May 15, 2017 (Updated December 4, 2017)

NYS Brownfield Cleanup Program

Remedial Action Work Plan

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

Prepared for:

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Prepared by:

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CERTIFICATIONS
Old Champlain Mill
16-50 Poultney Street, Whitehall, NY

I, Jeffrey A. Marx, P.E., certify that I am a NYS registered professional engineer and that this Remedial Action Work Plan was prepared in accordance with applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10) dated May 3, 2010.

082100	12/4/2017	
NYS Professional Engineer #	Date	Signature

BROWNFIELD CLEANUP PROJECT
REMEDIAL ACTION WORK PLAN
OLD CHAMPLAIN MILL SITE
VILLAGE OF WHITEHALL, NEW YORK

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APPENDICES

1.0 INTRODUCTION & PURPOSE

1.1 Introduction

This Remedial Action Work Plan (RAWP) has been prepared pursuant to the New York State Department of Environmental Conservation (DEC) Brownfield Cleanup Program (BCP) in relationship to the property known as the Old Champlain Mill (BCP Site No. C558036) located at 16-50 Poultney Street in the Village of Whitehall, Washington County, New York (herein "the Site"). A Site Location Map and Site Plan are presented as Figures 1 and 2 in Appendix A, respectively.

Figure 2 shows the property lines of the subject site. The property lines are the same boundaries for the BCP Site that will be subject to the environmental easement.

1.2 Purpose and Goal

The historical site use has been for manufacturing purposes. The Site is located in a commercially zoned area of the Village of Whitehall. The planned future use of the Site is anticipated to be commercial/industrial. The purpose of the RAWP is to provide a conceptual plan for remediating the site to Commercial Use as defined in 6 NYCRR Part 375, and to provide the technical basis for the development of project plans, specifications and construction documents.

The overall goal of the Site remedy is the protection of public health and the environment from known Site contaminants. This will be accomplished through groundwater monitoring to evaluate the continued effectiveness of natural attenuation of chlorinated volatile organic compounds (CVOCs) in groundwater, impositions groundwater use restriction, installation of vapor mitigation systems for future Site buildings, preparation and implementation of a Site Management Plan and recording an Environmental Easement for the property.

1.3 Remedial Action Approach

1.3.1 Applicable NYS Standards, Criteria and Guidance (SCGs)

The contemplated use for the Site is Commercial/Industrial Use. The applicable SCGs for each media subject to remedial action are summarized as follows:

Table 1.3.1-1

Media	Regulation	Standards, Criteria and Guidance
Soil	6 NYCRR Part 375 (December 14, 2007)	Table 375-6.8(b) Industrial/Commercial Use Soil Cleanup Objectives (SCOs)
Groundwater	NYSDEC Division of Water TOGS 1.1.1	Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (June 1998)
Soil Vapor	None	NYSDOH Final Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006

A copy of the December 14, 2007 6 NYCRR Part 375 Table 375-6.8(b) is included in Appendix B for reference. The SCOs (a.k.a. SCGs) for Commercial Use Sites are identified under the column heading "Protection of Public Health – Commercial". The DEC Division of Water TOGS 1.1.1 document is not included, but the standard or guidance values for the remedial action will be the GA class values. Currently, there is no regulation that establishes SCGs for soil vapor investigation or mitigation. In lieu of a regulation, the NYSDOH prepared guidance document listed in the Table 1.3.1-1 which will be used for applicable SCGs, if necessary.

1.3.2 Engineering and Institutional Controls

The engineering and institutional controls for the Site will be outlined in an Environmental Easement to be prepared and recorded for the Site. The controls include the following:

Institutional Controls

- Restrict the use of groundwater as a source of potable water and other uses without necessary water quality treatment as determined by NYSDOH.
- Restrict usage of the Site to Commercial /Industrial Use.
- The potential for vapor intrusion must be evaluated for any buildings developed on the site, and any potential impacts that are identified must be monitored or mitigated.
- Develop a DEC-approved Site Management Plan (SMP) to establish guidelines and procedures for Site disturbance and monitoring. The SMP will be attached to, and become a part of, the Environmental Easement.
- Periodic certification by the property owner; prepared and submitted by a professional engineer or such other expert acceptable to the DEC, until the DEC notifies the property owner in writing that this certification is no longer needed. The submittal will contain certification that the institutional controls and engineering controls are still in place, allow the DEC access to the site, and that nothing has occurred that would impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the SMP.

2.0 NATURE AND EXTENT OF CONTAMINATION

Sampling and analysis of several media types was conducted during the Remedial Investigation (RI) and RI supplemental investigations to evaluate the nature and extent of contamination at the subject Site. These media types included surface soils, subsurface soils, surface water, sediment and groundwater. Additionally, analytical results of surface soils and groundwater from previous investigations of the Site prior to entering into the BCP were incorporated into the RI to aid in developing a broader sense of the nature and extent of Site contaminants.

Based on these investigations, the contaminants of concern (generally defined as compounds detected above commercial use soil cleanup objectives) at the Site are semi-volatile organic compounds (SVOCs) and Arsenic in subsurface soils; and CVOCs, SVOCs and metals in groundwater. The distribution of contaminants exceeding SCGs in the various media-types sampled during the RI, and the distribution of total CVOCs in groundwater, is presented in the RI and Alternative Analysis (AA) Reports, which are available for review in the document repositories.

