



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**REGION 4**

**61 Forsyth Street**

**Atlanta, Georgia 30303-3104**

April 10, 2017

Mr. Wayne Reiber, P.E.  
Manager  
Environmental Assessment and Remediation  
Corporate Safety, Health and Environmental Affairs  
Cabot Corporation  
Two Seaport Lane, Suite 1300  
Boston, MA 02210

Dear Mr. Reiber:

Thank you for the draft Cabot Carbon Supplemental Remedial Investigation/Focused Feasibility Study (SRI/FFS) dated January 31, 2017. EPA conditional approves the SRI/FFS with the following comments/requirements:

1. The presence of certain COCs in groundwater at the Cabot Carbon site that the SRI/FFS attributes completely to operations at (or migration from) the adjacent Koppers Site are actually the result of a co-mingled groundwater plume coming from several sources in the area of the combined Cabot/Koppers site. There were historical operations at the Cabot Carbon Site that included the use of fuel oil and gasoline, which contain naphthalene and benzene; also naphthalene and benzene have been detected in soil samples collected at the Cabot Site. Specifically, the shallow soil samples result (SRI/FFS, Table 3.2) from the Cabot Site that show both benzene and naphthalene present in shallow soil samples, which is indicative of this contamination coming from historical on-site operations. The soil sample analysis demonstrates that shallow soil samples from the Cabot Site contain up to 32,000 µg/kg benzene (SB-4) and 64,000 µg/kg naphthalene, which exceed the Florida Soil Cleanup Target Levels (SCTLs) for direct exposure and for leaching to groundwater. The SCTLs for leaching to groundwater are 7 and 1,200 µg/kg for benzene and naphthalene, respectively. Approximately 74 percent of the 90 soil samples analyzed for benzene in Table 3.2 had detection limits and/or concentrations above the SCTL leaching

to groundwater standard and approximately 39 percent of the samples had naphthalene concentrations that exceed the SCTL soil to groundwater leaching standard.

2. Weathered tar samples analyzed by Cabot (draft SRI/FFS, Table 3.4) demonstrate that both naphthalene and benzene are associated with tar samples sourced from the Cabot Site. Recent analyses of tar samples collected from the Cabot Site contain up to 12 µg/kg benzene and 40 µg/kg naphthalene. Given that these concentrations are associated with highly weathered samples (historical Cabot Site operations ceased 50 years ago), this indicates that the concentrations of these COCs associated with fresh tar samples deposited on the Cabot Site during historical operations would have been higher. Again, the presence of these constituents in tar demonstrates that historical Cabot Site operations likely contributed to the benzene and naphthalene dissolved groundwater contamination on the Cabot site.
3. The energy source used to power the retort operation at the Cabot Site was fuel oil and there is historical evidence of large quantities of “Bunker C” (i.e., No. 5 or No. 6 fuel oil) stored onsite during historical Cabot Site operations. Figure 1.3 in the Draft SRI/FFS shows the location of some fuel-oil tanks in the southwest corner of the Cabot property. These fuel-oil sources likely contained naphthalene and BETX components. See, e.g. Irwin, R.J. *Environmental Contaminants Encyclopedia – Fuel Oil Number 6 Entry*, July 1, 1997 (fuel oil samples containing as high as 4,000 mg/kg naphthalene and stating “Fuel Oil numbers 4, 5, and 6 are commonly known as “residual oils” . . . Molecular composition includes asphaltenes, polar aromatics, naphthalene aromatics . . . Dimethyl and trimethyl naphthalenes are important components of Fuel No. 6”). Figure 1.3 also shows that USTs for the storage of diesel and gasoline products on the south side of the Cabot Site adjacent to the feature labeled “Office Area”. Similarly, a feature is labeled USTs in an area adjacent to and connecting to the feature labeled “Garage”. It would be reasonable to assume that USTs associated with the garage were likely diesel and/or gasoline tanks and naphthalene and BTEX would be associated with these fuels. In addition, Figure 1.3 contains a number of features labeled “Aboveground Storage Tank Area”, “LE Tank”, and “Storage Tanks”. It is unclear what was stored in these tanks, because the labels do not clearly indicate the products stored. This evidence of on-site sources of BTEX constituents associated with historical operations at the Cabot Site refutes the statement that the Koppers Site was a likely source of all of the naphthalene and BTEX contamination on the Cabot Site.
4. There is significant upper Hawthorn groundwater contamination in the Former Processing and Storage Area with respect to both GCTLs and MCLs. In particular, Figure 3.23 indicates that the three (Hawthorn) sample depths for WS-31 represent groundwater impacted, and partially impacted by a Cabot Carbon source. A review of FFS Table 3.5 indicates WS-31 samples with above GCTL or MCL concentrations of benzene (surficial aquifer and three upper Hawthorn monitoring intervals); toluene (surficial aquifer); 2,4-dimethylphenol (surficial aquifer and two uppermost upper Hawthorn intervals); 2-methylnaphthalene (surficial aquifer); 3 and/or 4-methylphenol (uppermost and lowermost



upper Hawthorn monitoring intervals); and naphthalene (surficial aquifer and the two uppermost upper Hawthorn monitoring intervals). Approximately 140 feet north of WS-31, samples from the WS-12 location show generally similar upper Hawthorn contamination that the SRI/FFS attributes to a comingled pine tar and creosote source. There is also some groundwater contamination attributable to this area that is downgradient of the Former Processing and Storage Area (methylphenol compounds in the surficial aquifer at WS-25). Although this Former Processing Area groundwater contamination is minor relative to contamination associated with the former Cabot Carbon lagoons, it is nevertheless of concern and additional remedial action is needed for this part of the Site.

