									Gray CLAY, Some Silt	
		10	WOH	WOH	WOH	WOH	-	0.0		
20										Monitoring Well installed: See "Monitoring Well Construction Log" for MW-17A
		11	WOH	1	WOH	1	-	1.5		
									Boring Terminated at ±22.0'	
25										
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: SJB Services, Inc. DRILL RIG TYPE: CME 55

METHOD OF INVESTIGATION: 4.25" hollow stem auger, 2' split spoon sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: JD

C.T. MALE ASSOCIATES, P.C.

SUBSURFACE EXPLORATION LOG

BORING NO.: BMW-18A
ELEV.: DATUM:
START DATE: 2/1/10 FINISH DATE: 2/1/10
SHEET 1 OF 1

PROJECT: Old Champlain Mill — CTM PROJECT NO.: 06.6448

LOCATION: Village of Whitehall, New York — CTM INSPECTOR: J. Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		1	3	4	6	6	10	1.0	Brown SILT, ORGANICS, Some fine Sand ±1.0'	very moist
		2	4	4	4	3	8	1.5	Gray and Brown mottled fine SAND and SILT, trace clay	
5		3	3	1	1	3	2	1.2	±6.5'	wet at ±6' bgs
		4	5	6	7	6	13	1.3	Brown and Gray fine and medium SAND, little silt	
		5	6	4	4	4	8	1.5		
10									Grades to Brown fine to coarse SAND ±10.0'	
		6	16	6	5	6	11	1.2	Brown and Orange Brown banding fine to coarse SAND	2" to 3" banding
		7	1	3	4	5	7	1.2	±14.0'	Gray/Brown silt lens at ±11.5'bgs
15		8	WOR	WOR	WOH	WOH	-	1.8	Gray CLAY, Some Silt	
		9	WOH	WOH	WOH	WOH	-	1.5		
		10	WOH	WOH	WOH	WOH	-	1.3		Monitoring Well installed: See "Monitoring Well Construction Log" for MW-18A
20									Boring Terminated at ±20.0'	
25										
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: SJB Services, Inc. DRILL RIG TYPE: CME 55

METHOD OF INVESTIGATION: 4.25" hollow stem auger, 2' split spoon sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: JD

C.T. MALE ASSOCIATES, P.C.

SUBSURFACE EXPLORATION LOG

BORING NO.: BMW-19A
ELEV.: DATUM:
START DATE: 2/1/10 FINISH DATE: 2/1/10
SHEET 1 OF 1

PROJECT: Old Champlain Mill — CTM PROJECT NO.: 06.6448

LOCATION: Village of Whitehall, New York — CTM INSPECTOR: J. Dippert

DEPTH (FT.)	SAMPLE TYPE	SAMPLE NO.	BLOWS ON SAMPLER 0/6	6/12	12/18	18/24	N	RECOVERY	SAMPLE CLASSIFICATION	NOTES
		1	WOH	WOH	1	2	-	1.0	Gray and Brown mottled SILT and CLAY, Some Organics	very moist
		2	1	2	1	2	3	1.0		
5		3	WOH	3	4	5	7	1.1		
		4	6	7	5	5	12	1.2	±7.0'	
									Gray fine SAND and SILT, little clay ±8.0'	wet at ±7' bgs
		5	WOR	WOH	WOH	2	-	0.4	Gray fine to coarse SAND, trace fine and medium gravel	
10		6	3	4	6	6	10	0.8		
		7	3	2	2	1	4	1.2	±13.5'	
15		8	WOR	WOR	WOR	WOH	-	1.3	Gray CLAY, Some Silt	
		9	WOR	WOR	WOR	WOH	-	0.7		
		10	WOR	WOR	WOR	WOH	-	1.0		Monitoring Well installed: See "Monitoring Well Construction Log" for MW-19A
20									Boring Terminated at ±20.0'	
25										
30										

N = NO. OF BLOWS TO DRIVE 2" SAMPLER 12" WITH A 140 LB. WT. FALLING 30" PER BLOW

DRILLING CONTRACTOR: SJB Services, Inc. DRILL RIG TYPE: CME 55

METHOD OF INVESTIGATION: 4.25" hollow stem auger, 2' split spoon sampler

GROUNDWATER LEVEL READINGS

DATE	LEVEL	CASING	STABILIZATION TIME

SAMPLE CLASSIFICATION BY: JD

APPENDIX D

TEST BORING ORGANIC VAPOR HEADSPACE ANALYSIS LOGS

ORGANIC VAPOR HEADSPACE ANALYSIS LOG

PROJECT: Old Champlain Mill	PROJECT #: 06.6448	PAGE 1 OF 1
CLIENT: Donnelly Industries, Inc.		DATE
LOCATION: Village of Whitehall, Washington County, New York		COLLECTED: 1/27/2010
INSTRUMENT USED: Mini Rae 2000 LAMP 10.6 EV		DATE
DATE INSTRUMENT CALIBRATED: 1/27/2010 BY: JD		ANALYZED: 1/27/2010
TEMPERATURE OF SOIL: Ambient		ANALYST: JD

EXPLORATION NUMBER	SAMPLE NUMBER	DEPTH (FT.)	SAMPLE TYPE	SAMPLE READING (PPM)**	BACKGROUND READING (PPM)**	REMARKS
BMW-12A	S-1	0-2	soil	38.7	0.2	sweet odor, no staining
	S-2	2-4	soil	6.6	2.0	organic odor, no staining
	S-3	4-6	soil	4.4	1.3	organic odor, no staining
	S-4	6-8	soil	5.0	0.9	no odor, no staining
	S-5	8-10	soil	5.2	1.0	no odor, no staining
	S-6	10-12	soil	5.7	1.1	no odor, no staining
	S-7	12-14	soil	4.9	0.8	no odor, no staining
	S-8	14-16	soil	5.2	0.7	no odor, no staining
	S-9	16-18	soil	5.4	0.8	no odor, no staining
	S-10	18-20	soil	4.5	1.1	no odor, no staining
	S-11	20-22	soil	4.3	1.0	no odor, no staining
	S-12	22-24	soil	4.6	1.2	no odor, no staining

*Instrument was calibrated in accordance with manufacturer's recommended procedure using a calibration gas supplied by the manufacturer.
**PPM represents concentration of detectable volatile and gaseous compounds in parts per million of air.

ORGANIC VAPOR HEADSPACE ANALYSIS LOG

PROJECT: Old Champlain Mill		**PROJECT #:** 06.6448	**PAGE** 1 OF 1
CLIENT: Donnelly Industries, Inc.			**DATE**
LOCATION: Village of Whitehall, Washington County, New York			**COLLECTED:** 1/28/2010
INSTRUMENT USED: Mini Rae 2000	**LAMP** 10.6	**EV**	**DATE**
DATE INSTRUMENT CALIBRATED: 1/28/2010		**BY:** JD	**ANALYZED:** 1/28/2010
TEMPERATURE OF SOIL: Ambient			**ANALYST:** JD

EXPLORATION NUMBER	SAMPLE NUMBER	DEPTH (FT.)	SAMPLE TYPE	SAMPLE READING (PPM)**	BACKGROUND READING (PPM)**	REMARKS
BMW-13A	S-1	0-2	soil	2.6	0.1	no odor, no staining
	S-2	2-4	soil	3.1	0.3	no odor, no staining
	S-3	4-6	soil	2.6	0.2	no odor, no staining
	S-4	6-8	soil	3.8	0.3	no odor, no staining
	S-5	8-10	soil	5.7	0.5	no odor, no staining
	S-6	10-12	soil	4.7	0.5	no odor, no staining
	S-7	12-14	soil	9.1	0.5	no odor, no staining
	S-8	14-16	soil	9.1	0.5	no odor, no staining
	S-9	16-18	soil	5.6	0.3	no odor, no staining
	S-10	18-20	-	-	-	no recovery
	S-11	20-22	soil	4.3	1.3	no odor, no staining
BMW-11A	S-1	0-2	soil	2.7	0.1	no odor, no staining
	S-2	2-4	soil	3.7	0.4	no odor, no staining
	S-3	4-6	soil	3.3	0.5	no odor, no staining
	S-4	6-8	soil	2.3	0.4	no odor, no staining
	S-5	8-10	soil	3.3	0.5	no odor, no staining
	S-6	10-12	soil	1.6	0.6	no odor, no staining
	S-7	12-14	soil	2.9	0.4	no odor, no staining
	S-8	14-16	soil	7.5	0.1	no odor, no staining
	S-9	16-18	soil	5.1	0.5	no odor, no staining
	S-10	18-20	soil	2.7	0.1	no odor, no staining

*Instrument was calibrated in accordance with manufacturer's recommended procedure using a calibration gas supplied by the manufacturer.
**PPM represents concentration of detectable volatile and gaseous compounds in parts per million of air.

ORGANIC VAPOR HEADSPACE ANALYSIS LOG

PROJECT: Old Champlain Mill		PROJECT #: 06.6448	PAGE 1 OF 1
CLIENT: Donnelly Industries, Inc.			DATE
LOCATION: Village of Whitehall, Washington County, New York			COLLECTED: 1/29/2010
INSTRUMENT USED: Mini Rae 2000	LAMP 10.6	EV	DATE
DATE INSTRUMENT CALIBRATED: 1/29/2010	BY: JD		ANALYZED: 1/29/2010
TEMPERATURE OF SOIL: Ambient			ANALYST: JD

EXPLORATION NUMBER	SAMPLE NUMBER	DEPTH (FT)	SAMPLE TYPE	SAMPLE READING (PPM)**	BACKGROUND READING (PPM)**	REMARKS
BMW-17A	S-1	0-2	soil	38.7	0.2	no odor, no staining
	S-2	2-4	soil	6.6	2.0	no odor, no staining
	S-3	4-6	-	-	-	no recovery
	S-4	6-8	soil	5.0	0.9	no odor, no staining
	S-5	8-10	soil	5.2	1.0	no odor, no staining
	S-6	10-12	-	-	-	no recovery
	S-7	12-14	soil	4.9	0.8	no odor, no staining
	S-8	14-16	soil	5.2	0.7	no odor, no staining
	S-9	16-18	soil	5.4	0.8	no odor, no staining
	S-10	18-20	-	-	-	no recovery
	S-11	20-22	soil	4.3	1.0	no odor, no staining

*Instrument was calibrated in accordance with manufacturer's recommended procedure using a calibration gas supplied by the manufacturer.
**PPM represents concentration of detectable volatile and gaseous compounds in parts per million of air.

ORGANIC VAPOR HEADSPACE ANALYSIS LOG

PROJECT: Old Champlain Mill		PROJECT #: 06.6448	PAGE 1 OF 1
CLIENT: Donnelly Industries, Inc.			DATE COLLECTED: 2/1/2010
LOCATION: Village of Whitehall, Washington County, New York			
INSTRUMENT USED: Mini Rae 2000	LAMP 10.6	EV	DATE ANALYZED: 2/1/2010
DATE INSTRUMENT CALIBRATED: 2/1/2010		BY: JD	
TEMPERATURE OF SOIL: Ambient			ANALYST: JD

EXPLORATION NUMBER	SAMPLE NUMBER	DEPTH (FT.)	SAMPLE TYPE	SAMPLE READING (PPM)**	BACKGROUND READING (PPM)**	REMARKS
BMW-19A	S-1	0-2	soil	1.0	0.0	no odor, no staining
	S-2	2-4	soil	1.1	0.0	no odor, no staining
	S-3	4-6	soil	5.1	0.0	no odor, no staining
	S-4	6-8	soil	7.2	0.0	no odor, no staining
	S-5	8-10	soil	32.7	0.1	no odor, no staining
	S-6	10-12	soil	78.1	0.1	no odor, no staining
	S-7	12-14	soil	66.4	1.0	no odor, no staining
	S-8	14-16	soil	1.2	0.7	no odor, no staining
	S-9	16-18	soil	1.5	0.0	no odor, no staining
	S-10	18-20	soil	1.6	0.1	no odor, no staining
BMW-18A	S-1	0-2	soil	7.0	0.3	organic odor, no staining
	S-2	2-4	soil	2.5	0.6	no odor, no staining
	S-3	4-6	soil	3.6	0.4	no odor, no staining
	S-4	6-8	soil	3.0	0.5	no odor, no staining
	S-5	8-10	soil	2.9	0.4	no odor, no staining
	S-6	10-12	soil	7.4	0.3	no odor, no staining
	S-7	12-14	soil	24.6	0.5	no odor, no staining
	S-8	14-16	soil	4.4	0.4	no odor, no staining
	S-9	16-18	soil	2.4	0.2	no odor, no staining
	S-10	18-20	soil	3.3	0.1	no odor, no staining

*Instrument was calibrated in accordance with manufacturer's recommended procedure using a calibration gas supplied by the manufacturer.
**PPM represents concentration of detectable volatile and gaseous compounds in parts per million of air.

ORGANIC VAPOR HEADSPACE ANALYSIS LOG

PROJECT: Old Champlain Mill	PROJECT #: 06.6448	PAGE 1 OF 1
CLIENT: Donnelly Industries, Inc.		DATE
LOCATION: Village of Whitehall, Washington County, New York		COLLECTED: 2/2/2010
INSTRUMENT USED: Mini Rae 2000 LAMP 10.6 EV		DATE
DATE INSTRUMENT CALIBRATED: 2/2/2010 BY: JD		ANALYZED: 2/2/2010
TEMPERATURE OF SOIL: Ambient		ANALYST: JD

EXPLORATION NUMBER	SAMPLE NUMBER	DEPTH (FT.)	SAMPLE TYPE	SAMPLE READING (PPM)**	BACKGROUND READING (PPM)**	REMARKS
BMW-14A	S-1	0-2	soil	1.4	0.0	organic odor, no staining
	S-2	2-4	soil	2.4	0.0	no odor, no staining
	S-3	4-6	soil	2.0	0.0	no odor, no staining
	S-4	6-8	soil	4.2	0.0	no odor, no staining
	S-5	8-10	soil	8.2	0.1	no odor, no staining
	S-6	10-12	soil	4.3	0.1	no odor, no staining
	S-7	12-14	soil	7.6	1.0	no odor, no staining
	S-8	14-16	soil	3.9	0.7	no odor, no staining
	S-9	16-18	soil	2.3	0.0	no odor, no staining
	S-10	18-20	soil	1.8	0.1	no odor, no staining
BMW-15A	S-1	2-4	soil	3.0	0.3	no odor, no staining
	S-2	4-6	soil	4.1	0.1	no odor, no staining
	S-3	6-8	soil	3.3	0.0	no odor, no staining
	S-4	8-10	soil	11.8	0.0	slight sweet odor, no staining
	S-5	10-12	soil	13.0	0.0	slight sweet odor, no staining
	S-6	12-14	soil	12.0	0.0	slight sweet odor, no staining
	S-7	14-16	soil	4.3	0.2	no odor, no staining
	S-8	16-18	soil	4.0	0.3	no odor, no staining
	S-9	18-20	soil	10.5	0.5	no odor, no staining
	S-10	20-22	soil	3.3	0.3	no odor, no staining
	S-11	22-24	soil	3.2	0.4	no odor, no staining

*Instrument was calibrated in accordance with manufacturer's recommended procedure using a calibration gas supplied by the manufacturer.
**PPM represents concentration of detectable volatile and gaseous compounds in parts per million of air.

ORGANIC VAPOR HEADSPACE ANALYSIS LOG

PROJECT: Old Champlain Mill		**PROJECT #:** 06.6448	**PAGE** 1 OF 1
CLIENT: Donnelly Industries, Inc.			**DATE COLLECTED:** 2/2/2010
LOCATION: Village of Whitehall, Washington County, New York			
INSTRUMENT USED: Mini Rae 2000	**LAMP** 10.6	**EV**	**DATE ANALYZED:** 2/2/2010
DATE INSTRUMENT CALIBRATED: 2/2/2010		**BY:** JD	
TEMPERATURE OF SOIL: Ambient			**ANALYST:** JD

EXPLORATION NUMBER	SAMPLE NUMBER	DEPTH (FT.)	SAMPLE TYPE	SAMPLE READING (PPM)**	BACKGROUND READING (PPM)**	REMARKS
BMW-16A	S-1	0-2	soil	4.0	0.0	no odor, no staining
	S-2	2-4	soil	2.4	0.1	no odor, no staining
	S-3	4-6	soil	1.2	0.0	no odor, no staining
	S-4	6-8	soil	4.0	0.1	no odor, no staining
	S-5	8-10	soil	3.2	0.2	no odor, no staining
	S-6	10-12	soil	2.8	0.1	no odor, no staining
	S-7	12-14	soil	4.4	0.3	no odor, no staining
	S-8	14-16	soil	188.0	0.2	no odor, no staining
	S-9	16-18	soil	69.7	0.2	no odor, no staining
	S-10	18-20	-	-	-	no recovery

*Instrument was calibrated in accordance with manufacturer's recommended procedure using a calibration gas supplied by the manufacturer.
**PPM represents concentration of detectable volatile and gaseous compounds in parts per million of air.

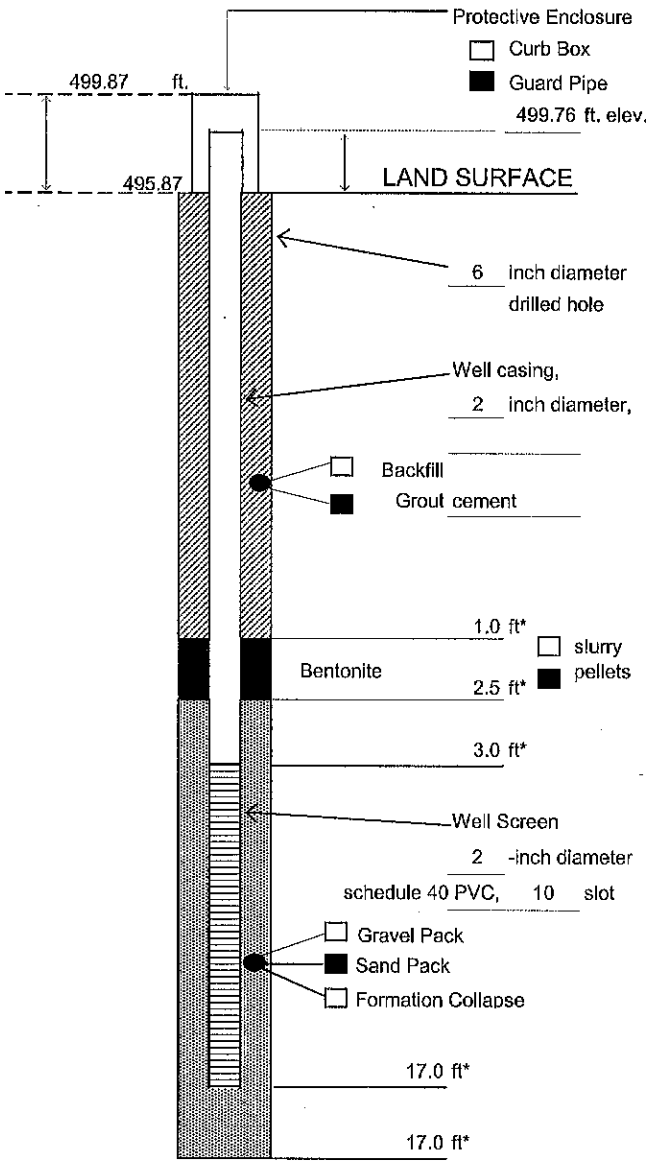
APPENDIX E

MONITORING WELL CONSTRUCTION LOGS

Well No. BMW-11A

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES, P.C.



* Depth below land surface.

Project Number 06.6448

Project Name Old Champlain Mill

Well No. BMW-11A Boring No. BMW-11B

Town/City Village of Whitehall

County Washington State NY

Installation Date(s) 1/29/2010

Drilling Contractor SJB Services, Inc.

Drilling Method Hollow Stem Auger

Water Depth From Top of Riser _____ ft _____ Date

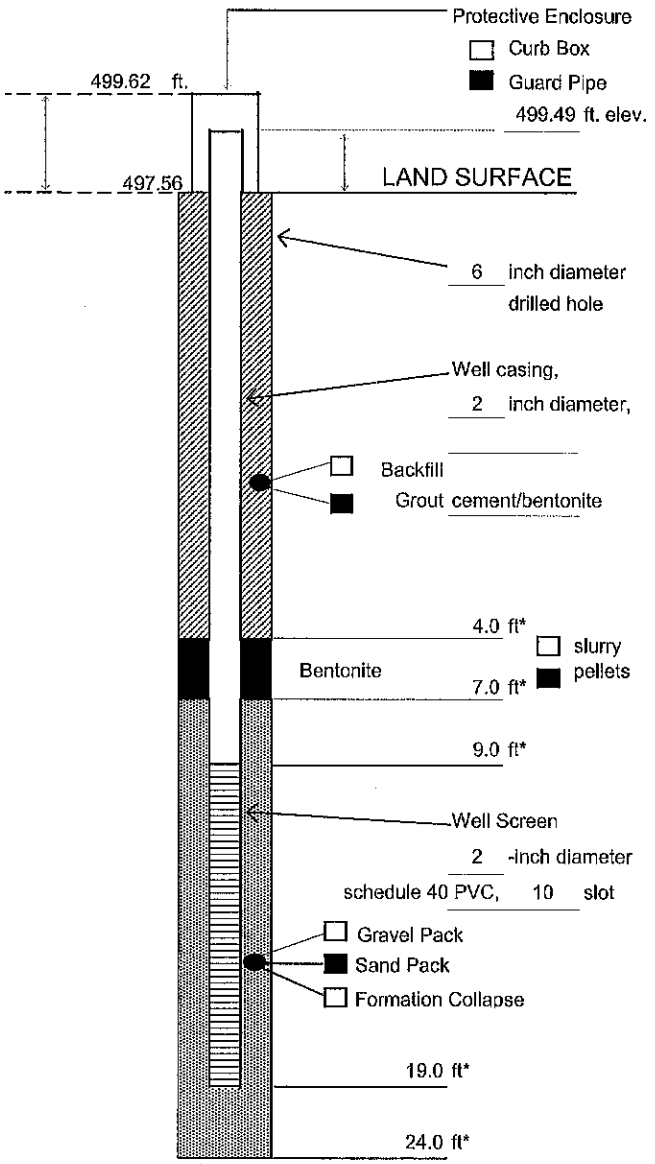
C.T. Male Observer Jonathan Dippert

Notes:
2.5ft offset of boring location BMW-11A
No samples collected

Well No. BMW-12A

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES, P.C.



* Depth below land surface.

Project Number 06.6448

Project Name Old Champlain Mill

Well No. BMW-12A Boring No. BMW-12A

Town/City Village of Whitehall

County Washington State NY

Installation Date(s) 1/27/2010

Drilling Contractor SJB Services, Inc.

Drilling Method Hollow Stem Auger

Water Depth From Top of Riser 3.2 ft 1/28/2010 Date

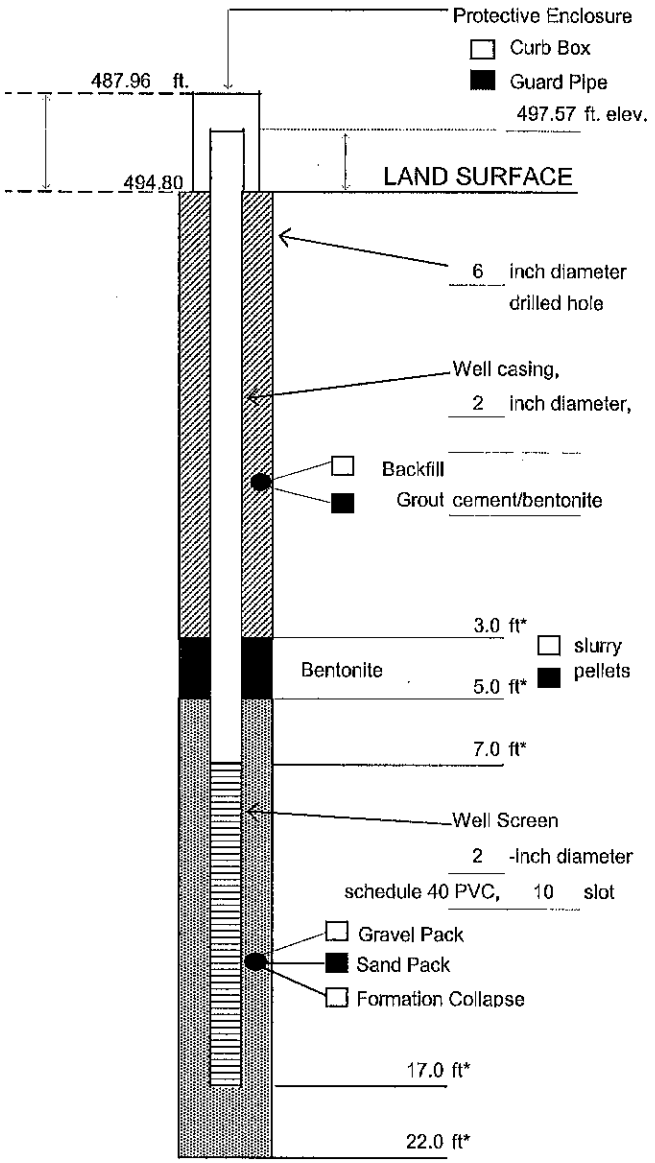
C.T. Male Observer Jonathan Dippert

Notes:

Well No. BMW-13A

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES, P.C.



