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October 31, 2018

Mr. Jacky Luo  
Project Manager  
New York State Department of Environmental Conservation  
625 Broadway  
Albany, New York 12233-7010

Re: *August 2018 Biological Monitoring Sampling Results*  
*Bloody Brook, Onondaga County, New York*

Dear Mr. Luo:

In July 2014, biota (crayfish) samples were collected from within the Bloody Brook site to evaluate possible cadmium exposure for aquatic receptors prior to the start of remediation activities in the West Branch of Bloody Brook (WBBB) and Bloody Brook from below the confluence of the West and Middle Branches of Bloody Brook (collectively referred to as WBBB). Samples were collected from three general locations in WBBB, including an upper location (between Ontario Place and Cranberry Drive), a middle location (downstream from Floradale Road), and a lower location (upstream from Onondaga Lake Parkway). These locations are shown in Figure 1, enclosed with this letter. The 2014 data were provided to New York State Department of Environmental Conservation (NYSDEC) in the September 9, 2014 Monthly Progress Report for the Bloody Brook site and were included in Appendix F (Field Sampling Plan [FSP]) of the *February 2018 Bloody Brook Site Management Plan* (SMP).

According to the SMP, biota samples were to be collected in 2018 and 2020 from within the Bloody Brook site from the same locations that were sampled during the 2014 baseline sampling to support the evaluation of the effectiveness of the site remedial program in mitigating potential cadmium impacts in WBBB. In accordance with the SMP, crayfish samples were collected on August 13, 2018 using the kick-net method, per the FSP and consistent with the collection methods used during the baseline sampling. Five samples were collected from the lower location, consistent with the baseline sampling. However, due to the number of crayfish that could be located, only four samples were collected from the upper location, and no samples were collected from the middle location.

Whole body crayfish samples were analyzed by Test America Laboratories for total cadmium by USEPA SW846 Method 6020, and the data underwent full third party data validation. Analytical results for both the 2014 baseline sampling and the 2018 monitoring are summarized in Table 1, enclosed with this letter. From the upper location, between Ontario Place and Cranberry Drive, average cadmium

concentrations decreased from 3.4 mg/kg in 2014 to 0.79 mg/kg in 2018. The lower location, upstream from Onondaga Lake Parkway, also showed a decrease, with an average cadmium concentration of 0.97 mg/kg in 2014 decreasing to 0.14 mg/kg in 2018. Although no samples were collected from the middle location (downstream from Floradale Road) in 2018, the available samples collected at the upper and lower locations indicate the remedy has been effective in mitigating cadmium impacts as can be seen with the declining cadmium concentrations in the biological samples.

Per the SMP, the next and final planned biological monitoring event is expected to occur in July or August 2020 from the same upper, middle, and lower locations. If you have any questions, or you would like to discuss the data results, please contact me at (315) 456-1993 or Kelly Lurie at (518) 542-2944.

Sincerely,



Jill Fonte  
Project Lead

Enclosure

cc:

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**Table 1**  
**Analytical Data for Baseline (July 2014) and First Year (August 2018) Biota Monitoring**  
**Bloody Brook**  
**Onondaga County, New York**

Sample Location	Sample Location	2014 Cadmium (mg/kg-ww)	2018 Cadmium (mg/kg-ww)
Upper Channel - between Ontario Place and Cranberry Drive	CR-1-01	3.1	0.53
	CR-1-02	3.6	0.56
	CR-1-03	3.2	1.3
	CR-1-04	2.5	0.76
	CR-1-05	4.4	
	<b>Average</b>	3.4	0.79
Middle Channel - downstream from Floradale Road	CR-2-01	4.3	Not sampled
	CR-2-02	3.5	Not sampled
	CR-2-03	5.2	Not sampled
	CR-2-04	3.6	Not sampled
	CR-2-05	3.5	Not sampled
	<b>Average</b>	4.0	No samples
Lower Channel-upstream from Onondaga Lake Parkway	CR-3-01	0.97	0.059 J
	CR-3-02	0.76	0.13
	CR-3-03	1.3	0.12
	CR-3-04	1.5	0.22
	CR-3-05	0.33	0.18
	<b>Average</b>	0.97	0.16

Notes:

1. Biota samples were whole body crayfish.
2. Results are reported in wet weight.
3. No crayfish were located in the "middle" sample from 2018.
4. J - estimated value; detected above the method detection limit but below the reporting limit.