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January22, 2009

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
Sixteenth Annual Report - 2008

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 2008 for the operation and maintenance of the containment remedy for the site and for the ground water monitoring program outside of the containment area.

The following major activities occurred during 2008.

- Semi-annual groundwater sampling events were performed during April and September, 2008.
- Annual sediment sampling was performed in September.
- Annual sampling and analysis of leachate was completed in April.
- 40,223 gallons of leachate were discharged to the City of Niagara Falls Wastewater Treatment Facility.
- An improved automated level control was installed in the sump.
- Sump intake level was lowered by approximately one foot to enhance the site inward hydraulic gradient.

The Semi-Annual Ground Water Sampling Laboratory Report and Annual Sediment Sampling Laboratory Report - September 2008, are included as Appendix A to this report. The Data Evaluation Narrative is also included in Appendix A.

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

Sincerely,
OLIN CORPORATION
Michael J. Bellotti
Michael J. Bellotti
Principal Environmental Specialist

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

SIXTEENTH ANNUAL REPORT

2008

CHARLES GIBSON SITE

(PINE AND TUSCARORA SITE)

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

PREPARED BY OLIN CORPORATION

JANUARY - 2009

Introduction

This is the sixteenth 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 2008 for the operations and maintenance of the containment remedy for the Site and the ground water monitoring program outside of the containment area. This year's data for the Semi-Annual Ground Water and Annual Sediment Sampling, collected during September 2008 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 03 and on September 11 for the site compounds alpha-BHC, beta-BHC, gamma-BHC, delta-BHC. Analyses were performed using SW-846 Method 8080. During 2008, 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. This sampling is done in even years, which is why it was sampled for in 2008. The next HCB sampling is scheduled for September 2010. . Monitoring locations are shown on ***Figure 1***.

A historic summary of semi-annual ground water monitoring data from 2000 through 2008 is provided in ***Table 1***. ***Table 1A*** shows groundwater monitoring data for 2008. 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 11, 2008. A historic summary of annual sediment sampling results is presented in ***Table 2***. 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 in 2008 are higher than detections since 2001, for both upstream and downstream samples. An investigation of the laboratory and field sampling QC does not indicate that the increased levels are attributable to laboratory or sampling error. In 2009, sampling duplicates will be taken to further check the validity of the 2008 results.

The Semi-Annual Ground Water Sampling Laboratory Report and Annual Sediment Sampling Laboratory Report - September 2008, are included as Appendix A to this report. The Data Evaluation Narrative is also included in Appendix A.

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. The ground water elevations from the first quarter were not taken during 2008. 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. The third pair (P1/P2) has an inward gradient during the last two quarters. We have adjusted pump intake levels down on Manhole B by 1.07 feet during 2008 to ensure the inward gradient. Water level elevations in Manhole A and Manhole B are monitored quarterly and are consistently below the 565 ft-msl level. The new level at which the pump turns on is at 563.40 feet. All data are shown in ***Table 3***.

There were 40,223 gallons of leachate discharged to the POTW during 2008. A summary of yearly discharge volumes for the Site is provided in ***Table 4***. Since 1992 a total of 1,044,862 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 2008 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 2008 include:

- Repairing wind damaged wooden fence facing Tuscarora Road.
- 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 ***Appendix B***.

Conclusions/Recommendations:

The work performed for the Site during 2008 was done 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 2008 monitoring year indicates that the containment remedy continues to be effective. An evaluation of data from the piezometer pairs at the Site indicates that an inward hydraulic gradient has been established in the containment area of the site, due to lowering of the sump intake level. This gradient improvement (P1/P2 area) will be monitored and enhanced as necessary. Data from 2008 sediment trap monitoring showed increases at both upstream and downstream points relative to prior monitoring episodes. Duplicate sediment analyses will be performed in 2009 to monitor this trend.

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

TABLES

TABLE 1
CHARLES GIBSON SITE
NIAGARA FALLS, NEW YORK

ANALYTICAL SUMMARY
SEMI-ANNUAL GROUND WATER SAMPLING 2001-2008

MONITOR WELL: MW-A3

	2001		2002		2003		2004		2005		2006		2007		2008	
Parameter	April	October	April	September	April	September	April	September	April	September	April	September	April	September	April	September
Alpha-BHC	.050U	.050U	.050U	.029J	.048U	.035J	.048U	.047U	.047U	.048U	.049U	.032J	.048U	-	.048U	.048U
Beta-BHC	.050U	.050U	.050U	.016J	.048U	.059U	.048U	.047U	.047U	.048U	.049U	.014J	.048U	-	.048U	.048U
Gamma-BHC	.050U	.050U	.050U	.050U	.048U	.059U	.048U	.047U	.047U	.048U	.049U	.048U	.048U	-	.048U	.048U
Delta-BHC	.050U	.050U	.050U	.050U	.048U	.059U	.048U	.047U	.047U	.048U	.049U	.03J	.048U	-	.048U	.048U
Hexachlorobenzene	10U	NR	NR	NR	NR	NR	10U	NR	NR	NR	NR	9J	NR	NR	5U	NR

MONITOR WELL: MW-1R

	2001		2002		2003		2004		2005		2006		2007		2008	
Parameter	April	October	April	September	April	September	April	September	April	September	April	September	April	September	April	September
Alpha-BHC	.050U/.050U	.099/.060	.070/.061	.055/.030J	.014J/.015U	.052U	.049U/.049	.026J/.048U	.040J/.049U	.047U/.048U	.037J	.032J	.041J	.029J	.032J	.015J
Beta-BHC	.12J/.050U	.19/.15	.10/.050U	.13/.095	.053/.052	.052U	.049U/.065	.090U/.024J	.050U/.049U	.047U/.048U	.036J	.022J	.035J	.024J	.049U	.05U
Gamma-BHC	.050U/.050U	.063J/.058U	.050U/.050U	.055U	.049U	.052U	.049U/.049U	.048U/.048U	.036J/.049U	.047U/.048U	.050U	.048U	.048U	.048U	.023J	.05U
Delta-BHC	.050U/.050U	.061U/.058U	.050U/.053	.055U	.049U	.052U	.049U/.049	.048U/.048U	.050U/.049U	.047U/.048U	.050U	.034J	.048U	.048U	.025J	.05U
Hexachlorobenzene	10U/10U	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	10U	NR	NR	5U	NR

MONITOR WELL: MW-2

	2001		2002		2003		2004		2005		2006		2007		2008	
Parameter	April	October	April	September	April	September	April	September	April	September	April	September	April	September	April	September
Alpha-BHC	.050U	.054U	.050U	.050U	.050U	.050U	.050U	.050U	.050U	.050U	.050U	.048U	.048U	.047U	.038J	.047U
Beta-BHC	.050U	.054U	.050U	.050U	.050U	.050U	.050U	.050U	.050U	.050U	.050U	.048U	.048U	.047U	.056U	.047U
Gamma-BHC	.050U	.054U	.050U	.050U	.050U	.030J	.050U	.030J	.050U	.050U	.050U	.048U	.048U	.047U	.056U	.047U
Delta-BHC	.050U	.054U	.050U	.050U	.050U	.050U	.050U	.050U	.050U	.050U	.050U	.030J	.048U	.047U	.034J	.047U
Hexachlorobenzene	10U	NR	NR	NR	NR	NR	10U	NR	NR	NR	NR	10U	NR	NR	5U	NR

Notes: Concentration in ug/l

- \- insufficient sample
- U Undetected
- J Estimated value
- NR Not required

TABLE 1
CHARLES GIBSON SITE
NIAGARA FALLS, NEW YORK

ANALYTICAL SUMMARY
SEMI-ANNUAL GROUND WATER SAMPLING 2001-2008

MONITOR WELL: MW-4

	2001		2002		2003		2004		2005		2006		2007		2008	
Parameter	April	October	April	September	April	September	April	September	April	September	April	September	April	September	April	September
Alpha-BHC	.050U	.0069J	.050U	.050U	.049U	0.056	.048U	.048U	.047U	.047U	.049U	.041J	.042J	.025J	.03J	.048U
Beta-BHC	.050U	.047J	.041J	.033J	.049U	.026J	.048U	.037J	.047U	.036J	.022J	.044J	.033J	.047U	.037J	.048U
Gamma-BHC	.050U	.050U	.071J	.050U	.049U	.033J	.048U	.048U	.047U	.047U	.049U	.048U	.048U	.047U	.05U	.048U
Delta-BHC	.050U	.050U	.050U	.050U	.049U	.050U	.048U	.048U	.047U	.047U	.030J	.036J	.048U	.047U	.024J	.048U
Hexachlorobenzene	10U	NR	NR	NR	NR	NR	NR	9U	NR	NR	NR	10U	NR	NR	5U	NR

MONITOR WELL: MW-5

	2001		2002		2003		2004		2005		2006		2007		2008	
Parameter	April	October	April	September	April	September	April	September	April	September	April	September	April	September	April	September
Alpha-BHC	.050U	.013J	.050U	.050U	.048U	.049U	.048U	.048U	.047U	.047UJ	.049U	.032J	.041J	.026J	.035J	.017J
Beta-BHC	.050U	.022J	.050U	.050U	.048U	.049U	.048U	.048U	.047U	.047UJ	.049U	.015J	.025J	.048U	.052U	.047U
Gamma-BHC	.050U	.055U	.050U	.050U	.048U	.049U	.048U	.048U	.047U	.047UJ	.049U	.048U	.047U	.048U	.027J	.018J
Delta-BHC	.050U	.055U	.050U	.050U	.048U	.049U	.048U	.048U	.047U	.047UJ	.049U	.030J	.047U	.048U	.031J	.0094J
Hexachlorobenzene	10U	NR	NR	NR	NR	NR	10U	NR	NR	NR	NR	NR	NR	NR	5U	NR

Notes: Concentration in ug/l

- \- insufficient sample
- U Undetected
- J Estimated value
- NR Not required

Table 1A
Olin Corp. Gibson Site
Groundwater Monitoring Data: 2008

Sample ID	Sample Date	CAS No	Parameter	Flags	Result	UM	Monitor Point
MW-1R-040308	4/3/2008	319-84-6	alpha-BHC	J	0.032	UG/L	Well
MW-1R-040308	4/3/2008	319-85-7	beta-BHC	U	0.049	UG/L	Well
MW-1R-040308	4/3/2008	319-86-8	delta-BHC	J	0.023	UG/L	Well
MW-1R-040308	4/3/2008	58-89-9	gamma-BHC	J	0.025	UG/L	Well
MW-1R-040308	4/3/2008	118-74-1	hexachlor	U	5	UG/L	Well
MW-1R-091108	9/11/2008	319-84-6	alpha-BHC	J	0.015	UG/L	Well
MW-1R-091108	9/11/2008	319-85-7	beta-BHC	U	0.05	UG/L	Well
MW-1R-091108	9/11/2008	319-86-8	delta-BHC	U	0.05	UG/L	Well
MW-1R-091108	9/11/2008	58-89-9	gamma-BHC	U	0.05	UG/L	Well
MW-2-040308	4/3/2008	319-84-6	alpha-BHC	J	0.038	UG/L	Well
MW-2-040308	4/3/2008	319-85-7	beta-BHC	U	0.056	UG/L	Well
MW-2-040308	4/3/2008	319-86-8	delta-BHC	U	0.056	UG/L	Well
MW-2-040308	4/3/2008	58-89-9	gamma-BHC	J	0.034	UG/L	Well
MW-2-040308	4/3/2008	118-74-1	hexachlor	U	5	UG/L	Well
MW-2-091108	9/11/2008	319-84-6	alpha-BHC	U	0.047	UG/L	Well
MW-2-091108	9/11/2008	319-85-7	beta-BHC	U	0.047	UG/L	Well
MW-2-091108	9/11/2008	319-86-8	delta-BHC	U	0.047	UG/L	Well
MW-2-091108	9/11/2008	58-89-9	gamma-BHC	U	0.047	UG/L	Well
MW-4-040308	4/3/2008	319-84-6	alpha-BHC	J	0.03	UG/L	Well
MW-4-040308	4/3/2008	319-85-7	beta-BHC	J	0.037	UG/L	Well
MW-4-040308	4/3/2008	319-86-8	delta-BHC	U	0.05	UG/L	Well
MW-4-040308	4/3/2008	58-89-9	gamma-BHC	J	0.024	UG/L	Well
MW-4-040308	4/3/2008	118-74-1	hexachlor	U	5	UG/L	Well
MW-4-091108	9/11/2008	319-84-6	alpha-BHC	U	0.048	UG/L	Well
MW-4-091108	9/11/2008	319-85-7	beta-BHC	U	0.048	UG/L	Well
MW-4-091108	9/11/2008	319-86-8	delta-BHC	U	0.048	UG/L	Well
MW-4-091108	9/11/2008	58-89-9	gamma-BHC	U	0.048	UG/L	Well
MW-5-040308	4/3/2008	319-84-6	alpha-BHC	J	0.035	UG/L	Well
MW-5-040308	4/3/2008	319-85-7	beta-BHC	U	0.052	UG/L	Well
MW-5-040308	4/3/2008	319-86-8	delta-BHC	J	0.027	UG/L	Well
MW-5-040308	4/3/2008	58-89-9	gamma-BHC	J	0.031	UG/L	Well
MW-5-040308	4/3/2008	118-74-1	hexachlor	U	5	UG/L	Well
MW-5-091108	9/11/2008	319-84-6	alpha-BHC	J	0.017	UG/L	Well
MW-5-091108	9/11/2008	319-85-7	beta-BHC	U	0.047	UG/L	Well
MW-5-091108	9/11/2008	319-86-8	delta-BHC	J	0.018	UG/L	Well
MW-5-091108	9/11/2008	58-89-9	gamma-BHC	J	0.0094	UG/L	Well
MW-7-040308	4/3/2008	319-84-6	alpha-BHC	J	0.029	UG/L	Well
MW-7-040308	4/3/2008	319-85-7	beta-BHC	U	0.052	UG/L	Well
MW-7-040308	4/3/2008	319-86-8	delta-BHC	U	0.052	UG/L	Well
MW-7-040308	4/3/2008	58-89-9	gamma-BHC	J	0.023	UG/L	Well
MW-7-040308	4/3/2008	118-74-1	hexachlor	U	5	UG/L	Well
MW-7-091108	9/11/2008	319-84-6	alpha-BHC	J	0.014	UG/L	Well
MW-7-091108	9/11/2008	319-85-7	beta-BHC	U	0.047	UG/L	Well
MW-7-091108	9/11/2008	319-86-8	delta-BHC	U	0.047	UG/L	Well
MW-7-091108	9/11/2008	58-89-9	gamma-BHC	U	0.047	UG/L	Well
MW-8-040308	4/3/2008	319-84-6	alpha-BHC	J	0.029	UG/L	Well
MW-8-040308	4/3/2008	319-85-7	beta-BHC	U	0.056	UG/L	Well
MW-8-040308	4/3/2008	319-86-8	delta-BHC	U	0.056	UG/L	Well
MW-8-040308	4/3/2008	58-89-9	gamma-BHC	U	0.056	UG/L	Well
MW-8-040308	4/3/2008	118-74-1	hexachlor	U	6	UG/L	Well
MW-3-040308	4/3/2008	319-84-6	alpha-BHC	U	0.048	UG/L	Well
MW-3-040308	4/3/2008	319-85-7	beta-BHC	U	0.048	UG/L	Well
MW-3-040308	4/3/2008	319-86-8	delta-BHC	U	0.048	UG/L	Well
MW-3-040308	4/3/2008	58-89-9	gamma-BHC	U	0.048	UG/L	Well
MW-3-040308	4/3/2008	118-74-1	hexachlor	U	5	UG/L	Well

