

3855 NORTH OCOEE STREET SUITE 200, CLEVELAND, TN 37312 OFFICE: (423) 336-4000 FAX: (423) 336-4166

January 26, 2010

Mr. Brian Sadowski. New York State Department of Environmental Conservation 270 Michigan Avenue Buffalo, New York 14203-2999

Subject:

Charles Gibson Site

NYSDEC Registry No. 9-32-063 Periodic Review Report - 2009

Dear Mr. Sadowski:

As requested by NYSDEC I have attached one hard copy and one electronic version (in Adobe PDF format) of the subject report. This report summarizes the site conditions and activities performed during 2009 for the monitoring, operation and maintenance of the containment remedy for the Charles Gibson site in Niagara Falls, NY.

The report is in the format requested by NYSDEC, and is submitted prior to January 31, 2010, as specified in the attached email documentation.

Please direct any comments to me at 423/336-4587. Thank you.

Sincerely,

OLIN CORPORATION

Michael J. Bellotti

Principal Environmental Specialist

Mitald Belloth

ecc:

C. M. Richards

Brian Vain - Olin Niagara Falls

Mike Walker - Sevenson Environmental Services

cc: Matthew Forcucci – NYSDOH Buffalo Mr. Michael Hinton – NYSDEC Buffalo

Bellotti, Mike J CERG

From: Michael Hinton [mjhinton@gw.dec.state.ny.us]

Sent: Friday, November 20, 2009 8:47 AM

To: Bellotti, Mike J CERG

Cc: Brian Sadowski

Subject: Re: Gibson site PRR

Mike,

Yes, Jan 31 will be the submittal date for the PRR.

>>> "Bellotti, Mike J CERG" <MJBellotti@olin.com> 11/20/2009 8:39 AM >>> Brian and Mike:

I received your notice regarding the requirement for submittal of a Periodic Review Report (PRR) for the Charles Gibson site in Niagara Falls, NY by December 31, 2009. Olin will submit the PRR per the required format and schedule. This is to confirm that the PRR will replace the annual report for the Charles Gibson site, traditionally submitted on January 31 of each year. Please confirm that this is the case. Thanks.

Michael J. Bellotti, P.G.
Principal Scientist
Olin Corporation Environmental Remediation Group
3855 North Ocoee Street, Suite 200
Cleveland, TN 37312
423-336-4587
mjbellotti@olin.com

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Enclosure 1 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION Site Management Periodic Review Report Notice Institutional and Engineering Controls Certification Form



			Site Details B	ox 1	
	Site	No.	932063		
	Site	Name	Charles Gibson Site		
	City Cou Allo Site	/Town: unty: Nia wable U Acreac	Jse(s) (if applicable, does not address local zoning):		
	OW		55 North Ocoee St., Clevland, TN 37312		
	Rep	oorting F	Period: March 02, 2009 to December 31, 2009		
<u></u>				Во	× 2
			Verification of Site Details	YES	NO
	1.	Is the i	nformation in Box 1 correct?	Ø	
		If NO, a	are changes handwritten above or included on a separate sheet?		
	2.	Has so tax ma	me or all of the site property been sold, subdivided, merged, or undergone a p amendment during this Reporting Period?		
			is documentation or evidence that documentation has been previously ted included with this certification?		
	3.	Have a for or a	any federal, state, and/or local permits (e.g., building, discharge) been issued at the property during this Reporting Period?		
		If YES, submit	is documentation (or evidence that documentation has been previously ted) included with this certification?		
	4.	If use o	of the site is restricted, is the current use of the site consistent with those ions?		
		If NO,	is an explanation included with this certification?		
	5.	has an	n-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7 y new information revealed that assumptions made in the Qualitative Exposure sment regarding offsite contamination are no longer valid?	(c),	DZ
		If YES	is the new information or evidence that new information has been previously ted included with this Certification?		
	6.	are the	n-significant-threat Brownfield Cleanup Program Sites subject to ECL 27-1415.7 assumptions in the Qualitative Exposure Assessment still valid (must be d every five years)?	(c),	

If NO, are changes in the assessment included with this certification?

SITE NO. 932063

Description of Institutional Controls

<u>Parcel</u>

Institutional Control

S_B_L Image: 161.05-3-7

Monitoring Plan O&M Plan

S B L Image: 161.05-5-12

Monitoring Plan O&M Plan

Description of Engineering Controls

Parcel

Engineering Control

S_B_L Image: 161.05-3-7

Cover System

Fencing/Access Control Groundwater Containment Leachate Collection

S B L Image: 161.05-5-12

Cover System

Fencing/Access Control Groundwater Containment Leachate Collection

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

Control Description for Site No. 932063

Parcel: 161.05-3-7

Consent Judgment 3/85 including IC stipulations p. 23 Permits and Easements, sections 11-24.

EC:

- Realignment of Cayuga Creek
- · Cap
- Double Membrane Liner
- Perimeter Leachate Collection System. Discharge to NFWWTP.
- Perimeter Fence
- Groundwater Quality Monitoring
- Leachate Monitoring
- Creek Sediment Monitoring

Parcel: 161.05-5-12

Consent Judgment 3/85 including IC stipulations p. 23 Permits and Easements, sections 11-24.

EC:

- Realignment of Cayuga Creek
- Cap
- Double Membrane Liner
- Perimeter Leachate Collection System. Discharge to NFWWTP.
- Perimeter Fence
- Groundwater Quality Monitoring
- Leachate Monitoring
- Creek Sediment Monitoring

Periodic Review Report (PRR) Certification Statements

	I certify by checking "YES" below that:		
	 a) the Periodic Review report and all attachments were prepared under the direction reviewed by, the party making the certification; 	n of, and	
	b) to the best of my knowledge and belief, the work and conclusions described in the are in accordance with the requirements of the site remedial program, and generally	is certific accepted YES	ation I NO
•	If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for early or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that a following statements are true:	ich Institu II of the	utional·
a) Coi	the Institutional Control and/or Engineering Control(s) employed at this site is unchanged ntrol was put in-place, or was last approved by the Department;	I since th	e date that the
	nothing has occurred that would impair the ability of such Control, to protect public health environment;	n and	
c) :va	access to the site will continue to be provided to the Department, to evaluate the remedy aluate the continued maintenance of this Control;	, includin	ig access to
	nothing has occurred that would constitute a violation or failure to comply with the Site M $$ ntrol; and	lanagem	ent Plan for this
e) ind	if a financial assurance mechanism is required by the oversight document for the site, the sufficient for its intended purpose established in the document.	e mecha	nism remains valid
		YES	NO
		Ø	
3.	If this site has an Operation and Maintenance (O&M) Plan (or equivalent as required in the	ne Decisi	on Document);
	I certify by checking "YES" below that the O&M Plan Requirements (or equivalent as req Decision Document) are being met.	uired in t	he
		D	
١.	If this site has a Monitoring Plan (or equivalent as required in the remedy selection docur	nent);	
	I certify by checking "YES" below that the requirements of the Monitoring Plan (or equiva	lent as re	equired
	in the Decision Document) is being met.	YES	NO
		₩ (a)	

IC CERTIFICATIONS SITE NO. 932063

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

Representative of site Owner, Olin Corporation (Owner or Remedial Part or the Site named in the Site Details Section of this form. Michael Blutt 1/25/2010 Date Date	print name	print business ad	dress
The Site named in the Site Details Section of this form. Michiel J. Bellott. 1/25/2010	Representative of site O	wner, Olin Corporation	
IC/EC CERTIFICATIONS BOO QUALIFIED ENVIRONMENTAL PROFESSIONAL (QEP) SIGNATURE certify that all information in Boxes 4 and 5 are true. I understand that a false statement made here runishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law. I, Michael J. Bellotti, at 3855 North Ocoee Street, Suite, 200, Cleveland, TN 37312 print name print business address site Owner, Olin Corporation Owner or Remedial Party) for the Site named in the Site Details Section of this form.	m certifying as		(Owner or Remedial Part
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Attachments

Attachment A – Piezometric Data Tables

Attachment B - Site Map

Attachment C - Site Inspection Forms

Attachment D - Ground Water Monitoring and Sampling Forms

I. INTRODUCTION

- A. Brief summary, nature and extent, remedial history: Construction of the remedy on the Charles Gibson Site concluded in 1990. The remedy consisted of rerouting Cayuga Creek around and away from the waste, installation of a fully circumscribed soil-bentonite slurry wall barrier and installation of a double flexible membrane liner cap with a perimeter collection drain system. The first year of operations and maintenance (O&M) of the containment remedy for the site and the ground water monitoring program began in 1993. Waters collected in the site perimeter collection drain system are managed by direct discharge to the City of Niagara Falls Wastewater Treatment Facility. The Charles Gibson site is classified as a commercial/small industrial/residential user (CSIRU) and does not require a permit.
- B. Effectiveness of remedial program: Ground water monitoring indicates there are no increased concentrations of the Site compounds being monitored. Evaluation of the ground water indicates that the containment remedy is effective. An evaluation of data from the piezometer pairs at the Site indicates that an inward hydraulic gradient has been established in the containment area of the site. Since 2003, concentrations of site compounds being monitored have been undetected or estimated at concentrations below the detection levels, in all monitor wells. The remedial program is achieving the objectives of containing groundwater flow and maintaining groundwater quality standards.
- C. Compliance: There are no areas of non-compliance.
- **D.** Recommendations: The Operation and Maintenance program has shown that the conditions at the site are stable and consistent.

