Department of Environmental Conservation

Division of Environmental Remediation

2001 O&M Report

Patton's Busy Bee Disposal Site
Town of Alfred, Allegany County
Site Number 9-02-014

February 2002

New York State Department of Environmental Conservation

2001 Operation and Maintenance Report

Patton's Busy Bee Disposal Site
Site #902014

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Section I Executive Summary

In accordance with the 1996 Record of Decision for the Busy Bee Disposal site, the New York State Department of Environmental Conservation (NYSDEC), Region 9 Division of Environmental Remediation (DER) staff have performed the required Operation and Maintenance inspections of the landfill cap, sampling of monitoring wells and selected residential drinking water wells associated with the Busy Bee Landfill Disposal site as prescribed in the current Operation and Maintenance (O&M) Plan.

Semi-annual site inspections examined the landfill cap, monitoring well integrity, and overall site conditions. The Site Inspection reports can be found in Appendix A.

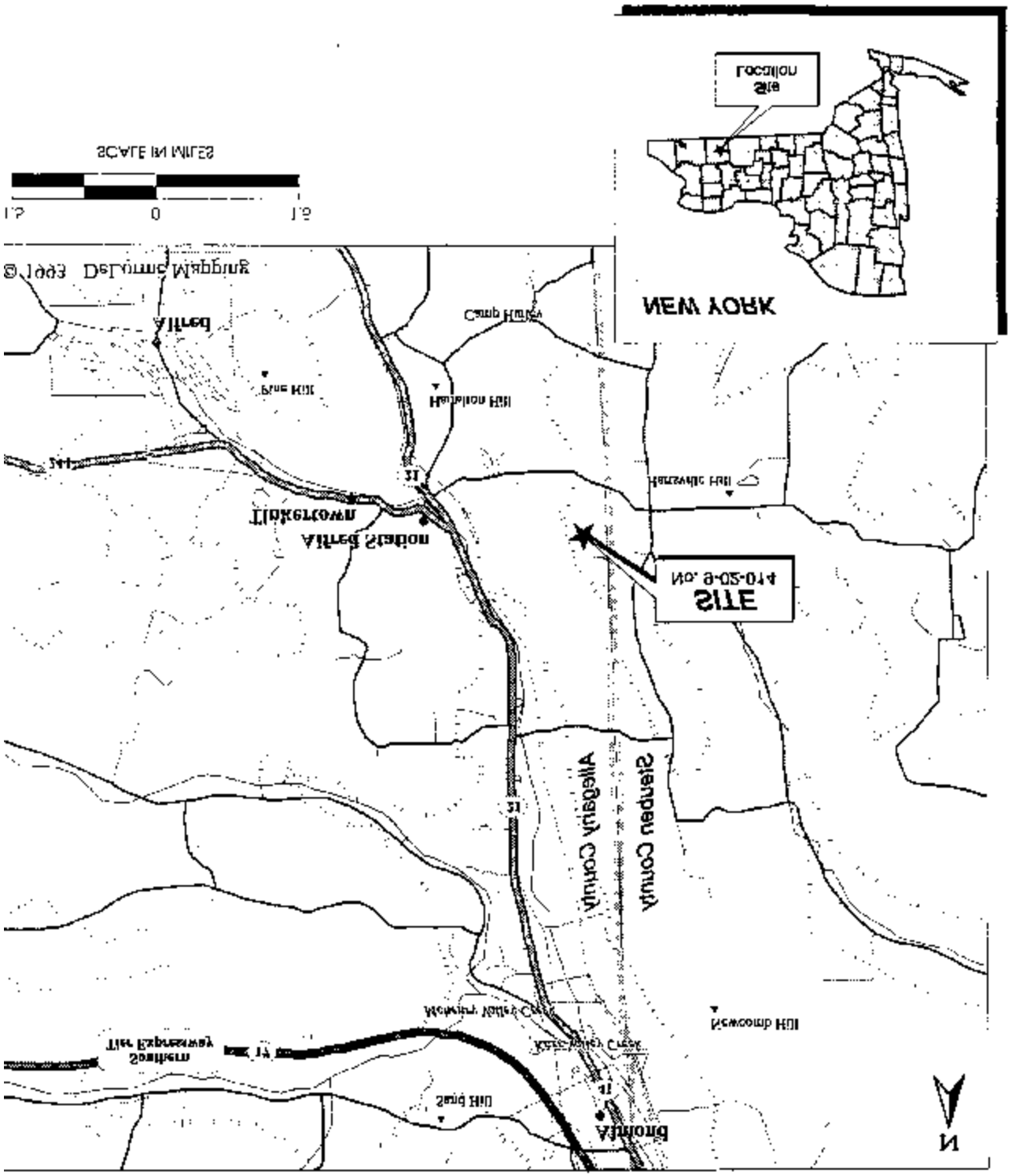
Eight residential water supply wells have been utilized periodically for off-site groundwater monitoring. In the spring of 2001 the home located at 5629 Clark Road was destroyed by fire. As of October 2001 the home was not rebuilt. For the year 2001 monitoring, six of these eight wells were scheduled to be sampled by DEC staff on October 17, 2001. As indicated, the home at 5629 Clark Road could not be sampled and the home at 5633 Clark Road was not sampled as the owners or representatives were not present to allow access. The results of this sampling suggests that no impact from the landfill can be detected. The New York State Department of Health (NYS DOH) letter to the residents regarding the recent sampling can be found in Appendix B, while the residential well sampling data information sheets are provided in Appendix C.

The site monitoring wells were purged on October 16, 2001 and sampled October 17, 2001 by DEC staff. Site monitoring well data does not indicate a significant off-site release or continued degradation of ground water quality. Refer to Appendix D for the monitoring well purging and sample logs.

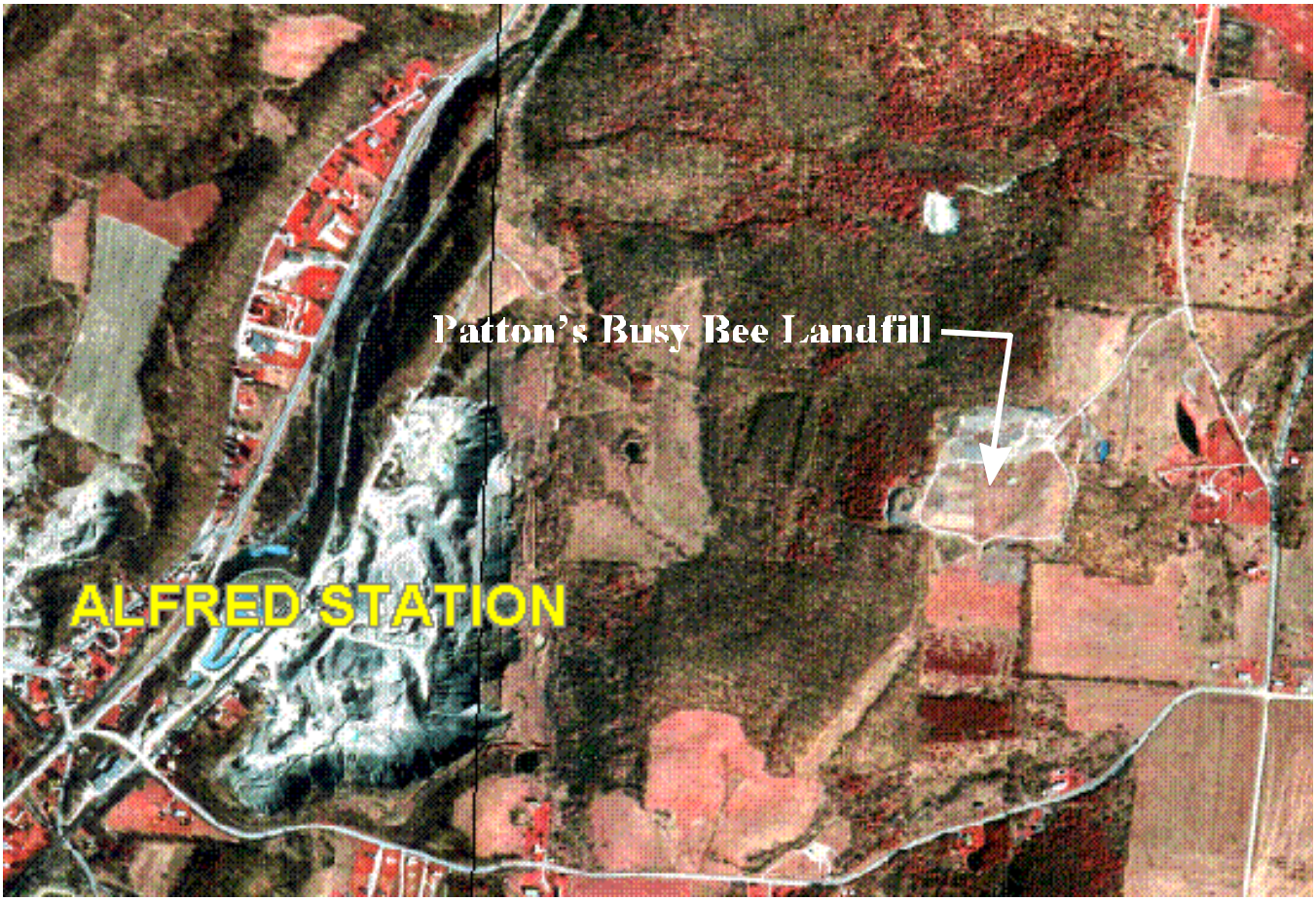
The site's four leachate collection tanks are checked by Region 9 Solid and Hazardous Waste staff and a log of leachate levels is being maintained. Leachate removal was performed by a NYSDEC Emergency Spill Remediation contractor, Op-Tech Environmental Services Inc. During 2001, approximately 44,000 gallons of leachate was removed from the collection tanks and disposed at the City of Hornell Wastewater Treatment Plant. The significantly lower amount of leachate removed during 2001 is attributed to the extremely dry weather during the summer months. Leachate collection tank monitoring data and removal logs are found in Appendix E.

Mowing of the landfill cover was performed by NYSDEC Division of Operations during August 2001. All warning signs installed around the perimeter of the site are in place and undamaged. General site photo's are found in Appendix F.

Recommendations for the year 2002 include continuation of the leachate hauling program, continuation of the general O&M activities that include mowing of the landfill cover and general maintenance of the site.



Site Location Map



Infrared Satellite Photo

Section II Site Inspection

Semi-annual Inspections of the Busy Bee landfill were conducted on June 15 and October 19, 2001 to satisfy the requirements of the Operation and Maintenance Manual (September 1997 with addenda dated April 1999 and March 2000).

In general, no significant problems were discovered that would impact the integrity of the landfill cover system or leachate management. There were no observed areas of erosion of the cover system nor observed breakouts of leachate on the side slopes of the landfill or the down gradient hill sides. The areas of previously observed leachate seeps were inspected and found to be clear of leachate. Site Inspection reports were completed for these site inspections and are contained in Appendix A.

Section III Residential Well Samples

On October 17, 2001 the selected residential water supply wells were sampled by the NYSDEC Region 9 Division of Environmental Remediation staff. Four of the eight homes were sampled in accordance with the new sampling schedule identified in the March 2000 addendum to the O&M plan. The next residential well sampling will occur in the fall of 2002. The trailer home formally at sample location D2 was destroyed by fire in the spring 2001 and will therefore be removed from future sampling unless the home is rebuilt. A sample was not collected from sample location D1 as the owner or a representative was not present to allow access for sample collection. This home will be sampled during the next private well sampling round scheduled for the fall of 2002. The samples collected from the private wells were delivered to the New York State Department of Health Wadsworth lab for sample analysis.

Inorganic compounds were detected in all drinking wells at various concentrations. Inorganic compounds are naturally occurring and are expected to be detected in groundwater. Iron and manganese was found in Sample #D4 & #D7 at levels above the NYSDOH standards for public drinking water supplies. However, the levels of iron and manganese do not represent a health concern. The standards for iron and manganese are based on aesthetic properties and set to prevent problems such as poor taste, odor and fixture staining.

No site related volatile organic compounds have been detected in the drinking water of the sampled water supply wells.

The data from the sampling of the residential wells was reviewed by the NYS DOH. Letters dated January 2, 2002 were sent from the NYS DOH to the owners of the sampled residential wells explaining the results of the sampling. The NYS DOH evaluation letters can be found in Appendix B. The actual well sample results are kept in the Region 9 office or the NYSDOH office and are available upon request.