Surface Soil

There were four (4) SVOCs (benzo(a)anthracene benzo(b)fluoranthene, dibenz(a,h)anthracene and indeno(1,2,3-cd)pyrene) detected in surface soil above SCGs in only one (1) of the 18 sample locations (SS-1). There was another SVOC (benzo(a)pyrene) individually detected in only two other sample locations (SS-3 and SS-5) above SCGs. No VOCs, pesticides, PCBs and metals detected in surface soil above applicable SCGs. SVOCs detected in surface soil above SGCs were detected in only a very small minority of sampling locations. Accordingly, surface soil is not a media that requires remedial action for this commercial use Site.

Surface Water

Acetone (a 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. Manganese was detected above its SCG in two (2) of the four (4)

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.

Metal contaminants include iron, manganese and sodium. Iron and manganese are viewed as naturally occurring in the environment. Sodium is likely 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. Based on the above information (and the absence of other VOCs, SVOCs, pesticides and PCBs above SCGs), potential adverse effects from surface water contaminants to on and off-Site populations are considered to be low. Therefore, surface water is not a media that requires remedial action for this commercial use Site.

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 their NYSDEC Division of Fish, Wildlife and Marine Resources Bureau of Habitat lowest effects level (LEL) SCGs, but below their NYSDEC severe effects level (SEL) SCGs. The LEL is the concentration of a contaminant tolerated by 95% of benthic species. The SEL is the concentration of a contaminant tolerated by only 5% of benthic species. Considering none of the metals exceed the SEL SCGs, and in most cases the concentrations of metals only slightly exceeded the LEL SCGs, implementing remedial action of sediments is not warranted. The impact to the wetland from implementing a remedial action is more detrimental to the ecological system than trying to obtain additional benefit to the 95% to 100% of the benthic species that can't currently tolerate the concentration of the detected metals.

3.0 REMEDIAL ACTION IMPLEMENTATION

The Site is considered one (1) remedial treatment area. There is no active or intrusive remedial action warranted for the Site given the nature and extent of contamination identified in the site media. The remedial action for the Site is generalized as groundwater monitoring, following receipt of the Certificate of Completion (COC), to evaluate the effectiveness of on-going natural attenuation on groundwater quality. The locations of monitoring wells that will be sampled as part of performance groundwater monitoring are depicted on Figure 2: Site Plan.

The following sections summarize the components of the remedial action.

3.1 Monitoring Well Protection and Abandonment

Monitoring wells that will be protected or abandoned are identified on Figure 3: Disposition of Monitoring Wells.

Twelve (12) monitoring wells (MW-1A to MW-5A, MW-10A, MW-13A to MW-15A, and MW-17A to MW-19A) are anticipated to be utilized for groundwater monitoring. These wells will be protected from damage during the remedial action. The wells will be secured in flush mounted curb boxes or metal casings with locking covers, set in concrete pads. If the selected compliance wells are damaged or destroyed, they will be replaced.

Eleven (11) monitoring wells (MW-1, MW-5 to MW-8, MW-11, MW-8A, MW-11A, MW-12A, MW-16A and URS-MW4) will be abandoned in accordance with CP-43: Groundwater Monitoring Well Decommissioning Policy. In order to provide a potential additional groundwater sampling point, BMW-11A will not be abandoned. The well will be kept but will not be sampled on a regular basis unless review of analytical data trends and consultation with NYSDEC and NYSDOH warrant additional data south of BMW-15.

3.2 Groundwater Monitoring

Twelve (12) monitoring wells (MW-1A to MW-5A, MW-10A, MW-13A to MW-15A, and MW-17A and MW-19A) identified on Figure 2 in Appendix A will be sampled annually

to evaluate the effectiveness of on-going natural attenuation on groundwater quality. The selected monitoring wells lie within, and at the perimeter of, the dissolved chlorinated VOCs contaminant plume.

The monitoring wells will be sampled for Target Compound List (TCL) VOCs. Testing for SVOCs is not necessary for continued monitoring as only two compounds (benzo(a)pyrene and indeno(1,2,3-cd)pyrene) were previously detected above SCGs in only one (1) of 15 groundwater sampling locations (BMW-16A). Testing for metals is also not necessary for continued monitoring as iron, manganese and sodium are considered naturally occurring (i.e., non-toxic) and lead was detected above SCGs in only one (1) of 15 groundwater sampling locations (MW-2A).

Groundwater evacuated from the monitoring wells during groundwater sampling will either be containerized for off-site disposal at a permitted facility or discharged to the ground surface adjacent to the monitoring well where the groundwater was evacuated from. In order to be discharged to the ground surface, the evacuated groundwater must meet the following criteria:

- No visual evidence of contamination such as discoloration, sheens, free product or NAPL;
- No olfactory (smell) evidence if contamination; and/or
- No exceedances of groundwater standards based on analytical results from previous sampling events.

Based on review of analytical results from previous sampling events, all groundwater evacuated as part of the first sampling event will need to be containerized for off-site disposal with the exception of groundwater evacuated from monitoring wells MW-4A, MW-5A and MW-18A; which can be discharged to the ground surface if it meets the above criteria.

3.3 Remedial Schedule

A preliminary remedial action work schedule is provided in Appendix C. Based on the timing of the work tasks identified on the schedule, DEC issuance of the Certificate of Completion is anticipated prior to December 2017.