II. SITE OVERVIEW

- A. <u>Site description and nature/extent prior to remediation</u>: The Site as now defined incorporates approximately two acres bounded to the east and north by Cayuga Creek, to the west by Tuscarora Road and to the south by Niagara Mohawk Power Corporation right-of-way and the Auto Zone Incorporated auto parts store and parking lot. The Site cap is slightly mounded with the center of the capped area essentially flat. The capped area is enclosed by a chain link fence. A wooden privacy fence is immediately next to and outside of the chain link fence on portions of the perimeter.
- B. Remediation chronology: The Agreement includes a provision in the event that after seven years following the delivery of a Release of Liability (issued December 15, 1992), Olin demonstrates that conditions at the Site are such that the stated frequency or duration of the requirements are no longer necessary to determine whether the remediation is effective, Olin may reduce the frequency and duration of such monitoring or inspections. Olin has submitted annual reports and has conducted the required monitoring for the duration of the remediation.

Olin Corporation will sustain adequate staff to administer the following post-remediation activities: post-remediation site inspections; maintenance; monitoring of the hydraulic gradient within the containment area; water level monitoring; inspection and maintenance of direct (leachate) discharge system; and storage and updating of the facility post-remediation plans. Information

concerning proposed changes or modifications to the plan will only be distributed to the State by Olin Corporation.

III. REMEDY PERFORMANCE, EFFECTIVENESS, AND PROTECTIVENESS

A. The work performed for the Site during 2009 was reviewed and found to be in accordance with the approved O&M Manual (2000). Ground water monitoring indicates there are no increased concentrations of the Site compounds being monitored. Evaluation of the ground water data generated during the 2009 monitoring year indicates that the containment remedy is effective. An evaluation of data from the piezometer pairs at the Site indicates that an inward hydraulic gradient has been established in the containment area of the site. Attachment A shows the most recent tables for piezometric data demonstrating that inward gradient.

IV. IC/EC Plan

A. IC/EC requirements

- Fence is in place around the landfill, effectively restricting access
- Clean soil cover is in place on the landfill, restricting infiltration and promoting runoff
- A hydraulic control system is in place, effectively controlling groundwater flow direction

B. Certification

Attached

V. MONITORING PLAN COMPLIANCE REPORT

A. Components of Monitoring Plan:

Operation, maintenance, and monitoring activities to be performed by the Group include:

- Performance of a ground water monitoring program to monitor ground water quality at the site and to verify the inward hydraulic gradient within the capped area.
- o The current groundwater level monitoring system for the Site consists of six piezometers (P-1 through P-6) and two manholes (A and B). Piezometers P-1, P-2 and Manhole A are located in the northeast section of the Site; P-3, P-4, and Manhole B are located in the southeast section; and P-5 and P-6 are located toward the southwest (see **Attachment B**).
- All piezometers are constructed of Schedule 80 PVC and are 2 inches in diameter.
 Each piezometer has been constructed with 5 feet of screen and were screened at the water table.
- o The construction of the piezometer screens at the water table allows for continued monitoring of the water table elevation inside and outside of the containment area during periods of water level fluctuations. Piezometers P-1, P-3, and P-5 are located outside of the slurry wall that runs along the perimeter of the Site. Piezometers P-2, P-4, and P-6 are inside the slurry wall and paired opposite the three piezometers inside the slurry wall.

Water level elevations will be measured quarterly at the Site. Manholes A and B and piezometers P-1 through P-6 will be measured. Water level elevations are measured by means of an acoustical sounder or electronic water level probe. The sounder or probe are lowered into the manhole or piezometer until it makes contact with the free water surface. The depth from the top of the piezometer riser pipe or manhole rim to the water surface is measured to an accuracy of 0.01 ft. Depth to water measurements are converted into mean sea level elevations by referring to the surveyed elevation of the top of the piezometer riser pipe or manhole rim provided on the Groundwater Elevation Form. The depth to water measurements for Manholes A and B are checked to see that they are not greater than 10.27 feet and 12.41 feet, respectively to ensure that the automatic sump pump is functioning B, C. Summary and comparison to remedial objectives:

The isolation of ground water within the capped area has been established and is being maintained by current operation and maintenance activities. The ground water elevation data indicate that ground water within the capped area is consistent with historical data. Review of the ground water elevation data indicates that inward hydraulic gradients were observed between piezometers within the capped area and piezometers outside of the capped area.

The water elevation data collected from the piezometers and ground water wells was used to determine whether an inward hydraulic gradient exists was made by comparing water level measurements within the capped area to those measured outside the capped area.

D. Deficiencies:

None

E. Recommendations for changes:

The groundwater monitoring program has shown consistent results throughout this monitoring period. It is requested that the groundwater sampling event be changed to every other year, from annually.

VI. O&M PLAN COMPLIANCE REPORT

A. Components of the O&M Plan

- Site remediation requirements have been met by Olin through rerouting
 of Cayuga Creek around and away from the waste, by constructing a
 fully circumscribing soil-bentonite slurry wall barrier, and through
 installing a double flexible membrane liner cap as part of the final cover
 with a perimeter collection drain system. This O&M Plan will safeguard
 that remedy and provide for monitoring of the Gibson Site in compliance
 with the State/Olin Agreement.
- Inspections, on at least a quarterly basis, of the Gibson Site are conducted to identify any potential problems with physical deterioration of structures, possible malfunctions of the slurry wall or of the perforated CPVC drain system, and to ensure that all site remedial measures components are operating effectively, in accordance with the State/Olin Agreement.
- The Environmental Inspector conducts the inspections to ensure that the remedial measures at the Site will remain operative in a manner that will

minimize the need for extra maintenance. Additionally, the inspections address the safeguards to control, minimize or eliminate threats to human health and the environment. The potential post-remediation threats include the release of HCB, BHC, or contaminated leachate to the groundwater, and/or the creek.

- Operation, maintenance, and monitoring activities are conducted to identify proposed changes to the O&M Manual or site procedures which would provide a safer and/or more efficient and cost-effective operation.
- Recordkeeping is conducted for each site visit and inspection.
- **B. O&M Summary** The ground water collection system is inspected semi-annually for the buildup of hard or soft scale-like deposits. The inspection is performed concurrently with inspection of the capped area. If a component of the ground water collection system is found to be damaged or malfunctioning, it is repaired or replaced.

The capped area is mowed on a regular basis to prevent establishment of woody vegetation during this reporting period. The capped area functions as designed and complies with the O&M Plan.

Inspections are conducted using the items listed on the Site Inspection Form presented in *Attachment C*. Information to be entered on these forms includes the inspector's name, date, and time of inspection, item inspected and any comments. The inspector indicates on the forms whether the condition of each item was acceptable or unacceptable to ensure that the requirements of this O&M Plan are fulfilled. The scheduled Site monitoring inspections are performed by a qualified individual assigned to inspect the items and systems noted on the Site Inspection Form. The completed Site Inspection Forms are maintained at Olin Environmental Remediation offices in Cleveland, TN. Inspections are performed, at a minimum, on a quarterly basis.

The groundwater monitoring and sampling is performed on an annual basis, with 2009 results presented in *Attachment D*. Per NYSDEC request, future groundwater monitoring events will be done in rotating quarters to help assess seasonal variability.

Sample collection and analysis of creek sediments are performed annually during the second half of the calendar year. .For 2009, creek sediments were sampled in duplicate to monitor elevated sediment concentrations of BHC detected in 2008. The 2008 elevated levels were detected in both upstream and downstream samples. The 2009 data show a decrease in sediment BHC levels, both upstream and downstream. Olin will continue to track this trend.

C. Evaluation of remedial systems:

All components are performing as designed.

D. O&M deficiencies

None

E. Conclusions

The O&M system is being run and maintained properly and does not require additions or modifications at this time. The Operations and Maintenance Manual was updated in 2009, reflecting recent modifications to site protocols.

VII. OVERALL PRR CONCLUSIONS AND RECOMMENDATIONS

A. Compliance with SMP

Based on the operations and maintenance documentation listed above, the system requirements are being met. There are no new exposure pathways. Additional plans and modifications are not necessary.

