Olin

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February 6, 2007

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Mr. Michael J. Hinton, P.E.
Environmental Engineer II
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
Fourteenth Annual Report - 2006

Dear Mr. Hinton:

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 activities performed during 2006 for the operation and maintenance of the containment remedy for the site and the ground water monitoring program outside of the containment area.

The following is a summary of major activities that occurred during 2006.

- Semi-annual groundwater sampling events were performed during April and September 2006.
- Annual sediment sampling was performed in September.
- Annual sampling and analysis of leachate was completed in April.
- There were 52,891gallons of leachate discharged to the City of Niagara Falls Wastewater Treatment Facility.

The Semi-Annual Ground Water Sampling and Annual Sediment Sampling Report - September 2006, is included as Appendix A to this report. The Data Usability Summary Report is included in this report.

Olin requests that NYSDEC consider our 2004 request to discontinue hexachorobenzene (HCB) monitoring in ground water wells.

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

Sincerely,
OLIN CORPORATION

Michael J. Bellotti
Principal Environmental Specialist

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cc: C. M. Richards via e-mail
Brian Vain – Olin Niagara Falls via e-mail
Mike Walker – Sevenson Environmental Services via e-mail
Matthew Forcucci – NYSDOH Buffalo

FOURTEENTH ANNUAL REPORT

2006

CHARLES GIBSON SITE

(PINE AND TUSCARORA SITE)

NIAGARA FALLS, NEW YORK
NYSDEC REGISTRY NO. 9-32-063

PREPARED BY OLIN CORPORATION

FEBRUARY 2007

Introduction

This is the fourteenth Annual Report from Olin Corporation (Olin) for the Charles Gibson Site (Pine and Tuscarora Site), located in Niagara Falls, New York. This report summarizes activities performed during 2006 for the operations and maintenance of the containment remedy for the Site and the ground water monitoring program outside of the containment areaThis year's data for the Semi-Annual Ground Water and Annual Sediment Sampling, collected during September 2006 has been incorporated as part of the Annual Report.

Background

The Charles Gibson Site (Site) is located approximately four miles east of downtown Niagara Falls, New York. The Site comprises an area of approximately two acres of land in Niagara County bordered on the south by private property, on the west by Tuscarora Road and on the north and east by Cayuga Creek. The Site is a fully remediated waste site currently surrounded by a fence.

Construction of the remedy on the 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 Site is classified as a commercial/small industrial/residential user (CSIRU) and does not require a permit.

Reports are submitted as appropriate to the New York State Department of Environmental Conservation (NYSDEC). Records of all environmental monitoring are maintained by Olin Corporation. These records are available for review and inspection by the State.

Discussion

The Stipulation and Consent Judgment, CIV 83-1400, and its modification, CIV 83-1400C, (the Agreement) listed the following elements to be included in the required remediation plan for the Site (Plan C):

1. Quarterly ground water monitoring for 30 years (revised in 1997 to semiannual);
2. Sample collection and analysis of creek water and of creek sediments annually for 30 years. During 1993 the creek water sampling was discontinued and sediment sampling was modified to collection during the low flow/dry season;
3. Establishment of an upward hydraulic gradient within the containment area, unless Olin can demonstrate by clear and convincing evidence the establishment of the same is unnecessary or inappropriate to the accomplishment of the goals set forth in paragraph 4(a) of the stipulation;
4. Acquisition by Olin of easements which would permit the required monitoring;
5. Provisions for protection of the Site from disturbance which might increase the threat of contamination migration, including regular inspection of the site;
6. Provisions for the design and implementation of a contingency plan in the event that migration of the contaminants occurs despite the implementation of the containment remediation plan;
7. Containment or removal of the contaminants deposited or caused to be deposited by Olin which have migrated off-Site consistent with the goals of paragraph 4(a);

8. Fiscal arrangements, guarantees, or the provision of financial assurances sufficient to ensure that Olin possess the financial ability to perform the containment remedial plan and monitoring. Olin's performance has been demonstrated and the financial assurance notification is no longer required.

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 of elements 1, 2, or 5 are no longer necessary to determine whether the remediation is effective, Olin may reduce the frequency and duration of such monitoring or inspections. Modifications are noted in the discussion above.

The approved Operation and Maintenance Manual (O&M Manual (June 2000)) provides details on the O&M of the containment remedy on the northern portion of the site and includes provisions for site control and environmental monitoring. The O&M Manual (June 2000) reflects current activities being performed for the operation and maintenance of the containment remedy for the Site and the ground water monitoring program outside the containment area. The yearly inspection and sampling schedule for the Site is included in(***Attachment 1***.

The O&M Manual (2000) addresses the required elements as set forth in the Agreement. Element 4, acquisition of easements, is a completed task. Element 6, a contingency plan, is addressed in the O&M Manual. Element 7, containment of the contaminants, has been achieved and is being monitored for effectiveness. Element 8, provision of financial assurance, is being met. This report discusses elements 1, 2, 3, and 5 of the Agreement.

Element 1) **Semi-annual ground water monitoring.** Monitor wells MW-A3, MW-1R, MW-2, MW-4, and MW-5 were sampled on April 19 and on September 6 for the site compounds alpha-BHC, beta-BHC, gamma-BHC, delta-BHC. Analyses were performed using SW-846 Method 8080. During 2006, with one exception, sampling results for all BHC isomers in all wells were either undetected (U) or tentatively detected (J) at levels below 0.1 ug/l. Since 2000, monitor wells have been sampled for hexachlorobenzene (HCB) biennially. The next HCB sampling is scheduled for September 2007. NYSDEC has been asked to reconsider an Olin request to discontinue the HCB monitoring. . Monitoring locations are shown on ***Figure 1***.

A historic summary of semi-annual ground water monitoring data from 1997 through 2006 is provided in ***Table 1***. The 1997 time period represents the start of the semi-annual events. ***Table 1A*** shows groundwater monitoring data for 2006. Since 2003, concentrations of site compounds being monitored have been undetected or estimated at concentrations below the detection levels, in all monitor wells.

Element 2) **Annual creek sediment monitoring.** Annual sediment sampling was performed on September 7, 2006A historic summary of annual sediment sampling results is presented in ***Table 2***. Table 2A shows stream sediment and manhole monitoring data for 2006. Sediment monitoring was modified in 2001 from collecting a grab sample to placement of sediment traps at the upstream and downstream locations. Sediment traps were installed for the first time during the April 2001 sampling event. All detections are similar or slightly lower than detections since 2001, for both upstream and downstream samples.

Element 3) **Establishment of an upward (inward) hydraulic gradient.** Quarterly ground water elevations were monitored at piezometer pairs P1/P2, P3/P4, and P5/P6 to document an inward hydraulic gradient in the containment area of the site. The data collected during each event are recorded on the Sampling Field Form. An evaluation of data from the piezometer pairs at the Site indicates that an inward hydraulic gradient is being maintained year round in two of the three piezometer pairs and a roughly level gradient occurs in the third pair (P1/P2) in three of four quarters. We will adjust pump intake levels to attempt to re-establish the inward gradient. Water

level elevations in Manhole A and Manhole B are monitored quarterly and are consistemtly below the 555 ft-msl level. All data are shown in ***Table 3***.

There were 52,891 gallons of leachate discharged to the POTW during 2006. A summary of yearly discharge volumes for the Site is provided in ***Table 4***. Since 1991 a total of 981,681 gallons of leachate were removed from the Site. Annual leachate sampling and analysis for BHC isomers began in 2000 to replace the POTW sampling that was previously performed. HCB is monitored every

five years (started in 2000). The sampling location is Manhole B. Analytical results for 2006 are provided in ***Table 5***. The next scheduled sampling is 2010.

Element 5) **Site protection.** Quarterly site inspections were conducted to identify any potential issues with the physical structures and to ensure that the remedial measure components are operating effectively. Routine site maintenance included fertilizing, mowing, weeding and mulching the site area.

Other non-routine repairs completed in 2006 include: replacing the man gate and darkening the well markings showing well numbers. General site conditions and security status were noted on the Site Inspection Form and addressed as appropriate. All inspection forms and field notes are included in ***Attachment 2***.

Conclusions/Recommendations:

The work performed for the Site during 2006 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 2006 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 is being maintained in the containment area of the site, but will be monitored in one zone where the gradient is level (P1/P2 area) and enhanced as necessary. Data from 2006 sediment trap monitoring were similar to prior monitoring episodes.

Olin requests that NYSDEC reconsider Olin's 2004 request to discontinue hexachorobenzene (HCB) monitoring in ground water wells. The April 2005 leachate results had no detectable concentrations of HCB.

Figure 1

Site Aerial and Monitoring Points

CHARLES GIBSON SITE

(PINE AND TUSCARORA SITE)

NIAGARA FALLS, NEW YORK

NYSDEC Registry No. 9-32-063

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

TABLE 1
CHARLES GIBSON SITE
NIAGARA FALLS, NEW YORK

ANALYTICAL SUMMARY
SEMI-ANNUAL GROUND WATER SAMPLING 1997 - 2005

MONITOR WELL : MW-A3

	1997	1998		1999		2000		2001		2002		2003		2004		2005	
Parameter	**September***	**April**	**October**	**April**	**October**	**May**	**October**	**April**	**October**	**April**	**September**	**April**	**September**	**April**	**September**	**April**	**September**
Alpha-BHC	0.059	.016J	0.12	.0043J	-	.050U	.054U	.050U	.050U	.050U	.029J	.048U	.035J	.048U	.047U	.047U	.048U
Beta- BHC	.028J	.012J	.0092J	.053U	-	.012J	.054U	.050U	.050U	.050U	.016J	.048U	.059U	.048U	.047U	.047U	.048U
Gamma-BHC	.050U	.050U	.024J	.053U	-	.050U	.054U	.050U	.050U	.050U	.050U	.048U	.059U	.048U	.047U	.047U	.048U
Delta-BHC	.050U	.050U	.053U	.053U	-	.050U	.054U	.050U	.050U	.050U	.050U	.048U	.059U	.048U	.047U	.047U	.048U
Hexachlorobenzene	10U	10U	-	11U	-	11U	NR	10U	NR	NR	NR	NR	NR	10U	NR	NR	NR

MONITOR WELL : MW-1R

	1997	1998		1999		2000		2001		2002		2003		2004		2005	
Parameter	**September***	**April**	**October**	**April**	**October**	**May**	**October**	**April**	**October**	**April**	**September**	**April**	**September**	**April**	**September**	**April**	**September**
Alpha-BHC	0.058	0.085	0.18	0.072	0.057	.028J	.054U/.052U	.050U/.050U	.099/.060	.070/.061	.055/.030J	.014J/.015U	.052U	.049U/.049	.026J/.048U	.040J/.049U	.047U/.048U
Beta- BHC	0.053	0.14	0.2	0.13	0.08	0.12	.038J/.052U	.012J/.050U	.19/.15	.10/.050U	.13/.095	.053/.052	.052U	.049U/.065	.090/.024J	.050U/.049U	.047U/.048U
Gamma-BHC	.050U	.050U	.028J	.053U	.050UJ	.051U	.054U/.052U	.050U/.050U	.063J/.058U	.050U/.050U	.055U	.049U	.052U	.049U/.049U	.048U/048U	.036J/.049U	.047U/.048U
Delta-BHC	.050U	.0042J	.053U	.0054J	.050U	.051U	.054U/.052U	.050U/.050U	.061U/.058U	.050U/.053	.055U	.049U	.052U	.049U/.049U	.048U/.048U	.050U/.049U	.047U/.048U
Hexachlorobenzene	10U	10U	11U	11U	10U	10U	NR	10U/10U	NR	NR	NR	NR	NR	10U	NR	NR	NR

MONITOR WELL : MW-2

	1997	1998		1999		2000		2001		2002		2003		2004		2005	
Parameter	**September***	**April**	**October**	**April**	**October**	**May**	**October**	**April**	**October**	**April**	**September**	**April**	**September**	**April**	**September**	**April**	**September**
Alpha-BHC	.050U	.050U	.053U	.053U	.050U	.029J	.053U	.050U	.054U	.050U	.050U	.050U	.050U	.050U	.050U	.050U	.050U
Beta- BHC	.050U	.050U	.053U	.053U	.050U	0.098	.053U	.050U	.054U	.050U	.050U	.050U	.050U	.050U	.050U	.050U	.050U
Gamma-BHC	.050U	.050U	.053U	.053U	.050UJ	.052U	.053U	.050U	.054U	.050U	.050U	.050U	.030J	.050U	.030J	.050U	.050U
Delta-BHC	.050U	.050U	.053U	.053U	.050U	.052U	.053U	.050U	.054U	.050U	.050U	.050U	.050U	.050U	.050U	.050U	.050U
Hexachlorobenzene	10UJ	10U	11U	10U	10U	10U	NR	10U	NR	NR	NR	NR	NR	10U	NR	NR	NR

Notes: Concentration in ug/l

* Start of semi annual monitoring

\- 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 1997 - 2005

MONITOR WELL : MW-4

	1997	1998		1999		2000		2001		2002		2003		2004		2005	
Parameter	**September***	**April**	**October**	**April**	**October**	**May**	**October**	**April**	**October**	**April**	**September**	**April**	**September**	**April**	**September**	**April**	**September**
Alpha-BHC	.050/.060	.0030J	.053U	.0031J	.050U	.051U/.052U	.054U	.050U	.0069J	.050U	.050U	.049U	0.056	.048U	.048U	.047U	.047U
Beta- BHC	.055/.069	.016J	.045J	.017J	.066/.068	.045J/.062	.054U	.050U	.047J	.041J	.033J	.049U	.026J	.048U	.037J	.047U	0.036J
Gamma-BHC	.050U	.050U	.053U	.053U	.050U	.051U/.052U	.054U	.050U	.050U	.071J	.050U	.049U	.033J	.048U	.048U	.047U	.047U
Delta-BHC	.050U	.050U	.053U	.053U	.050U	.051U/.052U	.054U	.050U	.050U	.050U	.050U	.049U	.050U	.048U	.048U	.047U	.047U
Hexachlorobenzene	10U	10U	10U	10U	10U	10U	NR	10U	NR	NR	NR	NR	NR	9U	NR	NR	NR

