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Sent: Friday, October 15, 2021 3:28 PM
To: Hornosky, Tim <hornostr@dhec.sc.gov>
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Subject: FPE Edgefield - Draft Source Remediation Concept

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Tim,
As we discussed at our meeting, attached is a draft source remediation concept for your review. After you review, and appropriate pondering, we would like to schedule a call to discuss your thoughts. With your general concurrence, we would prepare a more detailed Work Plan for DHEC approval.

We have been thinking about permitting. The draft concept is essentially the same process as hog and haul (i.e. excavate, stage/stockpile, sample and load). We would also be doing each area separately and in series (i.e. not simultaneously). The land disturbance would be less than an acre for each area. We also would not think that solid amendments added at backfill would require UIC permitting. In any case, we can discuss further on our future call.

We appreciate your help on this to line out an approvable concept before we launch into work plan preparation. Feel free to call me at any time with questions.


de maximis, inc.

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DRAFT

FPE Edgefield Source Remediation Concept Proposal

Objective: Address the three major source areas to directly remove mass and reduce the overall ground water remediation timeframe.

General and Background Information

- There are three source areas identified from multiple previous investigations (see figures below)
 - Paint Bed Drying Area (PBDA)
 - Drum Burial Area (DBA)
 - Degreasing Operational Area (DOA)
- Primary chlorinated hydrocarbon compounds (CHC) in site soils is trichloroethene (TCE) and associated degradation products
- Contaminated soil volume is approximately 5,675 cubic yards (CY), and contains approximately 160 lbs of residual -CHC
- The entire source area has been dewatered
- Multiple technologies were evaluated. Excavation with on-site treatment provides greater source elimination certainty with shorter timeframe to completion compared to alternate technologies, e.g. soil flushing, SVE



- (1) Paint Bed Drying Area (PBDA)
- (2) Drum Burial Area (DBA)
- (3) Degreasing Operational Area (DOA)

- Shoring will be installed to protect building structures and for health and safety, as needed
- On-site Treatment
 - Source area soils will be treated within secondary containment areas on the former manufacturing building slab via air drying/agitation, with amendment addition as needed, e.g. lime, oxidant
 - Treatment to occur on dry sunny days
 - Batches will be kept separate from each other for the entire time excavation is active, and protected to prevent erosion and migration to adjacent areas
 - At the end of each day, batches will be piled and tarped
 - When nearing the completion of an excavation and during soil air drying/agitation, soil screening will be performed using ASTM Method D7203 bulk methodology to determine residual CHC concentrations
 - Both source and over excavation materials will be tested for potential use as backfill using EPA methods
 - Soil batches for which sampling results indicate acceptable CHC concentrations will be used for backfilling the excavation (with amendments as noted below)
 - Soil batches with higher than acceptable CHC concentrations may receive further treatment and/or be profiled and transported off-site for disposal at a permitted facility
- Backfill and Restoration
 - Upon completion of the excavation (each area) and acceptable testing of the daily batches, a long lasting and self-activating oxidant will be applied to the excavation floor. Note that the purpose of the oxidant is to treat any residual CHC in the vicinity of the bedrock interface. Following oxidant application, the excavation will be backfilled with imported clean backfill and treated excavated soils meeting acceptable CHC concentrations
 - Once backfill has been completed to pre-excavation conditions, site restoration will be performed to original conditions
- Groundwater Re-saturation
 - When restoration is completed, groundwater extraction will not resume. Groundwater will rebound to its natural level in the specific area over time
 - As the areas re-saturate, observations downgradient and down fracture will be performed during our groundwater compliance monitoring to assess the long-term effects of source remediation and oxidant addition