

Engineers Environmental Professionals Land Surveyors Landscape Architects Planners

July 15, 2011

Mr. Mike McLean, P.E. NYSDEC, Region 5 1115 NYS Route 86 P.O. Box 296 Ray Brook, NY 12977-0296

> Re: Final Engineering Report: Stillwater Boiler House Site NYSDEC ERP Site No. B00197 Chazen Job No. 31100.03

Dear Mr. McLean:

This letter serves as the Final Engineering Report (FER) for the Former Stillwater Boiler House Site located in the Town of Stillwater, New York. This site was investigated and remediated under the New York State Department of Environmental Conservation's (NYSDEC) Environmental Restoration Program (ERP). The investigation activities took place between 2003 and 2008.

This document is now being required as an element of the remedial program at the Former Boiler House Property (hereinafter referred to as the "Site") prior to issuance of a Certificate of Completion (COC). The site was remediated in accordance with State Assistance Contract (SAC) C302647, Site #B00197. The SAC expired on May 3, 2009; therefore, no funding is available for the preparation of this document.

1. Boundaries of Site and Environmental Easement

- a) The site boundaries are clearly identified in the ERP SAC C302647. The site is located in the Town of Stillwater, Saratoga County, New York and is identified as Block 1 and Lot 9014 on the Town of Stillwater Tax Map. The site is a 1.23-acre area bounded by industrial property to the north, Best Avenue to the south, U.S. Route 4 to the east, and East Street to the west.
- b) An *Environmental Easement* (EE) was issued for the site on June 1, 2010. The boundaries of the EE are the same as the boundaries of the real property parcel. A copy of the EE is provided as Attachment 1 with a site survey, and an electronic file is included on the compact disc included in Attachment 4.
- c) Figure 1 of this FER is a site survey that includes the metes and bounds of the site.

2. Site Cleanup Levels and Remedial Activities

a) The 6 NYCRR Part 375 soil cleanup objectives used for the site were for Restricted Residential Use (effective December 14, 2006). Analytical results for pre-IRM surface and subsurface soil sampling are presented in attached Figures 2 and 3, respectively. Pre-IRM soil samples exhibited lead and SVOC concentrations greater than the SCOs.

Capital District Office

547 River Street, Troy, NY 12180 P: (518) 273-0055 F: (518) 273-8391 www.chazencompanies.com

Hudson Valley Office (845) 454-3980 North Country Office (518) 812-0513

- b) The groundwater cleanup levels used for the site were the 6 NYCRR Part 703.5 NYSDEC Ambient Groundwater Quality Standards (June 1998). Analytical results for pre-IRM groundwater samples are presented in Figure 4 and show that groundwater exhibited selected metals concentrations greater than the groundwater quality standard; however, these concentrations were attributed to sample turbidity and/or background concentrations. As site groundwater is not a drinking water source, no further action was taken.
- c) Soil gas analytical results were compared to OSHA and NIOSH exposure guidelines and New York State Department of Health (NYSDOH) Vapor Intrusion Guidelines (October 2006). Locations of soil gas samples collected for field analysis using a portable gas chromatograph and collected for laboratory analysis are shown on Figure 5. Soil gas results did not exceed the NYSDOH vapor intrusion guidelines in place at the time of the remedial investigation. Some compounds that were detected in soil gas did not have NYSDOH guidance values. These detections warrant further evaluation if a structure is constructed on the site for occupancy, as noted in the EE.
- d) Remedial activities at the site were completed as Interim Remedial Measures (IRMs) consistent with the NYSDEC-approved Site Investigation Work Plan (April 2004). The following table provides a summary of site Areas of Concern (AOCs) and related IRMs. Additional site IRMs included building demolition, and soil excavation and removal with site backfilling (see Figures 6 and 7). Analytical results for post-IRM soil sampling are shown on Figure 7. The detailed *Interim Remedial Measures Report* describes IRMs completed at the site and is included as Volume 4 of the *Remedial Investigation Report* (RIR, February 2009). The following is a summary of the remedial actions performed at the site.

Area	IRM Description
Building Removal for Remedial Investigation	The two adjoined boiler house buildings and two smokestacks were removed from the site due to their structural instability and the need to investigate subsurface conditions in those site areas. During the building demolitions, 422 tons of petroleum contaminated soil (PCS) that exceeded the Restricted Residential Use SCOs were removed from beneath the subslab areas of the boiler house to the bedrock surface depth; these soils were disposed of at the ESMI facility in Fort Edwards, New York as an IRM. In addition, 3,825 tons of petroleum- and PCB-contaminated soil and coal ash waste that exceeded the Restricted Residential Use SCOs were excavated and removed as an IRM. Some of this volume was located under the boiler house foundation and was accessible only after the demolition. The remainder of the material was associated with AOCs 3 and 9.
AOC-1: Existing 16,000-gallon aboveground storage tank (AST) Area	The 16,000-gallon AST was closed, including the removal and offsite disposal of approximately 2,000 gallons of industrial fuel oil. Residual petroleum sludge was removed from the AST, mixed with quartz sand to create a semi-solid material, and transported to the Albany County Landfill. Cristo Demolition, Inc. removed the AST for off-site disposal as clean, recyclable steel.
AOC-2: Former 16,000-gallon AST Area	No soil or groundwater samples exceeded cleanup objectives; therefore, no further investigation or remedial activities were performed for this AOC.
AOC-3: Adjacent to Former Bulk Petroleum Storage Area	A total of 3,825 tons of material (consisting of 2,639 tons of PCS, 764 tons of PCB-contaminated soil and 1,152 tons of coal ash waste) that exceeded the Restricted Residential Use SCOs were excavated and removed as an IRM. This volume included an area under the former boiler houses foundation, AOC 9, and an area which extended off-site to the former bulk

	storage area.
AOC-4: Former Champlain Canal	The RI did not identify a separate and unique source of contamination from the former Champlain Canal; therefore, no further investigation or remedial activities were performed for this AOC.
AOC-5: Building Drainage System	The building drainage system was severed and plugged at its outlet, and floor drains were removed during PCS removal IRM activities.
AOC-6: Boiler Ash Pile	The boiler ash piles were presumed to be impacted with asbestos and were disposed of as asbestos-containing material.
AOC-7: Abandoned Drums and Containers	Four drums of solid and liquid chemicals were overpacked for safe transport and numerous small (less than five gallons) containers were containerized for transportation and disposal at a licensed facility.
AOC-8: Abandoned Propane Cylinder	Three corroded compressed gas cylinders and one powdered flame retardant cylinder were a stabilized and cut for metal scrap by Chemcept, Inc. high-hazard unit.
AOC-9: Former Transformer Area	In 2006, 764 tons of PCB-impacted soil were removed and transported to Oneida-Herkimer Regional Landfill in Utica, New York.
AOC-10: Lead Based Paint	Painted metal surfaces were removed as part of building demolition IRM activities.
AOC-11: Asbestos Containing Materials	Prior to building demolition, identified asbestos-containing materials were removed by a licensed abatement contractor. All ACM was disposed of at a licensed facility.

Manifests and additional IRM details are included in the RIR, Volume 4 IRM Report; an electronic copy of this document is provided as Attachment 4.

In June 2008, approximately 125 cubic yards of surface soil from the post-IRM drainage swale area on the northeast corner of the site. This IRM was completed following post-IRM surface soil sampling, to remove impacted soils to a depth of two feet which exceeded Restricted Residential Use SCOs. The shallow excavation was backfilled with clean, imported sand and gravel from a local quarry and reseeded. Excavated soil was taken to the ESMI soil treatment/recycling facility in Fort Edwards, New York for disposal.