MONITOR WELL : MW-5

	1997	1998		1999		2000		2001		2002		2003		2004		2005	
Parameter	**September***	**April**	**October**	**April**	**October**	**May**	**October**	**April**	**October**	**April**	**September**	**April**	**September**	**April**	**September**	**April**	**September**
Alpha-BHC	0.059	.050U/.0066J	.053U	.0071J	.045J	.010J	.054U	.050U	.013J	.050U	.050U	.048U	.049U	.048U	.048U	.047U	.047UJ
Beta- BHC	.050U	.0080J/.0084J	.053U	.053U	0.05	.031J	.054U	.050U	.022J	.050U	.050U	.048U	.049U	.048U	.048U	.047U	.047UJ
Gamma-BHC	.050U	.050U	.053U	.053U	.0065J	.052U	.054U	.050U	.055U	.050U	.050U	.048U	.049U	.048U	.048U	.047U	.047UJ
Delta-BHC	.050U	.050U	.053U	.053U	.050U	.052U	.054U	.050U	.055U	.050U	.050U	.048U	.049U	.048U	.048U	.047U	.047UJ
Hexachlorobenzene	10U	10U	11U	11U/11U	10U	10U	NR	10U	NR	NR	NR	NR	NR	10U	NR	NR	NR

Notes: Concentration in ug/l

- * Start of semi annual monitoring
- - insufficient sample
- U Undetected
- J Estimated value
- NR Not required

Table 1A
Olin Corp. Gibson Site
Groundwater Monitoring Data: 2006

Sample ID	Samp Date	CAS No	Parameter	Flags	Result	UM	monitor point
FIELD BLANK	4/19/2006	319-84-6	alpha-BHC	U	0.047	UG/L	field blank
FIELD BLANK	4/19/2006	319-85-7	beta-BHC	U	0.047	UG/L	field blank
FIELD BLANK	4/19/2006	319-86-8	delta-BHC	U	0.047	UG/L	field blank
FIELD BLANK	4/19/2006	58-89-9	gamma-BHC	U	0.047	UG/L	field blank
MW-1R-041906	4/19/2006	319-84-6	alpha-BHC	J	0.037	UG/L	well
MW-1R-041906	4/19/2006	319-85-7	beta-BHC	J	0.036	UG/L	well
MW-1R-041906	4/19/2006	319-86-8	delta-BHC	U	0.05	UG/L	well
MW-1R-041906	4/19/2006	58-89-9	gamma-BHC	U	0.05	UG/L	well
MW1R-090606	9/6/2006	319-84-6	alpha-BHC	J	0.032	UG/L	well
MW1R-090606	9/6/2006	319-85-7	beta-BHC	J	0.022	UG/L	well
MW1R-090606	9/6/2006	319-86-8	delta-BHC	U	0.048	UG/L	well
MW1R-090606	9/6/2006	58-89-9	gamma-BHC	J	0.034	UG/L	well
MW1R-090606	9/6/2006	118-74-1	Hexachlorobenzene	U	10	UG/L	well
MW-2-041906	4/19/2006	319-84-6	alpha-BHC	U	0.05	UG/L	well
MW-2-041906	4/19/2006	319-85-7	beta-BHC	U	0.05	UG/L	well
MW-2-041906	4/19/2006	319-86-8	delta-BHC	U	0.05	UG/L	well
MW-2-041906	4/19/2006	58-89-9	gamma-BHC	U	0.05	UG/L	well
MW2-090606	9/6/2006	319-84-6	alpha-BHC	U	0.048	UG/L	well
MW2-090606	9/6/2006	319-85-7	beta-BHC	U	0.048	UG/L	well
MW2-090606	9/6/2006	319-86-8	delta-BHC	U	0.048	UG/L	well
MW2-090606	9/6/2006	58-89-9	gamma-BHC	J	0.03	UG/L	well
MW2-090606	9/6/2006	118-74-1	Hexachlorobenzene	U	10	UG/L	well
MW-4-041906	4/19/2006	319-84-6	alpha-BHC	U	0.049	UG/L	well
MW-4-041906	4/19/2006	319-85-7	beta-BHC	J	0.022	UG/L	well
MW-4-041906	4/19/2006	319-86-8	delta-BHC	U	0.049	UG/L	well
MW-4-041906	4/19/2006	58-89-9	gamma-BHC	J	0.03	UG/L	well
MW4-090606	9/6/2006	319-84-6	alpha-BHC	J	0.041	UG/L	well
MW4-090606	9/6/2006	319-85-7	beta-BHC	J	0.044	UG/L	well
MW4-090606	9/6/2006	319-86-8	delta-BHC	U	0.048	UG/L	well
MW4-090606	9/6/2006	58-89-9	gamma-BHC	J	0.036	UG/L	well
MW4-090606	9/6/2006	118-74-1	Hexachlorobenzene	U	10	UG/L	well
MW-5-041906	4/19/2006	319-84-6	alpha-BHC	U	0.049	UG/L	well
MW-5-041906	4/19/2006	319-85-7	beta-BHC	U	0.049	UG/L	well
MW-5-041906	4/19/2006	319-86-8	delta-BHC	U	0.049	UG/L	well
MW-5-041906	4/19/2006	58-89-9	gamma-BHC	U	0.049	UG/L	well
MW5-090606	9/6/2006	319-84-6	alpha-BHC	J	0.032	UG/L	well
MW5-090606	9/6/2006	319-85-7	beta-BHC	J	0.015	UG/L	well
MW5-090606	9/6/2006	319-86-8	delta-BHC	U	0.048	UG/L	well
MW5-090606	9/6/2006	58-89-9	gamma-BHC	J	0.03	UG/L	well
MW5-090606	9/6/2006	118-74-1	Hexachlorobenzene	U	10	UG/L	well
MW-7-041906	4/19/2006	319-84-6	alpha-BHC	U	0.049	UG/L	well
MW-7-041906	4/19/2006	319-85-7	beta-BHC	U	0.049	UG/L	well
MW-7-041906	4/19/2006	319-86-8	delta-BHC	U	0.049	UG/L	well
MW-7-041906	4/19/2006	58-89-9	gamma-BHC	U	0.049	UG/L	well
MW7-090606	9/6/2006	319-84-6	alpha-BHC	U	0.05	UG/L	well
MW7-090606	9/6/2006	319-85-7	beta-BHC	U	0.05	UG/L	well
MW7-090606	9/6/2006	319-86-8	delta-BHC	U	0.05	UG/L	well
MW7-090606	9/6/2006	58-89-9	gamma-BHC	U	0.05	UG/L	well
MW7-090606	9/6/2006	118-74-1	Hexachlorobenzene	U	10	UG/L	well
MWA-3-041906	4/19/2006	319-84-6	alpha-BHC	U	0.049	UG/L	well
MWA-3-041906	4/19/2006	319-85-7	beta-BHC	U	0.049	UG/L	well
MWA-3-041906	4/19/2006	319-86-8	delta-BHC	U	0.049	UG/L	well
MWA-3-041906	4/19/2006	58-89-9	gamma-BHC	U	0.049	UG/L	well
MWA3-090606	9/6/2006	319-84-6	alpha-BHC	J	0.032	UG/L	well
MWA3-090606	9/6/2006	319-85-7	beta-BHC	J	0.014	UG/L	well
MWA3-090606	9/6/2006	319-86-8	delta-BHC	U	0.048	UG/L	well
MWA3-090606	9/6/2006	58-89-9	gamma-BHC	J	0.03	UG/L	well
MWA3-090606	9/6/2006	118-74-1	Hexachlorobenzene	J	9	UG/L	well

TABLE 2
CHARLES GIBSONB SITE
NIAGARA FALLS, NEW YORK

ANALYTICAL SUMMARY

ANNUAL CAYUGA CREEK SEDIMENT SAMPLING
1993 - 2005

UPSTREAM

	1993	1994		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Parameter	**September**	**June**	**September**	**August**	**September**	**September**	**October**	**October**	**October**	**October***	**September**	**September**	**September**	**September**
Alpha-BHC	0.059	.016J	0.12	.0043J	.050U	.050U	2.1J	8.9/7.4	3.5	55	19/90	28/22J	80U/86J	23J
Beta- BHC	.028J	.012J	.0092J	.053U	.012J	.050U	5.2	28/19	4.5J	49	37/76	48/30	20J/190	36
Gamma-BHC	.050U	.050U	.024J	.053U	.050U	.050U	5.5	37/31	2.3U	24	31/26	12J/28	23J/56J	15J
Delta-BHC	.050U	.050U	.053U	.053U	.050U	.050U	.31UJ	2.9J/.42J	2.3U	3.3J	5.8U/1.6U	1.9J/26U	80U/38J	26U
Hexachlorobenzene	10U	10U	-	11U	11U	10U	470U	480U	NR	NR	NR	NR	NR	NR

DOWNSTREAM

	1993	1994		1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Parameter	**September**	**June**	**September**	**August**	**September**	**September**	**October**	**October**	**October**	**October***	**September**	**September**	**September**	**September**
Alpha-BHC	0.059	.016J	0.12	.0043J	.050U	.050U	2.1J	8.9/7.4	3.5	55	19/90	28/22J	80U/86J	NS
Beta- BHC	.028J	.012J	.0092J	.053U	.012J	.050U	5.2	28/19	4.5J	49	37/76	48/30	20J/190	NS
Gamma-BHC	.050U	.050U	.024J	.053U	.050U	.050U	5.5	37/31	2.3U	24	31/26	12J/28	23J/56J	NS
Delta-BHC	.050U	.050U	.053U	.053U	.050U	.050U	.31UJ	2.9J/.42J	2.3U	3.3J	5.8U/1.6U	1.9J/26U	80U/38J	NS
Hexachlorobenzene	10U	10U	-	11U	11U	10U	470U	480U	NR	NR	NR	NR	NR	NS

Notes:

U Not Detected

J Estimated value

NR Not required

NS No sample in trap

* Sediment traps installed April 2001

Table 2A
Olin Corp. Gibson Site
Manhole and Stream Sediment Monitoring Data: 2006

Sample ID	Samp Date	CAS No	Parameter	Flags	Result	UM	monitor point
MHB-041906	4/19/2006	319-84-6	alpha-BHC		**0.065**	UG/L	manhole
MHB-041906	4/19/2006	319-85-7	beta-BHC	J	0.046	UG/L	manhole
MHB-041906	4/19/2006	319-86-8	delta-BHC		**0.25**	UG/L	manhole
MHB-041906	4/19/2006	58-89-9	gamma-BHC	U	0.05	UG/L	manhole
DS-1-090606	9/6/2006	319-84-6	alpha-BHC		**8.3**	UG/KG	downstrm sediment
DS-1-090606	9/6/2006	319-85-7	beta-BHC		**22**	UG/KG	downstrm sediment
DS-1-090606	9/6/2006	319-86-8	delta-BHC		**11**	UG/KG	downstrm sediment
DS-1-090606	9/6/2006	58-89-9	gamma-BHC	J	3.7	UG/KG	downstrm sediment
MS-1-090606 (US dup)	9/6/2006	319-84-6	alpha-BHC		**13**	UG/KG	upstrm sediment
MS-1-090606 (US dup)	9/6/2006	319-85-7	beta-BHC		**36**	UG/KG	upstrm sediment
MS-1-090606 (US dup)	9/6/2006	319-86-8	delta-BHC		**14**	UG/KG	upstrm sediment
MS-1-090606 (US dup)	9/6/2006	58-89-9	gamma-BHC	J	4	UG/KG	upstrm sediment
US-1-090606	9/6/2006	319-84-6	alpha-BHC		**13**	UG/KG	upstrm sediment
US-1-090606	9/6/2006	319-85-7	beta-BHC		**34**	UG/KG	upstrm sediment
US-1-090606	9/6/2006	319-86-8	delta-BHC		**13**	UG/KG	upstrm sediment
US-1-090606	9/6/2006	58-89-9	gamma-BHC	J	3.9	UG/KG	upstrm sediment

Table 3
Quarterly Groundwater Elevation Summary
2006

2006 Quarterly Groundwater Elevations Summary

Piezometer Pair	2/15/2006	inward gradient	4/19/2006	inward gradient	9/6/2006	inward gradient	12/5/2006	inward gradient
P1 outside **P2 inside**	565.50 565.52	level	565.41 565.44	level	566.02 565.31	inward	565.45 565.54	level
P3 outside **P4 inside**	567.59 565.43	inward	567.00 565.38	inward	566.05 565.25	inward	567.14 565.44	inward
P5 outside **P6 inside**	569.52 567.97	inward	568.96 567.67	inward	568.13 567.37	inward	569.55 567.93	inward
		below 565 ft msl		**below 565 ft msl**		**below 565 ft msl**		**below 565 ft msl**
Manhole A	564.02	yes	563.72	yes	563.77	yes	563.87	yes
Manhole B	564.08	yes	563.80	yes	563.87	yes	563.89	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.

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

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**
TOTAL	**981,681**

Monthly Discharge Volumes 2006

Month	Volume (gallons)
Jan	6263
Feb	12351
Mar	0
Apr	6144
May	0
Jun	0
Jul	0
Aug	5824
Sep	0
Oct	5705
Nov	5716
Dec	10888
TOTAL	**52,891**

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 19, 2006

PARAMETER	MANHOLE B (MHB)
alpha-BHC	.065U
beta-BHC	.046J
delta-BHC	.25
gamma-BHC	.050U
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 1

INSPECTION AND SAMPLING SCHEDULE

CHARLES GIBSON SITE

(PINE AND TUSCARORA SITE)

NIAGARA FALLS, NEW YORK

NYSDEC Registry No. 9-32-063

GIBSON SITE
NIAGARA FALLS, NEW YORK
2005 INSPECTION AND SAMPLING SCHEDULE

Quarterly	Site Inspection (including Site Cover/Cap, Site Fence, Creek Riprap, Site Structures, CPVC Drain/Sump System).
Quarterly	Piezometer and sump groundwater level elevation measurements.
Semi-Annually	Groundwater monitoring well sampling (April and September) for BHC isomers.
Annually	Cayuga Creek sediment sampling (September) for BHC isomers.
Annually	Leachate sample collection and analysis (Manhole B) for BHC isomers (starting in 2000).
Annually	Annual report to NYSDEC (1st Quarter).
Biennially	Groundwater monitoring well sampling (starting in April 2000) for HCB. The biennial sampling events following 2000 will alternate seasonally between April and September sampling. Next HCB sampling is September 2006.
Every Five Years	Leachate sample collection and analysis (Manhole B) (for HCB) (starting in 2000). Next leachate sampling for HCB is 2010.

