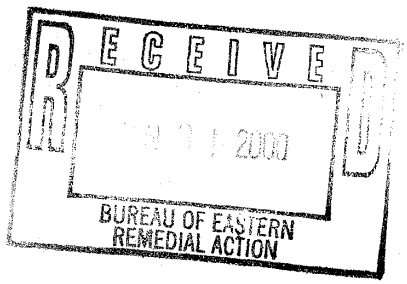
Fumex Sanitation Site

New Hyde Park, Nassau County, New York

Amendment To Phase II Remedial Investigation And Focused Feasibility Study



NYSDEC Site #1-30-041
Work Assignment #D002925-22.1

Prepared For:

New York State
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Section 1
Amendment to the RI/ FS

1.1 Background and Objectives

The Fumex Sanitation site is located at 131 Herricks Road in New Hyde Park, Nassau County, New York. The site encompasses approximately one-third acre of land and includes a one story masonry and metal frame building with no basement and a paved parking area. Fumex sanitation, Inc. operated a commercial termite extermination business at this location from 1952 to 1992. The site is currently unoccupied.

The Fumex site is located in a densely populated area. It is bounded to the north by Bedford Avenue, to the west by residential properties, to the south by a vacant parking lot owned by Mercury Electric, a tenant on Park Avenue and to the east by Herricks Road (see Figure 1). The area surrounding the site consists of industrial/ commercial properties as well as residential properties. Fumex Sanitation had operated a commercial termite extermination facility at the site since 1952. Fumex regularly sprayed its then unpaved parking lot with 1-2% chlordane for insect control from 1952 to 1978. In 1981, a drum of chlordane rinse water was spilled. Less than 30 gallons of the rinse water was spilled onto the asphalt parking lot behind the Fumex building. The rinse water entered two stormwater catch basins on the adjacent road (Bedford Avenue) and a dry well within the Fumex parking lot. Due to these activities, chlordane contaminated both the soil and groundwater beneath the site.

In 1986, NYSDECs Region 1 office entered into an Order-on-Consent with Fumex Sanitation, Inc. to determine the extent of chlordane in the soil and groundwater at the site and/or evaluate remedial alternatives. A limited site investigation was conducted in that same year. A second investigation was completed in 1989. In this same year, the Fumex site was included in the Registry of Inactive Hazardous Waste Disposal Sites in New York State.

In the spring of 1996, CDM was authorized by the New York State Department of Environmental Conservation (NYSDEC), under the State Superfund Standby Contract (SSSC), to conduct a limited Phase I Investigation of the site in order to assess current chlordane concentrations within the onsite dry well sediments and in onsite groundwater. Details of this investigation can be found in CDMs Phase I Remedial Investigation Report, dated December 1996. Based on the Phase I RI findings, NYSDEC determined that further investigation was necessary to fully assess the nature and extent of soil and groundwater contamination associated with the Fumex site.

In 1998, a Phase II Remedial Investigation was completed. This work was performed to assess whether the chlordane contamination from the Fumex Site had migrated off-site. Deep and shallow well clusters were installed to determine possible horizontal and vertical impacts off site. The well clusters were installed upgradient (for

