

**PERIODIC REVIEW REPORT
FOR
PORTION OF THE NIAGARA FALLS MUNICIPAL COMPLEX
1925 MAIN STREET
NIAGARA FALLS, NEW YORK 14305
BCP SITE NUMBER C932133
REPORTING PERIOD: FEBRUARY 3, 2104 — FEBRUARY 3, 2105**



Prepared for :
Bellevue Local Development Corporation & the
City of Niagara Falls
745 Main Street
PO Box 69
Niagara Falls, NY 14302

February 2015

GPI Greenman-Pedersen, Inc.
Engineering and Construction Services

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Buffalo, N.Y. 14225
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PERIODIC REVIEW REPORT

PORTION OF THE NIAGARA FALLS MUNICIPAL COMPLEX 1925 MAIN STREET NIAGARA FALLS, NEW YORK 14305 BCP SITE NUMBER C932133

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	Site Overview	1
2.0	PERIODIC REVIEW	2
2.1	Institutional and Engineering Controls	2
2.1.1	Inspection of Engineering and Institutional Controls	3
2.2	Site Monitoring Plan	4
2.3	Operation and Maintenance	4
3.0	CONCLUSIONS AND RECOMMENDATIONS	5
4.0	LIMITATIONS	5

LIST OF FIGURES

FIGURE 1	PROPERTY LOCATION MAP
FIGURE 2	SITE PLAN

LIST OF APPENDICES

APPENDIX A	PHOTOGRAPHS
APPENDIX B	NYSDEC SITE MANAGEMENT PERIODIC REVIEW NOTICE INSTITUTIONAL AND ENGINEERING CONTROLS CERTIFICATION FORM
APPENDIX C	NYSDEC'S JUNE 20, 2013 INSPECTION LETTER AND REVISED MONTHLY INSPECTION CHECKLIST
APPENDIX D	SSDS MONTHLY INSPECTION CHECKLISTS - JANUARY 2014 THROUGH AUGUST 2014 AND AUGUST 2014 THROUGH JANUARY 2015

1.0 INTRODUCTION

The City of Niagara Falls retained Greenman-Pedersen Inc. (GPI) to evaluate current conditions at the Niagara Falls Municipal Complex (henceforth referred to as the "Site") in the City of Niagara Falls, New York and prepare this Periodic Review Report (PRR) for the Site. This Site is currently owned by the Bellevue Local Development Corporation (Owner). This PRR is being completed to meet the Site Management Periodic Review Report and Institutional Control / Engineering Control (IC/EC) Certification requirements under the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP). The NYSDEC BCP site number is C932133. This PRR documents the implementation of and compliance with the November 2010 Site Management Plan (SMP) prepared for this site.

1.1 Site Overview

The Site is a portion of the Niagara Falls Municipal Complex, measuring approximately 0.803 acres. Figures 1 and 2 from the SMP are included in this PRR and show the location of the Site and the boundaries of the 0.803 acre portion comprising the BCP site. The properties comprising the Site were historically used for multiple purposes including an automotive repair / service facility; a dry cleaner; various retail stores; a beauty shop; jewelry stores; a liquor store; a tailor; dentist and lawyers offices; unidentified commercial structures and residential properties. Historically, the Site was comprised of seven separate tax parcels, which along with several additional adjoining tax parcels not part of the BCP site, were combined in 2011 to form the single tax parcel 144.13-3.24. The Site is currently occupied by Niagara Falls Municipal Complex building which is approximately 130,000 square feet in size.

Remedial investigations were conducted at the Site between July and October 2007. These investigations identified the presence of petroleum and solvent based volatile organic compounds (VOCs); semi-volatile organic compounds (SVOCs), which consisted primarily of polycyclic aromatic hydrocarbons (PAHs) and heavy metals in the overburden soils. The evaluation of detected concentrations revealed that one VOC and no SVOCs were recorded above NYSDEC's Part 375 Unrestricted Soil Cleanup Objectives (SCOs). Also, several metals were detected at concentrations above the Unrestricted SCOs. Additionally, analytical testing on staged soils excavated from beneath the former on-site structures during Interim Remedial Measures (IRMs) revealed the presence of tetrachloroethene, a common dry cleaning solvent at concentrations excess of the Industrial SCO. Also, total petroleum hydrocarbon analysis of the staged soils revealed the presence of petroleum impacts.

