Table 1
Site Management Plan
Former Michelsen Furniture Co. Site
182 Avenue D and 374 Conkey Avenue
Rochester, NY

Groundwater Elevations

Well ID	Casing Elevation	Corrected to BM	DTW	Water Elevation
Bench Mark	8.6458	100	NA	NA
BW-04	6.8333	101.8125	11.81	90.0025
BW-03	6.8125	101.8333	11.8	90.0333
IW-2	6.0625	102.5833	11.49	91.0933
IW-3	6.7708	101.875	10.87	91.005
BW-02	7.3332	101.3126	11.28	90.0326
IW-4	6.5115	102.1343	10.78	91.3543
IW-1	5.4271	103.2187	10.21	93.0087

Table 2
Site Management Plan
Former Michelsen Furniture Co. Site
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Summary of Volatile Organic Compounds (VOCs) in Soil Samples
Results in Milligrams per Kilogram (mg/Kg) or Parts Per Million (PPM)

Sample ID	Pre-RI Samples														NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives	NYCRR Part 375-6.8(b) Restricted Residential Soil Cleanup Objectives	NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objectives
	GP-05	GP-08	GP-09	GP-12	GP-22	GP-23	GP-24	GP-26	GP-27	GP-28	GP-29	GP-30	GP-31	UST Base			
Depth	3' - 4'	13' - 13.5'	13' - 14.1'	12'	7.6'	6.8' - 8.4'	2' - 3'	7.5'-7.7'	8' - 8.2'	6.8' - 7.1'	7.8' - 8.4'	13.5' - 14'	13.5' - 14'	9'			
Sample Collection Date	10/10/12	10/10/12	10/10/12	1/17/14	1/17/14	1/17/14	1/17/14	3/14/2014	3/14/2014	3/14/2014	3/14/2014	3/14/2014	3/14/2014	2/9/2015			
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NA	NA	NA
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.02	0.9	0.02
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.33	100	0.33
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.05	100	0.05
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NA	NA	NA
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	51	100	0.05
Methyl acetate	ND	ND	1,300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NA	NA	NA
Methyl cyclohexane	ND	ND	ND	0.820	ND	ND	0.160	ND	ND	ND	ND	ND	ND	NS	NA	NA	NA
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.19	100	0.19
Methyl tert-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.93	100	0.93
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.27	3.1	0.27
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.12	100	0.12
cis-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.25	100	0.25
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.37	49	0.37
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	NA	NA	NA
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NS	0.02	3.1	0.02
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.06	4.8	0.06
Trichloroethene	ND	***0.960***	ND	ND	ND	0.012	ND	***3.300***	0.022	0.011	***0.470***	ND	0.230	NS	0.47	21	0.47
Toluene	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND	ND	ND	ND	ND	0.7	100	0.7
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND	ND	ND	ND	NS	NA	NA	NA
Tetrachloroethene	ND	0.016	ND	ND	ND	ND U	ND	0.039	ND	ND	ND	ND	0.010	NS	1.3	19	1.3
Ethylbenzene	ND	ND	ND	0.170	ND	ND U	0.270	ND	ND	ND	ND	0.160	ND	0.011	1	41	1
m,p-Xylene	ND	ND	ND	0.072	ND	ND U	0.150	ND	ND	ND	ND	ND	ND	ND	0.26	100	1.6
o-Xylene	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND	ND	ND	ND	0.011	0.26	100	1.6
Isopropylbenzene	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND	ND	ND	ND	0.026	2.3**	NA	NA
n-Propylbenzene	ND	ND	ND	0.460	ND	ND U	0.370	ND	ND	ND	ND	ND	ND	0.037	3.9	100	3.9
1,3,5-Trimethylbenzene	ND	ND	ND	2.600	ND	ND U	0.840	ND	ND	ND	ND	1.400	ND	0.460	8.4	52	8.4
1,2,4-Trimethylbenzene	ND	ND	ND	0.760	ND	ND U	2.000	ND	ND	ND	ND	1.400	ND	0.015	3.6	52	3.6
tert-Butylbenzene	ND	ND	ND	0.044	ND	ND U	ND	ND	ND	ND	ND	0.036	ND	0.014	5.9**	100	5.9
sec-Butylbenzene	ND	ND	ND	0.580	ND	ND U	0.280	ND	ND	ND	ND	0.520	ND	0.086	11	100	11
4-Isopropyltoluene	ND	ND	ND	0.950	ND	ND U	0.410	ND	ND	ND	ND	0.400	ND	0.087	10**	NA	NA
n-Butylbenzene	ND	ND	ND	0.910	ND	ND U	0.370	ND	ND	ND	ND	0.690	ND	0.079	12	100	12
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND	ND	ND	ND	NS	1.1	100	1.1
Naphthalene	ND	ND	ND	2.500	ND	ND U	3.100	ND	ND	ND	ND	4.000	ND	ND	12	100	12

Notes:
VOC analysis by United States Environmental Protection Agency (USEPA) Method SW846 8260.
Bold type indicates that the constituent was detected above NYCRR Part 375-6.8(A) Unrestricted Use Soil Cleanup Objectives
Bold Italic type indicates that the constituent was detected above NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objectives
U - Indicates that the constituent was not detected.
NA = Not Applicable or Not Available
NS = Not sampled for
*Indicates no Part 375-6 SCO for this compound; SCO from NYSDEC Commissioner Policy 51 Supplemental SCOs for Protection of Groundwater.
**Indicates no Part 375-6 SCO or CP-51 SSCO for this compound; SCO from NYSDEC CP-51 Table 2: Soil Cleanup Levels for Gasoline Contaminated Soil.

Table 2
Site Management Plan
Former Michelsen Furniture Co. Site
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Summary of Volatile Organic Compounds (VOCs) in Soil Samples
Results in Milligrams per Kilogram (mg/Kg) or Parts Per Million (PPM)

Sample ID	Soil Samples																	NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives	NYCRR Part 375-6.8(b) Restricted Residential Soil Cleanup Objectives	NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objectives
	GP-32	GP-33	GP-34	GP-35	GP-36	GP-37	GP-38	GP-39	GP-40	GP-41	GP-42	GP-45	GP-50	IW-2	IW-3	IW-4	IW-5			
Depth	6.8' - 8'	7' - 7.4'	6' - 7'	4' - 4.5'	6.5' - 7'	6' - 6.5'	4' - 4.5'	13' - 15'	7.5' - 8'	11' - 13'	9' - 9.5'	10.5' - 11'	5' - 5.5'			7-9'	12-14'			
Sample Collection Date	2/2/15	2/2/15	2/3/15	2/3/15	2/3/15	2/3/15	2/3/15	2/3/15	2/3/15	2/3/15	2/3/15	2/4/15	2/4/15	3/17/15	3/17/15	4/7/15	4/7/15			
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02	0.9	0.02
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.33	100	0.33
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05	100	0.05
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.7**	NA	NA
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05	100	0.05
Methyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
Methyl cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.19	100	0.19
Methyl tert-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.93	100	0.93
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.27	3.1	0.27
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3**	100	0.12
cis-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.25	100	0.25
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.37	49	0.37
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02	3.1	0.02
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.06	4.8	0.06
Trichloroethene	0.053	0.096	0.035	ND	0.013	0.020	ND	ND	ND	ND	ND	ND	ND	0.006	ND	0.048	0.020	0.47	21	0.47
Toluene	ND	ND	ND	ND	ND	ND	ND	***1.000***	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.7	100	0.7
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	NA
Tetrachloroethene	ND	ND	ND	ND	ND	0.0058	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	19	1.3
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	0.940	ND	ND	ND	0.500	ND	ND	ND	ND	ND	1	41	1
m,p-Xylene	ND	ND	ND	ND	ND	ND	ND	**Tot. Xylenes:**	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.26	100	1.6
o-Xylene	ND	ND	ND	ND	ND	ND	ND	**5.500**	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.26	100	1.6
Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3**	NA	NA
n-Propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.9	100	3.9
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.4	52	8.4
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.6	52	3.6
tert-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.9**	100	5.9
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	100	11
4-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10**	NA	NA
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	100	12
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.1	100	1.1
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	100	12

Notes:
VOC analysis by United States Environmental Protection Agency (USEPA) Method SW846 8260.
Bold type indicates that the constituent was detected above NYCRR Part 375-6.8(A) Unrestricted Use Soil Cleanup Objectives
Bold Italic type indicates that the constituent was detected above NYCRR Part 375-6.8(b) Protection of Groundwater Soil Cleanup Objectives
U - Indicates that the constituent was not detected.
NA = Not Applicable or Not Available
*Indicates no Part 375-6 SCO for this compound; SCO from NYSDEC Commissioner Policy 51 Supplemental SCOs for Protection of Groundwater.
**Indicates no Part 375-6 SCO or CP-51 SSCO for this compound; SCO from NYSDEC CP-51 Table 2: Soil Cleanup Levels for Gasoline Contaminated Soil.

Table 3
Site Management Plan
Former Michelsen Furniture Co. Site
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Summary of Semi-Volatile Organic Compounds (SVOCs) in Soil (Remedial Investigation)
Results in Milligrams per Kilogram (mg/Kg) or Parts Per Million (PPM)

Sample ID	Pre-RI Samples						RI Samples								NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives
	GP-05	GP-08	GP-09	GP-22	GP-23	GP-24	GP-34	GP-37	GP-39	GP-41	IW-2 (BMW-2)	IW-3 (BMW-3)	IW-4	IW-5	
Depth	3'-4'	13'-13.5'	13'-14.1'	7.6'	6.8'-8.4'	2'-3'	6' - 7'	6' - 6.5'	13' - 15'	11' - 13'	13'-15.8'	4'-10'	7-9'	12-14'	
Sample Collection Date	10/10/12	10/10/12	10/10/12	1/17/14	1/17/14	1/17/14	2/3/15	2/3/15	2/3/15	2/3/15	3/17/2015	3/17/2015	4/7/15	4/7/15	
Naphthalene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	2.700	<0.038 U	<0.036 U	0.780 U	<0.039 U	<0.036 U	4.0	<0.036	<0.039	12
Acenaphthylene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	0.120	<0.038 U	<0.036 U	0.250	<0.039 U	<0.036 U	<0.75 U	<0.036	<0.039	100
Acenaphthene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	0.600	<0.038 U	<0.036 U	<0.039 U	<0.039 U	<0.036 U	6.8	<0.036	<0.039	20
Fluorene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	0.690	<0.038 U	<0.036 U	0.340	<0.039 U	<0.036 U	8.7	<0.036	<0.039	30
Phenanthrene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	2.000	<0.038 U	<0.036 U	0.860	1.300	<0.036 U	56.0	<0.036	0.16	100
Anthracene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	0.120	<0.038 U	<0.036 U	<0.039 U	<0.039 U	<0.036 U	17.0	<0.036	<0.039	100
Fluoranthene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	0.042	<0.038 U	<0.036 U	0.041	1.700	<0.036 U	52.0	<0.036	0.045	100
Pyrene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	0.200	<0.038 U	<0.036 U	0.086	1.200	<0.036 U	36.0	<0.036	<0.039	100
Benzo(a)anthracene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	<0.038 U	<0.036 U	<0.039 U	0.740	<0.036 U	**23.0**	<0.036	<0.039	1
Chrysene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	<0.038 U	<0.036 U	<0.039 U	0.630	<0.036 U	**19.0**	<0.036	<0.039	1
Benzo(b)fluoranthene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	<0.038 U	<0.036 U	<0.039 U	0.770	<0.036 U	**21.0**	<0.036	<0.039	1
Benzo(k)fluoranthene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	<0.038 U	<0.036 U	<0.039 U	<0.039 U	<0.036 U	**10.0**	<0.036	<0.039	0.8
Benzo(a)pyrene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	<0.038 U	<0.036 U	<0.039 U	0.570	<0.036 U	**17.0**	<0.036	<0.039	1
Indeno(1,2,3-cd)pyrene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	<0.038 U	<0.036 U	<0.039 U	<0.039 U	<0.036 U	**4.4**	<0.036	<0.039	0.5
Dibenzo(a,h)anthracene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	<0.038 U	<0.036 U	<0.039 U	<0.039 U	<0.036 U	**1.7**	<0.036	<0.039	0.33
Benzo(g,h,i)perylene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	<0.038 U	<0.036 U	<0.039 U	<0.039 U	<0.036 U	4.3	<0.036	<0.039	100
Carbazole	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.0	<0.036	<0.039	NA
2-Methylnaphthalene	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.1	<0.036	<0.039	NA

Notes:
SVOC analysis by United States Environmental Protection Agency (USEPA) Method SW846 8270.
Bold type indicates that the constituent was detected above NYCRR Part 375-6.8(A) Unrestricted Use Soil Cleanup Objectives
U - Indicates that the constituent was not detected.
NA = Not Applicable or Not Available

Table 4
Site Management Plan
Former Michelsen Furinture Co. Site
182 Avenue D 374 Conkey Avenue
Rochester, NY

Summary of Metals in Soil (RI)
Results in Miligrams per Kilogram (mg/Kg) or Parts Per Million (ppm)

Sample ID	RI Samples								NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives for the Protection of Public Health: Unrestricted Use	NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives for the Protection of Public Health: Restricted Residential Use
	GP-34	GP-37	GP-39	GP-41	IW-2	IW-3	IW-4	IW-5		
Depth	**6'-7'**	**6'-6.5'**	**13'-15'**	**11'-13'**	**13'-15.5'**	**4'-10'**	**7'-9'**	**12;-14'**		
Sample Collection Date	**2/3/2015**	**2/3/2015**	**2/3/2015**	**2/3/2015**	**3/17/2015**	**3/17/2015**	**4/7/2015**	**4/7/2015**		
Aluminum	3,700.00	4,200.00	16,000.00	4,600.00	2,800.00	8,400.00	4,000.00	4,800.00	Not Listed	Not Listed
Antimony	ND<2.3	ND<2.3	ND<2.2	ND<2.4	ND<2.2	ND<2.3	ND<2.2	ND<2.4	Not Listed	Not Listed
Arsenic	3.60	3.40	4.30	4.70	4.00	7.50	2.40	ND<2.4	13.0	16.00
Barium	23.00	33.00	170.00	29.00	31.00	290.00	21.00	36.00	350.0	400.00
Berylium	ND<0.23	0.25	0.28	0.33	ND<0.22	0.36	ND<0.22	ND<0.24	7.2	72.00
Cadmium	ND<0.58	ND<0.57	1.20	ND<0.59	ND<0.55	ND<0.56	ND<0.55	ND<0.59	2.5	4.30
Calcium	93,000.00	110,000.00	310,000.00	180,000.00	56,000.00	92,000.00	72,000.00	67,000.00	Not Listed	Not Listed
Chromium	4.90	5.60	1.80	5.30	4.40	9.50	5.10	7.10	30.0	110.00
Cobalt	4.00	5.00	3.10	4.80	3.70	3.70	4.10	4.30	Not Listed	Not Listed
Copper	6.40	8.20	3.50	11.00	7.20	17.00	9.40	8.60	50.0	270.00
Cyanide	ND<0.29	ND<1.4	ND<1.6	ND<1.5	ND<0.82	ND<0.28	ND<0.28	ND<1.5	27.0	27.00
Iron	9,100.00	9,100.00	7,200.00	11,000.00	8,300.00	11,000.00	8,600.00	9,700.00	Not Listed	Not Listed
Lead	14.00	10.00	11.00	26.00	9.40	**170.00**	6.20	7.00	63.0	400.00
Magnesium	12,000.00	16,000.00	8,200.00	1,800.00	8,600.00	8,900.00	3,100.00	9,200.00	Not Listed	Not Listed
Manganese	260.00	270.00	350.00	330.00	220.00	750.00	300.00	30.00	1,600.0	2,000.00
Mercury	ND<0.023	ND<0.023	ND>0.022	ND<0.024	ND>0.022	0.034	ND<0.022	ND<0.024	0.18	0.81
Nickel	8.00	9.00	5.40	10.00	7.40	8.60	6.20	7.70	30.0	310.00
Potassium	19,000.00	2,200.00	1,300.00	2,800.00	970.00	1,100.00	1,500.00	1,500.00	Not Listed	Not Listed
Selenium	ND<2.3	ND<2.3	ND<2.2	ND<2.4	ND<2.2	ND<2.3	ND<2.2	ND<2.4	3.9	180.00
Silver	ND<1.2	ND<1.1	ND<1.1	ND<1.2	ND<1.1	ND<1.1	ND<1.1	ND<1.2	2.0	180.00
Sodium	160.00	180.00	180.00	1,600.00	140.00	550.00	340.00	210.00	Not Listed	Not Listed
Thallium	ND<2.3	ND<2.3	ND<2.2	ND<2.4	ND<2.2	ND<2.3	ND<2.2	ND<2.4	Not Listed	Not Listed
Vanadium	5.50	6.30	ND<2.2	4.50	7.20	8.10	7.50	10.00	Not Listed	Not Listed
Zinc	19.00	39.00	**1,400.00**	ND<5.9	13.00	**370.00**	22.00	24.00	109.0	10,000.00

Notes:

Metals analysis by United States Environmental Protection Agency (USEPA) Method SW846 6010/7470.

Bold type indicates that the constituent was detected above NYCRR Part 375-6.8(A) Unrestricted Use Soil Cleanup Objectives

U - Indicates that the constituent was not detected.