* Depth below land surface.

Project Number 06.6448

Project Name Old Champlain Mill

Well No. BMW-13A Boring No. BMW-13A

Town/City Village of Whitehall

County Washington State NY

Installation Date(s) 1/28/2010

Drilling Contractor SJB Services, Inc.

Drilling Method Hollow Stem Auger

Water Depth From Top of Riser ____ ft ____ Date

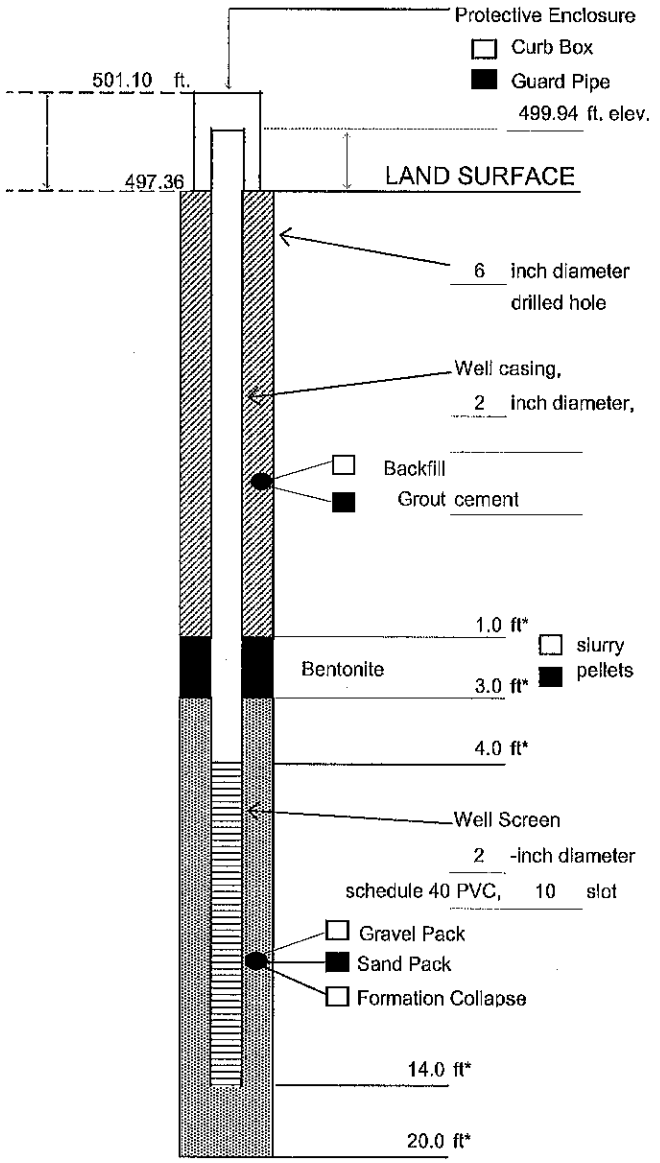
C.T. Male Observer Jonathan Dippert

Notes:

Well No. BMW-14A

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES, P.C.



* Depth below land surface.

Project Number 06.6448

Project Name Old Champlain Mill

Well No. BMW-14A Boring No. BMW-14A

Town/City Village of Whitehall

County Washington State NY

Installation Date(s) 2/2/2010

Drilling Contractor SJB Services, Inc.

Drilling Method Hollow Stem Auger

Water Depth From Top of Riser ____ ft ____ Date

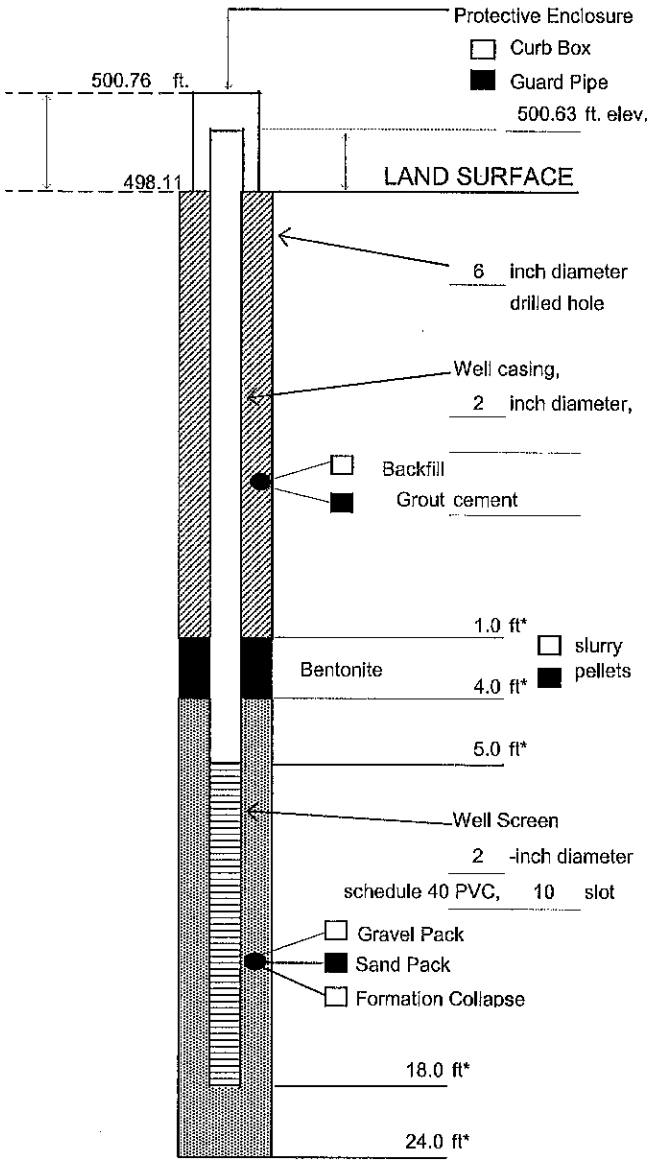
C.T. Male Observer Jonathan Dippert

Notes:

Well No. BMW-15A

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES, P.C.



* Depth below land surface.

Project Number 06.6448

Project Name Old Champlain Mill

Well No. BMW-15A Boring No. BMW-15A

Town/City Village of Whitehall

County Washington State NY

Installation Date(s) 2/2/2010

Drilling Contractor SJB Services, Inc.

Drilling Method Hollow Stem Auger

Water Depth From Top of Riser ____ ft ____ Date

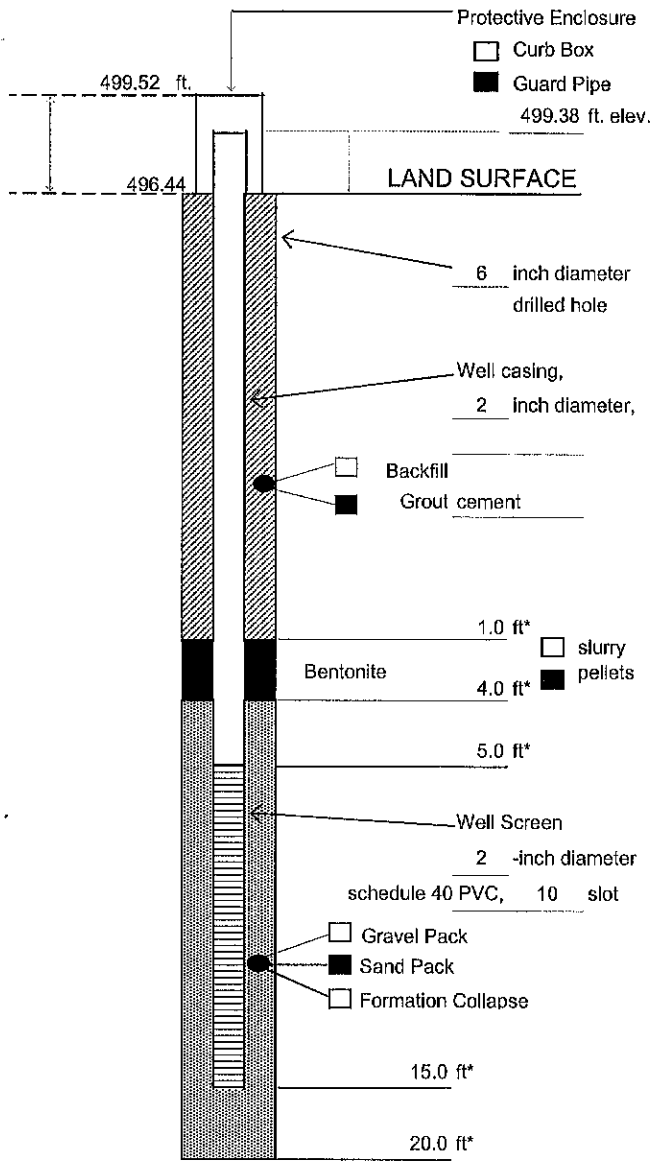
C.T. Male Observer Jonathan Dippert

Notes:

Well No. BMW-16A

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES, P.C.



* Depth below land surface.

Project Number 06.6448

Project Name Old Champlain Mill

Well No. BMW-16A Boring No. BMW-16A

Town/City Village of Whitehall

County Washington State NY

Installation Date(s) 2/3/2010

Drilling Contractor SJB Services, Inc.

Drilling Method Hollow Stem Auger

Water Depth From Top of Riser ____ ft ____ Date

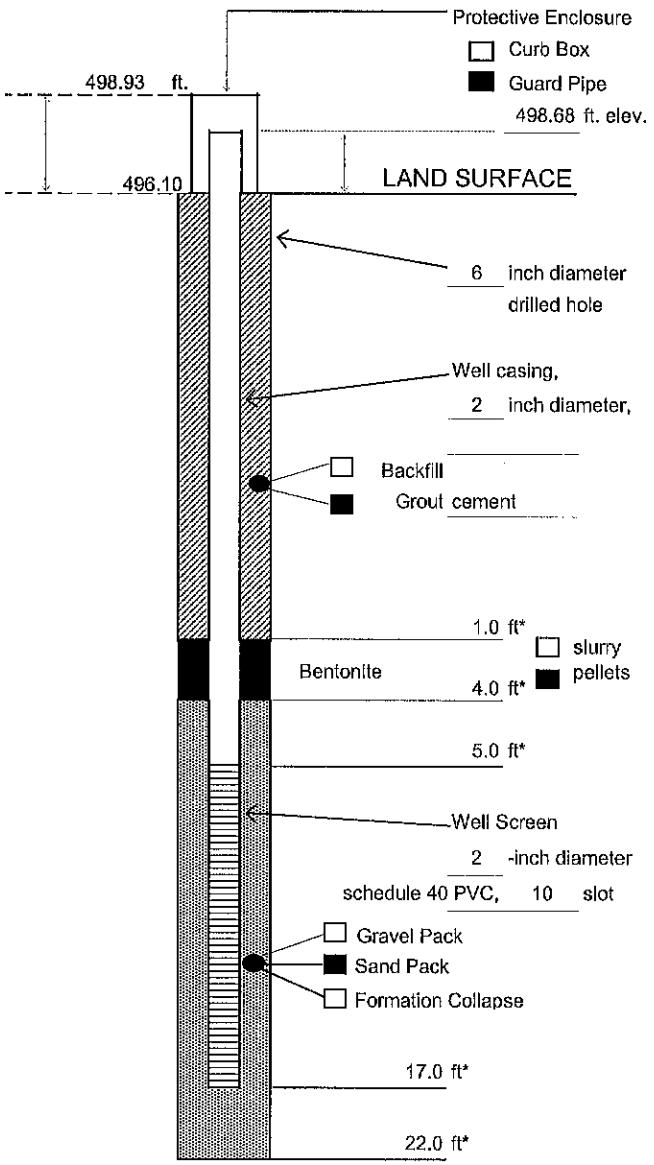
C.T. Male Observer Jonathan Dippert

Notes:

Well No. BMW-17A

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES, P.C.



* Depth below land surface.

Project Number 06.6448

Project Name Old Champlain Mill

Well No. BMW-17A Boring No. BMW-17A

Town/City Village of Whitehall

County Washington State NY

Installation Date(s) 1/29/2010

Drilling Contractor SJB Services, Inc.

Drilling Method Hollow Stem Auger

Water Depth From Top of Riser ____ ft ____ Date

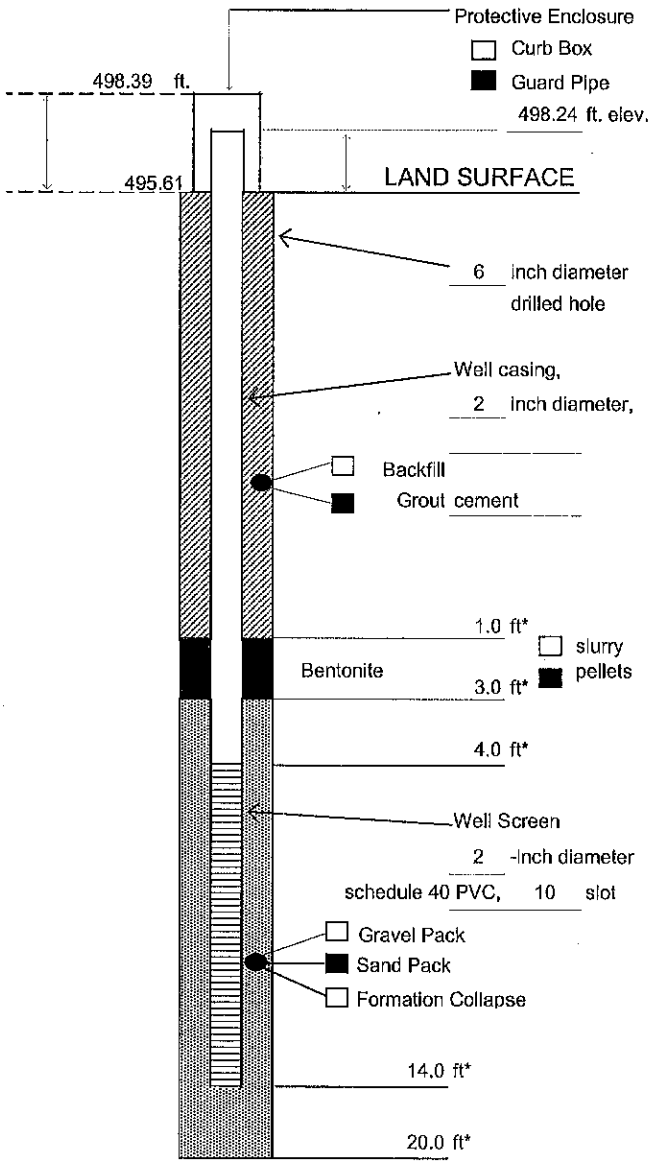
C.T. Male Observer Jonathan Dippert

Notes:

Well No. BMW-18A

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES, P.C.



* Depth below land surface.

Project Number 06.6448

Project Name Old Champlain Mill

Well No. BMW-18A Boring No. BMW-18A

Town/City Village of Whitehall

County Washington State NY

Installation Date(s) 2/1/2010

Drilling Contractor SJB Services, Inc.

Drilling Method Hollow Stem Auger

Water Depth From Top of Riser ft Date

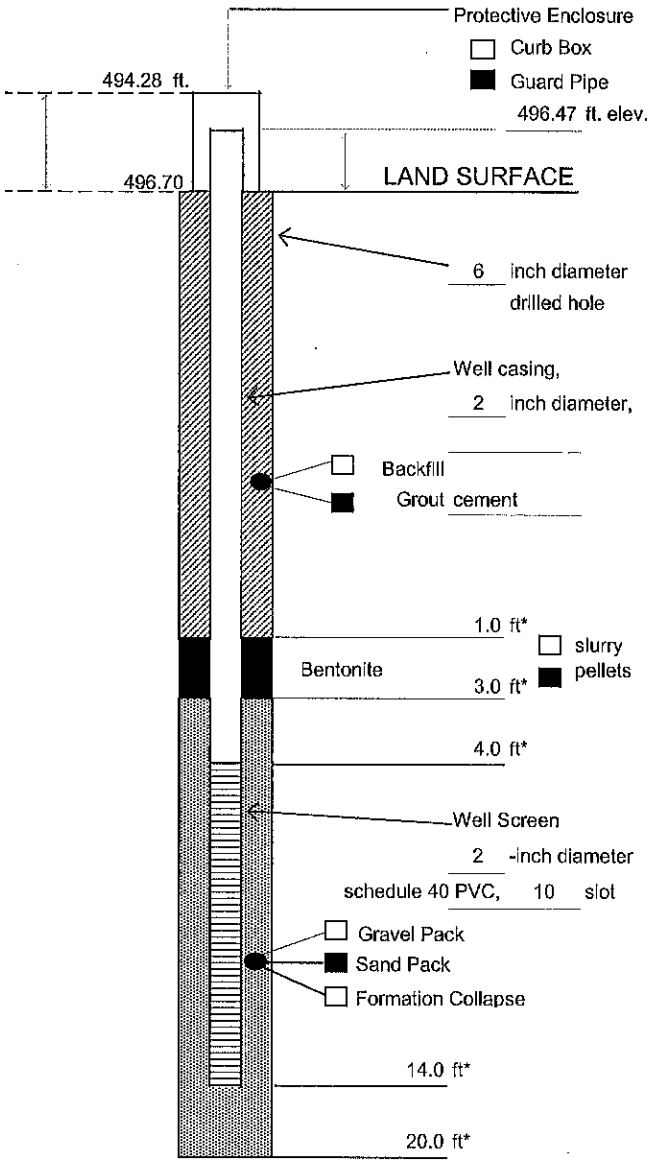
C.T. Male Observer Jonathan Dippert

Notes:

Well No. BMW-19A

MONITORING WELL CONSTRUCTION LOG

C.T. MALE ASSOCIATES, P.C.



* Depth below land surface.

Project Number 06.6448

Project Name Old Champlain Mill

Well No. BMW-19A Boring No. BMW-19A

Town/City Village of Whitehall

County Washington State NY

Installation Date(s) 2/1/2010

Drilling Contractor SJB Services, Inc.

Drilling Method Hollow Stem Auger

Water Depth From Top of Riser ____ ft ____ Date

C.T. Male Observer Jonathan Dippert

Notes:

APPENDIX F

WASTE DISPOSAL DOCUMENTATION

NON-HAZARDOUS WASTE MANIFEST

Please print or type. (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. N/A

Manifest Document No. 10271O-4

2. Page 1 of 1

3. Generator's Name and Mailing Address: Poultney Street Partners, 557 Route 23 South, Wayne, NJ 07470

4. Generator's Phone: (973) 672-1800

5. Transporter 1 Company Name: MC Environmental Services Inc.

6. US EPA ID Number: NYR000021071

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address: Veolia ES Technical Solutions, 4301 Industrial Rd., West Carrollton OH 45449

10. US EPA ID Number: OHD043945193

Former Mill NY Route 4, Whitehall NY

A. State Transporter's ID: 54-145

B. Transporter 1 Phone: 518-615-0349

C. State Transporter's ID

D. Transporter 2 Phone

E. State Facility's ID

F. Facility's Phone: 937-859-6101

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. Non-Hazardous Non-DOT Regulated None None	7	DM	2800	P
b. Non-Hazardous Non-DOT Regulated None None	2	DM	110	G
c.				
d.				

G. Additional Descriptions for Materials Listed Above

a) SSIA2 DM

b) SSIA2 DM

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

WIP #

Arrived @ Veolia Schuetzky NY on 12/27/10

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name | Signature | Date: Month 12, Day 27, Year 10

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: FRANK A. WAITE | Signature | Date: Month 12, Day 27, Year 10

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Date: Month, Day, Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in Item 19.

Printed/Typed Name | Signature | Date: Month, Day, Year

NON-HAZARDOUS WASTE — GENERATOR — TRANSPORTER — FACILITY

EXHIBIT 1

WORK PLAN MODIFICATION LETTER

(OCTOBER 21, 2009)

C.T. MALE ASSOCIATES, P.C.

50 Century Hill Drive, Latham, NY 12110
518.786.7400 FAX 518.786.7299 ctmale@ctmale.com

October 21, 2009

Ms. Alicia Thorne, P.E.
Environmental Engineer 2
NYSDEC, Region 5
Division of Environmental Remediation
232 Golf Course Road, P.O. Box 220
Warrensburg, New York 12885

RE: Work Plan Modification
Old Champlain Mill BCP Site
Village of Whitehall, New York
BCP Site No. C558036
C.T. Male Project No. 06.6448

Dear Ms. Thorne:

C.T. Male Associates, P.C. (C.T. Male), on behalf of Poultney Street Partners, LLC is requesting a modification to Section 3.0 - Objectives, Scope and Rationale - of the October 2008 Remedial Investigation Work Plan for the above referenced site. The modification includes the processing of uncontaminated, unadulterated wood stockpiles located on the site. The site's listing as a wood processing facility has been approved by NYSDEC, as demonstrated in the attached NYSDEC approval letter (dated October 9, 2009) and Registration Form for the site to operate as an *"Uncontaminated, Unadulterated Wood Processing Facility"*.

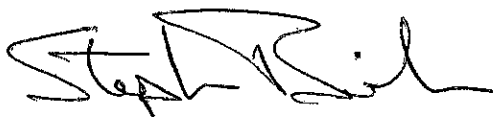
It is anticipated that the wood processing will occur concurrently with the site's remedial investigation, which is slated to begin in early November 2009.

As requested, this letter of modification will be placed in the document repositories for public access.

Should you have any questions or require further information, please do not hesitate to contact the undersigned at (518) 786-7400.

Respectfully,

C.T. MALE ASSOCIATES, P.C.



Stephen Bieber
Environmental Scientist

Attachment

c: Mr. Rod Donnelly
Poultney Street Partners, LLC
557 Route 23 South
Wayne, New Jersey 07470

The Whitehall Free Library
12 William Street
Whitehall, New York 12887
Attn: Reference Librarian

Village of Whitehall Clerk's Office
1 Saunders Street
Whitehall, New York 12887

Kirk Moline (C.T. Male)

New York State Department of Environmental Conservation
Environmental Quality – Division of Solid & Hazardous Materials
232 Golf Course Rd., PO Box 220, Warrensburg, NY 12885-0220
Phone: (518) 623-1238 • **Fax:** (518) 623-1311
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

October 9, 2009

Mr. Rod Donnelly
Poultney Street Partners, LLC
557 Route 23 South
Wayne, NJ 07470

Re: Old Champlain Mill – Wood Processing Facility
DEC Registration # 58W10
Whitehall (T), New York, Washington County

Dear Mr. Donnelly:

Enclosed you will find a validated copy of your registration form for an *Uncontaminated, Unadulterated Wood Processing Facility* that was submitted to the Department on October 5, 2009. Your registration application was submitted pursuant to the registration provisions of 6 NYCRR Part 360-16.1(d)(1)(ii) and 6 NYCRR 360-1.8(h), effective November 26, 1996. Validation of your registration does not, in any way, verify that the information which you provided on or with the form is true or correct.

Please note that 6 NYCRR Part 360 contains various requirements that must be followed to warrant your facility continued status as a registered facility. The pages which follow summarize these requirements. Full copies of Part 360 are available from this office or online at www.dec.state.ny.us. It is advised that you keep appropriate records regarding the use of the facility in order to accurately file the annual report as required by Part 360-1.8(h)(8). Please note that, under the provisions of Part 360-1.4(b), your facility is subject to inspections by Department staff to ascertain compliance with Part 360 and the Environmental Conservation Law.

This registration does not exempt or preclude you from complying with any other applicable federal, state, or local laws, rules or regulations. Should you have any questions regarding your facility's Part 360 registration or the applicable requirements, please feel free to contact me at (518) 623-1233.