B. Remedy Effectiveness:

Based on the data developed to date, the remedy has been effective in attaining the remedial objectives. :

- The isolation of ground water within the capped area has been established and is being maintained by current operation and maintenance activities.
- Review of the ground water elevation data indicate that inward hydraulic gradients were observed between piezometers within the capped area and piezometers outside of the capped area.
- Currently two locations, immediately upstream and downstream of the Site and the adjacent remediated portion of the Cayuga Creek bed, are sampled once per year, in the Fall or 'low water' period. A sample is collected downstream of the Site to monitor changes in levels of contaminants in creek sediments, if any. The other sample, immediately upstream of the Site is used to monitor potential upstream contaminant sources or potential 'backwash' effects caused by the changing level of the Niagara River. Beginning with the October 2000 sample event, annual creek sediment samples have been analyzed for BHC isomers only. This modification is based on analytical sediment data collected as part of the long-term monitoring program. HCB results are undetected (U) for all sampling events since 1993.

C. Future submittals:

Reporting will continue to be done on an annual schedule.

ATTACHMENT A

TABLE 1 CHARLES GIBSON SITE NIAGARA FALLS, NEW YORK

ANALYTICAL SUMMARY SEMI-ANNUAL GROUND WATER SAMPLING 2001-2008

MONITOR WELL: MW-A3

		100			A			-	200	-								
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Parameter	April	October	April	September	April	Sentember	April	Sentember	Anril	Santambar	Anni	Sontombor	in V	Contombos		1		
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					The state of the s	-	***************************************			, , , ,	111	3	1	-	2		2	 KZ

MONITOR WELL: MW-1R

	.00									-								
	2007	10	20	2002	2003	က္က	20	2004	2005	5	20	2006	2	2007	20	2008	20	2009
Parameter	April	October	April	September	April	September	April	Sentember	Anni	Sentember	Anri	Santombar	Annil	Sontombor	lino V	Contombor		Control
0.10		000,000						100000000000000000000000000000000000000		Collingo	110	Copiecinosi	=	CCDICITION	- 5	Ceptennen	=	Occurrence
Aipna-BHC	U050./U050.	090'/660'	.070/.061	.055/.030J	.0143/.015U	.0520	.049U/.049	.026J/.048U	.040.1/ 049U	04711/04811	037.1	032.1	041	1960	1650	0151	1 1010	
Cild ctcd	10007107	27.707				ı				00000	0	0.200.	01+0.	00.50.	200.	50.0	00100	,
Deta-bHC	Unen/rzi.	.19/.15	.10/.050U	.13/.095	053/052	.052U	.049U/.065	.0901/.024.1	05017.04913	04711/04811	0.36.1	1,000	035.1	177	1000	120	1 800 0	
OI 10 strategy	- 1010					١	+		001010000	0000	0000	0770	0000	0+30.	0	000	0.020.0	
Garmia-BHC	Onen/Onen	UBSU//rsan	0090/0090	.0550	0490	0550	0491 / 0491 /	04817 0481	036.1/ 04911	047(1/048(3)	050	1870	1870	11870	1 5 5 0	-140	1000	
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Hexachioropenzene		Y	Z Z	r Z	œ Z	ď	Z.	ď	œ	œ	ď	101	ũ	02	- 4	Q	2	2

MONITOR WELL: MW-2

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ta-BHC 050U 054U 050U <	Parameter	April	October	April	September	April	September	April	September	Anril	September	Anril	Sentember	Anri	Santambar	Anri	Sontombod	Anni	Contombo
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a-BHC 050U 054U 056U 056U 056U 056U 056U 056U 056U 056	טום-19וקוא	nnen:	0.0540	Doen.	DOSO.	0200	0200	020	020	0501	0501	050	04811	1870	11270	1850	11210	10000	
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a-BHC .050U .054U .050U .040U .047U	Gallitia-BHC	Onen:	.0540.	0200	0200	020	030	020	030	1020	050	1050	11870	. IαVO	11210	1990	1 1270	1000	
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	exachiorobenzene	100	YZ	YZ -	ZZ	Z Z	Z.	100	XX.	2	2	αN	1011	22	ΩZ	- 24	QIA	012	CIV

Notes: Concentration in ug/I
- insufficient sample
U Undetected
J Estimated value
NR Not required

TABLE 1 CHARLES GIBSON SITE NIAGARA FALLS, NEW YORK

ANALYTICAL SUMMARY SEMI-ANNUAL GROUND WATER SAMPLING 2001-2009

MONITOR WELL: MW-4

										***************************************		The same and the s						
	2007	0.1	7	2002	2	2003	ณี (2004	×	2005	25	2006	2	2007	20	2008	20	5009
Parameter	April	October	April	September	April	September	April	Sentember	Anril	Sentember	April	Santambar	And	Contombor		10		20,000
0.70	1.020									1201101000		OCDICI IDEI		Schleiner	ווווי	September	ב	OCCUPATION OF
Aiplia-bnC	DOCO.	,0069J	0050.	0090	.0490	0.056	.0480	.0480	.0470	.0470	0490	.041,1	042.1	025.1	03.1	0481	0.04711	aN
010	-1000	1 640		. 000										2011	2000	2	0.0	1111
סבום-פופם	Onen.	2,45		.033	0490.	.0263	.0480	.037	.0470	036,1	.022.1	044.1	033.1	04711	037.1	04811	0.04711	GN.
C. ic													2000			2	5	į
Gamma-BHC	0000	0050.	.0/13	.0500	.0490	.033	.048U	.048U	0470	0471	0491	0481	04811	0.4711	1150	11870	0.04711	ΩZ
0110 -11-0	. 1010											20.00	0010		0000	0010	0	-
Della-bric	2000	0000	0000	0000	.0490	0000	.0480	0481	0471	04711	030.1	036.1	04811	11270	1760	13070	0.0471	O.V
4 (1-1 1		1						2		0	3	0000	010	0 1	DE-20.	0000	2,5	ž
Hexachiorobenzene	200	YY	Y	Y Z	Z.	α 2	ž	- -	ď	a a	ď		02	an	112	QN	02	0,4
			***************************************									2	-		3	ź		2

MONITOR WELL: MW-5

2001		2002		2003	2	2004	2	2005		2006		2007	2	2008	20	2009
	October Api	rii September	April	September	April	September	April	September	April	Sentember	Anril	September	Anril	Sentember	Anril	Sentember
1.2	J ,050U	OO 050U	.048U	.049U	.048U	.048U	.047U	.047UJ	0490	.032.1	041.1	026.1	035.1	017.1	0.04811	NP NP
022	J .050U	OO 000	.048U	.049U	.0480	.048U	.047U	.047UJ	0490	015,1	025.1	04811	0521	04711	0.0481	a a
055L	J 050L	0090	.048U	0491	04811	04811	04711	047111	04911	04811	11200	11870	1 700	1 0 0 0	2000	
0551	.050	00 0500	04811	0491	04811	04811	11770	111770	1000	1050	1270	11970	2 1 20	5000	00100	2
lα	Ž	NR.	NR	and	101	GN GN	O div	200	2 2	SOCO.	2 012	0010	20.1	C#600.	0.0400	K 0

Notes: Concentration in ug/l
insufficient sample
U Undetected
J Estimated value
NR Not required

TABLE 2 Charles Gibson Site Niagara Falls, New York

ANALYTICAL SUMMARY

Annual Cayuga Creek Sediment Sampling 2001 - 2009

UPSTREAM

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Parameter	October*	September							
Alpha- BHC	55	19/90	28/22J	80U/86J	23J	13	40	77	240
Beta- BHC	49	37/76	48/30	20J/190	36	34	4.8	69	260
Gamma- BHC	24	31/26	12J/28	23J/56J	15J	13	4.6	17J	18J
Delta- BHC	3.3J	5.8U/1.6U	1.9J/26U	80U/38J	26U	3.9J	3.7	26U	39J

DOWNSTREAM

	2001	2002	2003	2004	2005	2006	2007	2008	2009
Parameter	October*	September							
Alpha- BHC	55	19/90	28/22J	80U/86J	23J	8.3	NS	5200	210
Beta- BHC	49	37/76	48/30	20J/190	36	22	NS	1000	73
Gamma- BHC	24	31/26	12J/28	23J/56J	15J	11	NS	66J	60U
Delta- BHC	3.3J	5.8U/1.6U	1.9J/26U	80U/38J	26U	3.7J	NS	82J	32

Notes:

U Not Detected

J Estimated value

NS No sample in trap

* Sediment traps installed April 2001

Table 3

2009 Quarterly Groundwater Elevations Summary

Piezometer	2/13/2009	Inward	4/02/2009	Inward	9/17/2009	Inward	11/23/2009	Inward
Pair		gradient		gradient		gradient		gradient
P1 outside P2 inside	∀	ĄZ	565.46	Inward	566.37	Inward	565.31	Inward
o Piote Co		V 1	54.000	-	200.42		565.29	
P4 inside	₹ ₹ Z Z	Z Z	565.34	Inward	566.51 565.29	Inward	566.41 565.24	Inward
							11:000	
P5 outside P6 inside	₫ ₫ Ζ Ζ	∀ Z	569.11 567.77	Inward	568.60 567.58	Inward	568.70	Inward
THE REAL PROPERTY OF THE PROPE		Below 565		Below 565 ft	000	Below 565 ft	10.100	Below 565 ft
		ft msl		lsm		lsm		lsm
Manhole A	₹ Z	ΑN	563.97	Yes	563.67	Yes	563 52	Yes
Manhole B	NA	ΑN	564.03	Yes	563.74	Yes	563,61	Xes

Notes: Measurement units are in feet above MSL.
Piezometers P1, P3, P5 are outside the slurry wall.
Piezometers P2, P4, P6 are located within the containment area.
NA – Not Available

Manhole monitoring:

- Maintain water level below 565 feet to prevent hydrostatic pressure buildup under concrete slab.
 - Pump Manhole B as required to maintain an inward gradient.