NA = Not Applicable or Not Available

Table 5
Site Management Plan
Former Michelsen Furniture Co. Site
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Summary of Detected Volatile Organic Compounds in Groundwater (Remedial Investigation)

Results in Micrograms per Liter (ug/L)

Sample ID	Pre-RI Samples											NYSDEC Part 703 Groundwater Standards
	MW-01	MW-02	GPMW-16	GPMW-21	GPNW-23	GPMW-24	BW-01	GPMW-26	GPMW-27	GPMW-30	GPMW-31	
Sample Collection Date	10/10/2012	10/25/2012	1/17/2014	1/17/2014	1/17/2014	1/17/2014	1/24/2014	3/14/2014	3/14/2014	3/19/2014	3/19/2014	
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
1,1,1-Trichloroethane	ND	ND	3.3	ND	ND	ND	ND	ND	ND	ND	ND	5
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	**120.0**	ND	ND	50
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
Methyl tert-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
2-Butanone	ND	ND	15	ND	ND	ND	ND	ND	15.0	ND	ND	50
cis-1,2-dichloroethene	ND	ND	**7.9**	ND	ND	**3,500**	ND	**9.3**	**84.0**	ND	ND	5
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6
Benzene	**1.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Trichloroethene	ND	**280**	**21**	**6.0**	**82**	ND	**600**	**420.0**	**420.0**	ND	**1100.0**	5
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Tetrachloroethene	ND	**5.8**	3.5	ND	**14**	ND	ND	ND	1.3	ND	ND	5
Ethylbenzene	4.0	ND	ND	ND	ND	**230**	ND	**14.0**	ND	**110.0**	**8.1**	5
m,p-Xylene	**6.4**	ND	ND	2.8	ND	ND	ND	ND	1.3	ND	ND	5
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	3.1	ND	ND	5
Isopropylbenzene	1.9	ND	ND	ND	ND	ND	ND	ND	ND	**98.0**	ND	5
n-Propylbenzene	**5.1**	ND	ND	ND	ND	ND	ND	ND	ND	**150.0**	ND	5
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	**160**	ND	ND	ND	**380.0**	ND	5
tert-butylbenzene	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2,4-Trimethylbenzene	**30**	ND	1.9	1.2	ND	**520**	ND	ND	4.6	**320.0**	ND	5
sec-Butylbenzene	3.6	ND	ND	ND	ND	ND	ND	ND	ND	**140.0**	ND	5
4-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**85.0**	ND	5
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**140.0**	ND	5
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3
Naphthalene	3.1	ND	ND	ND	ND	**580**	ND	ND	ND	**1200.0**	**66.0**	10

Notes:
VOC analysis by United States Environmental Protection Agency (USEPA) Method SW846 8260B.
Bold and highlighted type indicates that the constituent was detected above NYSDEC Part 703 Groundwater Standards
U - Indicates that the constituent was not detected.
NA = Not Applicable or Not Available

Table 5
Site Management Plan
Former Michelsen Furniture Co. Site
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Summary of Detected Volatile Organic Compounds in Groundwater (Remedial Investigation)

Results in Micrograms per Liter (ug/L)

Sample ID	RI Samples													NYSDEC Part 703 Groundwater Standards
	GPMW-26	GPMW-33	GPMW-34	GPMW-35	GPMW-38	IW-1	IW-2	IW-3	IW-4	IW-5	BW-02	BW-03	BW-04	
Sample Collection Date	3/25/2015	3/25/2015	3/25/2015	3/25/2015	3/25/2015	4/22/2015	3/31/2015	3/31/2015	4/10/2015	4/10/2015	4/9/2015	4/9/2015	4/10/2015	
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	1.0	ND	ND	ND	ND	**2.4**	2
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND	4.5	**6.0**	ND	ND	ND	ND	ND	5
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	1.6	1.4	ND	ND	ND	ND	ND	5
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	1.9	ND	ND	ND	ND	ND	ND	5
Methyl tert-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	1.4	ND	ND	ND	ND	ND	5
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50
cis-1,2-Dichloroethene	1.7	ND	**6.5**	ND	1.5	ND	**190**	**89**	ND	**68**	**32**	**16**	**180**	5
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Trichloroethene	**130**	**39**	**4,200**	3.9	**5.3**	ND	**180** V	**140**	**660**	**1,500**	**89**	**16**	**190**	5
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Tetrachloroethene	3.2	ND	**16**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
m,p-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
Isopropylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
n-Propylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
tert-butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2,4-Trimethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
sec-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
4-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3
Naphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10

Notes:

1. VOC analysis by United States Environmental Protection Agency (USEPA) Method SW846 8260B.
2. **Bold and highlighted type indicates that the constituent was detected above NYSDEC Part 703 Groundwater Standards**
3. "V" - indicates that the sample concentration is too high to evaluate accurate spike recoveries.
4. "ND" - Indicates that the constituent was not detected.
5. "NA" - Not Applicable or Not Available

Table 6
Site Management Plan
Former Michelsen Furniture Co. Site
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Summary of Semi-Volatile Organic Compounds in Groundwater (Remedial Investigation)
Results in Micrograms per Liter (ug/L)

Sample ID	Pre-RI Samples						RI Samples					NYSDEC Part 703 Groundwater Standards
	MW-01	MW-02	GPMW-16	GPMW-21	GPMW-23	GPMW-24	GPMW-34	GPMW-35	IW-2	IW-3	IW-5	
Sample Collection Date	10/10/2012	10/25/2012	1/17/2014	1/17/2014	1/17/2014	1/17/2014	3/25/2015	3/25/2015	3/31/2015	3/31/2015	4/7/2015	
Naphthalene	3.1	<0.25 U	1.1	0.55	0.50	**630**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	10
Acenaphthylene	<0.050 U	<0.050 U	0.20	<0.050 U	<0.050 U	<25 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	NA
Acenaphthene	0.84	0.050	<0.050 U	<0.050 U	<0.050 U	**90**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	20
Fluorene	0.42	<0.050 U	0.10	0.20	0.17	**94**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	50
Phenanthrene	0.55	0.16	0.12	0.44	0.38	**220**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	50
Anthracene	0.078	<0.050 U	<0.050 U	<0.050 U	<0.050 U	**210**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	50
Fluoranthene	0.13	0.10	<0.050 U	<0.050 U	<0.050 U	<25 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	50
Pyrene	0.095	0.12	<0.050 U	<0.050 U	<0.050 U	19	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	50
Benzo(a)anthracene	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	**1.0**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	0.002
Chrysene	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	**1.4**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	0.002
Benzo(b)fluoranthene	<0.050 U	0.054	<0.050 U	<0.050 U	<0.050 U	**0.68**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	0.002
Benzo(k)fluoranthene	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	**0.22**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	0.002
Benzo(a)pyrene	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	0.62	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	NA
Indeno(1,2,3-cd)pyrene	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	**0.34**	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	0.002
Dibenzo(a,h)anthracene	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	0.10	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	NA
Benzo(g,h,i)perylene	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	0.39	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	NA

Notes:

SVOC analysis by United States Environmental Protection Agency (USEPA) Method SW846 8270.

U - Indicates that the constituent was not detected.

NA - Indicates Not Applicable or Not Available

Table 7
Site Management Plan
Former Michelsen Furinture Co. Site
182 Avenue D 374 Conkey Avenue
Rochester, NY

Summary of Metals in Groundwater Samples (RI)
Results in Micrograms per Liter (ug/L) or Parts Per Billion (ppb)

Sample ID	RI Samples					NYSDEC Part 703 Groundwater Standards
	GP-34	GP-35	IW-2	IW-3	IW-5	
Sample Collection Date	3/25/2015	2/3/2015	3/31/2015	3/31/2015	4/7/2015	
Aluminum	**1,100.00**	**1,400.00**	<100.0 U	<100.0 U	**2,700.00**	100.0
Antimony	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0 U	0.003
Arsenic	2.20	3.50	<2.0 U	<2.0 U	2.30	25.000
Barium	68.00	120.00	73.00	31.00	92.00	1,000.0
Berylium	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0	Not Listed
Cadmium	<5.0 U	<5.0 U	<5.0 U	<5.0 U	<5.0	5.000
Calcium	84,000.00	180,000.00	100,000.00	69,000.00	140,000.00	Not Listed
Chromium	11.00	<10 U	<10 U	<10 U	<10.0	50.00
Cobalt	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0	Not Listed
Copper	<20.0 U	<20.0 U	<20.0 U	<20.0 U	<20.0	200.0
Iron	**2,000.00**	**3,600.00**	270.00	120.00	**3,200.00**	300.0
Lead	**4.20**	**12.00**	<2.0 U	<2.0 U	**4.10**	25.000
Magnesium	28,000.00	**40,000.00**	**48,000.00**	34,000.00	**51,000.00**	35,000.0
Manganese	**310.00**	**600.00**	190.00	20.00	140.00	300.0
Mercury	<0.2 U	<0.2 U	<0.2 U	<0.2 U	<0.2	0.7000
Nickel	<2.0 U	<20.0 U	<20.0 U	<20.0 U	<20.0	100.0
Potassium	3,200.00	2,200.00	3,200.00	4,200.00	6,800.00	Not Listed
Selenium	**2.90**	**8.80**	<2.0 U	5.40	<2.0	10.00
Silver	<10.0 U	<10.0 U	<10.0 U	<10.0 U	<10.0	50.0
Sodium	33,000.00	7,500.00	34,000.00	61,000.00	57,000.00	Not Listed
Thallium	<2.0 U	<2.0 U	<2.0 U	<2.0 U	<2.0	8.0000
Vanadium	<20.0 U	<20.0 U	<20.0 U	<20.0 U	<20.0	Not Listed
Zinc	<50.0 U	<50.0 U	<50.0 U	<50.0 U	<50.0	Not Listed

Notes:

Metals analysis by United States Environmental Protection Agency (USEPA) Method SW846 6010/7470.

Bold type indicates that the constituent was detected above NYSDEC Part 703 Groundwater Standards

U - Indicates that the constituent was not detected.

NA = Not Applicable or Not Available

Table 8
Site Management Plan
Former Michelsen Furniture Co. Site
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Summary of Detected Volatile Organic Compounds in Post Remediation Groundwater Samples
Results in Micrograms per Liter (µg/L) or Parts Per Billion (ppb)

Sample ID	Sample Location							NYSDEC Part 703 Groundwater Standards
	GPMW-26	GPMW-34	IW-3	IW-4	BW-02	BW-03	BW-04	
Sample Collection Date	10/30/2015	10/30/2015	10/30/2015	10/30/2015	10/30/2015	10/30/2015	10/30/2015	
ACETONE	ND	**79.5**	ND	ND	ND	ND	ND	50
BENZENE	ND	ND	ND	ND	ND	ND	**1.32**	1
BROMOCHLOROMETHANE	ND	ND	ND	ND	ND	ND	ND	5
BROMODICHLOROMETHANE	ND	**1.8**	ND	ND	ND	ND	ND	50
BROMOFORM	ND	ND	ND	ND	ND	ND	ND	50
BROMOMETHANE	ND	ND	ND	ND	ND	ND	ND	5
CARBON DISULFIDE	ND	ND	ND	ND	ND	ND	ND	NA
CARBON TETRACHLORIDE	ND	ND	ND	ND	ND	ND	ND	5
CHLOROBENZENE	ND	ND	ND	ND	ND	ND	ND	5
CHLORODIBROMOMETHANE	ND	ND	ND	ND	ND	ND	ND	NA
CHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	5
CHLOROFORM	ND	**8.9**	ND	ND	ND	ND	ND	7
CHLOROMETHANE	ND	ND	ND	ND	ND	ND	ND	NA
CYCLOHEXANE	ND	ND	ND	ND	ND	ND	1.55	NA
1,2-DIBROMO-3-CHLOROPROPANE	ND	ND	ND	ND	ND	ND	ND	0.04
1,2-DIBROMOETHANE	ND	ND	ND	ND	ND	ND	ND	NA
1,2-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND	ND	NA
1,3-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND	ND	3
1,4-DICHLOROBENZENE	ND	ND	ND	ND	ND	ND	ND	3
DICHLORODIFLUOROMETHANE	ND	ND	ND	ND	ND	ND	ND	3
1,1-DICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	5
1,2-DICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	0.6
1,1-DICHLOROETHENE	ND	ND	**1.39**	ND	ND	ND	**2.72**	0.7
CIS-1,2-DICHLOROETHENE	ND	ND	**114**	ND	**27.2**	**2.07**	**664**	5
TRANS-1,2-DICHLOROETHENE	ND	ND	ND	ND	ND	ND	**6.15**	5
1,2-DICHLOROPROPANE	ND	ND	ND	ND	ND	ND	ND	1
CIS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	ND	ND	0.4
TRANS-1,3-DICHLOROPROPENE	ND	ND	ND	ND	ND	ND	ND	0.4
ETHYLBENZENE	ND	ND	ND	ND	ND	ND	ND	5
2-HEXANONE	ND	ND	ND	ND	ND	ND	ND	50
ISOPROPYLBENZENE	ND	ND	ND	ND	ND	ND	ND	5
2-BUTANONE (MEK)	**215**	**218**	ND	ND	ND	ND	ND	50
METHYL ACETATE	ND	ND	ND	ND	ND	ND	ND	NA
METHYL CYCLOHEXANE	ND	ND	ND	ND	ND	**1.13**	**2.1**	NA
METHYLENE CHLORIDE	ND	ND	ND	ND	ND	ND	ND	5
4-METHYL-2-PENTANONE (MIBK)	ND	ND	ND	ND	ND	ND	ND	NA
METHYL TERT-BUTYL ETHER	ND	ND	ND	ND	ND	ND	ND	NA
STYRENE	ND	ND	ND	ND	ND	ND	ND	5
1,1,2,2-TETRACHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	0.2
TETRACHLOROETHENE	ND	ND	**1.87**	ND	ND	ND	ND	0.7
TOLUENE	ND	ND	ND	ND	ND	ND	ND	5
1,2,3-TRICHLOROBENZENE	ND	ND J4	ND	ND J4	ND J4	ND	ND	5
1,2,4-TRICHLOROBENZENE	ND	ND J4	ND	ND J4	ND J4	ND	ND	5
1,1,1-TRICHLOROETHANE	ND	ND	**12.7**	ND	ND	ND	ND	5
1,1,2-TRICHLOROETHANE	ND	ND	ND	ND	ND	ND	ND	5
TRICHLOROETHENE	**1.47**	ND	**261**	ND	**95** J6	**2.52**	**256**	5
TRICHLOROFLUOROMETHANE	ND	ND	ND	ND	ND	ND	ND	5
1,1,2-TRICHLOROTRIFLUOROETHANE	ND	ND	ND	ND	ND	ND	ND	NA
VINYL CHLORIDE	ND	ND	ND	ND	ND	ND	**37.1**	2
XYLENES, TOTAL	ND	ND	ND	ND	ND	ND	ND	5

Notes:
1. VOC analysis for TCL List VOCs by United States Environmental Protection Agency (USEPA) Method SW846 8260B.
2. Bold and highlighted type indicates that the constituent was detected above NYSDEC Part 703 Groundwater Standards.
3. "ND" - Indicates that the constituent was not detected.
4. "NA" - Indicates information is not applicable or not available.
5. "J4" - Indicates that the associated batch QC was outside the established quality control range for accuracy.
6. "J6" - Indicates that The sample matrix interfered with the ability to make any accurate determination; spike value is low.
7. If no standard is established for a selected compound, TOGS Table 1.1.1 Guidance values are substituted.

APPENDIX 5 – EXCAVATION WORK PLAN (EWP)

5-1 NOTIFICATION

At least 15 days prior to the start of any activity that is anticipated to encounter remaining contamination, the site owner or their representative will notify the NYSDEC. The following table includes contact information for the above notification. The information on this table will be updated as necessary to provide accurate contact information. A full listing of site-related contact information is provided in Appendix 2.

Notifications*

Michael Cruden, P.E. NYSDEC Remedial Bureau E	(518) 402-8914 michael.cruden@dec.ny.us
Todd Caffoe, P.E. NYSDEC Project Manager	(585) 226-5430 todd.caffoe.dec.ny.gov
Ms. Kelly Lewandowski NYSDEC Site Control	518-402-9553 kelly.lewandowski@dec.ny.us

* Note: Notifications are subject to change and will be updated as necessary.

This notification will include:

- A detailed description of the work to be performed, including the location and areal extent of excavation, plans/drawings for site re-grading, intrusive elements or utilities to be installed below the soil cover, estimated volumes of contaminated soil to be excavated and any work that may impact an engineering control;
- A summary of environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of

concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;

- A schedule for the work, detailing the start and completion of all intrusive work;
- A summary of the applicable components of this EWP;
- A statement that the work will be performed in compliance with this EWP and 29 CFR 1910.120;
- A copy of the contractor's health and safety plan (HASP), in electronic format, if it differs from the HASP provided in Appendix 6 of this SMP;
- Identification of disposal facilities for potential waste streams; and
- Identification of sources of any anticipated backfill, along with all required chemical testing results.

5-2 SOIL SCREENING METHODS

Visual, olfactory and instrument-based (e.g. photoionization detector) soil screening will be performed by a qualified environmental professional during all excavations into known or potentially contaminated material (remaining contamination). Soil screening will be performed when invasive work is done and will include all excavation and invasive work performed during development, such as excavations for foundations and utility work, after issuance of the COC.

Soils will be segregated based on previous environmental data and screening results into material that requires off-site disposal and material that requires testing to determine if the material can be reused on-site as soil beneath a cover or if the material can be used as cover soil. Further discussion of off-site disposal of materials and on-site reuse is provided in Section 5-7 of this Appendix.

5-3 SOIL STAGING METHODS

Soil stockpiles will be continuously encircled with a berm and/or silt fence. Hay bales will be used as needed near catch basins, surface waters and other discharge points.

Stockpiles will be kept covered at all times with appropriately anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced.

Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by the NYSDEC.

5-4 MATERIALS EXCAVATION AND LOAD-OUT

A qualified environmental professional or person under their supervision will oversee all invasive work and the excavation and load-out of all excavated material.

The owner of the property and remedial party (if applicable) and its contractors are responsible for safe execution of all invasive and other work performed under this Plan.

The presence of utilities and easements on the site will be investigated by the qualified environmental professional. It will be determined whether a risk or impediment to the planned work under this SMP is posed by utilities or easements on the site.

Loaded vehicles leaving the site will be appropriately lined, tarped, securely covered, manifested, and placarded in accordance with appropriate Federal, State, local, and NYSDOT requirements (and all other applicable transportation requirements).

A truck wash will be operated on-site, as appropriate. The qualified environmental professional will be responsible for ensuring that all outbound trucks will be washed at the truck wash before leaving the site until the activities performed under this section are complete Truck wash waters will be collected and disposed of off-site in an appropriate manner.

Locations where vehicles enter or exit the site shall be inspected daily for evidence of off-site soil tracking.

The qualified environmental professional will be responsible for ensuring that all egress points for truck and equipment transport from the site are clean of dirt and other materials derived from the site during intrusive excavation activities. Cleaning of the adjacent streets will be performed as needed to maintain a clean condition with respect to site-derived materials.

5-5 MATERIALS TRANSPORT OFF-SITE

All transport of materials will be performed by licensed haulers in accordance with appropriate local, State, and Federal regulations, including 6 NYCRR Part 364. Haulers will be appropriately licensed and trucks properly placarded.

Material transported by trucks exiting the site will be secured with tight-fitting covers. Loose-fitting canvas-type truck covers will be prohibited. If loads contain wet material capable of producing free liquid, truck liners will be used.

Trucks will be prohibited from stopping and idling in the neighborhood outside the project site.

Egress points for truck and equipment transport from the site will be kept clean of dirt and other materials during site remediation and development.

Queuing of trucks will be performed on-site in order to minimize off-site disturbance. Off-site queuing will be prohibited.

5-6 MATERIALS DISPOSAL OFF-SITE

All material excavated and removed from the site will be treated as contaminated and regulated material and will be transported and disposed in accordance with all local, State (including 6NYCRR Part 360) and Federal regulations. If disposal of material from this site is proposed for unregulated off-site disposal (i.e. clean soil removed for development purposes), a formal request with an associated plan will be made to the NYSDEC. Unregulated off-site management of materials from this site will not occur without formal NYSDEC approval.

Off-site disposal locations for excavated soils will be identified in the pre-excavation notification. This will include estimated quantities and a breakdown by class of disposal facility if appropriate, i.e. hazardous waste disposal facility, solid waste landfill, petroleum treatment facility, C/D recycling facility, etc. Actual disposal quantities and associated documentation will be reported to the NYSDEC in the Periodic Review Report. This documentation will include: waste profiles, test results, facility acceptance letters, manifests, bills of lading and facility receipts.

Non-hazardous historic fill and contaminated soils taken off-site will be handled, at minimum, as a Municipal Solid Waste per 6NYCRR Part 360-1.2. Material that does not meet Unrestricted SCOs is prohibited from being taken to a New York State recycling facility (6NYCRR Part 360-16 Registration Facility).

In the event that characterization sampling detects chlorinated VOCs at any concentration, a Contained In Demonstration Work Plan (CIDWP) must be prepared and

approved by NYSDEC unless the soil is to be disposed at a hazardous waste landfill. A copy of the NYSDEC approved CIDWP from the soil removal IRM is attached to this EWP as guidance.

5-7 MATERIALS REUSE ON-SITE

The qualified environmental professional will ensure that procedures defined for materials reuse in this SMP are followed and that unacceptable material does not remain on-site. Contaminated on-site material, including historic fill and contaminated soil, that is acceptable for reuse on-site will be placed below the demarcation layer or impervious surface, and will not be reused within a cover soil layer, within landscaping berms, or as backfill for subsurface utility lines.

Any demolition material proposed for reuse on-site will be sampled for asbestos and the results will be reported to the NYSDEC for acceptance. Concrete crushing or processing on-site will not be performed without prior NYSDEC approval. Organic matter (wood, roots, stumps, etc.) or other solid waste derived from clearing and grubbing of the site will not be reused on-site.

5-7.1 Development of Screening Procedures for Excavated Soil

Upon encountering potentially-impacted soil, on-site contractors should follow their own company's Health and Safety Plan (HASP) to provide for worker protection.

Three classes of soil have been defined for the Site and will be managed and handled in a manner dictated by evidence of environmental impairment. The three classes of material are described below.

