SITE MANAGEMENT
PERIODIC REVIEW REPORT (PRR)
WHILPOOL BRIDGE SOILS REMEDIATION

for

NIAGARA FALLS BRIDGE COMMISSION
NIAGARA FALLS, NY

Submitted to
NYSDEC, Buffalo, NY

March 2010

by

Iyer Environmental Group, PLLC
Orchard Park, NY 14127

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PERIODIC REVIEW (PRR) REPORT
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I. INTRODUCTION

A. Site History

Bridge painting operations at the Whirlpool Rapids Bridge in the past have involved uncontrolled blast cleaning using coal slag as an expendable abrasive. Heavy metals contamination from spent abrasives and paint waste were found on the slopes of the Niagara Gorge below the Bridge. Lead concentrations in surficial soil were found to range from 16 to 11,640 mg/Kg across a 400-feet wide sampling area on either side of the Bridge, with heavy metals migrating through the bedrock aquifer (0.1 to 1.2 mg/L lead in groundwater) into the Niagara River.

The selected remedy had two primary objectives: limit exposure to visitors, and minimize contaminant loadings to the Niagara River. The remedy was implemented in 2004 with the removal of contaminated soils (1,037 tons) and rebuilding of the tourist trail under the bridge, while preserving the natural beauty of the area. As part on institutional control, the area will remain a tourist attraction, and the side slopes will not be accessible to visitors.

B. Effectiveness of Remedial Program

The objective of limiting exposure to visitors to the Niagara Gorge was met immediately with the implementation of the remedy - removal of contaminated soils on and around the trail, and the placement of large stone blocks along the trail to prevent visitors from accessing the side slopes. A drastic reduction in heavy metals was observed in the bedrock aquifer in the first monitoring event (May 2005) immediately following the remedial action. Lead in particular dropped from a pre-remedy high of 1.2 mg/L (9/2003) to a post-remedy level of 0.04 mg/L (5/2005), and trace levels in the last three years.

C. Compliance

There are no non-compliance issues with monitoring or institutional controls. The NFBC has followed the long-term monitoring plan with quarterly sampling of groundwater and surface water from 2005 through 2008, and semi-annual sampling thereafter. The trail leading to the Bridge is maintained by the NYS Office of Parks, Recreation and Historical Preservation (NYSOPRHP). The NFBC has continuously monitored the area for signs of contamination during the bridge painting project which will be completed in 2010.

D. Recommendations

The requirements for site management will be met with the removal of the final containment structure from the painting project by August 2010. A final monitoring event and soil sampling along the rebuilt trail are scheduled for October/November 2010. No further work is recommended for the site after these events except for a continuation of the institutional controls limiting access to the side slopes and keeping the area as a tourist destination.

II. SITE OVERVIEW

A. Site Description

The Whirlpool Rapids Bridge (see location on Figure 1), constructed in 1897, is one of three bridges connecting the United States and Canada in the Niagara Falls area and operated by the Niagara Falls Bridge Commission (NFBC) since 1959. The lower deck is for automobile and pedestrian traffic, while the upper deck serves the railroad. Bridge

painting operations in the past involved uncontrolled blast cleaning using coal slag as an expendable abrasive without containment of the spent abrasives and paint waste. This Bridge was abrasively blast cleaned and painted about five times (last time in 1986-87) in its 100+ years of existence that resulted in lead-paint contamination of the trail and side slopes. The trail is owned by New York Power Authority (NYPA) and operated by New York State Office of Parks, Recreation and Historical Preservation (NYOPRHP) under a lease agreement.

Spent abrasives and finely divided paint waste were found (Environmental Impact Assessment, May 2003) along the trail and side slopes of the Bridge in discrete sections as well as mixed with soils. Lead concentrations ranged from 16 ppm to 11,640 ppm across the entire width of the 400 foot sampling area on either side of the Bridge. In comparison, the background soil samples ranged from 46 to 437 mg/Kg lead. Lead concentrations were higher (68 to 11,640 ppm) within the first 275 feet from the bridge, and tapered off within the last 125 feet (16 to 2,220 ppm lead). The highest lead levels were found near the footings of both the Whirlpool Bridge and the adjacent Canadian National Bridge. Elevated polynuclear aromatic hydrocarbons (PAHs) were found in only one sample on the upper slope. The underlying bedrock aquifer feeding into the Niagara River had heavy metal contamination, with lead and zinc levels up to 1.2 mg/L.