Table 4 Olin Corp. Gibson Site **Discharge Volumes**

Summary of Yearly Discharge Volumes

Monthly Discharge Volumes 2009

Date	Volume
	(gallons)
1991	104,120
1992	76,562
1993	77,797
1994	69,724
1995	56,940
1996	77,512
1997(*)	64,687
1998	51,070
1999	140,860
2000	67,236
2001	20,855
2002	0
2003 (1)	5230
2004	65,082
2005	51,115
2006	52,891
2007	22,958
2008	40,223
2009	40,187
TOTALS	1,044,862

Month	Volume (gallons)
Jan	5,672
Feb	5,111
Mar	5,503
Apr	5,206
Мау	4,651
Jun	2,851
Jul	1,269
Aug	951
Sep	2,099
Oct	1,862
Nov	2,132
Dec	2,880
Total	40,187

Notes:

- (*) Represents start of operation of direct discharge system (1) Pumped during test of system on 4/13/2003

Table 5

Annual Manhole B Sampling

CHARLES GIBSON SITE NIAGARA FALLS, NEW YORK

ANALYTICAL RESULTS SUMMARY ANNUAL LEACHATE SAMPLING

April 02, 2009

	MANHOLE B (MHB)
PARAMETER	
alpha-BHC	0.049
beta-BHC	0.040J
delta-BHC	0.17
gamma-BHC	0.048U
Hexachlorobenzene	NR

Notes:

U Undetected

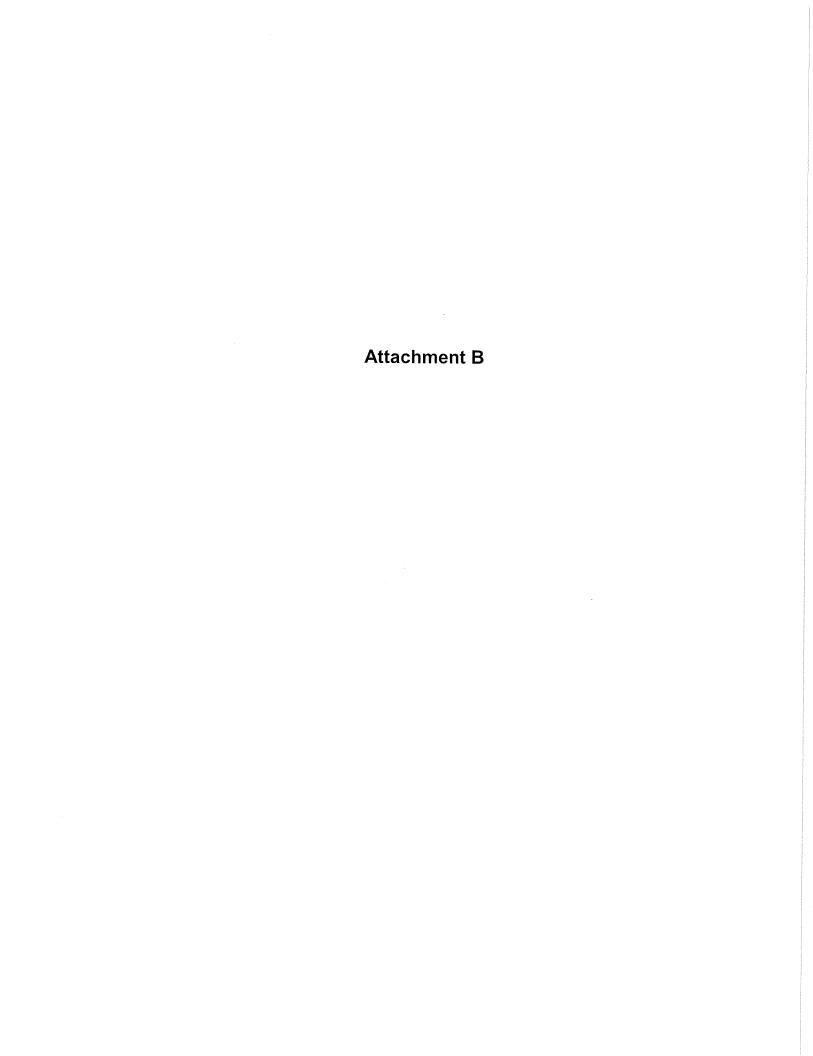
J Estimated value

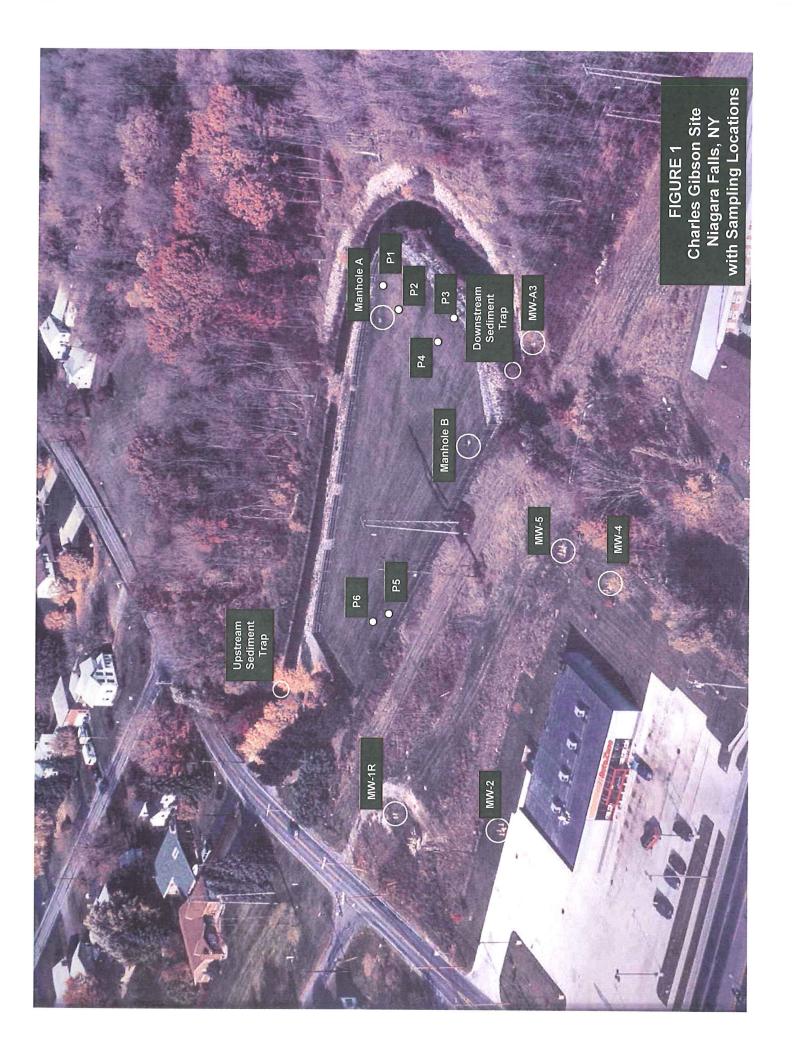
NR Not Required Concentration in ug/l

Field blank was non-detect for all parameters of interest.

Data has been validated and judged acceptable as qualified.

Next hexachlorobenzene (HCB) sampling scheduled for October 2010





Attachment C

THIS FORM TO BE USED FOR	R QUARTER	LY AND ALL OTHER S	SITE INSPECTIONS
DATE: <u>2/20/2009</u>	TIME:	900	
INSPECTOR: Michael	Walker	_COMPANY:	Sevenson Environmental Services
WEATHER: 19 F, W	indy, 1" snov	v on the ground	
REASON FOR INSPECTION (C	QUARTERLY	OR OTHER <u>):</u>	1st Quarter Inspection 2009
subsidence (sinking) and rodent burrows.	ite conditions , ponded wa For site sec	iter, stressed vegetation	e areas (number, size), cracks, n, soil discoloration or seeps, locks, gates open or damaged,
		COMMEN	NTS
ACCESS ROAD	<u>A</u>	• • • • • • • • • • • • • • • • • • •	
COVER VEGETATION	<u>A</u>		
TREES	<u>A</u>		
LITTER	<u>A</u>	MAT	
EROSION (CAP)	A		
EROSION (BANK)	<u>A</u>		
SECURITY:			
FENCE/LOCKS	<u>A</u>		
PIEZOMETERS/LOCKS	Α		
MONITORING WELLS/LOCKS	Α		
MANHOLES/LIDS/LOCKS	<u>A</u>		
ELECTRICAL PANEL	Α		
ADDITIONAL COMMENTS:	The casin	g for PZ-5 was tilted. It	looks like it may have heaved
from the frozen ground. There is	no apparen	t damage to the actual	piezometer, I will check on it
again after the ground thaws to s			
Sydowski from the NYSDEC. We	e did a site w	alk and discussed the	location of the sediment traps
in the creek. Mike Hinton has al	so requested	d that we cut down any	vegetation thicker than 1"
diameter that is growing along th	e creek ban	k through the rip rap.	