Sincerely,

Kevin J. Wood, P.E.
Environmental Engineer 2

KJW:lc
Enclosures

c w/enc.: Supervisor Vernon Scribner - Town of Whitehall
G. Wagner – NYSDEC, Albany
Kirk Moline - C.T. Male Associates

47-14-020 (04/00)
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID & HAZARDOUS MATERIALS

REGISTRATION FORM FOR A SOLID WASTE MANAGEMENT FACILITY

Please read and follow all instructions before completing this registration form

UNSOLED RECEIVED
OCT 05 2009
Region 5
Warrensburg Env. Quality

DEPARTMENT USE ONLY

DEC REGISTRATION # 58W10

DEC ADMINISTRATION #

DATE RECEIVED 10 / 5 / 09
VALIDATED BY LTR 10/9/09

PLEASE TYPE OR PRINT CLEARLY — **THIS IS NOT AN UPA PERMIT**

1. FACILITY NAME AND LOCATION	2. FACILITY OWNER'S NAME
Old Champlain Mill	Poultney Street Partners, LLC
Street: 16-50 Poultney Street	Mailing Address: 557 Route 23 South
City/Village: Village of Whitehall	City/Town/Village: Wayne
Town / County: Washington	State/Zip Code: NJ 07470
Telephone Number ( )	Telephone Number (973) 672-1800 x122
3. FACILITY OPERATOR'S NAME (if different)	4. SITE OWNER'S NAME (if different)
Mailing Address	Mailing Address
City/Town/Village	City/Town/Village
State/Zip Code	State/Zip Code
Telephone Number ( )	Telephone Number ( )

5. **TYPE OF FACILITY REGISTRATION** (check all applicable)

- ☐ Energy Recovery Incinerators or Pyrolysis Units [360-3.1(c)]
- ☐ Land Clearing Debris Landfills three acres or less [360-7.2(a)]
- ☐ Transfer Stations (municipally owned/operated/contracted) receiving less than 50,000 cubic yards or 12,500 tons of household solid waste annually [360-11.1(b)(i)]
- ☐ Transfer Stations (municipally owned/operated/contracted) receiving less than 50,000 cubic yards or 12,500 tons of containerized solid waste annually [360-11.1(b)(2)]
- ☐ Source Separated, Nonputrescible Solid Waste Recyclables Handling and Recovery Facilities [360-12.1(d)]
- ☐ Waste Tire Retreaders [360-13.1(d)(1)(i)]
- ☐ Waste Tire Stored for On-site Energy Recovery [360-13.1(d)(1)(ii)]
- ☐ Tire Dealers Selling Waste Tires [360-13.1(d)(1)(iii)]
- ☐ Tire Manufacturing Facilities [360-13.1(d)(1)(iv)]
- ☐ Processing Facilities Receiving Only Recognizable Uncontaminated Concrete, Asphalt Pavement, Brick, Soil or Rock [360-16.1(d)(1)(i)]
- ☒ Uncontaminated Unadulterated Wood Processing Facilities [360-16.1(d)(1)(ii)]
- ☐ Other Facilities not specifically described above, specify type

6. **SOLID WASTE HANDLED**
   a. List wastes and/or materials to be accepted: Not accepting waste. Processing of existing waste only.
   b. Quantity (specify Units - see instructions)
      design capacity same as storage on site
      storage on site ±6500 cubic yards

7. **OPERATIONS SCHEDULE** - Normal schedule of operation: 8 AM - 5 PM (Monday - Friday)

8. **NAME(S) OF ALL MUNICIPALITIES SERVED**: None

9. **CERTIFICATION:** I hereby affirm under penalty of perjury that information provided on this form and attached statements and exhibits was prepared by me or under my supervision and direction and is true to the best of my knowledge and belief, and that I have the authority as Managing Member (title) of Poultney Street Partners LLC (entity) to sign this registration form pursuant to 6 NYCRR Part 360. By signing this registration form, I affirm that I have read the applicable regulations and will abide by all conditions of the registration requirements. I am aware that any false statement made herein is punishable as a Class A misdemeanor pursuant to Section 210.45 of the Penal Law.

Printed/Typed Name	Signature	Mo.	Day	Year
Rod Donnelly	Rod Donnelly	09	25	09

REGIONAL OFFICE COPY - COPY #1

EXHIBIT 2

BOUNDARY SURVEY MAP

NEW YORK STATE ROUTE 4

LOT No.1
1.46± ACRES

LOT No.2
2.41± ACRES

LOT No.3
1.06± ACRES

LOT No.4
0.91± ACRES

LOT No.5
0.75± ACRES

LOT No.6
5.17± ACRES

Lands n/f of
New York State

Lands of the People of the State of New York
(Champlain Canal)

Lands n/f of
The Clarendon and Pittsford allroad Company
Book 498 Page 841

Permanent Easement and Right of Way
conveyed to the
Town of Whitehall
by deed dated March 31, 1988
Book 570 page 264

Permanent Easement and Right of Way
conveyed to the
Town of Whitehall
by deed dated March 31, 1988
Book 570 page 264

Wood Creek

SOUTHEASTERLY ALONG THE SHORE OF WOOD CREEK 45.11' MINDS AND TURNS 320.1 FEET

gravel roadway

paved parking area

sewage pump station

flag pole

N62°41'55"E 24.00'

N86°35'49"E 45.12'

N28°04'00"W 29.39'

N77°12'13"E 87.69'

N80°47'20"E 149.32'

38.02'

175.45'

N08°35'20"E

280.75'

306.37'

408.30'

N02°47'22"E

S87°04'00"E 250.00'

S85°35'10"E 111.90'

54.65'

111.99'

S74°44'38"W

S24°45'22"W

S86°29'30"E 25.00'

371.65'

228.61'

N87°02'04"W 154.84'

S87°02'04"E 154.84'

S53°39'07"W

N53°39'07"E

144.36'

S24°47'22"W

N02°47'22"E

102.02'

113.92'

S02°45'45"E

N02°45'45"E

277.69'

N87°14'15"W 185.60'

S87°14'15"E 217.50'

31.90'

S87°08'18"E 0.50'

N02°51'42"E 47.56'

S87°22'36"E 26.72'

159.07'

142.02'

N02°43'30"E

S02°47'28"W

N02°47'28"E

N82°48'29"W 219.12'

N82°50'00"W 40.45'

177.72'

819.01'

N86°35'00"W 153.00'±

NOTES:

1) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF AN ABSTRACT OF TITLE AND IS THEREFORE SUBJECT TO ANY EASEMENTS, COVENANTS OR RESTRICTIONS OF RECORD ANY STATEMENT OF FACTS SUCH DOCUMENT WOULD DISCLOSE

2) UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYORS SEAL IS A VIOLATION OF SECTION 7209, SUB-DIVISION 2, OF THE NEW YORK STATE EDUCATION LAW.

3) ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYORS SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES.

4) SUBJECT TO APPLICABLE LAWS AND APPROVALS OF THE TOWN, COUNTY AND STATE REGARDING SUBDIVISION OF LAND.

MAGNETIC

LEGEND

⊙ I.R.F.	IRON ROD FOUND
○ I.P.F.	IRON PIPE FOUND
○ I.R.S.	IRON ROD SET
○—	UTILITY POLE
⊡⊡⊡	STONE WALL
-x-x-x-	BARBED WIRE FENCE
•	POINT
W.F.P.	WOOD FENCE POST
—ohw—	OVERHEAD WIRES
n/o	NOW OR FORMERLY
⊛	MONITORING WELLS

DEED REFERENCE:

PHYLIS COOPER
AS THE TREASURER OF WASHINGTON COUNTY
TO
OLD CHAMPLAIN MILL INC.
DATED JULY 23, 2001
BOOK 885 PAGE 98

PRELIMINARY

REVISIONS

NO.	DATE	DESCRIPTION	BY

MAP OF A 6 LOT SUBDIVISION MADE FOR

OLD CHAMPLAIN MILL INC.

VILLAGE OF WHITEHALL, COUNTY OF WASHINGTON, STATE OF NEW YORK

DAVID J. BOLSTER
LICENSED LAND SURVEYOR
342 MAIN STREET, HUDSON FALLS, NEW YORK 12839

DAVID J BOLSTER, LLS

DATE SEALED

DATE: MAY 13, 2002 | SCALE: 1" = 50' | N.Y.S. LIC. NO. 49534

DWG. NO. 02-056
V/O WHITEHALL 60.6-1-5

EXHIBIT 3

FISH AND WILDLIFE IMPACT ANALYSIS REPORT

September 3, 2010

Fish and Wildlife Impact Analysis
Step I – Site Description

Old Champlain Mill
16-50 Poultney Street
Village of Whitehall
Washington County, New York
BCP Site No. C558036

Prepared for:

Poultney Street Partners, LLC
557 Route 23 South
Wayne, NJ 07470

Prepared by:

C.T. MALE ASSOCIATES, P.C.
50 Century Hill Drive
Latham, New York 12110
(518) 786-7400
FAX (518) 786-7299

C.T. Male Project No: 06.6448

FISH AND WILDLIFE IMPACT ANALYSIS
STEP I - SITE DESCRIPTION
OLD CHAMPLAIN MILL
VILLAGE OF WHITEHALL, WASHINGTON COUNTY, NEW YORK

TABLE OF CONTENTS

FISH AND WILDLIFE IMPACT ANALYSIS
STEP I - SITE DESCRIPTION
OLD CHAMPLAIN MILL
VILLAGE OF WHITEHALL, WASHINGTON COUNTY, NEW YORK

TABLE OF CONTENTS (CONTINUED)

FIGURES

TABLES

APPENDICES

1.0 INTRODUCTION

Step I of a New York State Department of Environmental Conservation (NYSDEC) Fish and Wildlife Impact Analysis (FWIA) was completed by C.T. Male Associates, P.C. (C.T. Male) for Poultney Street Partners, LLC, for the property known as Old Champlain Mill ("project site"). The project site is located on U.S. Route 4 in the Village of Whitehall, Washington County, New York (refer to Figure 1, Site Location Map).

The site consists of approximately 11.49 acres of land. The project site is bordered by the Champlain Canal to the west and the Wood Creek to the east, separated from each waterbody by 10 to 12 foot earthen dikes. The site is bordered by U.S. Route 4 to the north and railroad tracks to the south. The project site was observed to be an abandoned industrial site consisting of old mill foundations, masonry floors and building debris stockpiles. A sewer pump station was observed near the southeeastern property boundary. Large piles of debris were observed on the central portion of what remains of the Champlain Mill building's floor.

The objective of the Step I Site Description is to identify fish and wildlife resources, land-use and habitat types that exist both on the project site and within 0.5 miles of the project site. This report identifies fish and wildlife species that may utilize habitats that could potentially be impacted by site-related contaminants. The information in this FWIA is intended to be used to help determine if remediation may be warranted for biotic resources that may exist within or adjacent to the project site. Step I of the FWIA was conducted in accordance with "Fish and Wildlife Impact Analysis for Inactive Hazardous Waste Sites", NYSDEC, October, 1994.

2.0 SITE DESCRIPION

2.1 Site Location

The project site is approximately 11.49 acres in size and is located south of U.S Route 4 in the Village of Whitehall, Washington County, New York. The project site is identified as 16-50 Poultney Street and was identified on the Village of Whitehall tax maps as being tax parcel section 60.6, block 1 and lot 5. A 2004 Aerial Site Features Map depicting the project site's boundaries and ecological covertypes is presented as Figure 2, and a Drainage Map is presented as Figure 3. Land use in the vicinity of the project site includes residential commercial and industrial properties.

2.2 Site History

The site was reportedly developed in 1916 as a silk mill. The site was used for this purpose until 1959 at which point the building was used to manufacture newspaper vending machines. The site was used for this purpose until 2001.

2.3 Current Site Use

The project site presently is an abandoned industrial site that has historically been used for industrial purposes as described above. The project site was observed to be an abandoned industrial site consisting of old mill foundations, masonry floors and building debris stockpiles. A sewer pump station was observed near the southeastern property boundary. Large piles of debris were observed on the central portion of what remains of the Champlain Mill building's floor.

2.4 Drainage Patterns

The project site drains away from the old mill foundation located in the center of the property. No water drains directly to Wood Creek and Champlain Canal due to earthen berms located along the boundary of the project site on the eastern and western sides. The northern portion of the project site drains in the northern direction. The southern portion of the project site drains in the southern direction (Refer to Figure 3, Drainage Map).

2.5 Surrounding Property Usage

Poultney Street lies north of the project site. Martell's Auto lies north of Poultney Street. An apparently abandoned petroleum tank farm lies to the northwest of the project site across from

the Champlain Canal, and residential properties lie to the northeast of the project site across from Wood Creek. The Champlain Canal lies west of the project site. Vacant wooded land and River Side Drive are located west of the Champlain Canal. Wood Creek forms the eastern border of the project site. A Stewart's convenience store and gasoline station and residential properties are located east of Wood Creek. Lands of the Claredon and Pittsford Railroad Company lie south of the project site, including a pair of railroad tracks that bisect the southern portion of the island on which the project site sits. A portion of this adjacent property is considered an NYSDEC Inactive Hazardous Waste Disposal Site, which lies immediately adjacent to the south side of the site.

3.0 COVERTYPE DELINEATION

In the context of this report, a "covertype" is defined as an area characterized by a distinct pattern of natural or cultural land uses. Covertypes on the project site and areas within 0.5 miles ("the study area") were identified based on the physical and vegetative features observed by C.T. Male personnel during a site visit on July 9, 2010 and review of mapping of the surrounding area.

For each covertype identified in the covertype delineation, dominant vegetative species observed during the field reconnaissance are described (refer to Figure 2, Covertype Delineation Map). A Covertype Delineation Map detailing the major land use/vegetative communities within a one-half mile radius of the project site is presented as Figure 2. The Covertype Delineation Map was prepared based on an interpretation of aerial photographs, topographic maps, and New York State Freshwater Wetland maps and NWI Wetland maps. The covertypes within one-half mile of the project site were characterized using the New York Natural Heritage Program Classification System. Representative site photographs were taken to characterize the project site (refer to Appendix A, Representative Site Photographs).

The following sections provide a description of the eight (8) covertypes that were identified on the Old Champlain Mill site or within a 0.5 mile radius of the project site. These eight (8) covertypes are classified into four (4) general groups; woodland covertypes, cultural covertypes, riverine covertypes and palustrine covertypes (refer to Figure 2, Covertype Delineation Map). Of the eight (8) covertypes identified, three (3) are considered to be a cultural covertype (Edinger et al., 2002). Seven (7) of the identified covertypes have a secure global and state ranking, indicating that they are not rare ecological communities. Below are descriptions of the eight (8) covertypes identified within or adjacent to the project site.

3.1 Natural Covertype Designations

3.1.1 Unconfined River

Unconfined River includes the aquatic community of large, quiet, base level sections of streams with a very low gradient. The name of this community has been changed from "main channel stream" to better reflect this concept. These streams are typically dominated by runs with interspersed pool sections and a few short or no distinct riffles.

Unconfined rivers usually have clearly distinguished meanders (i.e., high sinuosity) and well developed levees, are in unconfined valleys and are most typical of the lowest reaches of stream systems. These streams are usually warm water, may have high turbidity and be somewhat poorly oxygenated. They are typically surrounded by floodplain forest or eroded sand or clay banks or fine sediment bars. Wood Creek, most closely characterized as this covertype, is located immediately east of the project site and within the 0.5 mile radius.

3.1.2 Shallow Emergent Swamp

A marsh meadow community that occurs on mineral soil or deep muck soils (rather than true peat) and that are permanently saturated and seasonally flooded. This marsh is better drained than a deep emergent marsh; water depths may range from 6 in to 3.3 ft (15 cm to 1 m) during flood stages, but the water level usually drops by mid to late summer and the substrate is exposed during an average year.

Most abundant herbaceous plants include bluejoint grass (Calamagrostis canadensis), cattails (*Typha latifolia, T. angustifolia, T. x glauca*), sedges (*Carex spp.*), marsh fern (*Thelypteris palustris*), manna grasses (*Glyceria pallida, G. canadensis*), spikerushes (*Eleocharis smalliana, E. obtusa*), and bulrushes (*Scirpus cyperinus, S. tabernaemontani, S. atrovirens*).

Shallow emergent marshes typically occur in lake basins and along streams often intergrading with deep emergent marshes, shrub swamps and sedge meadows. This covertype is located on the northeastern portion of the project site as well as southeastern portion of the 0.5 mile radius.

3.1.3 Shrub Swamp

A shrub swamp is an inland wetland dominated by tall shrubs that occurs along the shore of a lake or river, in a wet depression or valley not associated with lakes, or as a transition zone between a marsh, fen, or bog and a swamp or upland community. The substrate is usually mineral soil or muck. This is a very broadly defined type that includes several distinct communities and many intermediates.

Shrub swamps are very common and quite variable. They may be codominated by a mixture of species, or have a single dominant shrub species. Characteristic shrubs that are common in shrub swamps include alder (*Alnus incana ssp. rugosa);* red osier dogwood (*Cornus sericea*), silky dogwood (*C. amomum*), and willows (*Salix spp.*) (Levine 1998). This coverytype is found along the southeastern portion of the project site as well as in areas south of the project site within the 0.5 mile radius (refer to Figure 2, Covertype Delineation Map).

3.1.4 Successional Northern Hardwoods

Successional northern hardwoods include a hardwood or mixed forest that occurs in areas that have been cleared or otherwise disturbed. Characteristic trees and shrubs include any of the following: quaking aspen (*Populus tremuloides*), bigtooth aspen (*P. grandidentata*), balsam poplar (*P. balsamifera*), paper birch (*Betula papyrifera*), or gray birch (*B. populifolia*), pin cherry (*Prunus pensylvanica*), black cherry (*P. serotina*), red maple (*Acer rubrum*), white pine (*Pinus strobus*), with lesser amounts of white ash (*Fraxinus americana*), green ash (*F. pensylvanica*), and American elm (*Ulmus americana*). This covertype was observed on the southern portion of the project site as well as within a half a mile radius of the project site.

3.1.5 Limestone Woodlands

Limestone woodlands occur on shallow soils over limestone bedrock in non-alvar settings, and usually include numerous rock outcrops. The tree canopy may be open or closed. There are usually several codominant trees, although one species may become dominant in any one stand.

Characteristic canopy trees are primarily conifers such as northern white cedar (*Thuja occidentalis*), white pine (*Pinus strobus*), white spruce (*Picea glauca*), eastern hop hornbeam (*Ostrya virginiana*), sugar maple (*Acer saccharum*), shagbark hickory (*Carya ovata*), white oak (*Quercus alba*), and basswood (*Tilia Americana*). Characteristic shrubs include, gray dogwood (*Cornus foemina* ssp. *racemosa*) and wild honeysuckle (*Lonicera dioica*). Characteristic herbs include sedges (*Carex eburnea, C. pensylvanica, C. platyphylla*), marginal wood fern (*Dryopteris marginalis*), and rattlesnake fern (*Botrychium virginianum*). More data on regional variants and characteristic animals are needed. This covertype is located in the northeastern portion of the 0.5 mile radius on Skene Mountain (refer to Figure 2, Covertype Delineation Map and Appendix B, Correspondence).

3.2 Cultural Covertype Designations

3.2.1 Canal

The canal covertype is characterized as an aquatic community of an artificial waterway or modified stream channel constructed for inland navigation or irrigation. Most canals have a low gradient between locks; however, some feeder canals (built to supply water to another canal) have a steep gradient and are not navigable. This covertype was observed west of the project site (Champlain Canal) within 0.5 mile radius (refer to Figure 2, Covertype Delineation Map).

3.2.2 Urban Structure Exteriors

Urban structure exteriors include the exterior surfaces of metal, wood, or concrete structures such as commercial buildings, apartment buildings, houses, bridges or any structural surface composed of inorganic materials (glass, plastics, etc) in an urban or densely populated suburban area. This covertype may be sparsely vegetated with lichen, mosses, and terrestrial algae; occasionally vascular plants may grow in cracks. The urban structure exterior covertype was observed on the majority of the project site especially in the central portion, along with other adjacent properties throughout the Village of Whitehall.

3.2.3 Mowed Lawn with Trees

Mowed lawn with trees includes residential, recreational or commercial land in which the groundcover is dominated by clipped grasses and forbs, and it is shaded by at least 30% cover of trees. Ornamental and /or native shrubs may be present, usually with less than 50% cover. The groundcover is maintained by mowing. This covertype was observed scattered throughout the 0.5 mile radius, but did not exist within the project site.

4.0 DESCRIPTION OF FISH AND WILDLIFE RESOURCES

The objectives of the description of the fish and wildlife resources is to list fish and wildlife species physically observed within the project site and to identify fauna expected to inhabit each covertype. The tasks conducted to meet each of these objectives and the results of the tasks are discussed in the following sections.

4.1 Fauna Expected Within Each Covertype

During the field reconnaissance of the project site, observations were made to assess the presence of fish and wildlife species. Fish and wildlife species physically observed were identified and are summarized in Table 1. Also included in Table 1 are fish and wildlife species for which signs (e.g., tracks or scat) were observed. Additionally, Table 2 contains a list of fauna expected to be present within the project site.

The following sections provide a summary of the fish and wildlife species that were observed and are expected to occur within each covertype.

4.1.1 Unconfined River

Species commonly found in this unconfined rivers include deep-bodied fishes such as suckers (*Catostomids*) especially redhorses (*Moxostoma* spp.), sturgeon (*Acipenser* spp.), and shad (*Alosa* spp.). Many of the fishes are anadromous. Other characteristic fishes include warm water fishes such as pickerel (*Esox americanus*), northern pike (*E. lucius*), largemouth bass (*Micropterus salmoides*), smallmouth bass (*M. dolomieui*), pumpkinseed (*Lepomis gibbosus*), brown bullhead (*Ameiurus nebulosus*) and white sucker (*Catostomus commersoni*).

4.1.2 Shallow Emergent Marsh

Species commonly found in shallow emergent marshes include amphibians including frogs such as eastern American toad (*Bufo a. americanus*) and salamanders such as northern redback salamander (*Plethodon c. cinereus*). Birds that may be found include red-winged blackbird (*Agelaius phoeniceus*), marsh wren (*Cistothorus palustris*), and common yellowthroat (*Geothlypis trichas*).

4.1.3 Shrub Swamp

Characteristic birds that may be found in shrub swamps include common species such as common yellowthroat (*Geothlypis trichas*); and rare species such as American bittern (*Botaurus lentiginosus*), alder flycatcher (*Empidonax alnorum*), willow flycatcher (*E. trallii*), and Lincoln's sparrow (*Passerella lincolnii*).

4.1.4 Successional Northern Hardwoods

Characteristic birds include chestnut-sided warbler (*Dendroica pensylvanica*), Nashville warbler (*Vermivora ruficapilla*) in young forests with aspen and birch seedlings, and yellow-bellied sapsucker (*Sphyrapicus varius*) in mature aspen forests.

4.1.5 Limestone Woodland

More data on regional variants and characteristic animals are needed in order to determine fauna expected to exist within this covertype.

4.1.6 Canal

Characteristic fishes found in canals include brook stickleback (*Culaea inconstans*), central mudminnow (*Umbra limi*), brook silverside (*Labidesthes sicculus*), and pikes (*Esocidae*).

4.1.7 Urban Structure Exteriors

Nooks and crannies within this covertype may provide nesting habitat for birds and insects, and roosting sites for bats. Common species found within this covertype include American robin (*Turdus migratorius*) on porches or under shelter, barn swallow (*Hirundo rustica*) under shelter, and exotic birds such as rock dove (*Columba livia*), house sparrow (*Passer domesticus*), and European starling (*Sturnus vulgaris*). During the July 9, 2010 field review, signs of holes within the eastern berm from ground hogs (*Marmota monax*), a dead mink (*Mustela vison*) located on the pavement in proximity to the entrance and crows within the trees along the berm were observed within this covertype on the project site.

4.1.8 Maintained Lawn with Trees

Characteristic animals within this covertype include gray squirrel (*Sciurus carolinensis*), American robin (*Turdus migratorius*), mourning dove (*Zenaida macroura*), and mockingbird (*Mimus polyglottos*).

5.0 VALUE OF FISH AND WILDLIFE RESOURCES

The habitat value of each covertype in the vicinity of the project site was qualitatively evaluated based on field observations of physical characteristics. For evaluations of habitat quality of terrestrial covertypes, resident wildlife species requirements for food sources, home range, breeding requirements and cover were examined and compared to covertype characteristics. Additional information used in the evaluation of habitat quality included:

- The nature, extent and diversity of observed wildlife;
- The availability of similar habitats in the immediate vicinity;
- The size of the habitat;
- Adjacent land use patterns.

5.1 Habitat Value Descriptions

5.1.1 Unconfined River

The unconfined river (Wood Creek) in proximity to the project site provides cover and food for fish, bird and mammal species. Wildlife utilizes the stream and its species as a source of food, water and protection and a place for nesting. Therefore the value of fish and wildlife resources was determined to be high.

5.1.2 Shallow Emergent Marsh

The shallow emergent marsh provides cover and food for a diverse population of bird, amphibian and mammal species. Wildlife that would utilize this covertype as a source of food, water, protection, and a place for nesting are diverse. Therefore the value of fish and wildlife resources was determined to be moderate.

5.1.3 Shrub Swamp

The shrub swamp provides cover and food for a diverse population of bird, and mammal species. Wildlife that would utilize this covertype as a source of food, water, protection, and a place for nesting are diverse. Therefore the value of fish and wildlife resources was determined to be moderate.

5.1.4 Successional Northern Hardwoods

This covertype typically supports a diversity of wildlife including many species of birds and mammals. Large trees may provide cover and food sources for bird and bat species. As development has encroached upon these forested portions within the area surrounding the project site, the forest itself is likely one of the areas wildlife depend on for protective cover and food sources. Therefore, the value of bird and wildlife resources within the successional northern hardwood forests was determined to be low to moderate.

5.1.5 Limestone Woodlands

For this covertype more data on regional variants and characteristic animals are needed in order to determine fauna expected to exist within this covertype. However this habitat is rare and therefore the value of bird and wildlife resources within this covertype was determined to be high.

