

POLREP 70  
NanoChemonics Site  
4 Magnox Drive  
Pulaski, Pulaski County, Virginia 24301

Lat: N 37.04718  
Long: W 80.79146

ATTN: RRC  
VADEM -Tolbert  
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I. SITUATION (July 25, 2015 to October 20, 2015)  
EVENT: Site Cleanup Operations

- A. Refer to previous POLREPs for site background information.
- B. STNP, the owner of the NanoChemonics property, is conducting a response action and cleanup of the Site under an EPA order. The Administrative Settlement and Order was signed on April 8, 2011, and response actions continued in this period. In brief, the response action involves the removal of hazardous substances from the Site and includes the removal of such substances found in the debris created during demolition of the buildings at the Site. The action also includes the management of wash waters and storm waters at the Site that migrate toward lagoons and then into nearby Peak Creek.
- C. The response actions related to the lagoons and drying bed began on September 25, 2013. Sludge was removed from the four lagoons and placed into the drying bed for dewatering and drying. This part of the action was deemed to be complete by EPA during an inspection conducted on March 13, 2014.
- D. STNP contractors mobilized to the Site on October 29, 2014 to commence completion of work in the lagoon area by attempting to place the sludge and prepare it for covering actions. A significant amount of wet clay/sludge mixture (clay once forming the liner of the lagoons) was encountered in the southwestern quadrant and in the northern portion of the drying bed. ARG mobilized an excavator to the Site to excavate the wet C/S and place it into wind rows to dry. Shale material from the facility hill side was mixed with the C/S in an attempt to dry it sufficiently to allow placement in lifts to meet compaction requirements. However, it was determined that much of the C/S was too wet to enable placement to meet compaction requirements, even with the addition of the shale. The STNP contractors made a determination that the C/S needed to be allowed to dry in the wind rows before the drying bed closure could be completed. The STNP contractors demobilized, along with all the equipment, on November 6, 2014. Final closure of the drying bed was planned for 2015.
- E. STNP contractors re-mobilized to the Site on July 20, 2015 to continue the completion of the drying bed activities required by the Order, specifically to

determine if conditions would allow for final placement of C/S and cover. STNP contractor ARG used an excavator to work and turn the sludge that had previously been placed in wind rows in the drying bed. The STNP contractors determined that although significant reduction in the moisture content had occurred, much of the sludge was still too wet to enable placement to meet compaction requirements. EPA concurred with the assessment. The sludge was turned and worked with the excavator to break up large chunks to further facilitate drying. ARG demobilized on July 22, 2015 but returned on July 24 to turn the sludge again and place in wind rows for further drying.

## II. ACTIONS

- A. STNP contractors re-mobilized to the Site on September 15-16, 2015 to turn over and work the clay/sludge (C/S) mixture to facilitate further drying. The mixture was found to be dry enough and suitable for further working. Final activities involving spreading the sludge to a uniform layer (not to exceed 1 foot of sludge or 2 feet of C/S mixture) were tentatively scheduled for October 2015.
- B. The EPA START contractor and STNP contractor (McAdams) mobilized to the Site on September 29, 2015 to conduct storm water sampling. START and McAdams collected split storm water samples during a rain event from the former MO building pad and the former Copperas area on the 'creek side' of the Site. The MO pad sample was collected as a composite sample with aliquots collected from three areas/locations on the concrete pad. The sample from the former Copperas area of the main facility was collected as a grab sample from the area where water accumulates between the former Copperas shed and the Copperas sump. The samples were sent to the respective laboratories to be analyzed for PCB congeners. McAdams sent their split samples to Prism Laboratories, Inc. (Prism), Charlotte, NC. Prism subcontracted to have the PCB congener analysis performed by SGS Environmental Services, Wilmington, NC. START shipped the EPA samples to an EPA-assigned laboratory to be analyzed for PCB congeners by EPA Statement of Work (SOW) CBC01.2.
- C. STNP contractors ARG mobilized to the Site on October 13, 2015 to begin implementation of the final activities relating to the drying bed. From October 13 to 15, ARG spread, graded, and compacted the C/S material within the drying bed. The EPA START contractor mobilized to the Site on the afternoon of October 15<sup>th</sup>. STNP contractor McAdams was also on site. ARG excavated two test pits in the compacted C/S within the drying bed to demonstrate the C/S did not exceed the maximum thickness. Pumping of the C/S mixture was not observed. START and McAdams observed and verified the C/S thickness in the test pits. STNP backfilled and re-compacted the test pits and then began to spread the cover soil over the C/S layer. The cover soil was obtained from the former drying bed berm and the hill area along the south side of the drying bed. The STNP contractors and START demobilized for the weekend on the afternoon of October 16<sup>th</sup>.
- D. The STNP contractors (ARG and McAdams) remobilized on October 19, 2015 to complete the closure activities. Additional cover soil was spread and compacted over the drying bed. The STNP contractors established a 25-foot square grid pattern over

the drying bed area and used a rotary laser level to collect relative elevation measurements for the gridded cover area. This was done to ensure surface elevations over the drying bed cover would be conducive to promoting proper storm water drainage. The EPA START contractor mobilized to the Site on the morning of October 20<sup>th</sup>. START and McAdams used the rotary laser level to verify relative elevations across the landfill and identified areas that needed additional grading. ARG then completed final grading and compaction of the drying bed cover. ARG seeded the drying bed cover and applied straw over the area. START and the STNP contractors demobilized from the Site on the afternoon of October 20<sup>th</sup>.

- E. On October 15, 2015, STNP contractor McAdams reported that they had received PCB congener results for the storm water samples collected on September 29, 2015. McAdams reported a total PCB congener concentration of 213 nanograms per liter (ng/L) for the MO pad composite sample and 1.54 ng/L for the Copperas area sample. STNP results for the previous storm water sampling event conducted on November 25, 2013 indicated total PCB congener concentrations of 476 ng/L for the MO pad and 30 ng/L for the copperas area sample. STNP conducted caulk removal and additional cleaning of the MO pad subsequent to the November 2013 sampling event.
- F. EPA has established a public repository of site documents at the local library in Pulaski. EPA will also provide public information updates for the site on the EPA site website at: [www.epaossc.org/nanochemonics](http://www.epaossc.org/nanochemonics).

### III. FUTURE ACTIONS

- A. A final inspection of the drying bed will be conducted.
- B. Await EPA laboratory results for storm water samples collected for PCB congener analysis on September 29, 2015.
- C. EPA will continue providing on-site oversight of remediation activities conducted by STNP.
- D. EPA will determine whether the Removal Action is completed pursuant to the terms of the Order.

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