B. Chronology of Site Remedy

An Environmental Impact Assessment was completed in May 2003, and included soil and groundwater sampling, VLF survey of the bedrock to locate monitoring wells, soil leachability testing, and an ecological evaluation. The remedial goals (see Remedial Action Work Plan, October 2003) for the site were as follows:

- Limit exposure to visitors to the Niagara Gorge underneath the Bridge since
- Minimize contaminant loadings to the Niagara River, a Class A Special water body
- Preserve the natural beauty of the area and do not alter side slope stability
- Limit dangerous construction operations on the slope

The remedial action, undertaken from September through December 2004 (see RA Construction Report, February 2005), included:

- Excavation and disposal of 1,037 tons of contaminated soils
- Reconstruction of 500 feet of trail
- Drainage pipes (200 feet total) and three sumps for surface water sampling
- Concrete boxes with bolted covers around two bedrock monitoring wells
- Placement of large blocks of stone along reconstructed trail to provide an additional level of visitor safety and to minimize visitor access to the side slopes
- Restoration of the upper trail
- Implementation of a long term monitoring program for groundwater and surface water
- Institutional controls to maintain the area as a tourist attraction and limit visitor access to the side slopes

The NFBC started the bridge painting project in 2007 using state of the art techniques including a containment structure to capture, collect and dispose off-site spent abrasives and paint waste. The trail was visually inspected during the course of the painting project, and waste material was vacuumed periodically by the paint contractor. Finishing touches and removal of the containment structure will be completed by July 2010.

III. REMEDY PERFORMANCE, EFFECTIVENESS AND PROTECTIVENESS

The attached before/after photo page and site drawing show features of the remedy implemented in 2004. The objective of limiting exposure to visitors to the Niagara Gorge was met immediately after implementation of the remedy - removal of contaminated soils on and around the trail; rebuilding of the trail with geotextile membrane, crushed stone and bentonite; and the placement of large stone blocks along the trail to prevent visitors from accessing the side slopes. Signs posted along the trail also warn visitors to keep away from the side slopes. The rebuilt trail under the Bridge has remained in good condition over the years. Eroded slopes on each end of the Upper Retaining Wall are repaired by the NFBC and NYSOPRHP as when they occur. The remedy thus continues to be protective of human health and the environment.

Table 1 lists heavy metals (As, Cd, Cr, Pb and Zn) concentrations in groundwater and surface water before and after remediation, while Figure 1 illustrates the trend in lead concentrations over time. The results of the monitoring program demonstrate the effectiveness of the remedial action. The effectiveness of the remedy is evident from the results of the monitoring event immediately after remedial action. Lead in particular dropped from a pre-remedy high of 1.2 mg/L (9/2003) in groundwater to a post-remedy level of 0.04 mg/L (5/2005). Lead has been at trace levels in groundwater in the last three years over the course of the Bridge painting project.

The Niagara Gorge Trailway is enhanced as a result of this project. Hazardous materials were removed, the visitor's trail surface reconstructed in the vicinity of the Whirlpool Bridge, and new native species of plants were introduced. Areas outside of the pathway were restored with the placement of large stone blocks (sandstones and limestone) and talus rock groundcover. As the NYSOPRHP continues trail improvements in the future, the area beneath the Whirlpool Bridge crossing will be open to even greater numbers of trail users. This project, with its clarified pathway and trail edge landscaping, will subtly direct trail users along a quick, defined and limited route of passage under the bridge.

IV. IC/EC PLAN COMPLIANCE

A. IC/EC Requirements and Compliance

The site remains in compliance with the IC/EC requirements. A Declaration of Covenants and Restrictions was developed and filed with the Niagara County Clerk.

Maintain area as a tourist attraction: No residential, commercial or industrial use is contemplated for this area, and it will continue to remain a tourist attraction. Posted warning signs and security cameras keep visitors away from the side slopes, thereby preventing exposure to residual contamination on the side slopes.