APPENDIX A

September-06 Semiannual Report
Gibson Site

APPENDIX A

Data Usability Summary Report

October - 2006

CHARLES GIBSON SITE

(PINE AND TUSCARORA SITE)

NIAGARA FALLS, NEW YORK

NYSDEC Registry No. 9-32-063

DATA USABILITY SUMMARY REPORT
SEMI-ANNUAL GROUNDWATER SAMPLING AND ANNUAL CREEK SEDIMENT SAMPLING
SEPTEMBER 2006

CHARLES GIBSON SITE
NIAGARA FALLS, NEW YORK

PREPARED BY:
SEVENSON ENVIRONMENTAL SERVICES, INC.
2749 LOCKPORT ROAD
NIAGARA FALLS, NEW YORK 14305

Report Submitted: October 4, 2006

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1.0 INTRODUCTION

The following details an assessment and validation of analytical results reported by Severn Trent Laboratories, Inc. (STL) of Buffalo, New York, for groundwater samples and creek sediment samples collected in September 2006 for the Semi-Annual Groundwater Sampling and Annual Creek Sediment Sampling Program at the Charles Gibson Site in Niagara Falls, New York. The semi-annual sampling includes the collection of groundwater samples from five monitoring wells (MW-1R, MW-2, MW-4, MW-5, and MW-A3) and a field duplicate of MW-1R (designated as MW-7). Samples were collected and analyzed by the laboratory from all required groundwater sample locations during the sampling event. The annual sampling included the collection of two sediment samples (US1 and DS1) and a field duplicate of sediment sample US1 (designated as MS1). All samples were collected in accordance with the "Operation and Maintenance Manual" for the site, dated June 2000.

All aqueous and solid samples were submitted for the analysis of the pesticides alpha-BHC, beta-BHC, delta-BHC, and gamma-BHC, using US Environmental Protection Agency (USEPA) SW-846 Methods 3510 and 8081A. In addition, the groundwater samples were submitted for the analysis of hexachlorobenzene using USEPA SW-846 Methods 3510 and 8270C. Analyses are referenced from "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," SW-846 Third Edition, 1986 and subsequent revisions. The analytical data are presented in Tables 1 and 2 for the groundwater samples and sediment sample, respectively. A copy of the chain of custody form is included in Appendix A and the summary report from the laboratory is included in Appendix B. Data evaluation was based on information obtained from the finished data sheets, chain-of-custody forms, blank data, field duplicate data, and recovery data for matrix, blank, and surrogate spikes.

The Quality Assurance/Quality Control (QA/QC) criteria by which these data have been assessed are outlined in the analytical methods and in "National Functional Guidelines for Organic Data Review," USEPA, October 1999.

2.0 SAMPLE HOLDING TIMES

Based on the criteria outlined in the methods of analysis, the following holding time requirements were used:

Parameter	Matrix	Collection to Extraction (days)	Extraction to Analysis (days)
BHCs	Water	7	40
BHCs	Sediment	14	40
Hexachlorobenzene	Water	7	40

Based on sample chain-of-custody forms and laboratory analysis reports, groundwater samples were collected on September 6, 2006, extracted on September 7, 2006, and analyzed on September 8 and 9, 2006 for pesticides and hexachlorobenzene. Based on sample chain-of-custody forms and laboratory analysis reports, sediment samples were collected on September 6, 2006, extracted on September 12, 2006, and analyzed on September 12, 2006 for pesticides. The sample extraction and analysis was performed within the holding times specified in the "National Functional Guidelines for Organic Data Review" (USEPA, 1999).

As indicated on the chain of custody form and sample inventory form included with the laboratory analytical data report, the laboratory received the sample coolers at temperatures of 4°C, in good condition. Samples were hand delivered to the laboratory on the same day that the samples were collected.

3.0 SURROGATE SPIKE RECOVERIES

All field samples, blanks, and laboratory QC samples (e.g., matrix spike, matrix spike duplicate) analyzed for BHCs and hexachlorobenzene are spiked with surrogate compounds prior to extraction. The primary function of the surrogate spiking activity is to determine the efficiency of recovery of analytes in the samples preparation and analysis and thus the degree to which the sample matrix plays a role in the analysis. This matrix interference is measured as a percent recovery, which is then used to gauge the total accuracy of the analytical method for that sample.

All samples submitted for BHC analyses were spiked with the surrogate compounds decachlorobiphenyl and tetrachloro-m-xylene. All samples submitted for hexachlorobenzene analyses were spiked with the surrogate compounds 2-fluorobiphenyl, nitrobenzene-d5, and terphenyl-d14. All surrogate recoveries were within the laboratory control limits, demonstrating acceptable analytical efficiency, with the following exception:

- The recovery of the surrogate compound nitrobenzene-d5 in groundwater sample MW-5-090606 was 4%, less than the laboratory lower acceptance criteria of 46%. Matrix interference is suspected to have caused the low bias. Nitrobenzene-d5 is not associated with the target compound (i.e., hexachlorobenzene). No qualifiers were assigned to the sample results during data validation.

4.0 LABORATORY BLANK ANALYSES

The purpose of assessing the results of laboratory blank analyses is to determine the existence and magnitude of sample contamination resulting from laboratory sample preparation and analysis activities. A method blank is a sample of non-contaminated deionized water that is subjected to all of the sample preparation (i.e., extraction) and analytical methodology applied to the samples.

Laboratory blanks were extracted and analyzed at a frequency of one per analytical batch. All BHC and hexachlorobenzene results in the method blank were non-detect, indicating that contamination from laboratory activities was not a factor for this sampling round.

5.0 MATRIX SPIKE/MATRIX SPIKE DUPLICATE ANALYSES (MS/MSD)

To assess the effects of sample matrices on analytical efficiency, samples are spiked in duplicate with known concentrations of the target compounds into a prepared portion of a sample just prior to analysis. The matrix spike recovery provides information on matrix effects encountered during analysis and indicates whether the selected analytical method is appropriate for the recovery of the contaminants of concern for the matrix. The MS/MSD recoveries are used to evaluate analytical accuracy, while the relative percent difference (RPD) values between the MS and MSD are used to evaluate analytical precision.

The MS and MSD analyses for pesticides and hexachlorobenzene were performed using groundwater samples collected from monitoring well MW-2 for this sampling event. MS/MSD recoveries and the associated RPD were within the laboratory control limits, demonstrating acceptable laboratory accuracy and precision, with the following exception:

- The RPD for hexachlorobenzene was slightly greater than the laboratory acceptance criteria (RPD=16%, acceptance limit = 15%). The individual MS and MSD recoveries were within the laboratory QC limits. No qualifiers were assigned to the hexachlorobenzene results during data validation.

MS and MSD analyses were not performed in association with the sediment samples collected during this sampling event. The omission of MS and MSD analyses is acceptable per the requirements of USEPA SW-846 Method 8081A.

6.0 BLANK SPIKE ANALYSES

Blank spikes are analyzed as samples to assess the analytical accuracy of the methods employed in the absence of matrix interference. The blank spike contains known concentrations of the analytes of concern and is carried through the entire preparation and analysis process. The actual analyte concentration and percent recovery is reported with the laboratory QC data. Blank spikes are analyzed at a minimum frequency of one per analytical batch.

All BHC and hexachlorobenzene recoveries reported by the laboratory for the blank spike analyses were within the laboratory control limits, demonstrating acceptable analytical accuracy.

7.0 FIELD QA/QC

7.1 Field Blanks

The purpose of field blank analysis is to determine the existence and magnitude of contamination resulting from sample bottles, field sampling activities, sample transport, and/or storage. Due to a field oversight, a field blank was not collected during the sampling event.

7.2 Field Duplicates

Field duplicate samples are collected in a manner that is identical to the original sample - the original field samples and its duplicate are collected at the same time, by the sample personnel, using the same procedures and sampling equipment, and is placed in the same type of containers. Field duplicates are

used as a relative measure of the combined precision of the sample collection and analytical process. One field duplicate sample was collected during this sampling event and submitted as a "blind" sample to the laboratory. The field duplicates collected for this sampling event consisted of the following:

Sample ID	Field Duplicate ID
MW-1R-090606	MW-7-090606
US-1-090606	MS-1-090606

Results from the analysis of the primary sample were compared to the results from the duplicate sample analysis and agreement expressed in terms of relative percent difference (RPD).

The sample results for the MW-1R-090606/MW-7-090606 duplicate pair (Table 1) indicate that all parameters were not detected in sample MW-7-090606 while trace concentrations (i.e., less than the sample quantitation limit but greater than zero) of alpha-BHC, beta-BHC, and gamma-BHC were detected in sample MW-1R-090606. The duplicate sample results demonstrate acceptable reproducibility, indicating good sampling and analytical precision.

The sample results for the US-1-090606/MW-1-090606 duplicate pair (Table 2) indicate that alpha-BHC, beta-BHC, delta-BHC, and gamma-BHC were detected in both samples. RPD was calculated and found to be less than 10% for all parameters, demonstrating acceptable reproducibility and good sampling and analytical precision.

7.3 Rinse Blanks

No rinse blanks were collected for this sampling event, as dedicated equipment was used for monitoring well sample collection.

8.0 CONCLUSIONS

The analytical data package from Severn Trent was complete with all required QC information. The method blanks were free from contamination. All analyses were performed using specified methods within proper holding times. The relative percent differences, and surrogate, blank spike, and matrix spike/matrix spike duplicate recoveries were within laboratory control limits for all parameters and

analyses with the exceptions discussed above in Sections 3.0 and 5.0. Based on this assessment and validation of the laboratory report, the data produced by STL are acceptable without qualification.

TABLES

TABLE 1
ANALYTICAL RESULTS SUMMARY - SEMI-ANNUAL WELL SAMPLING
CHARLES GIBSON SITE
NIAGARA FALLS, NEW YORK
SEPTEMBER 2006

Sample ID	MW-A3-090606		MW-1R-090606		MW-7-090606*		MW-2-090606		MW-4-090606		MW-5-090606	
Sample Date	09/06/06		09/06/06		09/06/06		09/06/06		09/06/06		09/06/06	
BHC Isomers in Water via Method 8081A (ug/L)												
alpha-BHC	0.032	J	0.032	J	<0.050	U	<0.048	U	0.041	J	0.032	J
beta-BHC	0.014	J	0.022	J	<0.050	U	<0.048	U	0.044	J	0.015	J
delta-BHC	<0.048	U	<0.048	U	<0.050	U	<0.048	U	<0.048	U	<0.048	U
gamma-BHC (lindane)	0.030	J	0.034	J	<0.050	U	0.030	J	0.036	J	0.030	J
Hexachlorobenzene in Water via Method 8270 (ug/L)												
Hexachlorobenzene	9	J	<10	U	<10	U	<10	U	<10	U	<10	U

Notes:

* MW-7 is a field duplicate of MW-1R

U Compound was analyzed for but not detected

J Estimated value - result is less than the sample quantitation limit but greater than zero

TABLE 2
ANALYTICAL RESULTS SUMMARY - ANNUAL CREEK SEDIMENT SAMPLING
CHARLES GIBSON SITE
NIAGARA FALLS, NEW YORK
SEPTEMBER 2006

Sample ID	US-1-090606	MS-1-090606*	DS-1-090606
Sample Date	09/06/06	09/06/06	09/06/06
BHC Isomers in Soil via Method 8081A (ug/Kg)			
alpha-BHC	13	13	8.3
beta-BHC	34	36	22
delta-BHC	13	14	11
gamma-BHC (lindane)	3.9 J	4.0 J	3.7 J

Notes:

* MS-1 is a field duplicate of US-1

J Compound was analyzed for and determined to be present in the sample. The concentration listed is an estimated value, which is less than the specified minimum detection limit but is greater than zero.

APPENDIX A

CHAIN OF CUSTODY FORM

Chain of Custody Record

SEVERN TRENT STL®

Severn Trent Laboratories, Inc.