Material Classifications

Class of Material	Description	Screening Parameter	Management/ Re-use of Material
Class 1	Soil and fill materials free of petroleum impacts.	No Discernable Odor; PID Readings < 5 ppm; No Staining.	Use on-site for backfill in excavations.
Class 2	Soil and fill material with low to moderate petroleum or solvent impacts (based on consultation with NYSDEC).	PID readings greater than 5 ppm but less than 25 ppm.	Stage on-site and sample per DER-10, reuse as backfill in excavations below cover system if below restricted residential use SCOs. If soil does not meet restricted residential SCOs or if soil exhibits nuisance odor characteristics, it will be transported for offsite disposal (will require NYSDEC approved Contained-In Demonstration for disposal as non-hazardous waste).
Class 3	Soil and fill material with petroleum or solvent impacts.	Significant odor/staining, PID readings greater than 25 ppm.	Off-site disposal at a NYSDEC Part 360 landfill or other approved disposal facility (will require NYSDEC approved Contained-In Demonstration for disposal as non-hazardous waste).

The on-site management and use of Class 2 Materials as fill is supported by the Site specific screening of materials with a PID and the corresponding analytical data from soil samples.

5-8 FLUIDS MANAGEMENT

All liquids to be removed from the site, including but not limited to, excavation dewatering, decontamination waters and groundwater monitoring well purge and development waters, will be handled, transported and disposed in accordance with applicable local, State, and Federal regulations. Dewatering, purge and development fluids will not be recharged back to the land surface or subsurface of the site, and will be managed off-site, unless prior approval is obtained from NYSDEC.

Discharge of water generated during large-scale construction activities to surface waters (i.e. a local pond, stream or river) will be performed under a SPDES permit.

5-9 COVER SYSTEM RESTORATION

After the completion of soil removal and any other invasive activities the cover system will be restored in a manner that complies with the decision document. The existing cover system is comprised of a minimum of 24 inches of clean soil or asphalt pavement, concrete covered sidewalks and concrete building, etc. The demarcation layer, consisting of geotextile fabric or equivalent material will be replaced to provide a visual reference to the top of the remaining contamination zone, the zone that requires adherence to special conditions for disturbance of remaining contaminated soils defined in this SMP. If the type of cover system changes from that which exists prior to the excavation (i.e., a soil cover is replaced by asphalt), this will constitute a modification of the cover element of the remedy and the upper surface of the remaining contamination. A figure showing the modified surface will be included in the subsequent Periodic Review Report and in an updated SMP.

5-10 BACKFILL FROM OFF-SITE SOURCES

All materials proposed for import onto the site will be approved by the qualified environmental professional and will be in compliance with provisions in this SMP prior to receipt at the site. A Request to Import/Reuse Fill or Soil form, which can be found at http://www.dec.ny.gov/regulations/67386.html, will be prepared and submitted to the NYSDEC project manager allowing a minimum of 5 business days for review.

Material from industrial sites, spill sites, or other environmental remediation sites or potentially contaminated sites will not be imported to the site.

All imported soils will meet the backfill and cover soil quality standards established in 6NYCRR 375-6.7(d). All imported soils will meet 6NYCRR 375-6.8(b) Restricted Residential soil cleanup objectives. Soils that meet 'exempt' fill requirements under 6 NYCRR Part 360, but do not meet backfill or cover soil objectives for this site, will not be imported onto the site without prior approval by NYSDEC. Solid waste will not be imported onto the site. Analytical testing of imported soil and frequency of testing are detailed in the following table:

Recommended Number of Soil Samples for Soil Imported To or Exported From a Site			
Contaminant	**VOCs**	**SVOCs, Metals, PCBs, Pesticides**	
Soil Quantity (cubic yards)	**Discrete Samples**	**Composite**	**Discrete Samples/Composite**
0-50	1	1	3-5 discrete samples from different locations in the fill being provided will comprise a composite sample for analysis
50-100	2	1	
100-200	3	1	
200-300	4	1	
300-400	4	2	
400-500	5	2	
500-800	6	2	
800-1000	7	2	
>1000	Add an additional 2 VOC and 1 composite for each additional 1000 Cubic yards or consult with DER		

Trucks entering the site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

5-11 STORMWATER POLLUTION PREVENTION

Barriers and hay bale checks will be installed and inspected once a week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the site and available for inspection by the NYSDEC. All necessary repairs shall be made immediately.

Accumulated sediments will be removed as required to keep the barrier and hay bale check functional.

All undercutting or erosion of the silt fence toe anchor shall be repaired immediately with appropriate backfill materials.

Manufacturer's recommendations will be followed for replacing silt fencing damaged due to weathering.

Erosion and sediment control measures identified in the SMP shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters.

Silt fencing or hay bales will be installed around the entire perimeter of the construction area.

5-12 EXCAVATION CONTINGENCY PLAN

If underground tanks or other previously unidentified contaminant sources are found during post-remedial subsurface excavations or development related construction, excavation activities will be suspended until sufficient equipment is mobilized to address the condition.

Sampling will be performed on product, sediment and surrounding soils, etc. as necessary to determine the nature of the material and proper disposal method. Chemical analysis will be performed for a full list of analytes (TAL metals; TCL volatiles and semi-volatiles, TCL pesticides and PCBs), unless the site history and previous sampling results provide a sufficient justification to limit the list of analytes. In this case, a reduced list of analytes will be proposed to the NYSDEC for approval prior to sampling.

Identification of unknown or unexpected contaminated media identified by screening during invasive site work will be promptly communicated by phone to NYSDEC's Project Manager. Reportable quantities of petroleum product will also be reported to the NYSDEC spills hotline. These findings will be also included in the Periodic Review Report.

5-13 COMMUNITY AIR MONITORING PLAN

The Site Community Air Monitoring Plan (CAMP) is the generic NYSDOH CAMP and a copy is included in Appendix 7. Air sampling stations will be based on generally prevailing wind conditions. These locations will be adjusted on a daily or more frequent basis based on actual wind directions to provide an upwind and at least two downwind monitoring stations. Given the presence of residential properties and the Avenue D Recreation Center, at a minimum, one (1) monitoring station will be located on the eastern property line and one (1) sampling station will be placed on the northern property line. Exceedances of action levels listed in the CAMP will be reported to NYSDEC and NYSDOH Project Managers.

5-14 ODOR CONTROL PLAN

This odor control plan is capable of controlling emissions of nuisance odors off-site and on-site.. If nuisance odors are identified at the site boundary, or if odor complaints are received, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of all odor controls, including the halt of work, is the

responsibility of the remedial party's Remediation Engineer, and any measures that are implemented will be discussed in the Periodic Review Report.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include: (a) limiting the area of open excavations and size of soil stockpiles; (b) shrouding open excavations with tarps and other covers; and (c) using foams to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances will include: (d) direct load-out of soils to trucks for off-site disposal; (e) use of chemical odorants in spray or misting systems; and, (f) use of staff to monitor odors in surrounding neighborhoods.

If nuisance odors develop during intrusive work that cannot be corrected, or where the control of nuisance odors cannot otherwise be achieved due to on-site conditions or close proximity to sensitive receptors, odor control will be achieved by sheltering the excavation and handling areas in a temporary containment structure equipped with appropriate air venting/filtering systems.

5-15 DUST CONTROL PLAN

A dust suppression plan that addresses dust management during invasive on-site work will include, at a minimum, the items listed below:

- Dust suppression will be achieved though the use of a dedicated on-site water truck for road wetting. The truck will be equipped with a water cannon capable of spraying water directly onto off-road areas including excavations and stockpiles.
- Clearing and grubbing of larger sites will be done in stages to limit the area of exposed, unvegetated soils vulnerable to dust production.
- Gravel will be used on roadways to provide a clean and dust-free road surface.
- On-site roads will be limited in total area to minimize the area required for water truck sprinkling.

5-16 OTHER NUISANCES

A plan will be developed and utilized by the contractor for all remedial work to ensure compliance with local noise control ordinances.

LABELLA Associates, D.P.C.
Engineering
Architecture
Environmental
Planning

Contained-In Demonstration Work Plan
NYSDEC BCP Site No. C828189

Location:

Former Michelsen Furniture Co. Site
BCP Site No. C828189
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Prepared for:

Urban League of Rochester Economic Development Corporation
312 State Street
Rochester, New York 14614

LaBella Project No. 214633.02

October 2014

TABLE OF CONTENTS

1.0 INTRODUCTION & BACKGROUND

LaBella Associates, D.P.C. (LaBella) has been retained by the Urban League of Rochester Economic Development Corporation (URLEDC) to prepare this "Contained-In" Demonstration Work Plan (CIDWP) for the property located at 182 Avenue D and 374 Conkey Avenue in the City of Rochester, Monroe County, New York, hereinafter referred to as the "Site". A Site Location Map is included as Figure 1. The site has been enrolled in the NYSDEC BCP Program and has been assigned Site No. C828189.

This CIDWP is being submitted to forward information on soil and groundwater sampling completed at the Site during subsurface investigation activities performed by LaBella. In addition, this CIDWP provides a proposed sampling plan. This CIDWP was prepared in accordance with the "Contained-In" Criteria identified in NYSDEC Technical and Administrative Guidance Memorandum (TAGM) 3028.

1.1 Site Description & History

The Site consists of two (2) contiguous tax parcels encompassing approximately 0.62 acres. The Site location and surrounding area are shown on Figure 2. The Site is located in a primarily residential urban neighborhood in the City of Rochester. It is bounded by Avenue D to the south, Conkey Avenue to the east, residential property to the north, and the El Camino Trail and City of Rochester Avenue D Recreation Center to the east.

Parcel 1, addressed 182 Avenue D, encompasses approximately 0.4 acres and is improved with an approximately 44,000 square foot, four story brick warehouse building. Parcel 2 is a vacant lot addressed 374 Conkey Avenue and encompasses approximately 0.22 acres. The Site was initially operated by the George J. Michelsen Furniture Company from at least 1918 through 1954 and was utilized for furniture manufacturing. Based on a review of historical street directories, additional operators at the Site in the 1950s included Columbia Carpet Co., Rice Tool & Die Co. and General Fabricators Co. Parcel 2 historically contained a railroad spur that serviced the Michelsen Building. The Site has been utilized primarily for warehouse and distribution from the 1960's to September 2014.

1.2 Prior Investigations

The following environmental investigations have been performed at the Site:

- Phase I Environmental Site Assessment, 182 Avenue D, Rochester, NY, LaBella Associates, P.C., September 2011
- Phase II Environmental Site Assessment, 182 Avenue D, Rochester, NY, LaBella Associates, P.C., November 2012
- Additional Subsurface Investigations, 182 Avenue D and 374 Conkey Avenue, Rochester, NY, LaBella Associates, D.P.C, January & March 2014

Previous investigations have revealed the presence of tetrachloroethene (PCE), trichloroethene (TCE) and petroleum contamination at the Site. Previous investigation locations are depicted on Figure 2. Laboratory analysis of soil and groundwater samples collected during previous investigations is summarized on Tables 1 through 4.

1.3 Remedial Investigation Work Plan

LaBella prepared a Remedial Investigation Work Plan (RIWP) to evaluate the areas of concern identified during previous investigations and the extent of remedial actions required (if any) at the Site. The RIWP was submitted in July 2014 along with the Brownfield Cleanup Program Application. NYSDEC approved the RIWP in January 2015. Remedial Investigation activities are ongoing at the Site.

1.4 Summary of Contamination

Approximately 150 cubic yards (CY) of soil was excavated in preparation for construction of a new entryway vestibule at the Site. The soil was placed on and covered with 6-mil polyethylene sheeting. Laboratory analysis of a sample collected from the soil pile detected low concentrations of PCE and TCE (25.2 and 24.7 µg/Kg, respectively). A sample analyzed by the Toxicity Characteristic Leaching Procedure (TCLP) did not detected VOCs in the TCLP extract.

2.0 PROPOSED "CONTAINED-IN" SAMPLING

2.1 Proposed Sampling for "Contained-In"

Approximately 150 CY of soil has been staged on and covered with polyethylene sheeting. The soil will be sampled in accordance with Table 5.4 of DER-10. Based on the anticipated volume of soil to be removed, three (3) discrete soil sample will be collected. Samples will be submitted under chain-of-custody procedures to a NYSDOH ELAP certified laboratory for the following analysis:

- USEPA Target Compound List (TCL) list VOCs by USEPA Method 8260
- Toxicity Characteristic Leaching Procedure (TCLP) for VOCs by USEPA Method 1311

This sampling will be conducted in order to characterize the waste for appropriate disposal and to compare the testing results against the "Contained-In" Criteria identified in NYSDEC TAGM 3028.

Currently it is anticipated that the soil will be approved for 'contained-in' and will be disposed of at a solid waste landfill with a 6 NYCRR Part 360 Permit (i.e., Waste Management's Mill Seat Landfill in Riga, NY). The specific facility will be provided with the request for "Contained-In" when sampling results are received.

3.0 "CONTAINED-IN" REQUEST

Subsequent to completing/receiving the laboratory reports, LaBella will submit a "Contained-In" request that provides the sampling completed, the laboratory reports, the quantities of soil, etc. This request will provide the proposed disposal facility and request approval by NYSDEC (if data supports the request).

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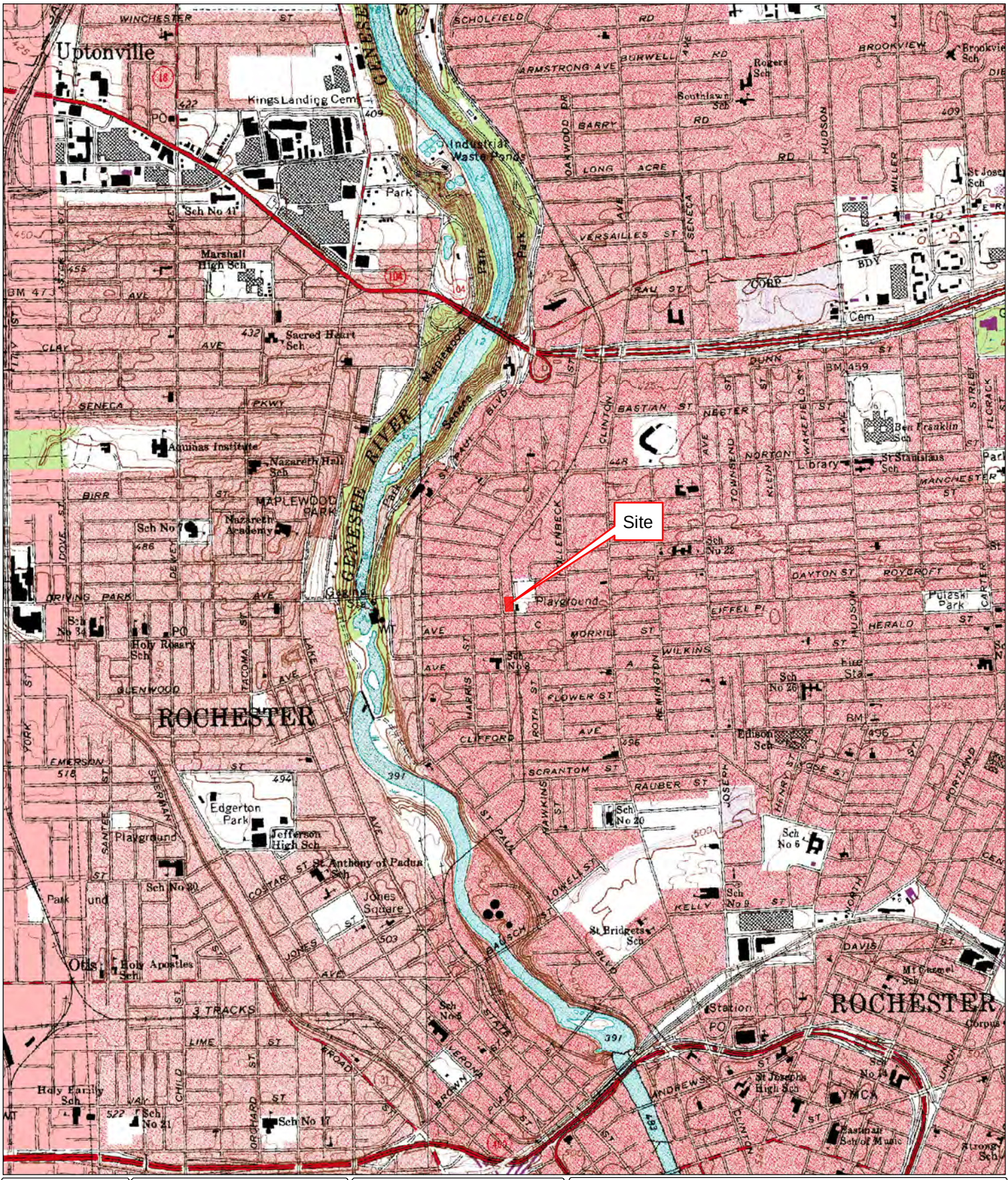
FIGURES



PROJECT/DRAWING NUMBER 214539 FIGURE 1	DRAWING TITLE SITE LOCATION MAP ISSUED FOR: DRAFT DESIGNED BY: DKE DRAWN BY: DKE REVIEWED BY: DATE: 03/19/2015	PROJECT/CLIENT Condained In Demonstration Work Plan Former Michelsen Furniture Co. Site 182 Avenue D & 374 Conkey Ave. Rochester, New York Client: Urban League of Rochester Economic Development Corp.	LABELLA Associates, D.P.C. 300 STATE STREET ROCHESTER, NY 14614 P: (585) 454-6110 F: (585)454-3066 www.labellapc.com COPYRIGHT 2003 0 1,050 2,100 4,200 Feet 1 inch = 2,000 feet N W E S

Path: J:\Urban League of Rochester Economic Development\214539 - Michelson BCP Site RI & Remediation\Drawings\CIDWP\Fig. 1 - Site location.mxd

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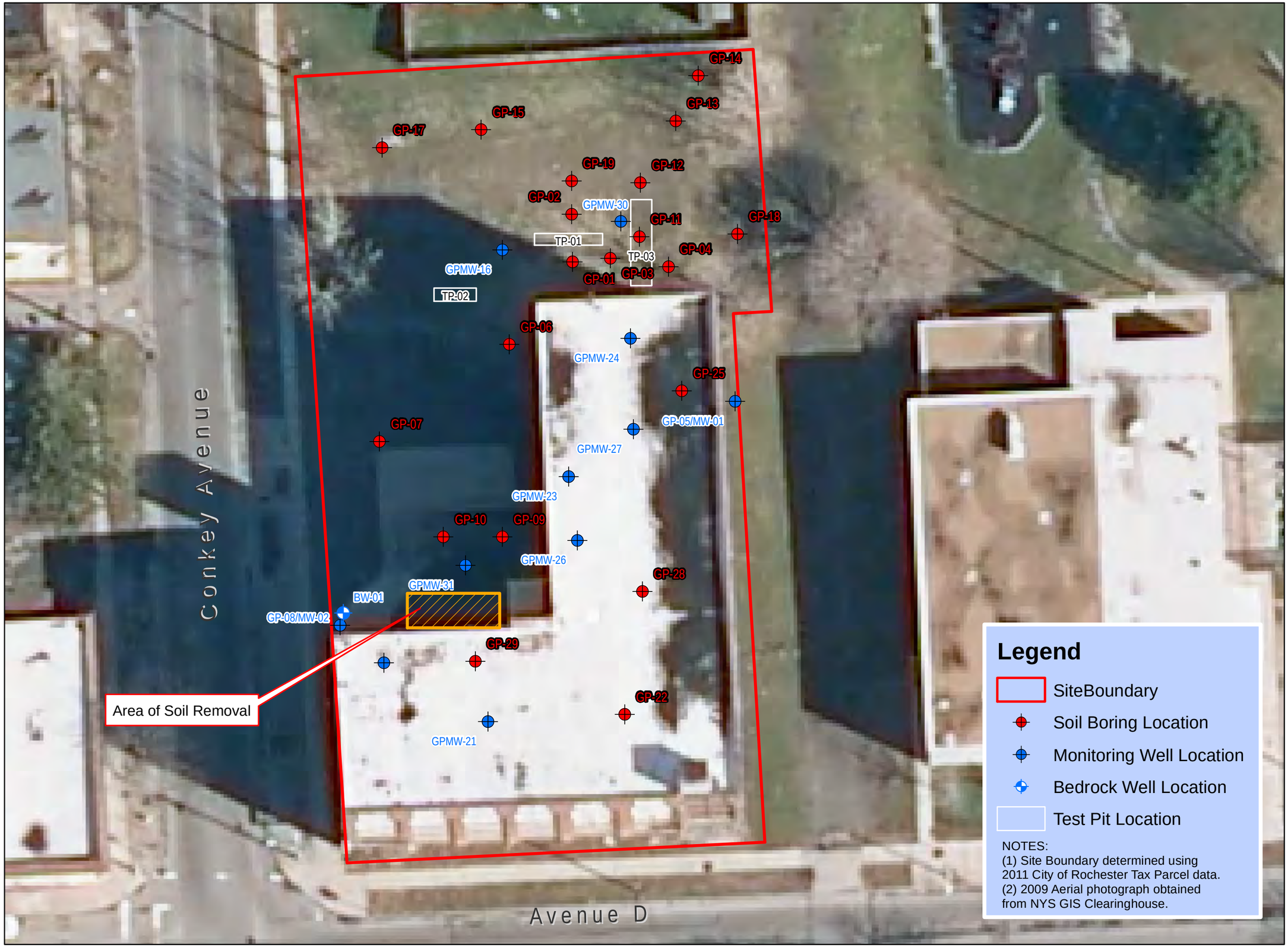