The investigation of groundwater identified the presence of chlorinated solvents at concentrations exceeding NYSDEC's water quality standards (WQS) in the overburden and bedrock groundwater. The highest concentrations were detected in the northern portion of the Site. Also, petroleum-related VOCs exceeding the WQS were detected in the overburden groundwater in the northern portion of the Site. No petroleum-related VOCs were detected in the bedrock groundwater. It

should be noted that groundwater is not used for potable or non-potable purposes at the Site or in the general vicinity of the Site.

An IRM was implemented at the Site and was conducted between late 2007 and early 2008. The IRM involved the excavation and off-site disposal of approximately 22,000 tons of impacted soils exceeding the Unrestricted SCOs. Also, four underground storage tanks identified during excavation along with 750-gallons of petroleum product were removed and disposed of off-site. The IRM addressed the impacted soil/fill from the Site; however, solvent contaminated groundwater within the bedrock aquifer remains on-site.

Based on the presence of solvent contaminated groundwater that remained on-site following IRM activities, a vapor barrier combined with a sub-slab depressurization system (SSDS) was installed during construction of the Niagara Falls Municipal Complex building. The system consists of a full-slab vapor barrier beneath the entire building footprint (including the portion outside the BCP portion of the Site) and an active venting system, involving the use of negative pressure blowers to evacuate air from below and around the building's basement floor slab.

2.0 PERIODIC REVIEW

GPI conducted the third annual Periodic Review in February 2015 for the reporting period occurring between February 3, 2014 through February 3, 2015. This Periodic Review is discussed in the sections below. Appendix A includes photographs taken during the Site Inspection and Appendix B includes the NYSDEC "Site Management Periodic Review Report Notice – Institutional and Engineering Controls Certification Form."

2.1 Institutional and Engineering Controls

Since remaining contaminated groundwater and soil vapor potentially exists beneath the Site, Engineering Controls and Institutional Controls were required to protect human health and the environment.

As described above the EC implemented at the Site includes a vapor mitigation system that is comprised of a vapor barrier beneath the entire footprint of the building combined with a SSDS. Because all contaminated soil was excavated from the Site, an Excavation Work Plan was not included in the SMP and no special procedures are required to be implemented for future excavations at the Site.

In addition to the ECs a series of ICs were also required for the Site. The ICs implemented at the Site include:

- Compliance with the Environmental Easement and the SMP;
- Operation and maintenance of all ECs in accordance with the SMP;

-
- Inspection of all ECs at the Site in accordance with the SMP;
 - The ECs may not be discontinued without an amendment or extinguishment of the Environmental Easement;
 - Reporting of all required monitoring data in accordance with the SMP;
 - The Site may only be used for restricted-residential or more restrictive uses provided that the long-term EC/ICs listed in the SMP are employed and may not be used for a higher level of use without additional remediation and amendment of the Environmental Easement, as approved by the NYSDEC;
 - The use of the groundwater underlying the Site is prohibited without treatment rendering it safe for intended use;
 - The potential for vapor intrusion must be evaluated for any buildings developed within the boundaries of the Site;
 - A qualified environmental professional shall submit to NYSDEC a written certified report on annual basis; and
 - The NYSDEC shall retain the right to access the Site at any time in order to evaluate any and all controls.

2.1.1 Inspection of Engineering and Institutional Controls

On February 25, 2015, GPI's Project Manager, Mr. James C. Manzella, CHMM, conducted the site inspection. The inspection included observation of current conditions throughout and surrounding the building; the basement of the building; and the sub-slab depressurization system. GPI also held discussions with Mr. Vincent Rychel, Supervisor for Plumbing, Heating, Air Conditioning for the City of Niagara Falls, NY, during the site inspection. Mr. Rychel took over for the previous Supervisor (James Anthony) in December 2014 and will be the City representative responsible for conducting the monthly inspections for future reporting periods. The evaluation of the IC/ECs obtained from the site inspection is summarized in the paragraphs below.

The Site is currently occupied by the Niagara Falls Municipal Complex, which houses the City's police department headquarters and local court system; therefore, is in compliance with the Site use restriction requirements of the Environmental Easement. Also, the Site is serviced by the public water system and no groundwater use occurs on-site and as such meets the groundwater use restrictions.

While the SMP required a soil vapor intrusion evaluation prior to the construction of any enclosed structures on the Site, the SMP allowed for the installation of vapor mitigation system in lieu of this evaluation. As described above the vapor mitigation system is comprised of a vapor barrier beneath the entire footprint of the building combined with a SSDS. The site monitoring as well as the operation and maintenance components associated with the SSDS are summarized in Sections 2.2 and 2.3 below.

2.2 Site Monitoring Plan

The Site Monitoring Plan component of the SMP requires that the sub-slab depressurization system be inspected pursuant to a monthly inspection checklist to confirm each of the electric blowers is operating. Additionally, the monthly inspection is to include an examination of visible piping for any cracks and ensure the discharge stacks are free from obstructions. Also, in their June 20, 2013 correspondence the NYSDEC provided a modified checklist that includes a column to record the SSDS's pressure readings. The NYSDEC also recommended in this letter that a copy of the monthly checklist be posted on the wall adjacent to the SSDS's pressure gauges. A copy of this letter along with the revised monthly checklist is included in Appendix C.

While not posted on the wall adjacent to the pressure gauges, a copy of the monthly checklist was maintained within the desk within the adjacent boiler room at the time of the February 25, 2015 site visit. It was noted that the older checklist was used for the first half of the reporting period; therefore at the site inspection Mr. Rychel was advised to use the revised monthly checklist, which will be used for future monthly inspections. Based on discussions with City personnel the monthly inspection required by the SMP was not performed for December 2014 due to internal miscommunication; however, an inspection was performed on January 5, 2015 to make up for the missed December inspection. Also, a second inspection was performed on January 19, 2015. Based on the fact that none of the inspections prior to or after December 2014 showed any issues with the SSDS and the fact a makeup inspection was performed, this is not viewed as a deficiency affecting IC/ECs for the Site. Copies of the 2014 and 2015 monthly checklists are included in Appendix D.

2.3 Operation and Maintenance

In addition to the monthly inspections of the SSDS, annual inspections of the following additional components of the system are to be performed: all warning devices/alarm indicators, system labeling, vacuum pressure gauges, exhaust stack discharge and integrity of the vapor barrier, as appropriate. Inspection of these features are confirmed by visual observation as well as noting air discharges from vents located on the roof of the building. As-built drawings as well as other pertinent information regarding the Sub-Slab Depressurization System are presented in Figure 6 and Appendices B and C of the SMP.

GPI evaluated the operation of the SSDS during the February 25, 2015 site inspection. GPI observed the discharge locations on the roof of the building, and the locations were free from obstructions. Additionally, while on the roof GPI confirmed that both blowers were operating properly and that air was flowing out of the vent pipes. The previously deficient south blower (i.e. noted to be making a rattling noise during the 2014 inspection) was replaced in mid-2014 with a new blower of the same make and model.

GPI manually tripped the alarms on the SSDS to confirm system operation by temporarily closing the valves on the discharge vents. Both units changed from green indicator lights to red indicator lights and an audible alarm sounded within a few seconds indicating the alarm system was functioning properly. System labeling was in place as identified in the SMP. Each of the pressure gauges displayed an operating pressure of 0.6 W.C. (inches of water), which is within the operating pressure range listed in the SMP. While the integrity of the vapor barrier could not be visually examined due to its subsurface location, the visual examination of the building's basement floor slab showed its integrity to be intact, which indicates impacts to the vapor barrier are unlikely.

3.0 CONCLUSIONS AND RECOMMENDATIONS

With the exception of the missed December 2014 monthly inspection the Site is in compliance with the SMP and Environmental Easement. As stated above none of the inspections prior to or after December 2014 showed any issues with the sub-slab system and the fact a makeup inspection was performed in early January, this is not viewed as a deficiency affecting IC/ECs for the Site. Therefore, no changes to the periodic review reporting are recommended.

4.0 LIMITATIONS

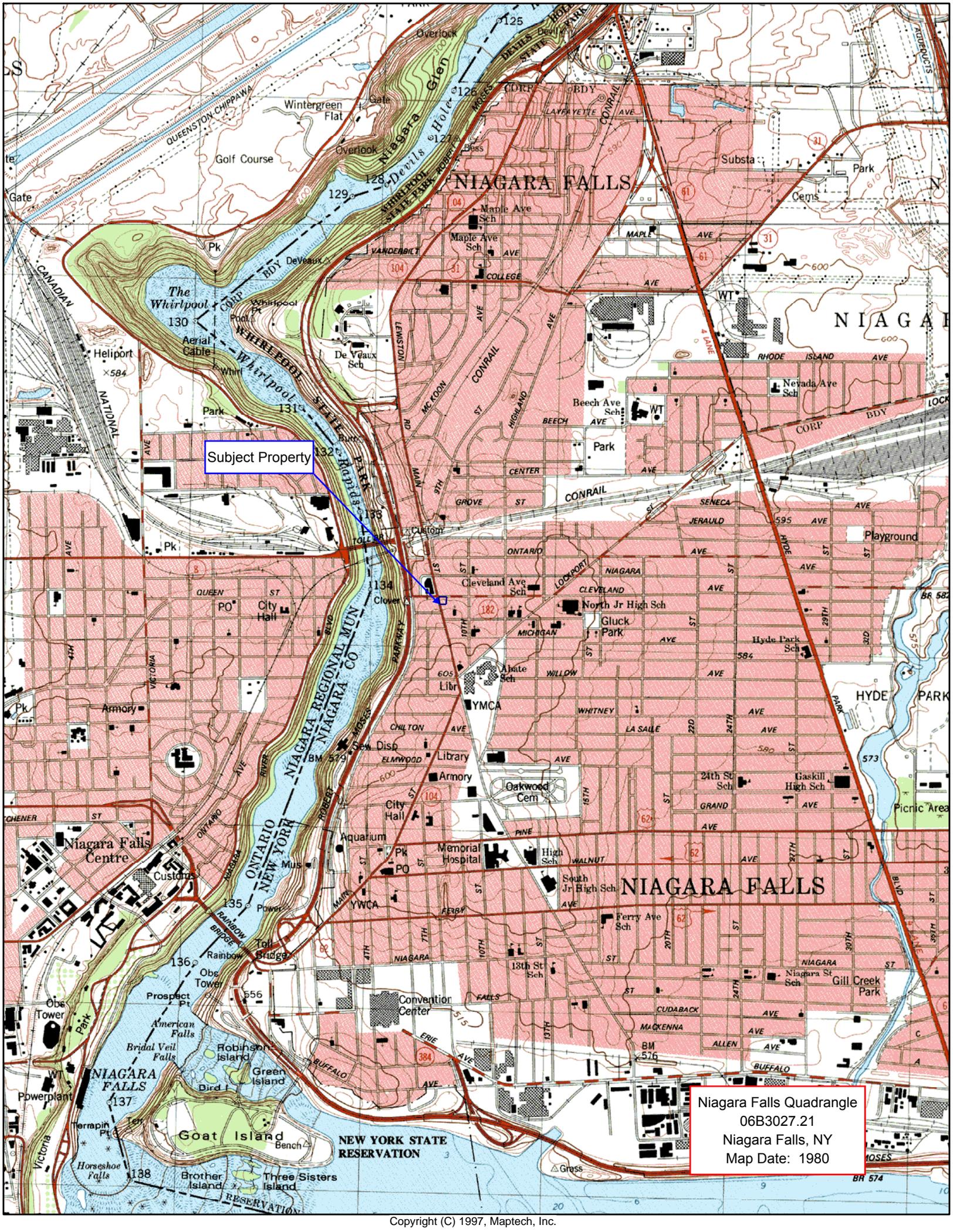
The conclusions presented in this report are based on information gathered in accordance generally accepted professional consulting principles and practices. All conclusions reflect observable conditions existing at the time of the site inspection. Information provided by outside sources (individuals, agencies, laboratories, etc.), as cited herein, was used in the evaluation of the Site. The accuracy of the conclusions drawn from this Periodic Review is, therefore, dependent upon the accuracy of information provided by these sources. Furthermore, GPI is not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to the performance of services.