TABLE 2
Charles Gibson Site
Niagara Falls, New York

ANALYTICAL SUMMARY

Annual Cayuga Creek Sediment Sampling 2001 - 2008

UPSTREAM

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

DOWNSTREAM

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

Notes:

U Not Detected

J Estimated value

NS No sample in trap

* Sediment traps installed April 2001

Table 3

2008 Quarterly Groundwater Elevations Summary

Piezometer Pair	2/13/2008	Inward gradient	4/03/2008	Inward gradient	9/11/2008	Inward gradient	11/05/2008	Inward gradient
P1 outside **P2 inside**	NA NA	NA	565.44 565.50	Level	566.13 565.28	Inward	565.46 565.24	Inward
P3 outside **P4 inside**	NA NA	NA	567.55 565.44	Inward	566.31 565.20	Inward	566.52 565.17	Inward
P5 outside **P6 inside**	NA NA	NA	569.84 567.99	Inward	568.37 567.39	Inward	568.76 567.43	Inward
		Below 565 ft msl		Below 565 ft msl		Below 565 ft msl		Below 565 ft msl
Manhole A **Manhole B**	NA NA	NA NA	564.13 564.17	Yes Yes	564.11 564.23	Yes Yes	563.81 563.89	Yes Yes

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

Manhole monitoring:

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

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
2007	22,958
2008	**40,223**
TOTALS	**1,044,862**

Monthly Discharge Volumes
2008

Month	Volume (gallons)
Jan	5,700
Feb	5,801
Mar	5,800
Apr	5,631
May	5,697
Jun	0
Jul	0
Aug	331
Sep	3,203
Oct	887
Nov	1,782
Dec	5,391
Total	**40,223**

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 03, 2008

PARAMETER	MANHOLE B (MHB)
alpha-BHC	.03J
beta-BHC	.066
delta-BHC	.072
gamma-BHC	.019J
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
2008 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 2010.
Every Five Years	Leachate sample collection and analysis (Manhole B) (for HCB) (starting in 2000). Next leachate sampling for HCB is 2010.

APPENDIX A

Data Evaluation Narratives
(April and September)
and
Summary Analytical Report
and
Chain of Custody Forms

2008

CHARLES GIBSON SITE

(PINE AND TUSCARORA SITE)

NIAGARA FALLS, NEW YORK

NYSDEC Registry No. 9-32-063

Data Evaluation Narrative
Charles Gibson – April 2008 Groundwater Sampling Event
Matrix: Groundwater

SDG: A-08-3411 – Test America Laboratories (STL), Amherst, NY

Deliverables

The data packages as submitted to Olin Corporation are complete as stipulated under the Quality Assurance Project Plan (QAPP) for United States Environmental Protection Agency (USEPA) Methods 8081A and 8270.

Sample Integrity

Samples within this sample delivery group (SDG) were submitted to the Test America laboratory in Amherst, NY (Buffalo) for chlorinated pesticide analyses. The sample cooler received at the laboratory measured 2.0°C which is within the required limit of 4°C ± 2°. The proper bottles and preservatives were used, the Chain of Custody was properly relinquished, and the correct analytical method was employed.

Sample Identification

This SDG contains the following water, soil and quality control (QC) samples, collected in April 2008:

SDG A-08-3411

Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
MHB-043008	MW-1R-040308	MW-2-040308	MW4-040308	MW-5-040308
MW-7-040308	MW-8-040308	MWA-3-040308		

Chlorinated Pesticides (8081A)

The samples in this SDG were submitted for chlorinated pesticides by USEPA Method 8081A.

Holding Times

The extraction and analytical logs indicate that applicable holding times were met for samples submitted for chlorinated pesticide analyses.

Practical Quantitation Limits

The practical quantitation limits (PQLs) as stipulated in the QAPP were met for the analysis of chlorinated pesticides by USEPA Method 8081A.

Calibration

The initial and continuing calibration data for this SDG indicates that the applicable initial calibration criteria were met for samples submitted for chlorinated pesticide analyses.

Surrogates

The surrogate recoveries were within applicable QC limits as stipulated by the laboratory.

Internal Standards

The internal standard (IS) recoveries were within applicable QC limits as stipulated by the laboratory for volatile analysis. No additional qualification of the data was required.

Blank Summary

The analytical results of the laboratory method blanks indicate that chlorinated pesticides were not detected.

Laboratory Control Sample and Standard Reference Material Check

The laboratory control sample (LCS) (ongoing precision and recovery [OPR] sample) spike recoveries and the standard reference material (SRM) check are within the applicable QC advisory limits as specified in the QAPP.

Matrix Spike/Matrix Spike Duplicate

The results of the MS/MSD analyses were within acceptable QC limits as stipulated in the QAPP.

Sampling Accuracy

The data was within applicable QC advisory limits; therefore no qualification was required.

Laboratory Duplicate Samples

No samples were selected by the laboratory for duplicate analyses.

Field Duplicate Samples

No samples were selected in the field for duplicate analyses.

Semi-volatiles (8270C)

The samples in this SDG were submitted for semi-volatile analyses by USEPA Method 8270C.

Holding Times

The extraction and analytical logs indicate that applicable holding times were met for samples submitted for semi-volatile analyses.

Practical Quantitation Limits

The practical quantitation limits (PQLs) as stipulated in the QAPP were met for the analysis of semi-volatiles by USEPA Method 8270C.

Calibration

The initial and continuing calibration data for this SDG indicates that the applicable initial calibration criteria were met for samples submitted for semi-volatile analyses.

Surrogates

The surrogate recoveries were within applicable QC limits as stipulated by the laboratory.

Internal Standards

The internal standard (IS) recoveries were within applicable QC limits as stipulated by the laboratory for volatile analysis. No additional qualification of the data was required.

Blank Summary

The analytical results of the laboratory method blanks indicate that semi-volatiles were not detected.

Laboratory Control Sample and Standard Reference Material Check

The laboratory control sample (LCS) (ongoing precision and recovery [OPR] sample) spike recoveries and the standard reference material (SRM) check are within the applicable QC advisory limits as specified in the QAPP.

Matrix Spike/Matrix Spike Duplicate

The percent recoveries and relative percent differences of the MS/MSD analyses were within acceptable QC limits as stipulated in the QAPP.

Sampling Accuracy

The data was within applicable QC advisory limits; therefore no qualification was required.

Laboratory Duplicate Samples

No samples were selected by the laboratory for duplicate analyses.

Field Duplicate Samples

No samples were selected in the field for duplicate analyses.

Overall Site Evaluation and Professional Judgment Flagging Changes

The data within these SDG's were compared to site data and edits to the DQE flags were not required based on professional judgment.

Monitoring period completeness, which is the percentage of analytical results judged to be valid, including estimated values, was 100 percent for the April 2008 sampling event. Typically, project objectives are met when completeness is 90 percent or better.

Prepared by:_____ Date: _____

Data Evaluation Narrative
Charles Gibson – September 2008 Groundwater Sampling Event
Matrix: Groundwater and Sediment

SDG: A-08-B130 – Test America Laboratories (STL), Amherst, NY

Deliverables

The data packages as submitted to Olin Corporation are complete as stipulated under the Quality Assurance Project Plan (QAPP) for United States Environmental Protection Agency (USEPA) Methods 8081A.

Sample Integrity

Samples within this sample delivery group (SDG) were submitted to the Test America laboratory in Amherst, NY (Buffalo) for chlorinated pesticide analyses. The sample cooler received at the laboratory measured 4.4°C which is within the required limit of 4°C ± 2°. The proper bottles and preservatives were used, the Chain of Custody was properly relinquished, and the correct analytical method was employed.

Sample Identification

This SDG contains the following water, soil and quality control (QC) samples collected on September 11, 2008:

SDG A-08-B130

Sample ID	Sample ID	Sample ID	Sample ID	Sample ID
DS-1-091108	FB-091108	MS-1-091108	MW-1R-0911-08	MW-2-091108
MW-4-091108	MW-5-09-08	MW-7-091108	MW-A3-0911-8	US-1-091108

Chlorinated Pesticides (8081A)

The samples in this SDG were submitted for chlorinated pesticides by USEPA Method 8081A.

Holding Times

The extraction and analytical logs indicate that applicable holding times were met for samples submitted for chlorinated pesticide analyses.

Practical Quantitation Limits

The practical quantitation limits (PQLs) as stipulated in the QAPP were met all groundwater samples submitted for the analysis of chlorinated pesticides by USEPA Method 8081A. The PQLs for soil samples DS-1 (A8B13010), MS-1 (A8B13009) and US-1 (A8B13008) were not met due to matrix interferences. Sample DS-1 was diluted 50X, MS-1 was diluted 10X and US-1 required a 5X dilution.

Calibration

The initial and continuing calibration data for this SDG indicates that the applicable calibration criteria were met for samples submitted for chlorinated pesticide analyses.

Surrogates

The surrogate recoveries were outside applicable QC limits as stipulated by the laboratory for samples MS-1 US-1 and DS-1. The surrogate failures were due to matrix interferences. If the percent recovery was greater than 140%, positive results were flagged "JH" and non-detects did no require qualification. If the percent recovery was less than 40% positive results were flagged "JL" and non-detects were flagged "UL.

Qualification Table

Data Flag: JH = Estimated quantitation: possibly biased high based upon QC data
UL = Undetected, reporting limit is higher than indicated

Sample ID	Constituent	Data Flag	Sample ID	Constituent	Data Flag	Sample ID	Constituent	Data Flag
US-1	d-BHC	JH	MS-1	d-BHC	JH	DS-1	d-BHC	JH
	a-BHC	JH		a-BHC	JH		a-BHC	JH
	b-BHC	JH		b-BHC	JH		b-BHC	JH
	g-BHC	UL		g-BHC	UL		g-BHC	JH

Internal Standards

The internal standard (IS) recoveries were within applicable QC limits as stipulated by the laboratory for volatile analysis. No additional qualification of the data was required.

Blank Summary

The analytical results of the laboratory method blanks indicate that chlorinated pesticides were not detected.