DATE: <u>4/2/909</u>	TIME:	900	
INSPECTOR:	M. Walker	COMPANY:	Sevenson Environmental Services
WEATHER:	sunny 55F		
REASON FOR INSPE	ECTION (QUARTERL	Y OR OTHER <u>):</u>	2nd quarter inspection and Spring sample event
subsidenc and roden	general site condition e (sinking), ponded w t burrows. For site se	ns note existence of bar rater, stressed vegetation ecurity, note absence of	E A=ACCEPTABLE re areas (number,size), cracks, on, soil discoloration or seeps, f locks, gates open or damaged, r unusual occurences.)
		COMME	NTS
ACCESS ROAD	<u>A</u>		
COVER VEGETATIO	-		
TREES	A		
LITTER	<u>A</u>		
EROSION (CAP)	<u>A</u>		
EROSION (BANK)	A		7. P. C.
SECURITY:			
FENCE/LOCKS			
PIEZOMETERS/LOCI	KS A		
MONITORING WELLS	S/LOCKS A		
MANHOLES/LIDS/LO	CKS A	Mr. Johnson	
ELECTRICAL PANEL	A		
ADDITIONAL COMME	ENTS: <u>Brian</u> Syd	dowski fromm the NYSI	DEC was also onsite to
do the site walk and in			
o the site walk and in	spection. The site to	okea gooa .	
***************************************		VVVIII.4	
	A		
			-

INSPECTOR: M. Walke WEATHER: REASON FOR INSPECTION (0	ər	_COMPANY:	Sevenson
WEATHER: REASON FOR INSPECTION (C			
REASON FOR INSPECTION (0			
INCHOOM ON MOI COTTON (C	NIADTEDI V	/ OD OTHED):	Quarterly Ipon / Sarania Cadimana
	ZOANTENE	OKOTHEK).	Quarterly Insp./ Sample Sedimen
GENERAL SITE CONDITIONS:		U=UNACCEPTABLE	
subsidence (sinking)), ponded wa	iter, stressed vegetatio	e areas (number,size), cracks, n, soil discoloration or seeps,
and rodent burrows. missing signs or evid	For site sed dence of van	curity, note absence of dalism. Note any other	locks, gates open or damaged, unusual occurences.)
		COMME	NTS
ACCESS ROAD	<u>A</u>		
COVER VEGETATION	<u>A</u>		***************************************
TREES	Α		
LITTER	<u>A</u>		
EROSION (CAP)	Α		
EROSION (BANK)	<u>A</u>		
SECURITY:			
FENCE/LOCKS	Α		
PIEZOMETERS/LOCKS	Α		
MONITORING WELLS/LOCKS	Α		
MANHOLES/LIDS/LOCKS	Α		
ELECTRICAL PANEL	<u>A</u>		
ADDITIONAL COMMENTS:	744414		
***		111111111111111111111111111111111111111	· · · · · · · · · · · · · · · · · · ·

DATE: <u>11/23/2009</u>	TIME:	930	
INSPECTOR: M.	Walker	COMPANY:	Sevenson Environmental Services
WEATHER: Sur	nny 42 F		
REASON FOR INSPECTIO	N (QUARTERLY	OR OTHER):	Quarterly inspection
subsidence (sinl and rodent burro	ral site conditions king), ponded wat ows. For site sect	note existence of beer, stressed vegeta urity, note absence	BLE A=ACCEPTABLE are areas (number,size), cracks, tion, soil discoloration or seeps, of locks, gates open or damaged, ner unusual occurences.)
		COMI	MENTS
ACCESS ROAD	A		
COVER VEGETATION	A		
TREES	A	***************************************	44144
LITTER	A		TRANSPARATE CONTRACTOR OF THE PROPERTY OF THE
EROSION (CAP)	A		MANA MANA MANA MANA MANA MANA MANA MANA
EROSION (BANK)	A	Marine Ma	A STATE OF THE STA
SECURITY:			
FENCE/LOCKS	А		
PIEZOMETERS/LOCKS	Α		
MONITORING WELLS/LOC	KS A		
MANHOLES/LIDS/LOCKS	A		
ELECTRICAL PANEL	A		
ADDITIONAL COMMENTS:	Site looks	good.	
	VIII II VIII II VIII VIII VIII VIII VI		
The state of the s			No.

Attachment D

RECORDED BY:	Jones	SA	AMPLE ID:	MW-1R0	040209 & (MW-7-04020s
SAMPLED BY:	Jones	SA	AMPLING EVENT/	DATE:	4/2/2009
COMPANY:	Sevenson		ONITORING WEL	L: MW-1R	
	·	CC	ONDITION:	OK	
GROUNDWATER P	URGE DATA	PURGE DATE	E: 4/2/200	9	
DEPTH TO BOTTON	M FROM TOP OF RISEI	R:	12.1 (FT.)		LL GIBSON SITE RING WELLS ARE
DEPTH TO WATER	FROM TOP OF RISER:		4.11 (FT.)	2-INCH E	DIAMETER STAIN-
	WATER COLUMN:		7.99 (FT.)	LESS ST	EEL. WELL DEPTHS:
	2" DIA. WELL CONS	TANT:	0.16	MW-1R	12.10'
	ONE WELL VOLUME	=	1.2784 (GALS)	MW-2 MW-A3	
BOTTOM OF WELL/ PURGE START TIM		No STOP TIME:	121	MW-4 MW-5 0	13.75' 15.28'
FIELD PARAMETER	MEASUREMENTS:				
WELL VOLUME	рН	SPECIFIC CONDUCTIVI umhos/cm)	TY TEMP. (C OR F)		NOTES:
Initial	8.17	225	16.		Clear
1	8.12	242	16.		Clear
2	8.04	294	16.		Clear
3	7.91	307	16.	5	Clear
Sample	7.91	307	16.	5	Clear
TOTAL VOLUME PU	RGED: 4 gallons R SEDIMENT SAMPLIN	NG DATA:	SAMPLE	DATE:	4/2/2009
MEDIA: GROUND CREEK S	WATER X EDIMENT	_	SAMPLE	T <u>IME:</u>	1215
LOCATION:	MW-1R (tuscorora Rd	i)			·
SAMPLE METHOD:	Purge 3 volumes , the	n Sample.			
SAMPLING OBSERV	ATIONS: Clear, No	Odor			
QC SAMPLES TAKE	N: Blind Dupl	icate sample tal	ken for QC check.	Labeled: M	W-7-040209 <u>,</u> 1420
OTHER OBSERVATI	ONS/COMMENTS:	4, 1 liter ambe	r bottles taken (BH	C)	
Note: specific conduc	tivity formula to 25 degr	ees Celcius: SC	SC measu C(25)= {{T-25}(0.0		

RECORDED BY:	Jones		AMPLE ID:	MW2-04	0209
SAMPLED <u>BY:</u>	Jones	S	AMPLING EVENT/	DATE:	4/2/2009
COMPANY:	Sevenson	N	ONITORING WELI	_: MW-2	
		C	ONDITION:	ОК	
GROUNDWATER PU	URGE DATA	PURGE DAT	E: 4/2/200		
DEPTH TO BOTTOM	A EDOM TOD OF DIS	DED.	40.40 (ET.)		LL GIBSON SITE
			, ,		RING WELLS ARE
DEPTH TO WATER I			4.55 (FT.)		DIAMETER STAIN-
	WATER COLUMN		7.58 (FT.)		EEL. WELL DEPTHS:
	2" DIA. WELL CON		0.16	MW-1R	12.10'
	ONE WELL VOLUI	ME=	1.2128 (GALS)	MW-2	12.13'
PURGE METHOD:	Perastaltic pump w	/ dedicated tubin	a	MW-A3 MW-4	11.95' 13.75'
BOTTOM OF WELL/S	SILT BUILDUP:	No		MW-5	15.28'
PURGE START TIME PURGE OBSERVATI		STOP TIME:	112	0	
FUNGE OBSERVATI	IONS.				
FIELD PARAMETER	MEASUREMENTS:				
		SPECIFIC			
WELL		CONDUCTIV			
VOLUME Initial	pH 7.05	umhos/cm)	(C OR F)	******	NOTES:
nitial 7.95		505	12.		Init. Sediment Disch.
1	7.93	825	12.		Clear
3	7.85 7.81	807 791	12.9 13.4		Clear
Sample	7.81	791 791	13.4		Clear Clear
oumpio	7.01	701	10.	1	Cleal
TOTAL VOLUME PUI	RGED: 4 gallon	S			
			W		
GROUNDWATER OF	R SEDIMENT SAMP	LING DATA:	SAMPLE	D <u>ATE:</u>	4/2/2009
MEDIA: GROUND' CREEK SI	Name of the Control o		SAMPLE	T <u>IME:</u>	1125
LOCATION <u>:</u>	MW-2		101.00		
SAMPLE METHOD:	Purge 3 volumes , t	hen Sample.			
SAMPLING OBSERV	ATIONS: <u>Clear, I</u>	No Odor	***************************************		
QC SAMPLES TAKEN	N: MS and	MSD samples ta	ken		
OTHER OBSERVATIO	ONS/COMMENTS:	6, 1 liter ambe	er bottles taken (BH	C)	
Note: specific conduct	tivity formula to 25 de	earees Celcius: S	SC measu C(25)= {{T-25)(0.0		