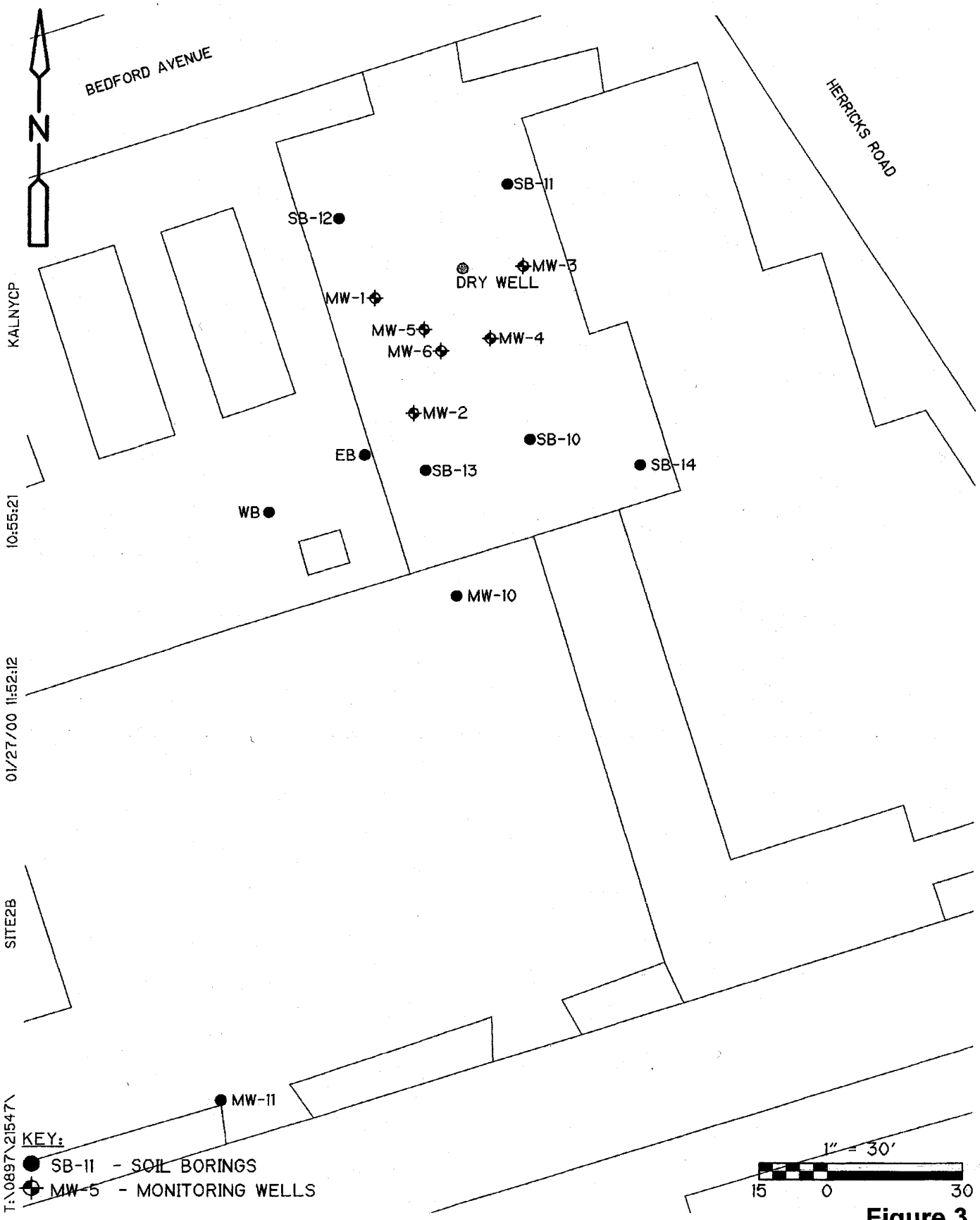

Figure 3
Monitoring Wells And Soil Sample Locations For Amendment To Phase II RI Report
Fumex Site - New Hyde Park, New York

CDM Camp Dresser & McKee

background purposes) and downgradient of the dry well. The upgradient well was installed approximately 200-ft from the Fumex site while the downgradient wells were installed 600-ft and 1200-ft from the site.

No off-site contamination was discovered during this investigation. Further details of this investigation can be found in the Final Phase II Remedial Investigation (RI) Report (CDM, January 2000) and the Final Feasibility Study (FS) Report (CDM, January 2000).

In an effort to further delineate the extent of the soil and groundwater contamination, NYSDEC authorized CDM to perform an additional investigation at the Fumex Sanitation Site. This work, the Amendment to the RI/FS, is the subject of this report.

The objective of the Amendment to the RI/FS was to determine if the chlordane contamination had migrated off-site.

1. 2 Field Investigation

On October 7, 1999 two shallow wells, MW-10 and MW-11, were installed immediately downgradient of the Fumex Sanitation Site. These two wells were installed approximately 90 and 170 feet downgradient of the dry well. MW-10 was installed approximately ten feet south of the Fumex property line. These wells were installed at the same depths as the on-site shallow wells (MW-1 through MW-5). During the installation of these two wells split spoon samples were obtained. The split spoon samples were collected from both wells at 0-2 feet and 45-47 ft. These samples were analyzed for TCL pesticides. Total Organic Carbon samples were also obtained from both depths at MW-10 and from the surface of MW-11.

