

Long Term Stewardship Site Visit Report
Commonwealth of Virginia Emergency Fuel Storage Facility
VAD98893223

Prepared by: Michael P. Cramer (3LC10) and John Hopkins (3LC20)

Site Visit: May 19, 2015

Background:

Pursuant to the Inter-Agency Cleanup Agreement, Virginia Department of Emergency Services has completed delineation of the site contamination and clean out of all 23 two-million-gallon tanks to eliminate the primary source of release. Five discrete groundwater plumes contaminated with petroleum hydrocarbons were identified at the site. Hipps Pond and portions of two influent ravines were found to be heavily contaminated with petroleum hydrocarbons in the sediments, though the surface water was only slightly contaminated through many years of natural flushing. A ***final remedy*** was selected in 1997 that included the following components:

- (1) Structural upgrade of the pond outlet dam to prevent catastrophic release of contaminated sediments to downstream sensitive wetlands;
- (2) Remediation of a sludge pit and a Cosmoline dump by excavation and removal;
- (3) Institutional controls to prevent public access to the contaminated portion of the facility by installing fencing, warning signs, and the requirement to enact deed restrictions for the northern portion of the facility to limit land use, ground water withdrawal, excavation and activities that may endanger human health.
- (4) Providing long-term monitoring data to EPA to demonstrate the progress of natural attenuation. The Final Decision was issued in 1997 and by August 2002, all remedy construction work has been completed. Interest in economic development of the land has not come to fruition. The current owner of a southern parcel has not developed the area as a golf course, and there is anecdotal evidence of its use as a seasonal hunting area for deer.
- (5) Securing man-made structures (tanks, valve pits, manways and Oil Water Separator 2). All access points will be physically secured by locking hasps, and the keys will be held in VDES (VDEM). These structures are to be inspected by state personnel on routine site visits to evaluate the conditions of the security measures.

The contaminants of concern are typical petroleum constituents: benzene, toluene xylenes and ethylbenzene in groundwater, and polycyclic aromatic hydrocarbons in soil and sediments. The

groundwater plumes are confined onsite and there is no current usage of the site groundwater. The sediments in two ravines and a pond at the facility are heavily contaminated with petroleum hydrocarbons and the aquatic habitat onsite has been impacted. However, ecological survey has not shown any evidence of offsite impact. Monitoring data of the pond discharge show that it has met state discharge permit limits. As a component of the remedy, the pond outlet dam will be structurally upgraded to permanently contain the contaminated sediments.

Current monitoring is performed annually, and includes: ground water sampling; surface water sampling; stream gauging; and dam maintenance activities.

Engineering Controls:

Existing Controls

Existing controls include a dam spillway to prevent catastrophic release of arsenic contaminated sediment. There is a fence around a portion of the facility.

Maintenance Requirements

Maintenance requirements for the fence are not spelled out in the Statement of Basis. The spillway has an inspection schedule which is outside the normal inspection schedule of the VA DEM for this kind of engineering control.

Property Boundaries and fence line boundaries

Property boundaries and fence line boundaries were not geo-referenced during this visit.

Ground Water Monitoring Wells:

Wells to be monitored as part of the ongoing monitored natural attenuation:

Area A: MW1; MW2 (Dry); MW3 (Dry); MW7; MW15; MW37 (Destroyed); TW1; HDW5; HDW6; HDW7

Area D: MW6; MW13; MW17; MW36; HDW2; HDW3; TW3

Area F: W31; MW33; MW39

Area G: MW18; MW24; MW25; MW26; HDW1 (LPH, 2014); HDW4

Progress towards meeting Ground Water Remediation Standards

Annually, ground water is tested for physical parameters including: turbidity; pH; temperature; conductivity, and dissolved oxygen.

Surface water sampling locations: SW-11; SW-11 (ref); SW-12; SW-13; SW-14; SW-15.

Surface water is sampled for physical parameters including: turbidity; pH; temperature; conductivity, and dissolved oxygen.

Surface water samples for lab based chemical testing have not been collected in some time due to low field sampling results.

Results from 2014 sampling indicate that free phase petroleum product re-occurred in monitoring well HDW1.

Surface water elevations are not measured because measuring gauges have been destroyed and not replaced.

EPA field staff field work included, among other things: ground water monitoring network visual observation, photography, and geo-referencing during this site visit.

Financial Assurance

Financial Assurance was not required in the Final Decision and Response to Comments.

Future Land Use Restrictions

To Be Determined

Current Restrictions

A fence has been installed and signs posted.

Local government agency knowledge of restrictions

VADEQ TRO had been notified of the visit, and sent a representative.

Current/Future Redevelopment

A portion of the site is reportedly under construction as a golf course. Field activities did not confirm ongoing progress toward the fulfillment of golf course development.

Site Visit:

Representatives of EPA Region III performed a site visit for the purpose of determining the current state of the Facility with respect to activities performed to meet the requirements of the final remedy. The following personnel were present during the site visit:

Michael Cramer – EPA RIII, Environmental Scientist and Site Project Manager

John Hopkins – EPA RIII, Remedial Project Manager

Erich Weissbart – EPA RIII, Environmental Scientist

Gregory F. Britt – Director, Technological Hazards Division, VDEM

Jeffrey K. Deibler, VDEQ, TRO

B. Thomas Houghton, PG, Principal, Swift Creek Environmental, Inc. – Contractor to VDEM

During the site visit on 5/19/15, many wells were observed to be either uncapped, fitted with non-functioning locks, or to have no locks. Many wells were described as 'temporary' and identified with 'TW' as part of their numbering system. These wells were observed to be two inch PVC wells with no steel outer casing. Locks on these wells, when present, were non-functioning. That is, they were for show only and provided no security against unauthorized access. A piece of the facility was sold off to a developer and another piece is (according to signage observed on the site) listed for sale by the owner of the piece which was sold to the developer. EPA representatives observed several building on the facility. Two were entered. One building looked like a storage facility or a garage. A 55 gallon drum was observed inside this building. Upon further examination, this drum was found to be partially filled. Labeling on the top cover indicated that the contents included sorbent materials (socks, or pads) generated on 6/16 from Valve Pit 17. EPA representatives took three photographs of this drum. The second building appeared to be a power plant of some sort. EPA observed what appeared to be former transformer racks inside this building. These transformer racks were unused and they appeared to have had any PCB materials removed.

The fence line was observed to be overgrown in places by native vegetation. Some portions of the fence line were observed to be overlain by portions of fallen trees. Although no observed area of the fence line was breached, maintaining fence line integrity is part of the final decision.

During the site visit, several valve pit areas were observed with the access covers bolted over the access areas to preclude entry. Access to valve pit areas to be sampled or monitored was gained by having the covers were permanently moved to allow access. Some valve pits were observed with no cover plates to preclude access. Cover plates were large, heavy steel plates. No locking hasps, as described above, were observed during the site visit.

EPA representatives noticed what appeared to be a tent at the facility. EPA's representative asked the VA DEM contractor if the facility was used for hunting. The contractor stated that the owner of the portion of the facility which was sold for development did use the area for hunting. EPA's representative observed what appeared to be several juvenile foxes at the facility.

The contractor, Swift Creek, is onsite monthly for surface water quality work under another contract to VADEM.