The following Tables III-1 & III-2 are a summary of the data obtained from the residential well samples.

The Record of Decision dated October 1996 required a residential drinking water sampling program for three years and an evaluation of the data collected. The sampling schedule for the residential wells was changed by addendum to the O&M plan dated March 2000 and as listed below.

Year	**Residential Wells**
2000	D1, D3, D5 & D7
2001	D1, D4, D6 & D8
2002	D1, D3, D5, D7 & D1A
2003	D1, D4, D6, D8 & D1A

The residential well identified here as D7 was first sampled in 2000. The owner has constructed a new single family home at this location and occupancy is expected in December 2001. This location was sampled again this year.

A new well has been installed on Clark Road near the Patton's Busy Bee landfill. This location will be added to the sampling schedule starting with the 2002 sampling round and will be sampled annually thereafter. This location will be identified as Sample D1A. Sample D2 will no longer be collected due to a fire that destroyed the residence. However D2 will be returned to the sampling schedule if the home is rebuilt or the well put back into service.

After the year 2003 sampling event the frequency of the sampling will again be evaluated and revisions recommended.

Please refer to Appendix C for the Residential Well Sampling Data Sheets.

Residential Well Sample Locations
October 2001

Sample #D1 - **Not Sampled**
XXXX Clark Rd.
Alfred Station, NY 14803
(607) 587-8379

Sample #D2 - **Not Sampled**
XXXX Clark Rd.
Alfred Station, NY 14803

Sample #D4
XXXX Crosby Creek Rd.
Hornell, NY 14843

Sample #D6
XXXX Hartsville Hill Rd.
Alfred Station, NY 14803

Sample #D7
XXXX Hartsville Hill Rd.
Alfred Station, NY 14803

Sample #D8
XXXX Hartsville Hill Rd.
Alfred Station, NY 14803

TABLE III-1 RESIDENTIAL WATER WELLS
VOLATILE ORGANIC COMPOUNDS
(ug/l)

Parameter	D1 10/17/01	D2 10/17/01	D4 10/17/01	D6 10/17/01	D7 10/17/01	D8 10/17/01	*D9 10/17/01
Dichlorodifluoromethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Chloromethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl Chloride	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Bromomethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluormethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Methylene Chloride	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
2,2-Dichloropropane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
cis–1,2-Dichloroethene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloropropene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Trans-1,3-dichloropropene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-trichloroethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichloropropane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dibromoethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-tetrachloroethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5

Xylene (total)	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5

TABLE III-1 (cont) RESIDENTIAL WATER WELLS
VOLATILE ORGANIC COMPOUNDS
(ug/l)

Parameter	D1 10/17/01	D2 10/17/01	D4 10/17/01	D6 10/17/01	D7 10/17/01	D8 10/17/01	*D9 10/17/01
Styrene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Isopropyl benzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-tetrachloroethane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,3-trichloropropane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
n-Propylbenzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Bromobenzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
o & p chlorotoluene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
tert-Butyl benzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
sec-Butyl benzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
p-cymene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichlorobenzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-dichlorobenzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
n-Butyl benzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dichlorobenzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dibromo-3-chloropropane	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
hexachlorobutadiene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
1, 2, 3 -Trichlorobenzene	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5

U- compound not detected
J - compound detected below sample quantitation limit
NS - No Sample Collected
*D9 - Duplicate Sample of D8

Table III-2 RESIDENTIAL WATER WELLS
INORGANIC COMPOUNDS
(ug/l)

Parameter	D1 10/17/01	D2 10/17/01	D4 10/17/01	D6 10/17/01	D7 10/17/01	D8 10/17/01	*D9 10/17/01
Aluminum	NS	NS	<50.0	56	41	<50.0	<50.0
Antimony	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	NS	NS	<3.0	<3.0	<3.0	<3.0	<3.0
Barium	NS	NS	124	86	51	23	22
Beryllium	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0
Cadmium	NS	NS	<1.0	<1.0	<1.0	<1.0	<1.0
Calcium	NS	NS	47	3	54	53	54
Chromium	NS	NS	<5.0	<5.0	<5.0	<5.0	<5.0
Cobalt	NS	NS	<5.0	<5.0	<5.0	<5.0	<5.0
Copper	NS	NS	<5.0	<5.0	<5.0	7	<5.0
Iron	NS	NS	541	55	768	20	17
Lead	NS	NS	<5.0	<5.0	<5.0	<5.0	<5.0
Magnesium	NS	NS	20	24	20.6	20	20
Manganese	NS	NS	103	17	350	76	74
Mercury	NS	NS	<0.2	<0.2	<0.2	<0.2	<0.2
Molybdenum	NS	NS	<5.0	<5.0	<5.0	<5.0	<5.0
Nickel	NS	NS	<5.0	<5.0	<5.0	<5.0	<5.0
Potassium	NS	NS	2	3	2.3	3	3
Selenium	NS	NS	<5.0	<5.0	<5.0	<5.0	<5.0
Silver	NS	NS	<5.0	<5.0	<5.0	<5.0	<5.0
Sodium	NS	NS	7	8	7.8	34	35
Strontium	NS	NS	197	725	259	256	260
Tin	NS	NS	<5.0	<5.0	<5.0	<5.0	<5.0
Titanium	NS	NS	<5.0	<5.0	<5.0	<5.0	<5.0
Thallium	NS	NS	<0.5	<0.5	<0.5	<0.5	<0.5
Vanadium	NS	NS	<5.0	<5.0	<5.0	<5.0	<5.0
Zinc	NS	NS	14	11	10	11	15

U- not detected at or above detection limit
B - detected below contract required detection limit
Shaded areas indicated exceedence of NYSDEC Ground Water Standards
NS - No Sample Collected
*D9 - Duplicate Sample of D8

Section IV Site Monitoring Wells

On October 17, 2001 the on-site monitoring wells were sampled by the NYSDEC Region 9 Division of Environmental Remediation staff. Each well was purged by either a dedicated hand bailer or a Grundfos pump to remove stagnant water from the well casing and allow fresh formation water to enter the well.

Acetone was detected at low levels in several monitoring wells at an estimated maximum concentration of 3 ug/l. There is no ground water standard for acetone, however a guidance value of 50 ug/l has been set as an action level. The detected levels of acetone are far below any level of concern. Acetone is a common laboratory chemical and the levels detected are considered to be a laboratory artifact.

Low levels of volatile organic compounds were detected in MW-103D, MW-103I and MW-104I;

- Cis-1,2-Dichloroethene in MW-103D at 8J ug/l,
- Cis-1,2-Dichloroethene and trichloroethene in MW-103I at 15 ug/l and 7J ug/l respectively,
- Cis-1,2-Dichloroethene in MW-104I at 10 ug/l.

The NYSDEC groundwater standard for these compounds is 5 ug/l. These compounds were detected in previous sampling events at similar concentrations.

Trace levels of volatile organic compounds were detected below ground water standards in MW-101D, MW-103D and MW-104I;

- 2-Butanone, Benzene and Chlorobenzene in MW-101D at 1J, 1J and 3J ug/l respectively,
- Trichloroethene in MW-103D at 4J ug/l,
- Trichloroethene in MW-104I at 3J ug/l.

Inorganic compounds were detected in all monitoring wells at various concentrations. Inorganic compounds are naturally occurring and are expected to be detected in groundwater. However the following compounds were detected above the NYSDEC groundwater standards;

- Arsenic was detected in MW-101I at 54.5 ug/l, MW-107IR at 95.3 ug/l and MW-107SR at 110 ug/l. The arsenic standard is 25 ug/l.
- Barium was detected in MW-107IR at 1450 ug/l and MW-107SR at 1230 ug/l. The barium standard is 1000 ug/l.
- Beryllium was detected in MW-101I at 4.3 ug/l, MW-107IR at 7.8 ug/l and MW-107SR at 6.3 ug/l. The beryllium standard is 3 ug/l.
- Chromium was detected in MW-107IR at 279 ug/l and MW-107SR at 133 ug/l. The chromium standard is 50 ug/l.
- Copper was detected in MW-107IR at 219 ug/l and MW-107SR at 222 ug/l. The copper standard is 200 ug/l.
- Iron was detected in every monitoring well ranging from 72.1 ug/l (MW-102D) to 344,000 ug/l (MW107IR). The iron standard is 300 ug/l.
- Lead was detected in MW-101I at 48.1 ug/l, MW-107IR at 144 ug/l and MW-113 at 80.5 ug/l. The lead standard is 25 ug/l.

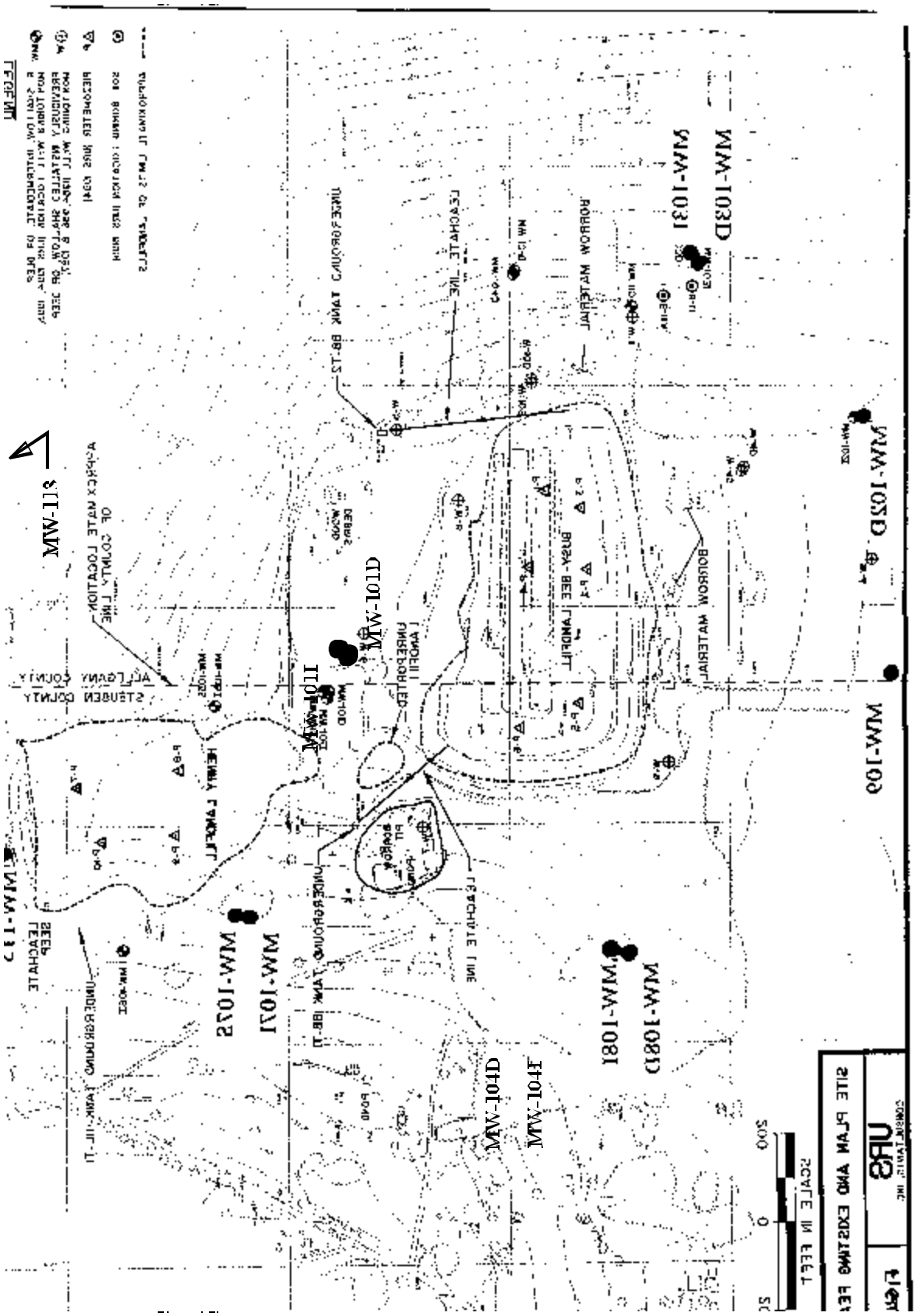
- Manganese was in MW-101D at 4290 ug/l, MW-101I at 2850 ug/l, MW-107IR at 4570 ug/l, MW-107SR at 6050 ug/l and MW-113 325 ug/l. The standard for manganese is 300 ug/l.