In addition, two composite, surficial-soil samples were collected from the residential property that borders the western boundary of the Fumex Site. One sample was obtained from the eastern boundary and the other from the western boundary of the property. These two samples were also analyzed for TCL Pesticides. The location of these two monitoring wells and surficial soil samples is shown in Figure 1.

On October 14, 1999, groundwater sampling was performed. The sampling included onsite wells MW-1, MW-2 and MW-5 and offsite wells MW-10 & MW-11. Each well was sampled for TCL Pesticides. Water Level monitoring of all onsite and offsite shallow wells was also performed. The location of all wells in relation to the Dry Well (suggested origin of the chlordane contamination) is show in Table 1.

The two monitoring wells and soil sample locations were surveyed as part of the October 14, 1999 field work. In addition, the waste hauler subcontractor sampled the drill cuttings from the installation of the monitoring wells in order to characterize the soil . Results from the waste characterization indicate that the drill cuttings (for this field effort and the previous investigations) are non-

Table 1
Location of Monitoring Wells and Soil Borings
Fumex Sanitation Site
NYSDEC No. 1-30-041
Amendment to the Phase II Remedial Investigation

Well-ID	Horizontal Location North (ft.)	Horizontal Location East (ft.)	Horizontal Location North (ft.) Relative to Dry Well*	Horizontal Location East (ft.) Relative to Dry Well*	Vertical Location Top Casing (ft. MSL)	Vertical Location Top Riser (ft. MSL)	Round 1 6/2/98 Depth to Water (ft.)	Round 2 9/24/98 Depth to Water (ft.)	Amendment 10/27/99 Depth to Water (ft.)	Round 1 Ground Water Level (ft. MSL)	Round 2 Ground Water Level (ft. MSL)	Amendment Ground Water Level (ft. MSL)
DRY-WELL	187694.7	2095630	-	-	96.52	86.50	-	-	-	-	-	-
MW-1	187688.1	2095610	-6.6	-19.4	97.44	97.24	40.62	42.24	45.10	56.62	55.00	52.14
MW-2	187662.4	2095619	-32.2	-10.6	97.71	97.54	40.93	42.55	45.39	56.61	54.99	52.15
MW-3	187695.3	2095643	0.6	13.4	97.50	97.12	40.45	42.11	44.94	56.67	55.01	52.18
MW-4	187679.1	2095636	-15.5	6.3	97.38	97.22	40.62	42.26	45.11	56.60	54.96	52.11
MW-5	187681.1	2095621	-13.6	-8.4	97.34	97.00	40.37	42.03	44.85	56.63	54.97	52.15
MW-6	187676.3	2095625	-18.4	-4.6	97.50	96.94	40.25	41.91	NA	56.69	55.03	NA
MW-7D	187125.4	2095232	-569.3	-397.4	89.45	89.18	33.55	35.18	NA	55.63	54.00	NA
MW-7S	187124.5	2095230	-570.2	-400.0	89.37	89.03	33.42	35.02	37.91	55.61	54.01	51.12
MW-8D	186480.1	2094844	-1214.5	-785.8	99.40	99.03	44.95	46.64	NA	54.08	52.39	NA
MW-8S	186481.6	2094841	-1213.1	-788.2	99.61	99.34	45.23	46.92	49.55	54.11	52.42	49.79
MW-9D	187967.4	2095521	272.7	-108.5	95.13	94.78	38.08	39.71	NA	56.70	55.07	NA
MW-9S	187968.5	2095524	273.9	-105.5	95.26	95.07	38.35	39.99	42.77	56.72	55.08	52.30
MW-10	187607.0	2095616	-87.6	-13.2	97.28	97.00	NA	NA	44.89	NA	NA	52.11
MW-11	187523.9	2095572	-170.7	-57.4	97.23	96.89	NA	NA	44.91	NA	NA	51.98
SB-10	187656.5	2095645	-38.1	15.2	-	-	-	-	-	-	-	-
SB-11	187713.7	2095639	19.1	9.9	-	-	-	-	-	-	-	-
SB-12	187705.9	2095602	11.2	-27.4	-	-	-	-	-	-	-	-
SB-13	187649.6	2095622	-45.1	-7.8	-	-	-	-	-	-	-	-
SB-14	187650.8	2095669	-43.9	39.7	-	-	-	-	-	-	-	-
EB Composite	187655.7	2095609	-39.0	-20.1	-	-	-	-	-	-	-	-
WB Composite	187644.4	2095582	-50.3	-47.1	-	-	-	-	-	-	-	-