RECORDED BY:	Jones	_ SA	MPLE ID:	MWA3-0	40209
SAMPLED BY:	Jones	_ SA	MPLING EVENT/[DATE:	4/2/2009
COMPANY:	Sevenson	MC	ONITORING WELL	: <u>MWA-3</u>	
		CC	NDITION:	OK	
GROUNDWATER	PURGE DATA	PURGE DATE	4/2/2009		
		D.	44.05 (ET.)		LL GIBSON SITE
	OM FROM TOP OF RISE		11.95 (FT.)		RING WELLS ARE
DEPTH TO WATER	R FROM TOP OF RISER		5.94 (FT.)		DIAMETER STAIN-
	WATER COLUMN:		6.01 (FT.)		EEL. WELL DEPTHS
	2" DIA. WELL CONS		0.16	MW-1R	12.10'
	ONE WELL VOLUME Perastaltic pump w/ c		0.9616 (GALS)	MW-2 MW-A3 MW-4	12.13' 11.95' 13.75'
BOTTOM OF WELI PURGE START TII PURGE OBSERVA	ME: 1345	No STOP TIME: No Odor	1400	MW-5)	15.28'
FIELD PARAMETE	R MEASUREMENTS:				
WELL VOLUME		SPECIFIC CONDUCTIVI			NOTES:
nitial	<u>рН</u> 7.12	<u>umhos/cm)</u> 77.9	(C OR F) 10,2	_ >	NOTES:
1	7.18	198	10.2		Clear
2	7.25	207	1(***************************************	Clear
3	7.22	241	9.6	3	Clear
Sample	7.22	241	9.6	3	Clear
TOTAL VOLUME P	URGED: 3 gallons OR SEDIMENT SAMPLII	NG DATA:	SAMPLE	DATE:	4/2/2009
	IDWATER X SEDIMENT	_ _	SAMPLE	T <u>IME:</u>	1400
_OCATION <u>:</u>	MWA-3, behind the N	Niagara Motel on	NF BLVD.		
SAMPLE METHOD	: Purge 3 volumes , the	en Sample.			
SAMPLING OBSER	RVATIONS: Clear , No	Odor		······································	
QC SAMPLES TAK	EN: no	8841.0°46.66.5	When the second		
OTHER OBSERVA	TIONS/COMMENTS:	2, 1 liter amber	bottles taken (BH	C)	
Note: specific condu	uctivity formula to 25 deg	rees Celcius: SC	SC measu (25)= {{T-25}(0.0		

RECORDED BY:	Jones	_ SA	AMPLE I <u>D:</u>	MW-4-04	0209
SAMPLED <u>BY:</u>	Jones	SA	AMPLING EVENT/	DATE:	4/2/2009
COMPANY:	Sevenson	M	ONITORING WELL	: MW-4	
		C(ONDITION:	ОК	
GROUNDWATER I	PURGE DATA	PURGE DATE	E: 4/2/2009)	
DEPTH TO BOTTO	M FROM TOP OF RISE	R:	13.75 (FT.)		LL GIBSON SITE RING WELLS ARE
DEPTH TO WATER	R FROM TOP OF RISER	? :	6.77 (FT.)	2-INCH D	IAMETER STAIN-
	WATER COLUMN:		6.98 (FT.)		EEL. WELL DEPTHS:
	2" DIA. WELL CONS	TANT:	0.16	MW-1R	12.10'
	ONE WELL VOLUME	==	1.1168 (GALS)	MW-2	12.13'
PURGE METHOD: BOTTOM OF WELL PURGE START TIN PURGE OBSERVA	/IE: 1310	dedicated tubing No STOP TIME: No Odor	1335	MW-A3 MW-4 MW-5	11.95' 13.75' 15.28'
FIELD PARAMETEI	R MEASUREMENTS:				
WELL VOLUME	рН	SPECIFIC CONDUCTIVI umhos/cm)	TY TEMP. (C OR F)	_	NOTES:
Initial	8.03	296	10.1		
1	7.79	872	8.4		Clear
2	7.75	710	8.8		Clear
3 Sample	7.43	749	8.7		Clear
Sample	7.43	749	8.7	····	Clear
TOTAL VOLUME PU	***************************************				
GROUNDWATER C	R SEDIMENT SAMPLII	NG DATA:	SAMPLE D	ATE:	4/2/2009
	DWATER X SEDIMENT	- -	SAMPLE T	IME:	1335
LOCATION:	MW-4				Televisian September 1995
SAMPLE METHOD:	Purge 3 volumes , the	en Sample.			
SAMPLING OBSER'	VATIONS: Clear , No	Odor			
QC SAMPLES TAKE	EN <u>:</u> no	Walland Walland			
OTHER OBSERVAT	TONS/COMMENTS:	2, 1 liter amber	bottles taken (BHC	S)	
Note: specific conduc	ctivity formula to 25 degr	ees Celcius: SC	SC measur (25)= {{T-25}(0.00		-

RECORDED BY:	Jones	_ SA	MPLE	D:	MW5-040	209	
SAMPLED <u>BY:</u>	Jones	_ SA	MPLING	3 EVENT/D	ATE:	4/2/2009	
COMPANY:	Sevenson	МС	ONITOR	ING WELL:	MW-5		
	4444	CC	NDITIC	N:	OK		
GROUNDWATER P	URGE DATA	PURGE DATE	Ξ:	4/2/2009			
DEPTH ТО ВОТТОІ	M FROM TOP OF RISE	R:	15.28	(FT.)		LL GIBSON S RING WELLS	
DEPTH TO WATER	FROM TOP OF RISER	·	6.94	(FT.)	2-INCH D	IAMETER ST	AIN-
	WATER COLUMN:			(FT.)		EEL. WELL D	
	2" DIA. WELL CONS	TANT:	0.16	, ,	MW-1R	12.10'	
	ONE WELL VOLUME		1.3344	(GALS)	MW-2 MW-A3	12.13' 11.95'	
PURGE METHOD: BOTTOM OF WELL PURGE START TIM PURGE OBSERVAT	E: 1230	ledicated tubing No STOP TIME: No Odor		1300	MW-4 MW-5	13.75' 15.28'	
FIELD PARAMETER	R MEASUREMENTS:						
WELL VOLUME	-U	SPECIFIC CONDUCTIVI	TY	TEMP.		NOTEO	
Initial	<u>pH</u> 6.65	<u>umhos/cm)</u> 1078		(C OR F) 9.3	•	NOTES: initial insect	dinaharaa
1	6.58	933		8.9		Clear	uiscriarge
2	6.69	910		8.8		Clear	
3	6.6	907		8.7		Clear	
Sample	6.6	907		8.7		Clear	
TOTAL VOLUME PU	JRGED: 4 gallons						
GROUNDWATER O	R SEDIMENT SAMPLIN	NG DATA:		SAMPLE D	ATE:	4/2/2009	
MEDIA: GROUNE CREEK S	DWATER X SEDIMENT	-		SAMPLE T	IME:	1305	
LOCATION:	MW-5				***		
SAMPLE METHOD:	Purge 3 volumes , the	n Sample.					
SAMPLING OBSER\	/ATIONS: Clear , No	Odor					
QC SAMPLES TAKE	N: no						
OTHER OBSERVAT	IONS/COMMENTS:	2, 1 liter amber	bottles	taken (BHC	3)		
Note: specific conduc	tivity formula to 25 degr	ees Celcius: SC		SC measur {{T-25)(0.02		_	

