



**ALACHUA COUNTY
ENVIRONMENTAL PROTECTION DEPARTMENT**

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July 3, 2001

Mr. Maher Budeir
Remedial Project Manager
United States Environmental Protection Agency
61 Forsyth Street S.W.
Atlanta, GA 30303

**RE: Cabot Carbon / Koppers Superfund Site
Gainesville, Florida
Record of Decision Amendment**

The Alachua County Environmental Protection Department (ACEPD) has reviewed the following documents associated with the proposed record of decision (ROD) amendment for the above referenced superfund site:

1. Cabot Carbon / Koppers Superfund Site. Revised Supplemental Feasibility Study (September 1999).
2. Cabot Carbon / Koppers Superfund Site. Five-Year Review Report (September 2000).
3. Cabot Carbon / Koppers Superfund Site. Revised Supplemental Feasibility Study Addendum (April 2001).
4. Cabot Carbon / Koppers Superfund Site. Superfund Proposed Plan Fact Sheet (April 2001).

Based on the available information, attached please find ACEPD comments. If you have any questions please contact me at (352) 264-6801.

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BOARD OF CO. COMMISSIONERS



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Thank you for your time and attention in this matter.

Sincerely,

A handwritten signature in cursive script, appearing to read "Chris Bird".

Chris Bird
Director

CB/ao/rh

cc: Board of County Commissioners
Randall Reid, County Manager
Dave Wagner, County Attorney
Tom Bussing, Gainesville City Mayor
Wayne Bowers, Gainesville City Manager
Tom Belcoure, ACPHU
Tracie Vaught, FDEP
Mike Fitzsimmons, FDEP
David Richardson, GRU

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ACEPD Comments on ROD Amendment for Cabot Carbon / Koppers Superfund Site

1. Springstead and Hogtown Creek

Background

One of the tasks covered under the September 1990 ROD for the Cabot Carbon / Koppers Superfund Site was to conduct confirmatory sampling on Springstead Creek. Results of the sampling are briefly summarized in the Five-Year Review Report (September 2000). Regarding human risks, the report acknowledges the presence of contaminated sediments at the creek (Figure 1) and the potential for contact with human receptors, but concludes that "both the carcinogenic and noncarcinogenic human health risk in the surface water (except a slight PCP exceedance) and sediments were within or below acceptable risk ranges." Regarding environmental risks, the report indicates that "the toxicity quotients indicate that aquatic organisms may be adversely impacted due to arsenic in Springstead Creek, chromium in the North Main Street ditch and PCP and PAHs in both Ditch and Creek". The report did not take into consideration aesthetic impacts to the Creek due to the contaminated sediments.

Since 1994, ACEPD has received a number of complaints regarding the presence of contaminated sediments at Springstead and Hogtown Creek, a chronology of the incidents and ACEPD response actions is presented in below. Figure 3 shows the approximate location of the sampling conducted by ACEPD. Analytical results are shown in Table 1.

- June 13, 1994, Citizen complaint received regarding a "tar-like" material in Springstead Creek which the individual found while looking for fossils in the creek.
- June 15, 1994, "tar-like" material observed in Springstead Creek was sampled by ACEPD staff for analyses of volatile organic compounds (VOCs).
- September 7, 1994, "tar-like" material observed in Springstead Creek was sampled by ACEPD staff for analyses of semi-volatile or base neutral acid extractable compounds (BNAEs).
- October 25, 1994, results of initial sampling conducted in June and September sent to USEPA, Cabot Corp., and Beazer East, Inc.
- August and September 1995, additional samples of the "tar-like" material located and sampled in Springstead Creek. Same materials first observed and sampled in Hogtown Creek downstream of the confluence with Springstead Creek. ACEPD staff collected samples for analysis of VOCs, BNAEs, and metals (copper, chromium, and arsenic).