5.1.6 Canal

The canal (Champlain Canal) in proximity to the project site provides cover and food for fish, bird and mammal species. Wildlife utilizes the stream and its species as a source of food, water and protection and a place for nesting. Therefore, the value of fish and wildlife resources was determined to be moderate.

5.1.7 Urban Structure Exterior

The presence of the old mill foundation, building debris stockpiles, and gravel roads that has been cleared in the past may provide habitat for some wildlife. However, due to the lack of vegetation and potential food sources and the fact that urban structures typically provide limited habitat, the value of bird and wildlife resources was determined to be low.

5.1.8 Maintained Lawn with Trees

The presence of maintained lawn with trees located in the 0.5 mile radius may provide habitat for some wildlife. However, since existing vegetation is frequently mowed, the species diversity it will support is not very large. Therefore, the value of bird and wildlife resources was determined to be low.

5.2 Value of Resources to Humans

The property is proposed to be re-used for residential and commercial uses in the future. This future use has the potential to be a benefit to humans. Other than the presence of ground hogs, mink, and American crows, the value of wildlife resources on the project site to humans is very limited. Within the vicinity of the project site, streams, rivers and canals may provide opportunity for fishing, hunting, and recreation.

6.0 OBSERVATIONS OF STRESS

During the field reconnaissance on July 9, 2010 the project site was examined for evidence of observable stress, including stained soils, leachate seeps, or exposed waste. In addition, atypical biotic conditions including reduced vegetative growth and density, wildlife mortality, and absence of expected fish and wildlife resources were noted. (refer to Appendix A, Representative Photographs).

No signs of discolored soils, leachate seeps or exposed waste, dying or dead vegetation or dead fish were observed on or in the vicinity of the project site. In proximity to the entrance, a dead mink was observed on the pavement. Building demolition debris was observed in the central portion of the project site. A Phase I ESA was done on August 8, 2006 and a Phase II ESA was completed on December 22, 2006 and contains more complete information on environmental issues potentially present at the project site.

Freedom of Information Law (FOIL) information request letters dated July 14, 2010 were submitted to the NYSDEC and New York State Department of Health (NYSDOH) to obtain any known records of past fish and wildlife contamination and/or mortality that may be associated with the project site. Correspondence from NYSDEC dated August 2, 2010 stated that NYSDEC does not contain records of wildlife contamination and/or mortality associated with the project site. A response from NYSDOH dated August 12, 2010 was received and included a disc containing information on fish and wildlife kills within several miles of the project site (refer to Appendix B, Correspondence). None of the fish or wildlife kills were found to be within 0.5. miles of the project site.

7.0 OTHER RESOURCES

7.1 Freshwater Wetlands

Based on a review of the National Wetland Inventory (NWI) Wetlands Maps twenty six (26) NWI wetlands were identified within a 0.5 mile radius of the project site, mostly associated with Wood Creek and Champlain Canal. Based on a review of NYSDEC Wetland Maps one (1) state wetland was identified within a 0.5 mile radius of the project site. This state wetland which also is a designated NWI wetland corresponds to the shrub swamp covertype located along the southern boundary of the 0.5 mile radius in proximity to Champlain Canal (refer to Figure 2, Covertype Delineation Map). No mapped NYSDEC or NWI wetlands are present within the project site.

7.2 Significant Habitats & Rare, Threatened, or Endangered Species

Information regarding the presence of significant habitats and state or federally listed rare, threatened or endangered plant or animal species on or within two miles of the project site was requested from the NYSDEC and the United States Fish and Wildlife Service (USFWS) on July 15, 2010. A response from NYSDEC was received on July 29, 2010 stating that in the vicinity of the project site the Limestone woodland ecological community can be found on Skene Mountain and the Canadian single-spike sedge (*Carex scirpoidea ssp scirpoidea*) and wary panic grass (*Panicum flexile*) have the potential to be found within this ecological community. Additionally, historic records indicate that button-bush dobber (*Cuscuta cephalanthi*) and downy lettuce (*Lactuca hirsuta*) may occur in proximity to the project site (Refer to Appendix B, Correspondence).

A field review of the project site was conducted on July 9, 2010. According to the Washington County list of Federally-protected endangered species on USFWS website, two (2) threatened and/or endangered federally-listed species have the potential to be found in Washington County, New York: the Indiana bat (*Myotis sodalis*) and the Small whorled pogonia (*Isotria medeoloides*)

As the proposed project site was not observed to contain large dead or dying trees, caves or mines, it is not anticipated that there is any suitable habitat for the summer foraging of Indiana bats, nor does the project site contain any bat hybernacula. The majority of the project site is comprised of concrete building foundation, building debris stockpiles, and access roads. As the project site was not observed to contain mature forests, dry or rocky slopes or slope bases near

vernal streams, the project site does not provide the vegetative conditions to support the known habitat conditions of the Small whorled pogonia.

A response from USFWS dated August 30, 2010 was received stating that the proposed project would likely not result in a take of Federally-listed endangered species and that no further coordination with USFWS was required (refer to Appendix B, Correspondence).

Based on field observations and understanding of the habitat requirements of the endangered species listed by NYSDEC and USFWS for Washington County, it is not anticipated that any required remedial activities will have any impact to any threatened or endangered species known to exist in the vicinity of the project site (refer to Appendix B, Correspondence).

8.0 APPLICABLE FISH AND WILDLIFE REGULATORY CRITERIA

The identification of applicable site-specific and contaminant-specific Fish and Wildlife Regulatory Criteria (FWRC) involves a qualitative examination of significant features protected by the state or federal government that might be affected by current conditions within the project site or by future remedial activities. The following sections provide the site-specific and contaminant-specific FWRC that may be applicable for the project site.

8.1 Site-Specific FWRC

Site-specific FWRC are regulations that apply to freshwater wetlands; regulated streams; navigable waterways, coastal zones; significant fish and wildlife habitats; wild, scenic and recreational rivers; and rare, endangered or threatened plant and animal species.

Site-specific FWRC that may be applicable to the project site include the following:

- *Clean Water Act, 233 U.S.C. 1261 et seq. Sec. 404 regulates the discharge of pollutants into waters of the U.S, including dredged or fill materials;*
- *Executive Order 11990, Protection of Wetlands. This order recognized the value of wetlands and directed federal agencies to minimize the degradation, destruction and loss of wetlands; and*
- *Endangered Species Act (87 Statute 884, as amended; 16 U. S. C. 1531 et seq.).*

8.2 Contaminant-Specific FWRC

Contaminant-specific FWRC are regulations that apply to water quality standards and guidance values for the protection of aquatic life and sediment criteria developed by the Division of Fish and Wildlife.

Contaminant-specific FWRC that may be applicable to the project site include the following:

- *NYSDEC, Division of Water Technical and Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, June 2004;*
- *NYSDEC, Water Quality Regulations for Surface Waters and Groundwaters, 6 NYCRR Parts 700-705;*

- *NYSDEC, Technical Guidance for Screening Contaminated Sediments, January 1999;*
- *NYSDEC, Environmental Remediation Programs, 6 NYCRR Part 375, December 2006; and*
- *NYSDEC, Draft DER-10 Technical Guidance for Site Investigation and Remediation, November 2009.*

9.0 SUMMARY AND CONCLUSIONS

Step I of a FWIA was completed by C.T. Male for the project site. The approximately 11.49 acre project site presently consists of old mill foundations, masonry floors and building debris stockpiles. In general, the value of the fish and wildlife resources located within the 0.5 mile radius study area is low to moderate. Industrial buildings and residential areas have eliminated much of the natural habitat in the vicinity of the project site and have replaced it primarily with mowed lawns with trees, paved roads and urban structure exterior areas. Overall, many of the covertypes in the study area have been heavily influenced by human activities.

The value of fish and wildlife resources to humans is very limited within the project site. As a result, the value of these resources to humans was determined to be low.

This completes Step I of the Fish and Wildlife Impact Analysis. In accordance with the FWIA guidance no additional assessment steps are recommended.

10.0 REFERENCES

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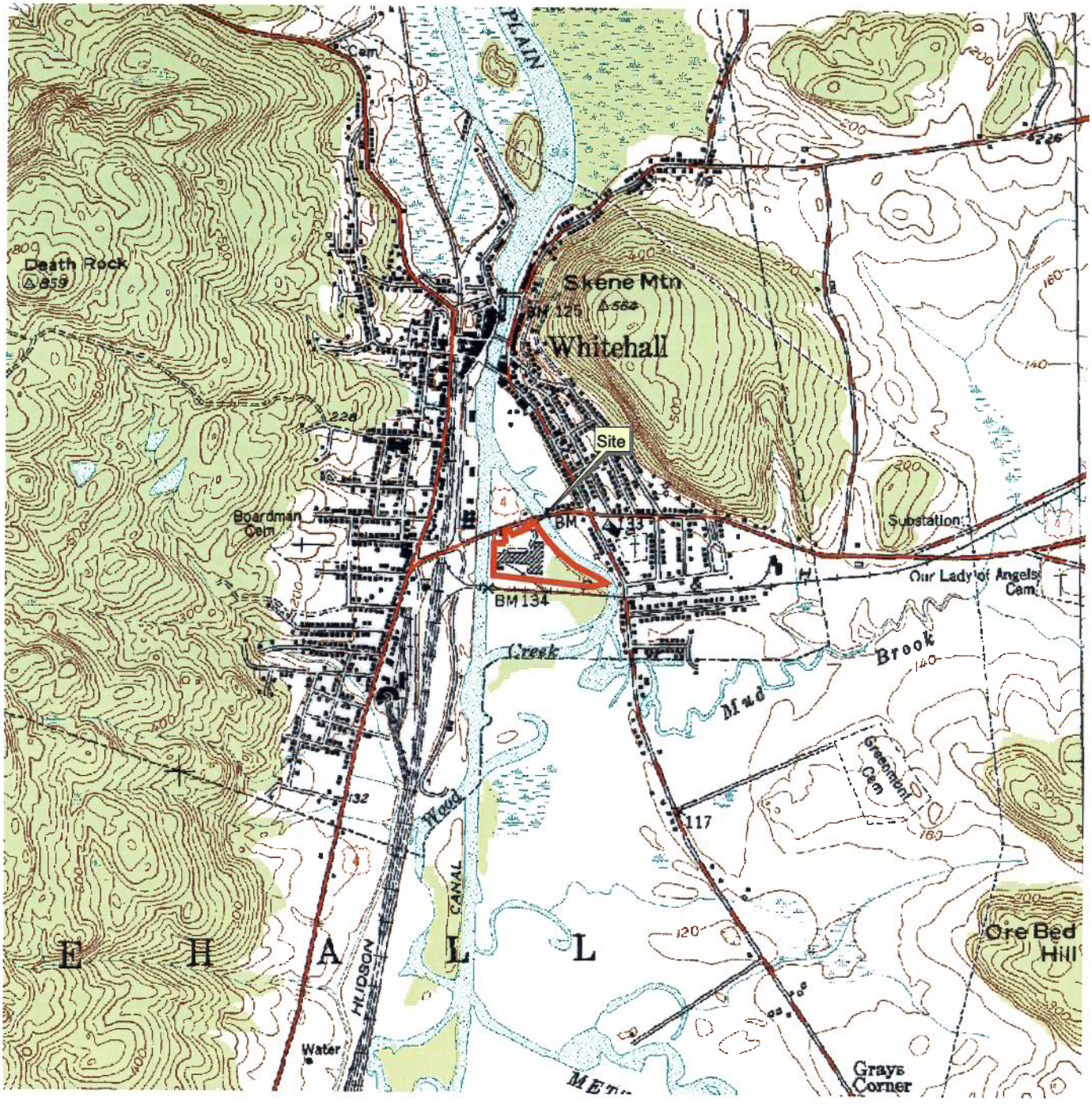
FIGURES



MAP REFERENCE
USGS Topographic Map
Whitehall, NY Quadrangle, Dated 2000
7.5 Minute Series, NAD 83 UTM18N
Topo downloaded from CUGIRon 7/8/10

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FIGURE 1 SITE LOCATION MAP

Old Champlain Mill

VILLAGE OF WHITEHALL	WASHINGTON COUNTY, NY
SCALE: 1"=1,000'	
DRAFTER: JLM	
PROJECT NO: 06.6448	

COVERTYPE MAP KEY

- Cultural Covertypes
- Woodland Covertypes
- Riverine Covertypes
- Palustrine Covertypes

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MAP REFERENCE
Covertype Map
Whitehall, NY Quadrangle, Dated 2004
7.5 Minute Series, NAD 83 UTM18N
Ortho downloaded from NYSGIS Clearing House on 7/8/2010

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FIGURE 2 COVERTYPE DELINEATION MAP

Old Champlain Mill

TOWN OF WHITEHALL	WASHINGTON COUNTY, NY
SCALE: 1"= 1,000'	
DRAFTER: JLM	
PROJECT NO: 06.6448	

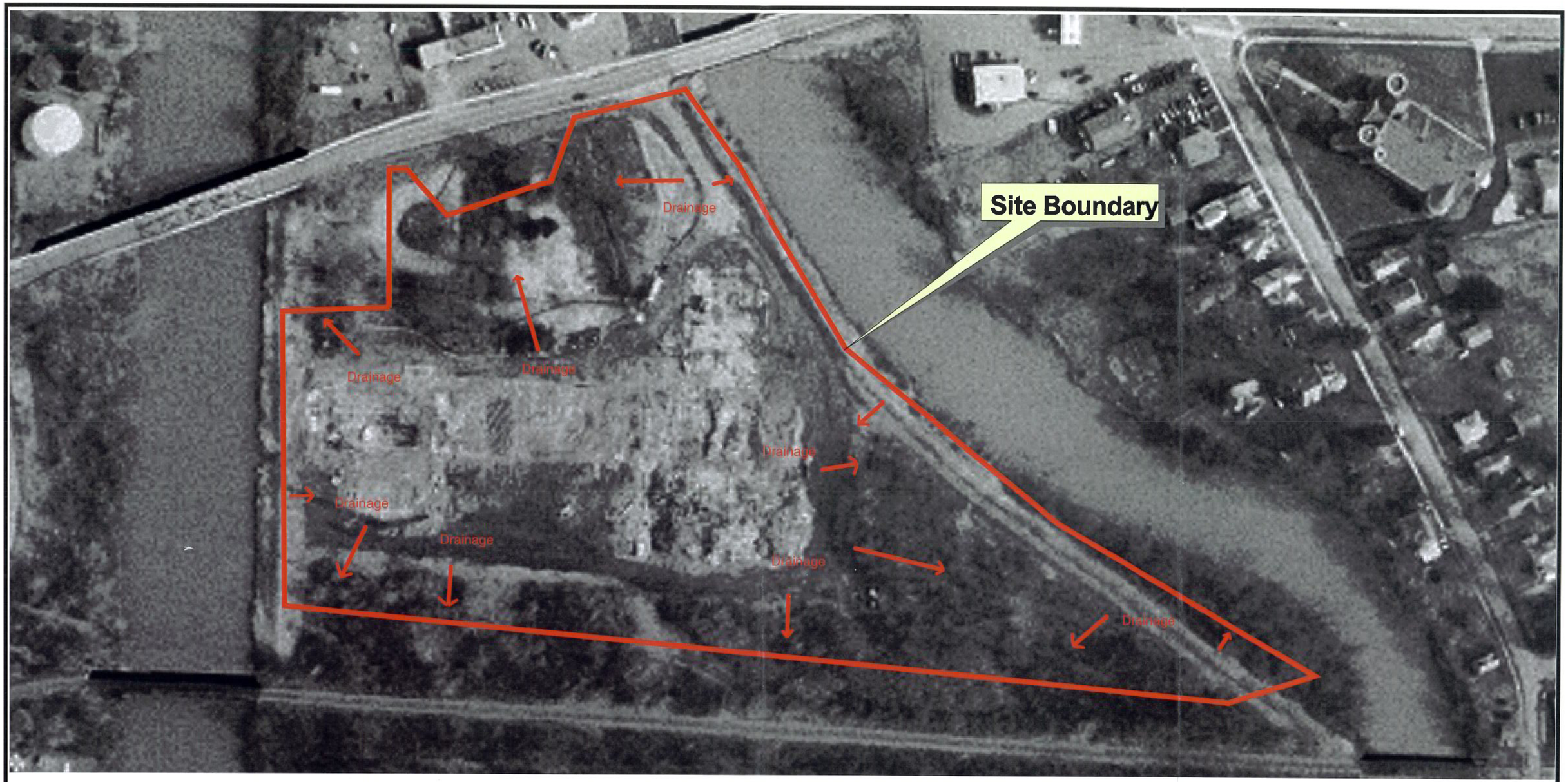

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FIGURE 3 DRAINAGE MAP

Old Champlain Mill

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TOWN OF WHITEHALL	WASHINGTON COUNTY, NY		MAP REFERENCE Drainage Map Whitehall, NY Quadrangle, Dated 2004 7.5 Minute Series, NAD 83 UTM18N Ortho downloaded from NYSGIS Clearing House on 7/8/2010
SCALE: 1"= 250'	DRAFTER: JLM	PROJECT NO: 06.6448	

TABLES

TABLE 1
Fauna Observed within the Study Area

Common Name	Scientific Name	Covertype	Comments
Ground hog	*Marmota monax*	Urban Structure Exterior	holes observed along berms
Mink	*Mustela vison*	Urban Structure Exterior	dead near entrance of site
American crow	*Corvus brachyrhynchos*	Urban Structure Exterior	sited within trees

TABLE 2
Fauna Expected to be Present within the Study Area

	Common Name	Scientific Name	Covertype
Birds	Red-winged blackbird	*Agelaius phoeniceus*	Shallow Emergent Marsh
	Marsh wren	*Cistothorus palustris*	Shallow Emergent Marsh
	Common yellowthroat	*Geothlypis trichas*	Shallow Emergent Marsh/Shrub Swamp
	American bittern	*Botaurus lentiginosus*	Shrub Swamp
	Alder flycatcher	*Empidonax alnorum*	Shrub Swamp
	Willow flycatcher	*E. traillii*	Shrub Swamp
	Lincoln's sparrow	*Passerella lincolnii*	Shrub Swamp
	Pileated woodpecker	*Dryocopus pileatus*	Successional Northern Hardwood Forests
	Chestnut-sided warbler	*Dendroica pennsylvanica*	Successional Northern Hardwood Forests
	Yellow-bellied sapsucker	*Sphyrapicus varius*	Successional Northern Hardwood Forests
	Nashville Warbler	*Vermivora ruficapilla*	Successional Northern Hardwood Forests
	Common nighthawk	*Chordeiles minor*	Urban Structure Exterior
	American robin	*Turdus migratorius*	Urban Structure Exterior/ Maintained Lawns with Trees
	House sparrow	*Passer domesticus*	Urban Structure Exterior
	European starling	*Sturnus vulgaris*	Urban Structure Exterior
	Barn swallow	*Hirundo rustica*	Urban Structure Exterior
	Rock dove	*Columba liva*	Urban Structure Exterior
	American crow	*Corvus brachyrhynchos*	Urban Structure Exterior
	Mourning dove	*Zenaida macroura*	Maintained Lawns with Trees
	Mockingbird	*Mimus polyglottos*	Maintained Lawns with Trees
Mammals	Ground hog	*Marmota monax*	Urban Structure Exterior
	Mink	*Mustela vison*	Urban Structure Exterior
	Gray Squirrel	*Sciurus carolinensis*	Maintained Lawns with Trees
Fish/ Amphibians/Insects	Brook stickleback	*Culaea inconstans*	Canal
	Central mudminnow	*Umbra limi*	Canal
	Brook silverside	*Labidesthes sicculus*	Canal
	Pikes	*Esocidae*	Canal
	Largemouth bass	*Micropterus salmoides*	Unconfined River
	Smallmouth bass	*Micropterus dolomieu*	Unconfined River
	Northern pike	*Esox lucius*	Unconfined River
	Pumpkinseed	*L. gibbosus*	Unconfined River
	Redhorses	*Moxostoma spp.*	Unconfined River
	Sturgeon	*Acipenser spp.*	Unconfined River
	Shad	*Alosa spp.*	Unconfined River
	Pickerel	*Esox americanus*	Unconfined River
	Northern pike	*E. lucius*	Unconfined River
	Brown bullhead	*Ameiurus nebulosus*	Unconfined River
	White sucker	*Catostomus commersoni*	Unconfined River
	Eastern American toad	*Bufo a. americanus*	Shallow Emergent Marsh
	Northern spring peeper	*Pseudoacris c. crucifer*	Shallow Emergent Marsh
	Green frog	*Rana clamitans melanota*	Shallow Emergent Marsh
	Wood frog	*Rana sylvatica*	Shallow Emergent Marsh
	Redback salamander	*Plethodon c. cinereus*	Shallow Emergent Marsh

APPENDIX A

Representative Site Photographs

REPRESENTATIVE PHOTOGRAPHS

Old Champlain Mill 7/9/10

View southwest of entrance to the project site.

View southeast along access road adjacent to earthen berm.

REPRESENTATIVE PHOTOGRAPHS

Old Champlain Mill 7/9/10

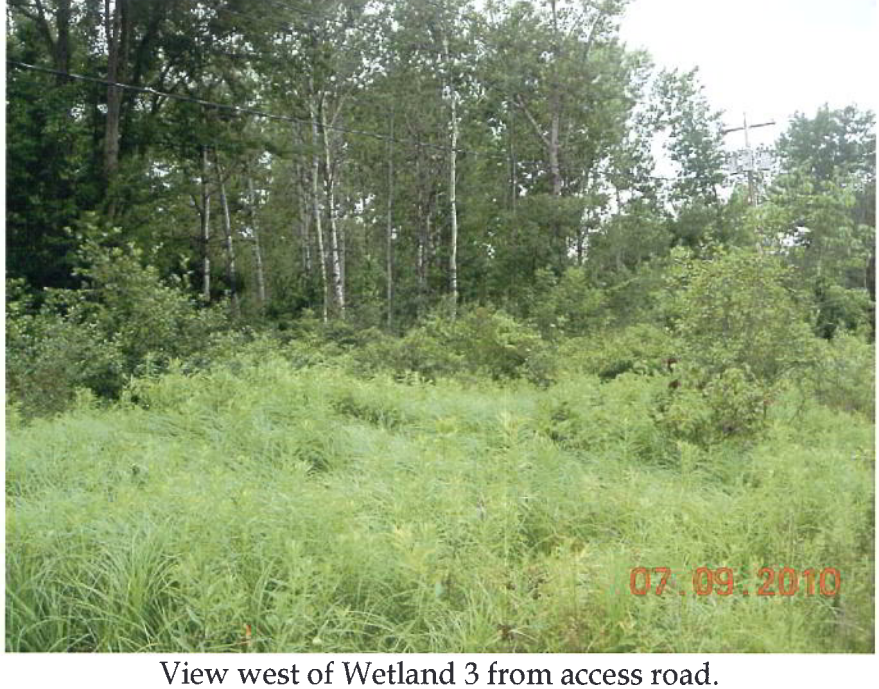
View west of access road along the perimeter of Wetland 7.

View west of western portion of the project site.

REPRESENTATIVE PHOTOGRAPHS

Old Champlain Mill 7/9/10

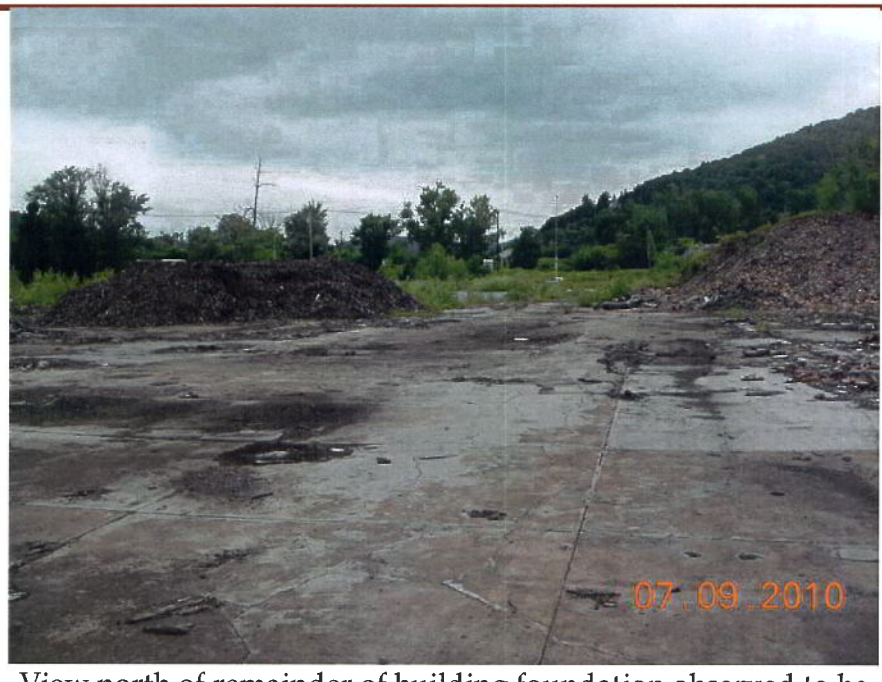
View west of building debris stockpiles in proximity to the remainder of the building foundation.



