



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

March 4, 2013

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

Subject: Charles Gibson Site, Niagara Falls, New York
Site No. 932063
Annual Periodic Review Report – 2012
Post Closure Operation, Maintenance, and Monitoring Activities

Dear Mr. Sadowski,

Olin hereby submits a CD containing a PDF of the 2012 Annual Period Review Report on the Post-Closure Operation, Maintenance, and Monitoring activities for the Charles Gibson Site. The annual certification is attached as hard copy and as part of the PDF.

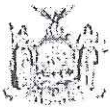
Please contact me with any questions at 423-336-4007 or by email at cmrichards@olin.com.

Sincerely,

Curt M. Richards
Olin Corporation

/bb
Enclosure

cc: A. Carringer



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. 932063

Site Name Charles Gibson Site

Site Address: N.E. Cnr. of Niagara Falls Blvd. & Tuscarora Rd. Zip Code: 14304
City/Town: Niagara Falls
County: Niagara
Site Acreage: 2.0

Reporting Period: January 31, 2012 to January 31, 2013

- | | 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?
Closed Landfill | <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.

Antoine M. Richards
Signature of Owner, Remedial Party or Designated Representative

2/28/13
Date

Description of Institutional Controls

<u>Parcel</u>	<u>Owner</u>	<u>Institutional Control</u>
161.05-3-7	OLIN CORPORATION	
161.05-5-12	OLIN CORPORATION	Monitoring Plan O&M Plan
		Monitoring Plan O&M Plan

Description of Engineering Controls

<u>Parcel</u>	<u>Engineering Control</u>
161.05-3-7	Cover System Fencing/Access Control Groundwater Containment Leachate Collection
161.05-5-12	Cover System Fencing/Access Control Groundwater Containment Leachate Collection

Control Description for Site No. 932063

Parcel: 161.05-3-7

Consent Judgement 3/12/85 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 3/12/85 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

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.

Curtis M. Richards

Signature of Owner, Remedial Party or Designated Representative

2/28/13

Date

IC CERTIFICATIONS
SITE NO. 932063

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 CURTIS M RICHARDS at 3855 N. OCDEE ST. CLEVELAND, TN
print name print business address 37312

am certifying as OLIN CORPORATION (Owner or Remedial Party)

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

Curtis M Richards
Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

2/28/13
Date

IC/EC CERTIFICATIONS

Box 7

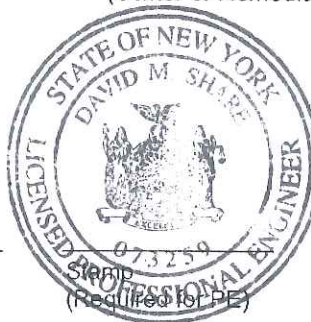
Professional Engineer Signature

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 David M. Share at 3855 N. Ocoee St., Suite 200, Cleveland, TN
print name print business address

am certifying as a Professional Engineer for the Olin Corporation
(Owner or Remedial Party)

David M. Share
Signature of Professional Engineer, for the Owner or
Remedial Party, Rendering Certification



2/27/2013
Date

**Charles Gibson Site
Site No. 932063
Periodic Review Report**

March 4, 2013

TABLE OF CONTENTS

- I. Introduction:**
 - Brief Summary, Nature and Extent, Remedial History
 - Effectiveness of Remedial Program
 - Compliance
 - Recommendations

- II. Site Overview:**
 - Site Description and Nature/Extent Prior to Remediation
 - Remediation Chronology

- III. Remedy Performance, Effectiveness, and Protectiveness:**
 - Effectiveness of Remedial Goals

- IV. IC/EC Plan (not applicable):**
 - IC/EC requirements

- V. Monitoring Plan Compliance Report:**
 - Components of Monitoring Plan
 - Summary and Comparisons to Remedial Objectives
 - Deficiencies
 - Recommendations for Change

- VI. Operation and Maintenance (O&M) Plan Compliance Report:**
 - Components of the O&M Plan
 - O&M Summary
 - Evaluation of Remedial Systems
 - O&M Deficiencies
 - Conclusions

- VII. Overall PRR Conclusions and Recommendations:**
 - Compliance with SMP
 - Remedy Effectiveness
 - Future Submittals

ATTACHMENTS

Attachment A – Institutional & Engineering Certification Form

Attachment B – Site Map

Attachment C – Field Sampling Forms

Attachment D – Site Inspection Forms

Table 1 – Analytical Summary - Groundwater

Table 2 – Analytical Summary – Manhole B

Table 3 – Analytical Summary – Sediment

Table 4 – Groundwater Elevations Summary

Table 5 – Discharge Volumes

I. INTRODUCTION

Brief Summary, Nature and Extent, Remedial History:

The Stipulation and Consent Judgment Approving Settlement Agreement was signed in 1985. 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 groundwater 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.

Effectiveness of Remedial Program:

Groundwater monitoring indicates there are no increased concentrations of the Site compounds being monitored. Evaluation of the groundwater 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.

Compliance:

There are no areas of non-compliance.

Recommendations:

The Operation and Maintenance program has shown that the conditions at the site are stable and consistent. Olin requests that background groundwater monitoring wells MW-1R and MW-2 be removed from the annual sampling event as the concentrations for site related compounds have undetected or estimated at concentrations below the detection limits for over the last 10 years.

II. SITE OVERVIEW

Site Description and Nature/Extent Prior to Remediation:

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.

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.

III. **REMEDY PERFORMANCE, EFFECTIVENESS, AND PROTECTIVENESS**

The work performed for the Site during 2012 was reviewed and found to be in accordance with the approved O&M Manual (Revised 2009). Groundwater monitoring indicates there are no increased concentrations of the Site compounds being monitored. Evaluation of the groundwater data generated during the 2012 monitoring year indicates that the containment remedy is effective. Drawdown in both manholes was effectively maintained at specified levels throughout the year.

IV. **IC/EC PLAN**

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

Certification:

Attachment A

V. **MONITORING PLAN COMPLIANCE REPORT**

Components of Site Monitoring Plan:

The operation, maintenance, and monitoring (OM&M) activities to be performed include:

- Performance of a groundwater monitoring program to monitor ground water quality at the Site and to verify the inward hydraulic gradient within the capped area.
- 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 was screened at the water table.
- 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 is 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.

Summary and Comparison to Remedial Objectives:

The isolation of groundwater within the capped area has been established and is being maintained by current operation and maintenance activities. Since 2003, concentrations of Site compounds being monitored have been undetected or estimated at concentrations below the detection levels, in all monitor wells and Manhole B (**Table 1 & Table 2**). The groundwater monitoring and sampling is performed on an annual basis in rotating quarters to help assess seasonal variability with Groundwater Sampling Field Parameters presented in **Attachment C**.

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. Beginning with the October 2000 sample event, annual creek sediment samples have been analyzed for BHC isomers only. HCB results are undetected (U) for all sampling events since 1993. Sample collection and analysis of creek sediments are performed annually during the second half of the calendar year. The 2012 data show a decrease in all sediment parameters, both upstream and downstream (**Table 3**).

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. The groundwater elevation data indicate that ground water within the capped area is consistent with historical data. An evaluation of data from the piezometer pairs at the Site indicates that an inward hydraulic gradient is being maintained in two of the three piezometer pairs with the exception of a slight outward gradient in the third with a maximum outward gradient being 0.79 ft. The third pair (P1/P2) has an inward gradient during the second quarter. There was minimal difference in the outward gradient with the maximum outward gradient being 0.87 ft. Drawdown in both manholes was effectively maintained at specified levels throughout the year. **Table 4** shows the most recent tables for piezometric data demonstrating that inward gradient.

Deficiencies:

None

Recommendations for Changes:

The groundwater monitoring program has shown consistent results throughout this monitoring period. Olin requests that background groundwater monitoring wells MW-1R

and MW-2 be removed from the annual sampling event as the concentrations for site related compounds have undetected or estimated at concentrations below the detection limits for over at least 10 years.