RECORDED BY:	C. Jones	s	SAMPLE	ID:	MW-8 (fie	ield blank)
SAMPLED <u>BY:</u>	C. Jones	<u> </u>	3AMPLING	G EVENT/ſ	DATE:	040209, 1300
COMPANY:	Sevenson			RING WELL		
		<u>C</u>	CONDITIC	ON:		
GROUNDWATER F	PURGE DATA	PURGE DAT	ſE:			
DEPTH TO BOTTC	OM FROM TOP OF RIS	SER:		(FT.)		ALL GIBSON SITE DRING WELLS ARE
DEPTH TO WATEF	R FROM TOP OF RISE	-R:		_(FT.)	2-INCH Γ	DIAMETER STAIN-
	WATER COLUMN:		•	 (FT.)	LESS ST	ΓΕΕL. WELL DEPTHS:
	2" DIA. WELL CON	STANT:	0.16	<u>i</u>	MW-1R	12.10'
	ONE WELL VOLUM	ΛE=		(GALS)	MW-2	12.13'
PURGE METHOD: BOTTOM OF WELL PURGE START TIM PURGE OBSERVA	L/SILT BUILDUP: ME:	STOP TIME:	:		MW-A3 MW-4 MW-5	11.95' 13.75' 15.28'
FIELD PARAMETE	R MEASUREMENTS:					
WELL VOLUME 1	рН	SPECIFIC CONDUCTIV umhos/cm)		TEMP. (C OR F)	_	NOTES:
2						The state of the s
3		***************************************	***************************************			3.006.14
4						
5						The control of the co
TOTAL VOLUME PU	URGED:					
GROUNDWATER C	OR SEDIMENT SAMPL	ING DATA:		SAMPLE [DATE:	
	IDWATER			SAMPLE 1	T <u>IME:</u>	
LOCATION:						
SAMPLE METHOD:						
SAMPLING OBSER	N/ATIONIO	THE STATE OF THE S				
QC SAMPLES TAKE	EN:					
OTHER OBSERVAT	TIONS/COMMENTS:					
Note: specific condu	uctivity formula to 25 deg	egrees Celcius: S	GC(25)=	SC measur {{T-25)(0.0	red 02)}+1	

RECORDED BY:	Jones	S#	AMPLE I <u>D:</u>	MHB-040	0209
SAMPLED <u>BY:</u>	Jones	S/	AMPLING EVENT/I	DATE:	4/2/2009
COMPANY:	Sevenson	M	ONITORING WELL	L: <u>manhole</u>	В
		C	ONDITION:	OK	
GROUNDWATER F	PURGE DATA	PURGE DATE	<u>=</u> :		
DEPTH ТО ВОТТО	M FROM TOP OF RISE	ER:	(FT.)		ALL GIBSON SITE PRING WELLS ARE
DEPTH TO WATER	R FROM TOP OF RISEF	R: <u>13.31</u>	(FT.)	2-INCH [DIAMETER STAIN-
[*	WATER COLUMN:	Name of the second of the seco	(FT.)	LESS ST	TEEL. WELL DEPTHS
I	2" DIA. WELL CONS	ST <u>ANT:</u>	0.16	MW-1R	12.10'
	ONE WELL VOLUM	 E=	(GALS)	MW-2	12.13'
PURGE METHOD: BOTTOM OF WELL PURGE START TIM PURGE OBSERVA	ΛE:	STOP TIME: Ran pump for	2 min. to flush tubi	MW-A3 MW-4 MW-5	11.95' 13.75' 15.28'
FIELD PARAMETER	R MEASUREMENTS:			•	
WELL VOLUME	рН	SPECIFIC CONDUCTIVI umhos/cm)	ITY TEMP. (C OR F)		NOTES:
1	<u>h</u>	dirii.,			NOTES,
2	3445-3445-3445-3445-3445-3445-3445-3445				- Marie
3					
4					
5	7.9	556	12.4	4	clear
TOTAL VOLUME PU	URGED: DR SEDIMENT SAMPLI	ING DATA:	SAMPLE	DATE:	4/2/2009
	DWATER SEDIMENT		SAMPLE	T <u>IME:</u>	1015
LOCATION:	Man Hole B				
SAMPLE METHOD:	Grab Sample W/ Per	astaltic pump		Martin Martin	***************************************
SAMPLING OBSER	VATIONS: Clear, No	o Odor			MACHINE TO THE TOTAL PROPERTY OF THE TOTAL P
QC SAMPLES TAKE	EN <u>:</u> No				
OTHER OBSERVAT	FIONS/COMMENTS:	2, 1 liter ambe	r bottles taken (BH	IC)	
Note: specific condu	ctivity formula to 25 deg	rees Celcius: SC	SC measu C(25)= {{T-25)(0.0	ured 02)}+1	

CHARLES GIBSON SITE NIAGARA FALLS, NEW YORK NYSDEC REGISTRY NO. 9-32-063 GROUNDWATER ELEVATION FORM

NSPECTOR: Walker COMPANY: Sevenson	RISER ELEVATION (INSIDE CASING)	DATE: <u>4/2/20</u>	009	TIME:	900	
RISER ELEVATION DEPTH TO WATER WATER COMMENTS	RISER ELEVATION DEPTH TO WATER WATER COMMENTS PIEZOMETER (INSIDE CASING) (FT.) ELEVATION P-1 572.72 7.26 565.46 P-2 574.89 9.46 565.43 P-3 574.16 7.35 566.81 P-4 576.14 10.8 565.34 P-5 575.05 5.94 569.11 P-6 578.28 10.51 567.77 MANHOLE A 575.22 11.25 563.97 MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwin Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. There water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Mar (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	INSPECTOR:	Walker	_COMPANY:	Sevenson	
P-1 572.72 7.26 565.46 P-2 574.89 9.46 565.43 P-3 574.16 7.35 566.81 P-4 576.14 10.8 565.34 P-5 575.05 5.94 569.11 P-6 578.28 10.51 567.77 MANHOLE A 575.22 11.25 563.97 MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Tow Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwater en Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. Therefore, It water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Manhole (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	P-1 572.72 7.26 565.46 P-2 574.89 9.46 565.43 P-3 574.16 7.35 566.81 P-4 576.14 10.8 565.34 P-5 575.05 5.94 569.11 P-6 578.28 10.51 567.77 MANHOLE A 575.22 11.25 563.97 MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwan Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. There water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Mar (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	WEATHER:	Sunny 55F			
P-2 574.89 9.46 565.43 P-3 574.16 7.35 566.81 P-4 576.14 10.8 565.34 P-5 575.05 5.94 569.11 P-6 578.28 10.51 567.77 MANHOLE A 575.22 11.25 563.97 MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Tow Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwater e in Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. Therefore, I water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Manhole (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	P-2 574.89 9.46 565.43 P-3 574.16 7.35 566.81 P-4 576.14 10.8 565.34 P-5 575.05 5.94 569.11 P-6 578.28 10.51 567.77 MANHOLE A 575.22 11.25 563.97 MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundw: n Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. There water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Mankole: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	PIEZOMETER				COMMENTS
P-3 574.16 7.35 566.81 P-4 576.14 10.8 565.34 P-5 575.05 5.94 569.11 P-6 578.28 10.51 567.77 MANHOLE A 575.22 11.25 563.97 MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Tow Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwater e in Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. Therefore, I water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Manhole (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	P-3 574.16 7.35 566.81 P-4 576.14 10.8 565.34 P-5 575.05 5.94 569.11 P-6 578.28 10.51 567.77 MANHOLE A 575.22 11.25 563.97 MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundward in Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. Therefore water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Man (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	P-1	572.72	7.26	565.46	
P-4 576.14 10.8 565.34 P-5 575.05 5.94 569.11 P-6 578.28 10.51 567.77 MANHOLE A 575.22 11.25 563.97 MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Tow Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwater e in Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. Therefore, I water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Manhole (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	P-4 576.14 10.8 565.34 P-5 575.05 5.94 569.11 P-6 578.28 10.51 567.77 MANHOLE A 575.22 11.25 563.97 MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwain Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. There water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Mark (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	P-2	574.89	9.46	565.43	
P-5 575.05 5.94 569.11 P-6 578.28 10.51 567.77 MANHOLE A 575.22 11.25 563.97 MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Tow Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwater ein Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. Therefore, I water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Manhole (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	P-5 575.05 5.94 569.11 P-6 578.28 10.51 567.77 MANHOLE A 575.22 11.25 563.97 MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwain Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. There water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Man (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	P-3	574.16	7.35	566.81	
P-6 578.28 10.51 567.77 MANHOLE A 575.22 11.25 563.97 MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Tov Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwater ein Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. Therefore, water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Manhole (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	P-6 578.28 10.51 567.77 MANHOLE A 575.22 11.25 563.97 MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwain Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. There water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Mar (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	P-4	576.14	10.8	565.34	
MANHOLE A 575.22 11.25 563.97 MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Tow Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwater e in Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. Therefore, I water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Manhole (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	MANHOLE A 575.22 11.25 563.97 MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwain Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. There water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Man (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	P-5	575.05	5.94	569.11	
(Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Tow Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwater e in Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. Therefore, I water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Manhole (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	MANHOLE B 577.34 13.31 564.03 (Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundward in Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. There water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Man (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	P-6	578.28	10.51	567.77	P. C.
(Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Tow Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwater e in Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. Therefore, I water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Manhole (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	(Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundward Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. Therefore water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Manhole: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	MANHOLE A	575.22	11.25	563.97	***************************************
Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwater expression of the second series of the second second series of the second second series of the second	Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundward in Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. There water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Man (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors) ADDITIONAL COMMENTS/OBSERVATIONS: Built up topsoil around P-5 to give the well	MANHOLE B	577.34	13.31	564.03	
		Niagara Tuscarora I in Manhole B (and b water distance from (Note: riser elevatio ADDITIONAL COMI	Road sanitary sewer line by extension Manhole A) the manhole rim should ns (re)surveyed Septemb	by a float controlled below an elevation not be <u>less</u> than 12 ber, 1999 by Wend	ed sump pump which m n of 565 ft. above mean 2.41 ft. at Manhole B ar lel Surveyors)	aintains groundwater sea level. Therefore nd 10.22 ft. at Manho
			-10-7-10-0		September 1991	
				What when the same of the same		

