Strong Advocates, Effective Solutions, Integrated Implementation



June 12, 2015

Mr. Eugene Melnyk Project Manager New York State Department of Environmental Conservation Division of Environmental Remediation, Region 9 270 Michigan Avenue Buffalo, New York 14203-2999

Re: Addendum to the RI-IRM-AA Work Plan Additional Interim Remedial Measure (IRM) 1050-1088 Niagara Street Site (C915277)

Dear Mr. Melnyk:

On behalf of 9271 Group, LLC, Benchmark Environmental Engineering and Science, PLLC (Benchmark) in association with TurnKey Environmental Restoration, LLC (TurnKey), has prepared this Addendum to the NYSDEC-approved Remedial Investigation/Interim Remedial Measures/Alternatives Analysis (RI/IRM/AA) Work Plan (revised May 2014).

As we discussed, 9271 Group, LLC has completed RI activities at the Site which identified an area of polychlorinated biphenyl (PCB) impacts in the vicinity of SB-17. Tables 4 and 5, and Figure 5 from the previously provided draft RI-AA Report are included for reference.

IRM EXCAVATION ACTIVITIES

In accordance with the NYSDEC DER-10, an additional IRM is planned to address the PCB impacted soil/fill to expeditiously mitigate health and environmental concerns. The additional IRM will be completed in accordance with the NYSDEC approved RI-IRM-AA Work Plan.

Details of additional planned remedial measures, including the soil vapor extraction (SVE) system and cover system, will be presented in a Remedial Action Work Plan (RAWP) that will be prepared and submitted to the Department after acceptance of the AA.

SB-17 Area

During the RI, elevated PCBs were identified in SB-17. In order to better define the extents of the impacts, delineation borings, identified as B-1 through B-4, were advanced to the north, south and west of SB-17 to assess the areal extents of PCB impacts. Based on the results, the PCB impact appear to be limited to SB-17, B-3 and B-4 at depths ranging from approximately 8 to 15 fbgs (see Figure 5).

The upper 6-feet of overburden soil/fill will be removed and stockpiled on-Site in accordance with the work plan and characterized to determine potential off-site disposal and/or on-Site resue as backfill.

As no elevated PID readings or visual evidence of impacts were observed during the RI, the extents of the excavation will continue until post-excavation sample results achieve 6NYCRR Part 375 Restricted Residential Use Soil Cleanup Objectives (RRSCOs), has reached practical extents including property boundary and presence of subgrade utilities along Niagara Street, and/or NYSDEC agrees that no further excavation is required.

OFF-SITE TRANSPORTATION AND DISPOSAL

Excavated impacted soil/fill will be transported off-site for disposal at a permitted commercial disposal facility by licensed haulers. Transportation and disposal documents will be included with the FER.

POST-EXCAVATION CONFIRMATION SAMPLING

Post excavation confirmatory samples will be collected from the excavation inaccordance with the approved work plan and DER-10. Post-excavation samples will be collected from the SB-17 Area excavation for PCBs.

Confirmatory samples will be analyzed in accordance with USEPA methodology with an equivalent Category B deliverables package to facilitate data evaluation by a third-party validation expert. Expedited turnaround times may be requested for the analytical results to minimize the time that the excavation remains open.

EXCAVATION BACKFILL

Following NYSDEC concurrence that the remedial excavation is complete, the excavation will be backfilled with approved backfill material in accordance with DER-10.

Backfill material may consist of the following materials:

- Gravel, rock, or stone, consisting of virgin material, from a permitted mine or quarry may be imported, without chemical testing, if it meets the requirements of DER-10, or as otherwise approved by NYSDEC.
- Recycled concrete or brick from a NYSDEC-registered construction and demolition debris processing facility may be imported, without chemical testing, if it meets the requirements of DER-10, or as otherwise approved by NYSDEC.
- Imported soil/fill originating from known off-site sources having no evidence of disposal or releases of hazardous substances, hazardous, toxic or radioactive wastes, or petroleum, and which meets the chemical criteria for Restricted-Residential Use Sites in DER-10, Appendix 5. No off-site materials meeting the definition of a solid waste as defined in 6NYCRR, Part 360-1.2(a) shall be used as backfill.
- On-site reuse of soil/fill that is placed at least two-feet below the final surface grade, in accordance with Part 375 Track 4 requirements.