Limiting visitor access to side slopes: Site management has included routine inspection of the trail under the Bridge and vacuuming of any spent abrasives released during blasting and painting. The NFBC and NYSOPRHP have maintained the trail in good condition, repairing side slopes after soil erosion and rock slides. Continuing improvements to the trailway will increase the number of visitors but their movement will be subtly restricted to the trailway.

B. IC/EC Certification

The IC/EC certification by the NFBC and IEG is attached.

V. MONITORING PLAN COMPLIANCE

A. Components

Long-term monitoring includes the following elements:

- Routine (monthly during tourist season) inspections of the site with checks on visitor access and potential signs of erosion along the side slopes.
- Removal of contaminated soils that may erode/slide off the side slopes during extreme weather conditions and pile up on to the visitors' path.
- Routine sampling of groundwater at the two bedrock wells (MW-1 and MW-2) and surface water in the three collection sumps (quarterly for the first two years and semi-annually thereafter) to monitor the effectiveness of the remedy.

B. Summary of Monitoring Completed

Iyer Environmental Group PLLC (IEG) has been performing the environmental monitoring at the site since the completion of remedial action. Monitoring completed to-date includes eight quarterly events from 2005 to 2008 (May 2005, September 2005, December 2005, April 2006, August 2006, November 2006, April 2007 and November 2007), and four semi-annual events from 2008 (June 2008, November 2008, June 2009 and November 2009. Groundwater and surface water samples were collected during these events for heavy metals analysis. In addition, the soil along the improved trail and the buffer zone was sampled in October 2006 after spent abrasives were found beneath the bridge.

C. Comparison with Remedial Objectives

The remedial objective is to limit contaminant loadings to the Niagara River, a Class A water body. This objective was met with the removal of over 1000 tons of contaminated soil from the trail beneath the Whirlpool Bridge, and easily accessible areas of the side slopes. The trend in heavy metals concentrations (see Figure 2 and Table 1) demonstrate that the remedy has been effective in significantly reducing heavy metals migration from the site. The metals are now at trace levels, with lead at 0.002 to 0.006 mg/L in the two bedrock wells in the last two rounds of sampling.

D. Monitoring Deficiencies

There are no monitoring deficiencies. All monitoring events have been performed in accordance with NYSDEC requirements and consistent with the long-term monitoring plan.

E. Conclusions and Recommendations for Changes

The remedy implemented in 2004 has been effective in meeting the remediation goals for the site. The blasting and paint work over the last three years have been performed by the NFBC's paint contractor with state of the art containment system that has had no noticeable effect on the environment.

No changes are recommended to the monitoring program. One more round of monitoring and soil sampling along the rebuilt trail are scheduled for

October/November 2010, following removal of the containment system. IEG recommends. No more monitoring is recommended for the site

VI. O&M PLAN COMPLIANCE

There is no O&M associated with the remedy for this site.

VII. OVERALL PRR CONCLUSIONS AND RECOMMENDATIONS

A. Compliance with SMP

Monitoring: All monitoring requirements have been met with quarterly (2005 – 2007) and semi-annual (2008 – present) sampling of groundwater and surface water.

IC/EC: All IC/EC requirements are met through restricting visitors to the trail and away from the side slopes, and repair of side slopes immediately after soil erosion or rock slides. A containment system and vacuuming of the trail as and when needed have kept spent abrasives and paint from entering the Niagara River.

B. Performance and Effectiveness of Remedy

The remedy has been effective in meeting its objectives. Exposure to residual contamination is prevented by limiting visitors to the trail and away from the side slopes. Contaminant migration has been significantly reduced with the removal of a significant amount of the source of contamination migration, and maintenance of the trail and side slopes.

C. Future PRR Submittals

This PRR may be updated at the end of 2010 with the results of the last round of monitoring and post-painting soil sampling scheduled for October/November 2010. The requirements for site management are anticipated to be met at that time, and it is recommended that site management be discontinued after the final sampling event. Institutional controls will however remain in place to limit visitor access to the side slopes.

