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KANSAS
DEPARTMENT OF HEALTH & ENVIRONMENT
BILL GRAVES, GOVERNOR
Gary R. Mitchell, Secretary

September 19, 1998

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SEP 29 1998
RCAP

Mr. Jimmy Young
Senior Environmental Specialist
Olin Corporation
P.O. Box 248, Lower River Road NW
Charleston, TN 37310

RE: Draft Comprehensive Investigation (CI) Work Plan for the Former Olin Water Services Facility
3155 Fiberglass Road, Kansas City, Wyandotte County, Kansas
EPA I.D. No. KSD000203638 (Olin Water Services/Drew Division RCRA Facility)
EPA I.D. No. (CERCLIS) KSD007151418 (Fiberglass Road CERCLA Site)

Dear Mr. Young:

The Kansas Department of Health and Environment (KDHE) has completed its review of the draft Comprehensive Investigation (CI) Work Plan for the Former Olin Water Services site. Comments are as follows:

General Comments:

1. Proposed additional monitoring well locations should probably be held in abeyance pending outcome of direct push technology (DPT) ground water samples.

2. The number of soil gas samples could be significantly reduced with additional subsurface DPT soil and/or ground water sample locations (see also Specific Comment #4 below).

3. The Fairfax Drainage District should be consulted for approval prior to initiating any intrusive borings or excavations in the Fairfax Industrial District. Please contact Mr. Steve Dailey of the FDD at (913) 321-2260.

4. Opportunities for source delineation and control should be evaluated with the proposed CI work.

6. The use of direct-push technology (Geoporbe or similar unit) should be considered for utilization site-wide to determine the horizontal and vertical extent of observed chlorinated hydrocarbon contamination of ground water. Deeper probe intervals should be proposed for at least some of the proposed shallow ground water probe locations.

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7. The work plan does not specify ground water sampling depths, although for shallow samples some variability may exist. Deeper ground water sampling intervals should be considered for a thorough vertical characterization. Deeper ground water horizons can be effectively sampled with DPT.

Specific Comments:

1. Section 4.2.1. Given the KDHE-approved RCRA closure plan and certification of clean closure, KDHE concurs with no further action for SWMU 5.1.

2. Section 4.2.1.2. No substantial documentation exists that any hazard wastes or hazardous waste constituents were disposed in the solid waste trash dumpsters. The Work Plan has satisfactorily demonstrated these points, and KDHE therefore concurs with no further action for SWMU 5.5.

3. Section 4.2.1.3. Since the Work Plan has documented storage of *de minimis* quantities of hazardous waste and hazardous waste constituents in this area, and given lack of detections in ground water of the constituent stored in this area (methylene chloride), KDHE concurs with no further action for SWMU 5.6. However, because methylene chloride was detected in SB-G8, a DPT ground water sample is recommended between SWMU 5.2 and SWMU 5.6.

4. Section 4.2.2.5. KDHE recommends that ground water grab samples be obtained and field screened instead of soil gas. Ground water samples represent much "harder" data and are subject to fewer inconsistencies in sampling method, sample analysis, etc. Fewer sample locations could also be proposed in obtaining ground water and/or subsurface soil samples.

Subsurface soil samples obtained by direct push technology (DPT) such as a Geoprobe or equivalent, have been, in our experience, more representative of source conditions and reproducible than soil gas sampling. Ground water samples obtained by DPT would also assist in locating permanent monitoring wells.

5. Section 5.4.2. Surface Soil Sampling. A core for VOC analysis can be obtained directly into a brass liner using the AMS "slambar" type system. The brass-lined core can be quickly retrieved and capped without transferring the sample and handling the sample unnecessarily. The type of samplers varies from 2"-12" in liner length. KDHE agrees with a homogenization sampling method for inorganic and other non-volatile parameters.

6. Section 5.4.3, DPT Soil Sampling. Subsurface soil samples for volatile organic compounds (VOCs) are best advanced in sealed brass liners by DPT. This minimizes sample transfer into glass containers and unnecessary handling of samples. Most KDHE-certified laboratories can handle and subsample for EPA Method 8260 analysis directly from the liner.

In the Geoprobe application, a two (2)-foot plunger-type subsurface soil sampler is opened at the target depth from the surface and advanced through the desired sample interval and extracted to the surface. The brass liners come in three (3) or four (4) sections, of which one can be broken, covered with teflon film and capped. One section could be placed directly on ice for a laboratory sample and the next higher section prepared for field analysis.