Imported fill and stockpiled crushed concrete and masonry building debris was used to backfill and grade the site and was also tested for compliance with site soil cleanup objectives. Fill materials were determined to be clean fill based on laboratory analysis. In areas where soil was excavated or in areas where the buildings were backfilled, the clean soil layer is a minimum of two-feet thick. A layer of clean imported topsoil was placed during site restoration for establishing a new vegetative cover. Additionally, a stone surfaced parking area was established on the northern third portion of the property, the stone in this area is a minimum of 12-inches thick.

3. Institutional Controls and Engineering Controls (ICs/ECs)

Institutional Controls and Engineering Controls (ICs/ECs) were implemented following the IRMs.

a) Site ECs include a soil cover consisting of clean sand and gravel and silt loam topsoil installed at the site were at least 6-inches thick across the site, with a two-foot thick layer beneath and near the former building footprint. See Figure 6. This EC was constructed to prevent human exposure to contaminated urban/industrial fill remaining at depth throughout the site.

- b) A series of ICs is required by the Record of Decision (ROD) to: (1) implement, maintain and monitor ECs; (2) prevent future exposure to remaining contamination by controlling disturbances of the subsurface contamination; and, (3) limit the use and development of the site to restricted residential uses only. Adherence to these ICs on the site is required by the Environmental Easement (Attachment 1) and will be implemented the Site Management Plan (SMP). These ICs are:
 - 1) Compliance with the Environmental Easement by the Grantor and the Grantor's successors and assigns with all elements of the SMP;
 - 2) All Engineering Controls must be maintained as specified in the SMP;
 - 3) All Engineering Controls on the Controlled Property must be inspected and certified at a frequency and in a manner defined in the SMP; and
 - 4) Data and information pertinent to site management for the controlled property must be reported at the frequency and in a manner defined in the SMP.

Institutional Controls may not be discontinued without an amendment to or extinguishment of the Environmental Easement.

The site has a series of Institutional Controls in the form of site restrictions. Adherence to these Institutional Controls is required by the Environmental Easement. Site restrictions that apply to the Controlled Property are:

- 1) Vegetable gardens and farming, including cattle and dairy farming, on the property are prohibited.
- 2) The use of the groundwater underlying the property is prohibited without treatment rendering it safe for the intended purpose.
- 3) All future activities on the property that will disturb remaining contaminated material are prohibited unless they are conducted in accordance with the SMP.
- 4) The potential for vapor intrusion must be evaluated for any buildings developed on the site that will be occupied, and any potential impacts that are identified must be mitigated.
- 5) The property may only be used for restricted residential use provided that the long-term Engineering and Institutional Controls included in the SMP are employed.
- 6) The property may not be used for a less restrictive use, such as unrestricted use, without additional remediation and amendment of the Environmental Easement by the Commissioner of NYSDEC.
- 7) The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that: (1) controls employed at the Controlled Property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC; and, (2) nothing has occurred that impairs the ability of the controls to protect public health and environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such Controlled Property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.

4. DER-10 Compliance

This FER presents information outlined in DER-10 and in NYSDEC's March 2011 FER checklist that was provided after submittal of the Draft FER.

5. Tables, Figures and As-Built Drawings

Attachments to this letter include the following tables and figures/drawings presenting post-remedial data, and nature and extent of remaining contamination, site boundaries, ECs (including soil removal and cover).

List of Tables

RIR Tables 13 through 15 document post-IRM soil sample concentrations and Table 12 documents groundwater concentrations for the site.

List of Figures/As-Built Drawings

Figure 1 ALTA/ASCM Land Title Survey Existing Conditions Plan – property survey and metes and bounds

Figure 2 Pre-IRM Surface Contaminants Above Restricted Residential Usage

Figure 3 Pre-IRM Subsurface Contaminants Above Restricted Residential Usage

Figure 4 Pre-IRM Groundwater Contaminants

Figure 5 Soil Gas Sample Plan

Figure 6 Summary of On-site Excavations and Backfill Materials

Figure 7 Current Conditions Contaminants Above Restricted Residential Usage

6. Electronic Data Submittal

Electronic data, including all manifests for solid waste, analytical data summary tables for pre- and post-excavation samples, soil backfill analyses, and waste disposal characterizations, as well as photographs were submitted with the RIR. An electronic copy of the RIR is attached to this FER as Attachment 4.

7. Site Management Plan

An SMP for the site was previously submitted to NYSDEC and approved on July 14, 2009. An electronic copy of the SMP is attached to this FER as Attachment 4.

8. Environmental Easement

An EE was issued for the site on June 1, 2010 to the Town of Stillwater. The entire site is included in the EE. An electronic copy of the EE is provided in Attachment 4. Since the site is owned by the municipality, notification to the municipality having jurisdiction is not applicable.

9. Financial Assurance

Per NYSDEC direction, the costs information submitted through the course of the project through its 2009 completion is sufficient, and no additional summary or tabulations are required.

10. Citizen Participation

Since this project was completed under the ERP, no fact sheet is required to be distributed to the site contact list prior to NYSDEC's approval of the FER.

FER Professional Engineer Certification and Stamp

I <u>Joseph M. Lanaro</u> certify that I am currently a NYS registered professional engineer, I had primary direct responsibility for the implementation of the subject construction program, and I certify that the Remedial Investigation and Interim Remedial Measures were implemented and that all construction activities were completed in substantial conformance with the DER-approved Remedial Investigation Work Plan and Interim Remedial Measures Work Plans.

The data submitted to the DEC demonstrates that the remediation requirements set forth in the Remedial Investigation Work Plan and Interim Remedial Measures Work Plans and all applicable statues and regulations have been or will be achieved in accordance with the time frames, if any, established in the Remedial Investigation Work Plan and Interim Remedial Measures Work Plans.

All use restrictions, institutional controls, engineering controls and/or any operation and maintenance requirements applicable to the site are contained in an environmental easement created and recorded pursuant to ECL 71-3605 and that any affected local governments, as defined in ECL 71-3603, have been notified that such easement has been recorded.

A Site Management Plan has been submitted for the continual and proper operation, and maintenance, and monitoring of any engineering controls employed at the site including the proper maintenance of a soil cover system, and that such a plan has been approved by the DEC.

Sincerely

Joseph M. Lanaro, P.E., M. ASCE

Principal, Vice President Engineering Services

cc: Ed Kinowski, Town of Stillwater Supervisor

James Trainor, Esq., Town Attorney

Attachments:

- 1: Environmental Easement
- 2: Figures:

Figure 1: Site Survey

Figure 2: Pre-IRM Surface Soil Contaminants Above Restricted Residential Usage

Figure 3: Pre-IRM Subsurface Soil Contaminants Above Restricted Residential Usage