3.4 Citizen Participation

Citizen participation was initiated during the investigative phase of this project. Citizen participation will continue on this project by placing this RAWP in the document repositories. A fact sheet summarizing the work to be performed and availability of the RAWP for public review and comment will be prepared by NYSDEC and will be sent to the public via the NYSDEC listserv. A 45-day public comment period will be initiated so the public may have an opportunity to review and comment on the RAWP.

4.0 TEMPORARY CONSTRUCTION FACILITIES

4.1 Site Security

The Site is located in an isolated area within the Village of Whitehall. Water bodies (Champlain Canal and Wood Creek) border the Site to the west and east. A railroad track and undeveloped land borders the Site to the south. NYS Route 4 borders the Site to the north. Two (2) commercial entities are located opposite NYS Route 4 (Poultney Street). Site access is limited and controlled by a locked gate at the entrance way to the site along Poultney Street. The gate shall remain locked when site work is not being conducted.

4.2 Remedial Action Derived Wastes

Personal protective equipment (PPE) worn by Site workers, rags, and other general trash will be placed in plastic bags and disposed of properly. The contractor will be responsible for waste disposal. Purged groundwater during monitoring sampling events that is required to be controlled will be contained and 55 gallon drums. The purge water will be characterized and profiled for appropriate off-site disposal on an as needed basis.

5.0 SITE CONTROLS DURING REMEDIAL ACTION

5.1 Groundwater Handling

Groundwater sampling shall be completed in a controlled manner to reduce the potential for impact to soil surface soils. The area around each well shall be covered with a plastic sheet large enough to create a clean working surface during sampling. The purge water shall be removed from the well in a manner that does not spill to the existing ground surface. The purge water shall be collected in 5 gallon pails and transferred into new or reconditioned steel 55 gallon drums, as applicable. The drums shall be labeled with a non-hazardous waste sticker that identifies the site address and contents of the drum (i.e., purge water).

Groundwater evacuated from the monitoring wells during groundwater sampling will either be containerized for off-site disposal at a permitted facility or discharged to the ground surface adjacent to the monitoring well where the groundwater was evacuated from. In order to be discharged to the ground surface, the evacuated groundwater must meet the following criteria:

- No visual evidence of contamination such as discoloration, sheens, free product or NAPL;
- No olfactory (smell) evidence if contamination; and/or
- No exceedances of groundwater standards based on analytical results from previous sampling events.

5.2 Groundwater Disposal

The purged groundwater shall be disposed at a facility permitted to accept the waste. If necessary, additional analytical testing of the water shall be performed if the analytical results of the groundwater samples are not sufficient. The waste profile shall be reviewed by the Remedial Engineer and approved/signed by the generator/owner. Records of proper transportation and disposal shall be provided to the Remedial Engineer within two weeks after removal of the waste from the site.

6.0 HEALTH AND SAFETY PLAN (HASP)

The Remedial Contractor's utilized for the remedial action will be required to provide a Site specific HASP that is certified by a Certified Industrial Hygienist or equivalent. The contractor's employees will be required to have read and understood their company's Site specific HASP prior to completing the work.

The Remedial Contractor will be responsible for meeting the conditions and requirements outlined in its HASP. Workers will be responsible for safe conduct and activity while implementing the work in compliance with governmental requirements, which shall include Site worker safety requirements mandated by Federal Occupational Safety and Health Administration (OSHA).

Health and safety procedures to be followed by C.T. Male Associates during the remedial action will be in general accordance with the Site-specific HASP developed as a component of the RI Work Plan. A copy of the health and safety plans will be available at the Site during the performance of remedial actions to which they are applicable.

7.0 CONFIRMATION AND DOCUMENTATION SAMPLING

Continued groundwater monitoring to be conducted during the remedial action includes sampling and laboratory analysis of groundwater as part of performance monitoring to evaluate the effectiveness of on-going natural attenuation.

7.1 Performance Monitoring

Twelve (12) monitoring wells (MW-1A to MW-5A, MW-10A, MW-13A to MW-15A, and MW-17A to MW-19A) identified on Figure 2 in Appendix A will be sampled annually to evaluate the effectiveness of on-going natural attenuation on groundwater quality.

The monitoring wells will be sampled for Target Compound List (TCL) volatile organic compounds (VOCs).

8.0 APPLICABLE PERMITS AND RELATED

8.1 Institutional Controls

The remedial action for the Site allows Commercial/Industrial contemplated use. Institutional controls will be required as part of the Environmental Easement. The controls for the Site must address known and potential impacted soils, groundwater usage, and soil vapor mitigation for future buildings.

9.0 SITE RESTORATION

9.1 Monitoring Well Abandonment

Eight (8) monitoring wells (MW-1, MW-6 to MW-8, MW-8A, MW-11A, MW-12A and URS-MW4) will be abandoned in accordance with CP-43: Groundwater Monitoring Well Decommissioning Policy.

The nine (9) monitoring wells (MW-2 to MW-4, MW-4A, MW-5, MW-10, MW-12, MW-6A, MW-7A and MW-9A) are identified as "Destroyed" on Figure 3. An attempt will be made to locate these wells. Wells which are located will be abandoned in accordance with CP-43, if feasible.

The twelve (12) monitoring wells (MW-1A to MW-5A, MW-10A, MW-13A to MW-15A, and MW-17A to MW-19A) being monitored will be abandoned in accordance with CP-43, upon approval from DEC when groundwater quality levels meet remedial goals.