Laboratory Control Sample and Standard Reference Material Check

The laboratory control sample (LCS) (ongoing precision and recovery [OPR] sample) spike recoveries and the standard reference material (SRM) check are within the applicable QC advisory limits as specified in the QAPP.

Matrix Spike/Matrix Spike Duplicate

Samples from MW-2/A8B13001 were selected in the filed for MS/MSD analysis. The percent recoveries and relative percent differences were within acceptable QC limits as stipulated in the QAPP.

Sampling Accuracy

The data was within applicable QC advisory limits; therefore no qualification was required.

Laboratory Duplicate Samples

No samples were selected by the laboratory for duplicate analyses.

Field Duplicate Samples

No samples were selected in the field for duplicate analyses.

Overall Site Evaluation and Professional Judgment Flagging Changes

The data within this SDG were compared to site data and edits to the DQE flags were required based on professional judgment. Monitoring period completeness, which is the percentage of analytical results judged to be valid, including estimated values, was 100 percent for the September 2008 sampling event. Typically, project objectives are met when completeness is 90 percent or better.

Prepared by: *James E. Young* Date: **September 29, 2008**

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job#: A08-3411

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

Mr. Mike Bellotti
Olin Corporation
1186 Lower River Road
Charleston, TN 37310

CC: Mr. Michael Walker

TestAmerica Laboratories

Brian J. Fischer
Project Manager

Donna Besco
Analyst

Melissa Deyo
Analyst

TestAmerica

TestAmerica Buffalo
Current Certifications

As of 6/15/2007

STATE	Program	Cert # / Lab ID
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,NELAP CWA, RCRA	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	NY0044
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	NELAP,SDWA, CWA, RCRA,	NY455
New York	NELAP, AIR, SDWA, CWA, RCRA,CLP	10026
Oklahoma	CWA, RCRA	9421
Pennsylvania	NELAP CWA,RCRA	68-00281
Tennessee	SDWA	02970
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, RCRA	998310390

Sample Data Summary Package

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A8341101	MHB-040308	LEACH	04/03/2008	09:00	04/03/2008	16:00
A8341102	MW-1R-040308	GW	04/03/2008	11:35	04/03/2008	16:00
A8341103	MW-2-040308	GW	04/03/2008	10:35	04/03/2008	16:00
A8341103MS	MW-2-040308 MS	GW	04/03/2008	10:35	04/03/2008	16:00
A8341103SD	MW-2-040308 MSD	GW	04/03/2008	10:35	04/03/2008	16:00
A8341104	MW-4-040308	GW	04/03/2008	14:10	04/03/2008	16:00
A8341105	MW-5-040308	GW	04/03/2008	13:10	04/03/2008	16:00
A8341106	MW-7-040308	GW	04/03/2008	08:30	04/03/2008	16:00
A8341107	MW-8-040308	GW	04/03/2008	15:40	04/03/2008	16:00
A8341108	MWA-3-040308	GW	04/03/2008	15:05	04/03/2008	16:00

METHODS SUMMARY

Job#: A08-3411

Project#: NY3A9025
Site Name: Olin Corporation

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

References:

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

SDG NARRATIVE

Job#: A08-3411

Project#: NY3A9025
Site Name: Olin Corporation

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

A08-3411
Sample Cooler(s) were received at the following temperature(s); 3@2.0 °C
All samples were received in good condition.

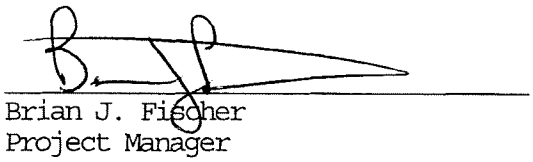
GC/MS Semivolatile Data

No deviations from protocol were encountered during the analytical procedures.

GC Extractable Data

For method 8081, the recovery of surrogate Decachlorobiphenyl in sample MW-7-040308 is outside of established quality control limits due to the sample matrix. The recovery of surrogate Tetrachloro-m-xylene is within quality control limits; no corrective action is required.

"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 Sample Data package and in the electronic data deliverables has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature."



Brian J. Fischer
Project Manager

4-29-08
Date

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.

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION
AND
ANALYTICAL REQUEST SUMMARY

LAB NAME: TESTAMERICA 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
MHB-040308	A8341101	-	-	-	SW8463	-	-	-
MW-1R-040308	A8341102	-	SW8463	-	SW8463	-	-	-
MW-2-040308	A8341103	-	SW8463	-	SW8463	-	-	-
MW-4-040308	A8341104	-	SW8463	-	SW8463	-	-	-
MW-5-040308	A8341105	-	SW8463	-	SW8463	-	-	-
MW-7-040308	A8341106	-	SW8463	-	SW8463	-	-	-
MW-8-040308	A8341107	-	SW8463	-	SW8463	-	-	-
MWA-3-040308	A8341108	-	SW8463	-	SW8463	-	-	-

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
B\N-A ANALYSIS

LAB NAME: TESTAMERICA LABORATORIES, INC.

SAMPLE IDENTIFICATION	MATRIX	DATE COLLECTED	DATE RECEIVED AT LAB	DATE EXTRACTED	DATE ANALYZED
MW-1R-040308	GW	04/03/2008	04/03/2008	04/04/2008	04/09/2008
MW-2-040308	GW	04/03/2008	04/03/2008	04/04/2008	04/09/2008
MW-4-040308	GW	04/03/2008	04/03/2008	04/04/2008	04/09/2008
MW-5-040308	GW	04/03/2008	04/03/2008	04/04/2008	04/09/2008
MW-7-040308	GW	04/03/2008	04/03/2008	04/04/2008	04/09/2008
MW-8-040308	GW	04/03/2008	04/03/2008	04/04/2008	04/09/2008
MWA-3-040308	GW	04/03/2008	04/03/2008	04/04/2008	04/09/2008

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
PESTICIDE/PCB ANALYSIS

LAB NAME: TESTAMERICA LABORATORIES, INC.

SAMPLE IDENTIFICATION	MATRIX	DATE COLLECTED	DATE RECEIVED AT LAB	DATE EXTRACTED	DATE ANALYZED
MHB-040308	LEACH	04/03/2008	04/03/2008	-	-
MW-1R-040308	GW	04/03/2008	04/03/2008	-	-
MW-2-040308	GW	04/03/2008	04/03/2008	-	-
MW-4-040308	GW	04/03/2008	04/03/2008	-	-
MW-5-040308	GW	04/03/2008	04/03/2008	-	-
MW-7-040308	GW	04/03/2008	04/03/2008	-	-
MW-8-040308	GW	04/03/2008	04/03/2008	-	-
MWA-3-040308	GW	04/03/2008	04/03/2008	-	-

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
ORGANIC ANALYSIS

LAB NAME: TESTAMERICA LABORATORIES, INC.

SAMPLE IDENTIFICATION	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILIARY CLEAN UP	DIL/CONC FACTOR
MHB-040308	LEACH	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MW-1R-040308	GW	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MW-2-040308	GW	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MW-4-040308	GW	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MW-5-040308	GW	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MW-7-040308	GW	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MW-8-040308	GW	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MWA-3-040308	GW	SW8463	SEPF	AS REQUIRED	AS REQUIRED

TestAmerica

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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.
G	Indicates a value greater than or equal to the project reporting limit but less than the laboratory quantitation limit
*	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
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
ANALYSIS DATA SHEET

Client No.

MW-1R-040308

Lab Name: TestAmerica Laboratories Inc. Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8341102

Sample wt/vol: 1005.0 (g/mL) ML Lab File ID: X23031.RR

Level: (low/med) LOW Date Samp/Recv: 04/03/2008 04/03/2008

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/04/2008

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/09/2008

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	5	U

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ASP 2000/8270 - HEXACHLOROBENZENE ONLY
ANALYSIS DATA SHEET

Client No.

MW-2-040308

Lab Name: TestAmerica Laboratories Inc. Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8341103

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: X23032.RR

Level: (low/med) LOW Date Samp/Recv: 04/03/2008 04/03/2008

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/04/2008

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/09/2008

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	5	U

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ASP 2000/8270 - HEXACHLOROBENZENE ONLY
ANALYSIS DATA SHEET

Client No.

MW-4-040308

Lab Name: TestAmerica Laboratories Inc. Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8341104

Sample wt/vol: 1005.0 (g/mL) ML Lab File ID: X23035.RR

Level: (low/med) LOW Date Samp/Recv: 04/03/2008 04/03/2008

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/04/2008

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/09/2008

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	5	U

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

Client No.

MW-5-040308

Lab Name: TestAmerica Laboratories Inc. Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8341105

Sample wt/vol: 1015.0 (g/mL) ML Lab File ID: X23036.RR

Level: (low/med) LOW Date Samp/Recv: 04/03/2008 04/03/2008

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/04/2008

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/09/2008

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	5	U

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

Client No.

MW-7-040308

Lab Name: TestAmerica Laboratories Inc. Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8341106

Sample wt/vol: 1010.0 (g/mL) ML Lab File ID: X23037.RR

Level: (low/med) LOW Date Samp/Recv: 04/03/2008 04/03/2008

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/04/2008

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/09/2008

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	5	U

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

Client No.

MW-8-040308

Lab Name: TestAmerica Laboratories Inc. Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8341107

Sample wt/vol: 870.00 (g/mL) ML Lab File ID: X23038.RR

Level: (low/med) LOW Date Samp/Recv: 04/03/2008 04/03/2008

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/04/2008

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/09/2008

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	6	U

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ASP 2000/8270 - HEXACHLOROBENZENE ONLY
ANALYSIS DATA SHEET

Client No.

MWA-3-040308

Lab Name: TestAmerica Laboratories Inc. Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8341108

Sample wt/vol: 1010.0 (g/mL) ML Lab File ID: X23039.RR

Level: (low/med) LOW Date Samp/Recv: 04/03/2008 04/03/2008

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/04/2008

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/09/2008

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	5	U

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

Client No.

MHB-040308

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8341101

Sample wt/vol: 1040.00 (g/mL) ML Lab File ID: 5A05032.TX0

% Moisture: _____ decanted: (Y/N) N Date Samp/Recv: 04/03/2008 04/03/2008

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 04/04/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/07/2008

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.00 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.030	J
319-85-7	beta-BHC	0.066	
319-86-8	delta-BHC	0.072	
58-89-9	gamma-BHC (Lindane)	0.019	J

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

Client No.

MW-1R-040308

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8341102

Sample wt/vol: 1015.00 (g/mL) ML Lab File ID: 5A05033.TX0

% Moisture:_____ decanted: (Y/N) N Date Samp/Recv: 04/03/2008 04/03/2008

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 04/04/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/07/2008

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.00 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	0.049	U
319-86-8	delta-BHC	0.023	J
58-89-9	gamma-BHC (Lindane)	0.025	J

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

Client No.

MW-2-040308

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8341103

Sample wt/vol: 900.00 (g/mL) ML Lab File ID: 5A05034.TX0

% Moisture:_____ decanted: (Y/N) N Date Samp/Recv: 04/03/2008 04/03/2008

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 04/04/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/07/2008

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.00 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.038	J
319-85-7	beta-BHC	0.056	U
319-86-8	delta-BHC	0.056	U
58-89-9	gamma-BHC (Lindane)	0.034	J

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

Client No.

MW-4-040308

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8341104

Sample wt/vol: 1000.00 (g/mL) ML Lab File ID: 5A05037.TX0

% Moisture:_____ decanted: (Y/N) N Date Samp/Recv: 04/03/2008 04/03/2008

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 04/04/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/07/2008

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.00 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.030	J
319-85-7	beta-BHC	0.037	J
319-86-8	delta-BHC	0.050	U
58-89-9	gamma-BHC (Lindane)	0.024	J

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

Client No.

MW-5-040308

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8341105

Sample wt/vol: 970.00 (g/mL) ML Lab File ID: 5A05038.TX0

% Moisture: _____ decanted: (Y/N) N Date Samp/Recv: 04/03/2008 04/03/2008

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 04/04/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/07/2008

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.00 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.035	J
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.027	J
58-89-9	gamma-BHC (Lindane)	0.031	J

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

Client No.

MW-7-040308

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8341106

Sample wt/vol: 960.00 (g/mL) ML Lab File ID: 5A05058.TX0

% Moisture: _____ decanted: (Y/N) N Date Samp/Recv: 04/03/2008 04/03/2008

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 04/04/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/08/2008

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.00 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
319-84-6	alpha-BHC	0.029	J
319-85-7	beta-BHC	0.052	U
319-86-8	delta-BHC	0.052	U
58-89-9	gamma-BHC (Lindane)	0.023	J

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

Client No.