STL-4124 (0901)

Client	Project Manager	Date	Chain of Custody Number
OLIN CORP.	Lorraine Miller	9-6-06	285885
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
PO Box 248, Lower River Rd	423-336-4000 / 423-336-4166		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
CHARLESTON / TN	Mike Walker	Brian Fisher	
Project Name and Location (State)	**Carrier/Waybill Number**		
Charles Gibson Site, Niagara Falls, NY.			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: BHC	HCB	Special Instructions/ Conditions of Receipt
MW1R-090606	9/6/06	1045		X			X						2	2	1 Liter Amber Glass
MW7-090606		1115		X			X						2	2	
MW-2-090606		1235		X			X						4	4	MS/MSD Volume
MW4-090606		1400		X			X						2	2	
MW5-090606		1450		X			X						2	2	
MW-A3-090606		1550		X			X						1	2	
DS-1-090606		1620			X		X						1		4oz Amber glass
DS-1-090606		1625			X		X						1		"
MS-1-090606		1635			X		X						1		"

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal

☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STANDARD

QC Requirements (Specify)

	Date	Time
1. Relinquished By	9/6/06	1730
2. Relinquished By		
3. Relinquished By		

	Date	Time
1. Received By	09/06/06	1730
2. Received By		
3. Received By		

Comments

204.0°C

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

51/507

SEVERN TRENT STL

STL Buffalo
10 Hazelwood Drive, Suite 106
Amherst, NY 14228

Tel: 716 691 2600 Fax: 716 691 7991
www.stl-inc.com

ANALYTICAL REPORT

Job#: A06-A184

STL Project#: NY3A9025
Site Name: OLIN CORPORATION
Task: Charles Gibson Site

Ms. Lorraine Miller
Olin Corporation
1186 Lower River Road
Charleston, TN 37310

CC: Mr. Michael Walker

STL Buffalo

Brian J. Fischer
Project Manager

Donna Besco
Analyst

Martha Fuller
Analyst

9/26/06

STL Buffalo
Current Certifications

As of 9/12/2006

STATE	Program	Cert # / Lab ID
AFCEE	AFCEE	
Arkansas	SDWA, CWA, RCRA, SOIL	88-0686
California	NELAP CWA, RCRA	01169CA
Connecticut	SDWA, CWA, RCRA, SOIL	PH-0568
Florida	NELAP CWA, RCRA	E87672
Georgia	SDWA	956
Illinois	NELAP SDWA, CWA, RCRA	200003
Iowa	SW/CS	374
Kansas	NELAP SDWA, CWA, RCRA	E-10187
Kentucky	SDWA	90029
Kentucky UST	UST	30
Louisiana	NELAP CWA, RCRA	2031
Maine	SDWA, CWA	NY044
Maryland	SDWA	294
Massachusetts	SDWA, CWA	M-NY044
Michigan	SDWA	9937
Minnesota	SDWA,CWA, RCRA	036-999-337
New Hampshire	NELAP SDWA, CWA	233701
New Jersey	SDWA, CWA, RCRA, CLP	NY455
New York	NELAP, AIR, SDWA, CWA, RCRA,ASP	10026
Oklahoma	CWA, RCRA	9421
Pennsylvania	CWA, RCRA	68-00281
South Carolina	RCRA	91013
Tennessee	SDWA	02970
USACE	USACE	
USDA	FOREIGN SOIL PERMIT	S-41579
USDOE	Department of Energy	DOECAP-STB
Virginia	SDWA	278
Washington	CWA,RCRA	C1677
West Virginia	CWA,RCRA	252
Wisconsin	CWA	998310390

Sample Data Summary Package

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A6A18408	DS-1-090606	SEDIM	09/06/2006	16:25	09/06/2006	17:30
A6A18409	MS-1-090606	SEDIM	09/06/2006	16:35	09/06/2006	17:30
A6A18401	MW1R-090606	WATER	09/06/2006	10:45	09/06/2006	17:30
A6A18403	MW2-090606	WATER	09/06/2006	12:35	09/06/2006	17:30
A6A18403MS	MW2-090606	WATER	09/06/2006	12:35	09/06/2006	17:30
A6A18403SD	MW2-090606	WATER	09/06/2006	12:35	09/06/2006	17:30
A6A18404	MW4-090606	WATER	09/06/2006	14:00	09/06/2006	17:30
A6A18405	MW5-090606	WATER	09/06/2006	14:50	09/06/2006	17:30
A6A18402	MW7-090606	WATER	09/06/2006	11:15	09/06/2006	17:30
A6A18406	MWA3-090606	WATER	09/06/2006	15:50	09/06/2006	17:30
A6A18407	US-1-090606	SEDIM	09/06/2006	16:20	09/06/2006	17:30

METHODS SUMMARY

Job#: A06-A184

STL Project#: NY3A9025
Site Name: Olin Corporation - Charles Gibson site

PARAMETER	ANALYTICAL METHOD	
ASP 2000/8270 - HEXACHLOROBENZENE ONLY	ASP00	8270
ASP 2000 - METHOD 8081 BHC'S	ASP00	8081
ASP 2000- METHOD 8081 BHC'S	ASP00	8081

References:

ASP00 "Analytical Services Protocol", New York State Department of Conservation, June 2000.

NON-CONFORMANCE SUMMARY

Job#: A06-A184

STL Project#: NY3A9025
Site Name: Olin Corporation - Charles Gibson site

General Comments

The enclosed data may or may not have been reported utilizing data qualifiers (Q) as defined on the Data Comment Page.

Soil, sediment and sludge sample results are reported on "dry weight" basis unless otherwise noted in this data package.

According to 40CFR Part 136.3, pH, Chlorine Residual, Dissolved Oxygen, Sulfite, and Temperature analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field (e.g. pH-Field), they were not analyzed immediately, but as soon as possible after laboratory receipt.

Sample dilutions were performed as indicated on the attached Dilution Log. The rationale for dilution is specified by the 3-digit code and definition.

Sample Receipt Comments

A06-A184
Sample Cooler(s) were received at the following temperature(s); 2@4.0 °C
All samples were received in good condition.

GC/MS Semivolatile Data

The surrogate recovery for Nitrobenzene-D5 was below laboratory quality control limits in the sample MW5-090606. However, this surrogate is not associated with the target analyte listed. No corrective action was necessary.

The relative percent difference between the Matrix Spike MW2-090606 and the Matrix Spike Duplicate MW2-090606 exceeded quality control criteria for Hexachlorobenzene, though all individual recoveries are compliant. No action required.

GC Extractable Data

For method 8081, several compounds exhibited a percent difference greater than 15% from the expected amount in the associated continuing calibrations. The average of all analytes is within 15% and the associated laboratory quality control recoveries are compliant. No corrective action was required.

For method 8081 pesticides, all extract for samples were acid treated to minimize matrix interferences. None of the target pesticide compounds reported for this job are effected by this cleanup.

****

The results presented in this report relate only to the analytical testing and condition of the sample at receipt. This report pertains to only those samples actually tested. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

"I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature."

Brian J. Fischer
Project Manager

9-26-01
Date

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION
AND
ANALYTICAL REQUEST SUMMARY

LAB NAME: SEVERN TRENT LABORATORIES, INC.

CUSTOMER SAMPLE ID	LABORATORY SAMPLE ID	ANALYTICAL REQUIREMENTS						
		VOA GC/MS	BNA GC/MS	VOA GC	PEST PCB	METALS	TCLP HERB	WATER QUALITY
-DS-1-090606	A6A18408	-	-	-	SW8463	-	-	-
MS-1-090606	A6A18409	-	-	-	SW8463	-	-	-
MW1R-090606	A6A18401	-	SW8463	-	SW8463	-	-	-
MW2-090606	A6A18403	-	SW8463	-	SW8463	-	-	-
MW4-090606	A6A18404	-	SW8463	-	SW8463	-	-	-
MW5-090606	A6A18405	-	SW8463	-	SW8463	-	-	-
MW7-090606	A6A18402	-	SW8463	-	SW8463	-	-	-
MWA3-090606	A6A18406	-	SW8463	-	SW8463	-	-	-
US-1-090606	A6A18407	-	-	-	SW8463	-	-	-

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
B\N-A ANALYSIS

LAB NAME: SEVERN TRENT LABORATORIES, INC.

SAMPLE IDENTIFICATION	MATRIX	DATE COLLECTED	DATE RECEIVED AT LAB	DATE EXTRACTED	DATE ANALYZED
MW1R-090606	WATER	09/06/2006	09/06/2006	09/07/2006	09/08/2006
MW2-090606	WATER	09/06/2006	09/06/2006	09/07/2006	09/08/2006
MW4-090606	WATER	09/06/2006	09/06/2006	09/07/2006	09/08/2006
MW5-090606	WATER	09/06/2006	09/06/2006	09/07/2006	09/08/2006
MW7-090606	WATER	09/06/2006	09/06/2006	09/07/2006	09/08/2006
MWA3-090606	WATER	09/06/2006	09/06/2006	09/07/2006	09/08/2006

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
PESTICIDE/PCB ANALYSIS

LAB NAME: SEVERN TRENT LABORATORIES, INC.

SAMPLE IDENTIFICATION	MATRIX	DATE COLLECTED	DATE RECEIVED AT LAB	DATE EXTRACTED	DATE ANALYZED
DS-1-090606	SEDIM	09/06/2006	9/06/2006	09/12/2006	09/12/2006
MS-1-090606	SEDIM	09/06/2006	09/06/2006	09/12/2006	09/12/2006
MW1R-090606	WATER	09/06/2006	09/06/2006	09/12/2006	09/12/2006
MW2-090606	WATER	09/06/2006	09/06/2006	09/07/2006	09/08/2006
MW4-090606	WATER	09/06/2006	09/06/2006	09/07/2006	09/09/2006
MW5-090606	WATER	09/06/2006	09/06/2006	09/07/2006	09/09/2006
MW7-090606	WATER	09/06/2006	09/06/2006	09/07/2006	09/08/2006
MWA3-090606	WATER	09/06/2006	09/06/2006	09/07/2006	09/09/2006
US-1-090606	SEDIM	09/06/2006	09/06/2006	09/12/2006	09/12/2006

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
ORGANIC ANALYSIS

LAB NAME: SEVERN TRENT LABORATORIES, INC.

SAMPLE IDENTIFICATION	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILIARY CLEAN UP	DIL/CONC FACTOR
DS-1-090606	SEDIM	SW8463	SONC	AS REQUIRED	AS REQUIRED
MS-1-090606	SEDIM	SW8463	SONC	AS REQUIRED	AS REQUIRED
MW1R-090606	WATER	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MW2-090606	WATER	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MW4-090606	WATER	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MW5-090606	WATER	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MW7-090606	WATER	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MWA3-090606	WATER	SW8463	SEPF	AS REQUIRED	AS REQUIRED
US-1-090606	SEDIM	SW8463	SONC	AS REQUIRED	AS REQUIRED

SEVERN TRENT STL

DATA QUALIFIER PAGE

These definitions are provided in the event the data in this report requires the use of one or more of the qualifiers. Not all qualifiers defined below are necessarily used in the accompanying data package.

ORGANIC DATA QUALIFIERS

ND or U	Indicates compound was analyzed for, but not detected.
J	Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed, or when the data indicates the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit but greater than zero.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS.
B	This flag is used when the analyte is found in the associated blank, as well as in the sample.
E	This flag identifies compounds whose concentrations exceed the calibration range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at the secondary dilution factor.
N	Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds, where the identification is based on the Mass Spectral library search. It is applied to all TIC results.
P	This flag is used for CLP methodology only. For Pesticide/Aroclor target analytes, when a difference for detected concentrations between the two GC columns is greater than 25%, the lower of the two values is reported on the data page and flagged with a "P".
A	This flag indicates that a TIC is a suspected aldol-condensation product.
1	Indicates coelution.
*	Indicates analysis is not within the quality control limits.

INORGANIC DATA QUALIFIERS

ND or U	Indicates element was analyzed for, but not detected. Report with the detection limit value.
J or B	Indicates a value greater than or equal to the instrument detection limit, but less than the quantitation limit.
N	Indicates spike sample recovery is not within the quality control limits.
S	Indicates value determined by the Method of Standard Addition.
E	Indicates a value estimated or not reported due to the presence of interferences.
H	Indicates analytical holding time exceedance. The value obtained should be considered an estimate.
*	Indicates the spike or duplicate analysis is not within the quality control limits.
+	Indicates the correlation coefficient for the Method of Standard Addition is less than 0.995.

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
ANALYSIS DATA SHEET

Client No.

MW1R-090606

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A6A18401

Sample wt/vol: 1005.0 (g/mL) ML Lab File ID: W11282.RR

Level: (low/med) LOW Date Samp/Recv: 09/06/2006 09/06/2006

% Moisture: _____ decanted: (Y/N) N Date Extracted: 09/07/2006

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/08/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
ANALYSIS DATA SHEET

Client No.

MW2-090606

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A6A18403

Sample wt/vol: 1030.0 (g/mL) ML Lab File ID: W11284.RR

Level: (low/med) LOW Date Samp/Recv: 09/06/2006 09/06/2006

% Moisture: _____ decanted: (Y/N) N Date Extracted: 09/07/2006

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/08/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
ANALYSIS DATA SHEET

Client No.

MW4-090606

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A6A18404

Sample wt/vol: 1025.0 (g/mL) ML Lab File ID: W11287.RR

Level: (low/med) LOW Date Samp/Recv: 09/06/2006 09/06/2006

% Moisture: _____ decanted: (Y/N) N Date Extracted: 09/07/2006

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/08/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
ANALYSIS DATA SHEET

Client No.

MW5-090606

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A6A18405

Sample wt/vol: 1025.0 (g/mL) ML Lab File ID: W11288.RR

Level: (low/med) LOW Date Samp/Recv: 09/06/2006 09/06/2006

% Moisture: _____ decanted: (Y/N) N Date Extracted: 09/07/2006

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/08/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
ANALYSIS DATA SHEET

Client No.

MW7-090606

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A6A18402

Sample wt/vol: 995.00 (g/mL) ML Lab File ID: W11283.RR

Level: (low/med) LOW Date Samp/Recv: 09/06/2006 09/06/2006

% Moisture: _____ decanted: (Y/N) N Date Extracted: 09/07/2006

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/08/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
ANALYSIS DATA SHEET

Client No.

MWA3-090606

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A6A18406

Sample wt/vol: 440.00 (g/mL) ML Lab File ID: W11289.RR

Level: (low/med) LOW Date Samp/Recv: 09/06/2006 09/06/2006

% Moisture: _____ decanted: (Y/N) N Date Extracted: 09/07/2006

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/08/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	9	J

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000 - METHOD 8081 BHC'S
ANALYSIS DATA SHEET

Client No.

DS-1-090606

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A6A18408

Sample wt/vol: 30.82 (g/mL) G Lab File ID: 5A05005.TX0

% Moisture: 71 decanted: (Y/N) N Date Samp/Recv: 09/06/2006 09/06/2006

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 09/12/2006

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/12/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	8.3	
319-85-7	beta-BHC	22	
319-86-8	delta-BHC	11	
58-89-9	gamma-BHC (Lindane)	3.7	J

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000 - METHOD 8081 BHC'S
ANALYSIS DATA SHEET

Client No.

MS-1-090606

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A6A18409

Sample wt/vol: 30.29 (g/mL) G Lab File ID: 5A05006.TX0

% Moisture: 71 decanted: (Y/N) N Date Samp/Recv: 09/06/2006 09/06/2006

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 09/12/2006

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/12/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	13	
319-85-7	beta-BHC	36	
319-86-8	delta-BHC	14	
58-89-9	gamma-BHC (Lindane)	4.0	J

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000- METHOD 8081 BHC'S
ANALYSIS DATA SHEET

Client No.

MW1R-090606

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A6A18401

Sample wt/vol: 1050.00 (g/mL) ML Lab File ID: 5A-04168.TX0

% Moisture: _____ decanted: (Y/N) N Date Samp/Recv: 09/06/2006 09/06/2006

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 09/07/2006

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/08/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.00 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.032	J
319-85-7	beta-BHC	0.022	J
319-86-8	delta-BHC	0.048	U
58-89-9	gamma-BHC (Lindane)	0.034	J

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000- METHOD 8081 BHC'S
ANALYSIS DATA SHEET

Client No.