VI. O&M PLAN COMPLIANCE REPORT

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. The O&M Plan safeguards that remedy and provide for monitoring of the Gibson Site in compliance with the Settlement Agreement.

Inspections, on at least a quarterly basis, of the 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 Settlement 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.

Operation & Monitoring (O&M) Summary:

The groundwater 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 groundwater 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 D**. 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.

Evaluation of Remedial Systems:

All components are performing as designed.

O&M deficiencies:

None

Conclusions:

The O&M system is being run and maintained properly and does not require additions or modifications at this time.

VII. OVERALL PRR CONCLUSIONS AND RECOMMENDATIONS

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.

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 groundwater elevation data indicate that inward hydraulic gradients were observed between piezometers within the capped area and piezometers outside of the capped area with one previously noted exception. Fluctuations of groundwater elevations indicate that minor outward hydraulic gradients occur, but typically revert back to inward gradients by the next quarter.

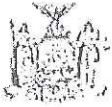
Currently two locations, immediately upstream and downstream of the Site and the adjacent remediated portion of the Cayuga Creek bed, are sampled once per year, in the Fall or 'low water' period. A sample is collected downstream of the Site to monitor changes in levels of contaminants in creek sediments, 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. HCB results are undetected (U) for all sampling events since 1993.

Future Submittals:

Future submittals of this report will be done on an annual basis.

Attachment A

Institutional & Engineering 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. 932063

Site Name Charles Gibson Site

Site Address: N.E. Cnr. of Niagara Falls Blvd. & Tuscarora Rd. Zip Code: 14304
City/Town: Niagara Falls
County: Niagara
Site Acreage: 2.0

Reporting Period: January 31, 2012 to January 31, 2013

- | | 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?
Closed Landfill | <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.

Antoine M. Richards
Signature of Owner, Remedial Party or Designated Representative

2/28/13
Date

SITE NO. 932063

Box 3

Description of Institutional Controls

Parcel

Owner

Institutional Control

161.05-3-7

OLIN CORPORATION

Monitoring Plan
O&M Plan

161.05-5-12

OLIN CORPORATION

Monitoring Plan
O&M Plan

Description of Engineering Controls

Box 4

Parcel

Engineering Control

161.05-3-7

Cover System
Fencing/Access Control
Groundwater Containment
Leachate Collection

161.05-5-12

Cover System
Fencing/Access Control
Groundwater Containment
Leachate Collection

Control Description for Site No. 932063

Parcel: 161.05-3-7

Consent Judgement 3/12/85 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 3/12/85 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

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.

Curtis M. Richards

Signature of Owner, Remedial Party or Designated Representative

2/28/13

Date

IC CERTIFICATIONS
SITE NO. 932063

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 CURTIS M RICHARDS at 3855 N. OGDEN ST. CLEVELAND, TN
print name print business address 37312

am certifying as OLIN CORPORATION (Owner or Remedial Party)

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

Curtis M Richards
Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

2/28/13
Date

IC/EC CERTIFICATIONS

Box 7

Professional Engineer 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 David M. Share at 3455 N. Osee St., Suite 200, Cleveland, TN
print name print business address

am certifying as a Professional Engineer for the Olin Corporation
(Owner or Remedial Party)

David M. Share
Signature of Professional Engineer, for the Owner or
Remedial Party, Rendering Certification



2/27/2013
Date

Attachment B

**Site Features Map
Figure 1**

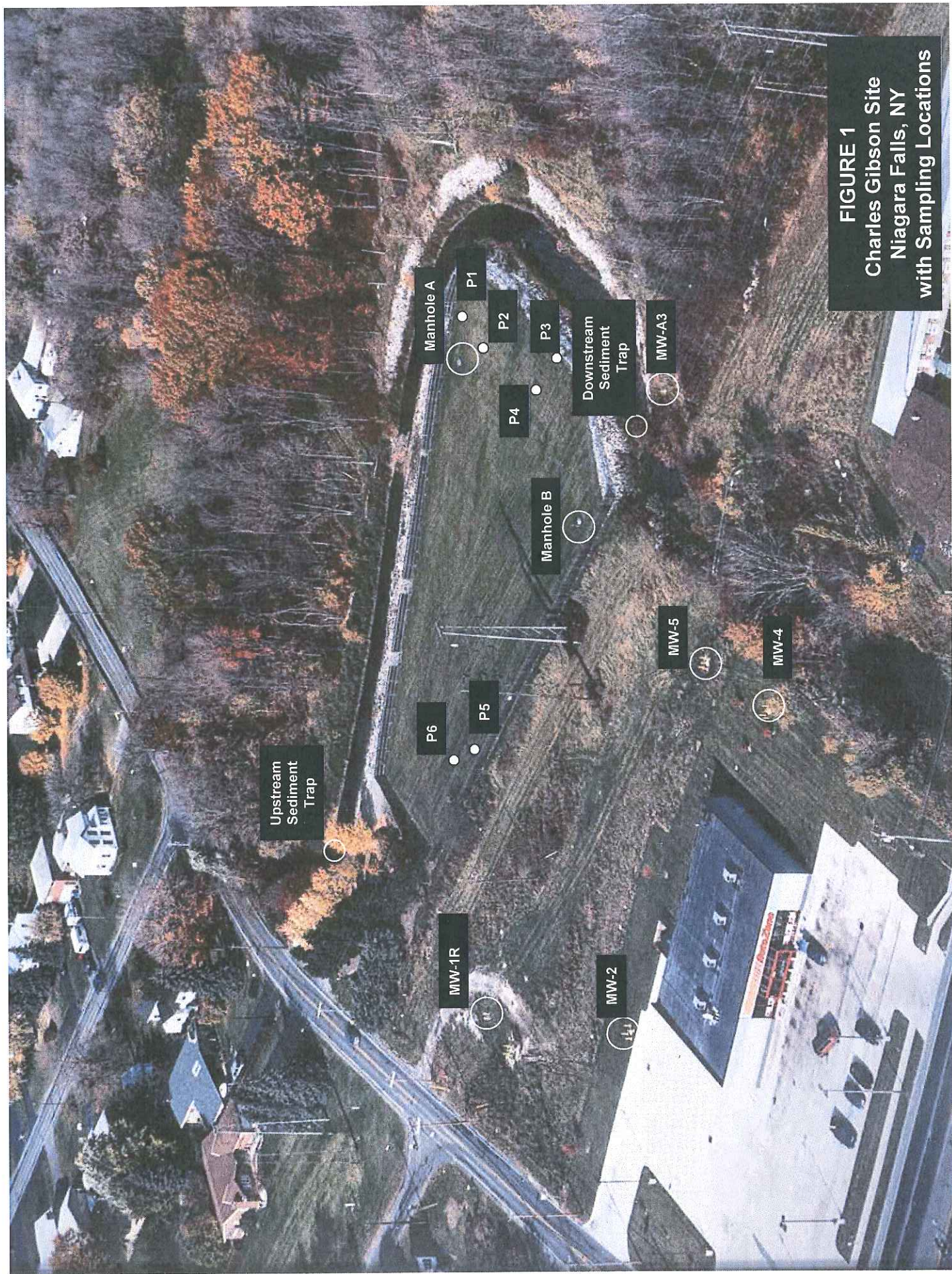


FIGURE 1
Charles Gibson Site
Niagara Falls, NY
with Sampling Locations

Attachment C

Field Sampling Forms

CHARLES GIBSON SITE
NIAGARA FALLS, NEW YORK
NYSDEC REGISTRY NO. 9-32-063
GROUNDWATER SAMPLING FIELD PARAMETERS
FIELD INSTRUMENTATION CALIBRATION FORM

DATE: 9-17-12 SEMI-ANNUAL SAMPLING EVENT: FALL 2012

PERSON CALIBRATING METERS: Jones

pH METER USED: MANUFACTURER: oakton
MODEL: pH tester 3
IDENTIFICATION/CONTROL NUMBER: 1220148