MW-8-040308

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8341107

Sample wt/vol: 900.00 (g/mL) ML Lab File ID: 5A05059.TX0

% Moisture:_____ decanted: (Y/N) N Date Samp/Recv: 04/03/2008 04/03/2008

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 04/04/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/08/2008

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	0.029	J
319-85-7	beta-BHC	0.056	U
319-86-8	delta-BHC	0.056	U
58-89-9	gamma-BHC (Lindane)	0.056	U

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ASP 2000- METHOD 8081 BHC'S
ANALYSIS DATA SHEET

Client No.: MWA-3-040308

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8341108

Sample wt/vol: 1040.00 (g/mL) ML Lab File ID: 5A05060.TX0

% Moisture: _____ decanted: (Y/N) N Date Samp/Recv: 04/03/2008 04/03/2008

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 04/04/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/08/2008

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)	0.048	U

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

Lab Name: TestAmerica Laboratories Inc. Contract: _____

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

	Client Sample ID	Lab Sample ID	2FP %REC	#	FBP %REC	#	NBZ %REC	#	PHL %REC	#	TBP %REC	#	TPH %REC	#			TOT OUT
1	MW-1R-040308	A8341102	36		74		78		30		97		59				0
2	MW-2-040308	A8341103	32		69		72		26		91		58				0
3	MW-2-040308 MS	A8341103MS	36		84		82		29		95		65				0
4	MW-2-040308 MSD	A8341103SD	38		89		85		30		97		70				0
5	MW-4-040308	A8341104	36		72		76		30		98		59				0
6	MW-5-040308	A8341105	38		77		82		32		107		50				0
7	MW-7-040308	A8341106	35		72		78		29		97		60				0
8	MW-8-040308	A8341107	43		79		87		36		103		78				0
9	MWA-3-040308	A8341108	37		77		80		31		99		67				0
10	SBLK70	A8B1275302	41		77		84		34		101		64				0
11	SMSB70	A8B1275301	42		90		88		33		101		80				0

			QC LIMITS
2FP	=	2-Fluorophenol	(20-120)
FBP	=	2-Fluorobiphenyl	(48-120)
NBZ	=	Nitrobenzene-D5	(46-120)
PHL	=	Phenol-D5	(16-120)
TBP	=	2,4,6-Tribromophenol	(52-132)
TPH	=	p-Terphenyl-d14	(24-136)

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

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

Lab Name: TestAmerica Laboratories Inc. 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	A8B1275801	84		73								0
2	Method Blank	A8B1275802	103		72								0
3	MHB-040308	A8341101	82		76								0
4	MW-1R-040308	A8341102	66		62								0
5	MW-2-040308	A8341103	85		67								0
6	MW-2-040308 MS	A8341103MS	95		76								0
7	MW-2-040308 MSD	A8341103SD	85		77								0
8	MW-4-040308	A8341104	99		78								0
9	MW-5-040308	A8341105	44		73								0
10	MW-7-040308	A8341106	153	*	78								1
11	MW-8-040308	A8341107	114		87								0
12	MWA-3-040308	A8341108	92		76								0

QC LIMITS

(DCBP) = Decachlorobiphenyl (15-139)
(TCMX) = Tetrachloro-m-xylene (30-139)

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

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

Lab Name: TestAmerica Laboratories Inc. Contract: _____ Lab Samp ID: A8B1275302

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

Matrix Spike - Client Sample No.: SBLK70

COMPOUND	SPIKE ADDED UG/L	MSB CONCENTRATION UG/L	MSB % REC #	QC LIMITS REC.
Hexachlorobenzene	100	93.1	93	38 - 131

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
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories Inc. Contract: _____ Lab Samp ID: A8341103

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

Matrix Spike - Client Sample No.: MW-2-040308

COMPOUND	SPIKE ADDED UG/L	SAMPLE CONCENTRATION UG/L	MS CONCENTRATION UG/L	MS % REC #	QC LIMITS REC.
Hexachlorobenzene	100	0	85.1	85	38 - 131

COMPOUND	SPIKE ADDED UG/L	MSD CONCENTRATION UG/L	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Hexachlorobenzene	100	88.5	88	3	15	38 - 131

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

* Values outside of QC limits

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

Comments: _____

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

Lab Name: TestAmerica Laboratories Inc. Contract: _____ Lab Samp ID: A8B1275802

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.	+ =
gamma-BHC (Lindane)	0.500	0.485	97	46 - 120	
alpha-BHC	0.500	0.465	93	39 - 121	
beta-BHC	0.500	0.508	102	39 - 138	
delta-BHC	0.500	0.530	106	40 - 121	

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
ASP 2000- METHOD 8081 BHC'S
WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories Inc. Contract: _____ Lab Samp ID: A8341103

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

Matrix Spike - Client Sample No.: MW-2-040308

COMPOUND	SPIKE ADDED UG/L	SAMPLE CONCENTRATION UG/L	MS CONCENTRATION UG/L	MS % REC #	QC LIMITS REC.	+ =
gamma-BHC (Lindane)	0.500	0.0344	0.520	97	46 - 120	
alpha-BHC	0.500	0.0377	0.501	93	39 - 121	
beta-BHC	0.500	0.00367	0.529	105	39 - 138	
delta-BHC	0.500	0	0.524	105	40 - 121	

COMPOUND	SPIKE ADDED UG/L	MSD CONCENTRATION UG/L	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.	+ =
gamma-BHC (Lindane)	0.485	0.513	99	2	50	46 - 120	
alpha-BHC	0.485	0.494	94	1	50	39 - 121	
beta-BHC	0.485	0.537	110	5	50	39 - 138	
delta-BHC	0.485	0.517	106	0	50	40 - 121	

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
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ASP 2000/8270 - HEXACHLOROBENZENE ONLY
METHOD BLANK SUMMARY

Client No.: SBLK70

Lab Name: TestAmerica Laboratories Inc. Contract: _____

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

Lab File ID: X23029.RR Lab Sample ID: A8B1275302

Instrument ID: HP5973X Date Extracted: 04/04/2008

Matrix: (soil/water) WATER Date Analyzed: 04/09/2008

Level: (low/med) LOW Time Analyzed: 10:36

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
1	MW-1R-040308	A8341102	X23031.RR	04/09/2008
2	MW-2-040308	A8341103	X23032.RR	04/09/2008
3	MW-2-040308 MS	A8341103MS	X23033.RR	04/09/2008
4	MW-2-040308 MSD	A8341103SD	X23034.RR	04/09/2008
5	MW-4-040308	A8341104	X23035.RR	04/09/2008
6	MW-5-040308	A8341105	X23036.RR	04/09/2008
7	MW-7-040308	A8341106	X23037.RR	04/09/2008
8	MW-8-040308	A8341107	X23038.RR	04/09/2008
9	MWA-3-040308	A8341108	X23039.RR	04/09/2008
10	SMSB70	A8B1275301	X23028.RR	04/09/2008

Comments: _____

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

Client No.

SBLK70

Lab Name: TestAmerica Laboratories Inc. Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8B1275302

Sample wt/vol: 1000.0 (g/mL) ML Lab File ID: X23029.RR

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

% Moisture: _____ decanted: (Y/N) N Date Extracted: 04/04/2008

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 04/09/2008

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	5	U

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

Client No.

Method Blank

Lab Name: TestAmerica Laborat Contract: _____

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

Lab Sample ID: A8B1275802 Lab File ID: 5A05030.TX0

Matrix: (soil/water) WATER Extraction: SEPF

Sulfur Cleanup: (Y/N): N Date Extracted: 04/04/2008

Date Analyzed (1): 04/07/2008 Date Analyzed (2): _____

Time Analyzed (1): 13:25 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	A8B1275801	04/07/2008	
2	MHB-040308	A8341101	04/07/2008	
3	MW-1R-040308	A8341102	04/07/2008	
4	MW-2-040308	A8341103	04/07/2008	
5	MW-2-040308 MS	A8341103MS	04/07/2008	
6	MW-2-040308 MSD	A8341103SD	04/07/2008	
7	MW-4-040308	A8341104	04/07/2008	
8	MW-5-040308	A8341105	04/07/2008	
9	MW-7-040308	A8341106	04/08/2008	
10	MW-8-040308	A8341107	04/08/2008	
11	MWA-3-040308	A8341108	04/08/2008	

Comments: _____

OLIN CORPORATION

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ASP 2000- METHOD 8081 BHC'S

ANALYSIS DATA SHEET

Client No.

Method Blank

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8B1275802

Sample wt/vol: 1000.00 (g/mL) ML Lab File ID: 5A05030.TX0

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

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 04/04/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/07/2008

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
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: TestAmerica Laboratories Inc. Contract: _____ Labsampid: A8C0000780

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

Lab File ID (Standard): X23022.RR Date Analyzed: 04/09/2008

Instrument ID: HP5973X Time Analyzed: 07:56

			IS1 (ANT) AREA	#	RT	#	IS2 (CRY) AREA	#	RT	#	IS3 (DCB) AREA	#	RT	#
	12 HOUR STD		365784		9.72		620267		13.73		176354		6.16	
	UPPER LIMIT		731568		10.22		1240534		14.23		352708		6.66	
	LOWER LIMIT		182892		9.22		310134		13.23		88177		5.66	
	CLIENT SAMPLE	Lab Sample ID												
1	MW-1R-040308	A8341102	322791		9.72		598580		13.72		144897		6.16	
2	MW-2-040308	A8341103	308913		9.72		584480		13.72		141010		6.16	
3	MW-2-040308 MS	A8341103MS	291762		9.72		518467		13.73		148831		6.16	
4	MW-2-040308 MSD	A8341103SD	284789		9.72		502810		13.73		144860		6.16	
5	MW-4-040308	A8341104	334544		9.72		611948		13.72		152117		6.16	
6	MW-5-040308	A8341105	333911		9.72		600097		13.72		151047		6.16	
7	MW-7-040308	A8341106	310209		9.72		575512		13.72		138616		6.16	
8	MW-8-040308	A8341107	312365		9.72		577980		13.72		139723		6.16	
9	MWA-3-040308	A8341108	316152		9.72		592082		13.72		142523		6.16	
10	SBLK70	A8B1275302	312177		9.72		592971		13.72		138850		6.16	
11	SMSB70	A8B1275301	287594		9.72		526708		13.73		148806		6.16	

	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
ASP 2000/8270 - HEXACHLOROBENZENE ONLY
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: TestAmerica Laboratories Inc. Contract: _____ Labsampid: A8C0000780

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

Lab File ID (Standard): X23022.RR Date Analyzed: 04/09/2008

Instrument ID: HP5973X Time Analyzed: 07:56

			IS4 (NPT) AREA	#	RT	#	IS5(PHN) AREA	#	RT	#	IS6 (PRY) AREA	#	RT	#
	12 HOUR STD		646925		7.66		654185		11.32		725084		14.99	
	UPPER LIMIT		1293850		8.16		1308370		11.82		1450168		15.49	
	LOWER LIMIT		323463		7.16		327093		10.82		362542		14.49	
	CLIENT SAMPLE	Lab Sample ID												
1	MW-1R-040308	A8341102	548271		7.66		565192		11.31		624091		14.98	
2	MW-2-040308	A8341103	528082		7.66		542652		11.31		613297		14.99	
3	MW-2-040308 MS	A8341103MS	567871		7.66		575508		11.32		611720		14.99	
4	MW-2-040308 MSD	A8341103SD	560792		7.66		571289		11.32		583703		14.99	
5	MW-4-040308	A8341104	569094		7.66		581423		11.31		655627		14.98	
6	MW-5-040308	A8341105	574677		7.66		567149		11.31		631184		14.99	
7	MW-7-040308	A8341106	519566		7.66		538500		11.31		602035		14.99	
8	MW-8-040308	A8341107	529150		7.66		551060		11.31		611459		14.98	
9	MWA-3-040308	A8341108	540823		7.66		551708		11.31		621553		14.99	
10	SBLK70	A8B1275302	532523		7.66		549463		11.31		613958		14.98	
11	SMSB70	A8B1275301	572896		7.66		573966		11.32		608521		14.99	

		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

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job#: A08-B130

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

Mr. Mike Bellotti
Olin Corporation
Environmental Remediation Group
3855 North Ocoee Street, Suite 200
Cleveland, TN 37312

CC: Mr. Michael Walker

TestAmerica Laboratories

Brian J. Fischer
Project Manager

for: Donna Besco
Analyst

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Buffalo
Current Certifications

As of 7/16/2008

STATE	Program	Cert # / Lab ID
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,NELAP CWA, RCRA	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	NY0044
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*	NELAP,SDWA, CWA, RCRA,	NY455
New York*	NELAP, AIR, SDWA, CWA, RCRA,CLP	10026
Oklahoma	CWA, RCRA	9421
Pennsylvania*	Registration, NELAP CWA,RCRA	68-00281
Tennessee	SDWA	02970
Texas*	NELAP CWA, RCRA	T104704412-08-TX
USDA	FOREIGN SOIL PERMIT	S-41579
USDOE	Department of Energy	DOECAP-STB
Virginia	SDWA	278
Washington*	NELAP CWA,RCRA	C1677
Wisconsin	CWA, RCRA	998310390
West Virginia	CWA,RCRA	252

*As required under the indicated accreditation, the test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report.