Note: * - The well/boring location is south or west of the Dry Well if the distances are reported as negative numbers.
Vertical Datum: NGVD1929 From Nassau County Monument 07E13N
Horizontal Datum: New York State Plane Coordinate System, N.A.D. 1927, Long Island Zone, Lambert Projection, From Nassau County Monuments 07E13N and 07E13NAZ

hazardous. The waste has been drummed and is scheduled for removal on January 31, 2000.

1.2.1 Soil Investigations

The results of the soil sampling program, summarized in Table 2 indicate the following:

There are no exceedances in the split spoons obtained from wells MW-10 and MW-11. All sample results are below the NYSDEC recommended soil cleanup criteria.

The composite surface soil from the east property boundary (adjacent to the Fumex property) tested positive for chlordane and heptachlor. It is normal to find heptachlor in the presence of chlordane since heptachlor comprises 10% of chlordane. In fact, it should be noted that the heptachlor concentrations are approximately 10% of the chlordane concentrations. The heptachlor concentration at the eastern composite sample was 360ug/kg. This concentration is more than triple the NYSDEC Recommended Soil Cleanup Standard of 100 ug/kg. The chlordane concentrations were 3,100 ug/kg (alpha-chlordane) and 3700 ug/kg (gamma-chlordane). These are almost six times the re4commended soil cleanup standard of 540 ug/kg.

The results of the western composite soil sample indicate there is no presence of pesticides in concentrations that exceed the Recommended Soil Cleanup Criteria.

1.2.2 Groundwater Investigations

The groundwater sampling investigation consisted of three onsite wells and the two recently installed monitoring wells, MW-10 and MW-11. The three onsite wells (MW-1, MW-2 and MW-5) were selected because they were directly downgradient of the Dry Well.

The location of the two offsite wells was selected as a means of supporting the travel times for chlordane and heptachlor presented in the Feasibility Study (CDM, January 2000). It was concluded in the Feasibility Study that it would be highly unlikely for the groundwater contamination to migrate from the site due to its very limited mobility. It was estimated that over a period of 40 years the distance that heptachlor and chlordane within the groundwater could travel would be 9-ft and 140-ft respectively.

The results of the analysis, shown in Table 3, of the onsite monitoring wells show a decrease in the number of exceedances and may indicate that partial biodegradation or attenuation is occurring. Chlordane concentrations at MW-1 were in the 15-20 ug/l range in 1998 whereas the average concentration of chlordane in the most recent sampling program was about 1ug/l. This trend was repeated in monitoring wells MW-2 and MW-5. The 1998 chlordane concentrations were between 4 and 13 ug/l while in 1999 the concentrations were all below 1 ug/l.

Table 2
Soil Sample Analysis Summary - Pesticides
Fumex Sanitation Site NYSDEC 1-30-041
Amendment to the Phase II Remedial Investigation