Path: J:\Urban League of Rochester Economic Development\214539 - Michelson BCP Site RI & Remediation\Drawings\CIDWP\Fig. 2 - Previous Investigations.mxd

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Contained In Demonstration Work Plan

Former Michelsen Furniture Co. Site

182 Avenue D
&
374 Conkey Avenue
Rochester, New York

Urban League of Rochester Economic Develoment Corporation

Title:

Previous Investigaiton Locations

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W
E
S

10 0 10

1 inch = 25 feet

214539

Figure 2

LABELLA Associates, D.P.C. | Engineering Architecture Environmental Planning

TABLES

Table 1
Interim Remedial Measures Work Plan
Former Michelsen Furniture Co. Site
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Summary of Volatile Organic Compounds (VOCs) in Soil Samples
Results in Milligrams per Kilogram (mg/Kg) or Parts Per Million (PPM)

Sample ID	Soil Samples													NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives
	GP-05	GP-08	GP-09	GP-12	GP-22	GP-23	GP-24	GP-26	GP-27	GP-28	GP-29	GP-30	GP-31	
Depth	3'-4'	13'-13.5'	13'-14.1'	12'	7.6'	6.8'-8.4'	2'-3'	7.5'-7.7'	8'-8.2'	6.8'-7.1'	7.8'-8.4'	13.5'-14'	13.5'-14'	
Sample Collection Date	10/10/12	10/10/12	10/10/12	1/17/14	1/17/14	1/17/14	1/17/14	3/14/2014	3/14/2014	3/14/2014	3/14/2014	3/14/2014	3/14/2014	
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.33
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.7**
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.05
Methyl acetate	ND	ND	1,300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Methyl cyclohexane	ND	ND	ND	0.820	ND	ND	0.160	ND	ND	ND	ND	ND	ND	NA
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.19
Methyl tert-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.93
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.27
2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3**
cis-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.25
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.37
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.02
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.06
Trichloroethene	ND	**0.960**	ND	ND	ND	0.012	ND	**3.300**	0.022	0.011	**0.470**	ND	0.230	0.47
Toluene	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND	ND	ND	ND	0.7
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND	ND	ND	ND	NA
Tetrachloroethene	ND	0.016	ND	ND	ND	ND U	ND	0.039	ND	ND	ND	ND	0.010	1.3
Ethylbenzene	ND	ND	ND	0.170	ND	ND U	0.270	ND	ND	ND	ND	0.160	ND	1
m,p-Xylene	ND	ND	ND	0.072	ND	ND U	0.150	ND	ND	ND	ND	ND	ND	0.26
o-Xylene	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND	ND	ND	ND	0.26
Isopropylbenzene	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND	ND	ND	ND	2.3**
n-Propylbenzene	ND	ND	ND	0.460	ND	ND U	0.370	ND	ND	ND	ND	ND	ND	3.9
1,3,5-Trimethylbenzene	ND	ND	ND	2.600	ND	ND U	0.840	ND	ND	ND	ND	1.400	ND	8.4
1,2,4-Trimethylbenzene	ND	ND	ND	0.760	ND	ND U	2.000	ND	ND	ND	ND	1.400	ND	3.6
tert-Butylbenzene	ND	ND	ND	0.044	ND	ND U	ND	ND	ND	ND	ND	0.036	ND	5.9**
sec-Butylbenzene	ND	ND	ND	0.580	ND	ND U	0.280	ND	ND	ND	ND	0.520	ND	11
4-Isopropyltoluene	ND	ND	ND	0.950	ND	ND U	0.410	ND	ND	ND	ND	0.400	ND	10**
n-Butylbenzene	ND	ND	ND	0.910	ND	ND U	0.370	ND	ND	ND	ND	0.690	ND	12
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND U	ND	ND	ND	ND	ND	ND	ND	1.1
Naphthalene	ND	ND	ND	2.500	ND	ND U	3.100	ND	ND	ND	ND	4.000	ND	12

Notes:
VOC analysis by United States Environmental Protection Agency (USEPA) Method SW846 8260.
Bold type indicates that the constituent was detected above NYCRR Part 375-6.8(A) Unrestricted Use Soil Cleanup Objectives
U - Indicates that the constituent was not detected.
NA = Not Applicable or Not Available
*Indicates no Part 375-6 SCO for this compound; SCO from NYSDEC Commissioner Policy 51 Supplemental SCOs for Protection of Groundwater.
**Indicates no Part 375-6 SCO or CP-51 SSCO for this compound; SCO from NYSDEC CP-51 Table 2: Soil Cleanup Levels for Gasoline Contaminated Soil.

Table 2
Interim Remedial Measures Work Plan
Former Michelsen Furniture Co. Site
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Summary of Semi-Volatile Organic Compounds (SVOCs) in Soil Samples
Results in Milligrams per Kilogram (mg/Kg) or Parts Per Million (PPM)

Sample ID	Soil Samples						NYCRR Part 375-6.8(a) Unrestricted Use Soil Cleanup Objectives
	GP-05	GP-08	GP-09	GP-22	GP-23	GP-24	
Depth	3'-4'	13'-13.5'	13'-14.1'	7.6'	6.8'-8.4'	2'-3'	
Sample Collection Date	10/10/12	10/10/12	10/10/12	1/17/14	1/17/14	1/17/14	
Naphthalene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	2.700	12
Acenaphthylene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	0.120	100
Acenaphthene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	0.600	20
Fluorene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	0.690	30
Phenanthrene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	2.000	100
Anthracene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	0.120	100
Fluoranthene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	0.042	100
Pyrene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	0.200	100
Benzo(a)anthracene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	1
Chrysene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	1
Benzo(b)fluoranthene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	1
Benzo(k)fluoranthene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	0.8
Benzo(a)pyrene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	1
Indeno(1,2,3-cd)pyrene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	0.5
Dibenzo(a,h)anthracene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	0.33
Benzo(g,h,i)perylene	<0.037 U	<0.041 U	<0.043 U	<0.040 U	<0.039 U	<0.041 U	100

Notes:

SVOC analysis by United States Environmental Protection Agency (USEPA) Method SW846 8270.

Bold type indicates that the constituent was detected above NYCRR Part 375-6.8(A) Unrestricted Use Soil Cleanup Objectives

U - Indicates that the constituent was not detected.

NA = Not Applicable or Not Available

Table 3
Interim Remedial Measures Work Plan
Former Michelsen Furniture Co. Site
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Summary of Detected Volatile Organic Compounds in Groundwater Samples
Results in Micrograms per Liter (ug/L)

Sample ID	MW-01	MW-02	GPMW-16	GPMW-21	GPNW-23	GPMW-24	BW-01	GPMW-26	GPMW-27	GPMW-30	GPMW-31	NYSDEC Part 703 Groundwater Standards
Sample Collection Date	10/10/2012	10/25/2012	1/17/2014	1/17/2014	1/17/2014	1/17/2014	1/24/2014	3/14/2014	3/14/2014	3/19/2014	3/19/2014	
Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2
1,1,1-Trichloroethane	ND	ND	3.3	ND	ND	ND	ND	ND	ND	ND	ND	5
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	**120.0**	ND	ND	50
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Methylene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
trans-1,2-dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
Methyl tert-butyl ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
2-Butanone	ND	ND	15	ND	ND	ND	ND	ND	15.0	ND	ND	50
cis-1,2-dichloroethene	ND	ND	**7.9**	ND	ND	**3,500**	ND	**9.3**	**84.0**	ND	ND	5
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7
Chloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
Cyclohexane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.6
Benzene	**1.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Trichloroethene	ND	**280**	**21**	**6.0**	**82**	ND	**600**	**420.0**	**420.0**	ND	**1100.0**	5
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1
Tetrachloroethene	ND	**5.8**	3.5	ND	**14**	ND	ND	ND	1.3	ND	ND	5
Ethylbenzene	4.0	ND	ND	ND	ND	**230**	ND	**14.0**	ND	**110.0**	**8.1**	5
m,p-Xylene	**6.4**	ND	ND	2.8	ND	ND	ND	ND	1.3	ND	ND	5
o-Xylene	ND	ND	ND	ND	ND	ND	ND	ND	3.1	ND	ND	5
Isopropylbenzene	1.9	ND	ND	ND	ND	ND	ND	ND	ND	**98.0**	ND	5
n-Propylbenzene	**5.1**	ND	ND	ND	ND	ND	ND	ND	ND	**150.0**	ND	5
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	**160**	ND	ND	ND	**380.0**	ND	5
tert-butylbenzene	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5
1,2,4-Trimethylbenzene	**30**	ND	1.9	1.2	ND	**520**	ND	ND	4.6	**320.0**	ND	5
sec-Butylbenzene	3.6	ND	ND	ND	ND	ND	ND	ND	ND	**140.0**	ND	5
4-Isopropyltoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**85.0**	ND	5
n-Butylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	**140.0**	ND	5
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3
Naphthalene	3.1	ND	ND	ND	ND	**580**	ND	ND	ND	**1200.0**	**66.0**	10

Notes:
VOC analysis by United States Environmental Protection Agency (USEPA) Method SW846 8260B.
Bold and highlighted type indicates that the constituent was detected above NYSDEC Part 703 Groundwater Standards
U - Indicates that the constituent was not detected.
NA = Not Applicable or Not Available

Table 4
Interim Remedial Measures Work Plan
Former Michelsen Furniture Co. Site
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Summary of Semi-Volatile Organic Compounds in Groundwater
Results in Micrograms per Liter (ug/L)

Sample ID	MW-01	MW-02	MWGP-16	MWGP-21	MWGP-23	MWGP-24	NYSDEC Part 703 Groundwater Standards
Sample Collection Date	10/10/2012	10/25/2012	1/17/2014	1/17/2014	1/17/2014	1/17/2014	
Naphthalene	3.1	<0.25 U	1.1	0.55	0.50	**630**	10
Acenaphthylene	<0.050 U	<0.050 U	0.20	<0.050 U	<0.050 U	<25 U	NA
Acenaphthene	0.84	0.050	<0.050 U	<0.050 U	<0.050 U	**90**	20
Fluorene	0.42	<0.050 U	0.10	0.20	0.17	**94**	50
Phenanthrene	0.55	0.16	0.12	0.44	0.38	**220**	50
Anthracene	0.078	<0.050 U	<0.050 U	<0.050 U	<0.050 U	**210**	50
Fluoranthene	0.13	0.10	<0.050 U	<0.050 U	<0.050 U	<25 U	50
Pyrene	0.095	0.12	<0.050 U	<0.050 U	<0.050 U	19	50
Benzo(a)anthracene	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	**1.0**	0.002
Chrysene	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	**1.4**	0.002
Benzo(b)fluoranthene	<0.050 U	0.054	<0.050 U	<0.050 U	<0.050 U	**0.68**	0.002
Benzo(k)fluoranthene	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	**0.22**	0.002
Benzo(a)pyrene	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	0.62	NA
Indeno(1,2,3-cd)pyrene	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	**0.34**	0.002
Dibenzo(a,h)anthracene	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	0.10	NA
Benzo(g,h,i)perylene	<0.050 U	<0.050 U	<0.050 U	<0.050 U	<0.050 U	0.39	NA

Notes:

AVOC analysis by United States Environmental Protection Agency (USEPA) Method SW846 8270.

U - Indicates that the constituent was not detected.

APPENDIX 6 – HEALTH & SAFETY PLAN

Site Health and Safety Plan

Location:

Former Michelsen Furniture Co. Site
182 Avenue D and 374 Conkey Avenue
Rochester, New York

Prepared For:

M+M Housing Development Fund Corp. as Nominee for Mills and Michelsen LLC
312 State Street
Rochester, New York 14614

LaBella Project No. 214539

September 2015

Site Health and Safety Plan

Location:

Former Michelsen Furniture Co. Site
182 Avenue D and 374 Conkey Avenue
Rochester, New York

Prepared For:

M+M Housing Development Fund Corp. as Nominee for
Mills and Michelsen LLC
312 State Street
Rochester, New York 14614

LaBella Project No. 214539

September 2015

LaBella Associates, D.P.C.
300 State Street
Rochester, New York 14614

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SITE HEALTH AND SAFETY PLAN

Project Title:	Former Michelsen Furniture Co. Site - Brownfield Cleanup Program
Project Number:	214539
Project Location (Site):	182 Avenue D & 374 Conkey Ave Rochester, New York
Environmental Director:	Gregory Senecal, CHMM
Project Manager:	Dave Engert, CHMM
Plan Review Date:	_____
Plan Approval Date:	_____
Plan Approved By:	_____ Mr. Richard Rote, CIH
Site Safety Supervisor:	Jennifer Gillen
Site Contact:	To Be Determined
Safety Director:	Rick Rote, CIH
Proposed Date(s) of Field Activities:	To Be Determined
Site Conditions:	Level, encompassing approximately 0.62 acres
Site Environmental Information Provided By:	• Phase I Environmental Site Assessment, LaBella, 2011 • Phase II ESA, LaBella, 2012 • Follow Up Subsurface Investigation Activities, LaBella, 2014
Air Monitoring Provided By:	LaBella Associates, D.P.C.
Site Control Provided By:	Contractor(s)

EMERGENCY CONTACTS

	Name	Phone Number
Ambulance:	As Per Emergency Service	911
Hospital Emergency:	Rochester General Hospital	585-922-8000
Poison Control Center:	Upstate New York Poison Control Center	1-800-222-1222
Police (local, state):	Rochester Police Department	911
Fire Department:	Rochester Fire Department	911
Site Contact:	Kathy Wood	585-454-5710 x 2002
Agency Contact:	NYSDEC – Todd Caffoe, P.E. NYSDOH – Dawn Hettrick	585-226-5350 518-402-7860
Environmental Director:	Greg Senecal, CHMM	Direct: 585-295-6243 Cell: 585-752-6480
Project Manager:	Dave Engert, CHMM.	Direct: 585-295-630 Cell: 585-737-3293
Site Safety Supervisor:	Steven Rife	Direct: 585-295-7004 Cell: 585-755-9244
Safety Director	Rick Rote, CIH	Direct: 585-295-6241

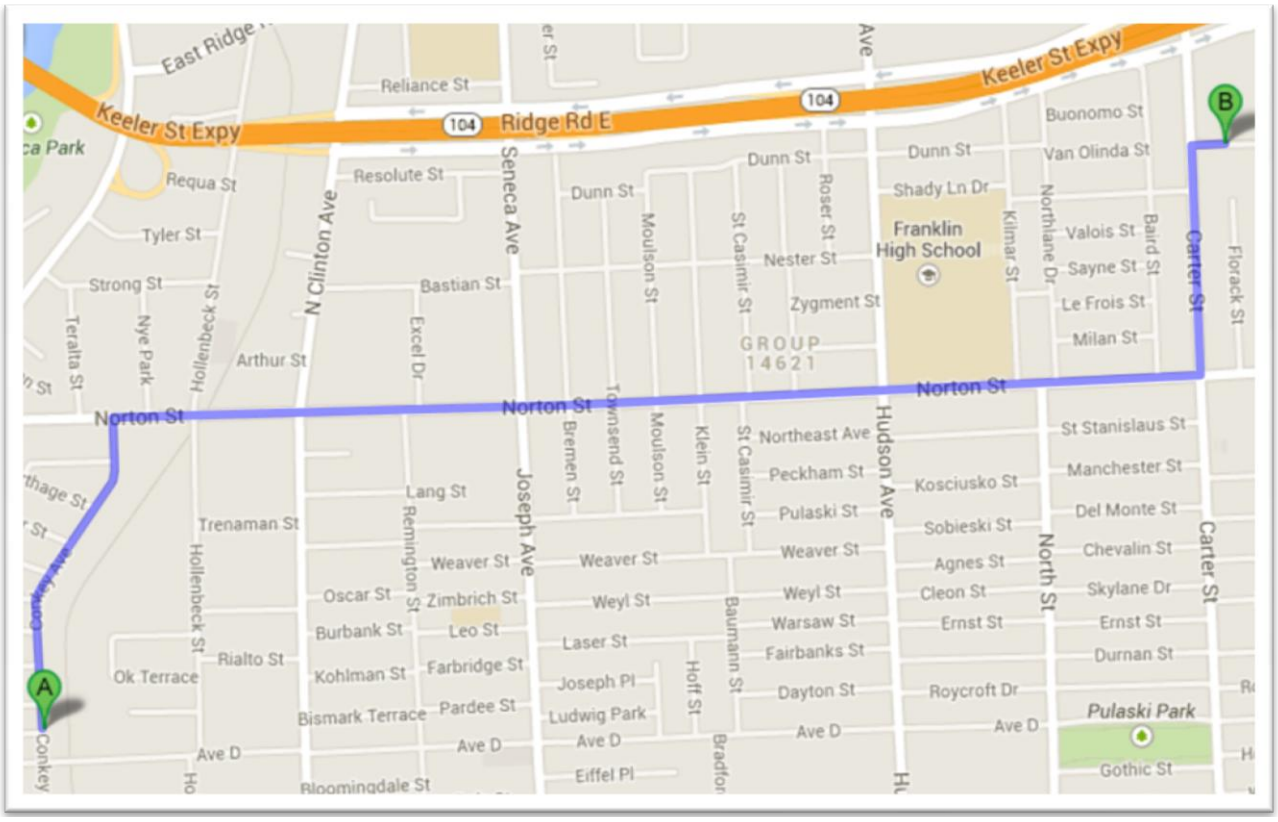
MAP AND DIRECTIONS TO THE MEDICAL FACILITY
ROCHESTER GENERAL HOSPITAL

Total Time: 6 minutes
Total Distance: 2.1 miles

Directions:

1. Turn Right onto Conkey Avenue, travel north 0.4 miles
2. Turn Right onto Norton Street, travel east 1.3 miles
3. Turn Left onto Carter Street, travel north 0.3 miles
4. Turn Right into Rochester General Hospital

Map:



LABELLA

1.0 Introduction

The purpose of this Health and Safety Plan (HASP) it to provide guidelines for responding to potential health and safety issues that may be encountered during the Remedial Investigation (RI) at the Former Michelsen Furniture Site, located at 182 Avenue D and 374 Conkey Avenue in the City of Rochester, Monroe County, New York. This HASP only reflects the policies of LaBella Associates D.P.C. The requirements of this HASP are applicable to all approved LaBella personnel at the work site. This document's project specifications and the Community Air Monitoring Plan (CAMP) are to be consulted for guidance in preventing and quickly abating any threat to human safety or the environment. The provisions of the HASP were developed in general accordance with 29 CFR 1910 and 29 CFR 1926 and do not replace or supersede any regulatory requirements of the USEPA, NYSDEC, OSHA or and other regulatory body.

2.0 Responsibilities

This HASP presents guidelines to minimize the risk of injury to project personnel, and to provide rapid response in the event of injury. The HASP is applicable only to activities of approved LaBella personnel and their authorized visitors. The Project Manager shall implement the provisions of this HASP for the duration of the project. It is the responsibility of LaBella employees to follow the requirements of this HASP, and all applicable company safety procedures.