RECORDED BY:	M. Walker	-	SAMPLE	ID:	US-1-091	709
SAMPLED <u>BY:</u>	M. Walker		SAMPLING	G EVENT/C	DATE:	9/17/2009
COMPANY:	Sevenson Environm	nental Service	MONITOR	RING WELL		NO
			CONDITIC	ON:		
GROUNDWATER P	URGE DATA	PURGE D	ATE:			
DEPTH TO BOTTON	M FROM TOP OF RISI	ER:		(FT.)		LL GIBSON SITE RING WELLS ARE
DEPTH TO WATER	FROM TOP OF RISE	R:		(FT.)	2-INCH D	DIAMETER STAIN-
	WATER COLUMN:			(FT.)	LESS ST	EEL. WELL DEPTHS:
	2" DIA. WELL CONS	ST <u>ANT:</u>	0.16	, ,	MW-1R	12.10'
	ONE WELL VOLUM	1E=		- (GALS)	MW-2	12.13'
PURGE METHOD: BOTTOM OF WELL/ PURGE START TIMI PURGE OBSERVAT	E:	STOP TIM	IE:		MW-A3 MW-4 MW-5	11.95' 13.75' 15.28'
FIELD PARAMETER	MEASUREMENTS:					
WELL VOLUME	рН	SPECIFIC CONDUCT umhos/cm	TIVITY	TEMP. (C OR F)	_	NOTES:
1	Affilia de la companya del companya del companya de la companya de		***************************************			
3				····	-	
4			W074 LA			
5				W		
TOTAL VOLUME PU	IRGED: R SEDIMENT SAMPL	WC DATA.		OAMDI E (~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	2117/2000
GROUNDWATER OF	K SEDIMENT SAMPL	ING DATA:		SAMPLE [JAIE:	9/17/2009
MEDIA: GROUND CREEK S	OWATER SEDIMENT Yes			SAMPLE 1	Γ <u>IME:</u>	1130
LOCATION:	Center of creek bed,	, upstream of	the cap, in I	ine with the	steel gate	posts.
SAMPLE METHOD:	Composite sample, ι	using sedimer	nt from the s	sediment tra	ap placed la	ast year.
SAMPLING OBSERV	'ATIONS: Not a lot	of sediment in	n the trap th	is year,		
QC SAMPLES TAKE	N: Duplicate	samples tak	en and labe	led USD-1-	091709, fo	r QC purposes.
OTHER OBSERVATI	ONS/COMMENTS:	Water leve	I in the cree	k was low t	his summe	:r,
This could have contr	ibuted to the lack of se	ediment in the	trap.			
Note: specific conduc	tivity formula to 25 dec	grees Celsius	: SC(25)=	SC measure {{T-25}(0.0		_

RECORDED BY:	M. Walker		_	SAMPLE	ID:	CGS-DS-	-1-091709
SAMPLED BY:	M. Walker			SAMPLIN	IG EVENT/[DATE:	9/17/2009
COMPANY:	Sevenson E	Environme	ntal Service	MONITO	RING WELL		NO
				CONDITI	ON:		
GROUNDWATER F	URGE DATA		PURGE DA	ATE:			
DEPTH TO BOTTO	M FROM TOP	OF RISER	₹:		(FT.)		LL GIBSON SITE RING WELLS ARE
DEPTH TO WATER	FROM TOP C	F RISER:			(FT.)	2-INCH E	DIAMETER STAIN-
	WATER CC	LUMN:			(FT.)		EEL. WELL DEPTHS:
	2" DIA. WEI	LL CONST	ANT:	0.16	` '	MW-1R	12.10'
	ONE WELL	VOLUME			– (GALS)	MW-2 MW-A3	12.13'
PURGE METHOD: BOTTOM OF WELL PURGE START TIM PURGE OBSERVAT	E:	P:	STOP TIME	Ξ:		MW-4 MW-5	
FIELD PARAMETER	R MEASUREM	ENTS:					
WELL VOLUME 1	рН		SPECIFIC CONDUCT umhos/cm)	IVITY	TEMP. (C OR F)	_	NOTES:
2					·····		
3		HIMMINO.					4,664
4	•	•	•	· · · · · · · · · · · · · · · · · · ·			
5							7000-7
TOTAL VOLUME PL		SAMPLIN	G DATA:		SAMPLE [DATE:	9/17/2009
MEDIA: GROUNE	NAVATED						1000
	_	es es			SAMPLE 1	IME:	1200
LOCATION: post from	Creek bed, of the corner.	lownstrear	m of the cap.	, inline witl	h the 3rd fer	nce	
SAMPLE METHOD:	Composite s	ample, usi	ing sediment	from the	sediment tra	ap placed la	ast year.
SAMPLING OBSER\	/ATIONS: <u>N</u>	lot a lot of	sediment in	the trap th	nis year, sim	ilar to the l	JS sample.
QC SAMPLES TAKE	N:	Ouplicate s	amples take	n and labe	eled CGS-DS	SD-1-09170	09, for QC purposes.
OTHER OBSERVAT	ONS/COMME	NTS:	Water level	in the cree	ek was low t	nis summe	Γ,
This could have cont	ibuted to the la	ack of sedi	ment in the t	trap.			
Note: specific conduc	tivity formula t	o 25 degre	ees Celsius:	SC(25)=	SC measur {{T-25}(0.0)		-

CHARLES GIBSON SITE NIAGARA FALLS, NEW YORK NYSDEC REGISTRY NO. 9-32-063 GROUNDWATER ELEVATION FORM

DATE: 917	709	_TIME:	800	
INSPECTOR:	Walker	_COMPANY:	Sevenson	
WEATHER:	Sunny 48 F			
PIEZOMETER	RISER ELEVATION (INSIDE CASING)	DEPTH TO WA	TER WATER ELEVATION	COMMENTS
P-1	572.72	6.35	566.37	
P-2	574.89	9.47	565.42	
P-3	574.16	7.65	566.51	
P-4	576.14	10.85	565.29	
P-5	575.05	6.45	568.6	
P-6	578.28	10.7	567.58	400000000000000000000000000000000000000
MANHOLE A	575.22	11.55	563.67	
		13.6	563.74	
	577.34			•
Niagara Tuscarora I in Manhole B (and b water distance from (Note: riser elevation	577.34 mpties into Manhole B by Road sanitary sewer line by extension Manhole A) In the manhole rim should in the manhole Septemb	gravity feed and by a float controll below an elevatio not be <u>less</u> than 1 er, 1999 by Wend	Manhole B is pumped ed sump pump which rought of 565 ft. above mean 2.41 ft. at Manhole B a	naintains groundw n sea level. There
(Note: Manhole A e Niagara Tuscarora I n Manhole B (and b water distance from (Note: riser elevation	mpties into Manhole B by Road sanitary sewer line by extension Manhole A) l the manhole rim should i ns (re)surveyed Septemb	gravity feed and by a float controll below an elevatio not be <u>less</u> than 1 er, 1999 by Wend	Manhole B is pumped ed sump pump which rong of 565 ft. above mear 2.41 ft. at Manhole B and Surveyors)	naintains groundw n sea level. There
(Note: Manhole A e Niagara Tuscarora I n Manhole B (and b water distance from (Note: riser elevation	mpties into Manhole B by Road sanitary sewer line by extension Manhole A) l the manhole rim should i ns (re)surveyed Septemb	gravity feed and by a float controll below an elevatio not be <u>less</u> than 1 er, 1999 by Wend	Manhole B is pumped ed sump pump which rong of 565 ft. above mear 2.41 ft. at Manhole B and Surveyors)	naintains groundw n sea level. There
Note: Manhole A e Niagara Tuscarora I n Manhole B (and b water distance from Note: riser elevation	mpties into Manhole B by Road sanitary sewer line by extension Manhole A) l the manhole rim should i ns (re)surveyed Septemb	gravity feed and by a float controll below an elevatio not be <u>less</u> than 1 er, 1999 by Wend	Manhole B is pumped ed sump pump which rong of 565 ft. above mear 2.41 ft. at Manhole B and Surveyors)	naintains groundw n sea level. There