Sample Data Summary Package

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A8B13010	DS-1-091108	SOIL	09/11/2008	16:00	09/11/2008	16:15
A8B13007	FIELD BLANK-091108	WATER	09/11/2008	15:00	09/11/2008	16:15
A8B13009	MS-1-091108	SOIL	09/11/2008	15:40	09/11/2008	16:15
A8B13002	MW-1R-091108	WATER	09/11/2008	11:40	09/11/2008	16:15
A8B13001	MW-2-091108	WATER	09/11/2008	10:30	09/11/2008	16:15
A8B13001MS	MW-2-091108	WATER	09/11/2008	10:30	09/11/2008	16:15
A8B13001SD	MW-2-091108	WATER	09/11/2008	10:30	09/11/2008	16:15
A8B13005	MW-4-091108	WATER	09/11/2008	13:40	09/11/2008	16:15
A8B13004	MW-5-091108	WATER	09/11/2008	12:50	09/11/2008	16:15
A8B13003	MW-7-091108	WATER	09/11/2008	12:30	09/11/2008	16:15
A8B13006	MW-A3-091108	WATER	09/11/2008	14:30	09/11/2008	16:15
A8B13008	US-1-091108	SOIL	09/11/2008	15:30	09/11/2008	16:15

METHODS SUMMARY

Job#: A08-B130

Project#: NY3A9025
Site Name: Olin Corporation

PARAMETER	ANALYTICAL METHOD
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 Environmental Conservation, June 2000.

SDG NARRATIVE

Job#: A08-B130

Project#: NY3A9025
Site Name: Olin Corporation

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

A08-B130
Sample Cooler(s) were received at the following temperature(s); 4.4 °C
All samples were received in good condition.

GC Extractable Data

For method 8081, the recovery of surrogate Decachlorobiphenyl in sample US-1-091108 is outside of established quality control limits due to the sample matrix and dilution. The recovery of surrogate Tetrachloro-m-xylene is within quality control limits; no corrective action is required.

For method 8081, samples DS-1-091108 and MS-1-091108 required dilution prior to analysis due to the heavy matrix present. The surrogate and spike recoveries are diluted out of all sample extracts with a dilution factor of 10X or greater.

For method 8081, the associated calibration verifications demonstrated an decreased instrument response, >15% difference, for both of the surrogates. The theoretical consequence of these would be a low bias in the calculated surrogate recoveries. The associated sample surrogate recoveries are well within the quality control limits. In the technical judgment of the laboratory, the sample data has not been impacted and no corrective action is required.

"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 Sample Data package and in the electronic data deliverables has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature."

Brian J. Fischer
Project Manager

12-6-08
Date

Date: 10/02/2008
Time: 16:30:39

Dilution Log w/Code Information
For Job A08-B130

Client Sample ID	Lab Sample ID	Parameter (Inorganic)/Method (Organic)	Dilution	Code
US-1-091108	A8B13008	8081	5.00	008
MS-1-091108	A8B13009	8081	10.00	008
DS-1-091108	A8B13010	8081	50.00	008

Dilution Code Definition:

002 - sample matrix effects
003 - excessive foaming
004 - high levels of non-target compounds
005 - sample matrix resulted in method non-compliance for an Internal Standard
006 - sample matrix resulted in method non-compliance for Surrogate
007 - nature of the TCLP matrix
008 - high concentration of target analyte(s)
009 - sample turbidity
010 - sample color
011 - insufficient volume for lower dilution
012 - sample viscosity
013 - other

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION
AND
ANALYTICAL REQUEST SUMMARY

LAB NAME: TESTAMERICA 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-1-091108	A8B13010	-	-	-	SW8463	-	-	-
FIELD BLANK-09110	A8B13007	-	-	-	SW8463	-	-	-
MS-1-091108	A8B13009	-	-	-	SW8463	-	-	-
MW-1R-091108	A8B13002	-	-	-	SW8463	-	-	-
MW-2-091108	A8B13001	-	-	-	SW8463	-	-	-
MW-4-091108	A8B13005	-	-	-	SW8463	-	-	-
MW-5-091108	A8B13004	-	-	-	SW8463	-	-	-
MW-7-091108	A8B13003	-	-	-	SW8463	-	-	-
MW-A3-091108	A8B13006	-	-	-	SW8463	-	-	-
US-1-091108	A8B13008	-	-	-	SW8463	-	-	-

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
PESTICIDE/PCB ANALYSIS

LAB NAME: TESTAMERICA LABORATORIES, INC.

SAMPLE IDENTIFICATION	MATRIX	DATE COLLECTED	DATE RECEIVED AT LAB	DATE EXTRACTED	DATE ANALYZED
DS-1-091108	SOIL	09/11/2008	09/11/2008	-	-
FIELD BLANK-091108	WATER	09/11/2008	09/11/2008	-	-
MS-1-091108	SOIL	09/11/2008	09/11/2008	-	-
MW-1R-091108	WATER	09/11/2008	09/11/2008	-	-
MW-2-091108	WATER	09/11/2008	09/11/2008	-	-
MW-4-091108	WATER	09/11/2008	09/11/2008	-	-
MW-5-091108	WATER	09/11/2008	09/11/2008	-	-
MW-7-091108	WATER	09/11/2008	09/11/2008	-	-
MW-A3-091108	WATER	09/11/2008	09/11/2008	-	-
US-1-091108	SOIL	09/11/2008	09/11/2008	-	-

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
ORGANIC ANALYSIS

LAB NAME: TESTAMERICA LABORATORIES, INC.

SAMPLE IDENTIFICATION	MATRIX	ANALYTICAL PROTOCOL	EXTRACTION METHOD	AUXILIARY CLEAN UP	DIL/CONC FACTOR
DS-1-091108	SOIL	SW8463	SONC	AS REQUIRED	AS REQUIRED
FIELD BLANK-091108	WATER	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MS-1-091108	SOIL	SW8463	SONC	AS REQUIRED	AS REQUIRED
MW-1R-091108	WATER	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MW-2-091108	WATER	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MW-4-091108	WATER	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MW-5-091108	WATER	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MW-7-091108	WATER	SW8463	SEPF	AS REQUIRED	AS REQUIRED
MW-A3-091108	WATER	SW8463	SEPF	AS REQUIRED	AS REQUIRED
US-1-091108	SOIL	SW8463	SONC	AS REQUIRED	AS REQUIRED

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

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.
G	Indicates a value greater than or equal to the project reporting limit but less than the laboratory quantitation limit
*	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
ASP 2000 - METHOD 8081 BHC'S
ANALYSIS DATA SHEET

Client No.

DS-1-091108

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: A8B13010

Sample wt/vol: 30.00 (g/mL) G Lab File ID: 5B17200.TX0

% Moisture: 67 decanted: (Y/N) Y Date Samp/Recv: 09/11/2008 09/11/2008

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 09/13/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/29/2008

Injection Volume: 1.00 (uL) Dilution Factor: 50.00

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	5200	
319-85-7	beta-BHC	1000	
319-86-8	delta-BHC	66	J
58-89-9	gamma-BHC (Lindane)	82	J

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

Client No.

FIELD BLANK-091108

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8B13007

Sample wt/vol: 1060.00 (g/mL) ML Lab File ID: 6A22148.TX0

% Moisture: _____ decanted: (Y/N) N Date Samp/Recv: 09/11/2008 09/11/2008

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 09/12/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/28/2008

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	0.047	U
319-85-7	beta-BHC	0.047	U
319-86-8	delta-BHC	0.047	U
58-89-9	gamma-BHC (Lindane)	0.047	U

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

Client No.

MS-1-091108

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: A8B13009

Sample wt/vol: 30.72 (g/mL) G Lab File ID: 5B17199.TX0

% Moisture: 69 decanted: (Y/N) Y Date Samp/Recv: 09/11/2008 09/11/2008

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 09/13/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/29/2008

Injection Volume: 1.00 (uL) Dilution Factor: 10.00

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	82	
319-85-7	beta-BHC	89	
319-86-8	delta-BHC	25	J
58-89-9	gamma-BHC (Lindane)	52	U

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

Client No.

MW-1R-091108

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8B13002

Sample wt/vol: 1000.00 (g/mL) ML Lab File ID: 6A22143.TX0

% Moisture:_____ decanted: (Y/N) N Date Samp/Recv: 09/11/2008 09/11/2008

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 09/12/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/27/2008

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	0.015	J
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
ASP 2000- METHOD 8081 BHC'S
ANALYSIS DATA SHEET

Client No.

MW-2-091108

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8B13001

Sample wt/vol: 1055.00 (g/mL) ML Lab File ID: 6A22140.TX0

% Moisture: _____ decanted: (Y/N) N Date Samp/Recv: 09/11/2008 09/11/2008

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 09/12/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/27/2008

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	0.047	U
319-85-7	beta-BHC	0.047	U
319-86-8	delta-BHC	0.047	U
58-89-9	gamma-BHC (Lindane)	0.047	U

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

Client No.

MW-4-091108

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8B13005

Sample wt/vol: 1050.00 (g/mL) ML Lab File ID: 6A22146.TX0

% Moisture:_____ decanted: (Y/N) N Date Samp/Recv: 09/11/2008 09/11/2008

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 09/12/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/28/2008

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)	0.048	U

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

Client No.

MW-5-091108

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8B13004

Sample wt/vol: 1060.00 (g/mL) ML Lab File ID: 6A22145.TX0

% Moisture: _____ decanted: (Y/N) N Date Samp/Recv: 09/11/2008 09/11/2008

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 09/12/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/28/2008

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	0.017	J
319-85-7	beta-BHC	0.047	U
319-86-8	delta-BHC	0.018	J
58-89-9	gamma-BHC (Lindane)	0.0094	J

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

Client No.

MW-7-091108

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8B13003

Sample wt/vol: 1060.00 (g/mL) ML Lab File ID: 6A22144.TX0

% Moisture:_____ decanted: (Y/N) N Date Samp/Recv: 09/11/2008 09/11/2008

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 09/12/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/28/2008

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	0.014	J
319-85-7	beta-BHC	0.047	U
319-86-8	delta-BHC	0.047	U
58-89-9	gamma-BHC (Lindane)	0.047	U

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

Client No.

MW-A3-091108

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8B13006

Sample wt/vol: 1030.00 (g/mL) ML Lab File ID: 6A22147.TX0

% Moisture:_____ decanted: (Y/N) N Date Samp/Recv: 09/11/2008 09/11/2008

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 09/12/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/28/2008

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)	0.048	U

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

Client No.

US-1-091108

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: A8B13008

Sample wt/vol: 30.20 (g/mL) G Lab File ID: 5B17198.TX0

% Moisture: 68 decanted: (Y/N) Y Date Samp/Recv: 09/11/2008 09/11/2008

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 09/13/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/29/2008

Injection Volume: 1.00 (uL) Dilution Factor: 5.00

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	77	
319-85-7	beta-BHC	69	
319-86-8	delta-BHC	17	J
58-89-9	gamma-BHC (Lindane)	26	U

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

Lab Name: TestAmerica Laboratories Inc. Contract: _____

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

GC Column(1): RTX-CLPI ID: 0.53 (mm) GC Column(2): RTX-CLPII ID.: 0.53 (mm)

	Client Sample ID	Lab Sample ID	DCBP 1 %REC	#	DCBP 2 %REC	#	TCMX 1 %REC	#	TCMX 2 %REC	#					TOT OUT
1	FIELD BLANK-091108	A8B13007	64		41		74		68						0
2	Matrix Spike Blank	A8B2221301	65		63		75		73						0
3	Method Blank	A8B2221303	62		100		73		71						0
4	MW-1R-091108	A8B13002	97		63		71		68						0
5	MW-2-091108	A8B13001	87		62		80		76						0
6	MW-2-091108	A8B13001MS	85		60		66		63						0
7	MW-2-091108	A8B13001SD	81		63		72		68						0
8	MW-4-091108	A8B13005	61		37		68		58						0
9	MW-5-091108	A8B13004	53		34		64		63						0
10	MW-7-091108	A8B13003	86		59		66		61						0
11	MW-A3-091108	A8B13006	88		58		70		65						0

QC LIMITS

(DCBP) = Decachlorobiphenyl (15-139)
(TCMX) = Tetrachloro-m-xylene (30-139)

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

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

Lab Name: TestAmerica Laboratories Inc. Contract: _____

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

GC Column(1): RTX-CLPII ID: 0.53 (mm) GC Column(2): RTX-CLPI ID.: 0.53 (mm)

Level (low/med): LOW

	Client Sample ID	Lab Sample ID	DCBP 1 %REC	#	DCBP 2 %REC	#	TCMX 1 %REC	#	TCMX 2 %REC	#					TOT OUT
1	DS-1-091108	A8B13010	0	D	0	D	0	D	0	D					0
2	Matrix Spike Blank	A8B2225401	68		110		103		90						0
3	Matrix Spike Blk Dup	A8B2225402	62		116		80		75						0
4	Method Blank	A8B2225403	71		125		104		97						0
5	MS-1-091108	A8B13009	0	D	0	D	0	D	0	D					0
6	US-1-091108	A8B13008	225	*	274	*	98		128						2