Enclosure 1
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. V00655

Site Name Whirlpool Rapids Bridge

Site Address: East of Whirlpool Street Zip Code: 14301-
City/Town: Niagara Falls
County: Niagara
Allowable Use(s) (if applicable, does not address local zoning): Industrial
Site Acreage:
Owner: Niagara Falls Bridge Commission
~~Main PO Box 1031, Niagara Falls, NY 14302~~
5365 Military Road, Lewiston, NY 14092
Reporting Period: June 23, 2006 to December 31, 2009

Verification of Site Details **Box 2**

		YES	NO
1.	Is the information in Box 1 correct?	☐	√
	If NO, are changes handwritten above or included 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?	☐	√
	If YES, is documentation or evidence that documentation has been previously submitted included with this certification?	☐	
3.	Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	√
	If YES, is documentation (or evidence that documentation has been previously submitted) included with this certification?	☐	
4.	If use of the site is restricted, is the current use of the site consistent with those restrictions?	√	☐
	If NO, is an explanation included with this certification?	☐	
5.	For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), has any new information revealed that assumptions made in the Qualitative Exposure Assessment regarding offsite contamination are no longer valid?	☐	√
	If YES, is the new information or evidence that new information has been previously submitted included with this Certification?	☐	
6.	For non-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7(c), are the assumptions in the Qualitative Exposure Assessment still valid (must be certified every five years)?	√	☐
	If NO, are changes in the assessment included with this certification?	☐	

SITE NO. V00655

Description of Institutional Controls

Parcel	Institutional Control
S_B_L Image: **144.09-2-2.01**	Ground Water Use Restriction Landuse Restriction O&M Plan

Description of Engineering Controls

None Required

Attach documentation if IC/ECs cannot be certified or why IC/ECs are no longer applicable.
(See instructions)

Control Description for Site No. V00655

Parcel: 144.09-2-2.01

April 6, 2006 a DECLARATION OF COVENANTS AND RESTRICTIONS was filed with the Niagara County Clerk in Book 1380 of Deeds at Page 37. Covenant restricts site use to current passive recreational for the hiking trail area and restricted commercial for the remainder of the site. Requires the owner to maintain the remedy, including proper operation. Monitoring and maintenance of the remedy in accordance with the Long-Term Monitoring and Maintenance plan revised April 18, 2005.

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

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
√	☐

3. If this site has an Operation and Maintenance (O&M) Plan (or equivalent as required in the Decision Document);

   I certify by checking "YES" below that the O&M Plan Requirements (or equivalent as required in the Decision Document) are being met.

YES	NO
√	☐

4. If this site has a Monitoring Plan (or equivalent as required in the remedy selection document);

   I certify by checking "YES" below that the requirements of the Monitoring Plan (or equivalent as required in the Decision Document) is being met.

YES	NO
√	☐

IC CERTIFICATIONS
SITE NO. V00655

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 2 and/or 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 Robert Koert (print name) at 5365 Military Road, Lewiston, NY 14092 (print business address),

am certifying as Niagara Falls Bridge Commission (Owner or Remedial Party)

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

Signature of Owner or Remedial Party Rendering Certification — Date: 2/28/2010

IC/EC CERTIFICATIONS

Box 7

QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) 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 Dharmarajan Iyer, Ph.D., PE (print name) at Iyer Environmental Group PLLC, 44 Rolling Hills Dr., Orchard Park, NY14127 (print business address), am certifying as a Qualified Environmental Professional

for the Niagara Falls Bridge Commission, Niagara Falls, NY (Owner or Remedial Party) for the Site named in the Site Details Section of this form.

Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification — Stamp (if Required) — Date: 2/28/2010