	Sample ID	EB	Q	EBDL	Q	EBDDL	Q	WB	Q	WBDL	Q	MW100	Q	MW1045	Q	MW1060	Q	MW110	Q	MW1142	Q	FB (ug/L)	Q
	Date	10/06/99		10/06/99		10/06/99		10/06/99		10/06/99		10/06/99		10/06/99		10/06/99		10/07/99		10/07/99		10/07/99	
	Depth(feet)	Surface		Surface		Surface		Surface		Surface		0-2 ft		45-47 ft		Dupl MW1045		0-2 ft		42-44 ft		10-12	
Pesticides (ug/Kg)	NYSDEC Recommended Soil Cleanup Standard																						
alpha-BHC	110	2.1	U	210	U	420	U	2.0	U	4.0	U	2.0	U	1.9	U	1.9	U	1.9	U	1.8	U	0.050	U
beta-BHC	200	2.4		210	U	420	U	2.0	U	4.0	U	2.0	U	1.9	U	1.9	U	1.9	U	1.8	U	0.050	U
delta-BHC	300	5.2	JN	210	U	420	U	2.0	JN	1.9	JND	2.0	UJ	1.9	U	1.9	U	1.9	U	1.8	U	0.050	U
gamma-BHC (Lindane)	60	2.1	U	210	U	420	U	2.0	U	4.0	U	2.0	U	1.9	U	1.9	U	1.9	U	1.8	U	0.050	U
Heptachlor	100	170	E	430	D	**360**	JD	2.0	U	4.0	U	2.0	U	1.9	U	1.9	U	1.9	U	1.8	U	0.050	U
Aldrin	41	5.3	R	210	U	420	U	2.0	U	4.0	U	2.0	U	1.9	U	1.9	U	1.9	U	1.8	U	0.050	U
Heptachlor epoxide	20	2.1	U	210	U	420	U	3.9	JN	4.0	JND	2.0	U	1.9	U	1.9	U	1.9	U	1.8	U	0.050	U
Endosulfan I	900	18	JN	210	U	420	U	2.0	U	4.0	U	2.0	U	1.9	U	1.9	U	1.9	U	1.8	U	0.050	U
Dieldrin	44	150	E	400	U	810	U	9.0		8.5	JD	4.7		3.8	U	3.8	U	3.6	U	3.4	U	0.10	U
4,4'-DDE	2100	120	E	210	JND	180	JND	18		13	D	25		3.3	J	3.8	U	3.5	J	3.4	U	0.10	U
Endrin	100	16	JN	400	U	810	U	3.9	U	7.9	U	4.0	UJ	3.8	U	3.8	U	3.6	U	3.4	U	0.10	UJ
Endosulfan II	900	4.0	U	400	U	810	U	3.9	U	7.9	U	4.0	U	3.8	U	3.8	U	3.6	U	3.4	U	0.10	U
4,4'-DDD	2900	4.0	UJ	400	UJ	810	UJ	12	J	16	D	4.0	UJ	3.8	UJ	3.8	UJ	3.6	UJ	3.4	UJ	0.10	U
Endosulfan sulfate	1000	4.0	U	400	U	810	U	3.9	U	7.9	U	4.0	U	3.8	U	3.8	U	3.6	U	3.4	U	0.10	U
4,4'-DDT	2100	210	E	360	JD	300	JD	28	J	28	JD	27	J	8.3		3.8	U	3.6	U	3.4	U	0.10	U
Methoxychlor	***	21	UJ	2100	U	4200	U	20	U	40	U	20	UJ	19	U	19	U	19	U	18	U	0.50	U
Endrin ketone	NS	32	JN	400	U	810	U	3.9	U	7.9	U	4.0	U	3.8	U	3.8	U	3.6	U	3.4	U	0.10	U
Endrin aldehyde	NS	4.0	UJ	400	U	810	U	3.9	U	7.9	U	4.0	UJ	3.8	U	3.8	U	3.6	U	3.4	U	0.10	U
alpha-chlordane	540	332	E	3600	DE	**3100**	JND	44	E	43	JND	6.9	JN	7.4	JN	1.9	U	0.93	J	1.8	U	0.050	U
gamma-chlordane	540	288	E	4400	DE	**3700**	D	37	E	38	D	6.9	J	9.3		1.9	U	1.9	U	1.8	U	0.050	U
Toxaphene	NS	210	U	21000	U	42000	U	200	U	400	U	200	U	190	U	190	U	190	U	180	U	5.0	U

Notes:

BOLD: Exceeds NYSDEC recommended soil cleanup criteria

U- Indicates that the compound was analyzed for, but not detected at or above the Contract Required Quantitation Limit(CRQL), or the compound is not detected due to qualification through the method or field blank.

J- The associated numerical value is an estimated quantity.

JN- Tentatively identified with approximated concentrations (Volatile and Semi Volatile Organics). Presumptively present at an approximated quantity (Pesticides/PCB's)

UJ- This compound was analyzed for, but not detected. The sample quantitation limit is an estimated quantity due to variance from quality control limits.