Figure 4: Pre-IRM Groundwater Contaminants

Figure 5: Soil Gas Sample Location Plan

Figure 6: Summary of On-site Excavations and Backfill Materials

Figure 7: Current Conditions

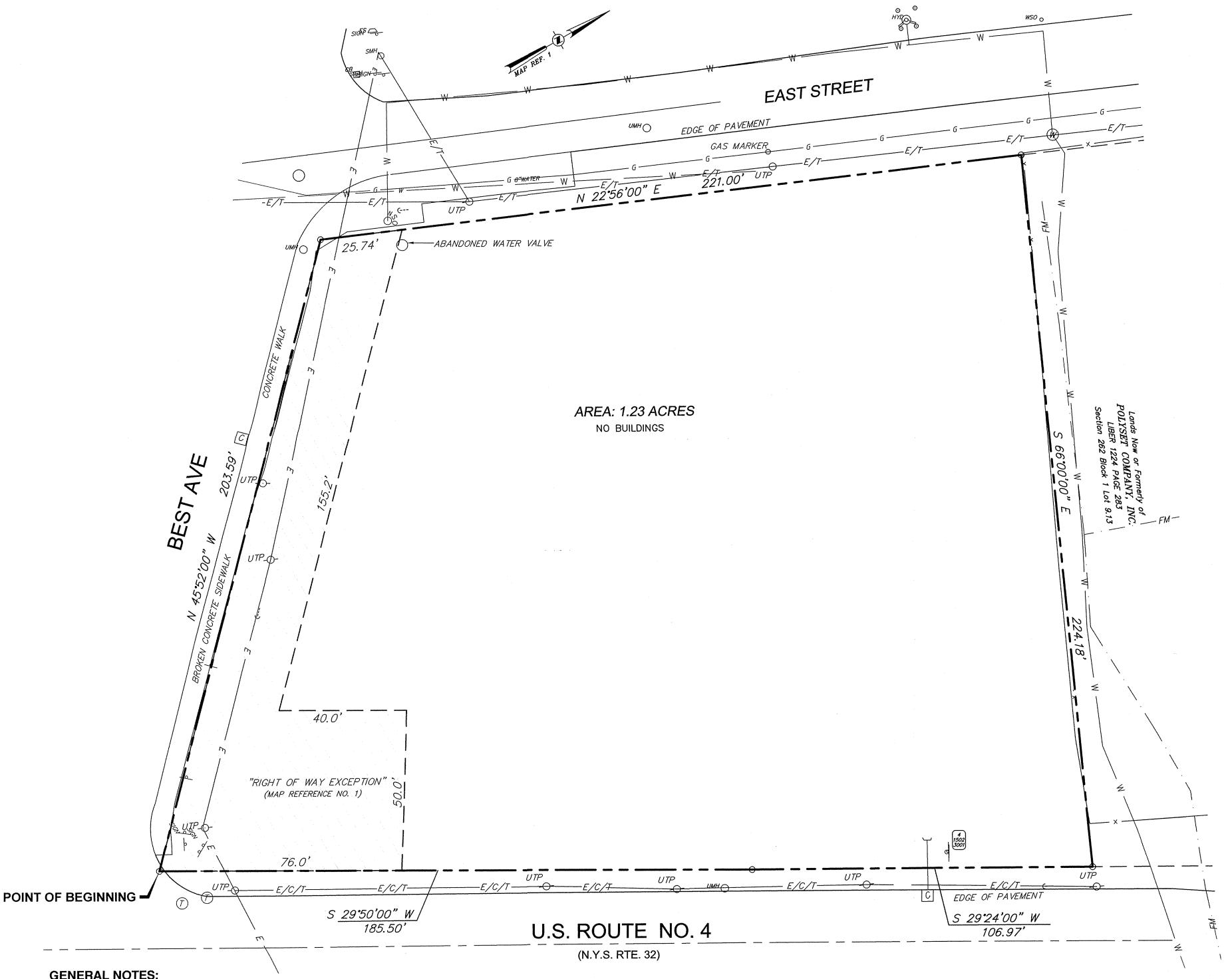
3: Tables: Remedial Investigation Report Tables 12, 13, 14, and 15

4: Compact Disc with electronic files for:

Remedial Investigation Report

Site Management Plan

Environmental Easement



GENERAL NOTES:

SITE WAS COVERED WITH 12 TO 18 INCHES OF SNOW AND ICE AT THE TIME OF SURVEY.

UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW.

ONLY COPIES FROM THE ORIGINAL OF THIS SURVEY MARKED WITH AN ORIGINAL OF THE LAND SURVEYOR'S INKED SEAL OR HIS EMBOSSED SEAL SHALL BE CONSIDERED TO BE VALID TRUE COPIES .

SURVEYED FROM RECORD DESCRIPTION AND AS IN POSSESSION.

PROPERTY BOUNDARY AS PER DEED AND MAP REFERENCE.

SUBJECT TO COVENANTS, EASEMENTS, RESTRICTIONS, CONDITIONS AND AGREEMENTS OF RECORD.

SURVEY SUBJECT TO ANY RIGHT, TITLE OR INTEREST THE PUBLIC MAY HAVE FOR HIGHWAY USE.

ALL ABOVE GROUND STRUCTURES AND SURFACE FEATURES SHOWN HEREON ARE THE RESULT OF A FIELD SURVEY UNLESS OTHERWISE NOTED. UNDERGROUND FACILITIES AND STRUCTURES, IF ANY ARE SHOWN HEREON, WERE TAKEN FROM DATA OBTAINED FROM MAPS, RECORD DRAWINGS AND RECORD DATA BY OTHERS OBTAINED FROM VARIOUS SOURCES. THE LOCATION OF UNDERGROUND UTILITIES SHOWN HAS BEEN COMPILED FROM FIELD SURVEY INFORMATION AND SAID RECORD DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES AND/OR STRUCTURES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES AND/OR STRUCTURES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES AND/OR STRUCTURES. THERE MAY BE OTHER UNDERGROUND UTILITIES AND/OR STRUCTURES, THE EXISTENCE OF WHICH ARE NOT KNOWN OR CERTIFIED BY THE UNDERSIGNED. SIZE, LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND STRUCTURES MUST BE VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO THE DESIGN AND/OR CONSTRUCTION OF ADJACENT IMPROVEMENTS. THE UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION MUST BE NOTIFIED PRIOR TO CONDUCTING TEST BORINGS, EXCAVATION OR CONSTRUCTION.

DEED REFERENCE:

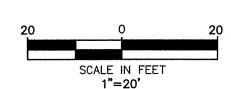
1. COUNTY OF SARATOGA TO BAO BAO INC., DATED NOVEMBER 16, 1999 AND RECORDED IN THE SARATOGA COUNTY CLERKS OFFICE IN DEED BOOK 1536,

TAX MAP PARCEL:

TOWN OF STILLWATER, SECTION 262.00, BLOCK 1, PARCEL 9.14

MAP REFERENCES:

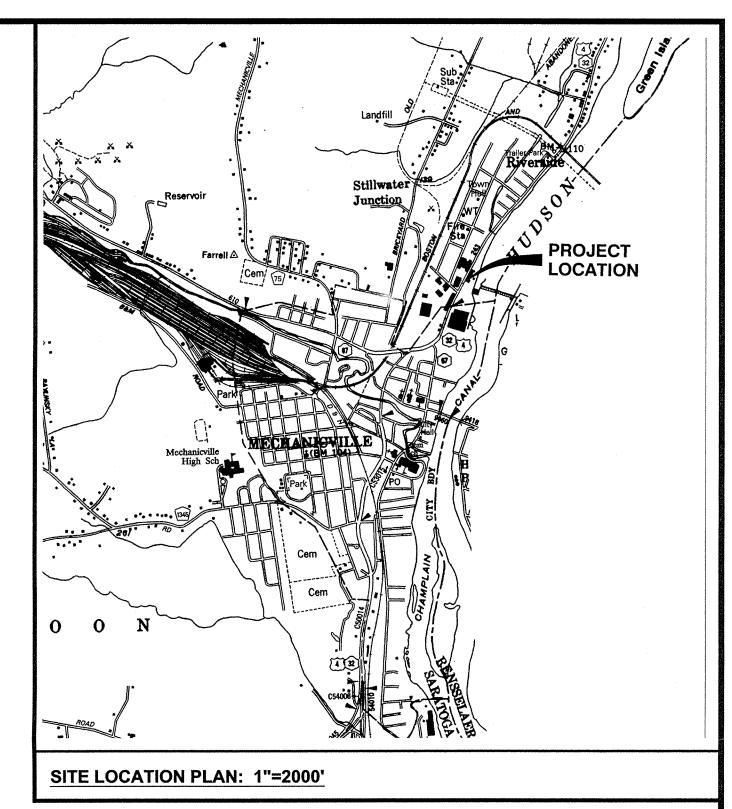
1. MAP ENTITLED "SUBDIVISION OF LANDS OF CARMINE AND MARY DECRESCENTE" BY PAUL F. TOMMELL PROFESSIONAL LAND SURVEYOR, DATED DECEMBER 21, 1987 AND FILED IN THE SARATOGA SPRINGS CLERKS OFFICE ON FEB. 16, 1988.