- Nickel was detected in MW-101I at 136 ug/l, MW-107IR at 360 ug/l and MW-107SR at 187 ug/l. The nickel standard is 100 ug/l.
- Selenium was detected in MW-107IR at 17.6 ug/l and MW-107SR at 13.5 ug/l. The selenium standard is 10 ug/l.
- Sodium was detected in MW-101D at 51,200 ug/l. The sodium standard is 20,000 ug/l.

The concentration of inorganics in MW-107 cluster is noteworthy and will be watched closely in the upcoming annual monitoring events. MW-107 cluster is adjacent to the former Henry landfill. The ground water in cluster MW-107 is very turbid. There is insufficient water volume available to effectively purge the well to remove sediment. The elevated inorganic levels detected may be associated with the sediment found in the sample from this well cluster. Future samples collected from MW-107IR and MW-107SR will be analyzed in both the unfiltered and filtered conditions to evaluate the impact of sample turbidity on the inorganic data.

The attached Tables IV-1, IV-2 & IV-3 provide a summary of the compounds detected in each well. The actual laboratory data sheets are maintained in the NYSDEC Region 9 Buffalo office and are available for review if requested.

Please refer to Appendix D for the Site Monitoring Well Purging and Sampling Log.



Location of Long term Monitoring Wells

TABLE IV-1 MONITORING WELLS
VOLATILE ORGANIC COMPOUNDS
(ug/l)

Parameter (Std/*guidance*)	**MW-101D 10/17/01**	**MW-101I 10/17/01**	**MW-102D 10/17/01**	**MW-103D 10/17/01**	**MW-103I 10/17/01**
Chloromethane	10 U	10 U	10 U	10 U	10 U
Bromomethane (5.0)	10 U	10 U	10 U	10 U	10 U
Vinyl chloride (2.0)	10 U	10 U	10 U	10 U	10 U
Chloroethane (5.0)	10 U	10 U	10 U	10 U	10 U
Methylene chloride (5.0)	10 U	10 U	10 U	10 U	10 U
Acetone *(50 guidance)*	3 J	2 J	10 U	10 U	10 U
Carbon disulfide	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene (5.0)	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane (5.0)	10 U	10 U	10 U	10 U	10 U
Chloroform (7.0)	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane (0.6)	10 U	10 U	10 U	10 U	10 U
2-Butanone	1 J	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane (5.0)	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride (5.0)	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane *(50 guidance)*	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane (1.0)	10 U	10 U	10 U	10 U	10 U
*cis-1,3-Dichloropropene (0.4)	10 U	10 U	10 U	10 U	10 U
Trichloroethene (5.0)	10 U	10 U	10 U	4 J	7 J
Dibromochloromethane *(50 guidance)*	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane (1.0)	10 U	10 U	10 U	10 U	10 U
Benzene (1.0)	1 J	10 U	10 U	10 U	10 U
*trans-1,3-Dichloropropene (0.4)	10 U	10 U	10 U	10 U	10 U
Bromoform *(50 guidance)*	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U	10 U
2-Hexanone *(50 guidance)*	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene (5.0)	10 U	10 U	10 U	10 U	10 U
Toluene (5.0)	10 U	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane (5.0)	10 U	10 U	10 U	10 U	10 U
Chlorobenzene (5.0)	3 J	10 U	10 U	10 U	10 U
Ethylbenzene (5.0)	10 U	10 U	10 U	10 U	10 U
Styrene (5.0)	10 U	10 U	10 U	10 U	10 U
Xylene, total (5.0)	10 U	10 U	10 U	10 U	10 U
Dichlorodifluoromethane (5.0)	10 U	10 U	10 U	10 U	10 U
Trichlorofluoromethane (5.0)	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloro-1,2,2-Trifluoroethane (5.0)	10 U	10 U	10 U	10 U	10 U
trans -1,2-Dichloroethene (5.0)	10 U	10 U	10 U	10 U	10 U

TABLE IV-1 (cont.) MONITORING WELLS
VOLATILE ORGANIC COMPOUNDS
(ug/l)

Parameter (Std/*guidance*)	**MW-101D 10/17/01**	**MW-101I 10/17/01**	**MW-102D 10/17/01**	**MW-103D 10/17/01**	**MW-103I 10/17/01**
Methyl tert-butyl ether	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene (5.0)	10 U	10 U	10 U	8 J	15
Cyclohexane	10 U	10 U	10 U	10 U	10 U
Methylcyclohexane	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane (Ethylene dibromide)	10 U	10 U	10 U	10 U	10 U
Isopropyl benzene (5.0)	10 U	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene (3.0)	10 U	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene (3.0)	10 U	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene (3.0)	10 U	10 U	10 U	10 U	10 U
1,2-Dibromo-3-chloropropane (0.04)	10 U	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene (5.0)	10 U	10 U	10 U	10 U	10 U
Methyl acetate	10 U	10 U	10 U	10 U	10 U

U- compound not detected
J - compound detected below sample quantitation limit
Shaded areas indicate exceedence of NYSDEC groundwater standards
italics indicates guidance value
* cis-1,3-dichloropropene and trans-1,3-dichloropropene total not to exceed 0.40 ug/l

TABLE IV-1 (cont.) MONITORING WELLS
VOLATILE ORGANIC COMPOUNDS
(ug/l)

Parameter (Std/*guidance*)	**MW-104D 10/17/01**	**MW-104I 10/17/01**	**MW-107IR 10/17/01**	**MW-107SR 10/17/01**	**MW-108D 10/17/01**
Chloromethane	NS	10 U	10 U	10 U	10 U
Bromomethane (5.0)	NS	10 U	10 U	10 U	10 U
Vinyl chloride (2.0)	NS	10 U	10 U	10 U	10 U
Chloroethane (5.0)	NS	10 U	10 U	10 U	10 U
Methylene chloride (5.0)	NS	10 U	10 U	10 U	10 U
Acetone *(50 guidance)*	NS	10 U	10 U	4 J	10 U
Carbon disulfide	NS	10 U	10 U	10 U	10 U
1,1-Dichloroethene (5.0)	NS	10 U	10 U	10 U	10 U
1,1-Dichloroethane (5.0)	NS	10 U	10 U	10 U	10 U
Chloroform (7.0)	NS	10 U	10 U	10 U	10 U
1,2-Dichloroethane (0.6)	NS	10 U	10 U	10 U	10 U
2-Butanone	NS	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane (5.0)	NS	10 U	10 U	10 U	10 U
Carbon tetrachloride (5.0)	NS	10 U	10 U	10 U	10 U
Bromodichloromethane *(50 guidance)*	NS	10 U	10 U	10 U	10 U
1,2-Dichloropropane (1.0)	NS	10 U	10 U	10 U	10 U
*cis-1,3-Dichloropropene (0.4)	NS	10 U	10 U	10 U	10 U
Trichloroethene (5.0)	NS	3 J	10 U	10 U	10 U
Dibromochloromethane *(50 guidance)*	NS	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane (1.0)	NS	10 U	10 U	10 U	10 U
Benzene (1.0)	NS	10 U	10 U	10 U	10 U
*trans-1,3-Dichloropropene (0.4)	NS	10 U	10 U	10 U	10 U
Bromoform *(50 guidance)*	NS	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	NS	10 U	10 U	10 U	10 U
2-Hexanone *(50 guidance)*	NS	10 U	10 U	10 U	10 U
Tetrachloroethene (5.0)	NS	10 U	10 U	10 U	10 U
Toluene (5.0)	NS	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane (5.0)	NS	10 U	10 U	10 U	10 U
Chlorobenzene (5.0)	NS	10 U	10 U	10 U	10 U
Ethylbenzene (5.0)	NS	10 U	10 U	10 U	10 U
Styrene (5.0)	NS	10 U	10 U	10 U	10 U
Xylene, total (5.0)	NS	10 U	10 U	10 U	10 U
Dichlorodifluoromethane (5.0)	NS	10 U	10 U	10 U	10 U
Trichlorofluoromethane (5.0)	NS	10 U	10 U	10 U	10 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	NS	10 U	10 U	10 U	10 U

trans -1,2-Dichloroethene (5.0)	NS	10 U	10 U	10 U	10 U

TABLE IV-1 (cont.) MONITORING WELLS
VOLATILE ORGANIC COMPOUNDS
(ug/l)

Parameter (Std/*guidance*)	**MW-104D 10/17/01**	**MW-104I 10/17/01**	**MW-107IR 10/17/01**	**MW-107SR 10/17/01**	**MW-108D 10/17/01**
Methyl tert-butyl ether	NS	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene (5.0)	NS	10	10 U	10 U	10 U
Cyclohexane	NS	10 U	10 U	10 U	10 U
Methylcyclohexane	NS	10 U	10 U	10 U	10 U
1,2-Dibromoethane (Ethylene	NS	10 U	10 U	10 U	10 U
Isopropylbenzene (5.0)	NS	10 U	10 U	10 U	10 U
1,3-Dichlorobenzene (3.0)	NS	10 U	10 U	10 U	10 U
1,4-Dichlorobenzene (3.0)	NS	10 U	10 U	10 U	10 U
1,2-Dichlorobenzene (3.0)	NS	10 U	10 U	10 U	10 U
1,2-Dibromo-3-chloropropane (0.04)	NS	10 U	10 U	10 U	10 U
1,2,4-Trichlorobenzene (5.0)	NS	10 U	10 U	10 U	10 U
Methyl acetate	NS	10 U	10 U	10 U	10 U

U- compound not detected
J - compound detected below sample quantitation limit
Shaded areas indicate exceedence of NYSDEC groundwater standards
italics indicates guidance value
* cis-1,3-dichloropropene and trans-1,3-dichloropropene total not to exceed 0.40 ug/l

TABLE IV-1 MONITORING WELLS
VOLATILE ORGANIC COMPOUNDS
(ug/l)

Parameter (Std/*guidance*)	**MW-108I 10/17/01**	**MW-109 10/17/01**	**MW-113 10/17/01**	**MW-113 (dup) 10/17/01**	
Chloromethane	10 U	10 U	10 U	10 U	
Bromomethane (5.0)	10 U	10 U	10 U	10 U	
Vinyl chloride (2.0)	10 U	10 U	10 U	10 U	
Chloroethane (5.0)	10 U	10 U	10 U	10 U	
Methylene chloride (5.0)	10 U	10 U	10 U	10 U	
Acetone *(50 guidance)*	10 U	10 U	2 J	2 J	
Carbon disulfide	10 U	10 U	10 U	10 U	
1,1-Dichloroethene (5.0)	10 U	10 U	10 U	10 U	
1,1-Dichloroethane (5.0)	10 U	10 U	10 U	10 U	
Chloroform (7.0)	10 U	10 U	10 U	10 U	
1,2-Dichloroethane (0.6)	10 U	10 U	10 U	10 U	
2-Butanone	10 U	10 U	10 U	10 U	
1,1,1-Trichloroethane (5.0)	10 U	10 U	10 U	10 U	
Carbon tetrachloride (5.0)	10 U	10 U	10 U	10 U	
Bromodichloromethane *(50 guidance)*	10 U	10 U	10 U	10 U	
1,2-Dichloropropane (1.0)	10 U	10 U	10 U	10 U	
*cis-1,3-Dichloropropene (0.4)	10 U	10 U	10 U	10 U	
Trichloroethene (5.0)	10 U	10 U	10 U	10 U	
Dibromochloromethane *(50 guidance)*	10 U	10 U	10 U	10 U	
1,1,2-Trichloroethane (1.0)	10 U	10 U	10 U	10 U	
Benzene (1.0)	10 U	10 U	10 U	10 U	
*trans-1,3-Dichloropropene (0.4)	10 U	10 U	10 U	10 U	
Bromoform *(50 guidance)*	10 U	10 U	10 U	10 U	
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U	
2-Hexanone *(50 guidance)*	10 U	10 U	10 U	10 U	
Tetrachloroethene (5.0)	10 U	10 U	10 U	10 U	
Toluene (5.0)	10 U	10 U	10 U	10 U	
1,1,2,2-Tetrachloroethane (5.0)	10 U	10 U	10 U	10 U	
Chlorobenzene (5.0)	10 U	10 U	10 U	10 U	
Ethylbenzene (5.0)	10 U	10 U	10 U	10 U	
Styrene (5.0)	10 U	10 U	10 U	10 U	
Xylene, total (5.0)	10 U	10 U	10 U	10 U	
Dichlorodifluoromethane (5.0)	10 U	10 U	10 U	10 U	
Trichlorofluoromethane (5.0)	10 U	10 U	10 U	10 U	
1,1,2-Trichloro-1,2,2-Trifluoroethane	10 U	10 U	10 U	10 U	

trans -1,2-Dichloroethene (5.0)	10 U	10 U	10 U	10 U	

TABLE IV-1 (cont.) MONITORING WELLS
VOLATILE ORGANIC COMPOUNDS
(ug/l)

