

ROCKY FLATS SITE REGULATORY CONTACT RECORD

Purpose: Improving treatment at the East Trenches Plume Treatment System (ETPTS) by adding an air stripper component

Contact Record Approval Date: October 25, 2012

Site Contact(s)/Affiliation(s): Scott Surovchak, U.S. Department of Energy (DOE); John Boylan, Rick DiSalvo, Linda Kaiser, S.M. Stoller Corporation (Stoller)

Regulatory Contact(s)/Affiliation(s): Carl Spreng, Colorado Department of Public Health and Environment (CDPHE); Vera Moritz, U.S. Environmental Protection Agency (EPA)

Date of Consultation Meeting: October 16, 2012

Consultation Meeting Participants: Carl Spreng, CDPHE; Vera Moritz, EPA; Scott Surovchak, DOE; John Boylan, Rick DiSalvo, Linda Kaiser, George Squibb, Stoller

Introduction: Treatment of contaminated groundwater by the ETPTS results in the removal of the vast majority of the of volatile organic compound (VOC) contamination load from the influent groundwater. But treatment typically does not result in complete removal of VOCs and a few VOCs remain in the ETPTS effluent at levels above Rocky Flats Cleanup Agreement (RFLMA) surface water standards in RFLMA Attachment 2, Legacy Management Requirements, Table 1, Surface Water Standards.

The RFLMA Project Coordinators began consulting in June 2010 regarding possible improvements to the VOC removal capability of the ETPTS and the Mound Site Plume Treatment System (MSPTS), which also had effluent concentrations of a few VOCs above RFLMA surface water standards. RFLMA Contact Records (CRs) 2010-07 and 2011-11 document the outcome of consultation regarding the actions to be taken to reduce VOCs at the MSPTS, which were to install a small solar powered air stripper in the effluent manhole and gather performance data that could be used to optimize its effectiveness.

The MSPTS air stripper consists of a sump pump to pump effluent water through commercially available engineered spray nozzles within the MSPTS effluent manhole allowing the VOCs to volatilize into the air in the manhole headspace.

The MSPTS air stripper was installed in early 2011 and its performance and optimization data are being reported in the RFLMA quarterly and annual reports of site surveillance and maintenance activities. The MSPTS air stripper is performing well and optimization is continuing. Appendix F in the *Annual Report of Site Surveillance and Maintenance Activities at the Rocky Flats Site, Calendar Year 2011* (2011 Annual Report) is a paper by John Boylan presented at the Waste Management 2012 Conference, titled “Solar-Powered Air Stripping at the Rocky Flats Site, Colorado”, which summarizes the features and performance testing of the MSPTS air stripper. The 2011 Annual Report is available on the Rocky Flats public website.

Discussion: Based on the positive results of the MSPTS air stripper performance, DOE will install a solar powered air stripper at the ETPTS similar to the air stripper at the MSPTS, but it will be installed in the ETPTS influent manhole. This will provide a reduction in the influent groundwater VOC concentrations that are subsequently treated by the ETPTS zero valent iron (ZVI) treatment media, which would potentially allow the current volume of ZVI media to provide adequate VOC treatment so that the effluent concentration are below RFLMA standards.

The PV system for the ETPTS air stripper will be a modular design, intended to be placed on (rather than excavated into) the ground surface near the influent manhole, so construction will involve little soil disturbance. At present, it is believed that the PV system installation will not involve any soil disturbance that would require a RFLMA Soil Disturbance Review Plan (SDRP), as provided in RFLMA Attachment 2, section 4.1. If this turns out not to be the case as the PV system is designed, another CR for the SDRP will be prepared.

Based on DOE's evaluation of the ETPTS influent VOC concentration and flow rate the amount and type of VOCs that will be volatilized to the air by the air stripper meets the Colorado Air Quality Control Regulations permitting exemption criteria.

Data will be collected to help optimize the effectiveness of the air stripping. If these efforts lead to the conclusion that this air stripper does not perform satisfactorily as anticipated based on experience with the MSPTS air stripper to date, the RFLMA Parties will consult on the feasibility of other approaches, such as moving the air stripper to the ETPTS effluent manhole to treat effluent water.

Performance and optimization data for the ETPTS air stripper will be reported in RFLMA quarterly and annual reports of site surveillance and maintenance activities.

Closeout of Contact Record: This CR will be closed when the ETPTS air stripper and PV system installation work is completed allowing performance testing and optimization to begin.

Resolution: Carl Spreng, CDPHE, approved this CR.

Contact Record Prepared by: Rick DiSalvo, John Boylan

Distribution:

Carl Spreng, CDPHE

Scott Surovchak, DOE

Linda Kaiser, Stoller

Rocky Flats Contact Record File