MW2-090606

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A6A18403

Sample wt/vol: 1050.00 (g/mL) ML Lab File ID: 5A-04172.TX0

% Moisture: _____ decanted: (Y/N) N Date Samp/Recv: 09/06/2006 09/06/2006

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 09/07/2006

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/08/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.00 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.048	U
319-85-7	beta-BHC	0.048	U
319-86-8	delta-BHC	0.048	U
58-89-9	gamma-BHC (Lindane)	0.030	J

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000- METHOD 8081 BHC'S
ANALYSIS DATA SHEET

Client No.

MW4-090606

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A6A18404

Sample wt/vol: 1040.00 (g/mL) ML Lab File ID: 5A-04175.TX0

% Moisture: _____ decanted: (Y/N) N Date Samp/Recv: 09/06/2006 09/06/2006

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 09/07/2006

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/09/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.00 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.041	J
319-85-7	beta-BHC	0.044	J
319-86-8	delta-BHC	0.048	U
58-89-9	gamma-BHC (Lindane)	0.036	J

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000- METHOD 8081 BHC'S
ANALYSIS DATA SHEET

Client No.

MW5-090606

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A6A18405

Sample wt/vol: 1050.00 (g/mL) ML Lab File ID: 5A-04176.TX0

% Moisture: _____ decanted: (Y/N) N Date Samp/Recv: 09/06/2006 09/06/2006

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 09/07/2006

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/09/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.00 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.032	J
319-85-7	beta-BHC	0.015	J
319-86-8	delta-BHC	0.048	U
58-89-9	gamma-BHC (Lindane)	0.030	J

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000- METHOD 8081 BHC'S
ANALYSIS DATA SHEET

Client No.

MW7-090606

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A6A18402

Sample wt/vol: 1000.00 (g/mL) ML Lab File ID: 5A-04171.TX0

% Moisture: _____ decanted: (Y/N) N Date Samp/Recv: 09/06/2006 09/06/2006

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 09/07/2006

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/08/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.00 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000- METHOD 8081 BHC'S
ANALYSIS DATA SHEET

Client No.

MWA3-090606

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A6A18406

Sample wt/vol: 1035.00 (g/mL) ML Lab File ID: 5A-04177.TX0

% Moisture: _____ decanted: (Y/N) N Date Samp/Recv: 09/06/2006 09/06/2006

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 09/07/2006

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/09/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 6.00 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.032	J
319-85-7	beta-BHC	0.014	J
319-86-8	delta-BHC	0.048	U
58-89-9	gamma-BHC (Lindane)	0.030	J

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000 - METHOD 8081 BHC'S
ANALYSIS DATA SHEET

Client No.

US-1-090606

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A6A18407

Sample wt/vol: 30.12 (g/mL) G Lab File ID: 5A05004.TX0

% Moisture: 72 decanted: (Y/N) N Date Samp/Recv: 09/06/2006 09/06/2006

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 09/12/2006

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/12/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	13	
319-85-7	beta-BHC	34	
319-86-8	delta-BHC	13	
58-89-9	gamma-BHC (Lindane)	3.9	J

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
WATER SURROGATE RECOVERY

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

	Client Sample ID	Lab Sample ID	FBP %REC	#	NBZ %REC	#	TPH %REC	#						TOT OUT
1	MSB77	A6B2586301	92		89		58							0
2	MW1R-090606	A6A18401	100		93		39							0
3	MW2-090606	A6A18403	97		89		36							0
4	MW2-090606	A6A18403MS	100		92		42							0
5	MW2-090606	A6A18403SD	92		82		39							0
6	MW4-090606	A6A18404	87		78		37							0
7	MW5-090606	A6A18405	100		4	*	34							1
8	MW7-090606	A6A18402	88		81		33							0
9	MWA3-090606	A6A18406	95		88		50							0
10	SBLK77	A6B2586302	88		92		57							0

QC LIMITS

FBP = 2-Fluorobiphenyl (44-120)
NBZ = Nitrobenzene-D5 (46-120)
TPH = p-Terphenyl-d14 (23-143)

\# Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000- METHOD 8081 BHC'S
WATER SURROGATE RECOVERY

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column(1): RTX-CLPI ID: 0.53 (mm)

	Client Sample ID	Lab Sample ID	DCBP %REC	#	TCMX %REC	#							TOT OUT
1	Matrix Spike Blank	A6B2586102	51		44								0
2	Method Blank	A6B2586101	42		62								0
3	MW1R-090606	A6A18401	74		74								0
4	MW2-090606	A6A18403	70		76								0
5	MW2-090606	A6A18403MS	72		80								0
6	MW2-090606	A6A18403SD	69		80								0
7	MW4-090606	A6A18404	50		76								0
8	MW5-090606	A6A18405	25		69								0
9	MW7-090606	A6A18402	86		74								0
10	MWA3-090606	A6A18406	70		76								0

QC LIMITS

(DCBP) = Decachlorobiphenyl (10-139)
(TCMX) = Tetrachloro-m-xylene (29-130)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000 - METHOD 8081 BHC'S
SOIL SURROGATE RECOVERY

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

GC Column(1): RTX-CLPI ID: 0.53 (mm)

Level (low/med): LOW

	Client Sample ID	Lab Sample ID	DCBP %REC	#	TCMX %REC	#							TOT OUT
1	DS-1-090606	A6A18408	97		85								0
2	Matrix Spike Blank	A6B2607101	92		75								0
3	Method Blank	A6B2607102	101		76								0
4	MS-1-090606	A6A18409	102		89								0
5	US-1-090606	A6A18407	92		84								0

QC LIMITS

(DCBP) = Decachlorobiphenyl (46-151)
(TCMX) = Tetrachloro-m-xylene (38-132)

\# Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogates diluted out

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
WATER MATRIX SPIKE BLANK RECOVERY

Lab Name: STL Buffalo Contract: _____ Lab Samp ID: A6B2586302

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix Spike - Client Sample No.: SBLK77

COMPOUND	SPIKE ADDED UG/L	MSB CONCENTRATION UG/L	MSB % REC #	QC LIMITS REC.
Hexachlorobenzene	100	112	112	59 - 120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike recovery: 0 out of 1 outside limits

Comments: _____

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: STL Buffalo Contract: _____ Lab Samp ID: A6A18403

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix Spike - Client Sample No.: MW2-090606

COMPOUND	SPIKE ADDED UG/L	SAMPLE CONCENTRATION UG/L	MS CONCENTRATION UG/L	MS % REC #	QC LIMITS REC.
Hexachlorobenzene	96.1	0	107	112	59 - 120

COMPOUND	SPIKE ADDED UG/L	MSD CONCENTRATION UG/L	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	96.1	91.7	95	16 *	15	59 - 120

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 1 outside limits
Spike recovery: 0 out of 2 outside limits

Comments: _____

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000- METHOD 8081 BHC'S
WATER MATRIX SPIKE BLANK RECOVERY

Lab Name: SIL Buffalo Contract: _____ Lab Samp ID: A6B2586101

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix Spike - Client Sample No.: Method Blank

COMPOUND	SPIKE ADDED UG/L	MSB CONCENTRATION UG/L	MSB % REC #	QC LIMITS REC.	+ =
alpha-BHC	0.500	0.358	72	37 - 134	
beta-BHC	0.500	0.384	77	44 - 135	
delta-BHC	0.500	0.345	69	41 - 131	
gamma-BHC (Lindane)	0.500	0.366	73	32 - 127	

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike recovery: 0 out of 4 outside limits

Comments: _____

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000 - METHOD 8081 BHC'S
SOIL MATRIX SPIKE BLANK RECOVERY

Lab Name: STL Buffalo Contract: _____ Lab Samp ID: A6B2607102

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix Spike - Client Sample No.: Method Blank Level: (low/med) LOW

COMPOUND	SPIKE ADDED UG/KG	MSB CONCENTRATION UG/KG	MSB % REC	#	QC LIMITS REC.	+ =
alpha-BHC	16.3	11.6	71		47 - 123	
beta-BHC	16.3	12.5	77		39 - 129	
delta-BHC	16.3	10.9	67		42 - 127	
gamma-BHC (Lindane)	16.3	11.9	73		42 - 136	

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike recovery: 0 out of 4 outside limits

Comments: _____

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000- METHOD 8081 BHC'S
WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: STL Buffalo Contract: _____ Lab Samp ID: A6A18403

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix Spike - Client Sample No.: MW2-090606

COMPOUND	SPIKE ADDED UG/L	SAMPLE CONCENTRATION UG/L	MS CONCENTRATION UG/L	MS % REC #	QC LIMITS REC.	+ =
alpha-BHC	0.478	0	0.375	78	37 - 134	
beta-BHC	0.478	0	0.410	86	44 - 135	
delta-BHC	0.478	0	0.371	78	41 - 131	
gamma-BHC (Lindane)	0.478	0.0295	0.389	75	32 - 127	

COMPOUND	SPIKE ADDED UG/L	MSD CONCENTRATION UG/L	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.	+ =
alpha-BHC	0.476	0.375	79	1	50	37 - 134	
beta-BHC	0.476	0.410	86	0	50	44 - 135	
delta-BHC	0.476	0.372	78	0	50	41 - 131	
gamma-BHC (Lindane)	0.476	0.389	76	1	50	32 - 127	

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 4 outside limits
Spike recovery: 0 out of 8 outside limits

Comments: _____

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
METHOD BLANK SUMMARY

Client No.: SBLK77

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID: W11281.RR Lab Sample ID: A6B2586302

Instrument ID: HP5973W Date Extracted: 09/07/2006

Matrix: (soil/water) WATER Date Analyzed: 09/08/2006

Level: (low/med) LOW Time Analyzed: 15:09

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	MSB77	A6B2586301	W11280.RR	09/08/2006
2	MW1R-090606	A6A18401	W11282.RR	09/08/2006
3	MW2-090606	A6A18403	W11284.RR	09/08/2006
4	MW2-090606	A6A18403MS	W11285.RR	09/08/2006
5	MW2-090606	A6A18403SD	W11286.RR	09/08/2006
6	MW4-090606	A6A18404	W11287.RR	09/08/2006
7	MW5-090606	A6A18405	W11288.RR	09/08/2006
8	MW7-090606	A6A18402	W11283.RR	09/08/2006
9	MWA3-090606	A6A18406	W11289.RR	09/08/2006

Comments: _____

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
ANALYSIS DATA SHEET

Client No.: SBLK77

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A6B2586302

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: W11281.RR

Level: (low/med) LOW Date Samp/Recv: _____ _____

% Moisture: _____ decanted: (Y/N) N Date Extracted: 09/07/2006

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 09/08/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
118-74-1	Hexachlorobenzene	10	U

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000- METHOD 8081 BHC'S
METHOD BLANK SUMMARY

Client No.

Method Blank

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Lab Sample ID: A6B2586101 Lab File ID: 5A-04160.TX0

Matrix: (soil/water) WATER Extraction: SEPF

Sulfur Cleanup: (Y/N): N Date Extracted: 09/07/2006

Date Analyzed (1): 09/08/2006 Date Analyzed (2): _____

Time Analyzed (1): 16:13 Time Analyzed (2): _____

Instrument ID (1): HP6890-5 Instrument ID (2): _____

GC Column (1): RTX-CLPI Dia: 0.53(mm) GC Column (2): _____ Dia: _____(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
1	Matrix Spike Blank	A6B2586102	09/08/2006	
2	MW1R-090606	A6A18401	09/08/2006	
3	MW2-090606	A6A18403	09/08/2006	
4	MW2-090606	A6A18403MS	09/09/2006	
5	MW2-090606	A6A18403SD	09/09/2006	
6	MW4-090606	A6A18404	09/09/2006	
7	MW5-090606	A6A18405	09/09/2006	
8	MW7-090606	A6A18402	09/08/2006	
9	MWA3-090606	A6A18406	09/09/2006	

Comments: _____

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000- METHOD 8081 BHC'S
ANALYSIS DATA SHEET

Client No.

Method Blank

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) WATER Lab Sample ID: A6B2586101

Sample wt/vol: 1000.00 (g/mL) ML Lab File ID: 5A-04160.TX0

% Moisture: _____ decanted: (Y/N) N Date Samp/Recv: _____ _____

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 09/07/2006

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/08/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 5.00 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.050	U
319-85-7	beta-BHC	0.050	U
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.050	U

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000 - METHOD 8081 BHC'S
METHOD BLANK SUMMARY

Client No.

Method Blank

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Lab Sample ID: A6B2607102 Lab File ID: 5A05008.TX0

Matrix: (soil/water) SOIL Extraction: SONC

Sulfur Cleanup: (Y/N): N Date Extracted: 09/12/2006

Date Analyzed (1): 09/12/2006 Date Analyzed (2): _____

Time Analyzed (1): 22:56 Time Analyzed (2): _____

Instrument ID (1): HP6890-5 Instrument ID (2): _____

GC Column (1): RTX-CLPI Dia: 0.53(mm) GC Column (2): _____ Dia: _____(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
1	DS-1-090606	A6A18408	09/12/2006	
2	Matrix Spike Blank	A6B2607101	09/12/2006	
3	MS-1-090606	A6A18409	09/12/2006	
4	US-1-090606	A6A18407	09/12/2006	

Comments: _____

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000 - METHOD 8081 BHC'S
ANALYSIS DATA SHEET

Client No.