LEGEND:

- UTILITY POLE GAS VALVE - WATER VALVE HYDRANT - ONE POST SIGN - TWO POST SIGN --- OVERHEAD CABLE LINES — – OVERHEAD TELEPHONE LINES - OVERHEAD ELECTRIC LINES — — — UNKOWN MANHOLE - UTILITY POLE WITH LIGHT

- MONITORING WELL - BORING LOCATION



PROPERTY DESCRIPTION:

ALL THAT CERTAIN PIECE OR PARCEL OF LAND SITUATE AND BEING IN THE TOWN OF STILLWATER, COUNTY OF SARATOGA, AND STATE OF NEW YORK, BOUNDED AND DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT LOCATED AT THE INTERSECTION FORMED BY THE WESTERLY LINE OF U.S. ROUTE NO. 4 WITH THE NORTHERLY LINE OF BEST AVENUE; THENCE FROM SAID POINT OF BEGINNING AND ALONG SAID NORTHERLY LINE OF BEST AVENUE, NORTH 45°52'00" WEST, 203.59 FEET TO A POINT BEING THE INTERSECTION FORMED BY SAID NORTH LINE OF BEST AVENUE WITH THE EASTERLY LINE OF EAST AVENUE; THENCE IN A NORTHERLY DIRECTION AND ALONG SAID EAST LINE OF EAST STREET, NORTH 22°56'00" EAST, 221.00 FEET TO A POINT; THENCE IN AN EASTERLY DIRECTION AND ALONG THE SOUTHERLY LINE OF THE LANDS NOW OR FORMERLY OF POLYSET COMPANY, INC. (BOOK 1224, PAGE 283), SOUTH 66°00'00" EAST, 224.18 FEET TO A POINT LOCATED IN THE AFORESAID WESTERLY LINE OF U.S. ROUTE 4; THENCE IN A SOUTHERLY DIRECTION AND ALONG THE SAME, THE FOLLOWING TWO COURSES AND DISTANCES: 1) SOUTH 29°24'00" WEST, 106.97 FEET TO A POINT AND 2) SOUTH 29°50'00" WEST, 185.50 FEET TO THE POINT OR PLACE OF BEGINNING.

CONTAINING, IN ALL, 1.23 ACRES OF LAND, BEING MORE OR LESS.

BEING LOT NO. 1 AS SHOWN ON A MAP FILED IN THE SARATOGA COUNTY CLERKS OFFICE IN DRAWER D, MAP 125 ENTITLED, "SUBDIVISION OF THE LANDS OF CARMINE AND MARY DECRESCENTE", DATED 12-21-87, AND FILED 2-16-88.

EASEMENT NOTES:

REFERENCE IS MADE TO LAWYERS TITLE INSURANCE COMPANY COMMITMENT FOR TITLE INSURANCE NO. BTA-09147 ISSUED BY BROADWAY TITLE AGENCY BEARING AN EFFECTIVE DATE OF MARCH 10, 2009. SCHEDULE B OF SAID COMMITMENT CITES THE FOLLOWING COVENANTS, CONDITIONS, EASEMENTS AND/OR AGREEMENTS AS AFFECTING THE PREMISES SHOWN HEREON:

- 1. EASEMENT FOR THE INSTALLATION OF GUY WIRE AND ANCHOR IN FAVOR OF NEW YORK STATE ELECTRIC & GAS CORPORATION RECORDED IN BOOK 1030 AT PAGE 458 (LOCATED AT OR NEAR THE SOUTHWESTERLY CORNER OF THE SUBJECT TRACT, NOT PROTRACTIBLE, MAY NOT AFFECT).
- 2. EASEMENT FOR UNDERGROUND WATER PIPE LINE IN FAVOR OF NEW YORK STATE ELECTRIC & GAS CORPORATION RECORDED IN BOOK 1030 AT PAGE 458 (LOCATED AT OR NEAR THE SOUTHEASTERLY CORNER OF THE SUBJECT TRACT, NOT PROTRACTIBLE).
- 3. THE PROPOSED ENVIRONMENTAL EASEMENT WILL ENCOMPASS THE ENTIRE PARCEL DESCRIBED ABOVE.

CERTIFICATION:

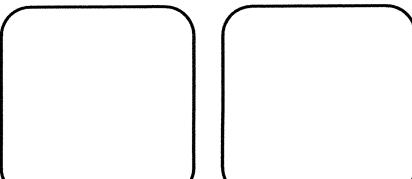
I HEREBY CERTIFY TO:

THE PEOPLE OF THE STATE OF NEW YORK ACTING THROUGH THEIR COMMISSIONER OF DEPARTMENT OF ENVIRONMENTAL CONSERVATION AND THE TOWN OF STILLWATER, NEW YORK

THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS," JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS IN 2005, AND INCLUDES ITEMS 2, 3, 4, 6, 7(A), 8, 9, 10, 11(B), 12, 13, AND 14 OF TABLE A THEREOF. PURSUANT TO THE ACCURACY STANDARDS AS ADOPTED BY ALTA AND NSPS AND IN EFFECT ON THE DATE OF THIS CERTIFICATION, UNDERSIGNED FURTHER CERTIFIES THAT IN MY PROFESSIONAL OPINION, AS A LAND SURVEYOR REGISTERED IN THE STATE OF NEW YORK, THE RELATIVE POSITIONAL ACCURACY OF THIS SURVEY DOES NOT EXCEED THAT WHICH

IS SPECIFIED THEREIN.

ISSUED FOR FINAL



ALL RIGHTS RESERVED. COPY OR REPRODUCTION OF THIS PLAT OR ANY PORTION, THEREOF IS PROHIBITED WITHOUT THE WRITTEN ERMISSION OF THE DESIGN ENGINEER, SURVEYOR, OR ARCHITECT UNAUTHORIZED ALTERATION OR ADDITION TO A SURVEY MAP BEARING A LICENSED LAND SURVEYOR'S SEAL IS A VIOLATION OF SECTION 7209, SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW. I HEREBY CERTIFY THAT THIS SURVEY MAP IS BASED ON AN ACTUAL FIELD SURVEY COMPLETED FEBRUARY 10, 2009 AND THAT THIS SURVEY MAP WAS MADE BY ME OR UNDER MY DIRECTION, AND CONFORMS WITH THE MINIMUM STANDARD OF PRACTICE ADOPTED BY THE NEW YORK STATE ASSOCIATION OF PROFESSIONAL LAND SURVEYORS.



Landscape Architects

CHAZEN ENGINEERING, LAND SURVEYING LANDSCAPE ARCHITECTURE CO., P.C.