WHIRLPOOL RAPIDS BRIDGE SOIL REMEDIATION
PHOTOS – BEFORE AND AFTER

Before – North end of Trail in Excavation Zone

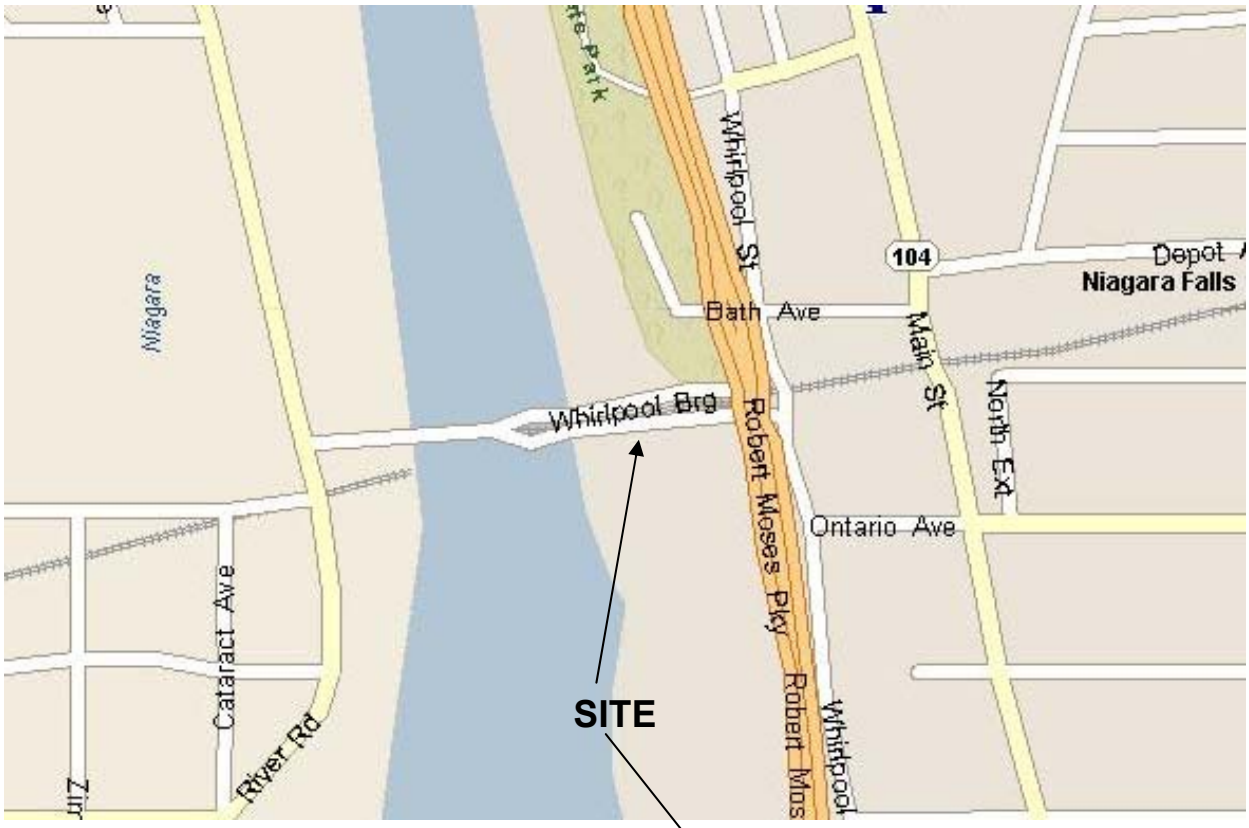
After – North end of Trail in Excavation Zone

