

Honeywell  
301 Plainfield Road  
Suite 330  
Syracuse, NY 13212  
315-552-9700  
315-552-9780 Fax

October 22, 2013

Mr. Donald Hesler  
New York State Department of Environmental Conservation  
Remedial Bureau D  
625 Broadway, 12<sup>th</sup> Floor  
Albany, NY 12233-7016

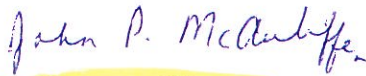
**RE: Thickener Sampling Plan  
Onondaga Lake Bottom Sub-Site – Onondaga County, NY  
Honeywell – Syracuse, NY  
October 2013**

Dear Mr. Hesler:

Enclosed you will find one copy of the Thickener Sampling Plan, dated October 2013.

Please feel free to contact Tom Drachenberg at (315) 741-3708 or me if you have any questions.

Sincerely,



**John P. McAuliffe, P.E.**  
Program Director, Syracuse

Enclosure

cc: Tim Larson, NYSDEC  
Tara Blum, NYSDEC  
William Daigle, NYSDEC  
Reginald Parker, NYSDEC  
Mary Jane Peachey, NYSDEC  
Christopher Jaros, Arnold & Porter  
Mark Distler, OBG  
Tom Abrams, Parsons  
Tom Drachenberg, Parsons



**THICKENER SAMPLING PLAN**  
**Onondaga Lake Bottom Sub-Site – Onondaga County, NY**  
**Honeywell – Syracuse, NY**  
**October 22, 2013**

The purpose of the sampling program is to validate the analysis presented in Appendix A.1 of the *Sediment Management Winter 2013 Additional Odor Mitigation Work Plan*, which estimated that the impact of this process on the dissolved contaminant concentrations is relatively low due to limited mass removal and due to replenishment of compounds from the solid phase to the liquid phase. This sampling program will include analysis of slurry samples taken upstream and downstream of the thickener, and samples of water flowing over the thickener weir to the water treatment plant. Samples will be analyzed for VOCs and SVOCs. This sampling program will be conducted concurrent with the vapor-phase granular activated carbon (VGAC) compliance testing, which will provide analysis of the air within the shaker screen house. Subsequent analysis of the data will compare contaminant mass rate entering the thickener (via slurry) and exiting the thickener (via slurry, weir water, and shaker screen house air).

### **SAMPLING METHODOLOGY**

Slurry samples from upstream and downstream of the thickener will be collected using existing sample ports located adjacent to flowmeter FE-520 (upstream of all thickeners), and on the discharge piping of Booster #5 (downstream of all thickeners). Due to line pressure, five-gallon buckets will be used to collect slurry from the sampling location, from which the sample will be collected and sent for off-site analysis. Thickener weir water will be collected from the weir water holding tank (T-14). A process flow diagram and sample collection location diagram has been included in this work plan to depict locations where slurry and water samples will be collected.

A total of five samples will be collected from each location described above during one of the planned 4-hour test runs associated with the Source Emissions Test Protocol<sup>1</sup> for the SCA VGAC system. This test protocol will involve the collection of an air sample exiting all shaker screen house and prior to treatment in the VGAC system. The protocol consists of three test runs (replicates), each involving sample collection over an approximate 4-hour period.

Based on analysis of data collected during the pre-design investigation, variability in concentrations of contaminants within RA-D sediments is high, with variance up to two orders of magnitude from different sample intervals within the same sample core. Based on average flow

---

<sup>1</sup> Source Emissions Test Protocol, Revision 3, SCA VGAC Systems”, O’Brien & Gere, October 8, 2013.



conditions, the slurry thickeners have an average residence time of approximately 20 minutes, and T-14 has an average residence time of approximately 10 minutes. This residence time is expected to introduce a degree of variability in the sample results, as a unit of slurry will be mixed with slurry which may have substantially different VOC/SVOC concentrations. To minimize this potential variability in sample results, the collection of the samples will be staggered, such that downstream and weir water samples are collected from the same unit of slurry, to the extent possible. As such, this variability may impact the ability to substantiate mass transfer from the solid/liquid phase to the air phase. The sample collection schedule is outlined in the table below.

<b>Sample Collection Schedule</b>					
<b>Sample Location</b>	<b>Sample Set #1</b>	<b>Sample Set #2</b>	<b>Sample Set #3</b>	<b>Sample Set #4</b>	<b>Sample Set #5</b>
Thickener Influent	T = 0 min	T = 60 min	T = 120 min	T = 180 min	T = 240 min
Thickener Effluent	T = 20 min	T = 80 min	T = 140 min	T = 200 min	T = 260 min
Thickener Weir Water	T = 30 min	T = 90 min	T = 150 min	T = 210 min	T = 270 min
Shaker Screen House Air	Sample Collected from T = 0 min to T = 260 min				

Slurry samples will be collected in glass jars with zero-headspace, and sent to an off-site laboratory, where the slurry samples will be centrifuged and separated for liquids (dissolved-phase) and solids (sorbed-to-sediment phase) analysis. Samples will be shipped for overnight delivery to the analytical laboratory the same day they are collected. Slurry samples will be analyzed individually. All samples will be analyzed for VOCs (Method 8260) and SVOCs (Method 8270) plus tentatively identified compounds. No QA/QC samples (trip blanks, etc) will be collected and analyzed during this sampling program.