3.0 Activities Covered

The activities covered under this HASP are limited to the following:

- Management of environmental investigation and remediation activities
- Environmental Monitoring
- Collection of samples
- Management of excavated soil and fill.

4.0 Work Area Access and Site Control

The contractor(s) will have primary responsibility for work area access and site control. However, a minimum requirement for work area designation and control will consist of:

- Drilling (Geoprobe®/Rotary) – Orange cones to establish at least a 10-foot by 10-foot work area
- Test Pitting – Orange cones and orange temporary fencing to establish at least 10-feet of distance between test pit and fencing.

5.0 Potential Health and Safety Hazards

This section lists some potential health and safety hazards that project personnel may encounter at the project site and some actions to be implemented by approved personnel to control and reduce the associated risk to health and safety. This is not intended to be a complete listing of any and all potential health and safety hazards. New or different hazards may be encountered as site environmental and site work conditions change. The suggested actions to be taken under this plan are not to be substituted for good judgment on the part of project personnel. At all times, the Site Safety Officer has responsibility for site safety and his or her instructions must be followed.

5.1 Hazards Due to Heavy Machinery

Potential Hazard:
Heavy machinery including trucks, excavators, backhoes, etc will be in operation at the site. The presence of such equipment presents the danger of being struck or crushed. Use caution when working near heavy machinery.

Protective Action:
Make sure that operators are aware of your activities, and heed operator's instructions and warnings. Wear bright colored clothing and walk safe distances from heavy equipment. A hard hat, safety glasses and steel toe shoes are required.

5.2 Excavation Hazards

Potential Hazard:
Excavations and trenches can collapse, causing injury or death. Edges of excavations can be unstable and collapse. Toxic and asphyxiant gases can accumulate in confined spaces and trenches. Excavations that require working within the excavation will require air monitoring in the breathing zone (refer to Section 9.0).

Excavations left open create a fall hazard which can cause injury or death.

Protective Action:
Personnel must receive approval from the Project Manager to enter an excavation for any reason. Subsequently, approved personnel are to receive authorization for entry from the Site Safety Officer. Approved personnel are not to enter excavations over 4 feet in depth unless excavations are adequately sloped. Additional personal protective equipment may be required based on the air monitoring.

Personnel should exercise caution near all excavations at the site as it is expected that excavation sidewalls will be unstable. All excavations will be backfilled by the end of each day. Additionally, no test pit will be left unattended during the day.

Fencing and/or barriers accompanied by "no trespassing" signs should be placed around all excavations when left open for any period of time when work is not being conducted.

5.3 Cuts, Punctures and Other Injuries

Potential Hazard:
In any excavation or construction, work site there is the potential for the presence of sharp or jagged edges on rock, metal materials, and other sharp objects. Serious cuts and punctures can result in loss of blood and infection.

Protective Action:
The Project Manager is responsible for making First Aid supplies available at the work site to treat minor injuries. The Site Safety Officer is responsible for arranging the transportation of authorized on-site personnel to medical facilities when First Aid treatment in not sufficient. Do not move seriously injured workers. All injuries requiring treatment are to be reported to the Project Manager. Serious injuries are to be reported immediately to the Site Safety Officer

5.4 Injury Due to Exposure of Chemical Hazards

Potential Hazards:
Volatile organic vapors from petroleum products, chlorinated solvents or other chemicals may be encountered during excavation activities at the project work site. Inhalation of high concentrations of organic vapors can cause headache, stupor, drowsiness, confusion and other health effects. Skin contact can cause irritation, chemical burn, or dermatitis.

Protective Action:
The presence of organic vapors may be detected by their odor and by monitoring instrumentation. Approved employees will not work in environments where hazardous concentrations of organic vapors are present. Air monitoring (refer to Section 9.0 and to the Modified CAMP in Appendix 7) of the work area will be performed at least every 60 minutes or more often using a Photoionization Detector (PID). Personnel are to leave the work area whenever PID measurements of ambient air exceed 25 ppm consistently for a 5 minute period. In the event that sustained total volatile organic compound (VOC) readings of 25 ppm is encountered personnel should upgrade personal protective equipment to Level C (refer to Section 8.0) and an Exclusion Zone should be established around the work area to limit and monitor access to this area (refer to Section 6.0).

5.5 Injuries Due to Extreme Hot or Cold Weather Conditions

Potential Hazards:
Extreme hot weather conditions can cause heat exhaustion, heat stress and heat stroke or extreme cold weather conditions can cause hypothermia.

Protective Action:
Precaution measures should be taken such as dress appropriately for the weather conditions and drink plenty of fluid. If personnel should suffer from any of the above conditions, proper techniques should be taken to cool down or heat up the body and taken to the nearest hospital if needed.

5.6 Potential Exposure to Asbestos

Potential Hazards:
During ground intrusive activities (e.g., test pitting or drilling) soil containing asbestos may be encountered. Asbestos is friable when dry and can be inhaled when exposed to air.

Protective Action:
The presence of asbestos can be identified through visual observation of a white magnesium silicate material. If encountered, work should be halted and a sample of the suspected asbestos should be collected and placed in a plastic sealable bag. This sample should be sent to the asbestos laboratory at LaBella Associates for analysis.

5.7 Potential Exposure to Thorium^{232}

Potential Hazards:
During ground intrusive activities (e.g., test pitting or drilling) soil containing ^{232}Thorium may be encountered. ^{232}Thorium is a radioactive substance and poses an exposure risk to humans once encountered.

Protective Action:
Each test pit, soil sample, or other soil from the subsurface should initially be screened with the Ludlum meter to check the level of radiation on the soil as compared to the Site background level of radiation. Should the level of radiation on the soil sample exceed 2 times the Site background level, then work should be halted at the specified location and Mr. Rick Rote of LaBella Associates, P.C. should be contacted immediately (see page ii Emergency Contacts).

6.0 Work Zones

In the event that conditions warrant establishing various work zones (i.e., based on hazards - Section 5.4), the following work zones should be established:

Exclusion Zone (EZ):
The EZ will be established in the immediate vicinity and adjacent downwind direction of site activities that elevate breathing zone VOC concentrations to unacceptable levels based on field screening. These site activities include contaminated soil excavation and soil sampling activities. If access to the site is required to accommodate non-project related personnel then an EZ will be established by constructing a barrier around the work area (yellow caution tape and/or construction fencing). The EZ barrier shall encompass the work area and any equipment staging/soil staging areas necessary to perform the associated work. The contractor(s) will be responsible for establishing the EZ and limiting access to approved personnel. Depending on the condition for establishing the EZ, access to the EZ may require adequate PPE (e.g., Level C).

Contaminant Reduction Zone (CRZ):
The CRZ will be the area where personnel entering the EZ will don proper PPE prior to entering the EZ and the area where PPE may be removed. The CRZ will also be the area where decontamination of equipment and personnel will be conducted as necessary.

7.0 Decontamination Procedures

Upon leaving the work area, approved personnel shall decontaminate footwear as needed. Under normal work conditions, detailed personal decontamination procedures will not be necessary. Work clothing may become contaminated in the event of an unexpected splash or spill or contact with a contaminated substance. Minor splashes on clothing and footwear can be rinsed with clean water. Heavily contaminated clothing should be removed if it cannot be rinsed with water. Personnel assigned to this project should be prepared with a change of clothing whenever on site.

Personnel will use the contractor's disposal container for disposal of PPE.

8.0 Personal Protective Equipment

Generally, site conditions at this work site require level of protection of Level D or modified Level D. However, air monitoring will be conducted to determine if up-grading to Level C PPE is required (refer to Section 9.0). Descriptions of the typical safety equipment associated with Level D and Level C are provided below:

Level D:
Hard hat, safety glasses, rubber nitrile sampling gloves, steel toe construction grade boots, etc.

Level C:
Level D PPE and full or ½-face respirator and tyvek suit (if necessary). [*Note: Organic vapor cartridges are to be changed after each 8-hours of use or more frequently.*]

9.0 Air Monitoring

According to 29 CFR 1910.120(h), air monitoring shall be used to identify and quantify airborne levels of hazardous substances and health hazards in order to determine the appropriate level of employee protection required for personnel working onsite. Air monitoring will consist at a minimum of the procedures described in Appendix 7 "Site Specific CAMP". Please refer to the Site Specific CAMP for further details on air monitoring at the Site.

The Air Monitor will utilize a photoionization Detector (PID) to screen the ambient air in the work areas for total Volatile Organic Compounds (VOCs) and a DustTrak tm Model 8520 aerosol monitor or equivalent for measuring particulates. Work area ambient air will generally be monitored in the work area and downwind of the work area. Air monitoring of the work areas and downwind of the work areas will be performed at least every 60 minutes or more often using a PID, and the DustTrak meter.

If sustained PID readings of greater than 25 ppm are recorded in the breathing zone, then either personnel are to leave the work area until satisfactory readings are obtained or approved personnel may re-enter the work areas wearing at a minimum a ½ face respirator with organic vapor cartridges for an 8-hour duration (i.e., upgrade to Level C PPE). Organic vapor cartridges are to be changed after each 8-hours of use or more frequently, if necessary. If PID readings are sustained, in the work area, at levels above 25 ppm for a 5 minute average, work will be stopped immediately until safe levels of VOCs are encountered or additional PPE will be required (i.e., Level B).

If dust concentrations exceed the upwind concentration by 150 $\mu g/m^3$ (0.15 mg/m^3) consistently for a 10 minute period within the work area or at the downwind location, then LaBella personnel may not re-enter the work area until dust concentrations in the work area decrease below 150 $\mu g/m^3$ (0.15 mg/m^3), which may be accomplished by the construction manager implementing dust control or suppression measures.

10.0 Emergency Action Plan

In the event of an emergency, employees are to turn off and shut down all powered equipment and leave the work areas immediately. Employees are to walk or drive out of the Site as quickly as possible and wait at the assigned 'safe area'. Follow the instructions of the Site Safety Officer.

Employees are not authorized or trained to provide rescue and medical efforts. Rescue and medical efforts will be provided by local authorities.

11.0 Medical Surveillance

Medical surveillance will be provided to all employees who are injured due to overexposure from an emergency incident involving hazardous substances at this site.

12.0 Employee Training

Personnel who are not familiar with this site plan will receive training on its entire content and organization before working at the Site.

Individuals involved with the remedial investigation must be 40-hour OSHA HAZWOPER trained with current 8-hour refresher certification.

J:\URBAN LEAGUE OF ROCHESTER ECONOMIC DEVELOPMENT\214539 - MICHELSON BCP SITE RI & REMEDIATION\REPORTS\RIWP\APPENDIX 4 HASP\HASP.DOCX

Table 1
Exposure Limits and Recognition Qualities

Compound	PEL-TWA (ppm)(b)(d)	TLV-TWA (ppm)(c)(d)	STEL	LEL (%)(e)	UEL (%)(f)	IDLH (ppm)(g)(d)	Odor	Odor Threshold (ppm)	Ionization Potential
Acetone	750	500	NA	2.15	13.2	20,000	Sweet	4.58	9.69
Anthracene	0.2	0.2	NA	NA	NA	NA	Faint aromatic	NA	NA
Benzene	1	0.5	5	1.3	7.9	3000	Pleasant	8.65	9.24
Benzo (a) pyrene (coal tar pitch volatiles)	0.2	0.1	NA	NA	NA	700	NA	NA	NA
Benzo (a)anthracene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (b) Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (g,h,i)perylene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzo (k) Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bromodichloromethane	NA	NA	NA	NA	NA	NA	NA	NA	10.88
Carbon Disulfide	20	1	NA	1.3	50	500	Odorless or strong garlic type	0.096	10.07
Chlorobenzene	75	10	NA	1.3	9.6	2,400	Faint almond	0.741	9.07
Chloroform	50	2	NA	NA	NA	1,000	ethereal odor	11.7	11.42
Chrysene	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dichloroethylene	200	200	NA	9.7	12.8	400	Acrid	NA	9.65
1,2-Dichlorobenzene	50	25	NA	2.2	9.2		Pleasant		9.07
Ethylbenzene	100	100	NA	1	6.7	2,000	Ether	2.3	8.76
Fluoranthene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluorene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Methylene Chloride	500	50	NA	12	23	5,000	Chloroform-like	10.2	11.35
Naphthalene	10, Skin	10	NA	0.9	5.9	250	Moth Balls	0.3	8.12
n-propylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Phenanthrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Pyrene	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	NA	NA	NA
Tetrachloroethane	NA	NA	NA	NA	NA	NA	Sweet	NA	NA
Toluene	100	100	NA	0.9	9.5	2,000	Sweet	2.1	8.82
Trichloroethylene	100	50	NA	8	12.5	1,000	Chloroform	1.36	9.45
1,2,4-Trimethylbenzene	NA	25	NA	0.9	6.4	NA	Distinct	2.4	NA
1,3,5-Trimethylbenzene	NA	25	NA	NA	NA	NA	Distinct	2.4	NA
Vinyl Chloride	1	1	NA	NA	NA	NA	NA	NA	NA
Xylenes (o,m,p)	100	100	NA	1	7	1,000	Sweet	1.1	8.56
Metals									
Arsenic	0.01	0.2	NA	NA	NA	100, Ca	Almond	NA	NA
Cadmium	0.2	0.5	NA	NA	NA	NA	NA	NA	NA
Chromium	1	0.5	NA	NA	NA	NA	NA	NA	NA
Lead	0.05	0.15	NA	NA	NA	700	NA	NA	NA
Mercury	0.05	0.05	NA	NA	NA	28	Odorless	NA	NA
Selenium	0.2	0.02	NA	NA	NA	Unknown	NA	NA	NA
Other									
Asbestos	0.1 (f/cc)	NA	1.0 (f/cc)	NA	NA	NA	NA	NA	NA

APPENDIX 7 – COMMUNITY AIR MONITORING PLAN

Community Air Monitoring Plan

Location:

Former Michelsen Furniture Co. Site
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Prepared for:

M+M Housing Development Fund Corp. as Nominee for Mills and Michelsen LLC
312 State Street
Rochester, New York 14614

LaBella Project No. 214539

September 2015

Community Air Monitoring Plan

Location:

Former Michelsen Furniture Co. Site
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Prepared for:

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Mills and Michelsen LLC
312 State Street
Rochester, New York 14614

LaBella Project No. 214539

September 2015

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1.0 INTRODUCTION

This Site Specific Community Air Monitoring Plan (CAMP) has been prepared by LaBella Associates, D.P.C. on behalf of the M+M Housing Development Fund Corp. as Nominee for Mills and Michelsen LLC. This CAMP addresses potential Volatile Organic Vapor (VOC) and particulate emissions that may occur during implementation of the Remedial Investigation Work Plan (RIWP) at the Former Michelsen Furniture Co. Site located at 182 Avenue D and 374 Conkey Avenue which encompasses approximately 0.62 acres in the City of Rochester, Monroe County, New York herein after referred to as the "Site."

1.1 PURPOSE

Various levels of VOCs, semi-VOCs, and metals (collectively refered to as "constituents of concern (COCs)) have been detected in the soil and groundwater at the Site or are suspected to be contained in the soil and/or groundwater at the Site. The presence of these COCs through disturbance of soil and groundwater at the Site can potentially result in nuisance odors or health threats to the neighborhood in the immediate vicinity of the Site as well as to the various occupants of the Site.

This CAMP is specific to activities being conducted as part of the Remedial investigation at the Site. The CAMP describes the air monitoring activities to be completed in order to provide a measure of protection for any downwind receptors including Site occupants and occupants of neighboring properties. This CAMP is not intended to provide action levels for respiratory protection of workers involved with the RI. Rather, a Health & Safety Plan (HASP) has been developed and is included as Appendix 4 to the RIWP to cover workers directly involved with the RI work.

This CAMP includes the requirements of the New York State Department of Health (NYSDOH) Generic CAMP (included as Appendix 1A of the Draft DER-10 New York State Department of Environmental Conservation (NYSDEC) Technical Guidance for Site Investigation and Remediation dated December 2002).

Pursuant to the New York State Department of Environmental Conservation (NYSDEC) Technical Administrative Guidance Manual (TAGM) #4031 – Fugitive Dust Suppression and particulate Monitoring Program at Inactive Hazardous Waste Sites, (HWR-89-4031), this CAMP addresses methods that will be utilized to monitor particulate (dust) levels at the perimeter of, and within the work areas of the Site. If elevated levels of particulate emissions are encountered, this CAMP identifies the procedures that will be employed to mitigate elevated particulate levels.

Air monitoring procedures for these COCs are also included in this CAMP. Monitoring for COCs in, or near, the work areas of the Site will also be conducted per the HASP.

2.0 METHODOLOGY

This CAMP has been designed for remedial investigation activities at the Site. The CAMP pertains primarily to remedial investigation activities that disturb soil and groundwater at the Site. The following procedures will be implemented to monitor and, if necessary, mitigate the potential migration of fugitive particulate and/or COC emissions at the Site.

2.1 Site Background Monitoring

Each day of field work during the ground intrusive work a wind sock or flag will be used to monitor wind direction in the work areas. Based upon daily wind conditions three temporary monitoring points, one up wind, one downwind, and one in the direction of the closest sensitive receptor to the work areas, will be identified. The wind direction will be observed and noted frequently throughout the day and monitoring stations will be adjusted appropriately.

This CAMP will utilize a photoionization Detector (PID) to screen the ambient air in the work areas for total VOCs and a DustTrak tm Model 8530 aerosol monitor or equivalent for measuring particulates.

Each day, prior to the commencement of the ground intrusive work, background concentrations of particulates and VOCs will be measured and recorded as 15 minute averages at the identified three locations (one upwind, one downwind, and one in the direction of the closest sensitive receptor) with the typical equipment engines and any other gas/diesel engines operating on Site. This will be established as the Site background level for the day.

2.2 VOC Monitoring, Response Levels and Actions

Volatile organic compounds (VOCs) will be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis. The PID will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.
2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown.
4. All 15-minute readings will be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.

2.3 Particulate Monitoring, Response Levels and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The equipment will be equipped

with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.
2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.
3. All readings will be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

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APPENDIX 8 – QUALITY ASSURANCE PROJECT PLAN

Quality Assurance Project Plan

Location:

Former Michelsen Furniture Site
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Prepared For:

M+M Housing Development Fund Corp. as Nominee for Mills and Michelsen LLC
312 State Street
Rochester, New York 14614

LaBella Project No. 214539

September 2015

Quality Assurance Project Plan

Location:

Former Michelsen Furniture Site
182 Avenue D & 374 Conkey Avenue
Rochester, New York

Prepared For:

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1. Introduction

The Quality Assurance Project Plan (QAPP) contains procedures which provide for collected data to be properly evaluated, and document that quality control (QC) procedures have been followed in the collection of samples. The quality control program represents the methodology and measurement procedures used in collecting quality field data. This methodology includes the proper use of equipment, documentation of sample collection, and sample handling practices.

Procedures used in the firm's QAPP are compatible with federal, state, and local regulations, as well as, appropriate professional and technical standards.

This QAPP has been organized into the following areas:

- Quality Control Objectives and Checks
- Field Equipment, Handling, and Calibration
- Sampling Techniques
- Sample Handling and Packaging

It should be noted that project-related documents may have project specific details that will differ from the procedures in this QAPP. In such cases, the project-related documents should be followed (subsequent to regulatory approval).

2. Quality Control Objectives

The United States Environmental Protection Agency (EPA) has identified five general levels of analytical data quality as being potentially applicable to site investigations conducted under CERCLA. These levels are summarized below:

- **Level I -** Field screening. This level is characterized by the use of portable instruments, which can provide real-time data to assist in the optimization of sampling point locations and for health and safety support. Data can be generated regarding the presence or absence of certain contaminants (especially volatiles) at sampling locations.
- **Level II -** Field analysis. This level is characterized by the use of portable analytical instruments, which can be used on site or in mobile laboratories stationed near a site (close-support labs). Depending upon the types of contaminants, sample matrix, and personnel skills, qualitative and quantitative data can be obtained.
- **Level III -** Laboratory analysis using methods other than the Contract Laboratory Program (CLP) Routine Analytical Services (RAS). This level is used primarily in support of engineering studies using standard EPA-approved procedures. Some procedures may be equivalent to CLP RAS, without the CLP requirements for documentation.
- **Level IV -** CLP Routine Analytical Services. This level is characterized by rigorous QC protocols and documentation and provides qualitative and quantitative analytical data. Some regions have obtained similar support via their own regional laboratories, university laboratories, or other commercial laboratories.
- **Level V -** Non-standard methods. Analyses, which may require method modification and/or

development. CLP Special Analytical Services (SAS) are considered Level V.