Office Locations:

Dutchess County Office: Capital District Office: 21 Fox Street 547 River Street Poughkeepsie, New York 12601 Phone: (845) 454-3980 Phone: (518) 273-0055 North Country Office: 100 Glen Street

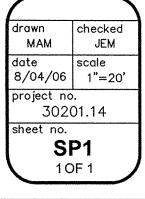
Connecticut: 914 Hartford Turnpike Glens Falls, New York 12801 Waterford, CT. 06385
Phone: (518) 812–0513 Phone: (860) 440–2690

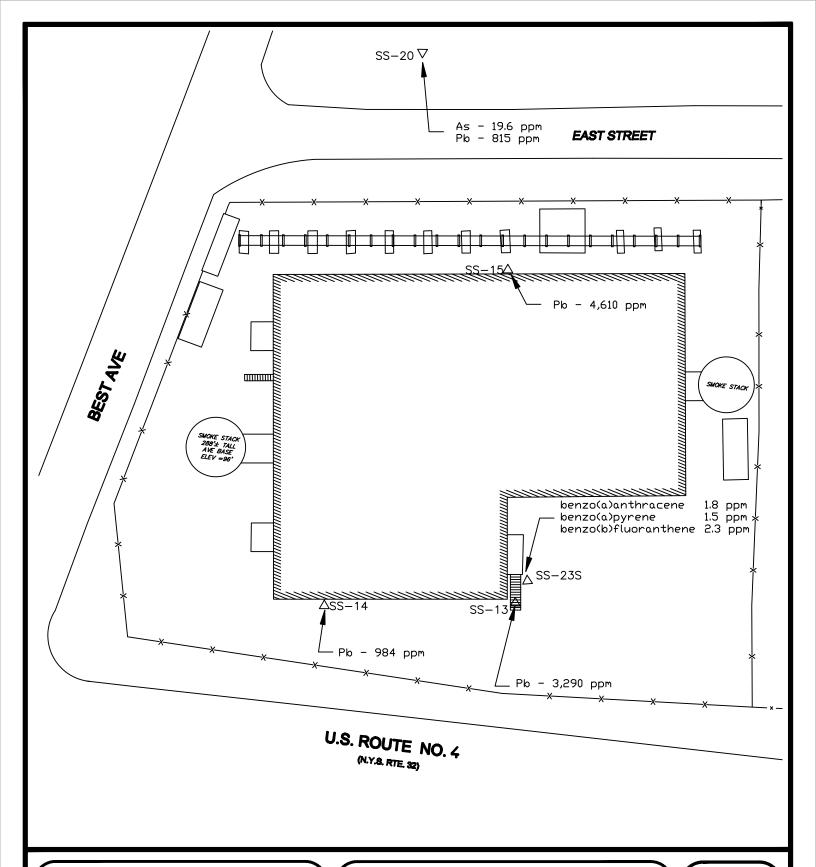
			·····
1	3/24/09	UPDATED TO 2005 ALTA STANDARDS	
rev.	date	description	

STILLWATER BOILERHOUSE

ALTA/ASCM LAND TITLE SURVEY EXISTING CONDITIONS PLAN STILLWATER BOILERHOUSE PROPERTY

STILLWATER, SARATOGA COUNTY, NEW YORK







Environmental Scientists

Planners

Dutchess County Office: 21 Fox Street Poughkeepsie, NY 12601 Phone: (845) 454-3980

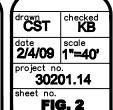
Capital District Office: 547 River Street Troy, NY 12180 Phone: (518) 273-0055

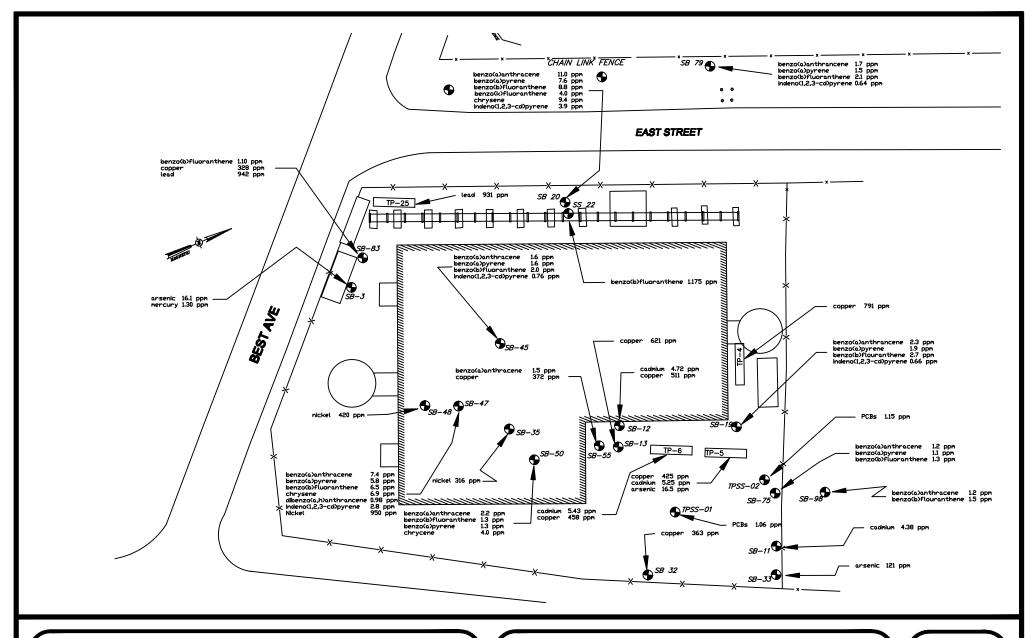
Orange County Office: 356 Meadow Avenue Newburgh, NY 12550 Phone: (845) 567-1133

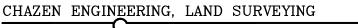
North Country Office: 100 Glen Street Glens Falls, NY 12801 Phone: (518) 812-0513

FORMER BOILER HOUSE PROPERTY FIGURE 2

Pre-IRMSurface Contaminants
Above Restricted Residential Usage
Sample Location Map
Town of Stillwater, Saratoga County, New York







LANDSCAPE ARCHITECTURE CO., P.C.

Dutchess County Office: 21 Fox Street Poughkeepsie, New York 12601 Phone: (845) 454-3980 Capital District Office: 547 River Street Troy, New York 12180 Phone: (518) 273-0055 Orange County Office: 356 Meadow Avenue Newburgh, New York 12550 Phone: (845) 567-1133 North Country Office: 100 Glen Street Glens Falls, New York 12801 Phone: (518) 812-0513

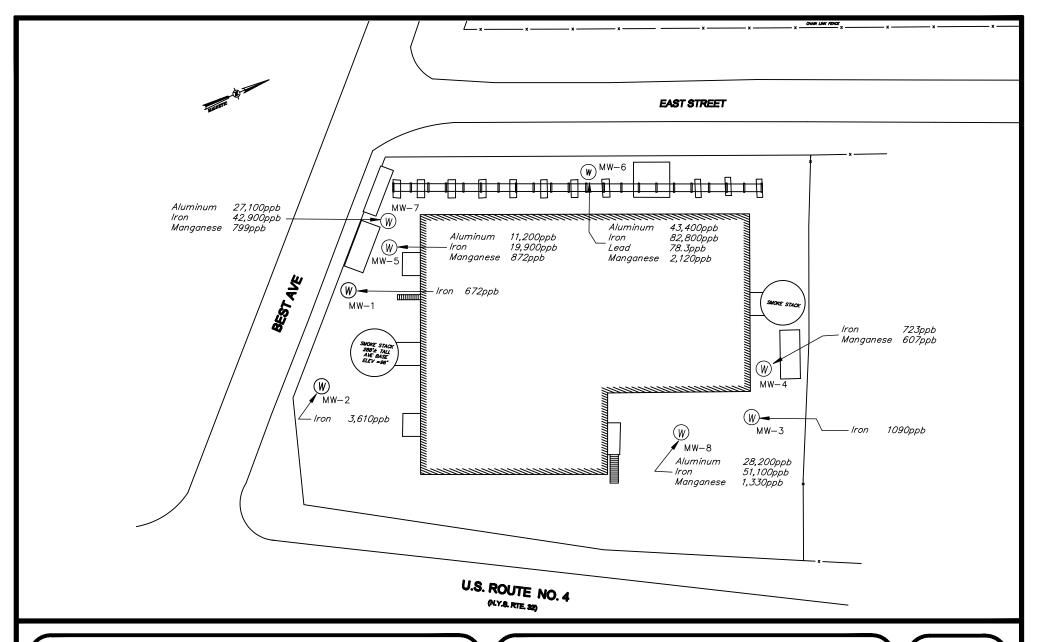
FORMER BOILER HOUSE PROPERTY FIGURE 3

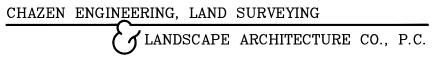
Pre-IRM Subsurface Contaminants
Above Restricted Residential Usage
Sample Location Map

Town of Stillwater, Saratoga County, New York

drawn CST	checked KB
date	scale
2/4/09	1"=50"
project no 3020	1.14
sheet no.	