QC LIMITS

(DCBP) = Decachlorobiphenyl (42-146)
(TCMX) = Tetrachloro-m-xylene (37-135)

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

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

Lab Name: TestAmerica Laboratories Inc. Contract: _____ Lab Samp ID: A8B2221303

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.	+ =
gamma-BHC (Lindane)	0.500	0.466	93	68 - 120	
alpha-BHC	0.500	0.447	89	39 - 121	
beta-BHC	0.500	0.475	95	39 - 138	
delta-BHC	0.500	0.470	94	40 - 121	

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
ASP 2000 - METHOD 8081 BHC'S
SOIL MATRIX SPIKE BLANK/MATRIX SPIKE BLANK DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories Inc. Contract: _____ Lab Samp ID: A8B2225403

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.	+ =
gamma-BHC (Lindane)	16.2	15.9	98	50 - 120	
alpha-BHC	16.2	15.9	97	49 - 120	
beta-BHC	16.2	16.4	101	56 - 120	
delta-BHC	16.2	16.3	99	45 - 123	

COMPOUND	SPIKE ADDED UG/KG	MSBD CONCENTRATION UG/KG	MSBD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.	+ =
gamma-BHC (Lindane)	16.4	13.0	79	21	50	50 - 120	
alpha-BHC	16.4	13.1	79	20	50	49 - 120	
beta-BHC	16.4	14.2	87	15	50	56 - 120	
delta-BHC	16.4	14.0	84	16	50	45 - 123	

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
ASP 2000- METHOD 8081 BHC'S
WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Laboratories Inc. Contract: _____ Lab Samp ID: A8B13001

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

Matrix Spike - Client Sample No.: MW-2-091108

COMPOUND	SPIKE ADDED UG/L	SAMPLE CONCENTRATION UG/L	MS CONCENTRATION UG/L	MS % REC #	QC LIMITS REC.	+ =
gamma-BHC (Lindane)	0.476	0	0.375	79	68 - 120	
alpha-BHC	0.476	0	0.360	76	39 - 121	
beta-BHC	0.476	0	0.407	86	39 - 138	
delta-BHC	0.476	0	0.423	89	40 - 121	

COMPOUND	SPIKE ADDED UG/L	MSD CONCENTRATION UG/L	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.	+ =
gamma-BHC (Lindane)	0.476	0.398	84	6	50	68 - 120	
alpha-BHC	0.476	0.385	81	6	50	39 - 121	
beta-BHC	0.476	0.426	90	4	50	39 - 138	
delta-BHC	0.476	0.447	94	5	50	40 - 121	

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
ASP 2000- METHOD 8081 BHC'S
METHOD BLANK SUMMARY

Client No.

Method Blank

Lab Name: TestAmerica Laborat Contract: _____

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

Lab Sample ID: A8B2221303 Lab File ID: 6B22135.TX0

Matrix: (soil/water) WATER Extraction: SEPF

Sulfur Cleanup: (Y/N): N Date Extracted: 09/12/2008

Date Analyzed (1): 09/27/2008 Date Analyzed (2): 09/27/2008

Time Analyzed (1): 18:56 Time Analyzed (2): 18:56

Instrument ID (1): HP6890-6 Instrument ID (2): HP6890-6

GC Column (1): RTX-CLPII Dia: 0.53(mm) GC Column (2): RTX-CLPI Dia: 0.53(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	FIELD BLANK-091108	A8B13007	09/28/2008	09/28/2008
2	Matrix Spike Blank	A8B2221301	09/27/2008	09/27/2008
3	MW-1R-091108	A8B13002	09/27/2008	09/27/2008
4	MW-2-091108	A8B13001	09/27/2008	09/27/2008
5	MW-2-091108	A8B13001MS	09/27/2008	09/27/2008
6	MW-2-091108	A8B13001SD	09/27/2008	09/27/2008
7	MW-4-091108	A8B13005	09/28/2008	09/28/2008
8	MW-5-091108	A8B13004	09/28/2008	09/28/2008
9	MW-7-091108	A8B13003	09/28/2008	09/28/2008
10	MW-A3-091108	A8B13006	09/28/2008	09/28/2008

Comments: _____

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

Client No.

Method Blank

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) WATER Lab Sample ID: A8B2221303

Sample wt/vol: 1000.00 (g/mL) ML Lab File ID: 6B22135.TX0

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

Extraction: (SepF/Cont/Sonc/Soxh): SEPF Date Extracted: 09/12/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/27/2008

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
ASP 2000 - METHOD 8081 BHC'S
METHOD BLANK SUMMARY

Client No.

Method Blank

Lab Name: TestAmerica Laborat Contract: _____

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

Lab Sample ID: A8B2225403 Lab File ID: 5B17187.TX0

Matrix: (soil/water) SOIL Extraction: SONC

Sulfur Cleanup: (Y/N): N Date Extracted: 09/13/2008

Date Analyzed (1): 09/29/2008 Date Analyzed (2): 09/29/2008

Time Analyzed (1): 13:39 Time Analyzed (2): 13:39

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

GC Column (1): RTX-CLPII Dia: 0.53(mm) GC Column (2): RTX-CLPI Dia: 0.53(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-1-091108	A8B13010	09/29/2008	09/29/2008
2	Matrix Spike Blank	A8B2225401	09/29/2008	09/29/2008
3	Matrix Spike Blk Dup	A8B2225402	09/29/2008	09/29/2008
4	MS-1-091108	A8B13009	09/29/2008	09/29/2008
5	US-1-091108	A8B13008	09/29/2008	09/29/2008

Comments: _____

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

Client No.

Method Blank

Lab Name: TestAmerica Laboratories Contract: _____

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

Matrix: (soil/water) SOIL Lab Sample ID: A8B2225403

Sample wt/vol: 30.35 (g/mL) G Lab File ID: 5B17187.TX0

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

Extraction: (SepF/Cont/Sonc/Soxh): SONC Date Extracted: 09/13/2008

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 09/29/2008

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

Sample Data Package

SDG Narrative

SAMPLE SUMMARY

LAB SAMPLE ID	CLIENT SAMPLE ID	MATRIX	SAMPLED DATE	SAMPLED TIME	RECEIVED DATE	RECEIVED TIME
A8B13010	DS-1-091108	SOIL	09/11/2008	16:00	09/11/2008	16:15
A8B13007	FIELD BLANK-091108	WATER	09/11/2008	15:00	09/11/2008	16:15
A8B13009	MS-1-091108	SOIL	09/11/2008	15:40	09/11/2008	16:15
A8B13002	MW-1R-091108	WATER	09/11/2008	11:40	09/11/2008	16:15
A8B13001	MW-2-091108	WATER	09/11/2008	10:30	09/11/2008	16:15
A8B13001MS	MW-2-091108	WATER	09/11/2008	10:30	09/11/2008	16:15
A8B13001SD	MW-2-091108	WATER	09/11/2008	10:30	09/11/2008	16:15
A8B13005	MW-4-091108	WATER	09/11/2008	13:40	09/11/2008	16:15
A8B13004	MW-5-091108	WATER	09/11/2008	12:50	09/11/2008	16:15
A8B13003	MW-7-091108	WATER	09/11/2008	12:30	09/11/2008	16:15
A8B13006	MW-A3-091108	WATER	09/11/2008	14:30	09/11/2008	16:15
A8B13008	US-1-091108	SOIL	09/11/2008	15:30	09/11/2008	16:15

METHODS SUMMARY

Job#: A08-B130

Project#: NY3A9025
Site Name: Olin Corporation

PARAMETER	ANALYTICAL METHOD
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 Environmental Conservation, June 2000.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4142 (0907)

Client	Project Manager	Date	Chain of Custody Number
OLIN CORPORATION	MIKE BELLOTTI	4/3/08	389941
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page ____ of ____**
3855 NORTH OCOEE STREET			
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
CLEVELAND / TN / 37312	MIKE WALKER	BRIAN FISCHER	
Project Name and Location (State)	**Carrier/Waybill Number**		
OLIN - CHARLES GIBSON SITE			
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: BHCs	Hexachlorobenzene	Special Instructions/ Conditions of Receipt
MANHOLE B - 040308	4/3/08	900		X			2						2	0	
MW-2 - 040308		1035		X			4						2	2	
MW-2 - 040308 MS		1035		X			4						2	2	MS/MSD MW-2
MW-2 - 040308 MSD		1035		X			4						2	2	
MW-7 - 040308		0830		X			4						2	2	
MW-1R - 040308		1135		X			4						2	2	
MW-5 - 040308		1310		X			4						2	2	
MW-4 - 040308		1410		X			4						2	2	
MW-A3 - 040308		1505		X			4						2	2	
MW-8 - 040308		1540		X			4						2	2	

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)

1. Relinquished By	Date	Time	1. Received By	Date	Time
	4/3/08	1600		4/3/08	1600
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

3@2.0°C

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

47/442

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
OLIN CORP	MIKE BELLOTTI	9/11/08	111208
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
3855 NORTH OCOEE STREET	432-336-4587		
City / State / Zip Code	**Site Contact**	**Lab Contact**	
CLEVELAND / TN / 37312	MIKE WALKER	BRIAN FISCHER	
Project Name and Location (State)	**Carrier/Waybill Number**		
OLIN - CHARLES GIBSON SITE			
Contract/Purchase Order/Quote No.			
ATTN: MIKE BELLOTTI			

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 (Attach list if more space is needed): BHCs	Special Instructions/ Conditions of Receipt
MW-2-091108	9/11/08	1030		X			X						4	MS/MSD *
MW-1R-091108		1140		X			X						2	
MW-7-091108		1230		X			X						2	
MW-5-091108		1250		X			X						2	
MW-4-091108		1340		X			X						2	
MW-A3-091108		1430		X			X						2	
FIELD BLANK-091108		1500		X			X						2	
MS-1-091108		1530				X							1	
MS-1-091108		1540				X							1	
DS-1-091108		1600				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		Date	Time
1. Relinquished By	9/11/08	1615	1. Received By	9/11/08	1615
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

4.4°C

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

39/503

APPENDIX B

Field Logs

Semiannual Groundwater Monitoring
and
Annual Sediment Sampling
and
Quarterly Inspections

2008

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: 2/12/2008 TIME: 800

INSPECTOR: Walker COMPANY: Sevenson

WEATHER:

REASON FOR INSPECTION (QUARTERLY OR OTHER): Drive by inspection, noticed damage

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

ADDITIONAL COMMENTS: During a routine drive by, I noticed the wodden fence facing Tuscorora Rd. had sustained some damage, most likely due to a wind storm the previuos 2 days. I did a quick site walk to make sure no other damage was evident and then erected a temporary safety fence as a barrier until Fox Fence could come out an do a permanent repair.

MW 4hrs.

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: 2/13/2008 TIME: 930

INSPECTOR: Walker COMPANY: Sevenson

WEATHER:

REASON FOR INSPECTION (QUARTERLY OR OTHER): Fence repair follow up

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: Met on site with the crew from Fox Fence to supervise

Repairs to the wind damaged fence . Explained how the steel fence posts should be drilled into the bases of the former wooden posts, and then the wooden fence should be affixed to the steel posts.

This would eliminate the need to dig new post holes and possibly damage the cap cover or liner.

This procedure has worked in the past, and has worked again this time, see attached pictures.