Method Blank

Lab Name: STL Buffalo Contract: _____

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: A6B2607102

Sample wt/vol: 30.53 (g/mL) G Lab File ID: 5A05008.TX0

% Moisture: _____ decanted: (Y/N) N Date Samp/Recv: _____ _____

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 09/12/2006

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/12/2006

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.6	U
319-85-7	beta-BHC	1.6	U
319-86-8	delta-BHC	1.6	U
58-89-9	gamma-BHC (Lindane)	1.6	U

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: STL Buffalo Contract: _____ Labsampid: A6C0006066

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID (Standard): W11276.RR Date Analyzed: 09/08/2006

Instrument ID: HP5973W Time Analyzed: 13:05

		IS1 (ANT) AREA	#	RT	#	IS2 (CRY) AREA	#	RT	#	IS3 (DCB) AREA	#	RT	#
	12 HOUR STD	198911		10.94		376979		15.53		76932		6.39	
	UPPER LIMIT	397822		11.44		753958		16.03		153864		6.89	
	LOWER LIMIT	99456		10.44		188490		15.03		38466		5.89	
	CLIENT SAMPLE	Lab Sample ID											
1	MSB77	A6B2586301		126901		10.94		250196		15.55		49450	6.39
2	MW1R-090606	A6A18401		117678		10.94		232219		15.52		46010	6.39
3	MW2-090606	A6A18403		122541		10.94		242043		15.51		48319	6.39
4	MW2-090606	A6A18403MS		114198		10.94		236214		15.52		43742	6.39
5	MW2-090606	A6A18403SD		119148		10.94		240604		15.51		45912	6.39
6	MW4-090606	A6A18404		115550		10.94		235492		15.51		46238	6.39
7	MW5-090606	A6A18405		113406		10.94		224437		15.51		44356	6.39
8	MW7-090606	A6A18402		132001		10.94		265217		15.51		51809	6.39
9	MWA3-090606	A6A18406		116975		10.94		233834		15.51		46352	6.39
10	SBLK77	A6B2586302		123951		10.94		235494		15.54		48239	6.39

	AREA UNIT QC LIMITS	RT QC LIMITS
IS1 (ANT) = Acenaphthene-D10	(50-200)	-0.50 / +0.50 min
IS2 (CRY) = Chrysene-D12	(50-200)	-0.50 / +0.50 min
IS3 (DCB) = 1,4-Dichlorobenzene-D4	(50-200)	-0.50 / +0.50 min

\# Column to be used to flag recovery values
* Values outside of contract required QC limits

OLIN CORPORATION
OLIN CORPORATION - CHARLES GIBSON SITE
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: STL Buffalo Contract: _____ Labsampid: A6C0006066

Lab Code: RECNY Case No.: _____ SAS No.: _____ SDG No.: _____

Lab File ID (Standard): W11276.RR Date Analyzed: 09/08/2006

Instrument ID: HP5973W Time Analyzed: 13:05

			IS4 (NPT) AREA	#	RT	#	IS5(PHN) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD		329229		8.31		352611		12.89		369937		16.88	
	UPPER LIMIT		658458		8.81		705222		13.39		739874		17.38	
	LOWER LIMIT		164615		7.81		176306		12.39		184969		16.38	
	CLIENT SAMPLE	Lab Sample ID												
1	MSB77	A6B2586301	212989		8.31		224878		12.89		262824		16.91	
2	MW1R-090606	A6A18401	199019		8.31		208498		12.88		249416		16.86	
3	MW2-090606	A6A18403	206801		8.31		216647		12.88		253714		16.85	
4	MW2-090606	A6A18403MS	188564		8.31		202635		12.88		252540		16.85	
5	MW2-090606	A6A18403SD	198433		8.31		212291		12.89		257348		16.84	
6	MW4-090606	A6A18404	193414		8.31		207093		12.88		249446		16.84	
7	MW5-090606	A6A18405	190201		8.31		201725		12.88		241706		16.84	
8	MW7-090606	A6A18402	222203		8.31		233632		12.88		282055		16.85	
9	MWA3-090606	A6A18406	197086		8.31		206566		12.88		246945		16.85	
10	SBLK77	A6B2586302	200999		8.31		215015		12.88		254053		16.89	

	AREA UNIT QC LIMITS	RT QC LIMITS
IS4 (NPT) = Naphthalene-D8	(50-200)	-0.50 / +0.50 min
IS5 (PHN) = Phenanthrene-D10	(50-200)	-0.50 / +0.50 min
IS6 (PRY) = Perylene-D12	(50-200)	-0.50 / +0.50 min

\# Column to be used to flag recovery values
* Values outside of contract required QC limits

APPENDIX B

SUMMARY ANALYTICAL REPORT

APPENDIX B

Field Logs

Semiannual Groundwater Monitoring
and
Annual Sediment Sampling
and
Quarterly Inspections

2006

CHARLES GIBSON SITE

(PINE AND TUSCARORA SITE)

NIAGARA FALLS, NEW YORK

NYSDEC Registry No. 9-32-063

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: 2/15/2006 TIME: 800

INSPECTOR: M. Walker COMPANY: Sevenson

WEATHER: Windy, Cloudy, 40F

REASON FOR INSPECTION (QUARTERLY OR OTHER): Quarterly Inspection and G/W Levels

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 occurences.)

		COMMENTS
ACCESS ROAD	A	Snow Covered
COVER VEGETATION	A	What was visible
TREES	A	
LITTER	A	
EROSION (CAP)	A	
EROSION (BANK)	A	
SECURITY:		
FENCE/LOCKS	A	New gate on side facing Niagara Falls Blvd.
PIEZOMETERS/LOCKS	A	
MONITORING WELLS/LOCKS	A	
MANHOLES/LIDS/LOCKS	A	
ELECTRICAL PANEL	A	

ADDITIONAL COMMENTS:

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: 9/6/2006 TIME: 830

INSPECTOR: Jones COMPANY: Sevenson

WEATHER:

REASON FOR INSPECTION (QUARTERLY OR OTHER): Quarterly, Semi annual sampling event

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 occurences.)

		COMMENTS
ACCESS ROAD	A	
COVER VEGETATION	A	
TREES	A	
LITTER	A	
EROSION (CAP)	A	
EROSION (BANK)	A	

SECURITY:

FENCE/LOCKS	A	
PIEZOMETERS/LOCKS	A	
MONITORING WELLS/LOCKS	A	
MANHOLES/LIDS/LOCKS	A	
ELECTRICAL PANEL	A	

ADDITIONAL COMMENTS:

Relabeled the monitoring wells with a black weather proof marker. Also marked the corresponding protective pipe bollards.

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: 12/5/2006 TIME: 1400

INSPECTOR: M. Walker COMPANY: Sevenson

WEATHER: Windy , 28 F, Cloudy, 4" of snow overnight

REASON FOR INSPECTION (QUARTERLY OR OTHER): Quarterly Inspection and G/W Levels

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 occurences.)

		COMMENTS
ACCESS ROAD	A	Snow Covered
COVER VEGETATION	A	What was visible
TREES	A	
LITTER	A	
EROSION (CAP)	A	
EROSION (BANK)	A	
SECURITY:		
FENCE/LOCKS	A	
PIEZOMETERS/LOCKS	A	
MONITORING WELLS/LOCKS	A	
MANHOLES/LIDS/LOCKS	A	
ELECTRICAL PANEL	A	

ADDITIONAL COMMENTS: Site looked good.

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

RECORDED BY: Chris Jones
SAMPLE ID: 090606-US-1
SAMPLED BY: Mike Walker
SAMPLING EVENT/DATE: 9/6/2006
COMPANY: Sevenson
MONITORING WELL: Sediment Trap
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: STOP TIME:
PURGE OBSERVATIONS:

NOTE: ALL GIBSON SITE MONITORING WELLS ARE 2-INCH DIAMETER STAINLESS 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: 9/6/2006

MEDIA: GROUNDWATER
CREEK SEDIMENT X
SAMPLE TIME: 1620

LOCATION: Center of creek, upstream of cap, inline with large gateposts

SAMPLE METHOD: Composite of sediment taken from the sediment trap.

SAMPLING OBSERVATIONS: Blackish sludge, sediment trap 1/2 full.

QC SAMPLES TAKEN: A blind duplicate was taken and labeled MS-1.

OTHER OBSERVATIONS/COMMENTS: 2- 4 oz glass jars

Note: specific conductivity formula to 25 degrees Celcius: SC(25)= SC 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: C. Jones
SAMPLED BY: C. Jones
COMPANY: Sevenson

SAMPLE ID: MWA3-090606
SAMPLING EVENT/DATE: Fall 06, 9/06/06
MONITORING WELL: MWA3
CONDITION: Good

GROUNDWATER PURGE DATA PURGE DATE: 9/6/2006

DEPTH TO BOTTOM FROM TOP OF RISER: 11.7 (FT.)
DEPTH TO WATER FROM TOP OF RISER: 10.91 (FT.)
WATER COLUMN: 0.79 (FT.)
2" DIA. WELL CONSTANT: 0.16
ONE WELL VOLUME= 0.1264 (GALS)

PURGE METHOD: Parastaltic pump w/ dedicated tubing
BOTTOM OF WELL/SILT BUILDUP: NO
PURGE START TIME 1515 STOP TIM 1445
PURGE OBSERVATIONS: Clear Ordorless

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	7.07	930	18.1	clear
2	7.11	926	18.1	Clear
3	7.04	930	17.9	Clear
4				
5				

TOTAL VOLUME PURGED: .5 gallon

GROUNDWATER OR SEDIMENT SAMPLING DATA: SAMPLE DATE: 9/6/2006

MEDIA: GROUNDWATER X
CREEK SEDIMENT
SAMPLE TIME: 1550

LOCATION: MWA3

SAMPLE METHOD: Parastaltic Pump with dedicated tubing

SAMPLING OBSERVATIONS: Clear water

QC SAMPLES TAKEN: none

OTHER OBSERVATIONS/COMMENTS:

2 * glass amber bottles filled

Note: specific conductivity formula to 25 degrees Celcius: SC(25)= SC 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: C. Jones
SAMPLED BY: C. Jones
COMPANY: Sevenson

SAMPLE ID: MW 5-090606
SAMPLING EVENT/DATE: Fall 06, 9/06/06
MONITORING WELL: MW 5
CONDITION: Good

GROUNDWATER PURGE DATA PURGE DATE: 9/6/2006

DEPTH TO BOTTOM FROM TOP OF RISER: 15.28 (FT.)
DEPTH TO WATER FROM TOP OF RISER: 7.97 (FT.)
WATER COLUMN: 7.31 (FT.)
2" DIA. WELL CONSTANT: 0.16
ONE WELL VOLUME= 1.1696 (GALS)

PURGE METHOD: Parastaltic pump w/ dedicated tubing
BOTTOM OF WELL/SILT BUILDUP: NO
PURGE START TIME 1420 STOP TIM 1450
PURGE OBSERVATIONS: Clear Ordorless

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	6.51	1864	18.2	Turbid
2	6.53	1799	17.8	Clear
3	6.55	1785	17.7	Clear
4				
5				

TOTAL VOLUME PURGED: 3.36

GROUNDWATER OR SEDIMENT SAMPLING DATA: SAMPLE DATE: 9/6/2006

MEDIA: GROUNDWATER X
CREEK SEDIMENT
SAMPLE TIME: 1450

LOCATION: MW 5
SAMPLE METHOD: Parastaltic Pump with dedicated tubing
SAMPLING OBSERVATIONS: Clear water
QC SAMPLES TAKEN: none
OTHER OBSERVATIONS/COMMENTS:

4 * glass amber bottles filled

Note: specific conductivity formula to 25 degrees Celcius: SC(25)= SC 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: C. Jones
SAMPLED BY: C. Jones
COMPANY: Sevenson

SAMPLE ID: MW 4 -090606
SAMPLING EVENT/DATE: Fall 06, 9/06/06
MONITORING WELL: Mw 4
CONDITION: Good

GROUNDWATER PURGE DATA PURGE DATE: 9/6/2006

DEPTH TO BOTTOM FROM TOP OF RISER: 13.75 (FT.)
DEPTH TO WATER FROM TOP OF RISER: 6.75 (FT.)
WATER COLUMN: 7 (FT.)
2" DIA. WELL CONSTANT: 0.16
ONE WELL VOLUME= 1.12 (GALS)

PURGE METHOD: Parastaltic pump w/ dedicated tubing
BOTTOM OF WELL/SILT BUILDUP: NO
PURGE START TIME 1310 STOP TIM 1355
PURGE OBSERVATIONS: Sulfur smell initially

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	7.07	1522	20.5	Black Org. Discharge
2	7.1	1574	19.5	Clear
3	7.12	1568	19	Clear
4				
5				

TOTAL VOLUME PURGED: 3.36

GROUNDWATER OR SEDIMENT SAMPLING DATA: SAMPLE DATE: 9/6/2006

MEDIA: GROUNDWATER X
CREEK SEDIMENT
SAMPLE TIME: 1400

LOCATION: MW 4

SAMPLE METHOD: Parastaltic Pump with dedicated tubing

SAMPLING OBSERVATIONS: Clear water

QC SAMPLES TAKEN: none

OTHER OBSERVATIONS/COMMENTS:

4 * glass amber bottles filled

Note: specific conductivity formula to 25 degrees Celcius: SC(25)= SC 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: C. Jones
SAMPLED BY: C. Jones
COMPANY: Sevenson

SAMPLE ID: MW2-090606
SAMPLING EVENT/DATE: Fall 06, 9/06/06
MONITORING WELL: MW2
CONDITION: Good

GROUNDWATER PURGE DATA PURGE DATE: 9/6/2006

DEPTH TO BOTTOM FROM TOP OF RISER: 12.13 (FT.)
DEPTH TO WATER FROM TOP OF RISER: 4.95 (FT.)
WATER COLUMN: 7.18 (FT.)
2" DIA. WELL CONSTANT: 0.16
ONE WELL VOLUME= 1.1488 (GALS)

PURGE METHOD: Parastaltic pump w/ dedicated tubing
BOTTOM OF WELL/SILT BUILDUP: NO
PURGE START TIME 11:35 STOP TIM 1230
PURGE OBSERVATIONS: initial organic discharge

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	7.19	1334	20.8	Clear
2	7.19	1363	21	Clear
3	7.2	1301	20.4	Clear
4				
5				

TOTAL VOLUME PURGED: 3.45 gal.