Parameter (Std/*guidance*)	**MW-108I 10/17/01**	**MW-109 10/17/01**	**MW-113 10/17/01**	**MW-113 (dup) 10/17/01**	
Methyl tert-butyl ether	10 U	10 U	10 U	10 U	
cis-1,2-Dichloroethene (5.0)	10 U	10 U	10 U	10 U	
Cyclohexane	10 U	10 U	10 U	10 U	
Methylcyclohexane	10 U	10 U	10 U	10 U	
1,2-Dibromoethane (Ethylene	10 U	10 U	10 U	10 U	
Isopropylbenzene (5.0)	10 U	10 U	10 U	10 U	
1,3-Dichlorobenzene (3.0)	10 U	10 U	10 U	10 U	
1,4-Dichlorobenzene (3.0)	10 U	10 U	10 U	10 U	
1,2-Dichlorobenzene (3.0)	10 U	10 U	10 U	10 U	
1,2-Dibromo-3-chloropropane (0.04)	10 U	10 U	10 U	10 U	
1,2,4-Trichlorobenzene (5.0)	10 U	10 U	10 U	10 U	
Methyl acetate	10 U	10 U	10 U	10 U	

U- compound not detected
J - compound detected below sample quantitation limit
Shaded areas indicate exceedence of NYSDEC groundwater standards
italics indicates guidance value
* cis-1,3-dichloropropene and trans-1,3-dichloropropene total not to exceed 0.40 ug/l

Table IV-2 MONITORING WELLS
INORGANIC COMPOUNDS
(ug/l)

Parameter (std/*guidance*)	**MW-101D 10/17/01**	**MW-101I 10/17/01**	**MW-102D 10/17/01**	**MW-103D 10/17/01**	**MW-103I 10/17/01**
Aluminum	213	61,300	118	293	620
Antimony (3)	3.0 U	3.0 U	3.0 U	3.0 U	3.0 U
Arsenic (25)	9.6 B	54.5	4.0 U	4.0 U	4.2 B
Barium (1000)	523	694	86.7 B	59.1 B	65.1 B
Beryllium (3)	1.0 U	4.3 B	1.0 U	1.0 U	1.0 U
Cadmium (5)	1.1 BN	1.0 UN	1.7 BN	1.7 BN	2.4 BN
Calcium	12,200	88,600	47,000	25,400	22,300
Chromium (50)	1.0 U	74.3	1.0 U	1.0 U	1.0 U
Cobalt	5.0 B	69.2	1.0 U	1.0 U	1.0 B
Copper (200)	14.9 B	175	1.1 B	1.0 U	6.1 B
Iron (300)	891	131,000	72.1	368	817
Lead (25)	2.0 U	48.1	2.0 U	2.0 U	2.0 U
Magnesium (*35,000 guidance*)	69,300	55,200	15,100	9,080	6710
Manganese (300)	4290	2850	2.8 B	19.4	28.2
Mercury (0.7)	0.072 U	0.072 U	0.072 U	0.072 U	0.072 U
Nickel (100)	9.8 B	136	1.5 U	1.5 U	1.8 B
Potassium	12,400	17,500	2330 B	1970 B	2040 B
Selenium (10)	5.0 U	9.7	5.0 U	5.0 U	5.0 U
Silver (50)	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Sodium (20000)	51,200	7400	3780 B	4160 B	4490 B
Thallium (*0.5 guidance*)	4.0 U	4.0 U	4.0 U	4.0 U	4.0 U
Vanadium	1.0 U	78.2	1.0 U	1.0 U	1.0 U
Zinc (*2000 guidance*)	16.3 B	364	2.0 U	2.6 B	8.3 B

U- not detected at or above detection limit
B - detected below contract required detection limit
E - value estimated due to interference
* - indicates duplicate analysis not within control limits

Shaded Area indicates exceedence of NYSDEC Ground Water Standards

Table IV-2 (cont) MONITORING WELLS
INORGANIC COMPOUNDS
(ug/l)

Parameter (std/*guidance*)	**MW-104D 10/17/01**	**MW-104I 10/17/01**	**MW-107IR 10/17/01**	**MW-107SR 10/17/01**	**MW-108D 10/17/01**
Aluminum	NS	572	164,000	116,000	407
Antimony (3)	NS	3.0 U	3.0 U	3.0 u	3.0 U
Arsenic (25)	NS	4.0 U	95.3	110	4.0 U
Barium (1000)	NS	65.9 B	1450	1230	92.2
Beryllium (3)	NS	1.0 U	7.8	6.3	1.0 U
Cadmium (5)	NS	1.4 BN	1.0 UN	1.0 UN	1.0 UN
Calcium	NS	46,400	101,000	190,000	17,200
Chromium (50)	NS	1.0 U	279	133	1.0 U
Cobalt	NS	1.0 U	153	93.3	1.0 U
Copper (200)	NS	6.2 B	219	222	4.2 B
Iron (300)	NS	812	344,000	216,000	1530
Lead (25)	NS	2.0 U	144	80.5	2.4 B
Magnesium (*35,000 guidance*)	NS	12,400	84,400	50,900	13,300
Manganese (300)	NS	15.3	4570	6050	96.9
Mercury (0.7)	NS	0.072 U	0.072 U	0.072 U	0.072 U
Nickel (100)	NS	1.6 B	360	187	3.2 B
Potassium	NS	2220	30,400	17,400	2950 B
Selenium (10)	NS	5.0 U	17.6	13.5	5.0 U
Silver (50)	NS	2.0 U	2.0 U	2.0 U	2.0 U
Sodium (20000)	NS	7070	11,900	5690	4320 B
Thallium *(0.5 guidance*)	NS	4.0 U	5.0 B	4.0 U	4.0 U
Vanadium	NS	1.1 B	187	144	1.0 U
Zinc (*2000 guidance*)	NS	9.9 B	777	743	17.8 B

U- not detected at or above detection limit
B - detected below contract required detection limit
E - value estimated due to interference

*- Duplicate analysis not within control limits
Shaded Area indicates exceedence of NYSDEC Ground Water Standards

Table IV-2 (cont) MONITORING WELLS
INORGANIC COMPOUNDS
(ug/l)

Parameter (std/*guidance*)	**MW-108I 10/17/01**	**MW-109 10/17/01**	**MW-113 10/17/01**	**MW-113 (DUP) 10/17/01**	
Aluminum	1290	151	3520	6520	
Antimony (3)	3.0 U	3.0 U	3.0 U	3.0 U	
Arsenic (25)	5.3 B	4.0 U	8.4 B	9.8 B	
Barium (1000)	75.7 B	65.6 B	56.3	73.7 B	
Beryllium (3)	1.0 U	1.0 U	1.0 U	1.0 U	
Cadmium (5)	1.0 UN	1.0 UN	1.0 UN	1.0 UN	
Calcium	35,100	19,100	62,000	61,900	
Chromium (50)	3.0 B	1.0 U	3.4 B	6.8 B	
Cobalt	1.6 B	1.0 U	7.4 B	10.1 B	
Copper (200)	5.2 B	1.0 U	14.9 B	21.6 B	
Iron (300)	2860	2570	9140	16,400	
Lead (25)	2.0 U	2.0 U	8.1	12.1	
Magnesium (*35,000 guidance*)	17,600	9340	25,200	25,900	
Manganese (300)	60.4	82.9	325	432	
Mercury (0.7)	0.072 U	0.072 U	0.072 U	0.072 U	
Nickel (100)	5.9 B	1.5 U	15.0 B	20.5 B	
Potassium	3840 B	2780 B	7690	8310	
Selenium (10)	5.0 U	5.0 U	5.0 U	5.0 U	
Silver (50)	2.0 U	2.0 U	2.0 U	2.0 U	
Sodium (20000)	3670 B	4120 B	5200	5190	
Thallium (*0.5 guidance*)	4.0 U	4.0 U	4.0 U	4.0 U	
Vanadium	1.9 B	1.0 U	4.7 B	8.0 B	
Zinc (*2000 guidance*)	17.1 B	4.4 B	31.7	43.2	

U- not detected at or above detection limit
B - detected below contract required detection limit
E - value estimated due to interference
*- Duplicate analysis not within control limits

N - Spiked sample recovery not within control limits
Shaded Area indicates exceedence of NYSDEC Ground Water Standards

Section V Leachate Management

The leachate generated from the Patton's Busy Bee landfill is collected in four on site underground collection tanks. Staff from the Region 9 Division's of Solid and Hazardous Waste and Environmental Remediation monitor the leachate levels in the tanks approximately once a month. During periods of high leachate generation (spring & early summer) the tanks are checked more frequently. Conversely, during the winter months accessibility to the tanks is restricted due to weather conditions and therefore less frequent monitoring can be performed.

Based on the results of the tank monitoring, leachate is removed by a contracted leachate hauler when the leachate levels reach at least 75% capacity of the tanks. During 2001, approximately 44,000 gallons of leachate was removed from the collection tanks and disposed at the City of Hornell Wastewater Treatment plant. The significantly lower amount of leachate removal is attributed to the extremely dry weather during the summer of 2001.

The following tables provide information on the leachate monitoring and removal activities. A sample from leachate tank BB-T2S was collected on 10/17/01 and is summarized in Table V-1, V-2 and V-3. The actual data is located in the Region 9 office and will be provided upon request.

Please refer Appendix E for Leachate Collection Tank Monitoring and Leachate Removal Logs.

TABLE V-1 Leachate Collection Tank
Volatile Organic Compounds
(ug/l)

Parameter	BB-T2-S 10/17/01
Chloromethane	100 U
Bromomethane	100 U
Vinyl chloride	100 U
Chloroethane	100 U
Methylene chloride	100U
Acetone	22 J
Carbon disulfide	100 U
1,1-Dichloroethene	100 U
1,1-Dichloroethane	100 U
Chloroform	100U
1,2-Dichloroethane	100 U
2-Butanone	100 U
1,1,1-Trichloroethane	100 U
Carbon tetrachloride	100 U
Bromodichloromethane	100U
1,2-Dichloropropane	100 U
*cis-1,3-Dichloropropene	100 U
Trichloroethene	100 U
Dibromochloromethane	100 U
1,1,2-Trichloroethane	100U
Benzene	100 U
*trans-1,3-Dichloropropene	100 U
Bromoform	100 U
4-Methyl-2-pentanone	100 U
2-Hexanone	100U
Tetrachloroethene	100 U
Toluene	100 U
1,1,2,2-Tetrachloroethane	100 U
Chlorobenzene	100 U
Ethylbenzene	100U
Styrene	100 U
Xylene, total	100 U
Dichlorodifluoromethane	100 U
Trichlorofluoromethane	100 U
1,1,2-Trichloro-1,2,2-Trifluoroethane	100U

trans -1,2-Dichloroethene	100 U

TABLE V-1 (cont.) Leachate Collection Tank
Volatile Organic Compounds
(ug/l)

Parameter	BB-T2-S 10/17/01
Methyl tert-butyl ether	100 U
cis-1,2-Dichloroethane	100 U
Cyclohexane	100 U
Methylcyclohexane	100 U
1,2-Dibromoethane (Ethylene dibromide)	100U
Isopropyl benzene	100 U
1,3-Dichlorobenzene	100 U
1,4-Dichlorobenzene	100 U
1,2-Dichlorobenzene	100 U
1,2-Dibromo-3-chloropropane	100U
1,2,4-Trichlorobenzene	100 U
Methyl acetate	100 U

U- compound not detected
J - indicates an estimated value

TABLE V-2 Leachate Collection Tank
Semi-volatile Organic Compounds
(ug/l)