C- Applies to pesticide results where the identification has been confirmed by GC/MS.

E- Reported value is estimated due to quantitation above the calibration range.

D- Reported result taken from diluted sample analysis.

A- Aldol condensation product

R- Reported value is unusable and rejected due to variance from quality control limits.

NA- Not analyzed

*** = Total pesticides <10,000 ug/kg

Table 3
Groundwater Sample Analysis Summary - Pesticides
Fumex Sanitation Site
NYSDEC No. 1-30-041
Amendment to the Phase II Remedial Investigation

		MW-1					MW-2				
		Phase I RI		Phase II RI		Amend	Phase I RI		Phase II RI		Amend
		Round 1	Round 2	Round 1	Round 2	-	Round 1	Round 2	Round 1	Round 2	-
	Sample ID	*MW1*	*MW-1DL*	*MW-1*	*MW-1DL*	*MW-1DL*	*MW2DL*	*MW2DL*	*MW-2*	*MW-2/DL*	*MW-2*
	Date	*03/20/96*	*08/27/96*	*06/02/98*	*09/24/98*	*10/27/99*	*03/20/96*	*08/27/96*	*06/02/98*	*09/24/98*	*10/27/99*
Pesticides (ug/L)	NYSDEC Standard for Class GA Water										
alpha-BHC	0.01	0.17 UJ	1.00 UJ	0.05 U	1.00 U	0.25 U	1.10 UJ	1.00 UJ	0.05 U	0.25 U	0.05 U
beta-BHC	0.04	0.17 U	1.00 UJ	**0.12**	1.00 U	0.25 U	1.10 U	1.00 UJ	0.05 U	0.25 U	0.05 U
delta-BHC	0.04	**0.36**	1.00 UJ	0.05 U	1.00 U	0.25 U	**2.20** D	1.00 UJ	0.05 U	0.25 U	0.05 U
gamma-BHC (Lindane)	0.05	**0.08** J	1.00 UJ	**0.48**	1.00 U	0.25 U	1.10 UJ	1.00 UJ	0.03 J	0.25 U	0.05 U
Heptachlor	0.04	0.17 U	1.00 UJ	**0.34** JN	1.00 U	0.25 U	1.10 U	1.00 UJ	0.05 U	0.25 U	0.05 U
Aldrin	ND	**0.29** J	1.00 UJ	**0.33** JN	1.00 U	0.25 U	1.10 U	1.00 UJ	**0.15** JN	0.25 U	0.05 U
Heptachlor epoxide	0.03	**0.22** J	1.00 UJ	0.05 U	1.00 U	**0.13** JND	**0.61** JD	**0.61** JD	0.05 U	0.25 U	**0.043** JN
Endosulfan I	No standard	0.35 J	1.00 UJ	0.05 U	1.00 U	0.25 U	0.93 JD	1.00 UJ	0.05 U	0.25 U	**0.026** JN
Dieldrin	0.00	**2.80**	2.00 UJ	10.00 U	**5.20** D	0.50 U	2.20 U	**4.30** JD	5.00 U	0.50 U	**0.057** JN
4,4'-DDE	0.20	0.14 JN	2.00 UJ	**0.83** JN	2.00 U	0.50 U	2.20 U	2.00 UJ	**0.56** JN	0.50 U	0.10 U
Endrin	ND	**0.40** J	2.00 UJ	0.10 U	2.00 U	0.50 U	**2.90** D	2.00 UJ	0.10 U	0.50 U	0.10 U
Endosulfan II	No standard	0.34 U	2.00 UJ	1.40 J	**1.1** JND	0.50 UJ	2.20 U	2.00 UJ	0.48 JN	0.50 U	0.10 U
4,4'-DDD	0.30	0.34 U	2.00 UJ	0.10 U	2.00 U	0.50 U	2.20 U	2.00 UJ	0.10 U	0.50 U	0.10 U
Endosulfan sulfate	No standard	0.34 U	2.00 UJ	0.10 U	2.00 J	0.50 UJ	2.20 U	2.00 UJ	0.10 U	0.50 U	0.10 U
4,4'-DDT	0.20	0.12 JN	2.00 UJ	**1.30** JN	2.00 U	0.50 U	2.20 U	2.00 UJ	**0.46** JN	0.50 U	0.10 U
Methoxychlor	35.0	1.70 U	10.00 UJ	0.50 U	10.00 UJ	2.50 U	11.00 U	10.00 UJ	0.50 U	2.5 UJ	0.50 U
Endrin ketone	5.0	0.17 J	2.00 UJ	0.74 J	2.00 U	0.50 UJ	2.20 U	2.00 UJ	0.26 JN	0.5 U	0.10 U
Endrin aldehyde	5.0	0.57	2.00 UJ	0.10 U	2.00 U	0.50 UJ	2.20 U	2.00 UJ	0.10 U	0.5 U	0.10 U
alpha-chlordane	0.05	**1.30** J	**4.30** JD	**18.00** DJN	**20** JD	**0.83** JND	**12.00** DJ	**2.90** JD	**13.00** DJN	**5.10** JD	**0.079** JN
gamma-chlordane	0.05	**1.50**	**6.50** JD	**16.00** D	**17** D	**1.3** JD	**15.00** D	**4.50** JD	**15.00** D	**5.10** D	**0.31** J
Toxaphene	0.06	17.00 U	100.00 UJ	5.00 U	100.00 U	5.0 U	110.00 U	100.00 UJ	5.00 U	25 U	5.0 U