5. To address the areas of elevated groundwater contamination in the vadose zone and surficial aquifer in these southern areas of the Cabot Carbon Site, the SRI/FFS has been modified to include remedial action in the form of remedy evaluation/optimization procedure for the existing shallow interceptor trench remedy. This remedy evaluation/optimization will consist of additional proof that is acceptable to EPA of the long-term effectiveness of the existing interceptor trench for the surficial aquifer as well as contaminant characterizing and any remedial actions needed to address all Cabot related upper and lower Hawthorn groundwater contamination in the Former Processing and Storage Area. The purpose of this remedy optimization effort in the Former Processing and Storage Area and investigation of vapor intrusion risk inside the currently unoccupied former Winn-Dixie building is to assess whether additional actions need to be implemented at source areas that will result in groundwater cleanup goals being met in the surficial aquifer faster than the continued operation of the groundwater interceptor trench alone. The remedy optimization efforts must also address areas of Cabot related elevated groundwater contamination in the upper and lower Hawthorn in the Former Processing and Storage Area. The remedy evaluation/optimization evaluation should address the areas to the south east, specifically the northeastern section of the shopping complex (just east of the former Winn Dixie) and the area just north of the automobile dealership (i.e., defined by well points WS-27 and WS-28). Assessment associated with the optimization evaluation should include additional sampling both of vadose zone and exposed soils where feasible in the Former Processing and Storage Area to support evaluation of potential sources. The remedy evaluation/optimization plan will be conducted by Cabot with EPA approval on a parallel track with the pre-design field activities associated with the former Cabot lagoons remedy.
6. All of the contamination associated with the former Cabot lagoons must be addressed by the proposed contaminant containment remedy for the lagoon areas and pump and treat for contaminated groundwater inside and outside of the containment remedy areas. EPA agrees with the concept of the containment remedy, but not with any specific containment wall configuration contained in the SRI/FFS report. This configuration should include all of the areas of gross contamination associated with the three former Cabot wastewater lagoons. The specific configuration of the containment remedy will be determined in the remedial design in coordination with the stormwater management considerations for the

Cabot site. Also, the bench testing of the slurry wall material should consider the potential leachability of any contaminated soils used for wall construction by SPLP testing of the formula mix.

7. EPA does not concur with the use of ATSDR MRLs for 2-Methyphenol and 3-Methyphenol. Since IRIS has recommended RfDs for 2-Methyphenol and 3-Methyphenol (IRIS 2017), EPA requires that these RfDs be used and the subsequent changes be made to the SRI/FFS.
8. Please change the ARARs Tables 4.1, 4.2, 4.3 to include the following -
  - Table 4.2, Action Specific - Chapter 62-780 ICs- Updated IC Guidance is dated July 2016
  - Table 4.2, Action Specific- Chapter 62-701- Include for requirements for cap design and construction
  - Table 4.3- Chemical Specific- Chapter 62-777, GCTL/SCTLs are relevant and appropriate per EPA
  - ARARs cited in 2011 AROD apply to site
9. The following corrections should be made to CUGs for Groundwater COCs currently in Table 4.5:

*Groundwater COCs / CUGs / Reference*

○ 2-Methylphenol	32 ug/l	Alt-GCTL
○ 3-Methylphenol	32 ug/l	Alt-GCTL
○ 4-Methylphenol	640 ug/l	Alt-GCTL
○ Camphor	230 ug/l	Alt-GCTL
○ Borneol	230 ug/l	Alt-GCTL

10. The additional Groundwater COCs and related CUGs below should be included in Table 4.5:

*Groundwater COCs /CUGs (health based/Non-health based) / Reference / Max observed*

• SVOCs-			
○ 2,4-Dinitrotoluene	0.5 ug/l	GCTL/carcinogen	120 ug/l
○ 2,6-Dinitrotoluene	0.05 ug/l	GCTL/carcinogen	170 ug/l
○ 4-Chloroaniline	28 ug/l	GCTL/systemic	170 ug/l
○ Acenaphthene	260 ug/l	1990 ROD	380 ug/l
○ Acenaphthylene	210 ug/l	GCTL/systemic	260 ug/l
○ Benzo(a)pyrene	0.20 ug/l	GCTL/carcinogen	0.25 ug/l
○ Biphenyl	0.83 / 0.5 ug/l	EPA RSL	43 ug/l
○ Nitrobenzene	3.5 ug/l	GCTL/systemic	25 ug/l
• VOCs-			
○ Isopropylbenzene	450 ug/l	DEP MCL	130 ug/l
○ Methyl Acetate	20,000 ug/l	DEP MCL	7,300 ug/l
• Total Xylenes	10,000 ug/l	DEP MCL	3,000 ug/l

In summary, EPA's main concern continues to be that the SRI/FFS still contains language that attempts to relieve Cabot of any responsibility to remediate some of the groundwater contaminants attributable to its historic Site operations, specifically BTEX and naphthalene. Please be aware that EPA does not entirely accept the COC attribution theories in the SRI/FFS that relieve Cabot of all responsibility for the BTEX and naphthalene contamination at the Cabot site. EPA will not approve a remedial design approach that does not address all Cabot site contaminants, including site-related BTEX and naphthalene contamination.

Please submit a draft Remedial Design Work Plan for the chosen future remedy as well as a proposed remedy optimization plan for the existing remedy to EPA within sixty (60) days of the date of this letter. We appreciate Cabot Carbon's efforts and cooperation in putting forward the SRI/FFS and I look forward to working with you on moving forward with the site RD/RA; please feel free to contact me at [kestle.rusty@epa.gov](mailto:kestle.rusty@epa.gov) or at (404) 562-8819.

Sincerely,

A handwritten signature in blue ink, appearing to read 'W. Russell Kestle, Jr.' with a stylized flourish at the end.

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