Parameter	BB-T2-S 10/17/01
Acetophenone	10 U
Atrazine	10 U
Benzaldehyde	0.7 J
Caprolactam	10 U
Biphenyl	10 U
N-Nitrosodiphenylamine	10 U
N-Nitroso-di-N-propylamine	10 U
2-Nitroaniline	25 U
3-Nitroaniline	25 U
4-Nitroaniline	25 U
3,3'-Dichlorobenzidine	10 U
2-Chloronaphthalene	10 U
Dibenzofuran	10 U
1,2-Dichlorobenzene	10 U
1,3-Dichlorobenzene	10 U
1,4-Dichlorobenzene	1 J
Hexachlorobenzene	10 U
Hexachlorobutadiene	10 U
Hexachloroethane	10 U
Hexachlorocyclopentadiene	10 U
2-methylnaphthalene	10 U
1,2,4-Trichlorobenzene	10 U
4-Chloroaniline	10 U
Butylbenzylphthalate	10 U
bis(2-Ethylhexyl) phthalate	1 J
Diethylphthalate	1 J
Dimethylphthalate	10 U
di-n-Butylphthalate	10 U
di-n-Octylphthalate	0.4 J
Carbazole	10 U
2,4-Dinitrotoluene	10 U
2,6-Dinitrotoluene	10 U
Isophorone	10 U
Nitrobenzene	10 U
Acenaphthylene	10 U
Acenaphthene	10 U

TABLE V-2 (cont) Leachate Collection Tank
Semi-volatile Organic Compounds
(ug/l)

Parameter	BB-T2-S 10/17/01
Anthracene	10 U
Benzo (a) anthracene	10 U
Benzo (a) pyrene	10 U
Benzo (b) fluoranthene	10 U
Benzo (g,h,i) perylene	10 U
Benzo (k) fluoranthene	10 U
Chrysene	10 U
Dibenzo (a,h) anthracene	10 U
Flouranthene	10 U
Flourene	10 U
Ideno (1,2,3-c,d) pyrene	10 U
Naphthalene	10 U
Phenanthrene	10 U
Pyrene	10 U
4-Chloro-3-methylphenol	10 U
2-Chlorophenol	10 U
2,4-Dichlorophenol	10 U
2,4-Dimethylphenol	10 U
2,4-Dinitrophenol	25 U
2-methyl-4,6-dinitrophenol	25 U
2-Methylphenol	10 U
4-Methylphenol	0.3 J
2-Nitophenol	10 U
4-Nitrophenol	25 U
Pentachlorophenol	25 U
Phenol	10 U
2,4,5-Trichlorophenol	25 U
2,4,6-Trichlorophenol	10 U
bis (2-Chloroethyl) ether	10 U
bis (2-Chloroisopropyl) ether	10 U
bis (2-Chloroethoxy) methane	10 U
4-Bromophenylphenylether	10 U
4-Chlorophenylphenylether	10 U

TABLE V-2 Leachate Collection Tank
Inorganic Compounds
(ug/l)

Parameter	BB-T2S 10/17/01
Aluminum	1270
Antimony	3.0 U
Arsenic	14.6
Barium	1000
Beryllium	1.0 U
Cadmium	1.0 UN
Calcium	223,000
Chromium	2.9 B
Cobalt	13.2 B
Copper	8.1 B
Iron	42,100
Lead	2.0 U
Magnesium	203,000
Manganese	1780
Mercury	0.072 U
Nickel	35.7 B
Potassium	174,000
Selenium	5.0 U
Silver	2.0 U
Sodium	1,114,000
Thallium	4.0 U
Vanadium	2.2 B
Zinc	51.6

U- not detected at or above detection limit
B - detected below contract required detection limit
N - Spiked sample recovery not within control limits

Section VI Status of Previous Recommendations

As recommended in the 1998 O&M Report for the Busy Bee Disposal Site the removal of the leachate collected on site is continuing. This is being accomplished by using a NYSDEC Spill Remediation contractor.

Four of the eight designated residential drinking water wells were sampled and the data has been evaluated by the NYS DOH. All on-site monitoring wells were sampled and the data has been evaluated.

Semi-annual inspections of the landfill were conducted.

The landfill cover was mowed in August 2001.

Warning signs are still in-place along the perimeter of the site to warn hikers and hunters of the presence of the Busy Bee Hazardous Waste Landfill.

Leachate from the Henry landfill continues to flow into the local road side ditches during wet weather conditions. This landfill is not part of the Patton's inactive hazardous waste site.

Samples were not collected from the pond adjacent to the Henry landfill nor from the Henry leachate collection tank.

Section VII 2002 Recommendations

The following activities are recommended for the 2001 Operation and Maintenance Year:

- The removal of leachate on an as needed basis must continue to ensure the landfill is maintained in as dry as state as possible. The buildup of leachate during the period prior to the RI investigation is suspected as the cause of the groundwater contamination associated with the Busy Bee Landfill.

- Sampling of the selected residential drinking water wells in accordance with the following schedule:

Year	Residential Wells
2000	D1, D3, D5 & D7
2001	D1, D4, D6, D7 & D8
2002	D1, D3, D5, D7 & D1A
2003	D1, D4, D6, D8 & D1A

A new well has been installed on Clark Road to a serve a trailer located near the landfill. This location will be added to the sampling schedule starting with the 2002 sampling round and will be sampled annually thereafter. This location will be identified as Sample D1A. Sample D2 will no longer be collected due to a fire that destroyed the residence. However D2 will be returned to the sampling schedule if the home is rebuilt or the well put back into service.

After the completion of the 2003 sampling event, the sampling frequency will be re-evaluated.

- Sampling of the on-site monitoring wells must continue to evaluate the effectiveness of the landfill cap and leachate collection system. Samples from MW-107 cluster shall be collected for both filtered and unfiltered inorganic analysis.

- Continuation of the Semi-annual inspections of the landfill.

- The landfill cap will require mowing, minor repair of animal burrows and general maintenance of the site. The mowing will be accomplished in the fall of 2002.

- The Henry Landfill, located directly north of the Busy Bee and not part of this O&M activity, should be maintained by the NYSDEC Solid Waste unit. Leachate continues to seep from the landfill along the northern perimeter and flows into the drainage ditches along Clark Road.

- Collect surface water sample for inorganic analysis from the pond located immediately down gradient of the Henry Landfill and MW-107 cluster.

- Collect leachate sample from the collection tank located on the Henry landfill for inorganic analysis.

Section VIII Conclusions

The inspection, leachate removal activities, monitoring well and private well sampling have been performed in accordance with the O&M Plan developed for this site. The analysis of data collected indicate that there is no evidence of migration of site related compounds from the Busy Bee Landfill area into the surrounding properties. The NYS DOH has concluded that the private wells sampled as part of this project have not been impacted by site related compounds.

REFERENCES

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NYSDEC, 1995, Determination of Soil Cleanup Objectives and Cleanup Levels: New York State Department of Environmental Conservation Division of Environmental Remediation Technical and Administrative Guidance Memorandum # HWR-95-4046, Albany, New York, 9p.

NYSDEC, 1995, Identification and Listing of Hazardous Wastes, New York State Codes, Rules and Regulations Title 6, Part 371: New York State Department of Environmental Conservation Division of Hazardous Substances Regulation, Albany, New York, 90p.

NYSDEC, 1996, Record of Decision, Patton's Busy Bee Disposal Site, Town of Alfred, Allegany County and Town of Hartsville, Steuben County, Site #902014

NYSDEC, 1997, Patton's Busy Bee Disposal Site, Town of Alfred, Allegany County, Town of Hartsville, Steuben County, Site #902014, Operation and Maintenance Manual

NYSDEC, 1998, Division of Water Technical and Operational Guidance Series (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations

URS Consultants, 1990, Engineering Investigation at Inactive Hazardous Waste Sites, Preliminary Site Assessment, Patton's Busy Bee Disposal Site, Site #902014, URS Corporation Buffalo New York

URS Consultants, 1995, Final Report, Remedial Investigation, Patton's Busy Bee Disposal Site, Site #902014, URS Corporation Buffalo New York

URS Consultants, 1996, Phase II Feasibility Study, Patton's Busy Bee Disposal Site, Site #902014, URS Corporation Buffalo New York

Appendix A

Semi-annual Inspection Reports

PATTON'S BUSY BEE DISPOSAL SITE
Alfred Station, New York
SITE NO. 9-02-014

SITE INSPECTION FORM

Name of Inspectorr: Michael J. Hinton P.E.

Title: Environmental Engineer II

Date of Inspection: June 15, 2001

1. **Leachate tanks being monitored regularly:** ■ **Yes** G **No**
Date of last tank inspection:

2. **Access road condition:** ■ **Good** G **Fair** G **Poor**
Refer site photo's
***If poor, describe*:**

3. **Vegetative cover:** ■ **Good** G **Fair** G **Poor**

***If poor, describe*:**

4. **Woody plants present on cap:** G **Yes** ■ **No**

5. **Mowing required:** ■ **Yes** G **No**
Refer photo's, mowing scheduled for after September 1

6. **Condition of gas vents:** ■ **Unobstructed** G **Obstructed** G **Damaged** G **Missing**
Refer site photo's
***If damaged, describe*:**

7. **Erosion of cap:** ■ **None** G **Minor** G **Needs Repair**

***Describe repair needed*:**

8. **Evidence of ponded water on cap:** ■ **None** G **Suspected** G **Observed**

Indicate location on map and describe:

9. **Evidence of animal borrows on cap:** G **No** ■ **Yes**

If yes, backfill as required: **To be done in Fall w/ mowing**
Date backfilled: **To be Determined**

10. Leachate seeps observed on cap: ■ **No** G **Yes**

If yes, indicate location(s) on site map. ***Describe appearance*:**

11. Other leachate seeps observed (not on cap): G **No** ■ **Yes**

If yes, indicate location(s) on site map. ***Describe appearance*: North side of Henry Landfill**

12. Litter present on or around landfill: ■ **No** G **Yes**

***If yes, describe and indicate location(s) on site map*:**

13. Condition of monitoring wells. ***Inspect each well and check boxes below as completed. All wells should be secured and locked. If damaged, identify well number and describe damage*:**

■ **W-3***	■ **W-8***	■ **MW-101I**	■ **MW-104I**	■ **MW-107I**
■ **W-4S***	■ **W-9***	■ **MW-101D**	■ **MW-104D**	■ **MW-108I**
■ **W-4D***	■ **W-10S***	■ **MW-102I**	G **MW-105S***	■ **MW-108D**
■ **W-5***	■ **W-10D***	■ **MW-102D**	G **MW-105I***	■ **MW-109**
G **W-6*** ***gone***	■ **W-11***	■ **MW-103I**	G **MW-106I*** ***not found***	■ **MW-113**
■ **W-7*** ***damaged***	■ **MW-101S***	■ **MW-103D**	■ **MW-107S**	

Additional Comments:
*** - indicates wells not used as part of long term monitoring program. Should consider formal abandonment**

Weather - Hot, humid and hazy, T ~ 80^{0}F, nice breeze from NE

Ponded water found on perimeter road, south side and NE corner, does not appear to be leachate. Thunder storms were reported in area overnight 6/14/01

Well cap broken on MW-113
Locks missing on Monitoring Wells: 101I, 101D, 104I, 104D, 107SR, 107IR and 113. Locks will be replaced during fall sampling event.

Significant leachate from Henry Landfill on north side of facility. Henry landfill located in Region 8. Followup from Region 8 Solid Waste unit recommended.