CALIBRATION STANDARDS USED:

STANDARD 7.00 METER READ: _____

STANDARD 4.00 METER READ: 4.06

STANDARD 10.00 METER READ: 10.10

METER CALIBRATION COMMENTS: _____

SPECIFIC CONDUCTIVITY METER USED: Oakton

MANUFACTURER: _____
MODEL: 35607-10
IDENTIFICATION/CONTROL NUMBER: WD 35607-10 (E-700)

CALIBRATION STANDARDS USED:

STANDARD 0 READ: _____
(STANDARD 0 USED: _____ AIR, _____ WATER)

STANDARD _____ 8974 8970

STANDARD _____ 1413 1419

METER CALIBRATION COMMENTS: _____

THERMOMETER USED: TYPE: Digital

MANUFACTURER: Fischer

IDENTIFICATION/CONTROL NUMBER: _____

COMMENTS: (DOES THERMOMETER TEMPERATURE AGREE WITH
SPECIFIC CONDUCTIVITY METER TEMPERATURE ?) _____

OTHER: _____

OTHER INSTRUMENTS USED: TYPE: _____

MANUFACTURER: _____

IDENTIFICATION/CONTROL NUMBER: _____

CALIBRATIONS PERFORMED: _____

OTHER CALIBRATION COMMENTS: _____

CHARLES GIBSON SITE
 NIAGARA FALLS, NEW YORK
 NYSDEC REGISTRY NO. 9-32-063
 GROUNDWATER AND SEDIMENT
 SAMPLING FIELD FORM

RECORDED BY: JONES SAMPLE ID: MW-1R-091712
 SAMPLED BY: JONES SAMPLING EVENT/DATE: 9/17/12
 COMPANY: SEVENSON MONITORING WELL: MW-1R
 CONDITION: GOOD

GROUNDWATER PURGE DATA

PURGE DATE:

DEPTH TO BOTTOM FROM TOP OF RISER: 12.10 (FT.)

DEPTH TO WATER FROM TOP OF RISER: 7.11 (FT.)

WATER COLUMN: 4.99 (FT.)

2" DIA. WELL CONSTANT: 0.16

ONE WELL VOLUME= 0.79 (GALS)

PURGE METHOD: 3 well volumes

BOTTOM OF WELL/SILT BUILDUP: NO

PURGE START TIME: 1425

STOP TIME: 1455

PURGE OBSERVATIONS:

NOTE: ALL GIBSON SITE
 MONITORING WELLS ARE

2-INCH DIAMETER STAIN-

LESS STEEL. WELL DEPTHS:

MW-1R 12.10'

MW-2 12.13'

MW-A3 11.95'

MW-4 13.75'

MW-5 15.28'

+ MW-7 Blind Dup.

FIELD PARAMETER MEASUREMENTS:

WELL VOLUME	pH	SPECIFIC CONDUCTIVITY umhos/cm	TEMP. (C OR F)	NOTES:
<u>1</u>	<u>7.49</u>	<u>849</u>	<u>14.7</u>	<u>CLEAR/NO ODOOR</u>
<u>2</u>	<u>7.41</u>	<u>859</u>	<u>14.8</u>	<u>↓</u>
<u>3</u>	<u>7.40</u>	<u>864</u>	<u>14.9</u>	<u>↓</u>
<u>4</u>	<u>7.37</u>	<u>879</u>	<u>14.8</u>	<u>↓</u>
<u>5</u>				

TOTAL VOLUME PURGED: 3 gallons

GROUNDWATER OR SEDIMENT SAMPLING DATA:

SAMPLE DATE: 9/17/12

MEDIA: GROUNDWATER X
 CREEK SEDIMENT

SAMPLE TIME: 1455

LOCATION: MW1 NEAR TUSCORA RD

SAMPLE METHOD: Pump with dedicated tubing

SAMPLING OBSERVATIONS: CLEAR NO ODOOR

QC SAMPLES TAKEN: BLIND DUP TAKEN HERE (MW-7) (1200) (FAKE SAMPLE TIME)

OTHER OBSERVATIONS/COMMENTS: 8, 1 LITER AMBERS TAKEN

Note: specific conductivity formula to 25 degrees Celcius: $SC(25) = \frac{SC \text{ measured}}{\{T-25\}(0.02)} + 1$

CHARLES GIBSON SITE
NIAGARA FALLS, NEW YORK
NYSDEC REGISTRY NO. 9-32-063
GROUNDWATER AND SEDIMENT
SAMPLING FIELD FORM

RECORDED BY: JONES SAMPLE ID: MW-2 - 091712
SAMPLED BY: JONES SAMPLING EVENT/DATE: 09/17/12
COMPANY: SEVENSON MONITORING WELL: MW-2
CONDITION: GOOD

GROUNDWATER PURGE DATA

PURGE DATE:

DEPTH TO BOTTOM FROM TOP OF RISER: 12.13 (FT.)

DEPTH TO WATER FROM TOP OF RISER: 6.28 (FT.)

WATER COLUMN: 5.85 (FT.)

2" DIA. WELL CONSTANT: 0.16

ONE WELL VOLUME = .93 (GALS)

NOTE: ALL GIBSON SITE
MONITORING WELLS ARE
2-INCH DIAMETER STAIN-
LESS STEEL. WELL DEPTHS:
MW-1R 12.10'
MW-2 12.13'
MW-A3 11.95'
MW-4 13.75'
MW-5 15.28'

PURGE METHOD: 3 VOLUMES

BOTTOM OF WELL/SILT BUILDUP: NO

PURGE START TIME: 1320

STOP TIME: 1350

PURGE OBSERVATIONS: SOME ORGANKS (GLUGS) WERE IN TUBING. CAME OUT DURING
PURGE PROCESS

FIELD PARAMETER MEASUREMENTS:

WELL VOLUME	pH	SPECIFIC CONDUCTIVITY umhos/cm	TEMP. (C OR F)	NOTES:
INT 1	7.31	1047	17.1	CLEAR/NO ODOOR
2	7.28	1118	16.5	
3	7.25	1141	16.8	
4	7.21	1146	16.7	
5				

TOTAL VOLUME PURGED: 3 gallons

GROUNDWATER OR SEDIMENT SAMPLING DATA:

SAMPLE DATE: 9/17/12

MEDIA: GROUNDWATER X
CREEK SEDIMENT

SAMPLE TIME: 1350

LOCATION: MW-2 ADJACENT TO AUTO ZONE LOT

SAMPLE METHOD: PUMP W/ DEDICATED TUBING

SAMPLING OBSERVATIONS:

QC SAMPLES TAKEN: MS/MSD VOLUME TAKEN

OTHER OBSERVATIONS/COMMENTS: 4 LITERS FOR PEST (8081) 4 LITERS SUAC (8270)

Note: specific conductivity formula to 25 degrees Celcius: $SC(25) = \frac{SC \text{ measured}}{\{(T-25)(0.02)\}+1}$