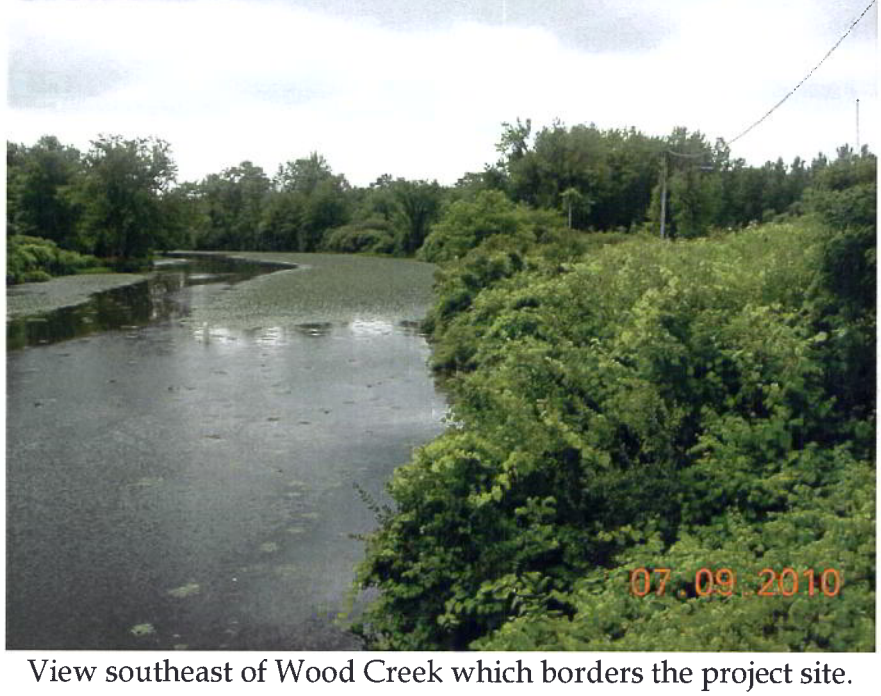
View west of Wetland 3 from access road.

REPRESENTATIVE PHOTOGRAPHS

Old Champlain Mill 7/9/10



View north of remainder of building foundation observed to be stained from an oil based product.



View southeast of Wood Creek which borders the project site.

APPENDIX B

Correspondence

Threatened & Endangered Species Correspondence

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

July 29, 2010

Jennifer L. McCarry
C T Male Associates
50 Century Hill Drive
Latham, NY 12110

Dear Ms. McCarry:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment of the proposed Remedial Investigation at Old Champlain Mill – Brownfield Cleanup Program, Project # 06.6448, area as indicated on the map you provided, located on Route 4, Village of Whitehall, Washington County.

Enclosed is a report of rare or state-listed animals and plants, significant natural communities, and other significant habitats, which our databases indicate occur, or may occur, on your site or in the immediate vicinity of your site. For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our databases. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or natural communities. This information should not be substituted for on-site surveys that may be required for environmental impact assessment.

The enclosed report may be included in documents that will be available to the public. However, any enclosed maps displaying locations of rare species are considered sensitive information, and are intended only for the internal use of the recipient; they should not be included in any document that will be made available to the public, without permission from the New York Natural Heritage Program.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g. regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

Sincerely,

Tara Salerno, Information Services
New York Natural Heritage Program # 784

Enc.
cc: Reg. 5

40 years of stewardship 1970-2010

Natural Heritage Report on Rare Species and Ecological Communities

NY Natural Heritage Program, NYS DEC, 625 Broadway, 5th Floor,
Albany, NY 12233-4757
(518) 402-8935

~The information in this report includes only records entered into the NY Natural Heritage databases as of the date of the report. This report is not a definitive statement on the presence or absence of all rare species or significant natural communities at or in the vicinity of this site.
~Refer to the User's Guide for explanations of codes, ranks and fields.
~Location maps for certain species and communities may not be provided 1) if the species is vulnerable to disturbance, 2) if the location and/or extent is not precisely known, 3) if the location and/or extent is too large to display, and/or 4) if the animal is listed as Endangered or Threatened by New York State.

Natural Heritage Report on Rare Species and Ecological Communities

COMMUNITIES

Limestone woodland

This occurrence of Limestone Woodland is considered significant from a statewide perspective by the NY Natural Heritage Program. It is either an occurrence of a community type that is rare in the state or a high quality example of a more common community type. By meeting specific, documented significance criteria, the NY Natural Heritage Program considers this occurrence to have high ecological and conservation value.

Office Use

NY Legal Status: Unlisted **NYS Rank:** S2S3 7996
Federal Listing: **Global Rank:** G3G4
Last Report: 1988-07-24 **EO Rank:**
County: Washington SL
Town: Whitehall
Location: Skene Mountain
General Quality and Habitat: This is a large, good occurrence with only minor disturbance. Open canopy deciduous woods (limestone woods) on steep southwest-facing slopes of Skene Mountain. Overlooking village of Whitehall. The terrain is rocky-cobble with exposed ledges (limestone). Some active landslides and talus areas. There are summit glades on top of the mountain. The upper glades are drier and contain xeric shrubs.

VASCULAR PLANTS

Carex scirpoidea ssp. scirpoidea

Canadian Single-spike Sedge

Office Use

NY Legal Status: Endangered **NYS Rank:** S1 - Critically imperiled 2568
Federal Listing: **Global Rank:** G5T5 - Secure
Last Report: 1999-07-27 **EO Rank:** Excellent or Good
County: Washington SL
Town: Whitehall
Location: Skene Mountain
General Quality and Habitat: This is a large population in diverse habitat and protectable. The plants are in an open canopy rocky woods on a steep slope with open grassy/sedgy spots within open sections of a calcareous rocky summit community.

Panicum flexile

Wiry Panic Grass

Office Use

NY Legal Status: Threatened **NYS Rank:** S3 - Vulnerable 5611
Federal Listing: **Global Rank:** G5 - Secure
Last Report: 1988-07-24 **EO Rank:** Good
County: Washington SL
Town: Whitehall
Location: Skene Mountain
General Quality and Habitat: 200-500 plants in good habitat. Open canopy rocky woods on steep slope with open grassy/sedgy spots overlooking the village of Whitehall. Open rocky areas on steep slope. Seepage.rpoidea.

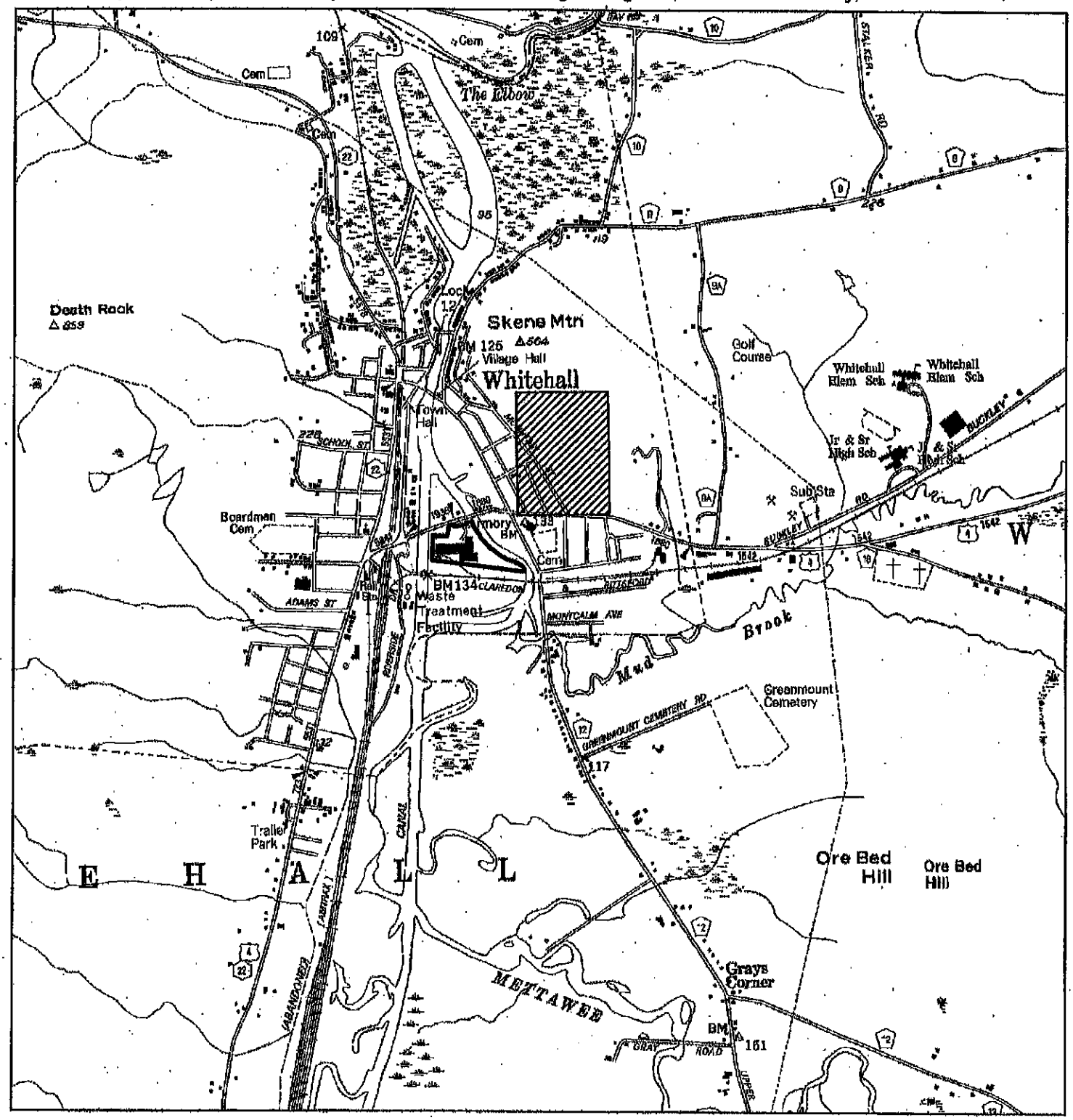
3 Records Processed

More detailed information about many of the rare and listed animals and plants in New York, including biology, identification, habitat, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.acris.nynhp.org, from NatureServe Explorer at http://www.natureserve.org/explorer, from NYSDEC at http://www.dec.ny.gov/animals/7494.html (for animals), and from USDA's Plants Database at http://plants.usda.gov/index.html (for plants).

More detailed information about many of the natural community types in New York, including identification, dominant and characteristic vegetation, distribution, conservation, and management, is available online in Natural Heritage's Conservation Guides at www.acris.nynhp.org. For descriptions of all community types, go to http://www.dec.ny.gov/animals/29384.html and click on Draft Ecological Communities of New York State.

Natural Heritage Map of Rare Species and Ecological Communities

Prepared July 19, 2010 by the NY Natural Heritage Program, NYS DEC Albany, NY



Legend

Project Site

NY Natural Heritage Program Database Records

Canadian Single-spike Sedge, Wiry Panic Grass, and Limestone Woodland

1:24,000

0 0.15 0.3 0.6 0.9 1.2 Miles

N W E S

This map, and the locations that are displayed, are considered sensitive information, and are intended for the internal use of the recipient; they should not be included in any document that will be made available to the public, without permission from NY Natural Heritage. Some records listed in the accompanying report may not be shown on this map. Please see the report for details.

Natural Heritage Report on Rare Species and Ecological Communities

NY Natural Heritage Program, NYS DEC, 625 Broadway, 5th Floor,
Albany, NY 12233-4757
(518) 402-8935

HISTORICAL RECORDS

The following plants and animals were documented in the vicinity of the project site at one time, but have not been documented there since 1979 or earlier.
There is no recent information on these plants and animals in the vicinity of the project site and their current status there is unknown. In most cases the precise location of the plant or animal in this vicinity at the time it was last documented is also unknown and therefore location maps are generally not provided.
If appropriate habitat for these plants or animals is present in the vicinity of the project site, it is possible that they may still occur there.

Natural Heritage Report on Rare Species and Ecological Communities

VASCULAR PLANTS

Cuscuta cephalanthi

Button-bush Dodder

Office Use 6837

NY Legal Status: Endangered
Federal Listing:
Last Report: 1910-pre

NYS Rank: S1 - Critically Imperiled
Global Rank: G5 - Secure
EO Rank: Historical, no recent information

County: Washington
Town: Whitehall
Location: Whitehall
Directions: Whitehall.
General Quality and Habitat:

M

Lactuca hirsuta

Downy Lettuce

Office Use 5652

NY Legal Status: Endangered
Federal Listing:
Last Report: ----07

NYS Rank: S1 - Critically Imperiled
Global Rank: G5? - Secure
EO Rank: Historical, no recent information

County: Washington
Town: Whitehall
Location: Whitehall
Directions: Whitehall.
General Quality and Habitat:

M

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2 Records Processed

More detailed information about many of the rare and listed animals and plants in New York, including biology, identification, habitat, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.acris.nynhp.org, from NatureServe Explorer at http://www.natureserve.org/explorer, from NYSDEC at http://www.dec.ny.gov/animals/7494.html (for animals), and from USDA's Plants Database at http://plants.usda.gov/index.html (for plants).

C.T. MALE ASSOCIATES, P.C.

50 Century Hill Drive, Latham, NY 12110
518.786.7400 FAX 518.786.7299 ctmale@ctmale.com

July 15, 2010

Ms. Jean Pietrusiak
New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
NY Natural Heritage Program
625 Broadway, 5th Floor
Albany, NY 12233-4757

RE: Threatened and Endangered Species File Review Request
Old Champlain Mill
NYSDEC Brownfields Cleanup Program #: C-558036
Village of Whitehall, Washington County, NY
C.T. Male Project No. 06.6448

Dear Ms. Pietrusiak:

C.T. Male Associates, P.C. (C.T. Male) is working on a Remedial Investigation at the above-referenced New York State Department of Environmental Conservation (NYSDEC) Environmental Restoration Program (ERP) site. The property known as the "Old Champlain Mill" located on U.S. Route 4 in the Village of Whitehall, Washington County, New York. The project site is approximately 11.49± acres and is currently an abandoned industrial site. As part of a NYS Brownfield Cleanup Program investigation, a Fish and Wildlife Impact Analysis (FWIA) is being conducted (refer to Attachment A – Site Location Map). Upon completion of remedial activities, the property owner intends to utilize the site for commercial development.

It is respectfully requested that the New York State Department of Environmental Conservation (NYSDEC) Natural Heritage Program provide C.T. Male with information on known occurrences of threatened or endangered species or habitats within the 11.49± acre project site. In addition to corresponding with NYSDEC, C.T. Male is also concurrently corresponding with the U.S. Fish and Wildlife Service (USFWS).

We have conducted project screening as described on the U.S. Fish and Wildlife Service (USFWS) website has been done. This letter serves to provide a description of the project and a summary of the threatened and endangered species assessment that was conducted, including the results of field surveys.

Project Description

The site consists of approximately 11.49 acres of land. The project site is bordered by the Champlain Canal to the west and the Wood Creek to the east, separated from each waterbody by 10 to 12 foot earthen dikes. To the north, the site is bordered by U.S. Route 4 and to the south, the site is bordered by railroad tracks. The project site was observed to be an abandoned industrial site consisting of old mill foundations, masonry floors and building debris stockpiles. A sewer pump station was observed near

the southern property boundary. Large piles of debris were observed on the central portion of what remains of the Champlain Mill building's floor. The project site was observed to be in the state of revegetation. The approximate latitude and longitude coordinates for the project are: N43° 33′ 30″, W73° 23′ 60″.

Threatened and Endangered Species Assessment

A field review of the project site was conducted by a C. T. Male field representative on July 9, 2010. According to the USFWS website, two (2) threatened and/or endangered federally listed species have the potential to be found in Washington County, New York: the Indiana bat (*Myotis sodalis*) and the Small whorled pogonia (*Isotria medeoloides*).

As the proposed project area does not contain large dead or dying trees, caves or mines, it is not anticipated that there is any suitable habitat for the summer foraging of Indiana bats, nor does the project site contain any bat hibernacula (refer to Attachment B – Representative Photographs).

The majority of the project site is comprised of foundations, debris, and successional northern hardwood forest. The site does not contain mature forests, dry or rocky slopes or slope bases near vernal streams, and the observed canopy would not provide the vegetative conditions to support the known habitat conditions of the Small whorled pogonia (refer to Attachment B – Representative Photographs).

Summary

Based on our field observations and our understanding of the habitat requirements of the Indiana bat and the Small whorled pogonia, it is not anticipated that any required remedial activities or future potential commercial development will have any impact to any threatened or endangered species known to exist in Washington County, New York.

Thank you very much for your time and if you have any further questions, please do not hesitate to contact me or Dave Plante at (518) 786-7400.

Sincerely,

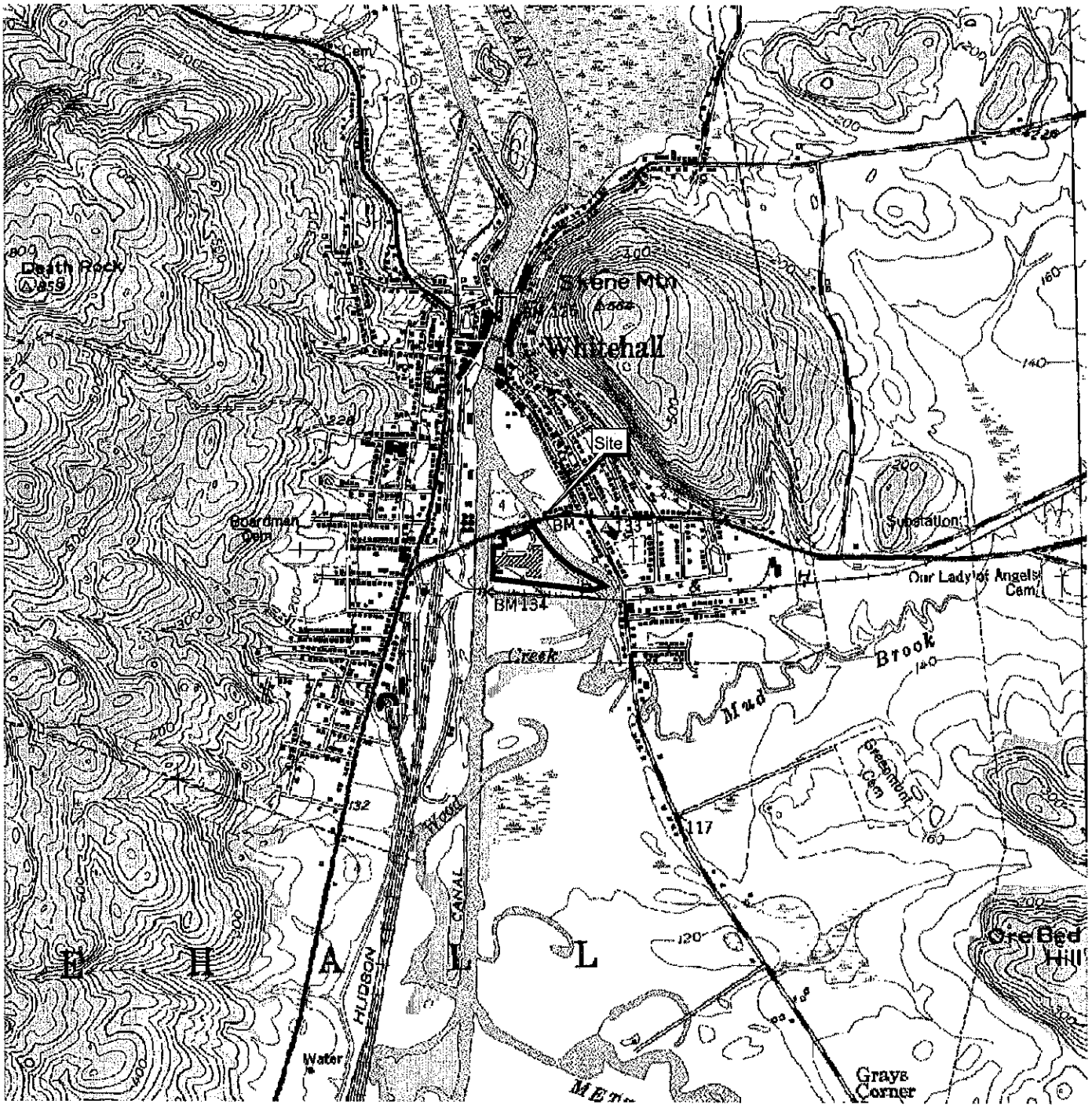
C.T. MALE ASSOCIATES, P.C.

Jennifer L. McCarry
Environmental Scientist

cc: Kirk Moline, Dave Plante (C.T. Male)

K:\Projects\066448\Env\FWIA\Correspondence\T&E Letters\FINAL L Petrusiak T&E DEC 07 15 10.Doc

Attachment A
Site Location Map



MAP REFERENCE
USGS Topographic Map
Whitehall, NY Quadrangle, Dated 2000
7.5 Minute Series, NAD 83 UTM18N
Topo downloaded from CUGIRon 7/8/10

N
W E
S

ARCHITECTURE &
BUILDING SYSTEMS ENGINEERING
CIVIL ENGINEERING
ENVIRONMENTAL SERVICES
SURVEY & LAND INFORMATION
SERVICES

C.T.MALE ASSOCIATES, P.C.

50 CENTURY HILL DRIVE, PO BOX 727, LATHAM, NY 12110
PHONE (518) 786-7400 FAX (518) 786-7299

FIGURE 1 SITE LOCATION MAP

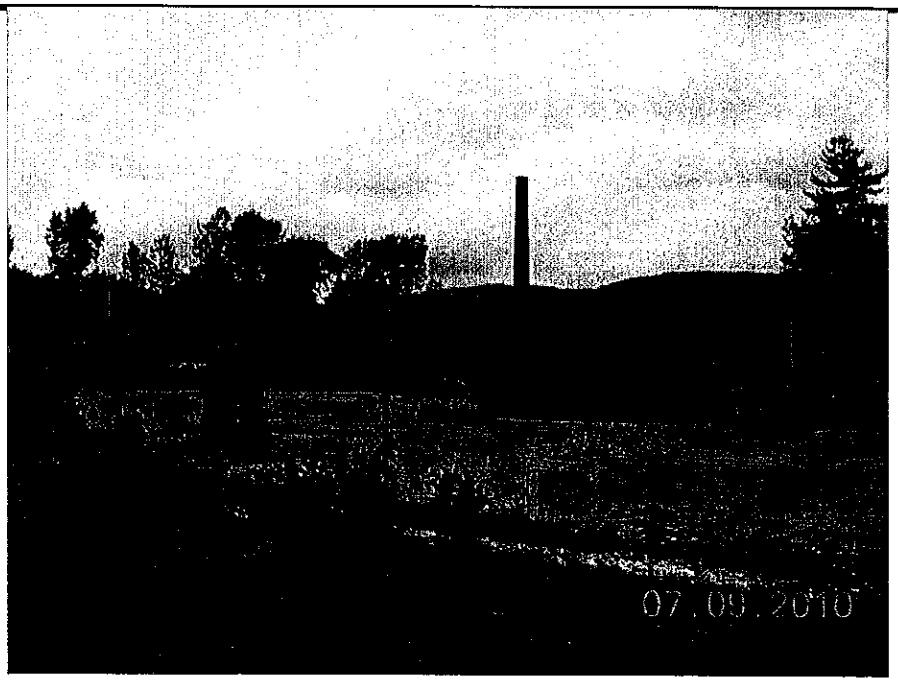
Old Champlain Mill

VILLAGE OF WHITEHALL	WASHINGTON COUNTY, NY
SCALE: 1"=1,000'	
DRAFTER: JLM	
PROJECT NO: 06.6448	

Attachment B
Representative Photographs

REPRESENTATIVE PHOTOGRAPHS

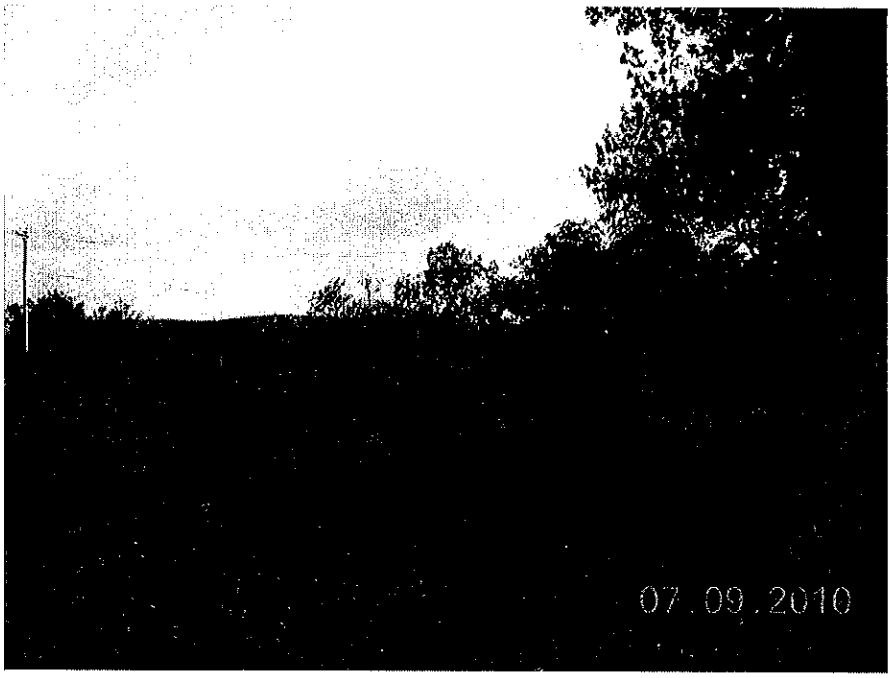
Old Champlain Mill 7/9/10



View southwest of entrance to the project site.