FIG. 3





Dutchess County Office: 21 Fox Street Poughkeepsie, New York 12601 Phone: (845) 454-3980 Capital District Office: 547 River Street Troy, New York 12180 Phone: (518) 273-0055 Orange County Office: 356 Meadow Avenue Newburgh, New York 12550 Phone: (845) 567-1133 North Country Office: 100 Glen Street Glens Falls, New York 12801 Phone: (518) 812-0513

FORMER BOILER HOUSE PROPERTY FIGURE 4

Pre-IRM Groundwater Contaminants

Town of Stillwater, Saratoga County, New York

	1
drawn CST	checked KB
^{date} 1/19/09	scale 1"=50'
project no 302 0)1.14
sheet no.	G. 4

- UTILITY POLE WITH LIGHT

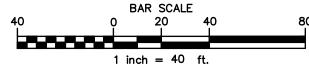
- ONE POST SIGN

- TWO POST SIGN

- UNKNOWN MANHOLE

- FIELD GC SCREENING SOIL GAS SAMPLE LOCATION

- SUMMA CANISTER SOIL GAS SAMPLE LOCATION



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CHAZEN ENGINEERING



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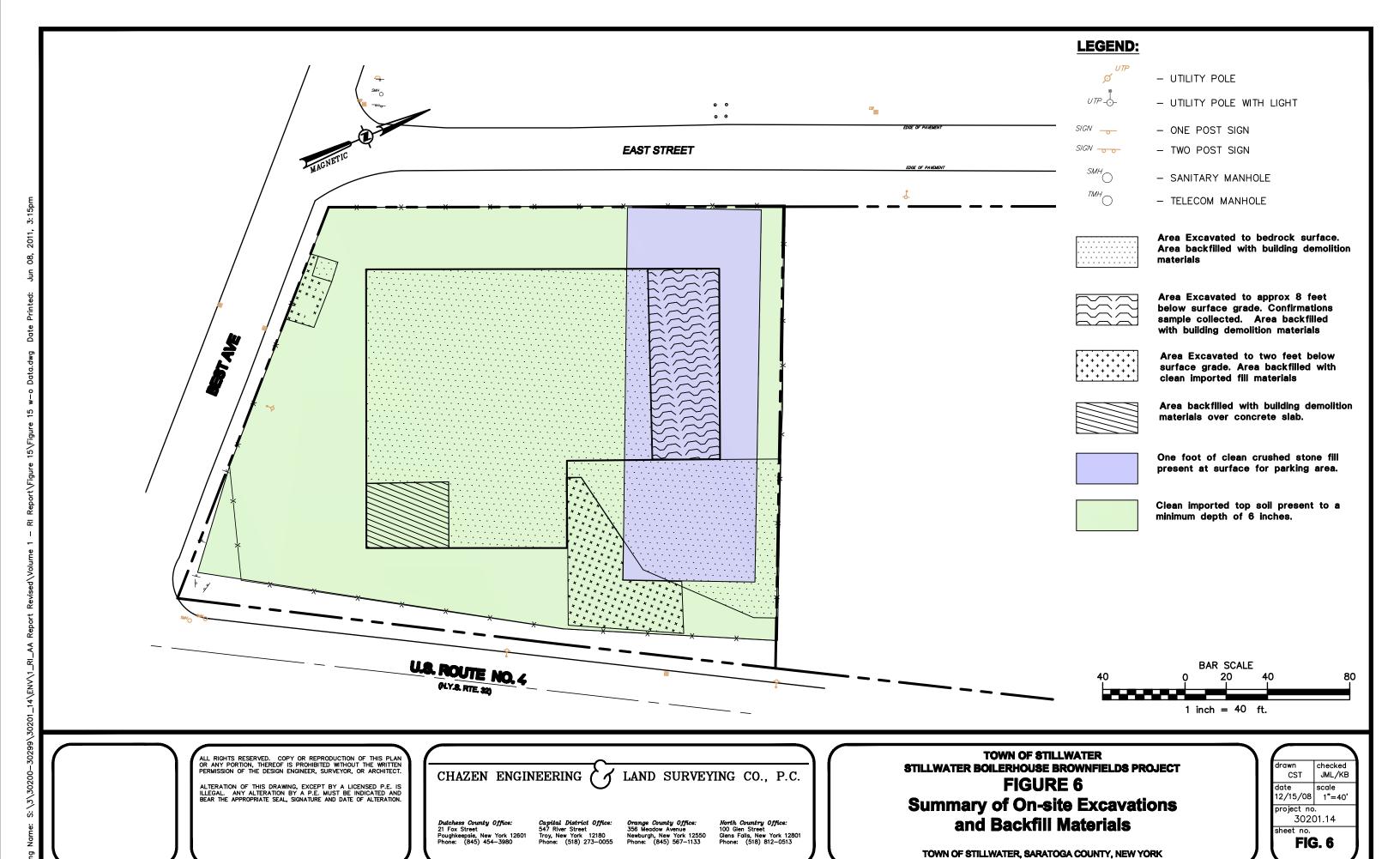
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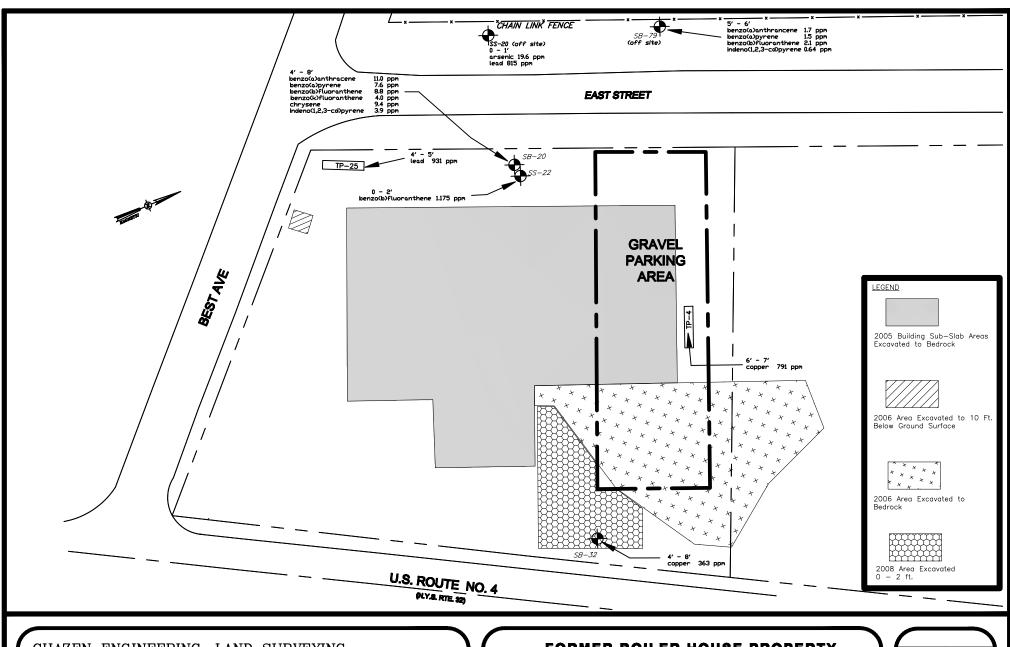
TOWN OF STILLWATER STILLWATER BOILERHOUSE BROWNFIELDS PROJECT

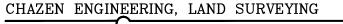
> FIGURE 5 **SOIL GAS SAMPLE LOCATION PLAN**

TOWN OF STILLWATER, SARATOGA COUNTY, NEW YORK

drawn	checked
JCR	JML/KB
date	scale
5/18/06	1"=40'
project no	
	01.14
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FORMER BOILER HOUSE PROPERTY FIGURE 7