CHARLES GIBSON SITE
NIAGARA FALLS, NEW YORK
NYSDEC REGISTRY NO. 9-32-063
GROUNDWATER AND SEDIMENT
SAMPLING FIELD FORM

RECORDED BY: <u>JONES</u>		SAMPLE ID: <u>MWA3-091812</u>		
SAMPLED BY: <u>JONES</u>		SAMPLING EVENT/DATE: <u>9/18/12</u>		
COMPANY: <u>SEVENSON</u>		MONITORING WELL: <u>MW-A3</u>		
		CONDITION: <u>Good</u>		
GROUNDWATER PURGE DATA		PURGE DATE:		
DEPTH TO BOTTOM FROM TOP OF RISER: <u>11.95</u> (FT.)		NOTE: ALL GIBSON SITE MONITORING WELLS ARE 2-INCH DIAMETER STAIN- LESS STEEL. WELL DEPTHS: MW-1R 12.10' MW-2 12.13' <u>MW-A3 11.95'</u> MW-4 13.75' MW-5 15.28'		
DEPTH TO WATER FROM TOP OF RISER: <u>11.03</u> (FT.)				
WATER COLUMN: <u>0.92</u> (FT.)				
2" DIA. WELL CONSTANT: <u>0.16</u>				
ONE WELL VOLUME= <u>.14</u> (GALS)				
PURGE METHOD: <u>3 volume</u>				
BOTTOM OF WELL/SILT BUILDUP: <u>NO</u>				
PURGE START TIME: <u>1425</u>		STOP TIME: <u>1430</u>		
PURGE OBSERVATIONS: <u>WELL WENT DRY AFTER 5 min PURGE THEN SAMPLED</u>				
FIELD PARAMETER MEASUREMENTS:				
WELL VOLUME	pH	SPECIFIC CONDUCTIVITY umhos/cm	TEMP. (C OR F)	NOTES:
<u>1</u>	<u>7.42</u>	<u>1204</u>	<u>16.1</u>	<u>cloudy</u>
<u>2</u>	<u>7.36</u>	<u>1112</u>	<u>16.0</u>	<u>cloudy</u>
<u>3</u>				
<u>4</u>				
<u>5</u>				
TOTAL VOLUME PURGED: <u>.5 gallon</u>				
GROUNDWATER OR SEDIMENT SAMPLING DATA:		SAMPLE DATE: <u>9/18/12</u>		
MEDIA: GROUNDWATER <u>OK</u>		SAMPLE TIME: <u>1430</u>		
CREEK SEDIMENT				
LOCATION: <u>MW-A3 - BEHIND FAUS HOTEL ON NF BLV.</u>				
SAMPLE METHOD: <u>PUMP WITH DEDICATED TUBING</u>				
SAMPLING OBSERVATIONS: _____				
QC SAMPLES TAKEN: <u>NONE</u>				
OTHER OBSERVATIONS/COMMENTS: <u>3 AMBER LIDS TAKEN, LIMITED VOLUME</u>				
Note: specific conductivity formula to 25 degrees Celcius: $SC(25) = \frac{SC \text{ measured}}{\{T-25\}(0.02)} + 1$				

CHARLES GIBSON SITE
NIAGARA FALLS, NEW YORK
NYSDEC REGISTRY NO. 9-32-063
GROUNDWATER AND SEDIMENT
SAMPLING FIELD FORM

RECORDED BY: JONES SAMPLE ID: MW4-091812
SAMPLED BY: JONES SAMPLING EVENT/DATE: 9/18/12
COMPANY: SEVENSON MONITORING WELL: MW4
CONDITION: Good

GROUNDWATER PURGE DATA

PURGE DATE:

DEPTH TO BOTTOM FROM TOP OF RISER: 13.75 (FT.)
DEPTH TO WATER FROM TOP OF RISER: 8.01 (FT.)
WATER COLUMN: 5.74 (FT.)
2" DIA. WELL CONSTANT: 0.16
ONE WELL VOLUME= .91 (GALS)

NOTE: ALL GIBSON SITE
MONITORING WELLS ARE
2-INCH DIAMETER STAIN-
LESS STEEL. WELL DEPTHS:
MW-1R 12.10'
MW-2 12.13'
MW-A3 11.95'
MW-4 13.75'
MW-5 15.28'

PURGE METHOD: 3 well volumes
BOTTOM OF WELL/SILT BUILDUP: no
PURGE START TIME: 1325
PURGE OBSERVATIONS: yellow tint

STOP TIME: 1345

FIELD PARAMETER MEASUREMENTS:

WELL VOLUME	pH	SPECIFIC CONDUCTIVITY umhos/cm)	TEMP. (C OR F)	NOTES:
INT 1	<u>7.40</u>	<u>1101</u>	<u>14.5</u>	<u>yellow</u>
2	<u>7.36</u>	<u>1041</u>	<u>14.8</u>	<u>yellow</u>
3	<u>7.24</u>	<u>1027</u>	<u>14.9</u>	<u>yellow/clear</u>
4	<u>7.25</u>	<u>1018</u>	<u>14.8</u>	<u>clear</u>
5				

TOTAL VOLUME PURGED: 3 gallons

GROUNDWATER OR SEDIMENT SAMPLING DATA:

SAMPLE DATE: 9/18/12

MEDIA: GROUNDWATER X
CREEK SEDIMENT _____

SAMPLE TIME: 1345

LOCATION: MW-4 BEHIND AMP ZONE

SAMPLE METHOD: Pump with DEDICATED TUBING

SAMPLING OBSERVATIONS: SLIGHT yellow, no odor

QC SAMPLES TAKEN: no

OTHER OBSERVATIONS/COMMENTS: 4 AMBER LITERS TAKEN

Note: specific conductivity formula to 25 degrees Celcius: $SC(25) = \frac{SC \text{ measured}}{\{(T-25)(0.02)\}+1}$

CHARLES GIBSON SITE
NIAGARA FALLS, NEW YORK
NYSDEC REGISTRY NO. 9-32-063
GROUNDWATER AND SEDIMENT
SAMPLING FIELD FORM

RECORDED BY: JONES SAMPLE ID: MW5-091812
SAMPLED BY: JONES SAMPLING EVENT/DATE: 9/18/12
COMPANY: SEVENSON MONITORING WELL: MW5
CONDITION: GOOD

GROUNDWATER PURGE DATA

PURGE DATE:

DEPTH TO BOTTOM FROM TOP OF RISER: 15.28 (FT.)
DEPTH TO WATER FROM TOP OF RISER: 8.16 (FT.)
WATER COLUMN: 7.12 (FT.)
2" DIA. WELL CONSTANT: 0.16
ONE WELL VOLUME= 1.13 (GALS)

NOTE: ALL GIBSON SITE
MONITORING WELLS ARE
2-INCH DIAMETER STAIN-
LESS STEEL. WELL DEPTHS:
MW-1R 12.10'
MW-2 12.13'
MW-A3 11.95'
MW-4 13.75'
MW-5 15.28'

PURGE METHOD: 3 VOLUMES
BOTTOM OF WELL/SILT BUILDUP: NONE
PURGE START TIME: 1200 STOP TIME: 1230
PURGE OBSERVATIONS: CLEAR / SLIGHT GREEN

FIELD PARAMETER MEASUREMENTS:

WELL VOLUME	pH	SPECIFIC CONDUCTIVITY umhos/cm	TEMP. (C OR F)	NOTES:
WT 1	<u>6.51</u>	<u>1218</u>	<u>14.1</u>	<u>yellow</u>
2	<u>6.65</u>	<u>1239</u>	<u>14.3</u>	<u> </u>
3	<u>6.71</u>	<u>1249</u>	<u>14.4</u>	<u> </u>
4	<u>6.74</u>	<u>1254</u>	<u>14.4</u>	<u>↓</u>
5				

TOTAL VOLUME PURGED: 3.5 gallons

GROUNDWATER OR SEDIMENT SAMPLING DATA:

SAMPLE DATE: 9/18/12

MEDIA: GROUNDWATER X
CREEK SEDIMENT

SAMPLE TIME: 1430 1230

LOCATION: MW-5 BEHIND AUTO ZONE

SAMPLE METHOD: PUMP W/ DEDICATED TUBING

SAMPLING OBSERVATIONS: SLIGHT GREEN

QC SAMPLES TAKEN: NO

OTHER OBSERVATIONS/COMMENTS: 4 LITER AMBER

Note: specific conductivity formula to 25 degrees Celcius: $SC(25) = \frac{SC \text{ measured}}{\{(T-25)(0.02)\}+1}$

CHARLES GIBSON SITE
 NIAGARA FALLS, NEW YORK
 NYSDEC REGISTRY NO. 9-32-063
 GROUNDWATER AND SEDIMENT
 SAMPLING FIELD FORM

RECORDED BY: JONES SAMPLE ID: US-1 091712 (Also MS-1)
 SAMPLED BY: JONES SAMPLING EVENT/DATE: 9/17/12
 COMPANY: SEVENSON MONITORING WELL: _____
 CONDITION: _____

GROUNDWATER PURGE DATA

PURGE DATE: _____

DEPTH TO BOTTOM FROM TOP OF RISER: _____ (FT.)