Unless stated otherwise, all data will be generated in accordance with Level IV. When CLP methodology is not available, federal and state approved methods will be utilized. Level III will be utilized, as necessary, for non-CLP RAS work which may include ignitability, corrosivity, reactivity, EP toxicity, and other state approved parameters for characterization. Level I will be used throughout the RI for health and safety monitoring activities.

All measurements will be made to provide that analytical results are representative of the media and conditions measured. Unless otherwise specified, all data will be calculated and reported in units consistent with other organizations reporting similar data to allow comparability of data bases among organizations. Data will be reported in µg/L and mg/L for aqueous samples, and µg/kg and mg/kg (dry weight) for soils, or otherwise as applicable.

The characteristics of major importance for the assessment of generated data are accuracy, precision, completeness, representativeness, and comparability. Application of these characteristics to specific projects is addressed later in this document. The characteristics are defined below.

2.1. Accuracy

Accuracy is the degree of agreement of a measurement or average of measurements with an accepted reference or "true" value and is a measure of bias in the system.

2.2. Precision

Precision is the degree of mutual agreement among individual measurements of a given parameter.

2.3. Completeness

Completeness is a measure of the amount of valid data obtained from a measurement system compared to the amount expected to be obtained under correct normal conditions.

2.4. Representativeness

Representativeness expresses the degree to which data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, a process condition, or an environmental condition

Careful choice and use of appropriate methods in the field will ensure that samples are representative. This is relatively easy with water or air samples since these components are homogeneously dispersed. In soil and sediment, contaminants are unlikely to be evenly distributed, and thus it is important for the sampler and analyst to exercise good judgment when removing a sample.

2.5. Comparability

Comparability expresses the confidence with which one data set can be compared to another. The data sets may be inter- or intra- laboratory.

3.0 Measurement of Data Quality

3.1. Accuracy

Accuracy of a particular analysis is measured by assessing its performance with "known" samples. These "knowns" take the form of EPA standard reference materials, or laboratory prepared solutions of target analytes spiked into a pure water or sample matrix. In the case of GC or GC/MS analyses, solutions of surrogate compounds, which can be spiked into every sample and are designed to mimic the behavior of target analytes without interfering with their determination, are used.

In each case the recovery of the analyte is measured as a percentage, correcting for analytes known to be present in the original sample if necessary, as in the case of a matrix spike analysis. For EPA supplied known solutions, this recovery is compared to the published data that accompany the solution.

For the firm's prepared solutions, the recovery is compared to EPA-developed data or the firm's historical data as available. For surrogate compounds, recoveries are compared to EPA CLP acceptable recovery tables.

If recoveries do not meet required criteria, then the analytical data for the batch (or, in the case of surrogate compounds, for the individual sample) are considered potentially inaccurate. The analyst or his supervisor must initiate an investigation of the cause of the problem and take corrective action. This can include recalibration of the instrument, reanalysis of the QC sample, reanalysis of the samples in the batch, or flagging the data as suspect if the problems cannot be resolved. For highly contaminated samples, recovery of the matrix spike may depend on sample homogeneity. As a rule, analyses are not corrected for recovery of matrix spike or surrogate compounds.

3.2. Precision

Precision of a particular analysis is measured by assessing its performance with duplicate or replicate samples. Duplicate samples are pairs of samples taken in the field and transported to the laboratory as distinct samples. Their identity as duplicates is sometimes not known to ASC and usually not known to bench analysts, so their usefulness for monitoring analytical precision at bench level is limited. For most purposes, precision is determined by the analysis of replicate pairs (i.e., two samples prepared at the laboratory from one original sample). Often in replicate analysis the sample chosen for replication does not contain target analytes so that quantitation of precision is impossible. For EPA CLP analyses, replicate pairs of spiked samples, known as matrix spike/matrix spike duplicate samples, are used for precision studies. This has the advantage that two real positive values for a target analyte can be compared.

Precision is calculated in terms of Relative Percent Difference (RPD).

- Where X_1 and X_2 represent the individual values found for the target analyte in the two replicate analyses or in the matrix spike/matrix spike duplicate analyses.
- RPDs must be compared to the method RPD for the analysis. The analyst or his supervisor must investigate the cause of RPDs outside stated acceptance limits. This may include a visual inspection of the sample for non homogeneity, analysis of check samples, etc. Follow-up action may include sample reanalysis or flagging of the data as suspect if problems cannot be resolved.
- During the data review and validation process (see Section 9), field duplicate RPDs are assessed as a measure of the total variability of both field sampling and laboratory analysis.

3.3. Completeness

Completeness for each parameter is calculated as follows:

- The firm's target value for completeness for all parameters is 100%. A completeness value of 95% will be considered acceptable. Incomplete results will be reported to the site managers. In planning the field sample collection, the site manager will plan to collect field duplicates from identified critical areas. This procedure should assure 100% completeness for these areas.

3.4. Representativeness

The characteristic of representativeness is not quantifiable. Subjective factors to be taken into account are as follows:

- The degree of homogeneity of a site;
- The degree of homogeneity of a sample taken from one point in a site; and
- The available information on which a sampling plan is based.

To maximize representativeness of results, sampling techniques and sample locations will be carefully chosen so that they provide laboratory samples representative of the site and the specific area. Within the laboratory, precautions are taken to extract from the sample bottle an aliquot representative of the whole sample. This includes premixing the sample and discarding pebbles from soil samples.

4. QC Targets

Target values for detection limit, percent spike recovery and percent "true" value of known check standards, and RPD of duplicates/replicates are included in the QCP, Analytical Procedures. Note that tabulated values are not always attainable. Instances may arise where high sample concentrations, non homogeneity of samples, or matrix interferences preclude achievement of target detection limits or other quality control criteria. In such instances, the firm will report reasons for deviations from these detection limits or noncompliance with quality control criteria.

5. Sampling Procedures

This section describes the sampling procedures to be utilized for each environmental medium that will be collected and analyzed in accordance with appropriate state and federal requirements. All procedures described are consistent with EPA sampling procedures as described in SW-846, third edition, September 1986. All samples will be delivered to the laboratory within 24 to 28 hours of collection.

6. Soil & Groundwater Investigation

The groundwater sampling plan outlined in this subsection has been prepared in general accordance with RCRA Groundwater Monitoring Technical Enforcement Guidance Document 9950.1 (September 1986), Office of Solid Waste and Emergency Response.

Prior to drilling, all drill sites will be cleared with appropriate utility companies to avoid potential accidents relating to underground utilities.

6.1. Test Borings and Well Installation

6.1.1. Drilling Equipment

Direct Push Geoprobe® Soil Borings:

Borings will be advanced with a Geoprobe® direct push sampling system. The use of direct push technology allows for rapid sampling, observation, and characterization of relatively shallow overburden soils. The Geoprobe® utilizes a four-foot macro-core sampler, with disposable polyethylene sleeves. Soil cores will be retrieved in four-foot sections, and can be easily cut from the polyethylene sleeves for observation and sampling. The macro-core sampler will be decontaminated between samples and borings using an alconox and water solution.

6.1.2. Drilling Techniques

Direct Push Geoprobe® Advanced Borings:

Prior to initiating drilling activities, the Geoprobe®, macro cores, drive rods, pertinent equipment, well pipe and screens will be steam cleaned or washed with an alconox and water solution followed by a clean water rinse. This cleaning procedure will also be used between each boring. Throughout and after the cleaning processes, direct contact between the equipment and the ground surface will be avoided. Plastic sheeting and/or clean support structures (e.g., pallets, sawhorses) will be used to create a designated decontamination area. The drilling rig and all equipment will be steam cleaned upon completion of the investigation and prior to leaving the site.

Test borings will be advanced with 2-inch direct push macro-cores through overburden soils. Drilling fluids, other than water from a NYSDEC-approved source, will not be allowed without special consideration and agreement from NYSDEC. The use of lubricants is also not allowed unless approved by the NYSDEC representative.

It will be the responsibility of the consultant to arrange for the appropriate drilling equipment to be present at the site. Standby time to arrange for additional equipment or a water supply will not be allowed

unless caused by unexpected site conditions.

During the drilling, a Photoionization detector (PID) will be used to monitor the gases exiting the hole. Macro-core cuttings will be contained if the PID meter readings are greater than 5 ppm above background or the cuttings show visible evidence of contamination, or as specified in the RI Work Plan.

6.1.3. Well Casing (Riser)

Direct Push Geoprobe® Groundwater Monitoring Wells:

Direct Push Geoprobe® advanced groundwater-monitoring wells will use 2.25-inch threaded flush joint PVC pipe.

6.1.4. Well Screen

Direct Push Geoprobe® Groundwater Monitoring Wells:

Direct Push Geoprobe® advanced groundwater-monitoring wells utilized 2.25-inch diameter well screen. Groundwater-monitoring wells will be set to intersect the top of the shallow overburden groundwater table. Each Geoprobe® advanced well will be equipped with 5 to 10 feet (based on anticipated groundwater level) of 0.020 inch slotted PVC screen connected to an appropriate length of PVC riser to complete the well installation.

6.1.5. Artificial Sand Pack

Granular backfill will be chemically and texturally clean (as determined using a 10x hand lens), inert, siliceous, and of appropriate grain size for the screen slot size and the host environment. Sand pack grain size will be selected based on sieve analyses of formation samples. The sand pack will be installed using a tremie pipe and the casing will be equipped with centralizers (wells 16 ft. or deeper only) to minimize the tendency for particle separation and bridging. Prior to casing and screen insertion, a minimum of 6-in of gravel-pack bedding will be placed in the bottom of the hole. The well screen and casing will be installed, and the sand pack placed around the screen and casing to a depth extending at least 25 percent of the screen length above the top of the screen, where possible.

6.1.6. Bentonite Seal

A minimum 2-foot thick seal of tamped bentonite pellets will be placed directly on top of the sand pack, and care will be taken to avoid bridging. The seal will be measured immediately after placement, without allowance for swelling. In the event that the bentonite seal cannot be 2-ft. thick due to a shallow water table, a seal at least 1-ft. thick will be set.

6.1.7. Grout Mixture

Upon completion of the bentonite seal, the well will be grouted with a non-shrinking cement grout (e.g., Volclay^{R}) mix to be placed from the top of the bentonite seal to the ground surface. The cement grout shall consist of a mixture of Portland cement (ASTM C 150) and water, in the proportion of not more than 7 gallons of clean water per bag of cement (1 cubic foot or 94 pounds). Additionally, 3% by weight of bentonite powder shall be added, if permitted.

6.1.8 Surface Protection

At all times during the progress of the work, precautions shall be used to prevent tampering with or the entrance of foreign material into the well. Upon completion of the well, a suitable lockable cap shall be installed to prevent material from entering the well. The PVC well riser shall be protected by a flush mounted road box set into a concrete pad. A concrete pad, sloped away from the well, shall be constructed around the flush mount road box at ground level.

Any well that is to be temporarily removed from service or left incomplete due to delay in construction shall be capped with a watertight cap and equipped with a "vandal-proof" cover, satisfying applicable NYSDEC regulations or recommendations.

6.1.9. Surveying

Coordinates and elevations will be established for each monitoring well and sampling location. Elevations to the closest 0.01 foot shall be used for the survey. These elevations shall be referenced to a regional, local, or project-specific datum. USGS benchmarks will be used whenever available. The location, identification, coordinates, and elevations of the wells will be plotted on maps with a scale large enough to show their location with reference to other structures at each site.

6.1.10. Well Development

After completion of the well, but not sooner than 24 hours after grouting is completed, development will be accomplished using pumping, bailing, or surge blocking. No dispersing agents, acids, disinfectants, or other additives will be used during development or introduced into the well at any other time. During development, water will be removed throughout the entire water column by periodically lowering and raising the pump intake (or bailer stopping point).

Well development will include washing the entire well cap and the interior of the well casing above the water table, using only water from the well itself. As a result of this operation, the well casing will be free of extraneous materials (grout, bentonite, and sand) inside the riser, well cap, and blank casing between top of the well casing and water table. This washing will be conducted before and/or during development; not after development. Development water will be either properly contained and treated as waste until the results of chemical analysis of samples are obtained or discharged on site as determined by the site-specific work plans and/or consultation with the NYSDEC representatives on site.

Development will be completed by removing the approximate volume of water introduced during drilling (if any) and an additional five (5) well volumes. Well development will be performed using dedicated bailers and/or pumping equipment (depending on volumes), and will continue until groundwater turbidity reaches 50 National Turbidity Units (NTUs), or lower. In the event that 50 NTUs is not reached after removing a reasonable number of well volumes (10), the NYSDEC will be contacted to request ceasing development. If dedicated equipment is not used, then the equipment will be decontaminated between each well (alconox wash with potable water rinse). If the NYSDEC Project Manager agrees that removal of this volume of water is impractical, then LaBella will work with NYSDEC to develop an alternate well development protocol.

7. Geologic Logging and Sampling

At each soil boring location, the boring will be advanced through overburden using either a drill rig and hollow-stem auger or direct push technology; soils will be visually inspected for stains and monitored with a PID to help determine potential for vertical migration of contaminants. Soil samples will be collected continuously in both the unsaturated soil zone and the saturated zone. Selected wells will be sampled continuously over the entire depth of the well. The sampling device will be decontaminated according to procedures outlined in the Decontamination section of this document. Soil samples will be screened in the field for volatile organic vapors using a PID, classified in accordance with Unified Soil Classification System (USCS) specifications, and logged. Samples will be stored in glass jars until they are needed for testing or the project is complete.

Hydrogeologic suitability for well emplacement will be determined by the supervising geologist in consultation with NYSDEC, based on thickness and estimated hydraulic conductivity of the saturated zone encountered. If necessary, the borehole will be advanced to water or abandoned.

8. Hydraulic Conductivity Testing Procedures

If necessary, single-well, rising head tests will be performed in order to determine the in-place hydraulic conductivity of unconsolidated and/or consolidated geologic materials, which occur in the monitoring interval of newly installed wells. The tests will be performed by a qualified hydrogeologist. These tests involve lowering the water level in the well and measuring the change in head with respect to time as the well is allowed to recover. In wells which are slow to recover, the water level will be bailed down as described below. The measurements in these wells will be taken manually. Wells which recover too quickly for this method will be tested by removing one bailer of water and the recovery measured by means of a pressure transducer system.

The rising head tests for wells with rapid recovery rates will be conducted as follows:

- The static water level in the well to be tested is measured and recorded;
- A pressure transducer is placed in the well to a minimum depth of three feet below the static water level;
- Readings are made using the data logger until three consecutive readings are the same (equilibrium conditions);
- The data logger is then calibrated to read 0.00 feet at static conditions. A pre-cleaned bailer is then lowered into the well and placed just below the water surface.
- Water level measurements are made until the water level returns to static conditions following introduction of the bailer. If static conditions are not reached within 15 minutes following introduction of the bailer, the well will be tested using the procedures described below for slow recovery wells;
- Once static conditions are reestablished, the bailer is rapidly removed from the water column thereby creating an instantaneous decline of the water level in the well. Coincident with the withdrawal of the bailer, automatic logging of the water levels is initiated using the data logger. The primary goal in the recovery test is to "instantaneously" remove a volume of water that will result in a measurable head decline, the recovery of which (to static conditions) can be monitored over time. Such an instantaneous withdrawal results in recovery due to contributions of flow from the surrounding formation. This flow is controlled by its hydraulic conductivity and not by other factors such as storage effects;

- The water level measurements will continue until water levels recover to within a minimum of 10 percent of the original static water level (90 percent recovery), or an elapsed time of one hour. If the well has not recovered to static conditions after one hour at the discretion of the hydrogeologist, the transducer will be removed and the well will be tested at a later date using the procedures described below for slow recovery wells.
- Data stored in the data loggers will be "dumped" to a hard copy printout using a field printer or to a magnetic disk using a portable computer. If field printouts are used, they will be dated and signed by the hydrogeologist.

For wells with slow recovery rates, the following procedures will be used:

- The static water level is measured and recorded;
- The well is bailed by hand until the depth to water appears to stabilize based on the depth of travel of the bailer rope or to the top of the open or screened interval in wells which are screened below the standing water level;
- The bailer is then removed and water level measurements are collected by hand (measuring tape or electronic water level indicator) at a frequency, which will provide approximately 15 to 20 data, points during recovery (to within 10 percent of the total drawdown), if feasible. Water level measurements are recorded on the hydraulic conductivity testing report.
- A pre-cleaned bailer (one for each well) will be used in the rising head testing. All equipment entering the well, such as the transducer and transducer cable, will be cleaned prior to reuse in accordance with the Decontamination section below. All well water and rinse water generated by the tests will be collected in appropriate containers and disposed of in accordance with the Investigation Derived Materials section below.
- The data from both types of rising head tests will be reduces and evaluated.
- The following equation will be used to calculate the in-situ hydraulic conductivity of the formation opposite the interval of the piezometer (Hvorslev, 1951).

$$k = d^2 \ln \frac{\left[\frac{2mL}{D}\right]}{8L(t_2 - t_1)} \ln \frac{H_1}{H_2}$$

Where:

K = hydraulic conductivity (ft./min.)
d = casing diameter (ft.)
L = intake length (ft.)
D = intake diameter (ft.)
t_1 = time 1 from semilog graph (min.)
t_2 = time 2 from semilog graph (min.)
H_1 = residual head (ft.) corresponding to t_1
H_2 = residual head (ft.) corresponding to t_2
m = square root of the ratio of horizontal to vertical permeability (an estimated value)

9. Groundwater Sampling Procedures

The groundwater in all new monitoring wells will be allowed to stabilize for 7 days following development. Water levels will be measured to within 0.01 foot prior to purging and sampling. Sampling of each well will be accomplished in one of two ways.

Active Sampling:

Low flow sampling of the monitoring wells will occur in order to minimize groundwater drawdown and to obtain a representative sample of groundwater conditions. In order to accomplish this task, the following steps will be taken:

1. Low flow purging of the monitoring wells will include collection of water quality indicator parameters. Water quality indicator parameters will be recorded at five (5)-minute intervals during the purging of the well. These water quality indicator parameters will include:

- Water Level Drawdown
- Temperature
- pH
- Dissolved Oxygen
- Specific Conductance
- Oxidation Reduction Potential
- Turbidity

2. Groundwater sampling will commence once the groundwater quality indicator parameters have stabilized for at least three (3) consecutive readings for the following parameters:

- Water Level Drawdown <0.3'
- Temperature - +/- 3%
- pH - +/- 0.1unit
- Dissolved Oxygen - +/-10%
- Specific Conductance - +/-3%
- Oxidation Reduction Potential - +/-10 millivolts
- Turbidity - +/-10% for values greater than 1 NTU

4. Each monitoring well will be sampled as indicated at the beginning of this Section. In the event that recoverable groundwater will not be adequate for all testing parameters for wells where the full suite of parameters are to be analyzed for, samples will be collected based on the following hierarchy – 1) VOCs, 2) SVOCs, 3) Metals, 4) PCBs, 5) Pesticides.

Passive Sampling:

Groundwater samples that are collected via passive methods (i.e., no-purge) will be collected according to the following procedures and in the volumes specified in Table 11-1:

- Samples will be collected via passive diffusion bag (PDB) samplers. PDB samplers are made of low-density polyethylene plastic tubing (typically 4 mil), filled with laboratory grade (ASTM Type II) deionized water and sealed at both ends.
- PDB samplers will only be used to collect groundwater samples which will be analyzed for VOCs and in general only for chlorinated VOCs.
- PDB samplers will be deployed by hanging in the well at the middle of the well screen unless

a low water table, need to deploy multiple samplers or the targeting of a specific depth interval is identified. The PDB samplers will be deployed at least 14 days prior to sampling.

- The PDB samplers will be deployed using a Teflon® coated string or synthetic rope.
- When transferring water from the PDB to sample containers, care will be taken to avoid agitating the sample, since agitation promotes the loss of volatile constituents;
- Any observable physical characteristics of the groundwater (e.g., color, sheen, odor, turbidity) at the time of sampling will be recorded; and
- Weather conditions (i.e., air temperature, sky condition, recent heavy rainfall, drought conditions) at the time of sampling will be recorded.

10. Geotechnical Sampling

If necessary, a grain size analysis will be conducted by sieving for two non-cohesive units, and Atterberg limits for one cohesive unit, (ASTM methods D 4318-84 and D 422-63, respectively) in each borehole. Grain size analysis by hydrometer will be performed on soils where 20 percent of the sample is less than No. 200 sieve size (i.e., silt or clay). Site-specific work plans indicate specific sampling requirements for physical or geotechnical testing.

Remolded permeability samples will be analyzed in accordance with ASTM D-5084.

11. Management of Investigative-Derived Waste

Purpose:

The purposes of these guidelines are to ensure the proper holding, storage, transportation, and disposal of materials that may contain hazardous wastes. Investigation-derived waste (IDW) included the following:

- Drill cuttings, discarded soil samples, drilling mud solids, and used sample containers;
- Well development and purge waters and discarded groundwater samples;
- Decontamination waters and associated solids;
- Soiled disposable personal protective equipment (PPE);
- Used disposable sampling equipment;
- Used plastic sheeting and aluminum foil;
- Other equipment or materials that either contain or have been in contact with potentially-impacted environmental media.
- Because these materials may contain regulated chemical constituents, they must be managed as a solid waste. This management may be terminated id characterization analytical results indicate the absence of these constituents.

Procedure:

1. Contain all investigation-derived wastes in Department of Transpiration (DOT)-approved 55-gallon drums, roll-off boxes, or other containers suitable for the wastes.
2. Contain wastes from separate borings or wells in separate containers (i.e. do not combine wastes from several borings/wells in a single container, unless it is a container used specifically for transfer purposes, or unless specific permission to do so has been provided by the LaBella Project Manager. Unused samples from surface sample locations within a

given area may be combined.

3. To the extent practicable, separate solids from drilling muds, decontamination waters, and similar liquids. Place solids within separate containers.
4. Transfer all waste containers to a staging area. Access to this area will be controlled. Waste containers must be transferred to the staging area as soon as practicable after the generating activity is complete.
5. Pending transfer, all containers will be covered and secured when not immediately attended,
6. Label all containers with regard to contents, origin, and date of generation. Use indelible ink for all labeling.
7. Collect samples for waste characterization purposes, use boring/well sample analytical data for characterization.
8. For wastes determined to be hazardous in character, be aware on accumulation time limitations. Coordinate the disposal of these wastes with the Owner and NYSDEC.
9. Dispose of investigation-derived wastes as follows;
    - Soil, water, and other environmental media for which analysis does not detect organic constituents, and for which inorganic constituents are at levels consistent with background, may be spread on-site or otherwise treated as a non0-waste material.
    - Soils, water, and other environmental media in which organic compounds are detected or metals are present above background will be disposed as industrial waste. Alternate disposition must be consistent with applicable State and Federal laws.
    - Personal protective equipment, disposable bailers, and similar equipment may be disposed as municipal waste, unless waste characterization results mandate disposal as industrial wastes

12. Decontamination

Sampling methods and equipment have been chosen to minimize decontamination requirements and to prevent the possibility of cross-contamination. Decontamination of equipment will be performed between discrete sampling locations. Equipment used to collect composite samples will not require decontamination between sub-sample collection; however decontamination of equipment will be performed between separate composite samples. All drilling equipment will be decontaminated prior to drilling, after drilling each monitoring well, and after the completion of all drilling. Special attention will be given to the drilling assembly, augers, and PVC casing and screens.

Drilling decontamination will consist of:

- Steam cleaning;
- Scrubbing with brushes, if soil remains on equipment; and
- Steam rinse.

Split spoons and other non-disposable equipment will be decontaminated between each sampling event. The sampler will be cleaned prior to each use, by one of the following procedures:

- Initially cleaned of all foreign matter;
- Sanitized with a steam cleaner;

OR

- Initially cleaned of all foreign matter;
- Scrubbed with brushes in trisodium phosphate or alconox solution;
- Rinsed with deionized water;
- Rinsed with pesticide grade methanol;
- Triple rinsed with deionized water; and
- Allowed to air dry.

13. Sample Containers

The volumes and containers required for the sampling activities are included in pre-washed sample containers will be ordered directly from a firm, which prepares the containers in accordance with EPA bottle washing procedures.

Table 1
Water Samples

Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Maximum Holding Time
Volatile Organics	40-ml glass vial with Teflon-backed septum	Two (2); fill completely, no air space	Cool to 4° C (ice in cooler), Hydrochloric acid to pH <2	7 days

Semivolatile Organics	1,000-ml amber glass jar	One (1); fill completely	Cool to 4° C (ice in cooler)	7/40 days
Pesticides	1,000-ml amber glass jar	One (1); fill completely	Cool to 4° C (ice in cooler)	7/40 days
PCBs	1,000-ml amber glass jar	One (1); fill completely	Cool to 4° C (ice in cooler)	7/40 days
Metals	500-ml polyethylene	One (1); fill completely	Cool to 4° C (Nitric acid to pH <2	6 months

* Holding time is based on verified time of sample receipt at laboratory.

Note: All sample bottles will be prepared in accordance with USEPA bottle washing procedures. These procedures are incorporated in LaBella Associates Quality Control Procedures Manual, January, 1992

TABLE 2
Soil Samples

Type of Analysis	Type and Size of Container	Number of Containers and Sample Volume (per sample)	Preservation	Maximum Holding Time
Volatile Organics, Semivolatile Organics, PCBs, and Pesticides	8-oz, glass jar with Teflon-lined cap	Two (2), fill as completely as possible	Cool to 4° C (ice in cooler)	7 days
RCRA Characterization	8-oz. glass jar with Teflon-lined cap	One (1); fill completely	Cool to 4° C (ice in cooler)	Must be extracted within 10 days; analyzed with 30 days

* Holding time is based on the times from verified time of sample receipt at the laboratory.

Note: All sample bottles will be prepared in accordance with USEPA bottle washing procedures. These procedures are incorporated in LaBella Associates Quality Control Procedures Manual, January, 1992.

TABLE 3
List of Major Instruments for Sampling and Analysis

- MSA 360 0_2 /Explosimeter
- S.E. International Radiation Monitor Model 4C
- Photovac Micro Tip FID or PID
- Organic Vapor Analyzer Foxboro (128)

- Hollige Series 963 Nephlometer (turbidity meter)
- EM-31 Geomics Electromagnetic Induction Device
- pH/Temperature/Conductivity Meter - Portable
- Hewlett Packard (HP) 1000 computer with RTE-6 operating system; and HP 9144 computer with RTE-4 operating system equipped with Aquarius software for control and data acquisition from gas chromatograph/mass spectrometer (GC/MS) systems; combined wiley and National Bureau of Standards (NBS) mass spectral library; and data archiving on magnetic tape
- Viriam 6000 and 37000 gas chromatrographs equipped with flame ionization, electron capture, photoionization and wall detectors as appropriate for various analyses,, and interfaced to Variam DS604 or D5634 data systems for processing data.
- Spectra-Physics Model SP 4100 and SP 4270 and Variam 4270 cam puting integrators
- Perkin Eimer (PE) 3000% and 3030% fully Automated Atomic Absorption Spectrophotometers (AAS) with Furnace Atomizer and background correction system
- PE Plasma II Inductively Coupled Argon Plasma (ICAP) Spectre meter with PE7500 laboratory computer
- Dionex 20001 ion chromatograph with conductivity detector for anion analysis, with integrating recorder

14. Sample Custody

This section describes standard operating procedures for sample identification and chain-of-custody to be utilized for all Phase II field activities. The purpose of these procedures is to ensure that the quality of the samples is maintained during their collection, transportation, and storage through analysis. All chain-of-custody requirements comply with standard operating procedures indicated in EPA sample handling protocol.

Sample identification documents must be carefully prepared so that sample identification and chain-of-custody can be maintained and sample disposition controlled. Sample identification documents include:

- Field notebooks,
- Sample label,
- Custody seals, and
- Chain-of-custody records.

15. Chain-of-Custody

The primary objective of the chain-of-custody procedures is to provide an accurate written or computerized record that can be used to trace the possession and handling of a sample from collection to completion of all required analyses. A sample is in custody if it is:

- In someone's physical possession;
- In someone's view;
- Locked up; or
- Kept in a secured area that is restricted to authorized personnel.

15.1. Field Custody Procedures

- As few persons as possible should handle samples.
- Sample bottles will be obtained precleaned from a source such as I-Chem. Coolers or boxes containing cleaned bottles should be sealed with a custody tape seal during transport to the field or while in storage prior to use.
- The sample collector is personally responsible for the care and custody of samples collected until they are transferred to another person or dispatched properly under chain-of-custody rules.
- The sample collector will record sample data in the notebook.
- The site manager will determine whether proper custody procedures were followed during the fieldwork and decide if additional samples are required.

15.2. Sample Tags

Sample tags attached to or affixed around the sample container must be used to properly identify all samples collected in the field. The sample tags are to be placed on the bottles so as not to obscure any QC lot numbers on the bottles; sample information must be printed in a legible manner using waterproof ink. Field identification must be sufficient to enable cross-reference with the logbook. For chain-of-custody purposes, all QC samples are subject to exactly the same custodial procedures and documentation as "real" samples.

15.3. Transfer of Custody and Shipment

- The coolers in which the samples are packed must be accompanied by a chain-of-custody record. When transferring samples, the individuals relinquishing and receiving them must sign, date, and note the time on the chain-of-custody record. This record documents sample custody transfer
- Shipping containers must be sealed with custody seals for shipment to the laboratory. The method of shipment, name of courier, and other pertinent information are entered in the "Remarks" section of the chain-of-custody record and traffic reports.
- All shipments must be accompanied by the chain-of-custody record identifying their contents. The original record accompanies the shipment. The other copies are distributed appropriately to the site manage.

- If sent by mail, the package is registered with return receipt requested. If sent by common carrier, a bill of lading is used. Freight bills, Postal Service receipts, and bill of lading are retained as part of the permanent documentation.

15.4. Chain-of-Custody Record

The chain-of-custody record must be fully completed in duplicate, using black carbon paper where possible, by the field technician who has been designated by the project manager as responsible for sample shipment to the appropriate laboratory for analysis. In addition, if samples are known to require rapid turnaround in the laboratory because of project time constraints or analytical concerns (e.g., extraction time or sample retention period limitations, etc.), the person completing the chain-of-custody

record should note these constraints in the "Remarks" section of the record.

15.5. Laboratory Custody Procedures

A designated sample custodian accepts custody of the shipped samples and verifies that the sample identification number matches that on the chain-of-custody record and traffic reports, if required. Pertinent information as to shipment, pickup, and courier is entered in the "Remarks" section.

15.6. Custody Seals

Custody seals are preprinted adhesive-backed seals with security slots designed to break if the seals are disturbed. Sample shipping containers (coolers, cardboard boxes, etc., as appropriate) are sealed in as many places as necessary to ensure security. Seals must be signed and dated before use. On receipt at the laboratory, the custodian must check (and certify, by completing the package receipt log and LABMIS entries) that seals on boxes and bottles are intact. Strapping tape should be placed over the seals to ensure that seals are not accidentally broken during shipment.

16. Documentation

16.1. Sample Identification

All containers of samples collected from the project will be identified using the following format on a label or tag fixed to the sample container (labels are to be covered with Mylar tape):

XX-YY-O/D

- XX This set of initials indicates the specific Phase II sampling project
- YY These initials identify the sample location. Actual sample locations will be recorded in the task log.
- O/D An "O" designates an original sample; "D" identifies it as a duplicate.

Each sample will be labeled, chemically preserved, if required and sealed immediately after collection. To minimize handling of sample containers, labels will be filled out prior to sample collection. The sample label will be filled out using waterproof ink and will be firmly affixed to the sample containers and protected with Mylar tape. The sample label will give the following information:

- Name of sampler,
- Date and time of collection,
- Sample number,
- Analysis required,
- pH, and
- Preservation.

16.2. Daily Logs

Daily logs and data forms are necessary to provide sufficient data and observations to enable participants to reconstruct event that occurred during the project and to refresh the memory of the field personnel if called upon to give testimony during legal proceedings. All daily logs will be kept in a bound waterproof

notebook containing numbered pages. All entries will be made in waterproof ink, dated, and signed. No pages will be removed for any reason. Corrections will be made according to the procedures given at the end of this section. The daily logs will include a site log and task log.

The site log is the responsibility of the site manager and will include a complete summary of the day's activity at the site.

The **Task Log** will include:

- Name of person making entry (signature).
- Names of team members on-site.
- Levels of personnel protection:
  - Level of protection originally used;
  - Changes in protection, if required; and
  - Reasons for changes.
- Time spent collecting samples.
- Documentation on samples taken, including:
  - Sampling location and depth station numbers;
  - Sampling date and time, sampling personnel;
  - Type of sample (grab, composite, etc.); and
  - Sample matrix.
- On-site measurement data.
- Field observations and remarks.
- Weather conditions, wind direction, etc.
- Unusual circumstances or difficulties.
- Initials of person recording the information.

17. Corrections to Documentation

17.1. Notebook

As with any data logbooks, no pages will be removed for any reason. If corrections are necessary, these must be made by drawing a single line through the original entry (so that the original entry can still be read) and writing the corrected entry alongside. The correction must be initialed and dated. Most corrected errors will require a footnote explaining the correction.

17.2. Sampling Forms

As previously stated, all sample identification tags, chain-of-custody records, and other forms must be written in waterproof ink. None of these documents are to be destroyed or thrown away, even if they are illegible or contain inaccuracies that require a replacement document.

If an error is made on a document assigned to one individual, that individual may make corrections simply by crossing a line through the error and entering the corrected information. The incorrect information should not be obliterated. Any subsequent error discovered on a document should be corrected by the person who made the entry. All corrections must be initialed and dated.

17.3. Photographs

Photographs will be taken as directed by the site manager. Documentation of a photograph is crucial to its validity as a representation of an existing situation. The following information will be noted in the task log concerning photographs:

- Date, time, location photograph was taken;
- Photographer (signature);
- Weather conditions;
- Description of photograph taken;
- Reasons why photograph was taken;
- Sequential number of the photograph and the film roll number; and
- Camera lens system used.

After the photographs have been developed, the information recorded in the field notebook should be transferred to the back of the photographs

18. Sample Handling, Packaging, and Shipping

The transportation and handling of samples must be accomplished in a manner that not only protects the integrity of the sample, but also prevents any detrimental effects due to the possible hazardous nature of samples. Regulations for packaging, marking, labeling, and shipping hazardous materials are promulgated by the United States Department of Transportation (DOT) in the Code of Federal Regulation, 49 CFR 171 through 177. All samples will be delivered to the laboratory with 24 to 48 hours from the day of collection.

All chain-of-custody requirements must comply with standard operating procedures in the EPA sample handling protocol. All sample control and chain-of-custody procedures applicable to the Consultant are presented in the Field Personnel Chain-of-Custody Documentation and Quality Control Procedures Manual, January 1992.

18.1. Sample Packaging

Samples must be packaged carefully to avoid breakage or contamination and must be shipped to the laboratory at proper temperatures. The following sample packaging requirements will be followed:

- Sample bottle lids must never be mixed. All sample lids must stay with the original containers.
- The sample volume level can be marked by placing the top of the label at the appropriate sample height, or with a grease pencil. This procedure will help the laboratory to determine if any leakage occurred during shipment. The label should not cover any bottle preparation QC lot numbers.
- All sample bottles are placed in a plastic bag to minimize the potential for vermiculite contamination.
- Shipping coolers must be partially filled with packing materials and ice when required, to prevent the bottles from moving during shipment.
- The sample bottles must be placed in the cooler in such a way as to ensure that they do not touch one another.
- The environmental samples are to be cooled. The use of "blue ice" or some other artificial

icing material is preferred. If necessary, ice may be used, provided that it is placed in plastic bags. Ice is not to be used as a substitute for packing materials.

- Any remaining space in the cooler should be filled with inert packing material. Under no circumstances should material such as sawdust, sand, etc., be used.
- A duplicate custody record and traffic reports, if required must be placed in a plastic bag and taped to the bottom of the cooler lid. Custody seals are affixed to the sample cooler.

18.2. Shipping Containers

Shipping containers are to be custody-sealed for shipment as appropriate. The container custody seal will consist of filament tape wrapped around the package at least twice and custody seals affixed in such a way that access to the container can be gained only by cutting the filament tape and breaking a seal.

Field personnel will make arrangements for transportation of samples to the lab. When custody is relinquished to a shipper, field personnel will telephone the lab custodian to inform him of the expected time of arrival of the sample shipment and to advise him of any time constraints on sample analysis. The lab must be notified as early in the week as possible, and in no case later than 3 p.m. (EST) on Thursday, regarding samples intended for Saturday delivery.

18.3. Marking and Labeling

- Use abbreviations only where specified.
- The words "This End Up" or "This Side Up" must be clearly printed on the top of the outer package. Upward pointing arrows should be placed on the sides of the package. The words "Laboratory Samples" should also be printed on the top of the package.
- After a sample container has been sealed, two chain-of-custody seals are placed on the container, one on the front and one on the back. The seals are protected from accidental damage by placing strapping tape over then.
- If samples are designated as medium or high hazard, they must be sealed in metal paint cans, placed in the cooler with vermiculite and labeled and placarded in accordance with DOT regulations.
- In addition, the coolers must also be labeled and placarded in accordance with DOT regulations if shipping medium and high hazard samples.

19. Calibration Procedures and Frequency

All instruments and equipment used during sampling and analysis will be operated, calibrated, and maintained according to the manufacturer's guidelines and recommendations as well as criteria set forth in the applicable analytical methodology references. Operation, calibration, and maintenance will be performed by personnel properly trained in these procedures. Documentation of all routine and special maintenance and calibration information will be maintained in an appropriate logbook or reference file, and will be available on request. Table 7-1 lists the major instruments to be used for sampling and analysis. Brief descriptions of calibration procedures for major field and laboratory instruments follow.

20. Field Instrumentation

20.1. Photovac Micro Tip Flameionizer (FID)

Standard operating procedures for the FID require that routine maintenance and calibration be performed every six months. Field calibration will be performed on a daily basis. The packages used for calibration are non-toxic analyzed gas mixtures available in pressurized containers.

20.2. Photovac/MiniRea Photoionization Detector (PID)

Standard operating procedures for the PID require that routine maintenance and calibration be performed every six months. Field calibration will be performed on a daily basis. The packages used for calibration are non-toxic analyzed gas mixtures available in pressurized containers.

20.3. Organic Vapor Analyzer

Organic vapor analyzers (OVAs) are calibrated and routine maintenance performed every six months when the units are not in use. Calibration is performed and the major system checks are performed prior to the instrument being released for field use.

Calibration of the OVA 128 GC must be performed by a factory-authorized service representative. The instrument is removed from its protective case and the probe is connected to the base unit. After checking for an airtight seal in the sample line (plugging the sample inlet to stop the pump), the hydrogen supply is turned on and the pressure is set to 10 psi. The electronics are turned on and the instrument is allowed to warm up for at least 5 minutes. After warm up, the instrument is zeroed on the "X10" scale using the adjust knob. The flame is then lit and a gas-tight sample bag is filled with a mixture of 100 ppm methane in air. The sample bag is then attached to the probe inlet and the internal pump is allowed to draw in as much sample as is needed. R32 on the control board is adjusted to read 100 ppm on the "X10" scale and then the hydrogen supply is shut down. The pump can now be turned off and the sample bag removed. Using the adjust knob, the meter is set to read 4 ppm on the "X1" scale. Switching back to the "X10" scale the adjust knob is again used to set the meter to 40 ppm. The scale is then set to "X100" and R33 is adjusted until the meter reads 40 ppm on the "X100" scale.