Current Conditions
Contaminants Above Restricted Residential
Usage Location Map

Town of Stillwater, Saratoga County, New York

<i>(</i>	
drawn CST	checked KB
date 2/4/09	scale
project no 3020	1.14

sheet no. **FIG. 7**

Table 12 Summary of Detected Compounds and Metals in Groundwater Samples

Table 12

Pre-IRM Summary of Detected Compounds and Metals in Groundwater

Former Boiler House Property Stillwater, New York

		MW-1	MW-2	MW-3	MW-3 DUPLICATE	MW-4	MW-5	MW-6	MW-7 Bedrock 11' - 31'	MW-8 Bedrock 12' - 22'
Analyte	Screened Interval	5' - 15'	6' - 11'	4' - 9'	4' - 9'	4' - 9'	9' - 14'	2.5' - 12.5'		
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
	Comparative Standard ¹	7/8/2004	7/8/2004	7/8/2004	7/8/2004	7/8/2004	7/8/2004	7/8/2004	7/6/2006	7/6/2006
olychlorinated Biphenyls by	Method 8082									
Aroclor 1260	0.09	na	na				na	na	na	na
olatile Organic Compounds	by Method 8260B									
Acetone	NS								3 J	
Methylene Chloride	5					2.2 J	1.6 J			
Xylenes (total)	NS								2 J	
emivolatile Organic Compo	unds by Method 8270)								
bis(2-Ethylhexyl)phthalate	5	2.2 J	3.2 J	2.5 J	2.0 J	2.6 J	1.8 J	1.6 J		
Caprolactum	NS								23	110 D
AL Metals by Method 6010	B and 7470A for Mer	ccury								
Aluminum	2000	429	1830	643	972	532	11200	43400	27100	28200
Antimony	6									5.8 B
Arsenic	50				5.840 J		10.1	33.3	15.2	20.6
Barium	2000	145 J	62.5 J	108 J	98.9 J	67.5 J	129 J	329	545	334
Beryllium	NS						1.460 J	2.650 J	1.4 BE	1.4 BE
Cadmium	10	214000	02200	142000	122000		120000	3.340 J	0.5 B	0.6 B
Calcium Chromium	NS 100	214000 1.370 J	92300 1.840 J	143000 1.620 J	123000 1.820 J	90400 1.370 J	138000 14.6	168000 54	73400 41.3	241000 49.3
Cobalt	NS	1.5703	1.040 J	1.020 3	1.020 3	1.5703	7.820 J	42.7 J	17.3 BE	22.1 BE
Copper	1000	1.460 J	40.4	26.5	40.1	16.0 J	33.5	147	49.7	73.3
Iron	600	672	3610	1090	1790	723	19900	82800	42900	51100
Lead	50	4.540 J	18.4	14.2	21.1	11.7	38.1	78.3	22.6	31.6
Magnesium	NS	41500	13800	15500	13600	13400	49400	41600	26000	62000
Manganese	600	315	347	46.3	59.7	607	872	2120	799	1330
Mercury	1.4	0.06 J			0.08 J	0.08 J	0.18 J	0.24		0.034 B
Nickel	200						23.6 J	103	47.9	58.4
Potassium	NS	12400	6890	16200	13700	6230	3480 J	13300	11200	12500
Selenium	20		5.79					5.890 J		
Silver	100								1.4 B	1.1 B
Sodium	NS	612000	155000	129000	107000	63100	117000	155000	99200	163000
Thallium	NS									
Vanadium	NS			1.900 J	1.940 J	1.900 J	16.2 J	56	54.4	48.4 B
Zinc	5000	26.6	38.8	42.3	51.4	44.9	128	313	122 E	159 E

NOTES:

1. 6 NYCRR Part 703

"na" - indicates sample or analyte was not analyzed.

Concentrations which exceed the ambient groundwater quality standard are shaded.

"---" - indicates the analyte was not detected above the method dection limit.

NS - indicates no groundwater effluent limitation specified in 6 NYCRR Part 703.6

Table 13 VOCs Detected in Post-IRM Soil Samples

Table 13 Post-IRM Volatile Organic Compounds Detected in Soil Samples

Former Boiler House Property Stillwater, New York

	6 NYCRR Part 375	6 NYCRR Part 375	BH-SS-02	BH-SS-03	Fill-01	Fill-02	TS-01
Amoluto	Unrestricted Use		11/2/06	11/7/06	12/5/06	12/6/06	12/11/06
Analyte	Omestricted ose	Restricted Residential Use	composite	composite	composite	composite	composite
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
1,1,1-Trichloroethane	680	100,000	nd	nd	nd	nd	nd
1,1,2,2-Tetrachloroethane			nd	nd	nd	nd	nd
1,1,2-Trichloroethane			nd	nd	nd	nd	nd
1,1,2-Trichlorotrifluoroethane			nd	nd	nd	nd	nd
1,1-Dichloroethane	270	26,000	nd	nd	nd	nd	nd
1,1-Dichloroethene	330	100,000	nd	nd	nd	nd	nd
1,2,4-Trichlorobenzene			nd	nd	nd	nd	nd
1,2-Dibromo-3-chloropropane			nd	nd	nd	nd	nd
1,2-Dibromoethane			nd	nd	nd	nd	nd
1,2-Dichlorobenzene	1,100	100,000	nd	nd	nd	nd	nd
1,2-Dichloroethane	20	3,100	nd	nd	nd	nd	nd
1,2-Dichloroethylene (Total)			nd	nd	nd	nd	nd
1,2-Dichloropropane			nd	nd	nd	nd	nd
1,3-Dichlorobenzene	2,400	49,000	nd	nd	nd	nd	nd
1,4-Dichlorobenzene	1,800	13,000	nd	nd	nd	nd	nd
2-Butanone	120	100,000	nd	nd	nd	nd	nd
2-Hexanone			nd	nd	nd	nd	nd
4-Methyl-2-pentanone			nd	nd	nd	nd	nd
Acetone	50	100,000	nd	nd	nd	nd	nd
Benzene	60	4,800	nd	nd	nd	nd	nd
Bromodichloromethane			nd	nd	nd	nd	nd
Bromoform			nd	nd	nd	nd	nd
Bromomethane			nd	nd	nd	nd	nd
Carbon disulfide			nd	nd	nd	nd	nd
Carbon Tetrachloride	760	2,400	nd	nd	nd	nd	nd
Chlorobenzene	1,100	100,000	nd	nd	nd	nd	nd
Chloroethane			nd	nd	nd	nd	nd
Chloroform	370	49,000	nd	nd	nd	nd	nd
Chloromethane			nd	nd	nd	nd	nd
cis-1,3-Dichloropropene			nd	nd	nd	nd	nd
Dibromochloromethane			nd	nd	nd	nd	nd
Dichlorodifluoromethane			nd	nd	nd	nd	nd
Ethylbenzene	1,000	41,000	nd	nd	nd	nd	nd
Isopropylbenzene			nd	nd	nd	nd	nd
Methyl tert-butyl ether (MTBE)	930	100,000	nd	nd	nd	nd	nd
Methylene chloride	50	100,000	nd	nd	nd	nd	nd
Styrene			nd	nd	nd	nd	nd
Tetrachloroethene	1,300	19,000	nd	nd	nd	nd	nd
Toluene	700	100,000	nd	nd	nd	nd	nd
trans-1,3-Dichloropropylene			nd	nd	nd	nd	nd
Trichloroethylene	470	21,000	nd	nd	nd	nd	nd
Trichlorofluoromethane			nd	nd	nd	nd	nd
Vinyl chloride	20	900	nd	nd	nd	nd	nd

NOTES:

nd	indicates that the compound was not detected at laboratory method detection limit
	No Soil Cleanup Objective listed in 6 NYCRR Part 375