7. Section 5.4.3. It is KDHE's experience that the best method for field screening of chlorinated hydrocarbons (especially TCE/PCE) is by mobile gas chromatograph (GC) with electron capture device (ECD). Gas chromatography/mass spectrometry (GC/MS) also works well with in-field analysis of soils and ground water for chlorinated constituents.

Flame ionization device (FID) is relatively insensitive compared to mobile GC/ECD or GC/MS. For example, KDHE's Shimadzu mobile GC/ECD has a detection limit of less than 1 μg/l or 1 μg/kg for TCE/PCE. Photoionization device (PID) analysis for aromatic compounds can be run concurrently with ECD in most mobile GC heated headspace configurations.

8. Section 5.4.3. The field screening/analysis method is not discussed in detail in this section. Sample preparation, minimum calibration/standard runs and analysis should be discussed. For a heated headspace method, KDHE recommends a 30-minute minimum sample heating time at 75° on a scientific heating block prior to injecting.

9. Section 5.4.4. The probe rods should be purged of at least one liter to verify that the water being sampled is formation water from the target zone. In performing the Fiberglass Road SSI, KDHE purged two (2) liters as the alluvial aquifer recharged easily. KDHE typically utilizes either slotted prefabricated DPT rods or drop-out type screens for water sampling.

10. Section 5.4.4. Slotted rods were very successful during the Fiberglass Road SSI field work. Water sampling from DPT rods is best conducted with disposable polyethylene tubing and washable stainless steel check/ball valves. The DPT rods can be gently purged quickly without necessity of pulling rods to the surface.

11. Section 5.4.4. In this way, another deeper sample can be advanced and sampled without the necessity of pulling rods and advancing a new hole. Solinst, Keck, and others also make a small diameter water level indicator which can fit inside of DPT rods to identify the top of the water table. With slotted rods, the depth can be checked often and another rod quickly advanced if necessary.

12. Section 5.4.4. The method could perhaps indicate a consistent shallow ground water sample will be obtained within the first five feet of the ground water table as measured in the probe rods. Uniform dedicated deeper depths could be indicated (eg. 40 feet, 60 feet, etc.) given the existing information relative to the Missouri River alluvial aquifer in the area.

13. Section 5.4.4. Deeper DPT samples are recommended in select locations to also characterize ground water vertically across the site. Multiple depths can be sampled from a single DPT location using the slotted rods discussed above without having to pull rods and advance a new hole to a greater depth.

14. Section 5.4.4. A subsurface conductivity device is available for DPT which allows a continuous vertical conductivity profile to be advanced with DPT rods. This information could be of great use in correlating hydrogeologic conditions at the site to observed detections of hazardous substances in ground water.

15. Section 5.4.9. The sampling section does not specify if total or filtered metals samples (or both) will be obtained.

16. Section 5.4.11. Field duplicates should also be obtained for field analysis. A rinsate sample should also be obtained from DPT rods during at least one decontamination event.

17. Section 5.4.13. Please indicate if the DPT decontamination procedures will be identical to the drill rig decontamination or if different procedures will be used.

18. Section 8.1. Please indicate if a separate Phase II or III CI Work Plan will be generated before proceeding with additional investigation. The proposed sample locations for later phases could be submitted separately for KDHE review and discussion. The Work Plan could be set up as a "global" document which gives the general project description and proposed work, QAPP, HASP, SOPs, etc., and at each phase the phase-specific Work Plan could be submitted with the specific sample locations as well as any variations in sampling method, procedures, etc. specific to that phase of work. This Work Plan could be set up in this manner.

This approach is acceptable, however sufficient time should be factored into the schedule for KDHE review and approval of additional Work Plans for each phase of the project (minimum 30 days) before initiating field work. The Work Plan for each phase could also summarize the results of the last phase to justify additional work and sample locations.

19. Figure 4-2. The DPT ground water locations indicated are the same as for the Fiberglass Road SSI. Please indicate where the proposed DPT ground water sample locations are if different from the SSI locations. The locations proposed for deeper DPT sampling should also be indicated. This may need to be revised if soil gas sampling is limited or dropped and replaced with DPT ground water/subsurface soil sampling.

KDHE requests that a revised CI Report addressing the above comments or a written response to the above comments be submitted by December 31, 1998. Please contact me at (913) 296-8065 if you have any further questions relative to the former Olin Water Services/Drew Division facility or Fiberglass Road site or questions regarding DPT sampling techniques, procedures, equipment, etc.

Sincerely,

Randolph L. Brown
Environmental Geologist and Project Manager
Remedial Section
Bureau of Environmental Remediation

rlb

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