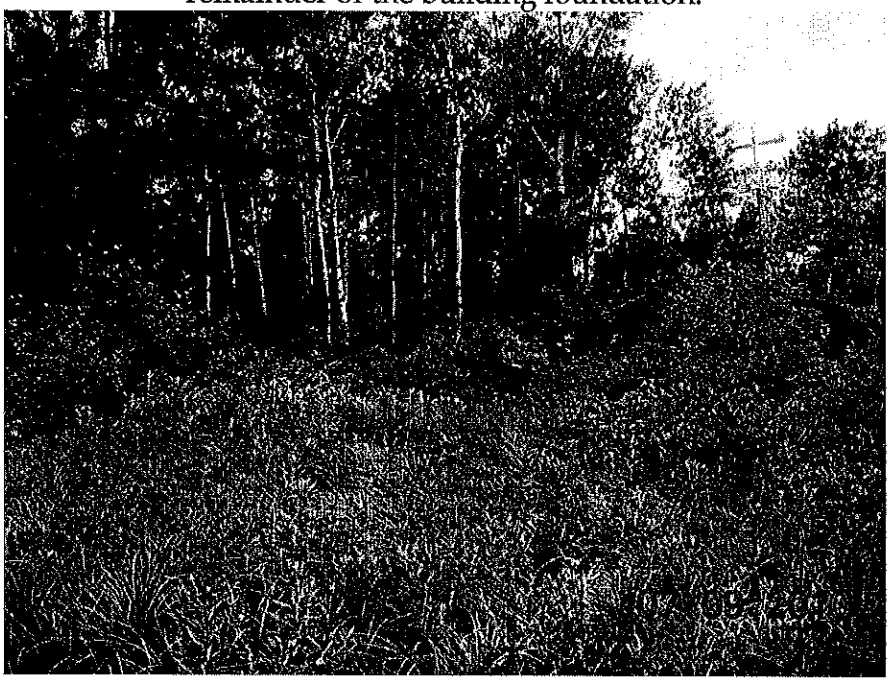
View southeast along access road adjacent to earthen berm.

View west of access road along the perimeter of Wetland 7.



View west of western portion of the project site.

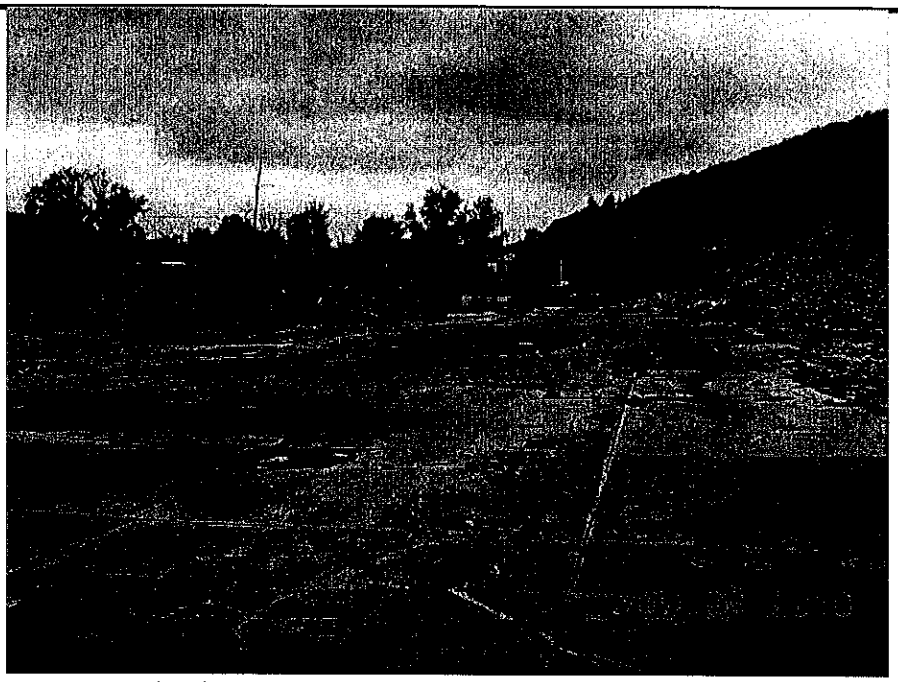
View west of building debris stockpiles in proximity to the remainder of the building foundation.



View west of Wetland 3 from access road.

REPRESENTATIVE PHOTOGRAPHS

Old Champlain Mill 7/9/10



View north of remainder of building foundation observed to be stained from an oil based product.

View southeast of Wood Creek which borders the project site.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
3817 Luker Road
Cortland, NY 13045

August 30, 2010

Ms. Jennifer L. McCarry
Environmental Scientist
C.T. Male Associates, PC
50 Century Hill Drive
Latham, NY 12110

Dear Ms. McCarry:

This is in response to your July 15, 2010, letter and August 25, 2010, electronic mail regarding the proposed remediation and development of an 11.49-acre site located on U.S. Route 4 in the Village of Whitehall, Washington County, New York. We understand that no Federal permits or funding will be needed.

We understand that you reviewed our website* for information on listed species known or with the potential to occur in Washington County and conducted assessments of the project area for potential habitat for the Federally-listed threatened small whorled pogonia (*Isotria medeoloides*) and Federally-listed endangered Indiana bat (*Myotis sodalis*). You concluded that no small whorled pogonia and limited potential Indiana bat habitat exists in the project area. We understand that all tree removal (very few trees) associated with the project will occur between October 1 and March 31 to avoid any direct effects to the Indiana bat. Given our understanding of the proposed project, the U.S. Fish and Wildlife Service (Service) does not anticipate any "take"[1] of the Indiana bat. No further coordination with the Service is required pursuant to the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) at this time. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered. The most recent compilation of Federally-listed and proposed endangered and threatened species in New York is available for your information.* Until the proposed project is complete, we recommend that you check our website every 90 days from the date of this letter to ensure that listed species presence/absence information for the proposed project is current.

The above comments pertaining to endangered species under our jurisdiction are provided as technical assistance pursuant to the ESA. This response does not preclude additional Service comments under other legislation.

The small whorled pogonia and Indiana bat are listed by the State of New York. Any changes in project plans or new information regarding the potential for impacts to listed species should be

[1] Take is defined in Section 3 of the ESA as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.

coordinated with both this office and with the New York State Department of Environmental Conservation (NYSDEC). The NYSDEC contact for the Endangered Species Program is Mr. Peter Nye, Endangered Species Unit, NYSDEC, 625 Broadway, Albany, NY 12233 (telephone: [518] 402-8859).

Thank you for your time. If you require additional information please contact Robyn Niver at (607) 753-9334. Future correspondence with us on this project should reference project file 100508.

Sincerely,

David A. Stilwell
Field Supervisor

*Additional information referred to above may be found on our website at: http://www.fws.gov/northeast/nyfo/es/section7.htm

cc: NYSDEC, Ray Brook, NY (Env. Permits)
NYSDEC, Albany, NY (Endangered Species; Attn: P. Nye)

C.T. MALE ASSOCIATES, P.C.

50 Century Hill Drive, Latham, NY 12110
518.786.7400 FAX 518.786.7299 ctmale@ctmale.com

July 15, 2010

Ms. Robyn Niver
United States Fish and Wildlife Service
3817 Luker Road
Cortland, New York 13045

RE: *Threatened and Endangered Species File Review Request*
Old Champlain Mill
NYSDEC Brownfields Cleanup Program #: C-558036
Village of Whitehall, Washington County, NY
C.T. Male Project No. 06.6448

Dear Ms. Niver:

C.T. Male Associates, P.C. (C.T. Male) is working on a Remedial Investigation at the above-referenced New York State Department of Environmental Conservation (NYSDEC) Environmental Restoration Program (ERP) site. The property known as the "Old Champlain Mill" located on U.S. Route 4 in the Village of Whitehall, Washington County, New York. The project site is approximately 11.49± acres and is currently an abandoned industrial site. As part of a NYS Brownfield Cleanup Program investigation, a Fish and Wildlife Impact Analysis (FWIA) is being conducted (refer to Attachment A – Site Location Map). Upon completion of remedial activities, the property owner intends to utilize the site for commercial development.

A project screening as described on the U.S. Fish and Wildlife Service (USFWS) website has been done. This letter serves to provide a description of the project and a summary of the threatened and endangered species assessment that was conducted, including the results of a field survey.

Project Description

The site consists of approximately 11.49 acres of land. The project site is bordered by the Champlain Canal to the west and the Wood Creek to the east, separated from each waterbody by 10 to 12 foot earthen dikes. To the north, the site is bordered by U.S. Route 4 and to the south, the site is bordered by railroad tracks. The project site was observed to be an abandoned industrial site consisting of old mill foundations, masonry floors and building debris stockpiles. A sewer pump station was observed near the southern property boundary. Large piles of debris were observed on the central portion of what remains of the Champlain Mill building's floor. The project site was observed to be in the state of revegetation. The approximate latitude and longitude coordinates for the project are: N43° 33′ 30″, W73° 23′ 60″.

Threatened and Endangered Species Assessment

A field review of the project site was conducted by a C. T. Male field representative on July 9, 2010. According to the USFWS website, two (2) threatened and/or endangered federally listed species have the

potential to be found in Washington County, New York: the Indiana bat (*Myotis sodalis*) and the Small whorled pogonia (*Isotria medeoloides*).

As the proposed project area does not contain large dead or dying trees, caves or mines, it is not anticipated that there is any suitable habitat for the summer foraging of Indiana bats, nor does the project site contain any bat hibernacula (refer to Attachment C – Representative Photographs).

The majority of the project site is comprised of foundations, debris, and successional northern hardwood forest. The site does not contain mature forests, dry or rocky slopes or slope bases near vernal streams, and the observed canopy would not provide the vegetative conditions to support the known habitat conditions of the Small whorled pogonia (refer to Attachment C – Representative Photographs).

Summary

Based on our field observations and our understanding of the habitat requirements of the Indiana bat and the Small whorled pogonia, it is not anticipated that any required remedial activities or future potential commercial development will have any impact to any threatened or endangered species known to exist in Washington County, New York.

Thank you very much for your time and if you have any further questions, please do not hesitate to contact me or Dave Plante at (518) 786-7400.

Sincerely,

C.T. MALE ASSOCIATES, P.C.

Jennifer L. McCarry
Environmental Scientist

cc: Kirk Moline, Dave Plante (C.T. Male)

Attachments:
Attachment A - Site Location Map
Attachment B – USGS Quadrangle Map Location Sheet
Attachment C – Representative Photographs

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Washington County

Federally Listed Endangered and Threatened Species and Candidate Species

This list represents the best available information regarding known or likely County occurrences of Federally-listed and candidate species and is subject to change as new information becomes available.

Common Name	Scientific Name	Status
Indiana bat (S)	*Myotis sodalis*	E
Small whorled pogonia *(Historic)*	*Isotria medeoloides*	T

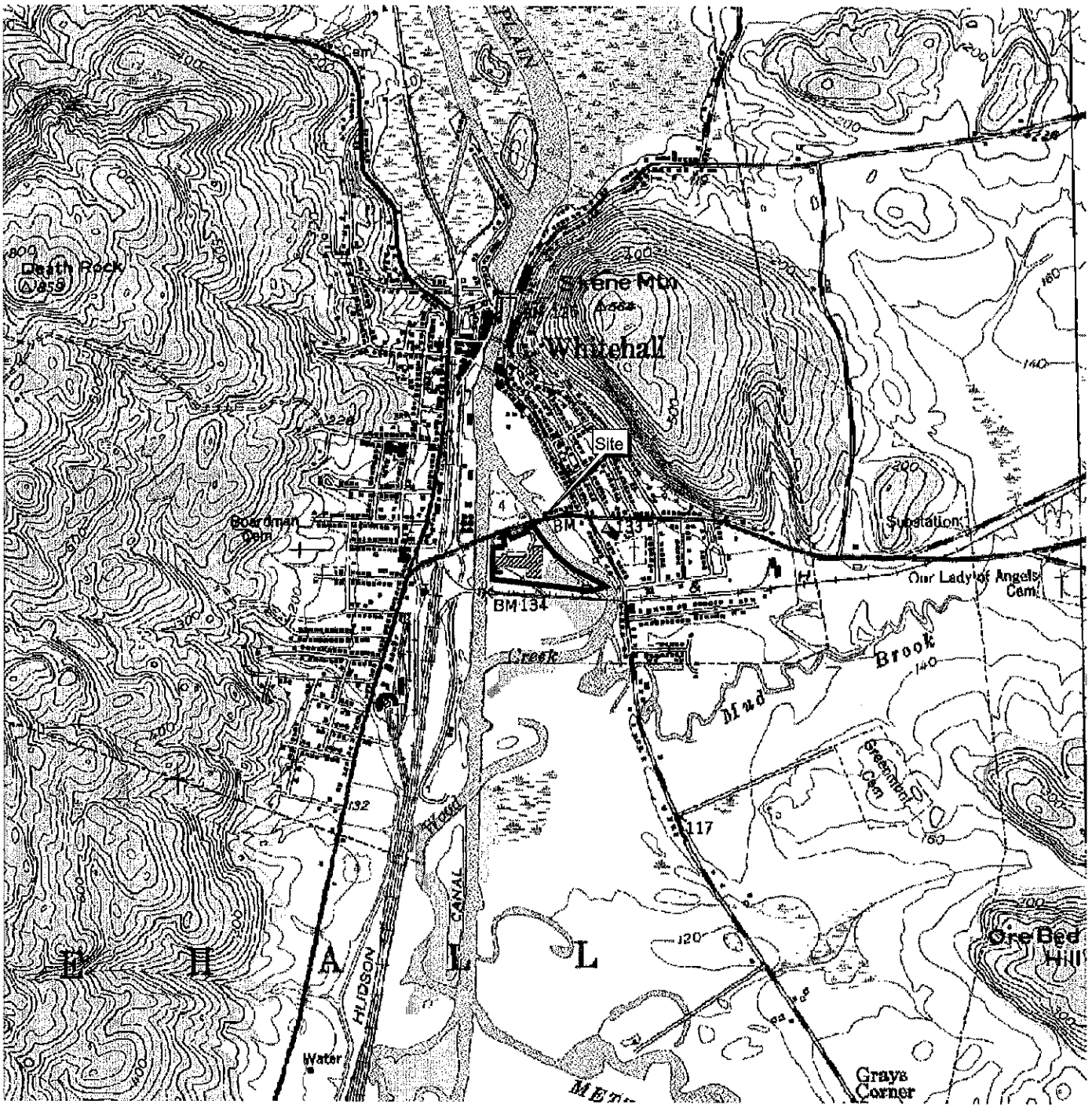
Status Codes: E=Endangered, T=Threatened, P=Proposed, C=Candidate, D=Delisted.

W=Winter S=Summer

Information current as of: 7/14/2010

Attachment A

Site Location Map



MAP REFERENCE
USGS Topographic Map
Whitehall, NY Quadrangle, Dated 2000
7.5 Minute Series, NAD 83 UTM18N
Topo downloaded from CUGIRon 7/8/10

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ARCHITECTURE &
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SURVEY & LAND INFORMATION
SERVICES

C.T.MALE ASSOCIATES, P.C.

50 CENTURY HILL DRIVE, PO BOX 727, LATHAM, NY 12110
PHONE (518) 786-7400 FAX (518) 786-7299

FIGURE 1 SITE LOCATION MAP

Old Champlain Mill

VILLAGE OF WHITEHALL	WASHINGTON COUNTY, NY
SCALE: 1"=1,000'	
DRAFTER: JLM	
PROJECT NO: 06.6448	

Attachment B

USGS Quadrangle Location Sheet

C.T. MALE PROJECT # 06.6448

PROJECT LOCATION (TOWN, COUNTY) Village of Whitehall, Washington County

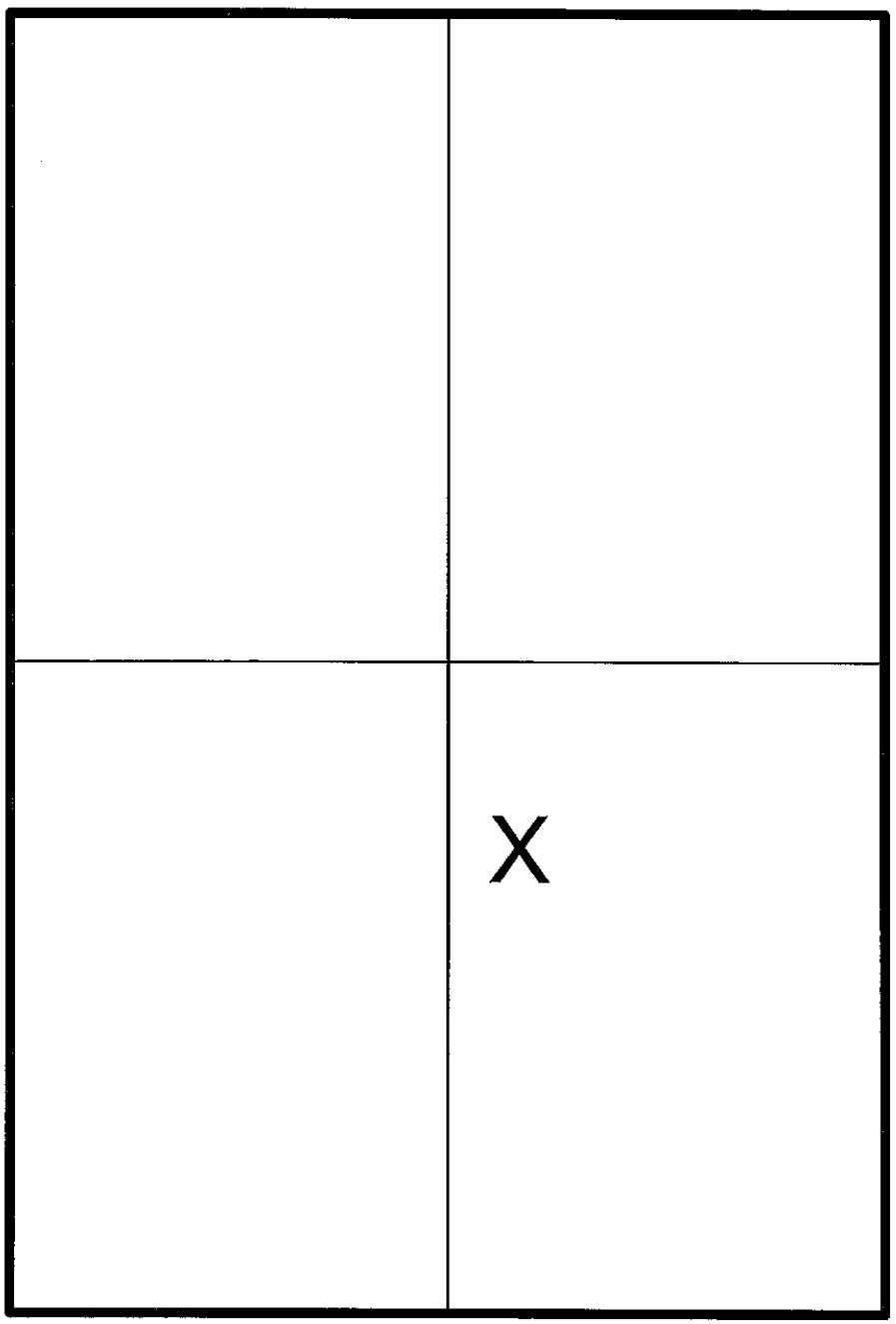
MEASUREMENTS IN INCHES FROM THE EAST SIDE OF THE USGS TOPOGRAPHIC MAP

WEST MEASUREMENT 6.0 inches

MEASUREMENTS IN INCHES FROM THE SOUTH SIDE OF THE USGS TOPOGRAPHIC MAP

NORTH MEASUREMENT 8.0 inches

U.S.G.S. QUADRANGLE NAME Whitehall, NY



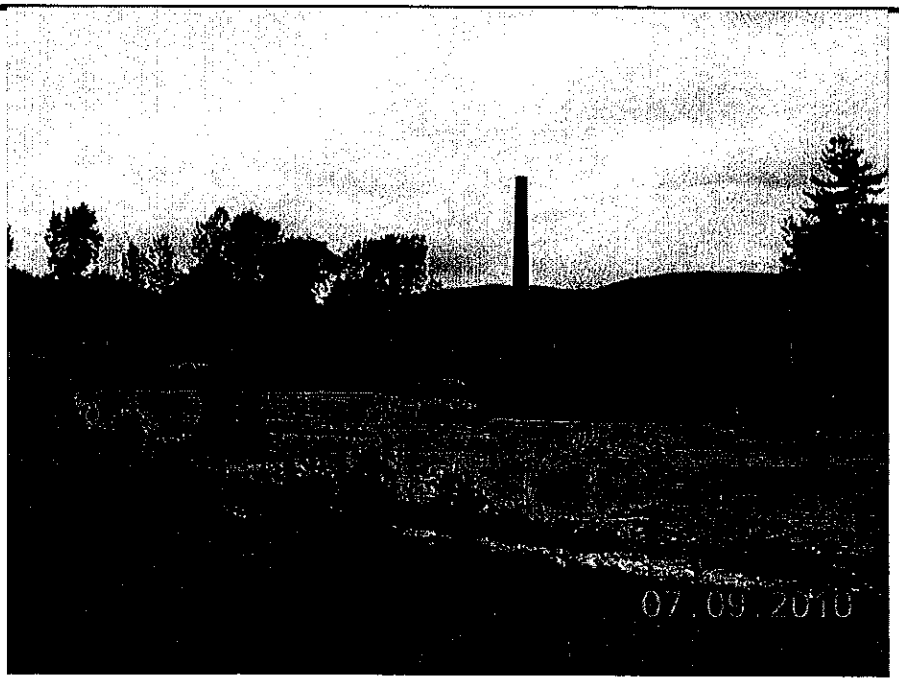
TO SHOW THE APPROXIMATE PROJECT LOCATION ON A USGS QUADRANGLE, PLACE AN X WITHIN THE ADJACENT BOX.

Attachment C

Representative Photographs

REPRESENTATIVE PHOTOGRAPHS

Old Champlain Mill 7/9/10



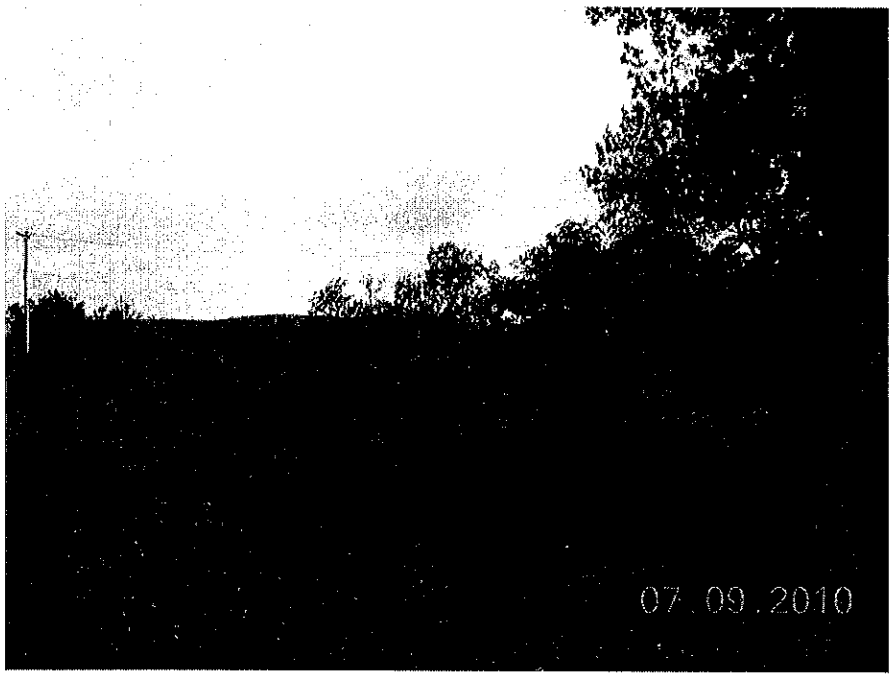
View southwest of entrance to the project site.

View southeast along access road adjacent to earthen berm.

REPRESENTATIVE PHOTOGRAPHS

Old Champlain Mill 7/9/10

View west of access road along the perimeter of Wetland 7.



View west of western portion of the project site.