Refer site photo's from today's date

Send copies of completed form to:

Mr. Gerald Rider	**50 Wolf Road**	**Michael Hinton**
NYSDEC Div. Env. Rem.	**Albany, NY 12233-7010**	**NYSDEC Div. of Env. Rem.**
O&M Section		**Region 9 Office**

270 Michigan Avenue
Buffalo, NY. 14203

Ms. Mary Jane Peachey
NYSDEC Div. Of Env. Rem.
Region 8 Office
6274 East Avon-Lima Road
Avon, NY 14414

PATTON'S BUSY BEE DISPOSAL SITE
Alfred Station, New York
SITE NO. 9-02-014

SITE INSPECTION FORM

Name of Inspector: **Michael J. Hinton P.E.** **Signed:**

Title: **Environmental Engineer II**

Date of Inspection: **October 17, 2001**

1. **Leachate tanks being monitored regularly:** ■ **Yes** G **No**
Date of last tank inspection*:** **10/17/01** ***Last Pump out: **August 30, 2001**

2. **Access road condition:** ■ **Good** G **Fair** G **Poor**
Refer site photo's
***If poor, describe*:**

3. **Vegetative cover:** ■ **Good** G **Fair** G **Poor**
***If poor, describe*:**

4. **Woody plants present on cap:** G **Yes** ■ **No**

5. **Mowing required:** G **Yes** ■ **No**
Refer photo's, mowing scheduled for after September 1 **- Mowed in August 2001 by Operations**

6. **Condition of gas vents:** ■ **Unobstructed** G **Obstructed**
G **Damaged** G **Missing**
Refer site photo's
***If damaged, describe*:**

7. **Erosion of cap:** ■ **None** G **Minor** G **Needs Repair**
***Describe repair needed*:**

8. **Evidence of ponded water on cap:** ■ **None** G **Suspected** G **Observed**
Indicate location on map and describe:

9. **Evidence of animal borrows on cap:** ■ **No** G **Yes**
If yes, backfill as required

10. Leachate seeps observed on cap: ■ **No** G **Yes**
***If yes, indicate location(s) on site map. Describe appearance*:**

11. Other leachate seeps observed (not on cap): G **No** ■ **Yes**
***If yes, indicate location(s) on site map. Describe appearance*: Northwest side of Henry Landfill**

12. Litter present on or around landfill: ■ **No** G **Yes**
***If yes, describe and indicate location(s) on site map*:**

13. Condition of monitoring wells. ***Inspect each well and check boxes below as completed. All wells should be secured and locked. If damaged, identify well number and describe damage*:**

G **W-3***	G **W-8***	■ **MW-101I**	■ **MW-104I**	■ **MW-107I**
G **W-4S***	G **W-9***	■ **MW-101D**	■ **MW-104D**	■ **MW-108I**
G **W-4D***	G **W-10S***	■ **MW-102I**	G **MW-105S***	■ **MW-108D**
G **W-5***	G **W-10D***	■ **MW-102D**	G **MW-105I***	■ **MW-109**
G **W-6*** ***gone***	G **W-11***	■ **MW-103I**	G **MW-106I*** ***not found***	■ **MW-113**
G **W-7*** ***damaged***	■ **MW-101S***	■ **MW-103D**	■ **MW-107S**	

Additional Comments:

*** - indicates wells not used as part of long term monitoring program. Should consider formal abandonment**

Weather - windy, rain T ~ 40^0F

Well cap broken on MW-113, need to use heavy stainless steel bailer to get adequate weight to get bailer down to water.

Need to paint well stickups and repair/replace concrete collars on most wells. Will develop work plan with Div. of Operations in Spring 2002 to effect repairs.

Locks re-placed on Monitoring Wells: 101I, 101D, 104I, 104D, 107SR, 107IR and 113.

Significant leachate from Henry Landfill on north side and northwest corner side of facility. Henry landfill located in Region 8. Followup from Region 8 Solid Waste unit recommended.

Leachate sample collected from BB-T2-South

Ropes and dedicated bailers in all wells to be replaced during next sampling round Fall 2002

Send copies of completed form to:
Mr. Gerald Rider NYSDEC Div. Env. Rem. O&M Section

50 Wolf Road
Albany, NY 12233-7010

Michael Hinton
NYSDEC Div. of Env. Rem.
Region 9 Office
270 Michigan Avenue
Buffalo, NY. 14203

Ms. Mary Jane Peachey
NYSDEC Div. Of Env. Rem.
Region 8 Office
6274 East Avon-Lima Road
Avon, NY 14414

Appendix B

NYS DOH Resident Letter

Appendix C

Residential Well Sampling Data Sheets

RESIDENTIAL WELL SAMPLING

Form to be completed at time of sampling

DATE OF SAMPLING: **10/17/01** TIME OF SAMPLING: **NS**

NAME OF SAMPLER: **Sadowski/Hinton** SAMPLE ID NUMBER: **D1**

OWNER OF WELL:

Name: **Stephen Patton** Telephone No.: **N/A**
Address: **5633 Clark Rd. Alfred Station NY 14803**

OCCUPANT OF HOUSE SERVED BY WELL (If other than owner):

Name: **Unknown** Telephone No.: **Unknown**
Address:

WATER USE:

Domestic: **Yes** Number of persons using water: Unknown
Livestock: **No** Number and type of livestock:
Irrigation: **No** Acres Frequency
Other (specify)

WATER TREATMENT:

Chlorinator present? **No** Water Softener? **Yes**
Water Filter? **No** Type
Other (specify)

DESCRIBE WHERE WATER SAMPLE WAS OBTAINED: (e.g. outdoor faucet, kitchen tap) (Water should be sampled as close to well head as possible)
No Sample collected, Owner or representative not present, residence locked, can not collect sample from outside faucet due to filter/water softener.

FUTURE USE: Are there any planned changes to current supply?

ADDITIONAL COMMENTS:

House up for sale, owner has moved to Denver, Colorado. Home appears to be rented.

RESIDENTIAL WELL SAMPLING

Form to be completed at time of sampling

DATE OF SAMPLING: **10/17/01** TIME OF SAMPLING: **NS**

NAME OF SAMPLER: **Sadowski/Hinton** SAMPLE ID NUMBER: **D2**

OWNER OF WELL:

Name: **Stephen and Sharon Patton** Telephone No.: **(607) 587-9104**
Address: **5629 Clark Rd. Alfred Station**

OCCUPANT OF HOUSE SERVED BY WELL (If other than owner):

Name: Home Destroyed Telephone No.: NA
Address:

WATER USE:

Domestic: Number of persons using water:
Livestock: Number and type of livestock:
Irrigation: Acres Frequency
Other (specify)

WATER TREATMENT:

Chlorinator present? Water Softener?
Water Filter? Type
Other (specify)

DESCRIBE WHERE WATER SAMPLE WAS OBTAINED: (e.g. outdoor faucet, kitchen tap) (Water should be sampled as close to well head as possible)
Home was destroyed by fire in the spring of 2001. No apparent effort to rebuild. Will sample in future if rebuilt.

FUTURE USE: Are there any planned changes to current supply?

ADDITIONAL COMMENTS:
Property up For Sale, owners, Mr. and Mrs. Stephen Patton have moved to Denver Colorado.

RESIDENTIAL WELL SAMPLING

Form to be completed at time of sampling

DATE OF SAMPLING: **10/17/01** TIME OF SAMPLING: **1440**

NAME OF SAMPLER: **Sadowski/Hinton** SAMPLE ID NUMBER: **D4**

OWNER OF WELL:

Name: **Mr. Richard Clark** Telephone No.:
Address: **5583 Crosby Creek Rd. Hornell NY 14843**

OCCUPANT OF HOUSE SERVED BY WELL (If other than owner):

Name: Telephone No.:
Address:

WATER USE:

Domestic: **Yes** Number of persons using water: 1
Livestock: **No** Number and type of livestock
Irrigation: **No** Acres Frequency
Other (specify)

WATER TREATMENT:

Chlorinator present? No Water Softener? No
Water Filter? No Type
Other (specify)

DESCRIBE WHERE WATER SAMPLE WAS OBTAINED: (e.g. outdoor faucet, kitchen tap) (Water should be sampled as close to well head as possible)
Sample was collected from kitchen sink. Home has been purchased from Mr. Terry Towner by Mr. Clark. Extensive remolding performed on

FUTURE USE: Are there any planned changes to current supply?
Mr. Clark considering installing filter system.

ADDITIONAL COMMENTS:

RESIDENTIAL WELL SAMPLING

Form to be completed at time of sampling

DATE OF SAMPLING: **10/17/01** TIME OF SAMPLING: **1425**

NAME OF SAMPLER: **Sadowski/Hinton** SAMPLE ID NUMBER: **D6**

OWNER OF WELL:

Name: **Unknown** Telephone No.:
Address: **5503 Hartsville Hill Road, Alfred Station NY 14803**

OCCUPANT OF HOUSE SERVED BY WELL (If other than owner):

Name: Telephone No.: **N/A**
Address:

WATER USE: (please circle)

Domestic: Yes No Number of persons using water:
Livestock: Yes No Number and type of livestock
Irrigation: Yes No Acres Frequency
Other (specify)

WATER TREATMENT:

Chlorinator present? No Water Softener? No
Water Filter? No Type
Other (specify)

DESCRIBE WHERE WATER SAMPLE WAS OBTAINED: (e.g. outdoor faucet, kitchen tap) (Water should be sampled as close to well head as possible)
Sample collected from hose bib in rear of home. Owner home sick, did not attempt to interview owner of collect sample from kitchen sink.

FUTURE USE: Are there any planned changes to current supply?

ADDITIONAL COMMENTS:

RESIDENTIAL WELL SAMPLING

Form to be completed at time of sampling

DATE OF SAMPLING: **10/17/01** TIME OF SAMPLING: **1415**

NAME OF SAMPLER: **Sadowski/Hinton** SAMPLE ID NUMBER: **D7**

OWNER OF WELL:

Name: **Scott and Tammy Cooper** Telephone No.:**(607)478-8668**
Address: **9 First St. Andover NY 14806**

OCCUPANT OF HOUSE SERVED BY WELL (If other than owner):

Name: **Home Under Construction** Telephone No.: **N/A**
Address: **242 Hartsville Hill Rd. Alfred Station NY 14803**

WATER USE: (please circle)

Domestic: Yes No Number of persons using water: **5**
Livestock: Yes No Number and type of livestock
Irrigation: Yes No Acres Frequency
Other (specify)

WATER TREATMENT:

Chlorinator present? Yes No Water Softener? Yes No
Water Filter? Yes No Type
Other (specify) **None Planed**

DESCRIBE WHERE WATER SAMPLE WAS OBTAINED: (e.g. outdoor faucet, kitchen tap) (Water should be sampled as close to well head as possible)
Sample collected from well head through temporary hose

FUTURE USE: Are there any planned changes to current supply?

ADDITIONAL COMMENTS:
Owner expects to occupy home December 2001.

RESIDENTIAL WELL SAMPLING

Form to be completed at time of sampling

DATE OF SAMPLING: **10/17/01** TIME OF SAMPLING: **1405**

NAME OF SAMPLER: **Sadowski/Hinton** SAMPLE ID NUMBER: **D8**

OWNER OF WELL:

Name: **Mrs. Lehman** Telephone No.:**(607) 587-9425**
Address: **266 Hartsville Hill Road**

OCCUPANT OF HOUSE SERVED BY WELL (If other than owner):

Name: Telephone No.:
Address:

WATER USE: (please circle)

Domestic: Yes Number of persons using water: 3
Livestock: No Number and type of livestock
Irrigation: No Acres Frequency
Other (specify)

WATER TREATMENT:

Chlorinator present? No Water Softener? No
Water Filter? No Type
Other (specify)

DESCRIBE WHERE WATER SAMPLE WAS OBTAINED: (e.g. outdoor faucet, kitchen tap) (Water should be sampled as close to well head as possible)
No one home at time of sample collection.
Sample collected from hose bib at rear of home.

FUTURE USE: Are there any planned changes to current supply?