GROUNDWATER OR SEDIMENT SAMPLING DATA: SAMPLE DATE: 9/6/2006

MEDIA: GROUNDWATER X
CREEK SEDIMENT
SAMPLE TIME: 1235

LOCATION: MW2
SAMPLE METHOD: Parastaltic Pump with dedicated tubing
SAMPLING OBSERVATIONS: Clear water
QC SAMPLES TAKEN: MS/MSD taken
OTHER OBSERVATIONS/COMMENTS:

8 * glass amber bottles filled

Note: specific conductivity formula to 25 degrees Celcius: SC(25)= SC 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: C. Jones
SAMPLED BY: C. Jones
COMPANY: Sevenson

SAMPLE ID: MW-1R-090606
SAMPLING EVENT/DATE: Fall 06, 9/06/06
MONITORING WELL: MW1-R
CONDITION: Good

GROUNDWATER PURGE DATA PURGE DATE: 9/6/2006

DEPTH TO BOTTOM FROM TOP OF RISER: 12.1 (FT.)
DEPTH TO WATER FROM TOP OF RISER: 3.21 (FT.)
WATER COLUMN: 8.89 (FT.)
2" DIA. WELL CONSTANT: 0.16
ONE WELL VOLUME= 1.4224 (GALS)

PURGE METHOD: Parastaltic pump w/ dedicated tubing
BOTTOM OF WELL/SILT BUILDUP: NO
PURGE START TIME 9:50 STOP TIM 1045
PURGE OBSERVATIONS: Clear Odorless

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	6.52	1065	20.1	Clear
2	6.57	1069	20.3	Clear
3	6.55	1072	20.4	Clear
4				
5				

TOTAL VOLUME PURGED: 4.5 gal.

GROUNDWATER OR SEDIMENT SAMPLING DATA: SAMPLE DATE: 9/6/2006

MEDIA: GROUNDWATER X
CREEK SEDIMENT
SAMPLE TIME: 1045

LOCATION: MW1R
SAMPLE METHOD: Parastaltic Pump with dedicated tubing
SAMPLING OBSERVATIONS: Clear water
QC SAMPLES TAKEN: MW7-090606
OTHER OBSERVATIONS/COMMENTS:

A blind duplicate sample was taken For QC purposes and labeled MW7-090606

Note: specific conductivity formula to 25 degrees Celcius: SC(25)= SC 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: Chris Jones
SAMPLE ID: 090606-DS-1
SAMPLED BY: Mike Walker
SAMPLING EVENT/DATE: 9/6/2006
COMPANY: Sevenson
MONITORING WELL: Sediment Trap
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: STOP TIME:
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'

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: 9/6/2006

MEDIA: GROUNDWATER
CREEK SEDIMENT X
SAMPLE TIME: 1635

LOCATION: Downstream of the cap. DS-1

SAMPLE METHOD: Composite of sediment taken from the sediment trap.

SAMPLING OBSERVATIONS: none

QC SAMPLES TAKEN: None

OTHER OBSERVATIONS/COMMENTS: 1- 4 oz glass jar

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

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: 2/15/2006 TIME: 800

INSPECTOR: M. Walker COMPANY: Sevenson

WEATHER: Windy, Cloudy, 40F

PIEZOMETER	RISER ELEVATION (INSIDE CASING)	DEPTH TO WATER (FT.)	WATER ELEVATION	COMMENTS
P-1	572.72	7.22	565.5	OK
P-2	574.89	9.37	565.52	OK
P-3	574.16	6.57	567.59	OK
P-4	576.14	10.71	565.43	OK
P-5	575.05	5.53	569.52	OK
P-6	578.28	10.31	567.97	OK
MANHOLE A	575.22	11.2	564.02	OK
MANHOLE B	577.34	13.26	564.08	OK

(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: Site looks good.

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: 4/19/2006 TIME: 1300

INSPECTOR: Craig Bove COMPANY: Sevenson

WEATHER: Sunny 55 F

PIEZOMETER	RISER ELEVATION (INSIDE CASING)	DEPTH TO WATER (FT.)	WATER ELEVATION	COMMENTS
P-1	572.72	7.31	565.41	OK
P-2	574.89	9.45	565.44	OK
P-3	574.16	7.16	567	OK
P-4	576.14	10.76	565.38	OK
P-5	575.05	6.09	568.96	OK
P-6	578.28	10.61	567.67	OK
MANHOLE A	575.22	11.5	563.72	OK
MANHOLE B	577.34	13.54	563.8	OK

(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 casing on P-3 has settled a bit and the 2" PVC well is pushing up on the metal cover.

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: 9/6/2006 TIME: 830

INSPECTOR: C. Jones COMPANY: Sevenson

WEATHER: 65 Sunny

PIEZOMETER	RISER ELEVATION (INSIDE CASING)	DEPTH TO WATER (FT.)	WATER ELEVATION	COMMENTS
P-1	572.72	6.7	566.02	ok
P-2	574.89	9.58	565.31	ok
P-3	574.16	8.11	566.05	ok
P-4	576.14	10.89	565.25	ok
P-5	575.05	6.92	568.13	ok
P-6	578.28	10.91	567.37	ok
MANHOLE A	575.22	11.45	563.77	ok
MANHOLE B	577.34	13.47	563.87	ok

(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: 12/5/2006 TIME: 1400

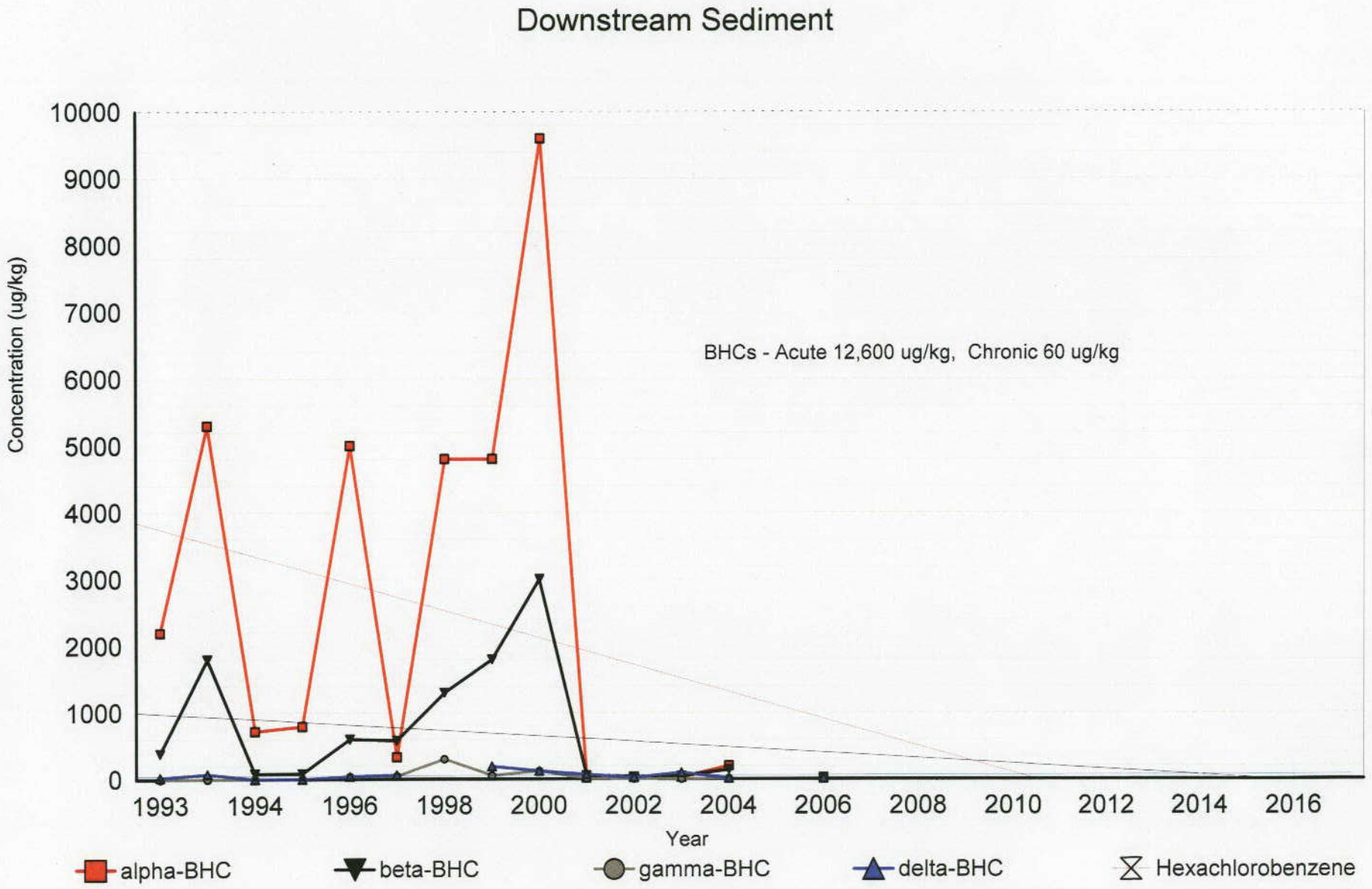
INSPECTOR: M. Walker COMPANY: Sevenson

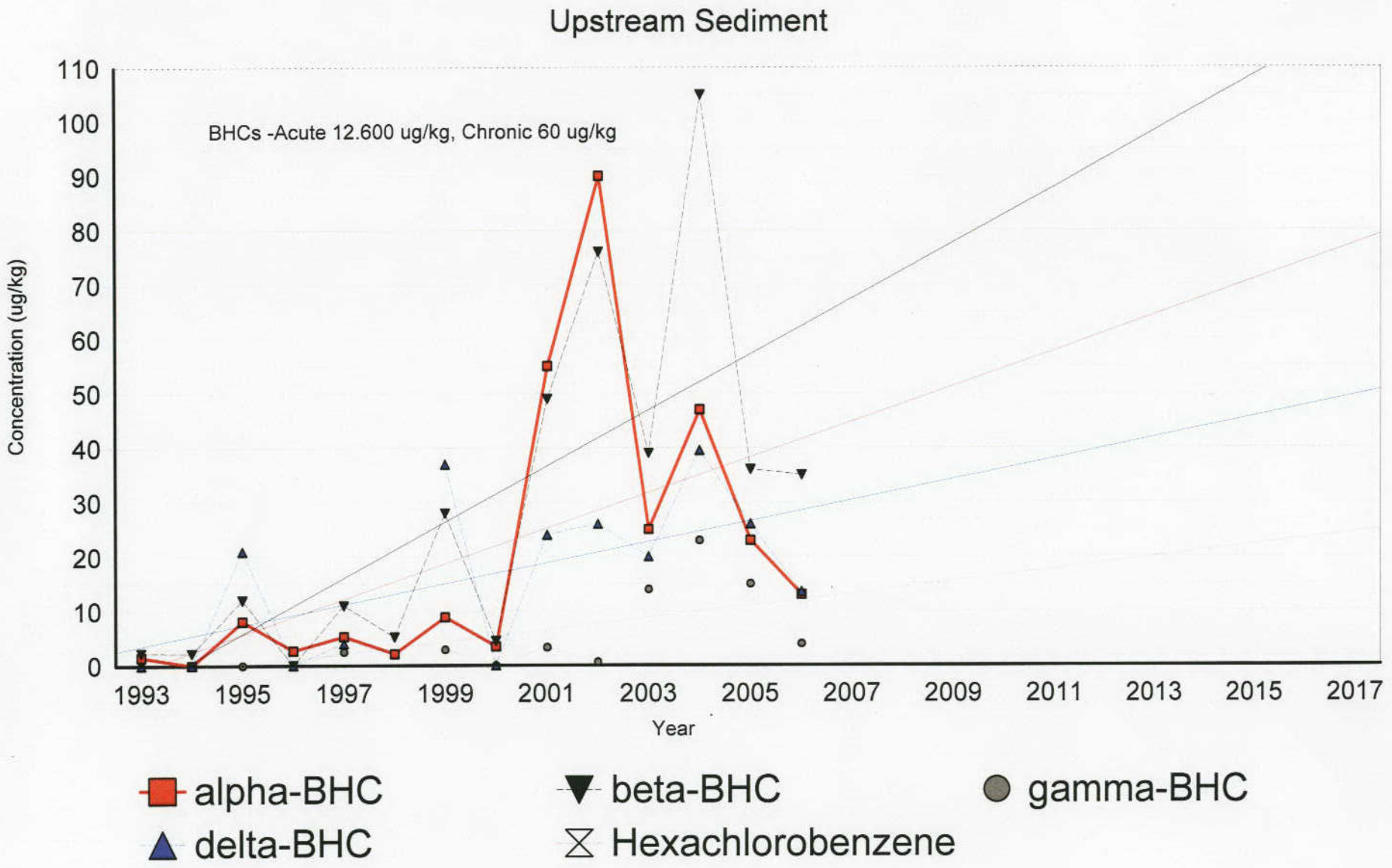
WEATHER: Cloudy 28 F, windy

PIEZOMETER	RISER ELEVATION (INSIDE CASING)	DEPTH TO WATER (FT.)	WATER ELEVATION	COMMENTS
P-1	572.72	7.27	565.45	OK
P-2	574.89	9.35	565.54	OK
P-3	574.16	7.02	567.14	OK
P-4	576.14	10.7	565.44	OK
P-5	575.05	5.5	569.55	OK
P-6	578.28	10.35	567.93	OK
MANHOLE A	575.22	11.35	563.87	OK
MANHOLE B	577.34	13.45	563.89	OK

(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)