COMMUNITY AIR MONITORING

In accordance with the approved work, included in the Health and Safety Plan (HASP), real-time community air monitoring will be performed during IRM activities at the Site with the requirements for community air monitoring at remediation sites as established by the New York State Department of Health (NYSDOH) and NYSDEC. Accordingly, it follows procedures and practices outlined under NYSDEC's DER-10 (May 2010) Appendix 1A (NYSDOH's Generic Community Air Monitoring Plan) and Appendix 1B (Fugitive Dust and Particulate Monitoring).

REPORTING

Full details and documentation of the IRM activities will be included in the Final Engineering Report (FER). At a minimum, the IRM section of the report will include:

- A map showing the lateral limits of excavation;
- Summaries of unit quantities, including: volume of soil/fill excavated; disposition of
 excavated soil/fill and collected ground/surface water; volume/type/source of backfill;
 and volume of ground/surface water pumped and treated;
- Planimetric map showing location of all verification and other sampling locations with sample identification labels/codes;
- Tabular comparison of verification and other sample analytical results to SCOs. An explanation shall be provided for any results exceeding acceptance criteria; and
- Text describing that the excavation activities were performed in accordance with this Work Plan.

Please do not hesitate to contact us if you have any questions.

Sincerely,

TurnKey Environmental Restoration, LLC

Nathan Munley

Project Manager

Michael Lesakowski

Sr. Project Manager

cc: B. Paladino (9271 Group, LLC)