10.0 REPORTING AND CERTIFICATE OF COMPLETION

10.1 Site Management Plan

A draft Site Management Plan (SMP) will be prepared in accordance with Chapter 6, Section 6.2 of DER 10 utilizing DEC's most recent SMP template for DEC review and comment prior to finalizing. The main sections of the SMP are as follows:

- Introduction;
- Summary of Previous Investigations and Remedial Actions;
- Institutional and Engineering Control Plan;
- Monitoring and Sampling Plan;
- Operation and Sampling Plan;
- Periodic Assessment Evaluations;
- Reporting Requirements; and
- Excavation Work Plan (EWP)

The EWP is applicable to any activity that is anticipated to encounter remaining contamination. The EWP describes notification; soil screening methods; soil staging methods; materials excavation and load-out; materials transport off-site; materials disposal off-site; materials re-use on-site; fluids management; cover system restoration; backfill from off-site sources; stormwater pollution prevention; excavation contingency plan; community air monitoring plan, odor control plan; dust control plan and other nuisances.

10.2 Environmental Easement

A draft Environmental Easement will be prepared in a form prescribed by the DEC at the time of preparation.

10.3 Final Report

After the issuance of the Decision Document, a Final Engineering Report (FER) will be prepared summarizing the work completed. The FER will be certified by a registered Professional Engineer in accordance with NYSDEC DER-10.

10.4 Certificate of Completion

A Certificate of Completion (COC) will be issued by NYSDEC after the FER and Environmental Easement (including the SMP) are reviewed and approved by NYSDEC, and the Environmental Easement is filed with the County Clerk. The COC is expected to be received by the end of 2017.

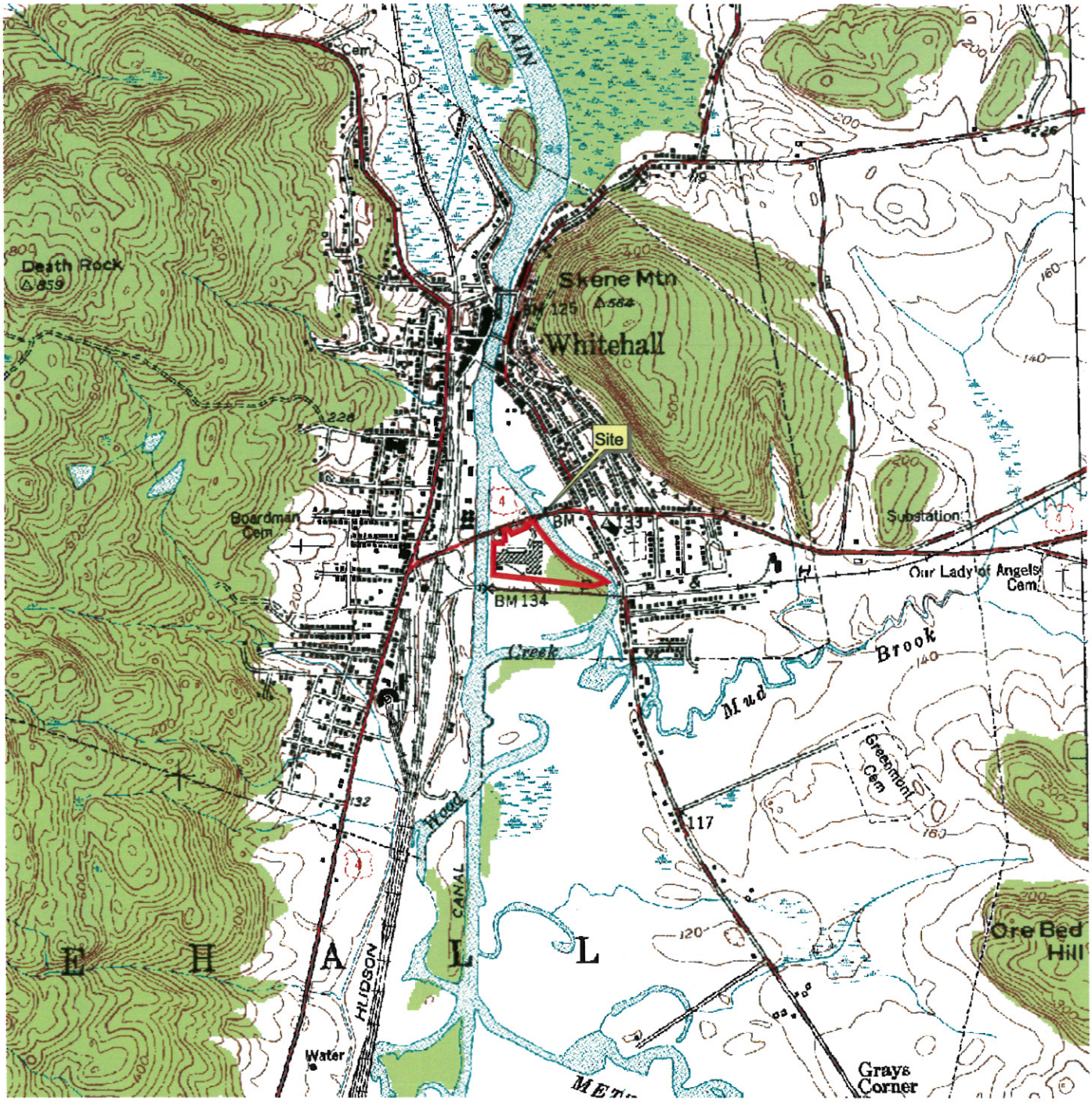
APPENDIX A

(FIGURES)