ADDITIONAL COMMENTS:
Duplicate sample collected. Sample #D9

Appendix D

Well Purging and Sampling Log

WELL PURGING & SAMPLING LOG

Site Name: Pattons Busy Bee		**Site Number: 902014**
Sampler: Glaser/Sadowski		
Purge Date: 10/16/01	**Start Purge: 1110**	**End Purge: 1200**
Sample Date: 10/17/01		**Sample Time: 1130**

Well Number: MW-101D

1. Total Casing and Screen Length (Ft):	**84.76'**
2. Casing Internal Diameter (in):	**2"**
3. Water Level Below Top of Casing (Ft.):	**81.90'**
4. Volume of Water in Casing (Gal.): #1 - #3 X #2 (gal/ft)	**0.47**
Volume of 3 Casings:	**1.40**

Well ID	Vol.(gal/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469
8"	2.611

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
pH										
CONDUCTIVITY										
TURBIDITY										
TEMPERATURE										
Eh										
TIME										

COMMENTS:
No parameters collected
Soft Bottom, Bailed dry at 1 gallon, slight turbidity

Water level at time of sample collection 81.68'

WELL PURGING & SAMPLING LOG

Site Name: Pattons Busy Bee		**Site Number: 902014**
Sampler: Sadowski/Glaser		
Purge Date: 10/16/01	**Start Purge: 1110**	**End Purge: 1120**
Sample Date: 10/17/01		**Sample Time: 1135**

Well Number: MW-101I

1. Total Casing and Screen Length (Ft):	**61.94'**
2. Casing Internal Diameter (in):	**2"**
3. Water Level Below Top of Casing (Ft.):	**55.14'**
4. Volume of Water in Casing (Gal.): #1 - #3 X #2 (gal/ft)	**1.11**
Volume of 3 Casings:	**3.33**

Well ID	Vol.(gal/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469
8"	2.611

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
pH										
CONDUCTIVITY										
TURBIDITY										
TEMPERATURE										
Eh										
TIME										

COMMENTS:
No parameters collected
Soft Bottom
Water level at sample collection 60.99'

Lat 42^0-16'-23" Long 77^0-44'15"

WELL PURGING & SAMPLING LOG

Site Name: Pattons Busy Bee	**Site Number: 902014**	
Sampler: Sadowski/Glaser		
Purge Date: 10/16/01	**Start Purge: 1135**	**End Purge: 1200**
Sample Date: 10/17/01		**Sample Time: 1020**

Well Number: MW-102D

1. Total Casing and Screen Length (Ft): 68.34'

2. Casing Internal Diameter (in): 2"

3. Water Level Below Top of Casing (Ft.): 57.15'

4. Volume of Water in Casing (Gal.): 1.82
#1 - #3 X #2 (gal/ft)
Volume of 3 Casings: 5.5

Well ID	Vol.(gal/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469
8"	2.611

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
pH										
CONDUCTIVITY										
TURBIDITY										
TEMPERATURE										
Eh										
TIME										

COMMENTS:
No Parameters collected

Ground water level at sample collection 57.19'

Lat 42^0-16'-12" Long 77^0-44'-23"

WELL PURGING & SAMPLING LOG

Site Name: Pattons Busy Bee		**Site Number: 902014**
Sampler: Glaser/Sadowski		
Purge Date: 10/16/01	**Start Purge: 1215**	**End Purge: 1250**
Sample Date: 10/17/01		**Sample Time: 1040**

Well Number: MW-103D

1. Total Casing and Screen Length (Ft): 69.99'

2. Casing Internal Diameter (in): 2"

3. Water Level Below Top of Casing (Ft.): 49.83'

4. Volume of Water in Casing (Gal.): 3.29

#1 - #3 X #2 (gal/ft)
Volume of 3 Casings: 9.86

Well ID	Vol.(gal/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469
8"	2.611

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
pH										
CONDUCTIVITY										
TURBIDITY										
TEMPERATURE										
Eh										
TIME										

COMMENTS:
No Parameters collected
Hard bottom, moderate turbidity, grew/grown color at completion

Ground water level at sample collection - 52.25'

Lat 42^0-16'-15" Long 77^0-44'-29"

WELL PURGING & SAMPLING LOG

Site Name: Pattons Busy Bee		**Site Number: 902014**
Sampler: Sadowski/Glaser		
Purge Date: 10/16/01	**Start Purge: 1215**	**End Purge: 1245**
Sample Date: 10/17/01		**Sample Time: 1035**

Well Number: MW-103I

1. Total Casing and Screen Length (Ft): 28.42'

2. Casing Internal Diameter (in): 2"

3. Water Level Below Top of Casing (Ft.): 24.22'

4. Volume of Water in Casing (Gal.): 0.68

#1 - #3 X #2 (gal/ft)

Volume of 3 Casings: 2.05

Well ID	Vol.(gal/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469
8"	2.611

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
pH										
CONDUCTIVITY										
TURBIDITY										
TEMPERATURE										
Eh										
TIME										

COMMENTS:
No Parameters collected
Bailed dry at 1.3 gallons, turbid, tan

Ground water level at time of sample collection 24.75'

WELL PURGING & SAMPLING LOG

Site Name: Pattons Busy Bee		**Site Number: 902014**
Sampler: Sadowski/Glaser		
Purge Date: 10/16/01	**Start Purge: 1230**	**End Purge: 1300**
Sample Date: 10/17/01		**Sample Time: 1050**

Well Number: MW-104I

1. Total Casing and Screen Length (Ft): 29.87'

2. Casing Internal Diameter (in): 2"

3. Water Level Below Top of Casing (Ft.): 26.31'

4. Volume of Water in Casing (Gal.): 0.58

#1 - #3 X #2 (gal/ft)

Volume of 3 Casings: 1.8

Well ID	Vol.(gal/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469
8"	2.611

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
pH										
CONDUCTIVITY										
TURBIDITY										
TEMPERATURE										
Eh										
TIME										

COMMENTS:

No Parameters collected
First bailer clear, then light brown
Ground water level at sample collection 27.41'

Lat 42^0-16'-18" Long 77^0-44'-29"

WELL PURGING & SAMPLING LOG

Site Name: Pattons Busy Bee		**Site Number: 902014**
Sampler: N/A		
Purge Date: 10/16/01	**Start Purge: 1230**	**End Purge: 1230**
Sample Date: N/A		**Sample Time: N/A**

Well Number: MW-104D

1. Total Casing and Screen Length (Ft): 70.42'

2. Casing Internal Diameter (in): 2"

3. Water Level Below Top of Casing (Ft.): No Water

4. Volume of Water in Casing (Gal.):
#1 - #3 X #2 (gal/ft)
Volume of 3 Casings:

Well ID	Vol.(gal/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469
8"	2.611

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
pH										
CONDUCTIVITY										
TURBIDITY										
TEMPERATURE										
Eh										
TIME										

COMMENTS:

Well Dry - No Sample Collected

WELL PURGING & SAMPLING LOG

Site Name: Pattons Busy Bee		**Site Number: 902014**
Sampler: Sadowski/Glaser		
Purge Date: 11/16/01	**Start Purge: 1000**	**End Purge: 1040**
Sample Date: 11/17/01		**Sample Time: 1235**

Well Number: MW-107IR

1. Total Casing and Screen Length (Ft): 73.53'

2. Casing Internal Diameter (in): 2"

3. Water Level Below Top of Casing (Ft.): 72.23'

4. Volume of Water in Casing (Gal.): 0.21

#1 - #3 X #2 (gal/ft)

Volume of 3 Casings: 0.63

Well ID	Vol.(gal/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469
8"	2.611

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
pH										
CONDUCTIVITY										
TURBIDITY										
TEMPERATURE										
Eh										
TIME										

COMMENTS:
No Parameters collected
Depth measurement to top of inner casing
Bailed dry at 0.5 gallons

Water level at time of sample collection - 72.84'

WELL PURGING & SAMPLING LOG

Site Name: Pattons Busy Bee		**Site Number: 902014**
Sampler: Sadowski/Glaser		
Purge Date: 10/16/01	**Start Purge: 1005**	**End Purge: 1045**
Sample Date: 11/17/01		**Sample Time: 1230**

Well Number: MW-107SR

1. Total Casing and Screen Length (Ft): 30.87'

2. Casing Internal Diameter (in): 2"

3. Water Level Below Top of Casing (Ft.): 28.33'

4. Volume of Water in Casing (Gal.): 0.41

#1 - #3 X #2 (gal/ft)

Volume of 3 Casings: 1.23

Well ID	Vol.(gal/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469
8"	2.611

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
pH										
CONDUCTIVITY										
TURBIDITY										
TEMPERATURE										
Eh										
TIME										

COMMENTS:
No Parameters collected
Bailed dry at 1.25 gallons
Water very turbid, tan color
Ground water level at time of sample collection 29.86'

Lat 42^0-16'-26" Long 77^0-44'-08"

WELL PURGING & SAMPLING LOG

Site Name: Pattons Busy Bee		**Site Number: 902014**
Sampler: Sadowski/Glaser		
Purge Date: 10/16/01	**Start Purge: 1150**	**End Purge: 1230**
Sample Date: 10/17/01		**Sample Time: 1155**

Well Number: MW-108D

1. Total Casing and Screen Length (Ft): 78.0'

2. Casing Internal Diameter (in): 2"

3. Water Level Below Top of Casing (Ft.): 50.74'

4. Volume of Water in Casing (Gal.): 4.44

#1 - #3 X #2 (gal/ft)

Volume of 3 Casings: 13.32

Well ID	Vol.(gal/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469
8"	2.611

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	~4.5	~9.0	~13.5	~16.5						
pH	8.36	8.25	7.70	7.64						
CONDUCTIVITY	19.4	18.2	17.1	19.4						
TURBIDITY	61.6	12.9	8.5	11.5						
TEMPERATURE	8.8	9.4	9.6	9.4						
Eh	-70.2	-65.3	-28	-31.4						
TIME	1212	1217	1224	1227						

COMMENTS:
Hard Bottom
Started with silt/sand to about 3 gallons, then clear
No odor

Ground water level at sample collection time 50.80'

Lat 42^0-16'-20" Long 77^0-44'-06"

WELL PURGING & SAMPLING LOG

Site Name: Pattons Busy Bee		**Site Number: 902014**
Sampler: Sadowski/Glaser		
Purge Date: 10/16/01	**Start Purge: 1150**	**End Purge: 1245**
Sample Date: 10/17/01		**Sample Time: 1150**

Well Number: MW-108I

1. Total Casing and Screen Length (Ft): 56.88'

2. Casing Internal Diameter (in): 2"

3. Water Level Below Top of Casing (Ft.): 48.94'

4. Volume of Water in Casing (Gal.): 1.63
#1 - #3 X #2 (gal/ft)
Volume of 3 Casings: 4.9

Well ID	Vol.(gal/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469
8"	2.611

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	~!.0	~3.0								
pH	8.3	8.18								
CONDUCTIVITY	17.0	17.4								
TURBIDITY	>200	167								
TEMPERATURE	8.5	8.6								
Eh	-56.0	-60.7								
TIME	1243	1246								

COMMENTS:
Hard bottom
Purged dry at 3 gallons

Ground water level at sample collection 49.06'

WELL PURGING & SAMPLING LOG

Site Name: Pattons Busy Bee		**Site Number: 902014**
Sampler: Sadowski/Glaser		
Purge Date: 10/16/01	**Start Purge: 1040**	**End Purge: 1120**
Sample Date: 10/17/01		**Sample Time: 1005**

Well Number: MW-109

1. Total Casing and Screen Length (Ft): 103.1'

2. Casing Internal Diameter (in): 2"

3. Water Level Below Top of Casing (Ft.): 57.22'

4. Volume of Water in Casing (Gal.): 7.47
#1 - #3 X #2 (gal/ft)

Volume of 3 Casings: 22.4

Well ID	Vol.(gal/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469
8"	2.611

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
	~1.0	~7.5	~15	~22.5						
pH	8.36	8.06	8.38	8.95						
CONDUCTIVITY	19.9	60.3	22.7	18.7						
TURBIDITY	49	24.2	48.8	34.4						
TEMPERATURE	9.4	9.9	11.5	11.4						
Eh	-72.5	-53.8	-72.0	-95.5						
TIME	1040	1053	1105	1120						

COMMENTS:
Generally clear to start
Slight H_2S odor at ~ 10 gallons
Slug of black colored water at ~13 gallons
Cleared after 14 gallons but still blackish

Ground water level at sample collection 88.60'

Lat 42^0-16'-11" Long 77^0-44'-16"

WELL PURGING & SAMPLING LOG

Site Name: Pattons Busy Bee		**Site Number: 902014**
Sampler: Sadowski/Glaser		
Purge Date: 10/16/01	**Start Purge: 1000**	**End Purge: 1130**
Sample Date: 10/17/01		**Sample Time: 1250**

Well Number: MW-113

1. Total Casing and Screen Length (Ft): 51.38'

2. Casing Internal Diameter (in): 2"

3. Water Level Below Top of Casing (Ft.): 42.10'

4. Volume of Water in Casing (Gal.): 1.51
#1 - #3 X #2 (gal/ft)

Volume of 3 Casings: 4.5

Well ID	Vol.(gal/ft)
1"	0.041
2"	0.163
4"	0.653
6"	1.469
8"	2.611

PARAMETERS	ACCUMULATED VOLUME PURGED (GALLONS)									
pH										
CONDUCTIVITY										
TURBIDITY										
TEMPERATURE										
Eh										
TIME										

COMMENTS:
No Parameters collected
H_2S odor detected at initial bailer
gw initially clear then milky

Trouble getting bailer to water, need to use heavier stainless steel bailer. Well riser not straight.