F. Jacobi (9271 Group, LLC)

C. Staniszewski (NYSDEC)

C. Doroski (NYSDOH)

File: 0136-013-005

TURNKEY

ATTACHMENTS



TABLE 4

SUMMARY OF REMEDIAL INVESTIGATION SUBSURFACE SOIL/FILL ANALYTICAL RESULTS

1050-1088 NIAGARA STREET SITE

BUFFALO, NEW YORK

										OI I ALO, I	IEW YORK													
		Restricted						l				D.4	SAMPL	E LOCATION	(DEPTH)						ı			
PARAMETER 1	Unrestricted Use SCOs 3	Residential	Commercial	TP-11	TP-12 (10-16)	TP-13	TP-14	MW-3 (18-20)	MW-4	MW-4 (16-18)	MW-6	B-1 (MW-1)	SB-09 ²	SB-10 ²	SB-11 ²	SB-12 ²	SB-13 (0.4-2)	SB-14 ²	SB-15 (10-12)	SB-16 ²	SB-17 (8-10)	SB-18 (14-16)	SB-19 (2-4)	SB-19 (9-10)
	Use SCOs	Use SCOs 3	Use SCOs ³	(6-8)		(4-6)	(2.5-4.5)	(10-20)	(2-4)	(10-10)	(2-4)	(8-10)	(0.4-2)	(0.4-2)	(0.4-2)	(12-14)	(0.4-2)	(11-12)		(4-6)				
Volatile Organic Compounds (VOCs) - mg	1/V a 4	<u> </u>			07/31/	1/2014			08/20/2014 08/19/2014		08/19/2014	01/29/2015	/29/2015 08/27/2014			08/28/20		2014		08/19/2014		08/20	/2014	
1,2,4-Trimethylbenzene	3.6	52	190	ND		8				0.97	T	ND	ND			24	-	ND	ND	T		ND		ND
1,3,5-Trimethylbenzene	8.4	52	190	ND		ND				ND		0.0027 J	ND			6.3		ND	ND			0.00045 J		ND
4-Isopropyltoluene Acetone	0.05	100	500	ND 0.01 J		ND ND				ND ND		0.0027 J 0.015 J	ND ND			2 ND		0.007 J	ND ND			0.00057 J ND		ND ND
Cyclohexane				ND		ND				0.39		0.029	ND			0.31 J		ND	1.2			ND		2.5
Ethylbenzene	1	41	390	ND		ND				ND		ND	ND		-	0.58	-	ND	ND			0.00063 B J	-	ND
Isopropylbenzene (Cumene) Methylcyclohexane	-		-	ND ND		0.31 2.3				0.38 3.2		0.005 J 0.056	ND ND			0.55 3.1		ND ND	0.72 3.5			ND ND		1.1
n-Butylbenzene	12		-	ND		1.4				0.37		ND	ND			6.4		ND	ND			ND		0.82
n-Propylbenzene	3.9	100	500	ND		0.48				0.53		0.0059	ND		-	1.4		ND	0.96			ND		1.4
sec-Butylbenzene	11 5.9	100	500	ND		ND 0.42				0.38		ND	ND			1.1 ND		ND ND	1.2			ND		0.66 0.047 J
tert-Butylbenzene trans-1,2-Dichloroethene	0.19	100 100	500 500	ND ND		0.13 ND				0.047 J ND		ND ND	ND ND			ND ND		0.0007 J	ND ND			ND ND		0.047 J ND
Total Xylenes	0.26	100	500	ND		ND	-			ND		ND	ND		-	4.8	-	ND	ND			0.0025 B J	-	ND
Total Tentatively Identified Compounds				ND		340.8				152.7		0.297	0.027			334		0.0371	1044			0.057		229.4
Semi-Volatile Organic Compounds (SVOC 2-Methylnaphthalene	cs) - mg/Kg * 		I	0.17 J	0.39	0.022 J	0.13	ND	0.024 J		ND		ND	ND	ND	1.1	ND	ND	ND	ND	ND	0.6 J	ND	
3-Methylphenol/4-Methylphenol	-		-	0.41 J	ND	ND	ND	ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Acenaphthene	20	100	500	0.11 J	ND 0.40 I	ND	0.04 J	ND	0.043 J		ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	0.35 J	ND	
Acenaphthylene Anthracene	100 100	100 100	500 500	0.06 J 0.24 J	0.18 J 0.037 J	ND ND	ND 0.062 J	ND ND	0.0088 J 0.087		ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND 0.011 J	ND 0.17 J	ND 1 J	ND ND	
Benzo(a)anthracene	1	1	5.6	0.38	0.1	ND	0.18	ND	0.32		ND		ND	ND	0.035 J	ND	ND	ND	ND	0.11	0.49	1.3 J	ND	
Benzo(a)pyrene	1	1	1 50	0.26 J	0.085	ND	0.25	ND	0.31		ND		ND	ND	ND	ND	ND	ND	ND	0.32	0.38 J	1 J	ND	
Benzo(b)fluoranthene Benzo(ghi)perylene	100	100	5.6 500	0.3 J 0.17 J	0.011	ND ND	0.27 0.25	ND ND	0.43 0.25		ND ND		ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	ND ND	0.32	0.41 ND	0.71 J ND	ND ND	
Benzo(k)fluoranthene	0.8	3.9	56	0.14 J	0.043 J	ND	0.14	ND	0.098		ND		ND	ND	ND	ND	ND	ND	ND	0.098	0.18 J	ND	ND	
Biphenyl	-		-	ND	0.054 J	ND	ND	ND	ND		ND		ND	ND	ND	0.16 J	ND	ND	ND	ND	ND	ND	ND	
Bis(2-ethylhexyl) phthalate Butyl benzyl phthalate	-	-	-	ND 0.51 J	ND ND	ND ND	ND ND	ND ND	ND ND		ND ND		ND ND	ND ND	ND 0.055 J	ND ND	ND ND	0.14 J ND	ND ND	0.1 J ND	ND ND	3.6 J ND	ND ND	
Carbazole	-			ND	ND	ND	0.03 J	ND	0.061 J		ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Chrysene	1	3.9	56	0.31 J	0.11	ND	0.23	ND	0.36		ND		ND	ND	0.027 J	ND	ND	ND	ND	0.12	0.5	1.3	ND	
Dibenzo(a,h)anthracene Fluoranthene	0.33 100	0.33 100	0.56 500	ND 0.63	ND 0.13	ND ND	0.076 J 0.34	ND 0.028 J	0.069 J 0.7		ND ND		ND ND	ND ND	ND 0.029 J	ND 0.05 J	ND ND	ND ND	ND ND	0.072 J 0.085	ND 1.1	ND 2.7	ND ND	
Fluorene	30	100	500	0.12 J	0.022 J	ND	0.033 J	ND	0.04 J		ND		ND	ND	ND	0.33	ND	ND	ND	ND	ND	0.93 J	ND	
Indeno(1,2,3-cd)pyrene	0.5	0.5	5.6	0.13 J	0.071 J	ND	0.21	ND	0.21		ND		ND	ND	ND	ND	ND	ND	ND	0.29	ND	ND	ND	
Naphthalene Phenanthrene	12 100	100 100	500 500	0.14 J 0.76	0.39 0.25	ND ND	0.21 0.25	ND ND	0.025 J 0.52		ND ND		ND ND	ND ND	ND ND	0.15 0.71	ND ND	ND ND	ND ND	ND 0.044 J	ND 0.89	0.7 J 3.2	ND ND	
Pyrene	100	100	500	0.62	0.15	ND	0.38	0.023 J	0.57		ND		ND	ND	0.025 J	0.07 J	ND	ND	ND	0.095	0.84	2.3	ND	
Total PAHs			500	5.46 J	2.837 J	0.022 J	3.081 J	0.051 J	4.1258 J		ND 0.40		0 J	0 J	0.171 J	2.57 J	0 J	0.14 J	0 J	2.095 J	4.96 J	19.69 J	0 J	
Total Tentatively Identified Compounds Metals - mg/Kg				ND	6.36	8.27	3.3	1.1	3.13		2.19		1.27	2.9	2.86	40	0.43	0.22	27.54	0.97	1.3	89.1	4.98	
Aluminum	-		-	9540	11100	11300		11700	12000		11700			10100		14500	2860	6450	9940		14000		6310	
Arsenic	13	16	16	7	3.7	2.9	4.9	3.5	6.1		3.5		3.5	3.1	4.5	5.2	2.6	2.8	3.9	6.6	6.9	8.1	ND	
Barium Beryllium	350 7.2	400 72	400 590	139 0.69	285 0.95	68 0.66	170	91.9 0.77	104 0.68		81.4 0.73		75.7	69.9 0.49	108	124 0.69	13.8 ND	53.1 0.32	57.4 0.53	135	139	74.6	61.3 0.34	
Cadmium	2.5	4.3	9.3	2	5	ND	2.4	0.6	0.29		0.34		ND	0.23	0.27	ND	ND	ND	0.24	0.82	0.5	27.8	0.22	
Calcium			-	49200	30100	2750		53200	27600		4270			60700		20200	141000	32700	50300		40300		3740	
Chromium Cobalt	30	180	1500	282 5.4	29.6 2	14.8 8.6 J	29.9	13.1 7.4	15.4 9.2		15 10.4		14.7	12.4 7.4	15.9	17.4 9.2	5.4 2.6	8.5 5.1	13.3 6.6	15.9	27.4 10.8	110	8 4.3	
Copper	50	270	270	57.7	57.9	9.1		17.7	24.4	-	14.3			17.8	-	18.8	11.5	11	17.9	-	50.1		13.6	
Iron				43400	10300	17200		15600	17000		19900			13000		17700	6400	9970	13500		21900	 06E	10000	
Lead Magnesium	63	400	1000	208 9470	1010 15200	17.9 3390	359	51.1 22500	71.6 12000		23.6 2930		12.7	16.2 25500	18.7	137 9920	7.3 87800	9.9	27.4 32500	69.1	116 9740	865	14.9 2310	
Manganese	1600	2000	10000	3000	2570	349		571 B	448 B		1090 B		-	402 B		617	396	219	350		589 B		219 B	
Mercury Nickel	0.18 30	0.81 310	2.8	0.28	0.34 13.4	0.023 16.1	0.085	0.13 16.2	0.05		0.069 12.9		ND 	0.63 15.6	0.42	0.08 16.6	0.036	ND 11.6	0.073	0.22	0.04 30.8	0.17	0.2 8	
Potassium		310	310 	30.4 794	13.4 841	1180		16.2 1420 B	19.1 1470 B		12.9 1040 B			2570 B	-	2210	7.1 966	1350	17.3 1640		30.8 1640 B		739 B	
Selenium	3.9	180	1500	ND	ND	ND	ND	ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
Silver	2	180	1500	1.1	2.1	ND	0.81	ND 405	ND		ND 504		ND	ND 224	ND	ND	ND	ND	ND	ND	ND 244	5.2	ND ND	
Sodium Vanadium	-		-	323 23	576 11.4	ND 23.5		185 18.6	ND 22.3		564 26.2			224 20.5		ND 30.5	ND 8.3	252 13.2	ND 19.6		244 25		11.6	
Zinc	109	10000	10000	323	935	50.4		103	85.3		82.3			58.3		79.3	34.2	44.8	61.6		141		69	
Total PCBs - mg/Kg ⁴				0.00	ND	AID.		ND				N _D		ND				ND	L		400	ND	1	
Aroclor 1248 Aroclor 1254	0.1 0.1	1	1	0.39	ND ND	ND ND		ND ND				ND 0.15 J		ND ND		-		ND ND	ND ND		120 ND	ND ND		
Pesticides and Herbicides - mg/Kg 4																								
4,4'-DDD	0.0033	13	92	ND	ND			ND			ND			0.00038 J			-		ND		ND 044.1			
4,4'-DDE 4,4'-DDT	0.0033 0.0033	8.9 7.9	62 47	0.017 J 0.029 J	ND 0.0094 J			ND ND			ND ND			ND ND			-		ND ND		0.14 J 0.13 J			
delta-BHC	0.04	100	500	0.021 J	ND			ND			0.43 J			0.00056 J					ND		1.2 J			
Dieldrin	0.005	0.2	1.4	0.023 J	ND			ND			ND			ND					ND		ND			
gamma-BHC (Lindane) gamma-Chlordane	-		-	ND 0.015 J	ND ND			ND ND			ND ND			ND ND					ND ND		0.079 J 0.098 J			
Heptachlor	-	-	-	ND	ND	-		ND			ND			ND	-				ND		0.12 J			

- Notes:

 1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.

 2. Soil boring samples taken from inside existing building onsite.

 3. Values per 6NYCRR Part 375 Soil Cleanup Objectives (SCOs).

 4. Sample results were reported by the laboratory in ug/kg and converted to mg/kg for comparisons to SCOs

- Definitions:

 ND = Parameter not detected above laboratory detection limit.

 "--" = No value available for the parameter. Or parameter not analysed for.

 J = Estimated value; result is less than the sample quantitation limit but greater than zero.

Bold	= Result exceeds Unrestricted Use SCOs.
Bold	= Result exceeds Restricted Residential Use SCOs.
Bold	= Result exceeds Commercial Use SCOs.



TABLE 5

SUMMARY OF PCB SUBSURFACE SOIL/FILL DELINEATION BORING ANALYITCAL RESULTS

1050-1088 NIAGARA STREET SITE

BUFFALO, NEW YORK

		Restricted		SAMPLE LOCATION (DEPTH)									
PARAMETER ¹	Unrestricted Use SCOs ²	Residential Use SCOs ²	Commercial Use SCOs ²	SB-17 (8-10)	B-1 (8-10)	B-2 (8-10)	B-3 (8-10)	B-3 (10-12)	B-4 (8-10)	B-4 (10-12)			
Total PCBs - mg/Kg ³													
Aroclor 1242	0.1	1	1	ND	ND	0.27 J	150	70	ND	ND			
Aroclor 1248	0.1	1	1	120	ND	ND	ND	ND	ND	ND			
Aroclor 1254	0.1	1	1	ND	0.15	0.34	ND	ND	2.2	ND			
Aroclor 1260	0.1	1	1	ND	ND	ND	ND	ND	0.73 J	ND			

Notes:

- 1. Only those parameters detected at a minimum of one sample location are presented in this table; all other compounds were reported as non-detect.
- 2. Values per 6NYCRR Part 375 Soil Cleanup Objectives (SCOs).
- 3. Sample results were reported by the laboratory in ug/kg and converted to mg/kg for comparisons to SCOs

Definitions:

ND = Parameter not detected above laboratory detection limit.

J = Estimated value; result is less than the sample quantitation limit but greater than zero.

Bold	= Results exceeds Unrestricted Use SCOs.
Bold	= Result exceeds Restricted Residential Use SCOs.
Bold	= Result exceeds Commercial Use SCOs.