This Periodic Review Report is based upon the application of scientific principles and professional judgment to certain facts with resultant subjective interpretations. Professional judgments expressed herein are based upon the facts currently available within the limits of the existing data, scope of services, budget, and schedule. To the extent that more definitive conclusions are desired by the Client than are warranted by the current available facts, it is specifically GPI's intent that the conclusions and recommendations stated herein will be intended as guidance and not necessarily a firm course of action except where explicitly stated as such. GPI makes no warranties, expressed or implied including without limitation, warranties as to merchantability or fitness of a particular purpose. Furthermore, the information provided in this report is not to be construed as legal advice.

This Periodic Review Report has been completed and prepared on behalf of and for the exclusive use of the City of Niagara Falls. Any reliance on this report by a third party is at such party's sole risk. Furthermore, nothing contained in this report shall be construed as a warranty or affirmation by GPI that the Site described in this report is suitable collateral for any loan or that acquisition of such property by any lender through foreclosure proceedings or otherwise will pose no risk of potential environmental liability on the part of such lender.

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FIGURES

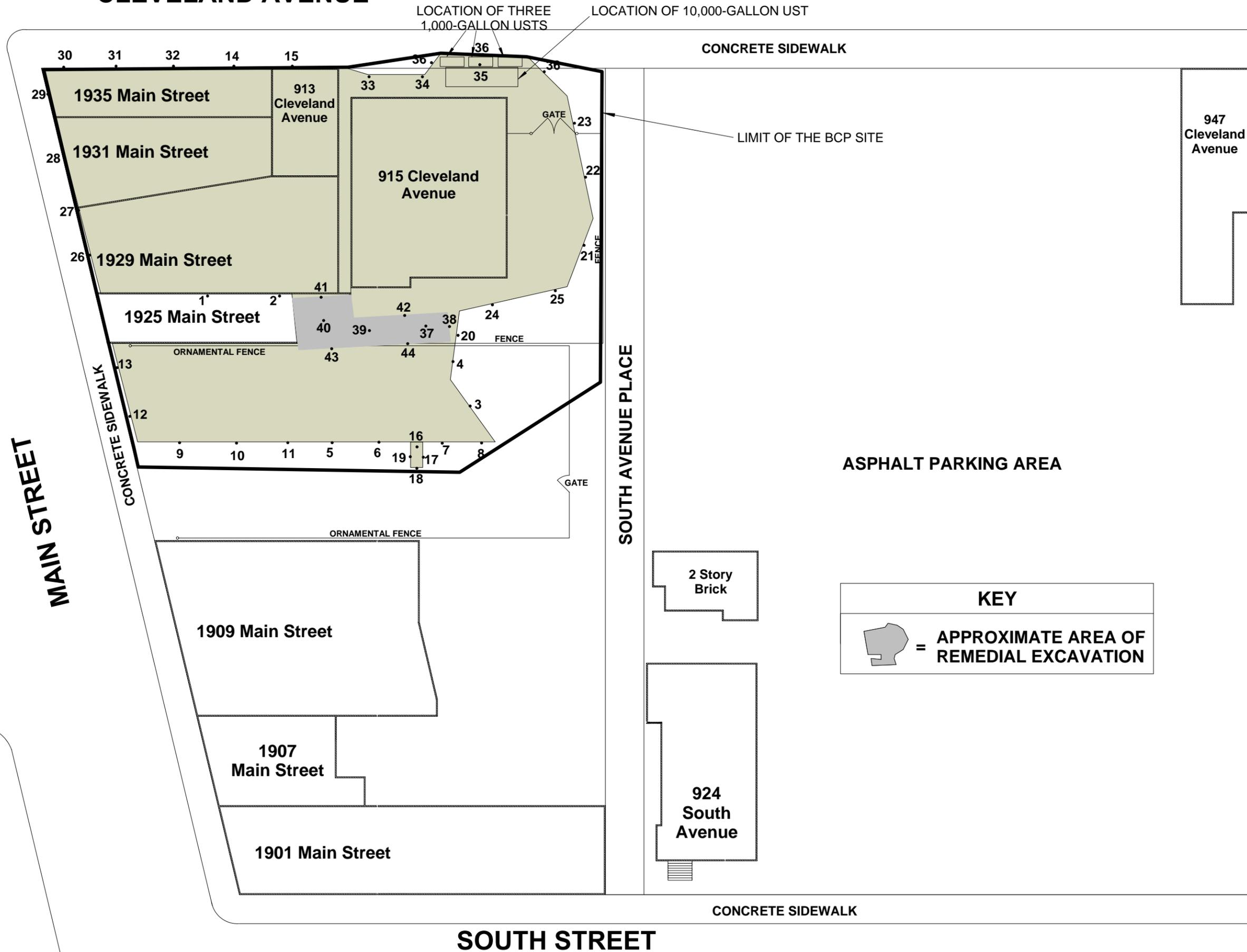


Subject Property

Niagara Falls Quadrangle
06B3027.21
Niagara Falls, NY
Map Date: 1980

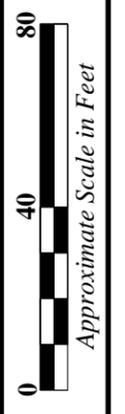


CLEVELAND AVENUE



Drawn by: DPS

Checked by: DBR



LCS Project # 06B3027.26

FIGURE 2

KEY

 = APPROXIMATE AREA OF REMEDIAL EXCAVATION


LINCOLN PLACE

MAIN STREET

SOUTH AVENUE PLACE

SOUTH STREET

ASPHALT PARKING AREA

2 Story Brick

924 South Avenue

1935 Main Street

1931 Main Street

1929 Main Street

1925 Main Street

1909 Main Street

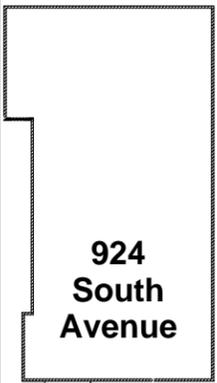
1907 Main Street

1901 Main Street

913 Cleveland Avenue

915 Cleveland Avenue

947 Cleveland Avenue



LOCATION OF THREE 1,000-GALLON USTS

LOCATION OF 10,000-GALLON UST

CONCRETE SIDEWALK

LIMIT OF THE BCP SITE

ORNAMENTAL FENCE

ORNAMENTAL FENCE

FENCE

GATE

GATE

FENCE

30 31 32 14 15

36 36 35 30

29

28

27

26

1 2

13

12

9 10 11 5 6 19 7 8

41 42 43 44 4

40 39 37 38 24 25

33 34

33 34

36 36 35 30

23

22

21

20

4

3

GATE

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GATE

APPENDIX A - PHOTOGRAPHS



Photograph No. 1 – Exterior of Niagara Falls Municipal Complex Building, west side.



Photograph No. 2 – Lobby of Niagara Falls Municipal Complex Building.



Photograph No. 3 – Basement level of Niagara Falls Municipal Complex Building depicting general conditions.



Photograph No. 4 – Sub-slab Depressurization System in basement, depicting pressure gauges and stack discharge piping.



Photograph No. 5 – Sub-slab Depressurization System in basement, depicting alarms and stack discharge piping.



Photograph No. 6 – Sub-slab Depressurization System discharge vents and blowers and power control for discharge vents.

**APPENDIX B - NYSDEC SITE MANAGEMENT
PERIODIC REVIEW NOTICE INSTITUTIONAL &
ENGINEERING CONTROLS CERTIFICATION
FORM**



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



	Site Details		Box 1
Site No.	C932133		
Site Name 915 Cleveland Avenue			
Site Address: 1925 Main Street Zip Code: 14305-2637			
City/Town: Niagara Falls			
County: Niagara			
Site Acreage: 0.8			
Reporting Period: February 03, 2014 to February 03, 2015			
			YES NO
1. Is the information above correct?			<input checked="" type="checkbox"/> <input type="checkbox"/>
If NO, include handwritten above or on a separate sheet.			
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?			<input type="checkbox"/> <input checked="" type="checkbox"/>
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?			<input type="checkbox"/> <input checked="" type="checkbox"/>
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?			<input type="checkbox"/> <input checked="" type="checkbox"/>
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.			
5. Is the site currently undergoing development?			<input type="checkbox"/> <input checked="" type="checkbox"/>
			Box 2
			YES NO
6. Is the current site use consistent with the use(s) listed below? Restricted-Residential, Commercial, and Industrial			<input checked="" type="checkbox"/> <input type="checkbox"/>
7. Are all ICs/ECs in place and functioning as designed?			<input checked="" type="checkbox"/> <input type="checkbox"/>
IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.			
A Corrective Measures Work Plan must be submitted along with this form to address these issues.			
_____ Signature of Owner, Remedial Party or Designated Representative			_____ Date

Box 2A

8. Has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?

YES NO

If you answered YES to question 8, include documentation or evidence that documentation has been previously submitted with this certification form.

9. Are the assumptions in the Qualitative Exposure Assessment still valid? (The Qualitative Exposure Assessment must be certified every five years)

If you answered NO to question 9, the Periodic Review Report must include an updated Qualitative Exposure Assessment based on the new assumptions.

SITE NO. C932133

Box 3

Description of Institutional Controls

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
144.13-3-24	Bellevue Local Development Corporation	Site Management Plan O&M Plan Ground Water Use Restriction Soil Management Plan Landuse Restriction Building Use Restriction Monitoring Plan IC/EC Plan

The Environmental Easement was filed as of 02-16-2011. The vapor mitigation system for the building includes a sub-slab depressurization system. A groundwater use restriction is in place along with a restriction for restricted residential use.

Box 4

Description of Engineering Controls

<u>Parcel</u>	<u>Engineering Control</u>
144.13-3-24	Vapor Mitigation

Periodic Review Report (PRR) Certification Statements

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

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

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

YES NO

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

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

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

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. C932133

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I James C. Manzella at Greenman-Pedersen Inc.
4450 Genesee St. Suite 100, Buffalo NY 14225
print name print business address

am certifying as Designated Representative (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

James C. Manzella
Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

2-25-15
Date

IC/EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I James C. Manzella at Greenman-Peterson Inc. 4950 Genesee St. Suite 100, Buffalo NY 14225
print name print business address

am certifying as a Qualified Environmental Professional for the Owner
(Owner or Remedial Party)

James C. Manzella
Signature of Qualified Environmental Professional, for
the Owner or Remedial Party, Rendering Certification

2-15-15
Stamp
(Required for PE) Date

**APPENDIX C - NYSDEC'S JUNE 20, 2013
INSPECTION LETTER AND REVISED MONTHLY
INSPECTION CHECKLIST**

New York State Department of Environmental Conservation

Division of Environmental Remediation, Region 9

270 Michigan Avenue, Buffalo, New York 14203-2915

Phone: (716) 851-7220 • Fax: (716) 851-7226

Website: www.dec.ny.gov



Joe Martens
Commissioner

June 20, 2013

Mr. Thomas Pryce
Bellevue Local Development Corporation
745 Main Street
P.O. Box 69
Niagara Falls, New York 14302

Dear Mr. Pryce:

915 Cleveland Avenue/1925 Main Street
Niagara Falls, NY 14305
Site No.: C932133

On June 13, 2013, I met with Mr. James Anthony to inspect the sub-slab depressurization (SSD) system at the above-subject site. The SSD system was operating; however, one of the vent pipe blowers, located on the third floor roof, was making excessive noise and is in need of maintenance work. I also noted that there was no Monthly Sub-Slab Blower Inspection Check List on site as required by the Site Management Plan (SMP).

Enclosed is a Monthly Sub-Slab Blower Inspection Check List which should be used to record each SSD system inspection. It has been modified from the check list in Appendix D of the SMP to include SSD system pressure readings. It may be useful to mount it in a folder on the basement wall of Mechanical Room B05 where the SSD system valves and pressure gauges are located. A copy of the check list and records of any maintenance performed on the system must be included in the Site Management Periodic Review Report (PRR). Other requirements for the PRR are outlined in the SMP, a copy of which is included for your convenience on the enclosed CD along with a copy of the Vapor Barrier and Collection System Installation Report.

If you have any questions, please call me at (716) 851-7220.

Sincerely,



Tim Dieffenbach
Engineering Geologist II

TD:sz
Enclosures

ec: Teresa Mucha, Esq. - NYSDEC, Office of General Counsel
Mr. Gregory Sutton - NYSDEC, Division of Environmental Remediation

cc: Thomas O'Donnell, Esq. - Deputy Corporation Counsel
Mr. James Anthony - City of Niagara Falls (w/enclosures)

**APPENDIX D - SSDS MONTHLY INSPECTION
CHECKLIST JANUARY 2014 THROUGH AUGUST
2014 AND AUGUST 2014 THROUGH JANUARY
2015**