Before – Looking North at Upper Retaining Wall

After – Looking North at Upper Retaining Wall

Before – South end of Excavation Zone near Old Bridge Supports

After – South end of Excavation Zone near Old Bridge Supports

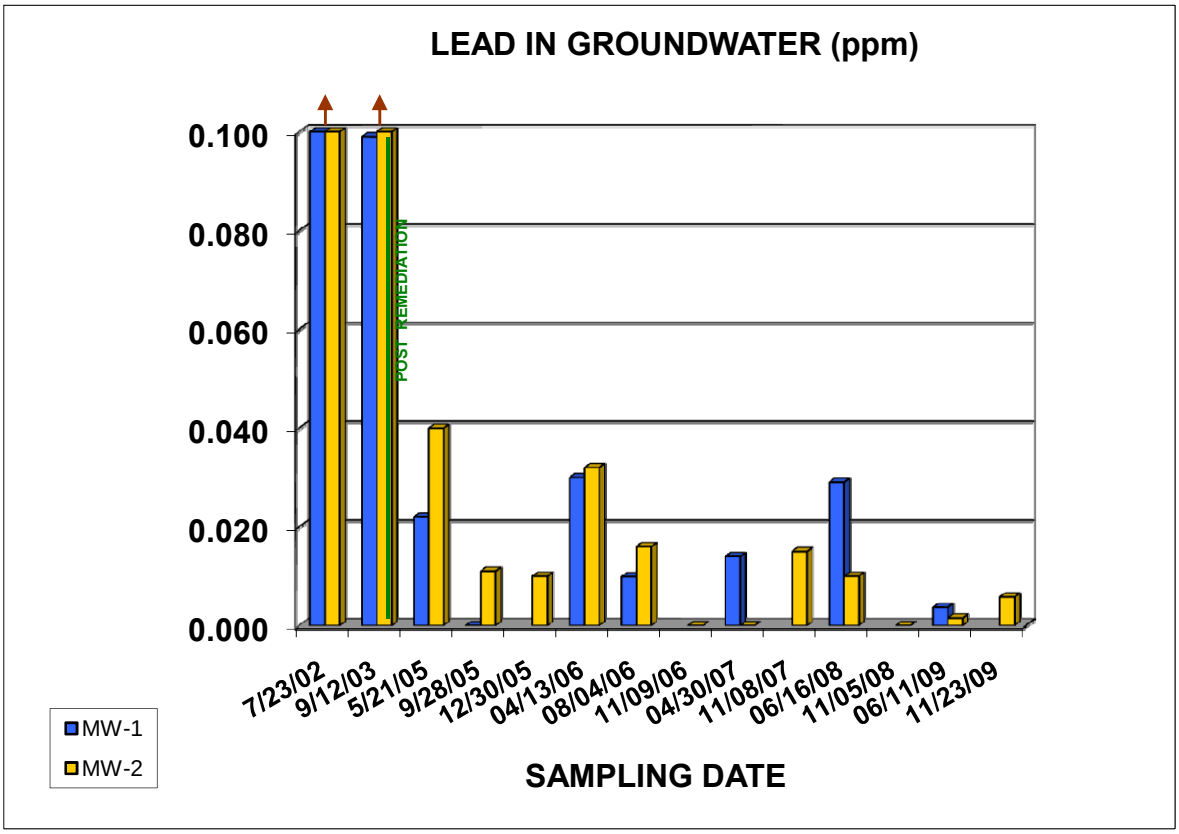


WHIRLPOOL BRIDGE SOILS REMEDIATION
LOCATION MAP/AERIAL PHOTO

FIGURE 1

IEG

FIGURE 2
WHIRLPOOL BRIDGE SOILS
LEAD IN GROUNDWATER AND SURFACE WATER



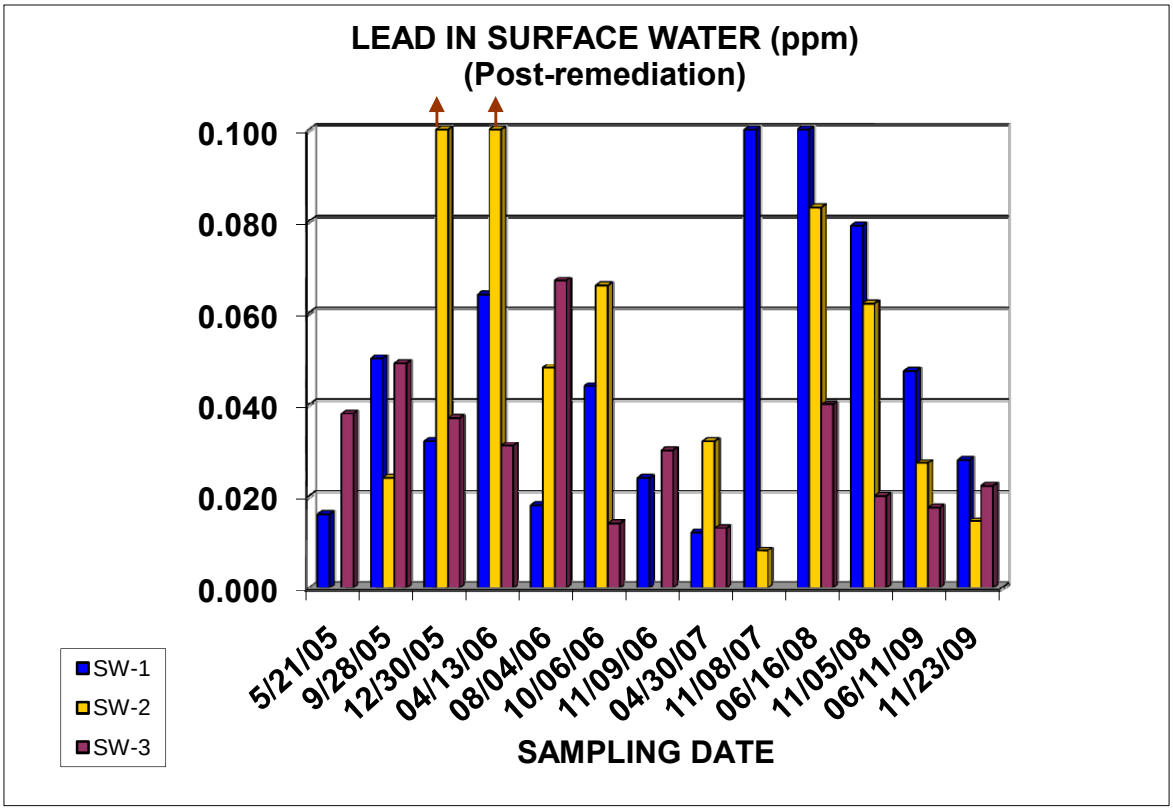


TABLE 1
WHIRLPOOL BRIDGE SOILS REMEDIATION
POST-REMEDIATION MONITORING
GROUNDWATER/SURFACE WATER ANALYSIS

ID	DATE	Arsenic	Cadmium	Chromium	Lead	Zinc	PAHs
MONITORING WELLS (in mg/L)							
MW-1	7/23/02	0.0060	0.0020	0.1080	0.2400	0.3350	ND
	9/12/03	0.0460	ND	0.0590	0.0990	0.2340	ND
	5/21/05	ND	ND	0.0098	0.0220	0.0760	--
	9/28/05	ND	ND	ND	ND	0.0360	--
	12/30/05	*NO SAMPLE; WELL DRY*					
	04/13/06	0.0110	ND	0.0150	0.0300	0.1300	--