DEPTH TO WATER FROM TOP OF RISER: _____ (FT.)

WATER COLUMN: _____ (FT.)

2" DIA. WELL CONSTANT: 0.16

ONE WELL VOLUME= _____ (GALS)

PURGE METHOD: _____

BOTTOM OF WELL/SILT BUILDUP: _____

PURGE START TIME: _____

PURGE OBSERVATIONS: _____

STOP TIME: _____

NOTE: ALL GIBSON SITE
 MONITORING WELLS ARE

2-INCH DIAMETER STAIN-
 LESS STEEL. WELL DEPTHS:

MW-1R 12.10'

MW-2 12.13'

MW-A3 11.95'

MW-4 13.75'

MW-5 15.28'

FIELD PARAMETER MEASUREMENTS:

WELL VOLUME	pH	SPECIFIC CONDUCTIVITY umhos/cm	TEMP. (C OR F)	NOTES:
1				
2				
3				
4				
5				

TOTAL VOLUME PURGED: _____

GROUNDWATER OR SEDIMENT SAMPLING DATA:

SAMPLE DATE: 9-17-12

MEDIA: GROUNDWATER
 CREEK SEDIMENT X

SAMPLE TIME: 1106

LOCATION: Cayuga Creek upstream of Landfill Cap even with Steel Gateposts

SAMPLE METHOD: Sediment trap in creek for 1 yr.

SAMPLING OBSERVATIONS: Brown/Black - no odor, sultry

QC SAMPLES TAKEN: Dup samples taken + labeled MS-1 for Lab QC purposes MS-1/labelled as

OTHER OBSERVATIONS/COMMENTS: MS TAKEN UPSTREAM (1 JAN) Sampled at
 LIMITED VOLUME 1110

Note: specific conductivity formula to 25 degrees Celcius: $SC(25) = \frac{SC \text{ measured}}{\{(T-25)(0.02)\}+1}$

CHARLES GIBSON SITE
 NIAGARA FALLS, NEW YORK
 NYSDEC REGISTRY NO. 9-32-063
 GROUNDWATER AND SEDIMENT
 SAMPLING FIELD FORM

RECORDED BY: <u>JONES</u>	SAMPLE ID: <u>DS-1-091712</u>
SAMPLED BY: <u>JONES</u>	SAMPLING EVENT/DATE: <u>9/17/12</u>
COMPANY: <u>SEVENSON</u>	MONITORING WELL: _____
CONDITION: _____	

GROUNDWATER PURGE DATA		PURGE DATE:			
DEPTH TO BOTTOM FROM TOP OF RISER:	(FT.)	NOTE: ALL GIBSON SITE MONITORING WELLS ARE			
DEPTH TO WATER FROM TOP OF RISER:	(FT.)	2-INCH DIAMETER STAIN-			
WATER COLUMN:	(FT.)	LESS STEEL. WELL DEPTHS:			
2" DIA. WELL CONSTANT:	<u>0.16</u>	MW-1R	12.10'		
ONE WELL VOLUME=	(GALS)	MW-2	12.13'		
		MW-A3	11.95'		
		MW-4	13.75'		
		MW-5	15.28'		
PURGE METHOD:		STOP TIME: _____			
BOTTOM OF WELL/SILT BUILDUP:					
PURGE START TIME:					
PURGE OBSERVATIONS:					
FIELD PARAMETER MEASUREMENTS:					
WELL VOLUME	pH	SPECIFIC CONDUCTIVITY umhos/cm	TEMP. (C OR F)	NOTES:	
1					
2					
3					
4					
5					
TOTAL VOLUME PURGED: _____					

GROUNDWATER OR SEDIMENT SAMPLING DATA:		SAMPLE DATE: <u>9-17-12</u>
MEDIA: GROUNDWATER		SAMPLE TIME: <u>1120</u>
CREEK SEDIMENT	<u>20</u>	
LOCATION: <u>sample taken from Sediment trap downstream of Landfill cap.</u>		
SAMPLE METHOD: <u>Trap in place under water for 1 yr. even with 2nd fence post from</u>		
SAMPLING OBSERVATIONS: <u>See corner of fencing. Silty brown - no odor</u>		
QC SAMPLES TAKEN: <u>0</u>		
OTHER OBSERVATIONS/COMMENTS: _____		

Note: specific conductivity formula to 25 degrees Celcius: $SC(25) = \frac{SC \text{ measured}}{\{(T-25)(0.02)\}+1}$

CHARLES GIBSON SITE
NIAGARA FALLS, NEW YORK
NYSDEC REGISTRY NO. 9-32-063
GROUNDWATER AND SEDIMENT
SAMPLING FIELD FORM

RECORDED BY: JONES SAMPLE ID: MAR-091712
SAMPLED BY: JONES SAMPLING EVENT/DATE: _____
COMPANY: SEVENSON MONITORING WELL: MANHOLE B
CONDITION: Good

GROUNDWATER PURGE DATA

PURGE DATE: _____

DEPTH TO BOTTOM FROM TOP OF RISER: _____ (FT.)

DEPTH TO WATER FROM TOP OF RISER: _____ (FT.)

WATER COLUMN: _____ (FT.)

2" DIA. WELL CONSTANT: 0.16

ONE WELL VOLUME= _____ (GALS)

PURGE METHOD: _____

BOTTOM OF WELL/SILT BUILDUP: _____

PURGE START TIME: _____

PURGE OBSERVATIONS: _____

STOP TIME: _____

NOTE: ALL GIBSON SITE
MONITORING WELLS ARE
2-INCH DIAMETER STAIN-
LESS STEEL. WELL DEPTHS:
MW-1B 12.10'
MW-2 12.13'
MW-A3 11.95'
MW-4 13.75'
MW-5 15.28'

FIELD PARAMETER MEASUREMENTS:

WELL VOLUME	pH	SPECIFIC CONDUCTIVITY umhos/cm	TEMP. (C OR F)	NOTES:
1	<u>7.60</u>	<u>841</u>	<u>15.1</u>	
2				
3				
4				
5				

TOTAL VOLUME PURGED: _____

GROUNDWATER OR SEDIMENT SAMPLING DATA:

SAMPLE DATE: 9/17/12

MEDIA: GROUNDWATER ✓
CREEK SEDIMENT _____

SAMPLE TIME: 1015

LOCATION: MANHOLE B ON CAP

SAMPLE METHOD: GRAB SAMPLE USING PERISTALTIC PUMP AND DEDICATED TUBING

SAMPLING OBSERVATIONS: _____

QC SAMPLES TAKEN: NO

OTHER OBSERVATIONS/COMMENTS: 4 1L GLASS AMBER WERE SAMPLED

Note: specific conductivity formula to 25 degrees Celcius: $SC(25) = \frac{SC \text{ measured}}{\{(T-25)(0.02)\}+1}$



CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM 3519

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 1

Project Name GIBSON NIAGARA FALLS - OLIN		Project Number		ANALYSIS REQUESTED (Include Method Number and Container Preservative)											
Project Manager DAVID SHARE		Report CC DMSHARE@olin.com		PRESERVATIVE		NUMBER OF CONTAINERS		METALS, DISSOLVED (List in comments below)		METALS, TOTAL (List in comments below)		METALS, DISSOLVED (List in comments below)		PRESERVATIVE KEY	
Company/Address 3855 NORTH OCEAN STREET SUITE 200 CLEVELAND, TN 37312		Email dmsshare@olin.com												0. NONE 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn Acetate 6. MeOH 7. NaHSO4 8. Other	
Phone # 423 336 4987		Sampler's Printed Name CHAS JONES													
Signature <i>[Signature]</i>															
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	DATE	SAMPLING TIME	MATRIX											
MW-1R-091712		9/17/12	1455	GW											
MW-7-091712		9/17/12	1200												
MWB-091712		9/17/12	1015												
MW-2-091712		9/17/12	1350												
MW-5-091812		9/18/12	1230												
MW-4-091812		9/18/12	1345												
MW-A3-091812		9/18/12	1430	↓											
US-1-091712		9/17/12	1100	SED											
MS-1-091712		9/17/12	1110	↓											
DS-1-091712		9/17/12	1120	↓											
SPECIAL INSTRUCTIONS/COMMENTS Metals 3 colors TOTAL															
See QAPP <input type="checkbox"/>															
STATE WHERE SAMPLES WERE COLLECTED															
RELINQUISHED BY CHAS JONES					RECEIVED BY UPS					RELINQUISHED BY					
Signature <i>[Signature]</i>					Signature					Signature					
Printed Name					Printed Name					Printed Name					
Firm					Firm					Firm					
Date/Time 9/18/12 1500					Date/Time					Date/Time					
RELINQUISHED BY					RECEIVED BY					RELINQUISHED BY					
Signature					Signature					Signature					
Printed Name					Printed Name					Printed Name					
Firm					Firm					Firm					
Date/Time					Date/Time					Date/Time					

TURNAROUND REQUIREMENTS
RUSH (SURCHARGES APPLY)
1 day 2 day 3 day
4 day 5 day

REPORT REQUIREMENTS
I. Results Only
II. Results + OC Summaries (LCS, DUP MS/MSD as required)
III. Results + OC and Calibration Summaries
IV. Data Validation Report with Raw Data

Edata Yes No

REQUESTED REPORT DATE
STANDARD

INVOICE INFORMATION
PO #
BILL TO
RECEIVED BY

Signature
Printed Name
Firm
Date/Time

PRESERVATIVE KEY
0. NONE
1. HCL
2. HNO3
3. H2SO4
4. NaOH
5. Zn Acetate
6. MeOH
7. NaHSO4
8. Other

REMARKS/
ALTERNATE DESCRIPTION
MS/MSD Volume
LIMITED Volume

Attachment D

Site Inspection Forms

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

THIS FORM TO BE USED FOR QUARTERLY AND ALL OTHER SITE INSPECTIONS

DATE: 3/15/2012 TIME: 900

INSPECTOR: Jones, Walker COMPANY: Sevenson

WEATHER: Rain P/C 52 F

REASON FOR INSPECTION (QUARTERLY OR OTHER): First Quarter Inspection 2012

GENERAL SITE CONDITIONS: U=UNACCEPTABLE A=ACCEPTABLE

(Note: For general site conditions note existence of bare areas (number,size), cracks, subsidence (sinking), ponded water, stressed vegetation, soil discoloration or seeps, and rodent burrows. For site security, note absence of locks, gates open or damaged, missing signs or evidence of vandalism. Note any other unusual occurrences.)

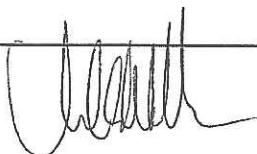
COMMENTS

ACCESS ROAD	<u>A</u>	<u></u>
COVER VEGETATION	<u>A</u>	<u></u>
TREES	<u>A</u>	<u></u>
LITTER	<u>A</u>	<u>Picked up some trash blowing around the site</u>
EROSION (CAP)	<u>A</u>	<u></u>
EROSION (BANK)	<u>A</u>	<u></u>

SECURITY:

FENCE/LOCKS	<u>U</u>	<u>Recent wind storm damage. See below</u>
PIEZOMETERS/LOCKS	<u>A</u>	<u></u>
MONITORING WELLS/LOCKS	<u>A</u>	<u></u>
MANHOLES/LIDS/LOCKS	<u>A</u>	<u></u>
ELECTRICAL PANEL	<u>A</u>	<u></u>

ADDITIONAL COMMENTS: During a recent storm, approximately 150' of the
perimeter fence had blown over, the cedar posts cracked off at their base. On the South side,
Some of the posts cracked however, the fence stayed upright. Sevenson erected a temporary fence
to secure the site, and made arrangements for a fencing company to come in and do the necessary
repairs.



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

THIS FORM TO BE USED FOR QUARTERLY AND ALL OTHER SITE INSPECTIONS

DATE: 5/22/2012 TIME: 1400

INSPECTOR: C Jones COMPANY: Sevenson

WEATHER 75 C sunny

REASON FOR INSPECTION (QUARTERLY OR OTHER quarterly)

GENERAL SITE CONDITIONS: U=UNACCEPTABLE A=ACCEPTABLE

(Note: For general site conditions note existence of bare areas (number,size), cracks, subsidence (sinking), ponded water, stressed vegetation, soil discoloration or seeps, and rodent burrows. For site security, note absence of locks, gates open or damaged, missing signs or evidence of vandalism. Note any other unusual occurrences.)

COMMENTS

ACCESS ROAD	<u>A</u>	
COVER VEGETATION	<u>A</u>	
TREES	<u>A</u>	
LITTER	<u>A</u>	
EROSION (CAP)	<u>A</u>	
EROSION (BANK)	<u>A</u>	
SECURITY:		
FENCE/LOCKS	<u>A</u>	
PIEZOMETERS/LOCKS	<u>A</u>	
MONITORING WELLS/LOCKS	<u>A</u>	
MANHOLES/LIDS/LOCKS	<u>A</u>	
ELECTRICAL PANEL	<u>A</u>	

ADDITIONAL COMMENTS: _____

C. J.

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

THIS FORM TO BE USED FOR QUARTERLY AND ALL OTHER SITE INSPECTIONS

DATE: 7/17/12 TIME: 830

INSPECTOR: JONES COMPANY: SEVENSON

WEATHER: 76° sunny

REASON FOR INSPECTION (QUARTERLY OR OTHER): QUARTERLY

GENERAL SITE CONDITIONS:

U=UNACCEPTABLE A=ACCEPTABLE

(Note: For general site conditions note existence of bare areas (number,size), cracks, subsidence (sinking), ponded water, stressed vegetation, soil discoloration or seeps, and rodent burrows. For site security, note absence of locks, gates open or damaged, missing signs or evidence of vandalism. Note any other unusual occurrences.)

COMMENTS:

ACCESS ROAD	<u>A</u>	
COVER VEGETATION	<u>A</u>	
TREES	<u>A</u>	
LITTER	<u>A</u>	
EROSION (CAP)	<u>A</u>	
EROSION (BANK)	<u>A</u>	

SECURITY:

FENCE/LOCKS	<u>A</u>	<u>SOME GRAFFITI</u>
PIEZOMETERS/LOCKS	<u>A</u>	
MONITORING WELLS/LOCKS	<u>A</u>	
MANHOLES/LIDS/LOCKS	<u>A</u>	
ELECTRICAL PANEL	<u>A</u>	

ADDITIONAL COMMENTS: _____

Cm

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

THIS FORM TO BE USED FOR QUARTERLY AND ALL OTHER SITE INSPECTIONS

DATE: 11/9/12 TIME: 1030

INSPECTOR: JONES COMPANY: SEVENSON

WEATHER: 40° cloudy

REASON FOR INSPECTION (QUARTERLY OR OTHER): QUARTERLY

GENERAL SITE CONDITIONS:

U=UNACCEPTABLE A=ACCEPTABLE

(Note: For general site conditions note existence of bare areas (number,size), cracks, subsidence (sinking), ponded water, stressed vegetation, soil discoloration or seeps, and rodent burrows. For site security, note absence of locks, gates open or damaged, missing signs or evidence of vandalism. Note any other unusual occurrences.)