MW 2

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: 4/3/2008 TIME: 730

INSPECTOR: C.Jones COMPANY: Sevenson

WEATHER:

REASON FOR INSPECTION (QUARTERLY OR OTHER): Qtrly. Insp. and spring sample 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	picked up some trash blowing around
EROSION (CAP)	A	
EROSION (BANK)	A	
SECURITY:		
FENCE/LOCKS	A	Fence on NW side needs minor maintenance
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: 9/11/2008 TIME: 1500

INSPECTOR: C Jones COMPANY: Sevenson

WEATHER:

REASON FOR INSPECTION (QUARTERLY OR OTHER): Fall 08

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	few plastic bags were thrown out
EROSION (CAP)	A	
EROSION (BANK)	A	
SECURITY:		
FENCE/LOCKS	A	
PIEZOMETERS/LOCKS	A	P-3 has settled 2 inches
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: 11/5/2008 TIME: 900

INSPECTOR: M. Walker COMPANY: Sevenson

WEATHER: Sunny 60 F

REASON FOR INSPECTION (QUARTERLY OR OTHER): Fourth Quarter Inspection

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:

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

DATE: 4/3/2008 SEMI-ANNUAL SAMPLING EVENT: Spring 2008

PERSON CALIBRATING METERS: C. Jones

pH METER USED: MANUFACTURER: Oakton
MODEL: pH tester 3
IDENTIFICATION/CONTROL NUMBER: e-941

CALIBRATION STANDARDS USED:

STANDARD 7.00 METER READ: 7.00
STANDARD 4.00 METER READ: 4.01
STANDARD 10.00 METER READ: 10.09

METER CALIBRATION COMMENTS:

SPECIFIC CONDUCTIVITY METER USED:
MANUFACTURER: Oakton Conductivity Meter
MODEL: WD 35607-10
IDENTIFICATION/CONTROL NUMBER: e-706

CALIBRATION STANDARDS USED:

STANDARD 0 READ:
(STANDARD 0 USED: _____ AIR, _____ WATER)
STANDARD _____ 447 444
STANDARD _____ READ:

METER CALIBRATION COMMENTS:

THERMOMETER USED: TYPE: Digital
MANUFACTURER: Fischer Scientific
IDENTIFICATION/CONTROL NUMBER: e-969
COMMENTS: (DOES THERMOMETER TEMPERATURE AGREE WITH SPECIFIC CONDUCTIVITY METER TEMPERATURE ?)
OTHER:

OTHER INSTRUMENTS USED: TYPE:
MANUFACTURER:
IDENTIFICATION/CONTROL NUMBER:

CALIBRATIONS PERFORMED:

OTHER CALIBRATION COMMENTS:

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

RECORDED BY: C. Jones
SAMPLE ID: MW-1R-040308 & MW7-040308
SAMPLED BY: C.Jones
SAMPLING EVENT/DATE: 4/3/2008
COMPANY: Sevenson
MONITORING WELL: MW-1R
CONDITION: OK

GROUNDWATER PURGE DATA PURGE DATE: 4/3/2008

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'

DEPTH TO BOTTOM FROM TOP OF RISER: 12.1 (FT.)
DEPTH TO WATER FROM TOP OF RISER: 4.01 (FT.)
WATER COLUMN: 8.09 (FT.)
2" DIA. WELL CONSTANT: 0.16
ONE WELL VOLUME= 1.29 (GALS)
PURGE METHOD: Peristaltic pump w/dedicated tubing
BOTTOM OF WELL/SILT BUILDUP: none
PURGE START TIME 1110 STOP TIM 1130
PURGE OBSERVATIONS: Clear

FIELD PARAMETER MEASUREMENTS:

WELL VOLUME	pH	SPECIFIC CONDUCTIVITY umhos/cm)	TEMP. (C OR F)	NOTES:
1	8.01	962	7.9	Clear
2	7.88	975	7.8	Clear
3	7.87	983	7.7	Clear
4	7.85	989	7.8	Clear
5				

TOTAL VOLUME PURGED: 3.88 gallons

GROUNDWATER OR SEDIMENT SAMPLING DATA: SAMPLE DATE: 4/3/2008

MEDIA: GROUNDWATER X
CREEK SEDIMENT
SAMPLE TIME: 1135
"MW-7" 830

LOCATION: Tuscarora Rd.

SAMPLE METHOD: P/Pump w/ dedicated tubing.

SAMPLING OBSERVATIONS: Clear , No Order

QC SAMPLES TAKEN: Blind Duokicate taken and labeled "MW-7" for QC.

OTHER OBSERVATIONS/COMMENTS: 8-1liter amber bottles taken.

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

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

RECORDED BY: C. Jones
SAMPLE ID: MW5-040308
SAMPLED BY: C.Jones
SAMPLING EVENT/DATE: 4/3/2008
COMPANY: Sevenson
MONITORING WELL: MW-5
CONDITION: OK

GROUNDWATER PURGE DATA PURGE DATE: 4/3/2008

DEPTH TO BOTTOM FROM TOP OF RISER: 15.28 (FT.)
DEPTH TO WATER FROM TOP OF RISER: 7.5 (FT.)
WATER COLUMN: 7.78 (FT.)
2" DIA. WELL CONSTANT: 0.16
ONE WELL VOLUME= 1.24 (GALS)

PURGE METHOD: Peristaltic pump w/dedicated tubing
BOTTOM OF WELL/SILT BUILDUP: none
PURGE START TIME 1245 STOP TIM 1305
PURGE OBSERVATIONS: turbid to clear

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	6.73	1751	9.1	Slightly turbid
2	6.71	1867	8.7	Clear
3	6.69	1861	8.7	Clear
4	6.68	1869	8.7	Clear
5				

TOTAL VOLUME PURGED: 3.73 gallons

GROUNDWATER OR SEDIMENT SAMPLING DATA: SAMPLE DATE: 4/3/2008

MEDIA: GROUNDWATER X
CREEK SEDIMENT
SAMPLE TIME: 1310

LOCATION: MW-5, in field past MW-4

SAMPLE METHOD: P/Pump w/ dedicated tubing.

SAMPLING OBSERVATIONS: Clear, No Odor

QC SAMPLES TAKEN: none

OTHER OBSERVATIONS/COMMENTS: 4-1liter amber bottles

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

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

RECORDED BY: C. Jones **SAMPLE ID:**

SAMPLED BY: C.Jones SAMPLING EVENT/DATE:

COMPANY: Sevenson MONITORING WELL: Manhole B

CONDITION: OK

GROUNDWATER PURGE DATA PURGE DATE: 4/3/2008

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				Grab sample
2				
3				
4				
5				

TOTAL VOLUME PURGED: 0

GROUNDWATER OR SEDIMENT SAMPLING DATA: SAMPLE DATE:

MEDIA: GROUNDWATER X SAMPLE TIME:
CREEK SEDIMENT

LOCATION: Manhole B

SAMPLE METHOD:

SAMPLING OBSERVATIONS: NOT SAMPLED THIS ROUND

QC SAMPLES TAKEN: no

OTHER OBSERVATIONS/COMMENTS:

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 **SAMPLE ID:** MW_8

SAMPLED BY: C.Jones SAMPLING EVENT/DATE: 4/3/2008

COMPANY: Sevenson MONITORING WELL: Field Blank

CONDITION: OK

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:

ONE WELL VOLUME= (GALS)

PURGE METHOD:

BOTTOM OF WELL/SILT BUILDUP:

PURGE START TIME STOP TIM

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: gallons

GROUNDWATER OR SEDIMENT SAMPLING DATA: SAMPLE DATE: 4/3/2008

MEDIA: GROUNDWATER _____ SAMPLE TIME: 1540
CREEK SEDIMENT _____

LOCATION: "MW-8" Field Blank

SAMPLE METHOD:

SAMPLING OBSERVATIONS:

QC SAMPLES TAKEN: Field Blank

OTHER OBSERVATIONS/COMMENTS: 4-1liter amber bottles taken.

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 **SAMPLE ID:** MW4-040308

SAMPLED BY: C.Jones SAMPLING EVENT/DATE: 4/3/2008

COMPANY: Sevenson MONITORING WELL: MW-4

CONDITION: OK

GROUNDWATER PURGE DATA PURGE DATE: 4/3/2008

DEPTH TO BOTTOM FROM TOP OF RISER: 13.75 (FT.)

DEPTH TO WATER FROM TOP OF RISER: 6.49 (FT.)

WATER COLUMN: 7.26 (FT.)

2" DIA. WELL CONSTANT: 0.16

ONE WELL VOLUME= 1.16 (GALS)

NOTE: ALL GIBSON SITE MONITORING WELLS ARE 2-INCH DIAMETER STAIN-LESS STEEL. WELL DEPTHS:

MW-1R	12.10'
MW-2	12.13'
MW-A3	11.95'
MW-4	13.75'
MW-5	15.28'

PURGE METHOD: Peristaltic pump w/dedicated tubing
BOTTOM OF WELL/SILT BUILDUP: yes
PURGE START TIME 1335 STOP TIM 1400
PURGE OBSERVATIONS: turbid w/ black flakesthen clearing

FIELD PARAMETER MEASUREMENTS:

WELL VOLUME	pH	SPECIFIC CONDUCTIVITY umhos/cm)	TEMP. (C OR F)	NOTES:
1	7.91	1416	9.1	Orange, turbid
2	7.68	1590	8.5	Orange, turbid
3	7.66	1602	8.3	Slightly turbid
4	7.65	1611	8.3	Clear
5				

TOTAL VOLUME PURGED: 3.48 gallons

GROUNDWATER OR SEDIMENT SAMPLING DATA: SAMPLE DATE: 4/3/2008

MEDIA: GROUNDWATER X SAMPLE TIME: 1410
CREEK SEDIMENT

LOCATION: MW-4, On Autozone property, east of bldg.

SAMPLE METHOD: P/Pump w/ dedicated tubing.

SAMPLING OBSERVATIONS: Clear, No Odor

QC SAMPLES TAKEN: none

OTHER OBSERVATIONS/COMMENTS: 4-1liter amber bottles taken.

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 **SAMPLE ID:** MW-A3-040308

SAMPLED BY: C.Jones SAMPLING EVENT/DATE: 4/3/2008

COMPANY: Sevenson MONITORING WELL: MW-A3

CONDITION: OK

GROUNDWATER PURGE DATA PURGE DATE: 4/3/2008

DEPTH TO BOTTOM FROM TOP OF RISER: 11.95 (FT.)

DEPTH TO WATER FROM TOP OF RISER: 5.38 (FT.)

WATER COLUMN: 6.57 (FT.)

2" DIA. WELL CONSTANT: 0.16

ONE WELL VOLUME= 1.05 (GALS)

NOTE: ALL GIBSON SITE MONITORING WELLS ARE 2-INCH DIAMETER STAIN-LESS STEEL. WELL DEPTHS:

MW-1R	12.10'
MW-2	12.13'
MW-A3	11.95'
MW-4	13.75'
MW-5	15.28'

PURGE METHOD: Peristaltic pump w/dedicated tubing
BOTTOM OF WELL/SILT BUILDUP: no
PURGE START TIME 1435 STOP TIM 1500
PURGE OBSERVATIONS: Clear

FIELD PARAMETER MEASUREMENTS:

WELL VOLUME	pH	SPECIFIC CONDUCTIVITY umhos/cm)	TEMP. (C OR F)	NOTES:
1	7.61	468	8.7	Clear
2	7.45	435	8.5	Clear
3	7.44	439	8.4	Clear
4	7.42	433	8.3	Clear
5				

TOTAL VOLUME PURGED: 3.15 gallons

GROUNDWATER OR SEDIMENT SAMPLING DATA: SAMPLE DATE: 4/3/2008

MEDIA: GROUNDWATER X SAMPLE TIME: 1505
CREEK SEDIMENT

LOCATION: MW-A3, behind Niagara Falls Hotel

SAMPLE METHOD: P/Pump w/ dedicated tubing.

SAMPLING OBSERVATIONS: Clear, No Odor

QC SAMPLES TAKEN: none

OTHER OBSERVATIONS/COMMENTS: 4-1liter amber bottles taken.

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 SAMPLING FIELD PARAMETERS
FIELD INSTRUMENTATION CALIBRATION FORM

DATE: 9/11/2008 SEMI-ANNUAL SAMPLING EVENT: Fall 2008

PERSON CALIBRATING METERS: C. Jones

pH METER USED: MANUFACTURER: Double Junction
MODEL: pH tester 30
IDENTIFICATION/CONTROL NUMBER: 1220148

CALIBRATION STANDARDS USED:

STANDARD 7.00 METER READ: 7.04
STANDARD 4.00 METER READ: 4.01
STANDARD 10.00 METER READ: 10.03

METER CALIBRATION COMMENTS:

SPECIFIC CONDUCTIVITY METER USED:
MANUFACTURER: Oakton Conductivity Meter
MODEL: WD 35607-10
IDENTIFICATION/CONTROL NUMBER: e-706

CALIBRATION STANDARDS USED:

STANDARD 0 READ:
(STANDARD 0 USED: _____ AIR, _____ WATER)
STANDARD _____ 447 444
STANDARD _____ 8974 8981

METER CALIBRATION COMMENTS:

THERMOMETER USED: TYPE: Digital
MANUFACTURER: Fischer Scientific
IDENTIFICATION/CONTROL NUMBER: 21115741
COMMENTS: (DOES THERMOMETER TEMPERATURE AGREE WITH SPECIFIC CONDUCTIVITY METER TEMPERATURE ?) yes
OTHER:

OTHER INSTRUMENTS USED: TYPE:
MANUFACTURER:
IDENTIFICATION/CONTROL NUMBER:

CALIBRATIONS PERFORMED:

OTHER CALIBRATION COMMENTS:

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

RECORDED BY: C. Jones
SAMPLE ID: MW5-091108
SAMPLED BY: C.Jones
SAMPLING EVENT/DATE: 9/11/2008
COMPANY: Sevenson
MONITORING WELL: MW-5
CONDITION: OK

GROUNDWATER PURGE DATA
PURGE DATE: 9/11/2008

DEPTH TO BOTTOM FROM TOP OF RISER: 15.28 (FT.)
DEPTH TO WATER FROM TOP OF RISER: 7.8 (FT.)
WATER COLUMN: 7.48 (FT.)
2" DIA. WELL CONSTANT: 0.16
ONE WELL VOLUME= 1.20 (GALS)

NOTE: ALL GIBSON SITE MONITORING WELLS ARE 2-INCH DIAMETER STAIN-LESS STEEL. WELL DEPTHS:

MW-1R	12.10'
MW-2	12.13'
MW-A3	11.95'
MW-4	13.75'
MW-5	15.28'

PURGE METHOD: Peristaltic pump w/dedicated tubing
BOTTOM OF WELL/SILT BUILDUP: none
PURGE START TIME: 1200 STOP TIM 1240
PURGE OBSERVATIONS: turbid to clear

FIELD PARAMETER MEASUREMENTS:

WELL VOLUME	pH	SPECIFIC CONDUCTIVITY umhos/cm)	TEMP. (C OR F)	NOTES:
1	6.52	532	16.4	Slightly turbid
2	6.53	490	16.1	Clear
3	6.54	481	16.2	Clear
4	6.53	478	16.2	Clear
5				

TOTAL VOLUME PURGED: 3.59 gallons

GROUNDWATER OR SEDIMENT SAMPLING DATA:
SAMPLE DATE: 9/11/2008

MEDIA: GROUNDWATER X
CREEK SEDIMENT
SAMPLE TIME: 1250

LOCATION: MW-5, in field past MW-4

SAMPLE METHOD: P/Pump w/ dedicated tubing.