Figure 1: Site Location Map

Figure 2: Site Plan

Figure 3: Disposition of Monitoring Wells



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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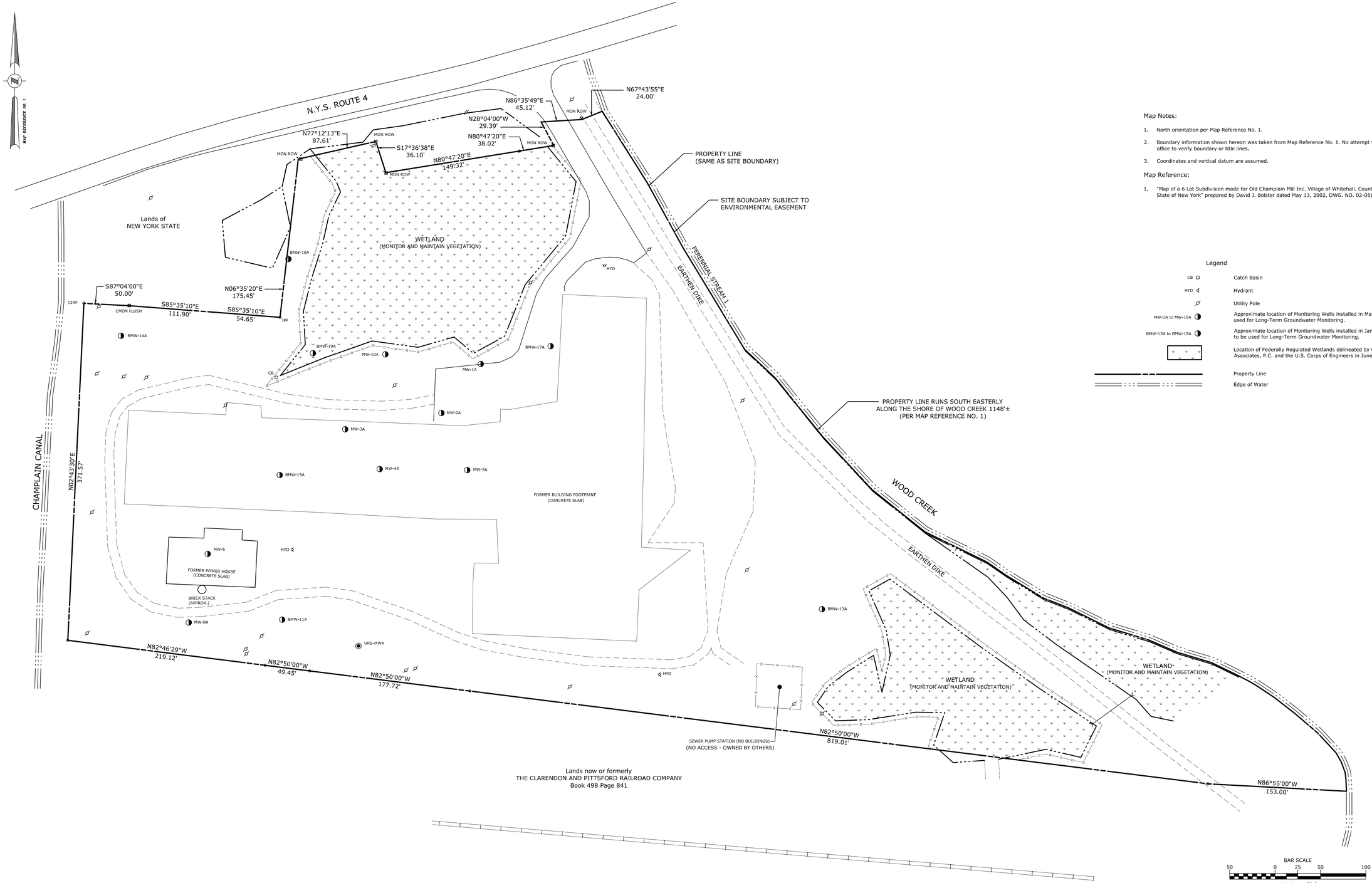
FIGURE 1 SITE LOCATION MAP

Old Champlain Mill

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



BAR SCALE

50 0 25 50 100

1 inch = 50 ft.

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
MW-1A to MW-10A	Approximate location of Monitoring Wells installed in May 2007 to be used for Long-Term Groundwater Monitoring.
BMW-13A to BMW-19A	Approximate location of Monitoring Wells installed in January/February 2010 to be used for Long-Term Groundwater Monitoring.
	Location of Federally Regulated Wetlands delineated by C.T. Male Associates, P.C. and the U.S. Corps of Engineers in June and July, 2010.
	Property Line
	Edge of Water

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DRAFTED : S.WUNSCH
CHECKED : S.BEIBER
PROJ. NO : 06.6448
SCALE : 1"=50'
DATE : DEC. 4, 2017

FIGURE 2
SITE PLAN

OLD CHAMPLAIN MILL

VILLAGE OF WHITEHALL — WASHINGTON COUNTY, NEW YORK

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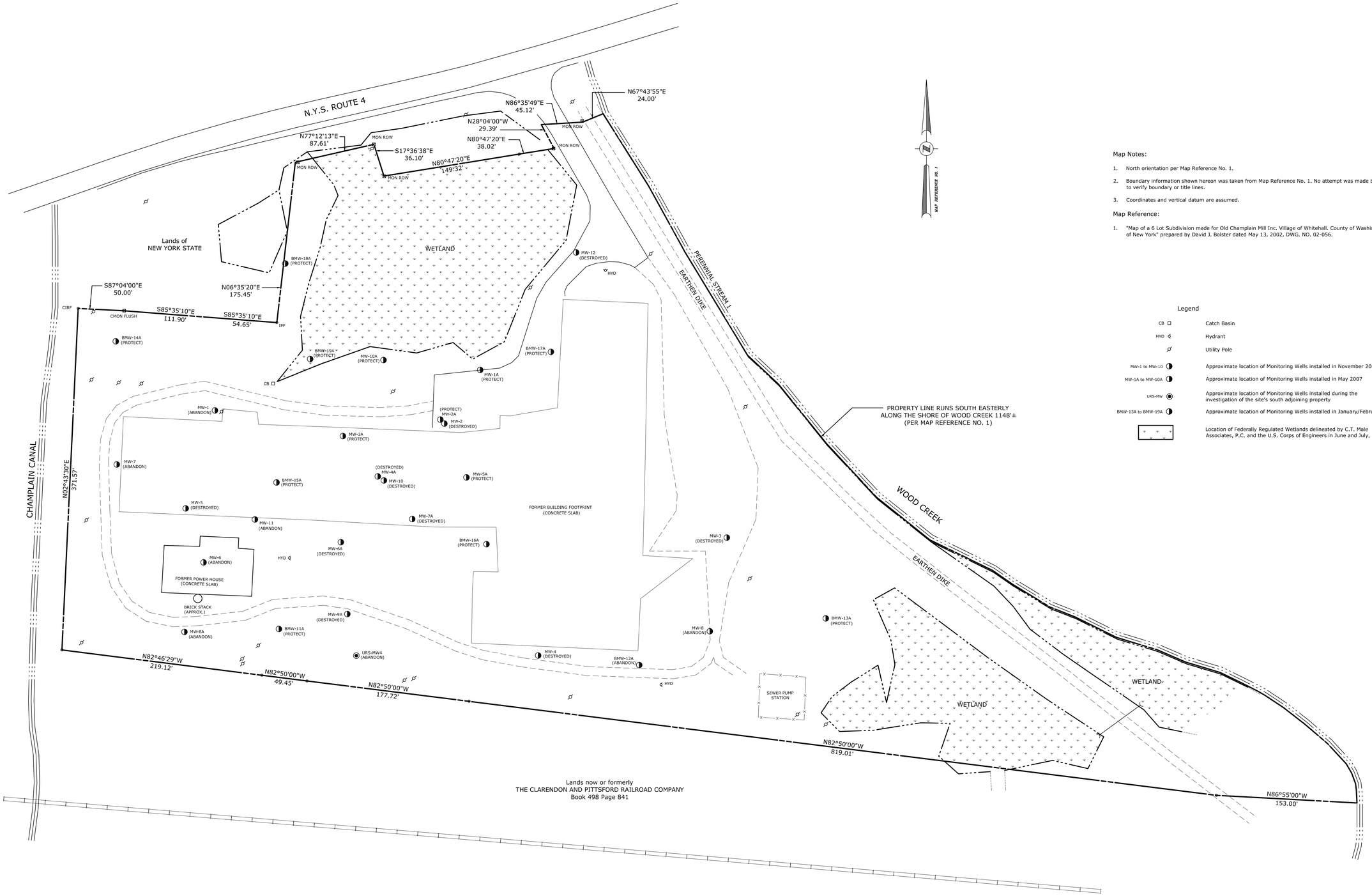
SHEET 1 OF 2

DWG. NO: 15-204

CAD DWG. FILE NAME: K:\Projects\06448\Env\Drawings-Maps\Figure-2_site plan_Revised 2017.11.27.dwg

CAD DWG. FILE NAME: Figure-2 site plan Revised



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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

CB	Catch Basin
HYD	Hydrant
	Utility Pole
MW-1 to MW-10	Approximate location of Monitoring Wells installed in November 2006
MW-1A to MW-10A	Approximate location of Monitoring Wells installed in May 2007
URS-MW	Approximate location of Monitoring Wells installed during the investigation of the site's south adjoining property
BMW-13A to BMW-19A	Approximate location of Monitoring Wells installed in January/February 2010
	Location of Federally Regulated Wetlands delineated by C.T. Male Associates, P.C. and the U.S. Corps of Engineers in June and July, 2010.

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

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CHECKED : S.BEIBER
PROJ. NO : 06.6448
SCALE : 1"=50'
DATE : NOV. 27, 2017

FIGURE 3
DISPOSITION OF MONITORING WELLS

OLD CHAMPLAIN MILL

VILLAGE OF WHITEHALL — WASHINGTON COUNTY, NEW YORK

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SHEET 2 OF 2
DWG. NO: 15-204

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CAD DWG. FILE NAME: Figure-3_mw disposition_Rev

APPENDIX B

TABLE 375-6.8(b)

(b) Restricted use soil cleanup objectives.

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
Metals							
Arsenic	7440-38-2	16[f]	16[f]	16[f]	16[f]	13[f]	16[f]
Barium	7440-39-3	350[f]	400	400	10,000 [d]	433	820
Beryllium	7440-41-7	14	72	590	2,700	10	47
Cadmium	7440-43-9	2.5[f]	4.3	9.3	60	4	7.5
Chromium, hexavalent [h]	18540-29-9	22	110	400	800	1[e]	19
Chromium, trivalent [h]	16065-83-1	36	180	1,500	6,800	41	NS
Copper	7440-50-8	270	270	270	10,000 [d]	50	1,720
Total Cyanide [h]		27	27	27	10,000 [d]	NS	40
Lead	7439-92-1	400	400	1,000	3,900	63[f]	450
Manganese	7439-96-5	2,000[f]	2,000[f]	10,000 [d]	10,000 [d]	1600[f]	2,000[f]
Total Mercury		0.81[j]	0.81[j]	2.8[j]	5.7[j]	0.18[f]	0.73
Nickel	7440-02-0	140	310	310	10,000 [d]	30	130
Selenium	7782-49-2	36	180	1,500	6,800	3.9[f]	4[f]
Silver	7440-22-4	36	180	1,500	6,800	2	8.3
Zinc	7440-66-6	2200	10,000 [d]	10,000 [d]	10,000 [d]	109[f]	2,480
PCBs/Pesticides							
2,4,5-TP Acid (Silvex)	93-72-1	58	100[a]	500[b]	1,000[c]	NS	3.8
4,4'-DDE	72-55-9	1.8	8.9	62	120	0.0033 [e]	17
4,4'-DDT	50-29-3	1.7	7.9	47	94	0.0033 [e]	136
4,4'- DDD	72-54-8	2.6	13	92	180	0.0033 [e]	14
Aldrin	309-00-2	0.019	0.097	0.68	1.4	0.14	0.19
alpha-BHC	319-84-6	0.097	0.48	3.4	6.8	0.04[g]	0.02
beta-BHC	319-85-7	0.072	0.36	3	14	0.6	0.09
Chlordane (alpha)	5103-71-9	0.91	4.2	24	47	1.3	2.9

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
delta-BHC	319-86-8	100[a]	100[a]	500[b]	1,000[c]	0.04[g]	0.25
Dibenzofuran	132-64-9	14	59	350	1,000[c]	NS	210
Dieldrin	60-57-1	0.039	0.2	1.4	2.8	0.006	0.1
Endosulfan I	959-98-8	4.8[i]	24[i]	200[i]	920[i]	NS	102
Endosulfan II	33213-65-9	4.8[i]	24[i]	200[i]	920[i]	NS	102
Endosulfan sulfate	1031-07-8	4.8[i]	24[i]	200[i]	920[i]	NS	1,000[c]
Endrin	72-20-8	2.2	11	89	410	0.014	0.06
Heptachlor	76-44-8	0.42	2.1	15	29	0.14	0.38
Lindane	58-89-9	0.28	1.3	9.2	23	6	0.1
Polychlorinated biphenyls	1336-36-3	1	1	1	25	1	3.2
Semivolatiles							
Acenaphthene	83-32-9	100[a]	100[a]	500[b]	1,000[c]	20	98
Acenapthylene	208-96-8	100[a]	100[a]	500[b]	1,000[c]	NS	107
Anthracene	120-12-7	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Benz(a)anthracene	56-55-3	1[f]	1[f]	5.6	11	NS	1[f]
Benzo(a)pyrene	50-32-8	1[f]	1[f]	1[f]	1.1	2.6	22
Benzo(b)fluoranthene	205-99-2	1[f]	1[f]	5.6	11	NS	1.7
Benzo(g,h,i)perylene	191-24-2	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Benzo(k)fluoranthene	207-08-9	1	3.9	56	110	NS	1.7
Chrysene	218-01-9	1[f]	3.9	56	110	NS	1[f]
Dibenz(a,h)anthracene	53-70-3	0.33[e]	0.33[e]	0.56	1.1	NS	1,000[c]
Fluoranthene	206-44-0	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Fluorene	86-73-7	100[a]	100[a]	500[b]	1,000[c]	30	386
Indeno(1,2,3-cd)pyrene	193-39-5	0.5[f]	0.5[f]	5.6	11	NS	8.2
m-Cresol	108-39-4	100[a]	100[a]	500[b]	1,000[c]	NS	0.33[e]
Naphthalene	91-20-3	100[a]	100[a]	500[b]	1,000[c]	NS	12