COMMENTS

ACCESS ROAD	<u>A</u>	
COVER VEGETATION	<u>A</u>	
TREES	<u>A</u>	
LITTER	<u>A</u>	<u>PICKED UP MINIMAL AMOUNT</u>
EROSION (CAP)	<u>A</u>	
EROSION (BANK)	<u>A</u>	

SECURITY:

FENCE/LOCKS	<u>A</u>	
PIEZOMETERS/LOCKS	<u>A</u>	
MONITORING WELLS/LOCKS	<u>A</u>	
MANHOLES/LIDS/LOCKS	<u>A</u>	
ELECTRICAL PANEL	<u>A</u>	

ADDITIONAL COMMENTS: _____

TABLE 1
CHARLES GIBSON SITE
NIAGARA FALLS, NEW YORK

ANALYTICAL SUMMARY
SEMI-ANNUAL GROUND WATER SAMPLING 2003-2012

MONITOR WELL: MW-A3

	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012	
Parameter	April	September	April	September	April	September	April	September	April	September	April	September	April	September	April	September	April	September	April	September
Alpha-BHC	.048U	.035J	.048U	.047U	.047U	.048U	.049U	.032J	.048U	-	.048U	.048U	.049U	NR	NR	.034J	.053U	NR	NR	0.050U
Beta-BHC	.048U	.059U	.048U	.047U	.047U	.048U	.049U	.014J	.048U	-	.048U	.048U	.049U	NR	NR	.050U	.053U	NR	NR	0.050U
Gamma-BHC	.048U	.059U	.048U	.047U	.047U	.048U	.049U	.048U	.048U	-	.048U	.048U	.049U	NR	NR	.029J	.053U	NR	NR	0.050U
Delta-BHC	.048U	.059U	.048U	.047U	.047U	.048U	.049U	.03J	.048U	-	.048U	.048U	.049U	NR	NR	.050U	.053U	NR	NR	0.050U
Hexachlorobenzene	NR	NR	10U	NR	NR	NR	NR	9J	NR	NR	5U	NR	NR	NR	NR	NR	NR	NR	NR	20U

MONITOR WELL: MW-1R

	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012	
Parameter	April	September	April	September	April	September	April	September	April	September	April	September	April	September	April	September	April	September	April	September
Alpha-BHC	.014J/.015U	.052U	.049U/.049	.026J/.048U	.040J/.049U	.047U/.048U	.037J	.032J	.041J	.029J	.032J	.015J	.049U	NR	NR	.038J	0.13	NR	NR	0.047U
Beta-BHC	.053/.052	.052U	.049U/.065	.090U/.024J	.050U/.049U	.047U/.048U	.036J	.022J	.035J	.024J	.049U	.05U	.028J	NR	NR	.045J	.048U	NR	NR	0.047U
Gamma-BHC	.049U	.052U	.049U/.049U	.048U/.048U	.036J/.049U	.047U/.048U	.050U	.048U	.048U	.048U	.023J	.05U	.049U	NR	NR	.025J	0.072	NR	NR	0.047U
Delta-BHC	.049U	.052U	.049U/.049	.048U/.048U	.050U/.049U	.047U/.048U	.050U	.034J	.048U	.048U	.025J	.05U	.049U	NR	NR	.048U	.048U	NR	NR	0.047U
Hexachlorobenzene	NR	NR	NR	NR	NR	NR	NR	10U	NR	NR	5U	NR	NR	NR	NR	4.7U	NR	NR	NR	9.4U

MONITOR WELL: MW-2

	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012	
Parameter	April	September	April	September	April	September	April	September	April	September	April	September	April	September	April	September	April	September	April	September
Alpha-BHC	.050U	.050U	.050U	.050U	.050U	.050U	.050U	.048U	.048U	.047U	.038J	.047U	.048U	NR	NR	.048U	0.071	NR	NR	0.047U
Beta-BHC	.050U	.050U	.050U	.050U	.050U	.050U	.050U	.048U	.048U	.047U	.056U	.047U	.048U	NR	NR	.048U	.049U	NR	NR	0.047U
Gamma-BHC	.050U	.030J	.050U	.030J	.050U	.050U	.050U	.048U	.048U	.047U	.056U	.047U	.048U	NR	NR	.048U	.031J	NR	NR	0.047U
Delta-BHC	.050U	.050U	.050U	.050U	.050U	.050U	.050U	.030J	.048U	.047U	.034J	.047U	.048U	NR	NR	.048U	.049U	NR	NR	0.047U
Hexachlorobenzene	NR	NR	10U	NR	NR	NR	NR	10U	NR	NR	5U	NR	NR	NR	NR	NR	NR	NR	NR	9.4U

MONITOR WELL: MW-4

	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012	
Parameter	April	September	April	September	April	September	April	September	April	September	April	September	April	September	April	September	April	September	April	September
Alpha-BHC	.049U	0.056	.048U	.048U	.047U	.047U	.049U	.041J	.042J	.025J	.03J	.048U	.047U	NR	NR	.49U	0.076	NR	NR	0.047U
Beta-BHC	.049U	.026J	.048U	.037J	.047U	.036J	.022J	.044J	.033J	.047U	.037J	.048U	.047U	NR	NR	.49U	.048U	NR	NR	0.047U
Gamma-BHC	.049U	.033J	.048U	.048U	.047U	.047U	.049U	.048U	.048U	.047U	.05U	.048U	.047U	NR	NR	.49U	.0247J	NR	NR	0.047U
Delta-BHC	.049U	.050U	.048U	.048U	.047U	.047U	.030J	.036J	.048U	.047U	.024J	.048U	.047U	NR	NR	.49U	.048U	NR	NR	0.047U
Hexachlorobenzene	NR	NR	NR	9U	NR	NR	NR	10U	NR	NR	5U	NR	NR	NR	NR	4.9U	NR	NR	NR	9.4U

MONITOR WELL: MW-5

	2003		2004		2005		2006		2007		2008		2009		2010		2011		2012	
Parameter	April	September	April	September	April	September	April	September	April	September	April	September	April	September	April	September	April	September	April	September
Alpha-BHC	.048U	.049U	.048U	.048U	.047U	.047UJ	.049U	.032J	.041J	.026J	.035J	.017J	.048U	NR	NR	.030J	.047U	NR	NR	0.047U
Beta-BHC	.048U	.049U	.048U	.048U	.047U	.047UJ	.049U	.015J	.025J	.048U	.052U	.047U	.048U	NR	NR	.049U	.047U	NR	NR	0.047U
Gamma-BHC	.048U	.049U	.048U	.048U	.047U	.047UJ	.049U	.048U	.047U	.048U	.027J	.018J	.048U	NR	NR	.025J	.017J	NR	NR	0.047U
Delta-BHC	.048U	.049U	.048U	.048U	.047U	.047UJ	.049U	.030J	.047U	.048U	.031J	.0094J	.048U	NR	NR	.049U	.047U	NR	NR	0.047U
Hexachlorobenzene	NR	NR	10U	NR	NR	NR	NR	NR	NR	NR	5U	NR	NR	NR	NR	4.7U	NR	NR	NR	9.4U

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

Table 2
Annual Manhole B Sampling

CHARLES GIBSON SITE
NIAGARA FALLS, NEW YORK

ANALYTICAL RESULTS SUMMARY
ANNUAL LEACHATE SAMPLING

September 17, 2012

Concentrations in ug/l	MANHOLE B (MHB)
PARAMETER	
alpha-BHC	0.047U
beta-BHC	0.047U
delta-BHC	0.047U
gamma-BHC	0.047U
Hexachlorobenzene	9.4U

Notes:

U Undetected
J Estimated value
NR Not Required

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 Fall 2014

TABLE 3
Charles Gibson Site
Niagara Falls, New York

ANALYTICAL SUMMARY

Annual Cayuga Creek Sediment Sampling 2003 - 2012

UPSTREAM

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Parameter	September	September	September	September	September	September	September	September	September	September
Alpha- BHC	28/22J	80U/86J	23J	13	40	77	240	94	200J	17
Beta- BHC	48/30	20J/190	36	34	4.8	69	260	97	120J	48
Gamma- BHC	12J/28	23J/56J	15J	13	4.6	17J	18J	33J	190U	5.5U
Delta- BHC	1.9J/26U	80U/38J	26U	3.9J	3.7	26U	39J	52J	140J	23

