

## **Ryeland Road Arsenic Site- Update through 10/05/07**

Activities through October 5, 2007:

- On October 1, 2007, all personnel mobilized to Reading, PA; operations resumed at the site on October 2, 2007. Temperatures at the site this week ranged from the low 60's in the mornings to the mid-80's during some afternoons. No significant rain events occurred during the week; operations ran on the normal schedule.
  - Excavation activities continued in the front yards of the former R02 and R03 residences. Grids that were excavated included E20-21, F19-23, H25-H27, I24-26. Excavation depths ranged from 3-15 feet to reach arsenic concentrations less than 12 ppm; ground water was not reached. START screened the excavated areas with XRF instrumentation for arsenic concentrations in the soils. START worked with ERRS to determine where excavation should cease in these areas. None of the excavated areas contained soil that had arsenic concentrations above 1,400 ppm; none of the soils were stockpiled as hazardous. START continually checked the excavated soil to determine segregation of the soil into non-hazardous and hazardous stockpiled soil.
  - START sent a lab request for XRF confirmatory soil samples. START also sent a request for analysis of the ferns on the nursery property. START will continue correspondence with EPA's CST to obtain laboratory services and subsequently provide a correlation for the Niton XRF with the soil and fern samples.
  - On Wednesday, October 3, 2007, EPA's BTAG group was on site to harvest the ferns in the nursery area. Eight personnel from EPA harvested all six groups of ferns and collected bags of their leaves for XRF screening. The fern groups were numbered from one to six. Leaves were collected from each group, including both planted ferns (*Pteris* species) and naturally occurring ferns (native species). START screened these fern groups and determined that the *Pteris* ferns contained much higher arsenic than the native species. The arsenic concentrations ranged as follows:
    - Group 1 (sediments 30.3 to 89.4 ppm)- *Pteris*-305.4 to 674.6 ppm
    - Group 2 (sediments 79.3 to 332.8 ppm)- *Pteris*-262.4 to 621.8 ppm
    - Group 3 (sediments 63.7 to 489.1 ppm)- *Pteris*-384.6 to 881 ppm
    - Group 4 (sediments 231 to 405 ppm)- *Pteris*-113.6 to 854.2 ppm
    - Group 5 (sediments 64 to 254.9 ppm)- *Pteris*-184.2 to 1032 ppm
    - Group 6 (sediments 7.8 to 8 ppm)-*Pteris*-0.2 to 8.9 ppm
- Under the direction of the RPM, START screened the ferns that were obtained from Virginia and those that were obtained from Florida. The ferns from Virginia ranged from 180 to 220 ppm and the ferns from Florida ranged from 25 to 55 ppm. The cost of the Virginia ferns was higher than the cost of the Florida ferns.
- ERRS utilized dust suppression with a water truck and hose during excavation and T&D activities. START strategically placed the DataRAMs to the west, east, and south of the excavation and T&D staging areas to account for migrating dusts that may occur as a result of ERRS' activities. No particulate levels were of a concern and the engineering controls were adequate. The particulate concentrations did not exceed 128 ug/kg.

- START utilized a personal DataRAM during excavation activities to monitor for health and safety of personnel. No upgrade in PPE was required for START due to extremely high arsenic concentrations or high pDR levels. Particulate levels did not exceed 0.097 mg/kg.
- START received bids for the Geoprobe operations and awarded the subcontract to a vendor; operations are expected to begin on October 9, 2007. START provided property addresses and all requested information to the subcontractor. The subcontractor telephoned the "One Call", under PA law, for the utility companies to locate and identify any utility lines on the properties that operations would occur. The notification occurred on Friday, October 5, 2007.
- EPA's RPM and OSC was on site and/or available throughout the week to coordinate site activities. The backup OSC (to OSC Fox) was also on site to monitor site activities.
- EPA's CIC was on site this week to monitor site activities and ensure that there were no issues with the residents in the area.
- The RPM continued to correspond with PADEP to ensure that all state regulations and clean-up standards are met on the site. PADEP was on site this week to monitor site activities. PADEP had no concerns with the condition of the site or site operations.

#### Transportation & Disposal

- T&D of non-hazardous soil occurred throughout the week (76 trucks). The total amount of non-hazardous soil that has been transported off site for disposal, to date, is approximately 37,697 tons (1,699 trucks).
- T&D of hazardous soil occurred throughout the week (10 trucks). The total amount of hazardous soil that has been transported off site for disposal, to date, is approximately 2,185 tons (93 trucks).

Activities which are anticipated to be completed/begun during the week of October 8, 2007:

1. ERRS will continue excavation in the front yard of the former R02 and R03 residences and the rear yard of the former R04 residence;
2. ERRS will continue to segregate non-hazardous and hazardous site soils based upon START's data from XRF instrumentation;
3. The additional ERRS contractor will continue to make arrangements for T&D of the site soils;
4. Geoprobe operations are anticipated to begin on October 9, 2007. START will screen the soils with XRF instrumentation at two-foot intervals and record the levels of arsenic in the site soils. The soils will be screened in the following areas: the roadway between a location east of the R20 residence and a location west of the R01 residence, at approximate 50 foot intervals; in the yard of the R01 residence; in the yard of the R26 residence, along the northern boundary of the R02, R03, and R04 properties; and at one location in the southwestern corner of the R05

property, just north of the intermittent stream. The Geoprobe operations are anticipated to be completed within 12 working days, maximum.

5. START will report the arsenic concentrations to the RPM, who will then make a determination how to proceed with remediation of the areas.
6. ERRS will continue T&D of non-hazardous and hazardous site soils.

Future activities that require completion:

1. START will conduct XRF sampling during the Geoprobe operations in order to further define the extent of contamination on the site;
2. START will ship XRF confirmatory soil samples to a laboratory for analysis;
3. START will procure a laboratory that will accept a modified analysis for arsenic concentrations in plant biota/ferns and ship approximately 10 fern samples to a laboratory for analysis. Upon receipt of the analytical data, START will determine a correlation between the laboratory data and the XRF screening data for arsenic concentrations.
4. START will conduct water sampling from both monitoring wells and residential wells located in close proximity to the site;
5. ERRS will complete excavation in the three properties (R02, R03, and R04) and restore the site with backfill;
6. START will determine an extent of contamination in the properties located to the south and west of the site and work with ERRS to remediate the properties according to state regulations;
7. START will complete the Interim Remedial Action Report;
8. ERRS will remediate the R01 and R05 properties towards the completion of the Remedial Action, anticipated in the spring of 2008;
9. The nursery property and VFW area's contamination will be addressed by EPA as a final remediation activity for the project.