REPRESENTATIVE PHOTOGRAPHS

Old Champlain Mill 7/9/10

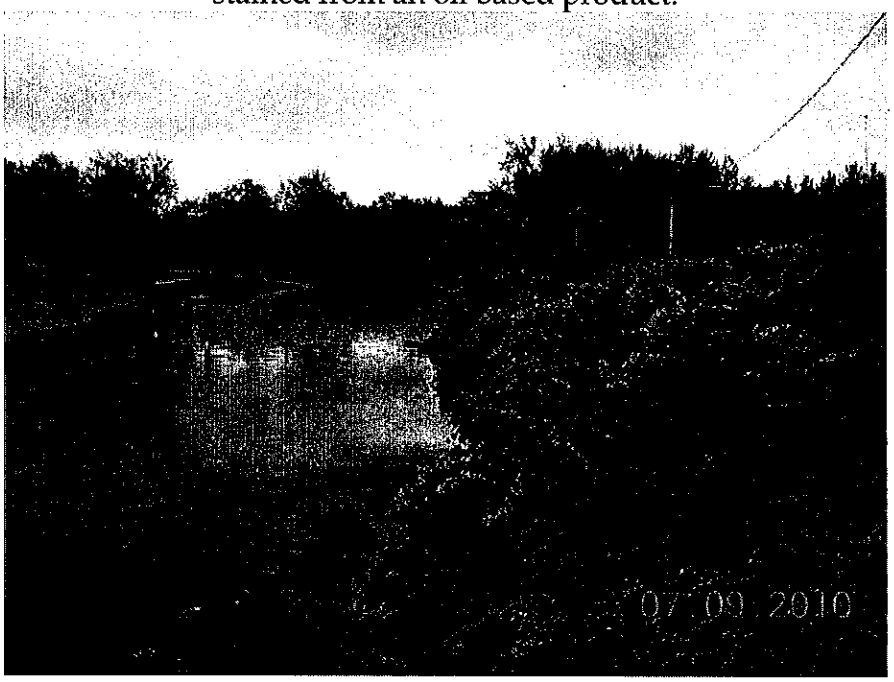
View west of building debris stockpiles in proximity to the remainder of the building foundation.

View west of Wetland 3 from access road.

REPRESENTATIVE PHOTOGRAPHS

Old Champlain Mill 7/9/10

View north of remainder of building foundation observed to be stained from an oil based product.



View southeast of Wood Creek which borders the project site.

Freedom of Information Law (FOIL) Correspondence

New York State Department of Environmental Conservation
FOIL Coordinator, Region 5
1115 NYS Route 86, PO Box 296, Ray Brook, New York 12977
Phone: (518) 897-1241 · **FAX:** (518) 897-1245
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

August 2, 2010

Ms. Jennifer L. McCarry, CPESC-IT
Environmental Scientist
C.T. Male Associates, PC
50 Century Hill Drive
Latham, NY 12110

Re: FOIL Request #10-203
Old Champlain Mill
Whitehall (V), Washington Co.
Records of Wildlife Mortality, Fish Kills or Contaminant Residues in Fish/Wildlife

Dear Ms. McCarry:

This is in response to your FOIL request regarding the above-referenced subject.

Staff has reviewed their files and has found no information responsive to your request.

Sincerely,

Sheryl L. Quinn
FOIL Coordinator - Region 5

slq/10-203

c: L. Nashett
M. Lupo

C.T. MALE ASSOCIATES, P.C.

50 Century Hill Drive, Latham, NY 12110
518.786.7400 FAX 518.786.7299 ctmale@ctmale.com

July 14, 2010

Ms. Sheryl Quinn
Regional FOIL Coordinator
New York State Department of Environmental Conservation, Region 5
1115 State Route 86
Ray Brook, NY 12977-0296

Re: FOIL Request
NYSDEC Environmental Restoration Site #: C-558036
Old Champlain Mill
Village of Whitehall, Washington County, New York
C.T. Male Project No. 06.6448

Dear Ms. Quinn:

C.T. Male Associates, P.C. (C.T. Male) is working on a Remedial Investigation at the above-referenced New York State Department of Environmental Conservation (NYSDEC) Environmental Restoration Program (ERP) site. The site is approximately 11.49 acres located along Wood Creek and U.S. Route 4, in the Village of Whitehall, Washington County, New York (refer to attached Site Location Map).

Pursuant to the Freedom of Information Law (FOIL), please provide information on the following:

- Records of wildlife mortality, fish kills or contaminant residues found in fish and wildlife tissues at the site.

C.T. Male will reimburse for copying expenses. Please call this office before copies are made if the fee exceeds $20.00. If you have any questions or comments regarding this request, or need additional information, please contact me or Dave Plante at (518) 786-7400. Thank you very much for your time.

Sincerely,

C.T. MALE ASSOCIATES, P.C.

Jennifer L. McCarry

Jennifer L. McCarry, CPESC-IT
Environmental Scientist

c: Kirk Moline, Dave Plante (C.T. Male)

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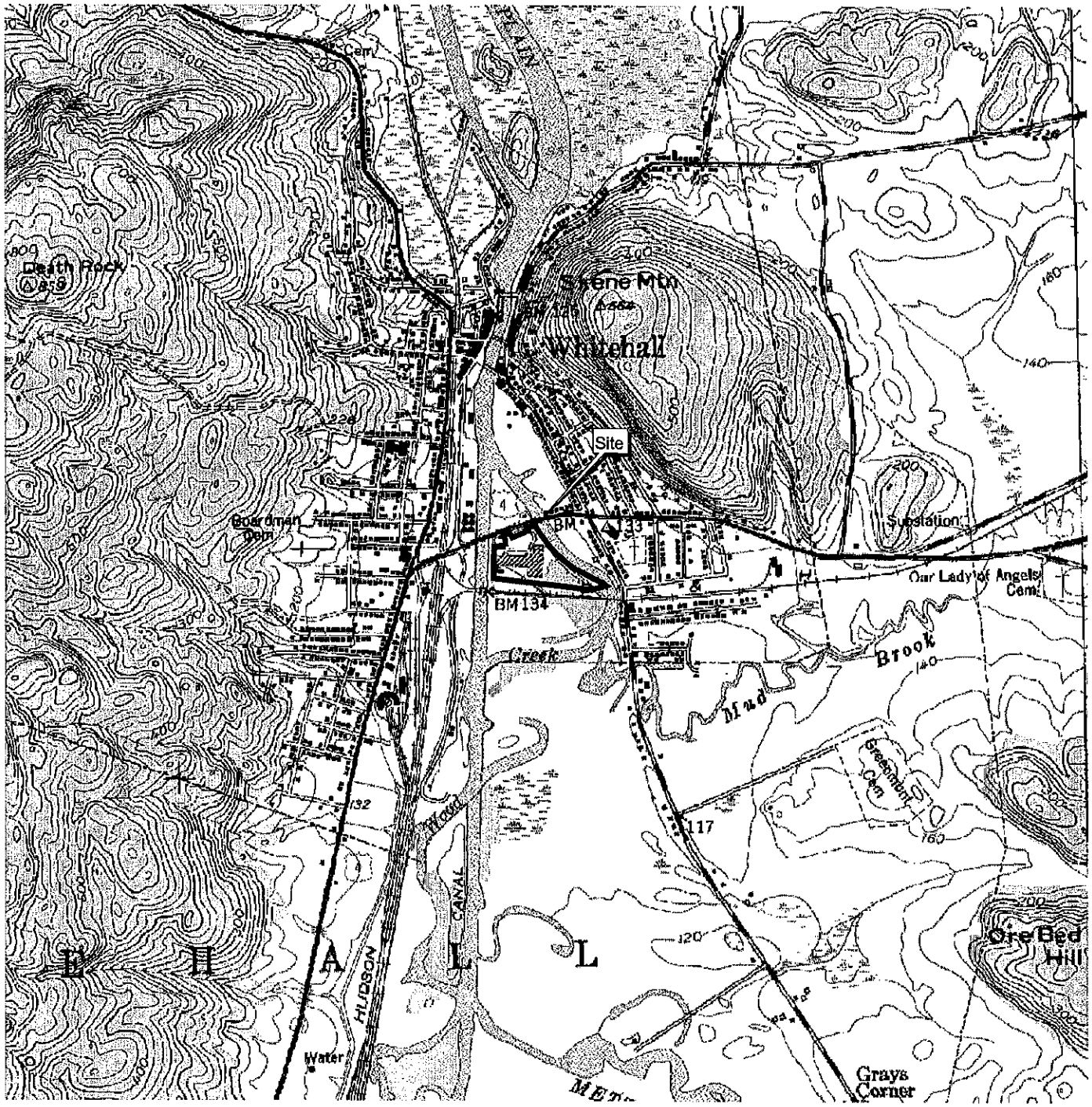

MAP REFERENCE
USGS Topographic Map
Whitehall, NY Quadrangle, Dated 2000
7.5 Minute Series, NAD 83 UTM18N
Topo downloaded from CUGIRon 7/8/10

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SURVEY & LAND INFORMATION
SERVICES

C.T.MALE ASSOCIATES, P.C.

50 CENTURY HILL DRIVE, PO BOX 727, LATHAM, NY 12110
PHONE (518) 786-7400 FAX (518) 786-7299

FIGURE 1 SITE LOCATION MAP

Old Champlain Mill

VILLAGE OF WHITEHALL	WASHINGTON COUNTY, NY
SCALE: 1"=1,000'	
DRAFTER: JLM	
PROJECT NO: 06.6448	

STATE OF NEW YORK
DEPARTMENT OF HEALTH

Corning Tower The Governor Nelson A. Rockefeller Empire State Plaza Albany, New York 12237

Richard F. Daines, M.D.
Commissioner

James W. Clyne, Jr.
Executive Deputy Commissioner

August 12, 2010

Jennifer McCarry
C.T. Male Associates, P.C.
50 Century Hill Drive
Latham, New York 12110

Re: FOIL # 10-07-175

Dear Ms. McCarry:

Your request, under provisions of the Freedom of Information Law (FOIL) for environmental records for Old Champlain Mill, Village of Whitehall, has been reviewed by the Department's Records Access Office (RAO).

The responsible program area within the Department (the Bureau of Toxic Substance Assessment) has forwarded to RAO material as responsive to your request. Enclosed is a CD-ROM containing the requested information.

Should you require additional information or wish to discuss this matter further, please do not hesitate to contact me at (518) 474-8734.

Sincerely,

Robert "Jake" LoCicero, Esq.
Records Access Office

RWL/dme
Enclosure

C.T. MALE ASSOCIATES, P.C.

50 Century Hill Drive, Latham, NY 12110
518.786.7400 FAX 518.786.7299 ctmale@ctmale.com

July 14, 2010

Records Access Office
New York State Department of Health
Corning Tower Room 2348
Albany, New York 12237-0044

Re: *FOIL Request*
NYSDEC Environmental Restoration Site #: C-558036
Old Champlain Mill
Village of Whitehall, Washington County, New York
C.T. Male Project No. 06.6448

To Whom It May Concern:

C.T. Male Associates, P.C. (C.T. Male) is working on a Remedial Investigation at the above-referenced New York State Department of Environmental Conservation (NYSDEC) Environmental Restoration Program (ERP) site. The site is approximately 11.49 acres located along Wood Creek and U.S. Route 4, in the Village of Whitehall, Washington County, New York (refer to attached Site Location Map).

Pursuant to the Freedom of Information Law (FOIL), please provide information on the following:

- Records of wildlife mortality, fish kills or contaminant residues found in fish and wildlife tissues at the site.

C.T. Male will reimburse for copying expenses. Please call this office before copies are made if the fee exceeds $20.00. If you have any questions or comments regarding this request, or need additional information, please contact me or Dave Plante at (518) 786-7400. Thank you very much for your time.

Sincerely,

C.T. MALE ASSOCIATES, P.C.

Jennifer L. McCarry

Jennifer L. McCarry, CPESC-IT
Environmental Scientist

c: Kirk Moline, Dave Plante (C.T. Male)

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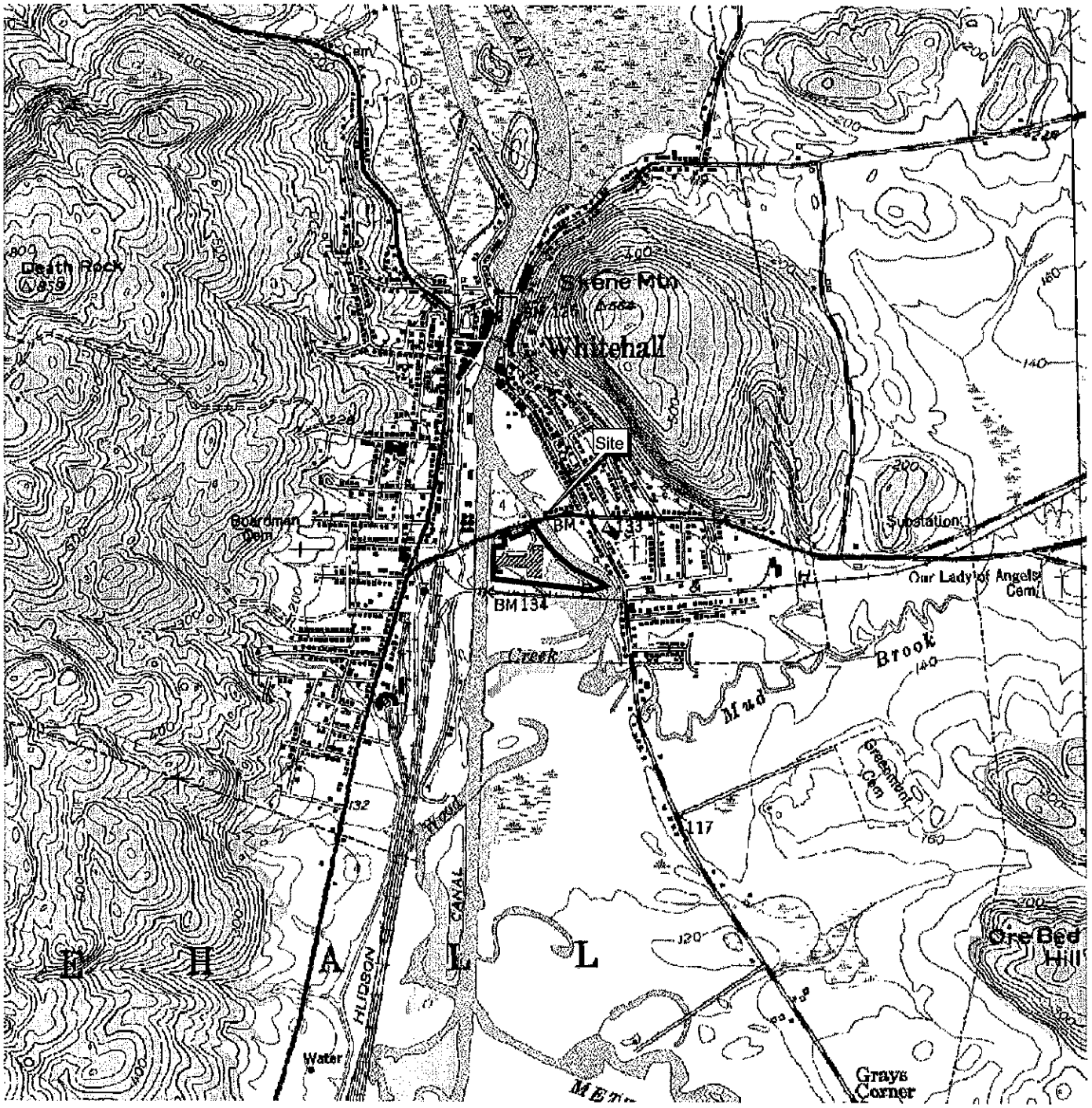

MAP REFERENCE
USGS Topographic Map
Whitehall, NY Quadrangle, Dated 2000
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PHONE (518) 786-7400 FAX (518) 786-7299

FIGURE 1 SITE LOCATION MAP

Old Champlain Mill

VILLAGE OF WHITEHALL	WASHINGTON COUNTY, NY
SCALE: 1"=1,000'	
DRAFTER: JLM	
PROJECT NO: 06.6448	

EXHIBIT 4

DATA USABILITY SUMMARY REPORTS

(NARRATIVE PORTIONS)

C.T. MALE ASSOCIATES, P.C.

SUBJECT: Data Usability Summary Report (DUSR)
Old Champlain Mill ERP Site
Chemtech SDG Nos.: B1234, B1281, B1353, B1658, B1671 and B1728
C.T. Male Project No.: 06.6448

DATE: June 8, 2010

Between January 27, 2010 and March 25, 2010, C.T. Male Associates, P.C. (C. T. Male) collected thirty nine (39) soil samples, plus three (3) field duplicates, and twenty (20) water samples, plus two (2) field duplicates, from the Old Champlain Mill ERP site. The samples were submitted, along with five (5) equipment blanks and five (5) trip blanks to Chemtech Laboratories, Inc. (Chemtech) in Mountainside, NJ for the following analyses:

SDG	Samples	Sample Date	Matrix	VOC, SW-846 8260B	SVOC , SW-846 8270C	Pesticides, SW-846 8081A	PCBs, SW-846 8082B	TAL Metals, SW-846 6010 and 7470A/7471B
B1234	BMW-12A-S-1	1/27/2010	Soil	1	1	1	1	1
B1234	BMW-12A-S-9	1/27/2010	Soil	1	0	0	0	0
B1234	BMW-13A-S-1	1/28/2010	Soil	1	1	1	1	1
B1234	BMW-13A-S-8	1/28/2010	Soil	1	0	0	0	0
B1234	BMW-11A-S-2	1/28/2010	Soil	1	0	0	0	0
B1234	BMW-11A-S-8	1/28/2010	Soil	1	0	0	0	0
B1234	BMW-17A-S-1	1/29/2010	Soil	1	1	1	1	1
B1234	BMW-17A-S-9	1/29/2010	Soil	1	0	0	0	0
B1281	BMW-19A-S-1	2/1/2010	Soil	1	1	1	1	1
B1281	BMW-19A-S-6	2/1/2010	Soil	1	0	0	0	0
B1281	BMW-18A-S-1	2/1/2010	Soil	1	1	1	1	1
B1281	BMW-18A-S-7	2/1/2010	Soil	1	0	0	0	0
B1281	BMW-FD-1	2/1/2010	Soil	1	1	1	1	1
B1281	BMW-14A-S-1	2/2/2010	Soil	1	1	1	1	1
B1281	BMW-14A-S-7	2/2/2010	Soil	1	0	0	0	0
B1281	BMW-EB-1	2/2/2010	Water	1	1	1	1	1
B1281	BMW-15A-S-1	2/2/2010	Soil	1	1	1	1	1
B1281	BMW-15A-S-6	2/2/2010	Soil	1	0	0	0	0
B1281	BMW-16A-S-2	2/3/2010	Soil	1	1	1	1	1
B1281	BMW-16A-S-8	2/3/2010	Soil	1	0	0	0	0
B1281	Transport Blank	-	Water	1	0	0	0	0
B1353	Transport Blank	-	Water	1	0	0	0	0
B1353	BMW-14A	2/10/2010	Water	1	1	1	1	1

SDG	Samples	Sample Date	Matrix	VOC, SW-846 8260B	SVOC , SW-846 8270C	Pesticides, SW-846 8081A	PCBs, SW-846 8082B	TAL Metals, SW-846 6010 and 7470A/7471B
B1353	BMW-18A	2/10/2010	Water	1	1	1	1	1
B1353	BMW-FD-02	2/11/2010	Water	1	1	1	1	1
B1353	BMW-19A	2/10/2010	Water	1	1	1	1	1
B1353	BMW-15A	2/10/2010	Water	1	1	1	1	1
B1353	BMW-17A	2/10/2010	Water	1	1	1	1	1
B1353	BMW-EB-02	2/11/2010	Water	1	1	1	1	1
B1353	BMW-16A	2/11/2010	Water	1	1	1	1	1
B1353	BMW-11A	2/11/2010	Water	1	1	1	1	1
B1353	BMW-12A	2/11/2010	Water	1	1	1	1	1
B1353	BMW-13A	2/11/2010	Water	1	1	1	1	1
B1658	TP-1-S-4	3/18/2010	Soil	1	1	1	1	1
B1658	TP-4-S-3	3/18/2010	Soil	1	1	1	1	1
B1658	TPEB01	3/18/2010	Water	1	1	1	1	1
B1658	Transport Blank	-	Water	1	0	0	0	0
B1658	TP-3-S-2	3/18/2010	Soil	1	1	1	1	1
B1658	TP-2-S-5	3/18/2010	Soil	1	1	1	1	1
B1671	SS-17	3/19/2010	Soil	1	1	1	1	1
B1671	SS-16	3/19/2010	Soil	1	1	1	1	1
B1671	SS-15	3/19/2010	Soil	1	1	1	1	1
B1671	SS-14	3/19/2010	Soil	1	1	1	1	1
B1671	SS-13	3/19/2010	Soil	1	1	1	1	1
B1671	SS-21	3/19/2010	Soil	1	1	1	1	1
B1671	SS-23	3/19/2010	Soil	1	1	1	1	1
B1671	SS-20	3/19/2010	Soil	1	1	1	1	1
B1671	SS-19	3/19/2010	Soil	1	1	1	1	1
B1671	SS-22	3/19/2010	Soil	1	1	1	1	1
B1671	FDSS031910	3/19/2010	Soil	1	1	1	1	1
B1671	SS-18	3/19/2010	Soil	1	1	1	1	1
B1671	EBSS031910	3/19/2010	Water	1	1	1	1	1
B1671	SS-11	3/19/2010	Soil	1	1	1	1	1
B1671	SS-12	3/19/2010	Soil	1	1	1	1	1
B1671	WS-1	3/19/2010	Soil	1	1	1	1	1

SDG	Samples	Sample Date	Matrix	VOC, SW-846 8260B	SVOC , SW-846 8270C	Pesticides, SW-846 8081A	PCBs, SW-846 8082B	TAL Metals, SW-846 6010 and 7470A/7471B
B1671	WS-2	3/19/2010	Soil	1	1	1	1	1
B1671	WS-3	3/19/2010	Soil	1	1	1	1	1
B1671	WS-4	3/19/2010	Soil	1	1	1	1	1
B1671	FDWS031910	3/19/2010	Soil	1	1	1	1	1
B1671	Transport Blank	-	Water	1	0	0	0	0
B1728	Transport Blank	-	Water	1	0	0	0	0
B1728	BMW-16A	3/25/2010	Water	1	0	0	0	0
B1728	MW-5A	3/25/2010	Water	1	0	0	0	0
B1728	MW-3A	3/25/2010	Water	1	0	0	0	0
B1728	MW-8A	3/25/2010	Water	1	0	0	0	0
B1728	MW-4A	3/25/2010	Water	1	1	1	1	1
B1728	MW-2A	3/25/2010	Water	1	1	1	1	1
B1728	MW-8	3/25/2010	Water	1	1	1	1	1
B1728	FDGW032510	3/25/2010	Water	1	1	1	1	1
B1728	EBGW032510	3/25/2010	Water	1	1	1	1	1
B1728	WSW-1	3/25/2010	Water	1	1	1	1	1
B1728	WSW-2	3/25/2010	Water	1	1	1	1	1
B1728	WSW-3	3/25/2010	Water	1	1	1	1	1
B1728	WSW-4	3/25/2010	Water	1	1	1	1	1
			Total	**74**	**55**	**55**	**55**	**55**

VOC – Volatile organic compounds
SVOC – Semi-volatile organic compounds
PCBs – Polychlorinated Biphenyls

C. T. Male evaluated the data reported by the laboratory to determine usability per Appendix 2B of the *Draft DER-10 Technical Guidance for Site Investigation and Remediation* (NYSDEC, December 2002), with guidance from the *USEPA CLP National Functional Guidelines for Organic and Inorganic Data Review* (October 1999 and 2004, respectively). The following criteria were reviewed:

- Completeness of data package as defined under the requirements for the NYSDEC ASP Category B or USEPA CLP deliverables;
- Holding time compliance for chemical analysis;
- Protocol required limits and specification compliance for quality control (QC) data (e.g., instrument tuning, calibration standards, blank results, spike results, duplicate results, etc);
- Contract compliance for analytical protocols;

- Omissions and transcription errors; and
- Data qualification.

Data Completeness

Documentation required by the project was included in the data package. There were no discrepancies found between the raw data and summary forms. The laboratory Case Narratives (Attachment A) identified deviations from laboratory analytical specifications. C.T. Male reviewed these QC results to determine if sample results should be qualified based on the criteria provided in Appendix 2B of the *Technical Guidance for Site Investigation and Remediation*. QC exceedences and data qualification recommendations are presented in the Data Evaluation Checklists (Attachment B). Qualified sample results are presented in the laboratory summary forms, which are located in Attachment C.

QC exceedences and data qualification recommendations are summarized below. It is recommended that results from the initial analyses of each sample be reported as the representative results for that sample except where noted below.

It is recommended that sample results which were reported by the laboratory as exceeding the calibration range (E-flagged), be reported from the analysis at the lowest dilution with results within calibration range.

Sample Condition upon Receipt and Holding Times

Chemtech received all the samples listed on the chain of custody (COC) records intact and in good condition. The temperature of samples were within laboratory specification limits of 2 to 6°C upon receipt.