	08/04/06	ND	ND	0.0062	0.0099	0.0560	--
	11/09/06	*NO SAMPLE; WELL DRY*					
	04/30/07	ND	0.0011	0.0057	0.0140	0.0940	--
	11/08/07	*NO SAMPLE; WELL DRY*					
	06/16/08	ND	ND	0.0085	0.0290	0.0700	--
	11/05/08	*NO SAMPLE; WELL DRY*					
	06/11/09	ND	ND	0.0014	0.0037	0.0406	--
	11/23/09	*NO SAMPLE; WELL DRY*					
MW-2	7/23/02	0.6700	0.0090	0.3400	1.1100	1.4600	ND
	9/12/03	0.4280	0.0060	0.2340	1.2400	1.2400	ND
	5/21/05	0.0140	ND	0.0086	0.0400	0.0510	--
	9/28/05	ND	ND	ND	0.0110	ND	--
	12/30/05	ND	ND	ND	0.0100	ND	--
	04/13/06	0.0170	ND	0.0130	0.0320	0.0570	--
	08/04/06	ND	ND	0.0080	0.0160	0.0640	--
	11/09/06	ND	ND	ND	ND	0.0430	--
	04/30/07	ND	ND	ND	ND	0.0260	--
	11/08/07	ND	ND	0.0085	0.0150	0.0500	--
	06/16/08	ND	ND	ND	0.0100	0.0120	--
	11/05/08	ND	ND	ND	ND	0.0170	--
	06/11/09	0.0086	ND	ND	0.0015	0.0056	--
	11/23/09	0.0098	ND	ND	0.0058	0.0156	--