Notes:

U- Indicates that the compound was analyzed for, but not detected at or above the Contract Required Quantitation Limit(CRQL), or the compound is not detected due to qualification through the method or field blank.

J- The associated numerical value is an estimated quantity.

JN- Tentatively identified with approximated concentrations (Volatile and Semi Volatile Organics). Presumptively present at an approximated quantity (Pesticides/PCB's)

UJ- This compound was analyzed for, but not detected. The sample quantitation limit is an estimated quantity due to variance from quality control limits.

C- Applies to pesticide results where the identification has been confirmed by GC/MS.

E- Reported value is estimated due to quantitation above the calibration range.

D- Reported result taken from diluted sample analysis.

A- Aldol condensation product

R- Reported value is unusable and rejected due to variance from quality control limits.

P - Target analyte is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form I and flagged with a P.

ND = Non detect

NA = Not analyzed

Table 3
Groundwater Sample Analysis Summary - Pesticides
Fumex Sanitation Site
NYSDEC No. 1-30-041
Amendment to the Phase II Remedial Investigation

		MW-5					MW-10	MW-11
		Phase I RI		Phase II RI		Amend	Amendment	
		Round 1	Round 2	Round 1	Round 2	-	-	-
	Sample ID	*MW5*	*MW5*	*MW-5*	*MW-5 /DL*	*MW-5*	*MW-10D*	*MW-11*
	Date	*03/20/96*	*08/27/96*	*06/02/98*	*09/24/98*	*10/27/99*	*10/27/99*	*10/27/99*
Pesticides (ug/L)	**NYSDEC Standard for Class GA Water**							
alpha-BHC	0.01	0.60 UJ	0.05 UJ	0.05 U	0.50 U	0.05 U	0.05 U	0.05 U
beta-BHC	0.04	0.60 U	0.05 UJ	0.05 U	0.50 U	0.05 U	0.05 U	0.05 U
delta-BHC	0.04	0.60 U	0.05 UJ	0.05 U	0.50 U	0.05 U	0.05 U	0.05 U
gamma-BHC (Lindane)	0.05	**0.32** J	**0.30** J	**0.11** J	0.50 U	0.05 U	0.05 U	0.05 U
Heptachlor	0.04	**0.50** J	**0.05** J	0.05 U	0.50 U	0.05 U	0.05 U	0.05 U
Aldrin	ND	0.60 U	0.05 UJ	**0.11** J	0.50 U	0.05 U	0.05 U	0.05 U
Heptachlor epoxide	0.03	**0.39** J	**0.17** J	0.05 U	0.50 U	**0.62** JN	0.05 U	0.05 U
Endosulfan I	No standard	0.62 J	0.05 R	0.05 U	0.50 U	0.05 U	0.05 U	0.05 U
Dieldrin	0.00	**1.00** J	**0.81** J	**1.40** J	**1.2** JD	**0.23**	0.10 U	0.10 U
4,4'-DDE	0.20	1.20 U	0.11 JN	0.19 JN	1.00 U	0.086 JN	0.10 U	0.10 U
Endrin	ND	**0.90** JN	0.10 UJ	**0.19** J	1.00 U	0.10 U	0.10 U	0.10 U
Endosulfan II	No standard	1.20 U	0.06 JN	0.10 U	**0.92** JND	0.10 U	0.10 U	0.10 U
4,4'-DDD	0.30	1.20 U	0.05 J	0.10 U	1.00 U	0.10 U	0.10 U	0.10 U
Endosulfan sulfate	No standard	1.20 U	0.10 UJ	0.10 U	1.00 U	0.10 U	0.10 UJ	0.10 UJ
4,4'-DDT	0.20	1.20 U	0.09 JN	0.41 J	1.00 U	0.10 U	0.10 U	0.10 U
Methoxychlor	35.0	6.00 U	0.50 UJ	0.50 U	5.00 UJ	0.50 U	0.50 U	0.50 U
Endrin ketone	5.0	1.20 U	0.06 JN	0.17 J	1.0 U	0.10 U	0.10 UJ	0.10 UJ
Endrin aldehyde	5.0	1.20 U	0.10 UJ	0.10 U	1.0 U	0.10 U	0.10 UJ	0.10 UJ
alpha-chlordane	0.05	**4.80** J	**0.46** J	**3.70** DJN	**7.6** JD	**0.34** JN	0.05 U	0.05 U
gamma-chlordane	0.05	**5.20**	**0.43** J	**3.40** D	**5.0** D	**0.27** J	0.05 U	0.05 U
Toxaphene	0.06	60.00 U	5.00 UJ	5.00 U	50 U	5.0 U	5.00 U	5.00 U