Ground water level at sample collection 49.38'

Duplicate sample collected this well - Sample #A883-14

Lat 42^0-16'-31" Long 77^0-44'-09"

Appendix E

Leachate Collection Tank Monitoring and Leachate Removal Log

Patton's Busy Bee Disposal Site
Site No. 9-02-014

Leachate Tank Monitoring

Tank #BB-T1-North

North Tank: Estimated Capacity: 15,000 gallons
Distance from Top of Standpipe to Bottom of Tank: 12.4'
Tank Diameter: 10' (est)
Tank Length: 25' (est)

BB-T1-North

Leachate Tank Measurement							
Date	Depth	Date	Depth	Date	Depth	Date	Depth
9/11/97	**8.05'**	**9/30/98**	**0.6'**	**10/15/99**	**9.8'**	**7/5/00**	**0.7'**
9/17/97	**8.05'**	**12/29/98**	**~8'**	**11/10/99**	**6.1'**	**8/3/00**	**12.0'**
10/21/97	**0.6'**	**4/1/99**	**pumping**	**12/2/99**	**9.9'**	**8/21/00**	**12.0'**
11/12/97	**0.63'**	**4/9/99**	**12.1'**	**12/10/99**	**9.5'**	**9/6/00**	**12.0'**
11/25/97	**6.20'**	**4/19/99**	**11.3'**	**12/30/99**	**5.6'**	**9/18/00**	**12.0'**
12/10/97	**9.83'**	**5/7/99**	**2.3'**	**1/11/00**	**0.5'**	**10/19/00**	**8.25'**
1/14/98	**0.5'**	**5/25/99**	**9.4'**	**2/8/00**	**0.5'**	**12/26/00**	**6.30'**
3/6/98	**0.33'**	**7/12/99**	**9.5'**	**3/20/00**	**0.08'**	**2/9/01**	**0.15'**
4/24/98	**0.5'**	**7/29/99**	**9.0'**	**4/10/00**	**full**	**3/20/01**	**0.6'**
5/15/98	**8.3'**	**8/23/99**	**8.2'**	**5/2/00**	**12.3'**	**4/26/01**	**0.16**
5/21/98	**6.4'**	**9/10/99**	**6.9'**	**5/19/00**	**9.2'**	**6/7/01**	**12.1**
5/27/98	**3.6'**	**10/1/99**	**0.5'**	**6/15/00**	**12.2'**	**6/15/01**	**12.1**

Note: Depth measured from top of riser to leachate level
Arrange for removal when leachate is within 4.9' of top of riser

Patton's Busy Bee Disposal Site
Site No. 9-02-014

Leachate Tank Monitoring

Tank #BB-T1-North (cont.)

North Tank: Estimated Capacity: 15,000 gallons
Distance from Top of Standpipe to Bottom of Tank: 12.4'
Tank Diameter: 10' (est)
Tank Length: 25' (est)

BB-T1-North

Leachate Tank Measurement							
Date	**Depth**	**Date**	**Depth**	**Date**	**Depth**	**Date**	**Depth**
7/19/01	12.0'						
8/23/01	12.0'						
10/17/01	12.2'						
11/30/01	12.3'						

Note: Depth measured from top of riser to leachate level

Patton's Busy Bee Disposal Site
Site No. 9-02-014

Leachate Tank Monitoring

Tank #BB-T1-South

South Tank: Estimated Capacity: 18,000 gallons
Distance from Top of Standpipe to Bottom of Tank: 12.8'
Tank Diameter: 10.7' (est)
Tank Length: 28' (est)

BB-T1-South

Leachate Tank Measurement							
Date	**Depth**	**Date**	**Depth**	**Date**	**Depth**	**Date**	**Depth**
9/11/97	6.25'	9/30/98	1.0'	10/15/99	6.0'	7/5/00	1.9'
9/17/97	6.10'	12/29/98	~8'	11/10/99	3.8'	8/3/00	10.0'
10/21/97	1.83'	4/1/99	being pumped	12/2/99	10.9'	8/21/00	8.0'
11/12/97	1.84'	4/9/99	11.3'	12/10/99	9.0	9/6/00	7.0'
11/25/97	4.53'	4/19/99	3.6'	12/30/99	3.6'	9/18/00	6.3'
12/10/97	8.58'	5/7/99	3.6'	1/11/00	1.8'	10/19/00	3.6
1/14/98	1.75'	5/25/99	6.5'	2/8/00	1.8'	12/26/00	3.7'
3/6/98	1.62'	7/12/99	4.0'	3/20/00	1.5'	2/09/01	1.5'
4/24/98	1.0'	7/29/99	3.6'	4/10/00	full	3/20/01	1.8'
5/15/98	3.6'	8/23/99	3.6'	5/2/00	8.0'	4/26/01	1.4'
5/21/98	3.6'	9/10/99	3.6'	5/19/00	3.6'	6/7/01	9.9'
5/27/98	3.5'	10/1/99	1.7'	6/15/00	6.4'	6/15/01	9.6'

Note: Depth measured from top of riser to leachate level

Patton's Busy Bee Disposal Site
Site No. 9-02-014

Leachate Tank Monitoring

Tank #BB-T1-South (cont)

North Tank: Estimated Capacity: 15,000 gallons
Distance from Top of Standpipe to Bottom of Tank: 12.4'
Tank Diameter: 10' (est)
Tank Length: 25' (est)

BB-T1-South

Leachate Tank Measurement							
Date	**Depth**	**Date**	**Depth**	**Date**	**Depth**	**Date**	**Depth**
7/19/01	**8.3'**						
8/23/01	**7.4'**						
10/17/01	**10.4'**						
11/30/01	**6.9'**						

Note: Depth measured from top of riser to leachate level

Patton's Busy Bee Disposal Site
Site No. 9-02-014

Leachate Tank Monitoring

Tank #BB-T2-North

North Tank: Estimated Capacity: 2000 gallons
Distance from Top of Standpipe to Bottom of Tank: 7.5' (est)
Tank Diameter: 5' (est)
Tank Length: unknown

BB-T2-North

Leachate Tank Measurement							
Date	Depth	Date	Depth	Date	Depth	Date	Depth
9/11/97	7.1	9/30/98	1.0'	10/15/99	7.0'	7/5/00	2.1'
9/17/97	7.05'	12/29/98	~5'	11/10/99	7.1'	8/3/00	7.3'
10/21/97	5.0'	4/1/99	~7'	12/2/99	7.5'	8/21/00	7.3'
11/12/97	3.91'	4/9/99	7.25'	12/10/99	7.3'	9/6/00	7.2'
11/25/97	3.90'	4/19/99	7.25'	12/30/99	6.5'	9/18/00	7.2'
12/10/97	7.37'	5/7/99	6.25'	1/11/00	1.5'	10/19/00	NR
1/14/98	1.21'	5/25/99	6.25'	2/8/00	1.3'	12/26/00	6.5'
3/6/98	4.58'	7/12/99	6.25'	3/20/00	0.3'	2/9/01	2.8'
4/24/98	1.0'	7/29/99	6.2'	4/10/00	full	3/20/01	2.0'
5/15/98	2.6'	8/23/99	6.2'	5/2/00	0.5'	4/20/01	0.33'
5/21/98	2.2'	9/10/99	6.2'	5/19/00	full	6/7/01	7.1'
5/27/98	1.7'	10/1/99	2.7'	6/15/00	5.8'	6/15/01	7.1'

Note: Depth measured from top of riser to leachate level

Arrange for removal when leachate is within 3.5' of top of riser

Patton's Busy Bee Disposal Site
Site No. 9-02-014

Leachate Tank Monitoring

Tank #BB-T2-North (cont)

North Tank: Estimated Capacity: 2000 gallons
Distance from Top of Standpipe to Bottom of Tank: 7.5' (est)
Tank Diameter: 5' (est)
Tank Length: unknown

BB-T2-North

Leachate Tank Measurement							
Date	**Depth**	**Date**	**Depth**	**Date**	**Depth**	**Date**	**Depth**
7/29/01	7.0'						
8/23/01	7.0'						
10/17/01	7.0'						
11/30/01	7.0'						

Note: Depth measured from top of riser to leachate level

Arrange for removal when leachate is within 3.5' of top of riser

Patton's Busy Bee Disposal Site
Site No. 9-02-014

Leachate Tank Monitoring

Tank #BB-T2-South

South Tank: Estimated Capacity: 4000 gallons
Distance from Top of Standpipe to Bottom of Tank: 6.3'
Tank Diameter: 5.1' (est)
Tank Length: 24' (est)

BB-T2-South

Leachate Tank Measurement							
Date	Depth	Date	Depth	Date	Depth	Date	Depth
9/11/97	3.05'	9/30/98	1.5'	10/15/99	3.8'	7/5/00	1.6'
9/17/97	3.0'	12/29/98	~4'	11/10/99	1.9'	8/3/00	3.5'
10/21/97	1.6'	4/1/99	~6'	12/2/99	5.0'	8/21/00	3.0
11/12/97	1.73'	4/9/99	5.25'	12/10/99	3.8'	9/6/00	2.6'
11/25/97	1.65'	4/19/99	2.2'	12/30/99	1.6'	9/18/00	2.3'
12/10/97	3.83'	5/7/99	1.7'	1/11/00	1.3'	10/19/00	1.6'
1/14/98	0.98'	5/25/99	1.7'	2/8/00	1.3'	12/26/00	1.5'
3/6/98	1.62'	7/12/99	1.8'	3/20/00	full	2/9/01	1.6'
4/24/98	1.5'	7/29/99	1.8'	4/10/00	full	3/20/01	1.6'
5/15/98	1.6'	8/23/99	1.8'	5/2/00	0.2'	4/26/01	0
5/21/98	1.6'	9/10/99	1.8'	5/19/00	full	6/7/01	4.4'
5/27/98	1.5'	10/1/99	1.6'	6/15/00	1.6'	6/15/01	4.3'

Note: Depth measured from top of riser to leachate level

Patton's Busy Bee Disposal Site
Site No. 9-02-014

Leachate Tank Monitoring

Tank #BB-T2-South (cont)

North Tank: Estimated Capacity: 2000 gallons
Distance from Top of Standpipe to Bottom of Tank: 7.5' (est)
Tank Diameter: 5' (est)
Tank Length: unknown

BB-T2-South

Leachate Tank Measurement							
Date	**Depth**	**Date**	**Depth**	**Date**	**Depth**	**Date**	**Depth**
7/19/01	3.8'						
8/23/01	3.4'						
10/17/01	3.9'						
11/30/01	1.8'						

Note: Depth measured from top of riser to leachate level

Leachate Removal Log

Date	Estimated Storage Volume	Estimated Volume Removed	Date	Estimated Storage Volume	Estimated Volume Removed
10/27/97	38,000	15,200	11/2/00	32,500	31,000
10/29/97	22,800	canceled	5/8/01	38,000	33,000
11/21/97	38,000	10,000	8/30/01	11,000	11,000
12/3/97	No Estimate	20,000			
12/4/97	No Estimate	5,500			
12/5/97	No Estimate	6,800			
1/22/98	38,000	17,800			
3/31/98	38,000	40,000			
5/5/98	38,000	35,600			
6/2/98	38,000	23,100			
10/30/98	38,000	31,000			
12/23/98	No Estimate	7,700			
4/1/99	38,000	34,700			
4/8/99	No Estimate	21,500			
5/18/99	No Estimate	16,500			
10/4/99	38,000	34,500			
4/26/00	38,000	35,000			
5/31/00	38,000	37,500			
7/13/00	38,000	36,200			

Appendix F

Site Photo's June 15, 2001

Access Road 6/15/01

Access Road 6/15/01

Access Road 6/15/01

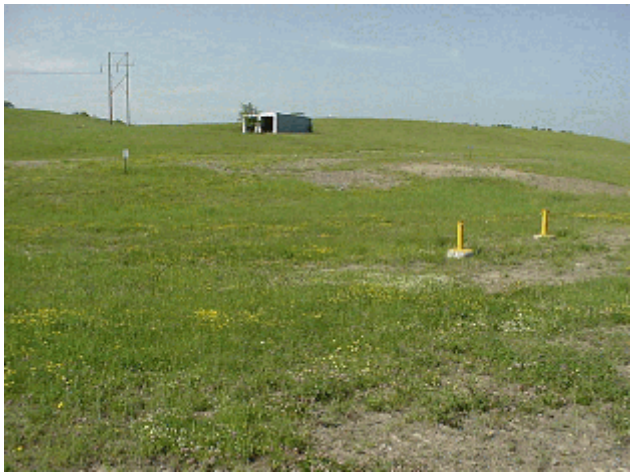
Access Road and Gate 6/15/01

Henry Landfill 6/15/01

Henry Landfill 6/15/01

Tank BBT1 Access Road 6/15/01

Tank BBT2 Access Road 6/15/01



North Cap Area 6/15/01

North East Cap Area 6/15/01

North West Area 6/15/01

East Cell Cap Area 6/15/01

West Cell Cap Area 6/15/01

ROW Cap Area between Cells 6/15/01