TABLE 1
WHIRLPOOL BRIDGE SOILS REMEDIATION
POST-REMEDIATION MONITORING
GROUNDWATER/SURFACE WATER ANALYSIS

ID	DATE	Arsenic	Cadmium	Chromium	Lead	Zinc	PAHs
SURFACE WATER SUMPS (in mg/L)							
SW-1	5/21/05	ND	ND	ND	0.016	ND	--
	9/28/05	ND	ND	ND	0.050	0.055	--
	12/30/05	ND	ND	ND	0.032	0.029	--
	04/13/06	ND	ND	ND	0.064	0.034	--
	08/04/06	ND	ND	ND	0.0180	0.0260	--
	10/06/06	ND	ND	ND	0.0440	--	--
	11/09/06	ND	ND	ND	0.0240	0.0200	--
	04/30/07	ND	ND	ND	0.0120	0.0250	--
	11/08/07	ND	ND	ND	0.1200	0.0590	--
	06/16/08	ND	ND	ND	0.1200	0.0750	--
	11/05/08	ND	ND	ND	0.0790	0.0300	--
	06/11/09	ND	ND	0.0004	0.0473	0.0778	--
	11/23/09	ND	ND	ND	0.0279	0.0386	--
SW-2	5/21/05	*NO SAMPLE; SUMP DRY*					
	9/28/05	ND	ND	ND	0.0240	0.0360	--
	12/30/05	ND	ND	ND	0.2900	0.1800	--
	04/13/06	ND	ND	ND	0.1200	0.0820	--
	08/04/06	ND	ND	ND	0.0480	0.0450	--
	10/06/06	ND	ND	ND	0.0660	--	--
	11/09/06	*NO SAMPLE; SUMP DRY*					
	04/30/07	ND	ND	ND	0.0320	0.0550	--
	11/08/07	ND	ND	ND	0.0081	0.0320	--
	06/16/08	ND	ND	0.0056	0.0830	0.1200	--
	11/05/08	ND	ND	ND	0.0620	0.0740	--
	06/11/09	ND	ND	0.0023	0.0272	0.0551	--
	11/23/09	ND	ND	ND	0.0145	0.0411	--
SW-3	5/21/05	ND	ND	ND	0.0380	0.0840	--
	9/28/05	ND	ND	0.0040	0.0490	0.0560	--
	12/30/05	ND	ND	0.0040	0.0370	0.1700	--
	04/13/06	ND	ND	ND	0.0310	0.1100	--
	08/04/06	ND	ND	ND	0.0670	0.1200	--
	10/06/06	ND	ND	ND	0.0140	--	--
	11/09/06	ND	ND	ND	0.0300	0.0600	--
	04/30/07	ND	ND	ND	0.0130	0.3900	--
	11/08/07	*NO SAMPLE; COULD NOT LOCATE SUMP*					
	06/16/08	ND	ND	ND	0.0400	0.1100	--
	11/05/08	ND	ND	ND	0.0200	0.0610	--
	06/11/09	0.0026	ND	0.0012	0.0175	0.1250	--
	11/23/09	ND	ND	0.0010	0.0222	0.3840	--

ND = non-detect

DRAWING 1

WATER GAUGE
ELEVATION = 323.29'

N

NIAGARA RIVER

EDGE WATER

TOP of RISER = 356.86
TOP of CASING = 357.24

SUMP
DISCHARGE

MW - 2

SUMP SWS-3

SMALL TALLIS STONES

REGRADED/
VEGETATED AREA

SUMP
DISCHARGE

SMALL TALLIS STONES

SUMP SWS-2

LARGE BOULDERS
(1 LAYERED STACK)

SUMP
DISCHARGE

2002 SURVEY BASLINE

WHIRLPOOL BRIDGE

CONCRETE
BRIDGE
SUPPORTS

MW-1
TOP of CASING = 360.45
TOP of RISER = 360.00

EXIST. WALL

POWER AUTHORITY OF THE STATE OF NEW YORK

REGRADED/
SEEDED AREA

TOPSOIL/
SEEDED AREA

LARGE BOULDERS
(3 LAYERED STACK)

TREE STUMP

SUMP SWS-1

CHAIN LINK FENCE

OLD FENCE LINE

NIAGARA FALLS
BRIDGE COMMISSION