Project samples were prepared and analyzed within EPA-established holding times from the verified time of sample receipt (VTSR).

Volatile Organic Analysis (VOA) by SW-846 8260B

Project samples were analyzed within 12 hours of the performance check standard, BFB. Percent relative abundance of all ions met the criteria specified in Table 4 of the EPA SW-846 Method 8260B. Laboratory specifications were met during the initial and continuing calibrations associated with the project samples. In addition the average relative response factor (RRF) was greater than or equal to 0.05 for target analytes during the initial and continuing calibrations. The percent relative standard deviation (%RSD) between RRF was less than or equal to 30% during the initial calibration, and the percent difference (%D) between the initial calibration average RRF and continuing calibration RRF was less than or equal to 25% for target analytes except the following:

- SDG B1281 – Acetone and methyl acetate during the initial calibration associated with the analyses of samples Transport Blank and BMW-EB-1; and methyl acetate during the initial calibration associated with the analyses of samples BMW-19A-S-1, BMW-19A-S-6, BMW-18A-S-1, BMW-18A-S-7, BMW-FD-1, BMW-14A-S-7, BMW-15A-S-1, BMW-15A-S-6, BMW-16A-S-2 and BMW-16A-S-8. Acetone during the continuing calibration associated with the diluted analysis of sample BMW-16A-S-8; bromomethane and methyl acetate during the

continuing calibration associated with the analyses of samples Transport Blank and BMW-EB-1; and 1,2-dibromo-3-chloropropane during the continuing calibration associated with the analysis of sample BMW-14A-S-1. The associated results have been qualified as estimated (J/UJ) due to poor correlation in the calibration standards.

- SDG B1353 – Dichlorodifluoromethane during the initial calibration associated with the analyses of the project samples in this SDG. Acetone during the continuing calibration associated with the analyses of samples BMW-14A, BMW-FD-02 and BMW-19A; and tetrachloroethene during the continuing calibration associated with the analyses of samples Transport Blank, BMW-EB-02, BMW-15A, BMW-17A, BMW-16A, BMW-11A, BMW-12A and BMW-13A. The associated results have been qualified as estimated (J/UJ) due to poor correlation in the calibration standards.
- SDG B1658 – Dichloroethane during the initial calibration associated with the analyses of samples TP-1-S-4, TP-4-S-3 and TP-3-S-2. The associated results have been qualified as estimated (J/UJ) due to poor correlation in the calibration standards.
- SDG B1671 – Bromomethane during the initial calibration associated with the analyses of samples Transport Blank and EBSS031910. The associated results have been qualified as estimated (J/UJ) due to poor correlation in the calibration standards.
- SDG B1728 – Bromomethane during the initial calibration associated with the analyses of the project samples in this SDG. The associated results have been qualified as estimated (J/UJ) due to poor correlation in the calibration standards.

Surrogate recovery and internal standard results met laboratory specifications for project samples except the following:

- SDG B1234, Internal Standards –
  - BMW-17A-S-1 – 1,4-Dichlorobenzene-d4 was below specifications during the initial and reanalysis, and chlorobenzene-d5 was below specifications during the initial analysis. The associated results have been qualified as estimated (J/UJ) due to interference.
    - It is recommended that the VOA results from the reanalysis of BMW-17A-S-1 be reported as representative results for that sample.
- SDG B1281, Surrogates –
  - BMW-16A-S-8 – The percent recovery (%R) for toluene-d8 exceeded specifications during the diluted analysis. The reported detected results from the diluted analysis of BMW-16A-S-8 have been qualified as estimated (J) due to interference.
- SDG B1281, Internal Standards –
  - BMW-16A-S-8 – 1,4-Dichlorobenzene-d4 was below specifications during the analysis. The associated results have been qualified as estimated (J/UJ) due to interference.

The %R results for laboratory control sample (LCS) and LCS duplicate (LCSD) analysis were within laboratory specifications for the target analytes except the following:

- SDG B1281 – The %R for acetone exceeded specifications during the LCS and LCSD associated with the analyses of the Transport Blank and BMW-EB-1. The associated detected results for acetone have been qualified as estimated (J) due to analytical inaccuracy.
- SDG B1728 – The %R for acetone exceeded specifications during the LCS associated with the analyses of samples MW-8A, MW-4A, MW-8, WSW-2, WSW-3, MW-2A, FDGW032510 and

the diluted analysis of MW-3A . The associated detected results for acetone have been qualified as estimated (J) due to analytical inaccuracy.

A method blank was reported for each analytical batch. Equipment blanks and transport blanks were also submitted to the laboratory for VOA associated with SDGs B1281, B1353, B1658, B1671 and B1728. Tentatively identified compounds (TICs) were not detected during the analyses of the equipment or transport blanks. A TIC was detected during the analysis of the method blank associated with the samples in SDGs B1658 and B1671. Acetone and methylene chloride (common laboratory blank contaminants) were detected during the analysis of the transport and equipment blanks associated with the samples in SDGs B1353 and B1671. Methylene chloride was also detected during the anlaysis of the equipment and transport blanks associated with the samples in SDG B1658. Action levels were developed by multiplying the highest concentration observed among the associated blank by a factor of 5 and by a factor of 10 for the common laboratory blank contaminates. Results in the associated samples reported below the action level have been have been qualified as non-detect (U) and the detection limit has been elevated to the amount detected in the sample.

Criteria for accuracy and precision were met during the matrix spike (MS) and MS duplicate (MSD) analyses of samples BMW-12A-S-9, BMW-14A-S-1, BMW-18A, SS-18, WS-2 and WSW-2 for target analytes.

A field duplicate evaluation was performed on samples BMW-FD-1 (blind field duplicate) and BMW-18A-S-1. Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples BMW-FD-02 (blind field duplicate) and BMW-16A. Refer to Attachment B-7 for the duplicate evaluation. Criteria for precision was achieved for target analytes.

A field duplicate evaluation was performed on samples FDSS031910 (blind field duplicate) and SS-22. Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples FDWS031910 (blind field duplicate) and WS-4. Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples FDGW032510 (blind field duplicate) and MW-2A. Refer to Attachment B-16 for the duplicate evaluation. Acetone has been qualified as estimated (J/UJ) due to analytical imprecision.

Semi-volatile Organic Analysis (SVOA) by SW-846 8270C

Project samples were analyzed within 12 hours of the performance check standard, DFTPP. Percent relative abundance of ions met the criteria specified in Table 3 of the EPA SW-846 Method 8270C. Laboratory specifications were met during the initial and continuing calibrations associated with the project samples. In addition the average RRF was greater than or equal to 0.05 for target analytes during the initial and continuing calibrations. The %RSD between RRF was less than or equal to 30% during the initial calibration, and the %D between the initial calibration average RRF and continuing calibration RRF was less than or equal to 25% for target analytes except the following:

- SDG B1234 – Benzaldehyde during the initial calibration associated with the analyses of the project samples in this SDG. The associated results have been qualified as estimated (J/UJ) due to poor correlation in the calibration standards.
- SDG B1281 – Benzaldehyde during the initial calibration associated with the analyses of the project samples in this SDG. The associated results have been qualified as estimated (J/UJ) due to poor correlation in the calibration standards.
- SDG B1353 – Benzaldehyde, 2,4-dinitrophenol and 4,6-dinitro-2-methylphenol during the initial calibration associated with the analyses of samples Transport Blank, BMW-14A, BMW-18A, BMW-FD-02, BMW-19A, BMW-15A, BMW-17A, BMW-EB-02, BMW-11A and BMW-12A; and 4,6-dinitro-2-methylphenol during the continuing calibration associated with the analyses of samples Transport Blank, BMW-14A, BMW-18A, BMW-FD-02, BMW-19A, BMW-15A, BMW-17A, BMW-EB-02, BMW-11A and BMW-12A. The associated results have been qualified as estimated (J/UJ) due to poor correlation in the calibration standards.
- SDG B1658 – 2,4-Dinitrophenol during the initial calibration associated with the analyses of the samples in this SDG; hexachlorocyclopentadiene during the continuing calibration associated with the analyses of samples TP-1-S-4, TP-4-S-3, TP-3-S-2 and TP-2-S-5; and benzaldehyde during the continuing calibration associated with the analysis of sample TPEB01. The associated results have been qualified as estimated (J/UJ) due to poor correlation in the calibration standards.
- SDG B1671 – 2,4-Dinitrophenol during the initial calibration associated with the analyses of the samples in this SDG; and hexachlorobutadiene, hexachlorocyclopentadiene and pentachlorophenol during the continuing calibration associated with the analyses of samples SS-16, SS-15, SS-21, SS-22, SS-18 and EBSS031910. The associated results have been qualified as estimated (J/UJ) due to poor correlation in the calibration standards.

Surrogate recoveries and internal standard results met laboratory specifications for project samples except the following:

- SDG B1728, Surrogates –
  - WSW-2 – The %R for 2-fluorophenol, phenol-d5 and 2,4,6-tribromophenol was below specifications during the initial and reanalysis. The associated acid results have been qualified as estimated (J/UJ) due to interference.

The %R results for LCS/LCSD analyses were within laboratory specifications for target analytes except the following:

- SDG B1234 –The %R for benzaldehyde was below specifications during the LCS associated with the analyses of the project samples in this SDG. The associated results for benzaldehyde have been qualified as estimated (J/UJ) due to analytical inaccuracy.
- SDG B1281 – The %R for benzaldehyde was below specifications during the LCS and LCSD associated with the analysis of sample BMW-EB-1; and the %R for benzaldehyde was below specifications during the LCS associated with the analyses of the soil samples in this SDG. The associated results for benzaldehyde have been qualified as estimated (J/UJ) due to analytical inaccuracy.
- SDG B1658 – The relative percent difference (%RPD) between the LCS and LCSD for phenol exceeded specifications during the LCS/LCSD associated with the analysis of sample TPEB01. The associated results for phenol have been qualified as estimated (J/UJ) due to analytical imprecision.

A method blank was reported for each analytical batch. Equipment blanks were also submitted to the laboratory for SVOA associated with SDGs B1281, B1353, B1658, B1671 and B1728. Dimethylphthalate and several TICs were detected during the analysis of the method blanks associated with SDGs B1234 and B1658; acetophenone, bis(2-ethylhexyl)phthalate, dimethylphthalate and several TICs were detected during the analysis of the method and equipment blanks associated with SDGs B1281 and B1671; bis(2-ethylhexyl)phthalate and several TICs were detected during the analysis of the method and equipment blanks associated with SDG B1353; and acetophenone and several TICs were detected during the analysis of the method and equipment blanks associated with SDG B1728. Action levels were developed by multiplying the highest concentration observed among the associated blank by a factor of 5. Results in the associated samples reported below the action level have been qualified as non-detect (U) and the detection limit has been elevated to the amount detected in the sample.

Criteria for accuracy and precision were met during the matrix spike (MS) and MS duplicate (MSD) analyses of samples BMW-13A-S-1, BMW-14A-S-1, BMW-18A, TP-1-S-4, SS-18, WS-2 and WSW-2 for target analytes except the following:

- BMW-13A-S-1 – The %R for benzaldehyde was below specifications during the MS and MSD analysis. The associated results have been qualified as estimated (UJ) due to analytical inaccuracy.
- BMW-14A-S-1 – The %R for benzaldehyde was below specifications during the MS and MSD analysis. The associated results have been qualified as estimated (UJ) due to analytical inaccuracy. The %RPD between the MS and MSD for 4-chloroaniline and 3,3-dichlorobenzidine exceeded specifications. The associated results have been qualified as estimated (UJ) due to analytical imprecision.
- TP-1-S-4 – The %RPD between the MS and MSD for 4-chloroaniline exceeded specifications. The associated results have been qualified as estimated (UJ) due to analytical imprecision.
- WS-2 – The %R for 2,4-dinitrophenol was below specifications during the MS and MSD analysis. The associated results have been qualified as estimated (UJ) due to analytical inaccuracy.
- WSW-2 – The %R for benzaldehyde, phenol, 2-chlorophenol, 2-nitrophenol, 4-nitrophenol and 4,6-dinitro-2-methylphenol were below specifications during the MS and MSD analysis. The associated results have been qualified as estimated (UJ) due to analytical inaccuracy. The %RPD between the MS and MSD for phenol, 4-chloroaniline, 3-nitroaniline and 3,3-dichlorobenzidine exceeded specifications. The associated results have been qualified as estimated (UJ) due to analytical imprecision.

A field duplicate evaluation was performed on samples BMW-FD-1 (blind field duplicate) and BMW-18A-S-1. Refer to Attachment B-5 for the duplicate evaluation. Phenanthrene, fluoranthene, pyrene and benzo(a)pyrene have been qualified as estimated (J/UJ) due to analytical imprecision.

A field duplicate evaluation was performed on samples BMW-FD-02 (blind field duplicate) and BMW-16A. Refer to Attachment B-7 for the duplicate evaluation. Naphthalene, acenaphthene and antracene have been qualified as estimated (J/UJ) due to analytical imprecision.

A field duplicate evaluation was performed on samples FDSS031910 (blind field duplicate) and SS-22. Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples FDWS031910 (blind field duplicate) and WS-4. Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples FDGW032510 (blind field duplicate) and MW-2A. Criteria for precision was achieved as target analytes were not detected in the associated samples.

Pesticide Analysis by SW-846 8081A

Laboratory specifications were met during the initial and continuing calibrations. The %RSD between RRF was less than or equal to 30% during the initial calibration, and the %RPD between the initial calibration average RRF and continuing calibration RRF was less than or equal to 25% for target analytes.

Surrogate recoveries met laboratory specifications for project samples.

The %R results for LCS analysis were within laboratory specifications for target analytes except the following:

- SDG B1658 – The %RPD between the LCS and LCSD for alpha-BHC exceeded specifications during the LCS/LCSD associated with the analysis of sample TPEB01. The associated results for phenol have been qualified as estimated (J/UJ) due to analytical imprecision.

A method blank was reported for each analytical batch. Equipment blanks were also submitted to the laboratory for pesticide analysis associated with SDGs B1281, B1353, B1658, B1671 and B1728. Target compounds were not detected during the analyses of the method blanks or the equipment blanks.

Criteria for accuracy and precision were met for target analytes during the MS and MSD analysis of samples BMW-11A-S-2, BMW-14A-S-1, BMW-18A, TP-2-S-5, SS-18, WS-2 and WSW-2, except the following:

- BMW-11A-S-1 – The %R for alpha-BHC, gamma-BHC and heptachlor were below specifications during the MS and MSD analysis. The associated results have been qualified as estimated (UJ) due to analytical inaccuracy. The %RPD between the MS and MSD for endosulfan sulfate, alpha-BHC, beta-BHC, delta-BHC, endosulfan II, alpha-chlordane, gamma-chlordane, endrin ketone, methoxychlor, 4,4-DDD, 4,4-DDE, endrin aldehyde, heptachlor and endosulfan I exceeded specifications. The associated results have been qualified as estimated (UJ) due to analytical imprecision.
- SS-18 – The %RPD between the MS and MSD for alpha-BHC exceeded specifications. The associated results have been qualified as estimated (UJ) due to analytical imprecision.
- WSW-2 – The %R for aldrin, alpha-BHC, endosulfan II, alpha-chlordane, gamma-chlordane, endrin ketone, gamma-BHC, dieldrin, endrin, 4,4-DDE, heptachlor and endosulfan I were below specifications during the MS and MSD analysis. The associated results have been qualified as estimated (UJ) due to analytical inaccuracy. The %RPD between the MS and MSD for heptachlor epoxide, endosulfan sulfate, aldrin, alpha-BHC, beta-BHC, delta-BHC, endosulfan II, alpha-chlordane, gamma-chlordane, endrin ketone, gamma-BHC, dieldrin, endrin, methoxychlor, 4,4-DDD, 4,4-DDE, endrin aldehyde, heptachlor and endosulfan I exceeded specifications. The associated results have been qualified as estimated (UJ) due to analytical imprecision.

A field duplicate evaluation was performed on samples BMW-FD-1 (blind field duplicate) and BMW-18A-S-1. Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples BMW-FD-02 (blind field duplicate) and BMW-16A. Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples FDSS031910 (blind field duplicate) and SS-22. Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples FDWS031910 (blind field duplicate) and WS-4. Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples FDGW032510 (blind field duplicate) and MW-2A. Criteria for precision was achieved as target analytes were not detected in the associated samples.

PCB Analysis by SW-846 8082B

Laboratory specifications were met during the initial and continuing calibrations. The %RSD between RRF was less than or equal to 30% during the initial calibration, and the %D between the initial calibration average RRF and continuing calibration RRF was less than or equal to 25% for target analytes.

Surrogate recoveries met laboratory specifications for project samples.

The %R results for LCS analysis were within laboratory specifications for the target analytes aroclor 1016 and aroclor 1260.

A method blank was reported for each analytical batch. Equipment blanks were also submitted to the laboratory for pesticide analysis associated with SDGs B1281, B1353, B1658, B1671 and B1728. Target compounds were not detected during the analyses of the method blanks or the equipment blanks.

Criteria for accuracy and precision were met for target analytes during the MS and MSD analysis of samples BMW-11A-S-2, BMW-14A-S-1, BMW-18A, TP-2-S-5, SS-18, WS-2 and WSW-2, except the following:

- BMW-11A-S-1 – The %RPD between the MS and MSD for Aroclor 1260 and Aroclor 1016 exceeded specifications. The associated results have been qualified as estimated (UJ) due to analytical imprecision.
- WSW-2 – The %R for Aroclor 1260 and Aroclor 1016 were below specifications during the MS and MSD analysis. The associated results have been qualified as estimated (UJ) due to analytical inaccuracy. The %RPD between the MS and MSD for Aroclor 1260 and Aroclor 1016 exceeded specifications. The associated results have been qualified as estimated (UJ) due to analytical imprecision.

A field duplicate evaluation was performed on samples BMW-FD-1 (blind field duplicate) and BMW-18A-S-1. Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples BMW-FD-02 (blind field duplicate) and BMW-16A. Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples FDSS031910 (blind field duplicate) and SS-22. Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples FDWS031910 (blind field duplicate) and WS-4. Criteria for precision was achieved as target analytes were not detected in the associated samples.

A field duplicate evaluation was performed on samples FDGW032510 (blind field duplicate) and MW-2A. Criteria for precision was achieved as target analytes were not detected in the associated samples.

Metals and Mercury Analysis by SW-846 6010B and 7470A/7471B

The inductively coupled plasma (ICP) instrument was calibrated according to the SW-846 Methods 6010B and 7470A/7471B. All samples were bracketed by ICV/CCV with recoveries that were within 80-120% for mercury and 90-110% of the true value for all other target metals.

Recovery of the ICP interference check sample fell within 80-120% of the true standard concentration for all target analytes.

Laboratory specifications (80-120%R) were met during the LCS analysis for target metals.

The %R of the contract required detection limit (CRDL) standard fell within 70-130% of the true value for target metals.

A method blank was reported for each batch, and a calibration blank was analyzed at the beginning, after every 10 samples, and at the end of each batch. Equipment blanks were also submitted to the laboratory for metals analysis associated with SDGs B1281, B1353, B1658, B1671 and B1728. Refer to Attachments B-1, B-3, B-8 and B-10 for blank contamination evaluations associated with the soil samples. Target metals were not detected in the blanks associated with the water samples except aluminum, calcium, magnesium, mercury, sodium, thallium and zinc were detected above the detection limit during the analysis of the blanks associated with the project samples in SDG B1353; and aluminum, barium, cadmium, calcium, iron, magnesium, manganese, mercury, potassium, sodium, thallium and zinc were detected above the detection limit during the analysis of the blanks associated with the project samples in SDG B1728. Action levels were developed by multiplying the highest concentration observed among all associated blanks within the SDG by a factor of 5. Samples with results reported below the action level have been have been qualified as non-detect (U) and the detection limit has been elevated to the amount detected in the sample.

Criteria for accuracy and precision were met during the MS/MSD analysis of samples BMW-17A-S-1, BMW-14A-S-1, BMW-18A, TPEB01, SS-18, WS-2 and WSW-2 for target metals except the following:

- TPEB01 – The %R during the MS and MSD was below specifications for silver and thallium. The associated results have been qualified as estimated (UJ) due to analytical inaccuracy.
- SS-18 – The %RPD between the MS and MSD was below specifications for antimony. The associated results have been qualified as estimated (UJ) due to analytical imprecision.

Significant chemical and matrix interference were not observed during the serial dilution analyses of samples BMW-17A-S-1, BMW-14A-S-1, BMS-18A, TPEB01, SS-18, WS-2 and WSW-2. The %D between initial and serially diluted results was less than 10% for those target metals with results greater than fifty times the detection limit except the following:

- BMW-17A-S-1 – Copper has been qualified as estimated (J) due to chemical and matrix interference.

A laboratory duplicate evaluation was performed on samples BMW-17A-S-1, BMW-14A-S-1, BMW-18A, TPEB01, SS-18, WS-2 and WSW-2. Refer to Attachments B-2, B-4, B-6, B-9, B-11, B-12 and B-15 for the duplicate evaluations. Criteria for precision was achieved for detected results in samples BMW-14A-S-1, BMW-18A, TPEB01, SS-18, WS-2 and WSW-2. Results for sodium have been qualified as estimated (J) in sample BMW-17A-S-1 due to analytical imprecision.

A laboratory duplicate evaluation was performed on samples BMW-17A-S-1, BMW-14A-S-1, BMW-18A, TPEB01, SS-18, WS-2 and WSW-2. Refer to Attachments B-2, B-4, B-6, B-9, B-11, B-12 and B-15, respectively, for the duplicate evaluations. Criteria for precision was achieved for the detected results except sodium results have been qualified as estimated (J) in sample BMW-17A-S-1 due to analytical imprecision.

A field duplicate evaluation was performed on samples BMW-FD-1 (blind field duplicate) and BMW-18A-S-1. Refer to Attachment B-5 for the duplicate evaluation. Antimony, cobalt, copper, lead, manganese and potassium results have been qualified as estimated (J/UJ) in the associated samples due to analytical imprecision.

A field duplicate evaluation was performed on samples BMW-FD-02 (blind field duplicate) and BMW-16A. Refer to Attachment B-7 for the duplicate evaluation. Lead and selenium results have been qualified as estimated (J/UJ) in the associated samples due to analytical imprecision.

A field duplicate evaluation was performed on samples FDSS031910 (blind field duplicate) and SS-22. Refer to Attachment B-13 for the duplicate evaluation. Arsenic, cadmium, copper, iron, lead, manganese, mercury and vanadium results have been qualified as estimated (J/UJ) in the associated samples due to analytical imprecision.

A field duplicate evaluation was performed on samples FDWS031910 (blind field duplicate) and WS-4. Refer to Attachment B-14 for the duplicate evaluation. Criteria for precision was achieved for the detected results.

A field duplicate evaluation was performed on samples FDGW032510 (blind field duplicate) and MW-2A. Refer to Attachment B-16 for the duplicate evaluation. Selenium results have been qualified as estimated (J/UJ) in the associated samples due to analytical imprecision.

Summary

Overall, data quality objectives for the Old Champlain Mill ERP site were met, as there were no data deficiencies that would indicate the need for re-sampling. The analytical results are usable with the qualification of results as described in this DUSR. No analytical data has been rejected.

Megan Drosky
Environmental Scientist

EXHIBIT 5

July 1, 2011 – DEC RI REPORT COMMENT & ACCEPTANCE LETTER

New York State Department of Environmental Conservation
Office of Environmental Quality, Region 5
Division of Environmental Remediation
232 Golf Course Road, Warrensburg, New York 12885
Phone: (518) 623-1200 · **FAX:** (518) 623-4193
Website: www.dec.ny.gov

Joe Martens
Commissioner

July 1, 2011

Mr. Kirk Moline
C.T. Male Associates, PC
50 Century Hill Drive
Latham, NY 12110-0727

Re: Old Champlain Mill Site, Brownfield Cleanup Program Site No. C558036
16-50 Poultney Street
Village of Whitehall, Washington County

Dear Mr. Moline:

The New York State Department of Environmental Conservation (Department) has reviewed the draft Remedial Investigation (RI) Report for the above referenced site and offers the following:

- As defined in 6 NYCRR Part 375-1.2 (ar), "Sediment" means unconsolidated particulate material found at the bottom of lakes, rivers, streams and other waterbodies at bed elevations equal to or lower than the mean high water level as defined in subdivision 608.1(i)." Therefore, for the purposes of making a remedial decision at this Brownfield Cleanup Program (BCP) site, the Department will consider the collected sediment samples as surface soil and evaluate them with respect to the 6 NYCRR Part 375-6 Remedial Program Soil Cleanup Objectives.

Please make this letter an attachment to the draft RI report, and submit the report and associated attachment to the project document repositories for public review. Please copy this office on the document cover letter transmission.

If you have any questions, please feel free to call me at (518) 623-1200.

Sincerely,

Alicia Thorne, P.E.
Environmental Engineer 2

AJT:jz

ec: Rod Donnelly, Poultney Street Partners, LLC
Wendy Kuchner, NYSDOH