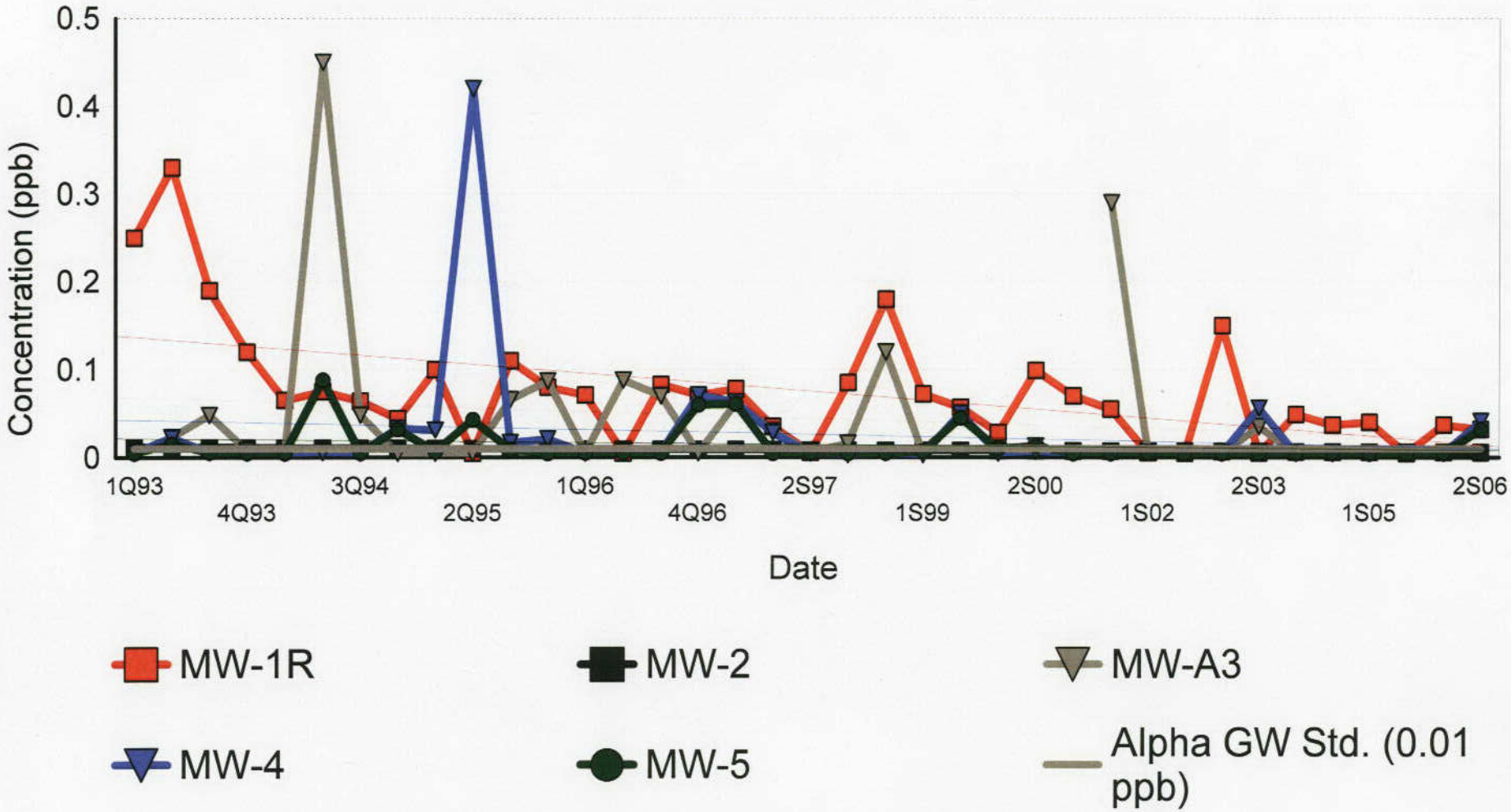
ADDITIONAL COMMENTS/OBSERVATIONS: Site looks good.


Downstream Sediment
Concentration (ug/kg)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
1993
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
Year
BHCs - Acute 12,600 ug/kg, Chronic 60 ug/kg
alpha-BHC
beta-BHC
gamma-BHC
delta-BHC
Hexachlorobenzene


Upstream Sediment
BHCs -Acute 12.600 ug/kg, Chronic 60 ug/kg
Concentration (ug/kg)
110
100
90
80
70
60
50
40
30
20
10
0
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
Year
alpha-BHC
beta-BHC
gamma-BHC
delta-BHC
Hexachlorobenzene

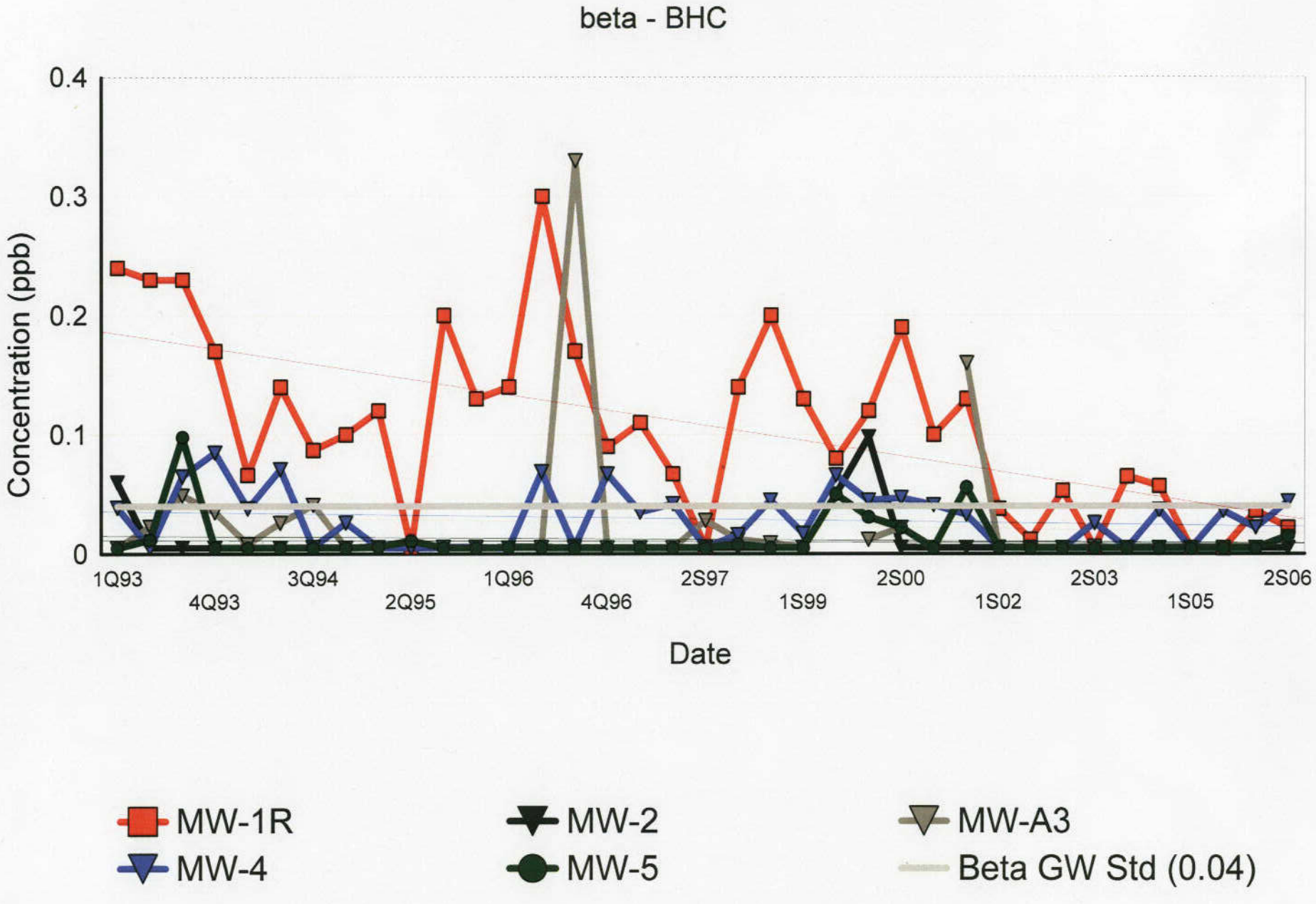
Gibson Site #932063

alpha - BHC



Non-detects plotted as 1/10th of detection limit

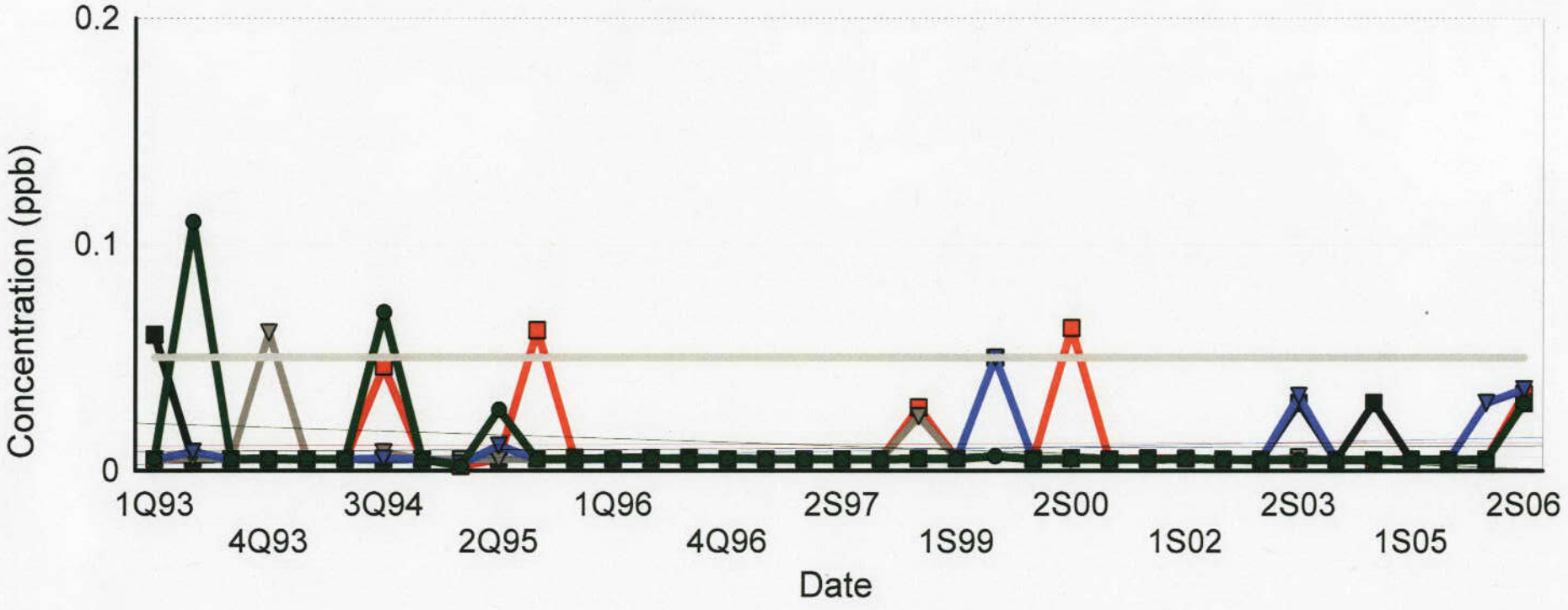
Gibson Site #932063



Non-detects plotted as 1/10th of detection limit

Gibson Site #932063

gamma - BHC



MW-1R

MW-2

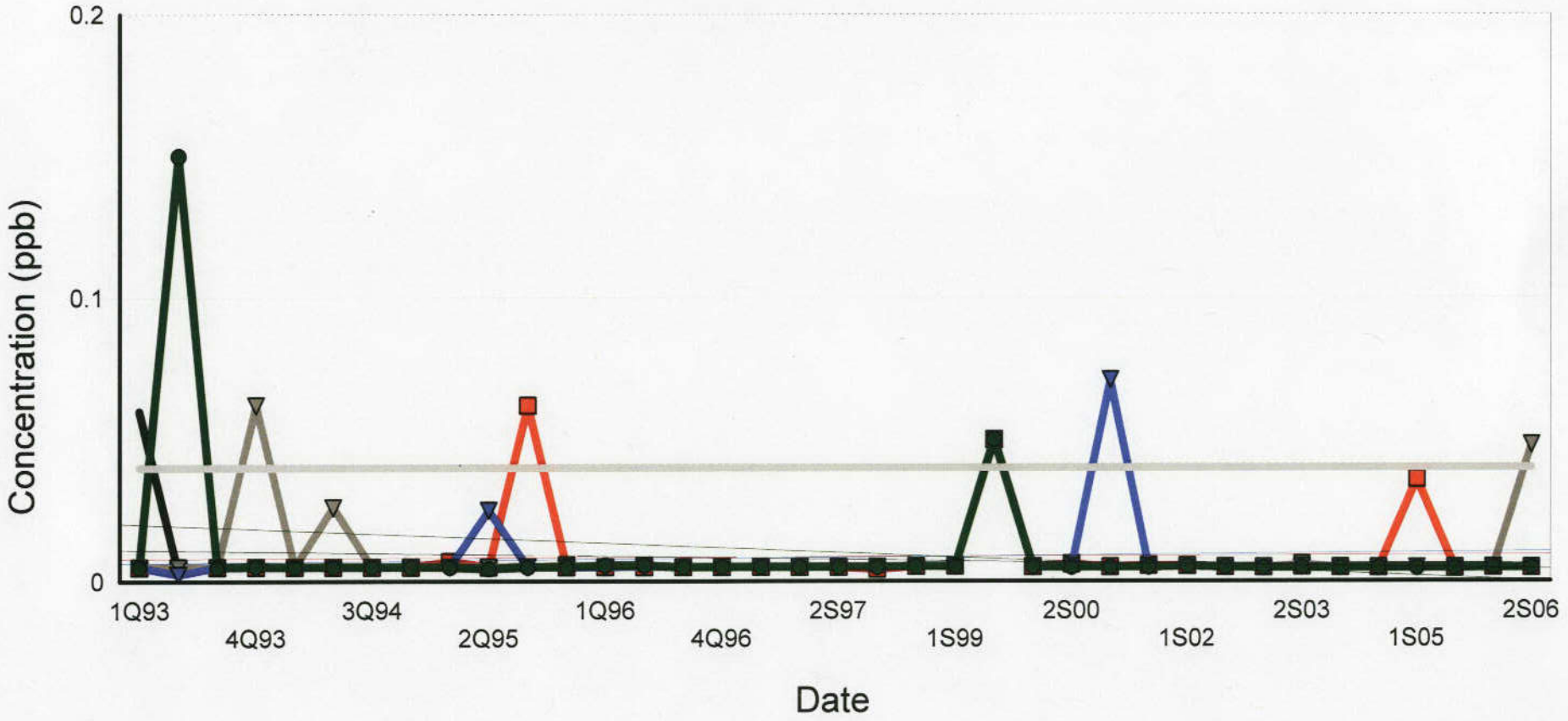
MW-A3

MW-4

Non-detects plotted as 1/10th of detection limit

Gibson Site #932063

delta -BHC



Non-detects plotted as 1/10th of detection limit