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
o-Cresol	95-48-7	100[a]	100[a]	500[b]	1,000[c]	NS	0.33[e]
p-Cresol	106-44-5	34	100[a]	500[b]	1,000[c]	NS	0.33[e]
Pentachlorophenol	87-86-5	2.4	6.7	6.7	55	0.8[e]	0.8[e]
Phenanthrene	85-01-8	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Phenol	108-95-2	100[a]	100[a]	500[b]	1,000[c]	30	0.33[e]
Pyrene	129-00-0	100[a]	100[a]	500[b]	1,000[c]	NS	1,000[c]
Volatiles							
1,1,1-Trichloroethane	71-55-6	100[a]	100[a]	500[b]	1,000[c]	NS	0.68
1,1-Dichloroethane	75-34-3	19	26	240	480	NS	0.27
1,1-Dichloroethene	75-35-4	100[a]	100[a]	500[b]	1,000[c]	NS	0.33
1,2-Dichlorobenzene	95-50-1	100[a]	100[a]	500[b]	1,000[c]	NS	1.1
1,2-Dichloroethane	107-06-2	2.3	3.1	30	60	10	0.02[f]
cis-1,2-Dichloroethene	156-59-2	59	100[a]	500[b]	1,000[c]	NS	0.25
trans-1,2-Dichloroethene	156-60-5	100[a]	100[a]	500[b]	1,000[c]	NS	0.19
1,3-Dichlorobenzene	541-73-1	17	49	280	560	NS	2.4
1,4-Dichlorobenzene	106-46-7	9.8	13	130	250	20	1.8
1,4-Dioxane	123-91-1	9.8	13	130	250	0.1[e]	0.1[e]
Acetone	67-64-1	100[a]	100[b]	500[b]	1,000[c]	2.2	0.05
Benzene	71-43-2	2.9	4.8	44	89	70	0.06
Butylbenzene	104-51-8	100[a]	100[a]	500[b]	1,000[c]	NS	12
Carbon tetrachloride	56-23-5	1.4	2.4	22	44	NS	0.76
Chlorobenzene	108-90-7	100[a]	100[a]	500[b]	1,000[c]	40	1.1
Chloroform	67-66-3	10	49	350	700	12	0.37
Ethylbenzene	100-41-4	30	41	390	780	NS	1
Hexachlorobenzene	118-74-1	0.33[e]	1.2	6	12	NS	3.2
Methyl ethyl ketone	78-93-3	100[a]	100[a]	500[b]	1,000[c]	100[a]	0.12

Table 375-6.8(b): Restricted Use Soil Cleanup Objectives

Contaminant	CAS Number	Protection of Public Health				Protection of Ecological Resources	Protection of Ground-water
		Residential	Restricted-Residential	Commercial	Industrial		
Methyl tert-butyl ether	1634-04-4	62	100[a]	500[b]	1,000[c]	NS	0.93
Methylene chloride	75-09-2	51	100[a]	500[b]	1,000[c]	12	0.05
n-Propylbenzene	103-65-1	100[a]	100[a]	500[b]	1,000[c]	NS	3.9
sec-Butylbenzene	135-98-8	100[a]	100[a]	500[b]	1,000[c]	NS	11
tert-Butylbenzene	98-06-6	100[a]	100[a]	500[b]	1,000[c]	NS	5.9
Tetrachloroethene	127-18-4	5.5	19	150	300	2	1.3
Toluene	108-88-3	100[a]	100[a]	500[b]	1,000[c]	36	0.7
Trichloroethene	79-01-6	10	21	200	400	2	0.47
1,2,4-Trimethylbenzene	95-63-6	47	52	190	380	NS	3.6
1,3,5- Trimethylbenzene	108-67-8	47	52	190	380	NS	8.4
Vinyl chloride	75-01-4	0.21	0.9	13	27	NS	0.02
Xylene (mixed)	1330-20-7	100[a]	100[a]	500[b]	1,000[c]	0.26	1.6

All soil cleanup objectives (SCOs) are in parts per million (ppm).
NS=Not specified. See Technical Support Document (TSD).

Footnotes

[a] The SCOs for residential, restricted-residential and ecological resources use were capped at a maximum value of 100 ppm. See TSD section 9.3.

[b] The SCOs for commercial use were capped at a maximum value of 500 ppm. See TSD section 9.3.

[c] The SCOs for industrial use and the protection of groundwater were capped at a maximum value of 1000 ppm. See TSD section 9.3.

[d] The SCOs for metals were capped at a maximum value of 10,000 ppm. See TSD section 9.3.

[e] For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL is used as the SCO value.

[f] For constituents where the calculated SCO was lower than the rural soil background concentration as determined by the Department and Department of Health rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for this use of the site.

[g] This SCO is derived from data on mixed isomers of BHC.

[h] The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

[i] This SCO is for the sum of endosulfan I, endosulfan II, and endosulfan sulfate.

[j] This SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts). See TSD Table 5.6-1.

APPENDIX C

PRELIMINARY REMEDIAL ACTION SCHEDULE

Preliminary Project Schedule (June 2017)

Old Champlain Mill

Village of Whitehall, Washington County

BCP Site No. C558036

TASK	MAY 2017				JUNE 2017				JULY 2017					AUGUST 2017				SEPTEMBER 2017				OCTOBER 2017					NOVEMBER 2017				DECEMBER 2017			
	8	15	22	29	5	12	19	26	3	10	17	24	31	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	4	11	18	25
Submission of Draft Remedial Action Work Plan (RAWP) for DEC Review																																		
Address Initial DEC Comments on Draft RAWP																																		
DEC Release of Draft RAWP for Public Comment (45 days)																																		
Address DEC Comments and Finalize RAWP																																		
DEC Issues RAWP Approval Notice Fact Sheet																																		
Prepare Draft Env. Easement (EE) and Complete Boundary Survey																																		
Prepare Draft Site Management Plan (SMP)																																		
Prepare Draft Final Engineering Report (FER)																																		
DEC Review of Draft SMP and Draft FER																																		
Execute Final EE and Record EE																																		
Address DEC Comments and Submit Final SMP																																		
Address DEC Comments and Submit Final FER																																		
DEC Issuance of the Certificate of Completion (Anticipate December 2017)																																		

NOTES:

(1) The dates illustrated (e.g. January 1, 2017 on the project schedule correspond to Monday of each week. Highlights placed on these dates indicates that the deliverable is anticipated to be submitted and/or completed during the referenced week

APPENDIX D

NYSDOH GENERIC CAMP

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. APeriodic@ monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

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

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

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

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

December 2009