Analysis of the data will include the evaluation of results both from individual sample sets and an average of all data sets, to determine if distinguishable trends of mass removal are apparent, and to estimate mass removal from the influent slurry to the shaker screen house air.



**PARSONS**  
301 Plainfield Road, Suite 350  
Syracuse, New York 13212  
(315) 451-9560

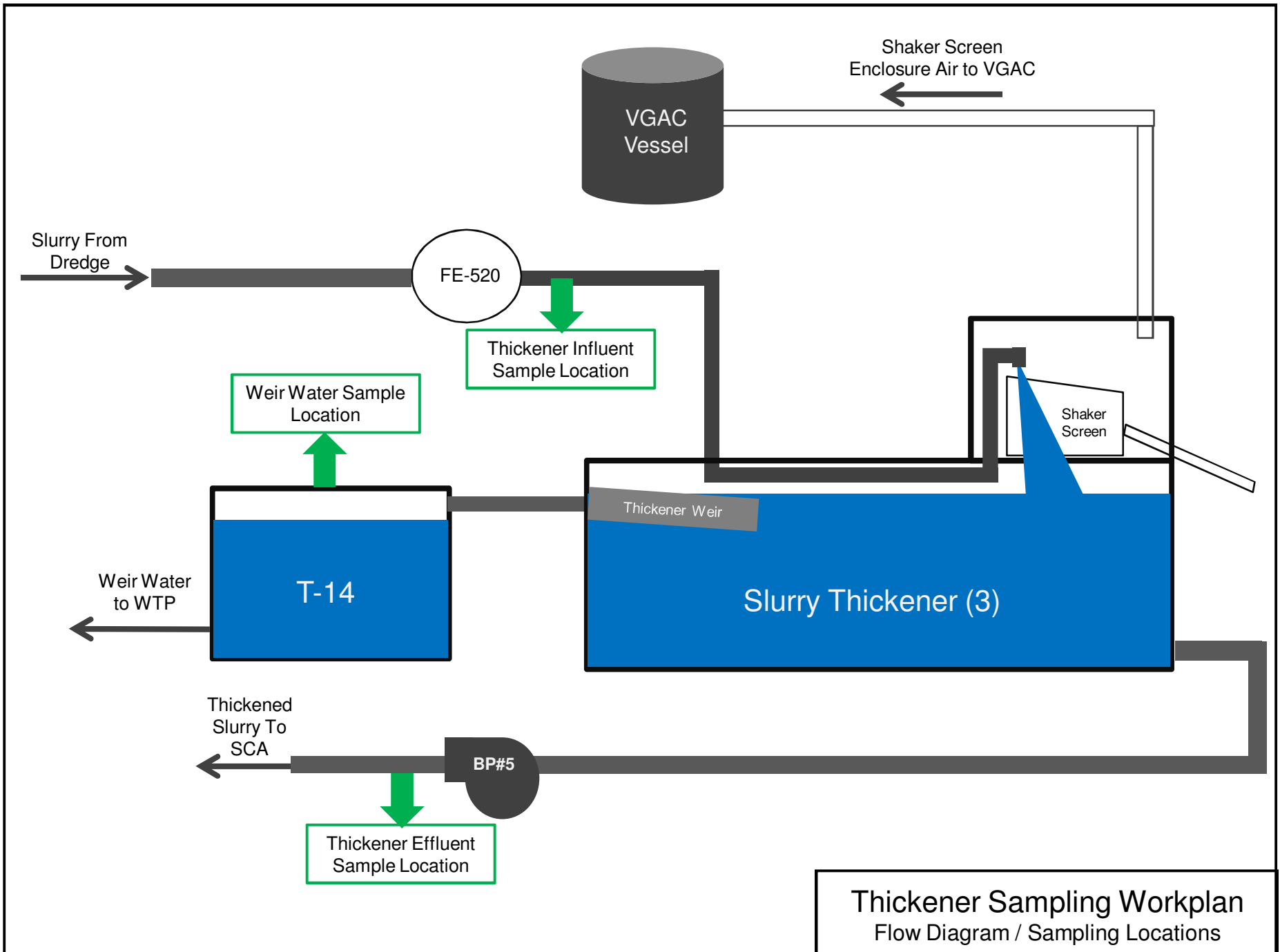
---

## **REPORTING**

A testing summary report will be submitted to NYSDEC. A meeting with NYSDEC will be offered to discuss the data evaluation.

## **SCHEDULE**

Testing will be planned for the week of October 28, 2013. Following receipt of the analytical data from the laboratory, a summary report will be prepared and submitted to NYSDEC in 1/31/14.



Thickener Sampling Workplan  
Flow Diagram / Sampling Locations