SAMPLING OBSERVATIONS: Clear, No Odor

QC SAMPLES TAKEN: none

OTHER OBSERVATIONS/COMMENTS: 2-1liter amber bottles. Sampled for BHC

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

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

RECORDED BY: C. Jones **SAMPLE ID:** MW-1R-091108 & MW7-091108

SAMPLED BY: C.Jones SAMPLING EVENT/DATE: 9/11/2008

COMPANY: Sevenson MONITORING WELL: MW-1R

CONDITION: OK

GROUNDWATER PURGE DATA PURGE DATE: 9/11/2008

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'

DEPTH TO BOTTOM FROM TOP OF RISER: 12.1 (FT.)

DEPTH TO WATER FROM TOP OF RISER: 6.65 (FT.)

WATER COLUMN: 5.45 (FT.)

2" DIA. WELL CONSTANT: 0.16

ONE WELL VOLUME= 0.87 (GALS)

PURGE METHOD: Peristaltic pump w/dedicated tubing

BOTTOM OF WELL/SILT BUILDUP: none

PURGE START TIME: 1100 STOP TIM 1130

PURGE OBSERVATIONS: Clear

FIELD PARAMETER MEASUREMENTS:

WELL VOLUME	pH	SPECIFIC CONDUCTIVITY umhos/cm)	TEMP. (C OR F)	NOTES:
1	7.53	802	17.1	Clear
2	7.49	823	17	Clear
3	7.45	830	17.1	Clear
4	7.43	835	17	Clear
5				

TOTAL VOLUME PURGED: 2.62 gallons

GROUNDWATER OR SEDIMENT SAMPLING DATA: SAMPLE DATE: 9/11/2008

MEDIA: GROUNDWATER X SAMPLE TIME: 1140

CREEK SEDIMENT "MW-7" 1230

LOCATION: Tuscarora Rd.

SAMPLE METHOD: P/Pump w/ dedicated tubing.

SAMPLING OBSERVATIONS: Clear , No Order

QC SAMPLES TAKEN: Blind Duplicate taken and labeled "MW-7" for QC.

OTHER OBSERVATIONS/COMMENTS: 4-1liter amber bottles taken. Sampled for BHC

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

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

RECORDED BY: C. Jones **SAMPLE ID:** MW4-091108

SAMPLED BY: C.Jones SAMPLING EVENT/DATE: 9/11/2008

COMPANY: Sevenson MONITORING WELL: MW-4

CONDITION: OK

GROUNDWATER PURGE DATA PURGE DATE: 9/11/2008

DEPTH TO BOTTOM FROM TOP OF RISER: 13.75 (FT.)

DEPTH TO WATER FROM TOP OF RISER: 6.96 (FT.)

WATER COLUMN: 6.79 (FT.)

2" DIA. WELL CONSTANT: 0.16

ONE WELL VOLUME= 1.09 (GALS)

NOTE: ALL GIBSON SITE MONITORING WELLS ARE 2-INCH DIAMETER STAIN-LESS STEEL. WELL DEPTHS:

MW-1R	12.10'
MW-2	12.13'
MW-A3	11.95'
MW-4	13.75'
MW-5	15.28'

PURGE METHOD: Peristaltic pump w/dedicated tubing
BOTTOM OF WELL/SILT BUILDUP: none
PURGE START TIME 1310 STOP TIM 1335
PURGE OBSERVATIONS: turbid w/ black flakesthen clearing, slight odor

FIELD PARAMETER MEASUREMENTS:

WELL VOLUME	pH	SPECIFIC CONDUCTIVITY umhos/cm)	TEMP. (C OR F)	NOTES:
1	7.31	1178	16.6	Orange, turbid
2	7.37	1060	16.4	slightly turbid
3	7.34	1035	16.3	Slightly turbid
4	7.36	1026	16.3	Clear
5				

TOTAL VOLUME PURGED: 3.26 gallons

GROUNDWATER OR SEDIMENT SAMPLING DATA: SAMPLE DATE: 9/11/2008

MEDIA: GROUNDWATER X SAMPLE TIME: 1340
CREEK SEDIMENT

LOCATION: MW-4, On Autozone property, east of bldg.

SAMPLE METHOD: P/Pump w/ dedicated tubing.

SAMPLING OBSERVATIONS: Clear, No Odor

QC SAMPLES TAKEN: none

OTHER OBSERVATIONS/COMMENTS: 2-1liter amber bottles taken.

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

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

RECORDED BY: C. Jones
SAMPLE ID: MW-A3-091108
SAMPLED BY: C.Jones
SAMPLING EVENT/DATE: 9/11/2008
COMPANY: Sevenson
MONITORING WELL: MW-A3
CONDITION: OK

GROUNDWATER PURGE DATA
PURGE DATE: 9/11/2008

DEPTH TO BOTTOM FROM TOP OF RISER: 11.95 (FT.)
DEPTH TO WATER FROM TOP OF RISER: 6.95 (FT.)
WATER COLUMN: 5 (FT.)
2" DIA. WELL CONSTANT: 0.16
ONE WELL VOLUME= 0.80 (GALS)

NOTE: ALL GIBSON SITE MONITORING WELLS ARE 2-INCH DIAMETER STAIN-LESS STEEL. WELL DEPTHS:

MW-1R	12.10'
MW-2	12.13'
MW-A3	11.95'
MW-4	13.75'
MW-5	15.28'

PURGE METHOD: Peristaltic pump w/dedicated tubing
BOTTOM OF WELL/SILT BUILDUP: no
PURGE START TIME 1400 STOP TIM 1425
PURGE OBSERVATIONS: Clear

FIELD PARAMETER MEASUREMENTS:

WELL VOLUME	pH	SPECIFIC CONDUCTIVITY umhos/cm)	TEMP. (C OR F)	NOTES:
1	7.67	579	16.8	Clear
2	7.48	510	16.7	Clear
3	7.31	495	16.7	Clear
4	7.25	489	16.8	Clear
5				

TOTAL VOLUME PURGED: 2.40 gallons

GROUNDWATER OR SEDIMENT SAMPLING DATA:
SAMPLE DATE: 9/11/2008

MEDIA: GROUNDWATER X
CREEK SEDIMENT
SAMPLE TIME: 1430

LOCATION: MW-A3, behind Niagara Falls Hotel
SAMPLE METHOD: P/Pump w/ dedicated tubing.
SAMPLING OBSERVATIONS: Clear, No Odor
QC SAMPLES TAKEN: none
OTHER OBSERVATIONS/COMMENTS: 2-1liter amber bottles taken. Sampled for BHC

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

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

RECORDED BY: C. Jones
SAMPLE ID: MW2-091108
SAMPLED BY: C.Jones
SAMPLING EVENT/DATE: 9/11/2008
COMPANY: Sevenson
MONITORING WELL: MW-2
CONDITION: OK

GROUNDWATER PURGE DATA PURGE DATE: 9/11/2008

DEPTH TO BOTTOM FROM TOP OF RISER: 12.13 (FT.)
DEPTH TO WATER FROM TOP OF RISER: 5.42 (FT.)
WATER COLUMN: 6.71 (FT.)
2" DIA. WELL CONSTANT: 0.16
ONE WELL VOLUME= 1.07 (GALS)

PURGE METHOD: Peristaltic pump w/dedicated tubing
BOTTOM OF WELL/SILT BUILDUP: none
PURGE START TIME: 950 STOP TIM 1025
PURGE OBSERVATIONS: turbid to clear

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	7.46	356	17.2	cloudy
2	7.3	529	17.3	Clear
3	7.33	540	17.2	Clear
4	7.35	551	17.4	Clear
5				

TOTAL VOLUME PURGED: 3.22 gallons

GROUNDWATER OR SEDIMENT SAMPLING DATA: SAMPLE DATE: 9/11/2008

MEDIA: GROUNDWATER X
CREEK SEDIMENT
SAMPLE TIME: 1030

LOCATION: MW-2 behind autozone next to dumpsters

SAMPLE METHOD: P/Pump w/ dedicated tubing.

SAMPLING OBSERVATIONS: Clear, slight odor

QC SAMPLES TAKEN: MS/MSD

OTHER OBSERVATIONS/COMMENTS: 4- 1 liter amber bottles taken.

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

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

RECORDED BY: C. Jones
SAMPLE ID: field blank-091108
SAMPLED BY: C.Jones
SAMPLING EVENT/DATE: 9/11/2008
COMPANY: Sevenson
MONITORING WELL: Field Blank
CONDITION: OK

GROUNDWATER PURGE DATA PURGE DATE:

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'

DEPTH TO BOTTOM FROM TOP OF RISER: (FT.)
DEPTH TO WATER FROM TOP OF RISER: (FT.)
WATER COLUMN: (FT.)
2" DIA. WELL CONSTANT:
ONE WELL VOLUME= (GALS)
PURGE METHOD:
BOTTOM OF WELL/SILT BUILDUP:
PURGE START TIME STOP TIM
PURGE OBSERVATIONS:

FIELD PARAMETER MEASUREMENTS:

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

TOTAL VOLUME PURGED: gallons

GROUNDWATER OR SEDIMENT SAMPLING DATA: SAMPLE DATE: 9/11/2008

MEDIA: GROUNDWATER
CREEK SEDIMENT
SAMPLE TIME: 1500

LOCATION: Field Blank
SAMPLE METHOD:
SAMPLING OBSERVATIONS:
QC SAMPLES TAKEN: Field Blank
OTHER OBSERVATIONS/COMMENTS: 2-1liter amber bottles taken. Sampled for BHC

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

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: 4/3/2008 TIME: 800

INSPECTOR: C. Jones COMPANY: Sevenson

WEATHER: 40 F Sunny

PIEZOMETER	RISER ELEVATION (INSIDE CASING)	DEPTH TO WATER (FT.)	WATER ELEVATION	COMMENTS
P-1	572.72	7.28	565.44	OK
P-2	574.89	9.39	565.5	OK
P-3	574.16	6.61	567.55	OK
P-4	576.14	10.7	565.44	OK
P-5	575.05	5.21	569.84	OK
P-6	578.28	10.29	567.99	OK
MANHOLE A	575.22	11.09	564.13	OK
MANHOLE B	577.34	13.17	564.17	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: 9/11/2008 TIME: 930

INSPECTOR: C. Jones COMPANY: Sevenson

WEATHER: 60 F Sunny

PIEZOMETER	RISER ELEVATION (INSIDE CASING)	DEPTH TO WATER (FT.)	WATER ELEVATION	COMMENTS
P-1	572.72	6.59	566.13	OK
P-2	574.89	9.61	565.28	OK
P-3	574.16	7.85	566.31	casing settled
P-4	576.14	10.94	565.2	OK
P-5	575.05	6.68	568.37	OK
P-6	578.28	10.89	567.39	OK
MANHOLE A	575.22	11.11	564.11	OK
MANHOLE B	577.34	13.11	564.23	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: 11/5/2008 TIME: 900

INSPECTOR: M. Walker COMPANY: Sevenson

WEATHER: 60 F sunny

PIEZOMETER	RISER ELEVATION (INSIDE CASING)	DEPTH TO WATER (FT.)	WATER ELEVATION	COMMENTS
P-1	572.72	7.26	565.46	OK
P-2	574.89	9.65	565.24	OK
P-3	574.16	7.64	566.52	OK
P-4	576.14	10.97	565.17	OK
P-5	575.05	6.29	568.76	OK
P-6	578.28	10.85	567.43	OK
MANHOLE A	575.22	11.41	563.81	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: