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Subject: Koppers- DEP review- Proposed Offsite soil sampling work plans
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Attachments: [DOC041510.pdf](#)
Importance: High

Scott-

DEP has reviewed the 2 offsite soil sampling work plans dated February 19, 2010, which were developed in response to requests for further offsite soil contaminant delineation to State SCTLs in order to facilitate design and implementation of a timely offsite soil removal action at the Koppers Superfund site. We appreciate Beazers' responsiveness to the DEP November 2009 letter which outlined the general approach that would be acceptable to the Department to accomplish these goals. DEP offers the following comments and recommendations on the proposed scopes of work:

Offsite soil sampling west of Koppers:

- The sample locations shown in Figure 1 of the scope of work are acceptable.
- We also recommend an additional 10 locations *west* of Koppers as shown on the attached hand edited figure 1. The intent of the additional recommended samples is to include *both* 0-6" and 6"-24" sampling and analysis for vertical delineation in locations closer to the western property boundary in areas with known higher contaminant levels and potential vertical migration, as well as to fill in some "gaps" on individual residential properties.
- Note that 3 of the recommended *west* locations could not be designated on the attached figure as they are located offsite to the south of SS17AA on parcels adjacent to the southwest property boundary, to complete offsite delineation in that area adjacent to on-property locations SS-1, SS-2, and SS-3.
- As noted in previous discussions, if vadose zone contamination exceeds SCTLs at depths greater than 2 feet BLS, this deeper contamination must also be vertically delineated and addressed either by removal or institutional controls. (Note the recommended additional sample location west of on-property sample SS-5 where contamination extends below 2 feet BLS.)
- Data suggests that the dioxin may exceed the SCTL for unrestricted use offsite to the *north* of SS-108 and SS-109. The south side of the residential properties abutting Koppers at those locations should be sampled.
- The work plan proposes to initially analyze 6"-24" samples from 5 locations as designated in the original figure 1 and to hold the remaining 6"-24" samples pending initial results. Up to 10 contingent 6"-24" samples analyses are proposed. We request the inclusion of the additional 6"-24" sample analyses recommended above by DEP in the initial analysis. And that the work plan retain the option for 10 additional contingent 6"-24" samples analyses, with specific samples to be determined in consult with both EPA and DEP. We understand that the hope is that a review of the data will indicate a trend that confirms the limited depth of contamination such that minimal additional vertical confirmation sampling will be necessary. This evaluation requires an adequate number and distribution

of sample points, the adequacy of which can only be determined when the actual data becomes available.

Offsite soil sampling South, East, Northeast:

- The 8 proposed ROW locations to the east and south of the Koppers property in figure 1 are acceptable as initial offsite sampling locations. However, as discussed below, we are concerned with the sparse density of the samples and caution that the limited data will not be adequate to conclude that there are no offsite SCTL exceedances of site related contaminants.
- The current work plan proposes analysis of 0-6" samples only. While it seems unlikely that windblown transport could result in deeper contamination, analysis of 6"-24" samples will be required for vertical delineation of observed contamination per Chapter 62-780.
- Note that most of the proposed locations are at least 100 feet away from the Koppers property boundary(s) along which significant concentrations of site related contamination have been detected. The absence of contamination at the proposed ROW locations will not be adequate to conclude that site related contamination has not migrated off the Koppers property into areas closer to the site. Should ROW sample results indicate that SCTLs are met at those locations, step back sampling in locations closer to the Koppers site will be necessary to fully evaluate offsite conditions. Conversely, should SCTLs be exceeded at the proposed ROW locations, further step out sampling will be necessary to determine the extent of site related contamination and/or support an evaluation of background conditions.
- In addition to the proposed locations we recommend the following:
 - 1) on the north-south street closest to the SE corner of Koppers
 - 2) an additional sample location south of 23rd Avenue between the 2 sampling points proposed in the work plan (between NW 3rd Terrace and NW 2nd St)
 - 3) northeast of Koppers. Soil contamination remains undelineated offsite to *north/north east* of SS-104 (dioxin @170,635 ppt, cPAHs @ 38,719 ug/kg and arsenic @ 43 mg/kg). Sampling should be proposed. A minimum of 2 locations should be sampled to begin offsite delineation in this area and include analyses for As, Hg, PCP, PAHs and TCDD (dioxin). We recommend that in addition to 0-6" samples, 6-24" samples should be collected and held for analysis, particularly if 0-6" soils appear disturbed (not representative) or 0-6" sample results show concentrations above SCTLs for unrestricted use.

Background sampling:

Given the distant locations of the 4 proposed background sampling areas, it is unclear how this data will be useful in evaluating if natural or urban background levels have contributed to the observed contaminant distribution and concentrations in the immediate area of the Koppers site. Current offsite data has confirmed dioxin at concentrations significantly below the SCTL for unrestricted use in some areas next to the site. This along with the results of the previous background study conducted by Beazer/AMEC suggest that dioxin soil contamination proximal to Koppers is site related and limited in extent. It would seem more prudent to focus on delineation.

If background concentrations are affecting delineation of soil contamination, continued offsite delineation efforts and concurrent evaluation of contaminant trends proximal to the site would provide more useful data.

Thank you for the opportunity to comment on the proposed offsite soil sampling. I can be reached at 850-245-8969 if you have any questions or would like to discuss further.

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