There is too little data to label this a trend. The Phase I RI, performed in 1996 reported chlordane concentrations typically a half to one-quarter of those results reported in the Phase II RI.

There was no evidence of pesticide contamination in the results of the off-site sampling of monitoring wells MW-10 and MW-11. No pesticides were detected in the either groundwater sample obtained and analyzed.

The results of the off-site groundwater sampling confirm that it is unlikely that pesticide contaminated groundwater has migrated off of the Fumex Sanitation Site.

1. 3 Conclusions

The primary objective of the Phase II RI for the Fumex Sanitation site was to define the nature and extent of pesticide contamination associated with the site and to provide necessary data to undertake a focused Feasibility Study. Completion of the Phase II RI met these objectives. A further study was performed to determine if the pesticide contamination was restricted to the Fumex Sanitation Site. The major conclusions based on the Amendment to the Phase II RI/FS data are as follows:

The North, South, East and Western boundaries of the pesticide contamination appear to be defined. The southern boundary is the site itself. MW-10 was installed 10 feet south of the site with no pesticides detected in either the groundwater or soil.

The eastern boundary of the soil and groundwater pesticide contamination is the former Fumex Sanitation structure or Herricks Road.

The northern boundary is considered to be the sidewalk since the slope of the parking lot is from North to South. There is no evidence of pesticide contamination upgradient of the site.

The western boundary of pesticide contamination appears to be the driveway of the neighboring property. The results of the eastern property soil sample, chlordane = 3100 ug/kg) may indicate that the existing concrete block wall, currently serving as the property line between the residence and the Fumex Site, was a relatively recent addition. It is likely that the soil contamination at the site was caused by runoff from the then unbounded Fumex Sanitation Site.

The pesticide contaminated groundwater has not migrated off-site. To date there have been no pesticides detected in either the off-site soil or groundwater media The threat to the drinking water of Long Island from this site is extremely minimal due to the characteristics of these compounds. Chlordane binds to the soil very well. The RI estimated that the distance traveled in the groundwater over a 42

year duration (conservative estimate that chlordane was spilled on the first day of operation) was 9 feet.

Due to the occurrence of soil contamination on the neighboring property, the extent of the proposed soil removal should be expanded to include a portion of the adjacent property to the Fumex Site. This should not impact the cost of the soil removal alternatives in a major way. The soil removed from the site will be treated (thermally or chemically) and then land-applied at a landfill.