DOWNSTREAM

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Parameter	September	September	September	September	September	September	September	September	September	September
Alpha- BHC	28/22J	80U/86J	23J	8.3	NS	5200	210	53J	230J	9.8
Beta- BHC	48/30	20J/190	36	22	NS	1000	73	62J	130J	37
Gamma- BHC	12J/28	23J/56J	15J	11	NS	66J	60U	63U	220U	5.9U
Delta- BHC	1.9J/26U	80U/38J	26U	3.7J	NS	82J	32	56J	170J	18

Notes:

Concentration in microgram per kilogram (ug/kg)

U Not Detected

J Estimated value

NS No sample in trap

Table 4
2012 Quarterly Groundwater Elevations Summary

Piezometer Pair	3/15/2012	Gradient	5/22/2012	Gradient	9/17/2012	Gradient	11/09/2012	Gradient
P1 outside P2 inside	565.36 565.54	Outward	566.01 565.50	Inward	564.50 565.26	Outward	564.51 565.38	Outward
P3 outside P4 inside	568.25 565.34	Inward	567.40 565.46	Inward	564.37 565.16	Outward	568.28 565.22	Inward
P5 outside P6 inside	569.23 567.75	Inward	569.01 567.75	Inward	566.77 566.80	Outward	568.40 567.25	Inward
Manhole A Manhole B	564.21 564.27	Below 565 ft msl Yes Yes	563.40 563.49	Below 565 ft msl Yes Yes	563.47 563.53	Below 565 ft msl Yes Yes	563.62 563.99	Below 565 ft msl Yes Yes

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.

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

THIS FORM TO BE USED FOR ALL QUARTERLY PIEZOMETER AND MANHOLE GROUND-WATER ELEVATION MEASURING EVENTS

DATE: 3/15/2012 TIME: 900

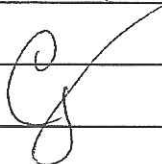
INSPECTOR: Jones COMPANY: Sevenson

WEATHER: Rain turning to just cloudy

PIEZOMETER	RISER ELEVATION (INSIDE CASING)	DEPTH TO WATER (FT.)	WATER ELEVATION	COMMENTS
P-1	572.72	<u>7.36</u>	<u>565.36</u>	
P-2	574.89	<u>9.35</u>	<u>565.54</u>	
P-3	574.16	<u>5.91</u>	<u>568.25</u>	
P-4	576.14	<u>10.8</u>	<u>565.34</u>	<u>Slight frost heave</u>
P-5	575.05	<u>5.82</u>	<u>569.23</u>	<u>PVC well shifted</u>
P-6	578.28	<u>10.53</u>	<u>567.75</u>	
MANHOLE A	575.22	<u>11.01</u>	<u>564.21</u>	
MANHOLE B	577.34	<u>13.07</u>	<u>564.27</u>	

(Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Town of Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwater elevations in Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. Therefore, Depth to water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Manhole A.
 (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors)

ADDITIONAL COMMENTS/OBSERVATIONS: The outer well casing at P-4 has sunk into
the surrounding soils a little causing the locking cover to fit extremely tight. The PVC well pipe
itself in P-5 has shifted a little, it looks like the joint has separated . Sevenson will repair as needed.



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

THIS FORM TO BE USED FOR ALL QUARTERLY PIEZOMETER AND MANHOLE GROUND-
WATER ELEVATION MEASURING EVENTS

DATE: 5/22/2012 TIME: 1400

INSPECTOR: C. Jones COMPANY: Severson

WEATHER 75 C sunny

PIEZOMETER	RISER ELEVATION (INSIDE CASING)	DEPTH TO WATER (FT.)	WATER ELEVATION	COMMENTS
P-1	572.72	<u>6.71</u>	<u>566.01</u>	
P-2	574.89	<u>9.39</u>	<u>565.5</u>	
P-3	574.16	<u>6.76</u>	<u>567.4</u>	
P-4	576.14	<u>10.68</u>	<u>565.46</u>	
P-5	575.05	<u>6.04</u>	<u>569.01</u>	
P-6	578.28	<u>10.53</u>	<u>567.75</u>	
MANHOLE A	575.22	<u>11.82</u>	<u>563.4</u>	
MANHOLE B	577.34	13.85	563.49	

(Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Town of Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwater elevations in Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. Therefore, Depth to water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Manhole A. (Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors)

ADDITIONAL COMMENTS/OBSERVATIONS:

27

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

THIS FORM TO BE USED FOR ALL QUARTERLY PIEZOMETER AND MANHOLE GROUND-
WATER ELEVATION MEASURING EVENTS

DATE: 9/17/12 TIME: 845

INSPECTOR: JONES COMPANY: SEVENSON

WEATHER: 70° Sunny

PIEZOMETER	RISER ELEVATION (INSIDE CASING)	DEPTH TO WATER (FT.)	WATER ELEVATION	COMMENTS
P-1	572.72	<u>8.22</u>	<u>564.50</u>	
P-2	574.89	<u>9.63</u>	<u>565.26</u>	
P-3	574.16	<u>9.79</u>	<u>564.37</u>	
P-4	576.14	<u>10.98</u>	<u>565.16</u>	
P-5	575.05	<u>8.28</u>	<u>566.77</u>	
P-6	578.28	<u>11.48</u>	<u>566.80</u>	
MANHOLE A	575.22	<u>11.75</u>	<u>563.47</u>	
MANHOLE B	577.34	<u>13.81</u>	<u>563.53</u>	

(Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Town of Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwater elevations in Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. Therefore, Depth to water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Manhole A.

(Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors)

ADDITIONAL COMMENTS/OBSERVATIONS:

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

THIS FORM TO BE USED FOR ALL QUARTERLY PIEZOMETER AND MANHOLE GROUND-
 WATER ELEVATION MEASURING EVENTS

DATE: 11/9/12 TIME: 1030

INSPECTOR: JONES COMPANY: SEVENSON

WEATHER: 40° cloudy

PIEZOMETER	RISER ELEVATION (INSIDE CASING)	DEPTH TO WATER (FT.)	WATER ELEVATION	COMMENTS
P-1	572.72	<u>8.21</u>	<u>564.51</u>	
P-2	574.89	<u>9.51</u>	<u>565.38</u>	
P-3	574.16	<u>5.88</u>	<u>568.28</u>	
P-4	576.14	<u>10.72</u>	<u>565.22</u>	
P-5	575.05	<u>6.65</u>	<u>568.40</u>	
P-6	578.28	<u>11.03</u>	<u>567.25</u>	
MANHOLE A	575.22	<u>11.60</u>	<u>563.62</u>	
MANHOLE B	577.34	<u>13.35</u>	<u>563.99</u>	

(Note: Manhole A empties into Manhole B by gravity feed and Manhole B is pumped automatically to the Town of Niagara Tuscarora Road sanitary sewer line by a float controlled sump pump which maintains groundwater elevations in Manhole B (and by extension Manhole A) below an elevation of 565 ft. above mean sea level. Therefore, Depth to water distance from the manhole rim should not be less than 12.41 ft. at Manhole B and 10.22 ft. at Manhole A.

(Note: riser elevations (re)surveyed September, 1999 by Wendel Surveyors)

ADDITIONAL COMMENTS/OBSERVATIONS: _____

Cj

Table 5
Charles Gibson Site
Discharge Volumes

Summary of Yearly Discharge Volumes

Date	Volume (gallons)
2003 (1)	5,230
2004	65,082
2005	51,115
2006	52,891
2007	22,958
2008	40,223
2009	40,187
2010	28,118
2011	40,625
2012	29,623
Total	376,052

Monthly Discharge Volumes
2012

Month	Volume (gallons)
Jan	4,468
Feb	4,919
Mar	4,879
Apr	2,220
May	8,224
Jun	991
Jul	912
Aug	935
Sep	0
Oct	983
Nov	1,092
Dec	0
Total	29,623

Notes:

(1) Pumped during test of system on 4/13/2003