Table 14 SVOCs Detected in Post-IRM Soil Samples

Table 14

Post-IRM Semi-volatile Organic Compounds Detected in Soil Samples

Former Boiler House Property Stillwater, New York

	6 NYCRR Part 375	6 NYCRR Part 375	BH-SS-02	BH-SS-03	Fill-01	Fill-02	TS-01
Analyte	Unrestricted Use	Restricted	11/2/06	11/7/06	12/5/06 composite	12/6/06 composite	12/11/06 composite
Analyte		Residential Use	composite	composite			
	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)	(ppb)
1,2,4-Trichlorobenzene			nd	nd	nd	nd	nd
1,2-dichlorobenzene			nd	nd	nd	nd	nd
1,3-dichlorobenzene			nd	nd	nd	nd	nd
1,4-dichlorobenzene			nd	nd	nd	nd	nd
2,4,5-Trichlorophenol			nd	nd	nd	nd	nd
2,4,6-Trichlorophenol			nd	nd	nd	nd	nd
2,4-dichlorophenol			nd	nd	nd	nd	nd
2,4-dimethlyphenol			nd	nd	nd	nd	nd
2,4-dinitrophenol			nd	nd	nd	nd	nd
2,4-dinitrotoluene			nd	nd	nd	nd	nd
2,6-dinitrotoluene			nd	nd	nd	nd	nd
2-Chloronaphthalene			nd	nd	nd	nd	nd
2-Chlorophenol			nd	nd	nd	nd	nd
2-methylnaphthalene			nd	nd	nd	nd	nd
2-Methylphenol			nd	nd	nd	nd	nd
2-Nitroaniline			nd	nd	nd	nd	nd
2-Nitrophenol			nd	nd	nd	nd	nd
3,3' -dichlorobenzidine			nd	nd	nd	nd	nd
3-Nitroaniline			nd	nd	nd	nd	nd
4,6-dinitro-2-methylphenol			nd	nd	nd	nd	nd
4-Bromophenyl-phenylether			nd	nd	nd	nd	nd
4-Chloro-3-Methylphenol			nd	nd	nd	nd	nd
4-Chloroaniline			nd	nd	nd	nd	nd
4-Chlorophenyl-phenylether			nd	nd	nd	nd	nd
4-Methylphenol			nd	nd	nd	nd	nd
4-Nitroaniline			nd	nd	nd	nd	nd
4-Nitrophenol			nd	nd	nd	nd	nd
Acenaphthene	20,000	100,000	nd	nd	nd	nd	nd
Acenaphthylene	100,000	100,000	nd	nd	nd	nd	nd
Anthracene	100,000	100,000	nd	nd	nd	nd	nd
Benzo(a)anthracene	1,000	1,000	nd	nd	nd	nd	nd
Benzo(a)pyrene	1,000	1,000					
Benzo(b)fluoranthene	1,000	1,000	nd nd	nd nd	nd nd	nd nd	nd nd
Benzo(g,h,i)perylene	100,000	100,000	nd	nd	nd	nd	
Benzo(k)fluoranthene	800	3900		nd	nd	nd	nd nd
Benzoic acid			nd				
			nd	nd	nd	nd	nd
Benzyl Alcohol			nd	nd	nd	nd	nd
Bis (-2-Chloroethoxy) Methane			nd	nd	nd	nd	nd
Bis (2-Chloroethyl) ether			nd	nd	nd	nd	nd
Bis(2-Chloroisopropyl) ether			nd	nd	nd	nd	nd
Bis (2-ethylhexyl) Phthalate			nd	nd	nd	nd	nd
Butyl Benzyl Phthalate			nd	nd	nd	nd	nd
Chyrsene	1,000	3,900	nd	nd	nd	nd	nd
Dibenz(a,h)anthracene	330	330	nd	nd	nd	nd	nd
Dibenzofuran	7,000	59,000	nd	nd	nd	nd	nd
Diethylphthalate			nd	nd	nd	nd	nd
Dimethyl Phthalate			nd	nd	nd	nd	nd
Di-n-Butylphthalate			nd	nd	nd	nd	nd
Di-n-Octyl Phthalate			nd	nd	nd	nd	nd
Fluoranthene	100,000	100,000	nd	1,400	nd	nd	nd
Fluorene	30,000	100,000	nd	nd	nd	nd	nd
Hexachlorobenzene			nd	nd	nd	nd	nd
Hexachlorobutadiene			nd	nd	nd	nd	nd
Hexachlorocyclopentadiene			nd	nd	nd	nd	nd
Hexachloroethane			nd	nd	nd	nd	nd
Indeno(1,2,3-cd)pyrene	500	500	nd	nd	nd	nd	nd
Isophorone			nd	nd	nd	nd	nd
Naphthalene	12,000	100,000	nd	nd	nd	nd	nd
Nitrobenzene			nd	nd	nd	nd	nd
N-Nitroso-Di-N-Propylamine			nd	nd	nd	nd	nd
N-Nitrosodiphenylamine			nd	nd	nd	nd	nd
Pentachlorophenol	800	6,700	nd	nd	nd	nd	nd
Phenanthrene	100,000	100,000	nd	1,100	nd	nd	nd
Phenol	330	100,000	nd	nd	nd	nd	nd
1 HCHO1	220	100,000	IIU	IIU	IIU	IIU	IIU

NOTES:

nd	indicates that the compound was not detected at laboratory method detection limit
	No Soil Cleanup Objective listed in 6 NYCRR Part 375

Table 15 Metals Detected in Post-IRM Soil Samples

Table 15 Post-IRM Metals Detected in Soil Samples

Former Boiler House Property Stillwater, New York

Analyte	6 NYCRR Part 375	6 NYCRR Part 375 Restricted Residential Use	BH-SS-02	BH-SS-03	Fill-01	Fill-02	TS-01
	Unrestricted Use		11/2/06	11/7/06	12/5/06	12/6/06	12/11/06
	Cin estricted esc		composite	composite	composite	composite	composite
	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
Aluminum			15,370	4,640	4,820	5,210	4,350
Antimony			3.92	nd	3.24	3.9	2.25
Arsenic	13	16	3.23	3.6	2.44	3.06	1.79
Barium	350	400	93.9	67.6	26.3	30.4	21.8
Beryllium	7.2	72	0.66	nd	nd	nd	nd
Cadmium	2.5	4.3	nd	nd	nd	nd	nd
Calcium			1,266	16,000	26,000	29,400	2,980
Chromium, Total	30 (1)	180 (1)	21.1	11	8.22	8.35	5.05
Cobalt			9.89	4.85	5.92	6.11	4.14
Copper	50	270	32.8	23	17.5	19.4	12
Iron			27,880	9,080	13,200	14,000	9,130
Lead	63	400	16.6	68.6	5.86	6.32	5.49
Magnesium			4,096	3,090	8,290	7,120	1,920
Manganese	1600	2000	188	221	292	320	267
Nickel	30	310	15.5	14.5	11	11.9	7.09
Potassium			870	596	524	555	667
Selenium	3.9	180	1.11	nd	nd	nd	nd
Silver	2	180	nd	nd	nd	nd	nd
Sodium			381	406	440	450	298
Thallium			nd	nd	nd	nd	nd
Vanadium			26.1	47.4	10	11.7	8.72
Zinc	109	10000	51.3	63.6	40	40.9	29.7
Mercury	0.18	0.81	nd	nd	nd	nd	nd

NOTES:

(1)	Analytical results indicate no hexavalent Chromium in site fill				
nd	indicates that the compound was not detected at laboratory method detection limit				
	No Soil Cleanup Objective listed in 6 NYCRR Part 375				
68.6	Concentrations which exceed the 6 NYCRR Part 375 Unrestricted Use soil cleanup objective are presented in BOLD SANS SERIF				