The OVA has a detection limit of 0.1 ppm in methane equivalents and a working range of 0 to 1,000 ppm. During daily field use, system checks are performed which involve calibration and maintenance of the pump systems, gases, and filters. Care is taken to check for and prevent clogging or leaks. Quad rings and the burner chamber are examined on a weekly basis. Routine biannual maintenance includes a thorough cleaning as well as a re-examination of the pump system for leaks and wear. Parts are replaced as necessary. Instrument operation is verified by calibrating and running the OVA for 4 to 6 hours. An instrument specific logbook is maintained with the OVA to document its use and maintenance.

20.4. Conductance, Temperature, and pH Tester

Temperature and conductance instruments are factory calibrated. Temperature accuracy can be checked against an NBS certified thermometer prior to field use if necessary. Conductance accuracy may be checked with a solution of known conductance and recalibration can be instituted, if necessary.

To recalibrate conductance, remove the black plug revealing the adjustment potentiometer screw. Add standard solution to cup, discard and refill. Repeat procedure until the digital display indicates the same

value twice in a row. Adjust the potentiometer until the digital display indicates the known value of conductance. To increase the digital display reading, turn the adjustment potentiometer screw counter-clockwise (clockwise to decrease).

To standardize the pH electrode and meter, place the pH electrode in the 7.0 buffer bottle. Adjust the "ZERO" potentiometer on the face of the tester so that the digital display indicates 7.00.

Then place the pH electrode in the 4.0 or 10.0 buffer bottle (depending on where you expect the actual measurement to be). Adjust the "SLOPE" potentiometer on the face of the tester so that the digital display indicates the value of the buffer chosen.

Note: There is interaction between the "ZERO" and "SLOPE" adjustments, so the procedure should be repeated several times.

Do not subject the pH electrode to freezing temperatures.

It is good practice to rinse the electrode in distilled water when going from one buffer to another. When not in use the cap should be kept on the electrode. Keeping the cotton in the cap moist will keep the electrode ready to use. Moisten the cotton frequently (once a week, usually).

20.5. 0_2/Explosimeter

The primary maintenance item of the Model 260 is the rechargeable 2.4 volt (V) nickel cadmium battery. The battery is recharged by removing the screw cap covering receptacle and connecting one end of the charging cable to the instrument and the other end to a 115V AC outlet.

The battery can also be recharged using a 12V DC source. An accessory battery charging cable is available, one end of which plugs into the Model 260 while the other end is fitted with an automobile cigarette lighter plug.

Recommended charging time is 16 hours.

Before the calibration of the combustible gas indicator can be checked, the Model 260 must be in operating condition. Calibration check-adjustment is made as follows:

1. Attach the flow control to the recommended calibration gas tank.
2. Connect the adapter-hose to the flow control.
3. Open flow control valve.
4. Connect the adapter-hose fitting to the inlet of the instrument; after about 15 seconds the LEL meter pointer should be stable and within the range specified on the calibration sheet accompanying the calibration equipment. If the meter pointer is not in the correct range, stop the flow; remove the right hand side cover. Turn on the flow and adjust the "S" control with a small screwdriver to obtain a reading as specified on the calibration sheet.
5. Disconnect the adapter-hose fitting from the instrument.
6. Close the flow control valve.
7. Remove the adapter-hose from the flow control.

8. Remove the flow control from the calibration gas tank.
9. Replace the side cover on the Model 260.

CAUTION: Calibration gas tank contents are under pressure. Use no oil, grease, or flammable solvents on the flow control or the calibration gas tank. Do not store calibration gas tank near heat or fire or in rooms used for habitation. Do not throw in fire, incinerate, or puncture. Keep out of reach of children. It is illegal and hazardous to refill this tank. Do not attach the calibration gas tank to any other apparatus than described above. Do not attach any gas tank other than MSA calibration tanks to the regulator.

20.6. Nephelometer (Turbidity Meter)

The Series 95 nephelometer is calibrated before each use. Allow the instrument to warm up for approximately 2 hours. Using turbidity-free deionized water, zero the meter. Set the scale to 100, fill with a 40 NTU standard (AEPA-1 turbidity standard from Advanced Polymer Systems, Inc.), and insert into the instrument. Adjust the standardize control to give a readout of 200. Re-zero the instrument and repeat these steps with the scale set at 10 and 1 using 4.0 and 0.4 NTU standards, respectively. These standards are prepared by diluting aliquots of the 40 NTU standard.

20.7. S.E. International Radiation Monitor Model 4EC

This radiation monitor detects alpha, beta, gamma, and X-rays. The analog meter is scaled in CPM (counts per minute) or mR/hr (milli-Roentgens per hour), and the X1, X10, X100 switch extends the effective measurement range. This handheld unit is powered by a single 9-volt battery that offers up to 2,000 hours of operation.

21. Internal Quality Control Checks

QC data are necessary to determine precision and accuracy and to demonstrate the absence of interferences and/or contamination of field equipment. Field-based QC will comprise at least 10% of each data set generated and will consist of standards, replicates, spikes, and blanks. Field duplicates and field blanks will be analyzed by the laboratory as samples and will not necessarily be identified to the laboratory as duplicates or blanks. For each matrix, field duplicates will be provided at a rate of one per 10 samples collected or one per shipment, whichever is greater. Field blanks which consist of trip, routine field, and rinsate blanks will be provided at a rate of one per 20 samples collected for each parameter group, or one per shipment, whichever is greater.

Calculations will be performed for recoveries and standard deviations along with review of retention times, response factors, chromatograms, calibration, tuning, and all other QC information generated. All QC data, including split samples, will be documented in the site logbook. QC records will be retained and results reported with sample data.

21.1. Blank Samples

Blank samples are analyzed in order to assess possible contamination from the field and/or laboratory so that corrective measures may be taken, if necessary. Field samples are discussed in the following subsection:

21.2. Field Blanks

Various types of blanks are used to check the cleanliness of field handling methods. The following types

of blanks may be used: the trip blank, the routine field blank, and the field equipment blank. They are analyzed in the laboratory as samples, and their purpose is to assess the sampling and transport procedures as possible sources of sample contamination. Field staff may add blanks if field circumstances are such that they consider normal procedures are not sufficient to prevent or control sample contamination, or at the direction of the project manager. Rigorous documentation of all blanks in the site logbooks is mandatory.

- **Routine Field Blanks** or bottle blanks are blank samples prepared in the field to access ambient field conditions. They will be prepared by filling empty sample containers with deionized water and any necessary preservatives. They will be handled like a sample and shipped to the laboratory for analysis.
- **Trip Blanks** are similar to routine field blanks with the exception that they are **not** exposed to field conditions. Their analytical results give the overall level of contamination from everything except ambient field conditions. For the RI/FS, one trip blank will be collected with every batch of water samples for volatile organic analysis. Each trip blank will be prepared by filling a 40-ml vial with deionized water prior to the sampling trip, transported to the site, handled like a sample, and returned to the laboratory for analysis without being opened in the field.
- **Field Equipment Blanks** are blank samples (sometimes called transfer blanks or rinsate blanks) designed to demonstrate that sampling equipment has been properly prepared and cleaned before field use, and that cleaning procedures between samples are sufficient to minimize cross contamination. If a sampling team is familiar with a particular site, they may be able to predict which areas or samples are likely to have the highest concentration of contaminants. Unless other constraints apply, these samples should be taken last to avoid excessive contamination of sampling equipment.

21.3. Field Duplicates

Field duplicate samples consist of a set of two samples collected independently at a sampling location during a single sampling event. In some instances the field duplicate can be a blind duplicate, i.e., indistinguishable from other analytical samples so that personnel performing the analyses are not able to determine which samples are field duplicates. Field duplicates are designed to assess the consistency of the overall sampling and analytical system.

21.4. Quality Control Check Samples

Inorganic and organic control check samples are available from EPA free of charge and are used as a means of evaluating analytical techniques of the analyst. Control check samples are subjected to the entire sample procedure, including extraction, digestion, etc., as appropriate for the analytical method utilized.

APPENDIX 9 - O&M MANUAL

Operation, Maintenance and Monitoring Plan

Michelsen Site

182 Avenue D, Rochester, NY

Sub-Slab Depressurization System

This Operation, Maintenance and Monitoring (OM&M) Plan describes the measures necessary to operate, monitor and maintain the mechanical components of the sub-slab depressurization system (SSDS) for the building located182 Avenue D, Rochester, New York property. The OM&M items identified include the following:

- The steps necessary to allow individuals unfamiliar with the Site to operate and maintain the SSDS;
- an operation and maintenance contingency plan; and,
- the required regulatory reporting.

A copy of this Plan should be kept at the Site.

SYSTEM LAYOUT AND COMPONENTS

The SSDS was installed in conjunction with the rehabilitation of the building. The system consists of four (4) suction points as detailed on the As Built Drawings (See SMP Figure 11). The suction pits were installed by removing a section of the concrete floor and approximately 1-2 cubic feet of sub soil. The void was filled with washed pea stone and the riser pipe was installed. The concrete floor was then restored and sealed. The riser pipes consisted of 4 inch schedule 40 PVC that were run up through the building interior to a roof penetration. Riser pipes were installed at a pitch that ensures that any rainwater or condensation within the pipes drains downward into the ground beneath the slab. Each riser pipe is equipped with a centrifugal exhaust fan mounted approximately 2 feet above the roofline. Based on product availability, two (2) of the riser pipes were equipped with RadonAway Model GP-501 fans and two (2) were equipped with Fantech Model HP-190 fans. Each riser pipe is equipped with a vacuum indicator mounted on the riser pipe or interior wall. Each vacuum indicator consists of an oil filled U-tube style manometer. The indicator is inspected by observing the level of the colored fluid. In addition, each riser pipe is equipped with a system alarm that provides a visual and audible alarm in the event of a loss of system vacuum.

Following the installation of the SSDS, testing was conducted by LaBella to evaluate the effectiveness and to confirm that there is adequate negative pressure beneath the entire floor slab of the building. The following post start-up testing was completed:

- **Component Check** - all components of the system were confirmed to be in-place
- **Alarm Test** – On November 23rd, 2015 the alarms were tested to confirm proper operation of the alarms. The alarm test consisted of disconnecting the fan power and confirming both the light and audible alarm were triggered.

  Pressure Field Extension Testing - Subsequent to activation of the system, a pressure field extension test was performed to evaluate the effectiveness of the SSDS. The testing consisted of drilling ½ inch holes in the basement concrete slab in locations detailed on the Figure 4. At each location Teflon tubing was placed in the hole and sealed with plumber's putty. The tubing was connected to a digital monometer and the pressure reading was recorded. Recorded pressure readings were as follows:

Sample Location	Measurement (inches of water column)
SSV-1	-0.106
SSV-2	-0.087
SSV-3	-0.097
SSV-4	-0.093

SSV-5	-0.091
SSV-6	-0.018
SSV-7	-0.083
SSV-8	-0.079

SYSTEM MAINTENANCE

The system was designed and installed to operate with minimal maintenance. In the event of an alarm, the system should be inspected for obvious damage. In the event no damage is apparent, the system can be shut-off and restarted. In the event the alarm continues, the fan should be evaluated and the manufacturer contacted or a mitigation contractor (e.g., radon mitigation specialist) should be contacted for servicing the fan. Information on contacts for the system are provided below.

In the event that maintenance is required of the system, reports and any other information generated during regular operations at the Site will be reported to the NYSDEC. Maintenance events must be documented and documentation must include the following information:

- Date;
- Condition of SSDS upon arrival;
- Name, company, and position of person(s) conducting maintenance activities;
- Maintenance activities conducted;
- Any modifications to the system;
- Other documentation such as copies of invoices or work orders for maintenance work, receipts for replacement equipment, etc., (attached to the checklist/form); and,
- Condition of SSDS when finished.

In the event that the system and/or system components are observed to require non-routine maintenance (e.g., broken components, alarm sounding, etc.) the following persons can be contacted to assist with repairs to the system:

RadonAway
3 Saber Way
PO Box 8244
Ward Hill, MA 01835
Phone: (800) 767-3703
Fax: (978) 521-3964

Todd Caffoe, P.E.
NYSDEC
6274 East Avon-Lima Road
Avon, NY 14414-9516
(585) 226-5350

Dave Engert, CHMM
LaBella Associates, D.P.C.
300 State Street
Rochester, New York 14614
(585) 295-6630

All non-routine maintenance of the SSDS will be documented and these documents will be kept on-file.

MONITORING

Unless it becomes evident that more frequent monitoring is necessary, annual monitoring of the Site's SSDS will be performed to ensure that the system is operating properly. A visual inspection of the accessible portions of the system will be conducted during each monitoring event. SSDS components to be visually inspected include: the vent fans, system piping, system wiring, and system alarms. In addition, the U-Tube Manometer

reading should also be recorded. In the event that a vent fan appears to be malfunctioning, or if piping or wiring appears damaged, the component(s) in question should be promptly repaired or replaced, following the manufacturer's recommendations and instructions. Vent fan failure(s), repair(s), replacement(s), and/or operational problems should be documented and included with the annual certification.

APPENDIX 10 – SITE MANAGEMENT FORMS

LABELLA Associates, D.P.C.

300 State Street
Rochester, New York 14614
Phone: 585-454-6110
Fax: 585-454-3066

Site Wide Inspection Form	
	Project Name: Former Penn Yan Marine
	Location: 15 Waddell Avenue, Penn Yan, NY
	LaBella Project No.:
	Inspected By:
	Date of Inspection:
	Weather Conditions:
	Comments
Compliance with SMP/Environmental Easement	
Condition of SSDS (if applicable)	
Condition of groundwater monitoring wells to be used for long-term monitoring as indicated in SMP.	
General site conditions at time of inspection	
Site management activities currently being conducted (if any)	
Site records up to date?	
Additional Notes/Comments:	

LABELLA Associates, D.P.C.	**SUB-SLAB DEPRESSURIZATION SYSTEM INSPECTION FORM** Project Name: Former Michelsen Furniture Co. Site - Site No. C828189
	Location: 690 Saint Paul Street, Rochester, New York
300 State Street	LaBella Project No.: 209280
Rochester, New York 14614	Inspected By:
Phone: (585) 454-6110	Date of Inspection:
Fax: (585) 454-3066	Weather Conditions:

INSPECTION FINDINGS:

Sub-Slab Depressurization System - Fan #1:		
Operational -	Yes	No
Vacuum Gauge Reading (inches of water) -		
Open Ball Valve on Trap & Drain Water -		
Alarm Check -	Alarm Sounded?	Alarm Failed?

Sub-Slab Depressurization System - Fan #2:		
Operational -	Yes	No
Vacuum Gauge Reading (inches of water) -		
Open Ball Valve on Trap & Drain Water -		
Alarm Check -	Alarm Sounded?	Alarm Failed?

Sub-Slab Depressurization System - Fan #3:		
Operational -	Yes	No
Vacuum Gauge Reading (inches of water) -		
Open Ball Valve on Trap & Drain Water -		
Alarm Check -	Alarm Sounded?	Alarm Failed?

Sub-Slab Depressurization System - Fan #4:		
Operational -	Yes	No
Vacuum Gauge Reading (inches of water) -		
Open Ball Valve on Trap & Drain Water -		
Alarm Check -	Alarm Sounded?	Alarm Failed?

SSDS Piping Check (Note Condition - Good/Fair/Poor):		
(include pictures if warranted)	As-Found Condition	As-Left Condition
Chase -		
6th Floor Piping -		
Piping on Roof -		
Exhaust Point Above Roof -		
Tubing -		
Vacuum Gauges -		
Integrity of Joint Seals -		
Ball Valves on Traps -		
Condition of Labels -		
Overall Physical Condition of SSDS -		

Comments:

LABELLA Associates, D.P.C.
300 State Street
Rochester, New York 14614
Telephone: (585) 454-6110
Facsimile: (585) 454-3066

WELL I.D.: _____

Project Name: Former Michelsen Furniture Co. Site
Location: 182 Avenue D and 374 Conkey Avenue
Project No.:
Sampled By:
Date:
Weather:

WELL SAMPLING INFORMATION

Well Diameter:
Depth of Well:
Measuring Point: Top of PVC
Pump Type:
Static Water Level:
Length of Well Screen:
Depth to Top of Pump:
Tubing Type:

FIELD PARAMETER MEASUREMENT

Time	Pump Rate	Gallons Purged	pH	Temp °C	Conductivity (µS/cm)	Turbidity (NTU)	Dissolved O_2 (mg/L)	Redox (mV)	Alkalinity	Iron (II)	Comments
			+/- 0.1		+/- 3%		+ 10%	+/- 10 mV			

Total _____ Gallons Purged

Purge Time Start: _____ Purge Time End: _____ Final Static Water Level: _____

OBSERVATIONS

Notes:

Summary of Green Remediation Metrics for Site Management

Site Name: _____ Site Code: _____
Address: _____ City: _____
State: _____ Zip Code: _____ County: _____

Initial Report Period (Start Date of period covered by the Initial Report submittal)
Start Date: _____

Current Reporting Period
Reporting Period From: _____ To: _____

Contact Information
Preparer's Name: _____ Phone No.: _____
Preparer's Affiliation: _____

I. Energy Usage: Quantify the amount of energy used directly on-site and the portion of that derived from renewable energy sources.

	Current Reporting Period	**Total to Date**
Fuel Type 1 (e.g. natural gas (cf))		
Fuel Type 2 (e.g. fuel oil, propane (gals))		
Electricity (kWh)		
Of that Electric usage, provide quantity:		
Derived from renewable sources (e.g. solar, wind)		
Other energy sources (e.g. geothermal, solar thermal (Btu))		

Provide a description of all energy usage reduction programs for the site in the space provided on Page 3.

II. Solid Waste Generation: Quantify the management of solid waste generated on-site.

	Current Reporting Period (tons)	**Total to Date (tons)**
Total waste generated on-site		
OM&M generated waste		
Of that total amount, provide quantity:		
Transported off-site to landfills		
Transported off-site to other disposal facilities		
Transported off-site for recycling/reuse		
Reused on-site		

Provide a description of any implemented waste reduction programs for the site in the space provided on Page 3.

III. Transportation/Shipping: Quantify the distances travelled for delivery of supplies, shipping of laboratory samples, and the removal of waste.

	Current Reporting Period (miles)	**Total to Date (miles)**
Standby Engineer/Contractor		
Laboratory Courier/Delivery Service		
Waste Removal/Hauling		

Provide a description of all mileage reduction programs for the site in the space provided on Page 3. Include specifically any local vendor/services utilized that are within 50 miles of the site.

IV. Water Usage: Quantify the volume of water used on-site from various sources.

	Current Reporting Period (gallons)	**Total to Date (gallons)**
Total quantity of water used on-site		
Of that total amount, provide quantity:		
Public potable water supply usage		
Surface water usage		
On-site groundwater usage		
Collected or diverted storm water usage		

Provide a description of any implemented water consumption reduction programs for the site in the space provided on Page 3.

V. Land Use and Ecosystems: Quantify the amount of land and/or ecosystems disturbed and the area of land and/or ecosystems restored to a pre-development condition (i.e. Green Infrastructure).

	Current Reporting Period (acres)	**Total to Date (acres)**
Land disturbed		
Land restored		

Provide a description of any implemented land restoration/green infrastructure programs for the site in the space provided on Page 3.

Description of green remediation programs reported above (Attach additional sheets if needed)
Energy Usage:
Waste Generation:
Transportation/Shipping:
Water usage:
Land Use and Ecosystems:
Other:

CERTIFICATION BY CONTRACTOR
I, _____ (**Name**) do hereby certify that I am _____ (**Title**) of the Company/Corporation herein referenced and contractor for the work described in the foregoing application for payment. According to my knowledge and belief, all items and amounts shown on the face of this application for payment are correct, all work has been performed and/or materials supplied, the foregoing is a true and correct statement of the contract account up to and including that last day of the period covered by this application. _____ **Date** **Contractor**