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- November 16, 1995, summarized sediment data from previous sampling events transmitted to Florida DHRS Environmental Toxicology staff.
- September and October 1996, additional samples of the "tar-like" material located and sampled in Springstead Creek and Hogtown Creek. ACEPD staff collected samples for analysis of VOCs, BNAEs, and metals (copper, chromium, and arsenic).
- September 1999, resampled "tar-like" material located and sampled in Springstead Creek and Hogtown Creek. ACEPD staff collected samples of sediment in the sump for analysis of VOCs and BNAEs.
- February 11, 2000, Florida Department of Environmental Protection (FDEP) staff reports that data from Springstead Creek have five constituents that violate current leachability criteria (62-777 FAC): ethylbenzene, naphthalene, toluene, 1,2,4-trimethylbenzene, and xylenes.
- October 23, 2000, ACEPD staff located a sump in the Hogtown Creek floodplain on property previously owned by Guy Cleveland. The sump had been used in the 1960's to collect discharges that entered the stream system from construction activities on the former Cabot property. ACEPD staff collected samples of sediment in the sump for analysis of VOCs and BNAEs.

Recommendations

Based on the above referenced information, ACEPD recommends that additional assessment and the removal of contaminated sediments be conducted at Springstead and Hogtown Creeks. An initial assessment of the location and volume of material present in the streambed is needed. The assessment plan should document the amount and location of the existing visibly contaminated materials and assess the horizontal and vertical extent of buried contaminated materials. ACEPD is confident that an assessment can be conducted with minimal disturbance to the creek. Any and all contaminated sediment removal activities should be conducted in a manner that minimizes disturbance of the natural ecosystem of Springstead and Hogtown creeks. In addition to the sump located in the floodplain of Hogtown Creek, which was found by ACEPD staff, a sump was reportedly dug in the vicinity of the City of Gainesville Public Works Compound on Springstead Creek. ACEPD recommends that this second sump should be located as part of the assessment activities and any contaminated materials remaining in both former sumps should be assessed and removed.

All federal, state, and local permits will need to be obtained before sediment removal activities are conducted. The assessment plan should address specific sedimentation and contaminant control measures to assure that the removal of the contaminated sediments does not degrade surface water quality. Since in most cases, the property owners along the creek own to the center line of the creek, permission should be

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obtained from all property owners on both sides of the creeks before conducting assessment and remedial activities. ACEPD requests the opportunity to comment on all proposed assessment and/or remedial plans.

2. Hawthorn Group Materials

Background

EPA's preferred alternative (Alternative 7-F) as well as all other alternatives presented in the feasibility study rely on total or partial onsite containment of the soil and groundwater contaminated by the chemicals of concern (COC). A common assumption in all the remedial alternatives is the presence of an effective clay barrier in the upper Hawthorn Group materials throughout the site or at least under the impacted areas. The Hawthorn Group is a complex unit consisting primarily of siliciclastic (sands and clays) and carbonate materials with varying amounts of phosphate. These sediments may act as confining units or serve as secondary artesian aquifer units, depending on the lithology.

There has been little site specific information on the Hawthorn Group obtained during assessments of the Cabot Carbon/Koppers site. The only intermediate wells on the site, excluding one former intermediate production well on the Cabot Carbon portion of the site, were installed in 1985 by IT Corp. Based on the limited lithologic information obtained during the investigation conducted by IT Corp. in 1985, ACEPD has concerns about the integrity of the Hawthorn Group as a barrier to the vertical migration of contaminants. Based on the available geologic information from the three wells on the Cabot Carbon/Koppers site, ACEPD believes additional assessment of the Hawthorn Group materials is of utmost importance in determining its potential usefulness as a barrier to downward migration of contaminants on the site. The Hawthorn Group materials may not provide an adequate, uniform low permeability layer to effectively stop the migration of contaminants into the intermediate aquifer. The sand and carbonate materials present along with the clays may more readily transmit water.

Lithologic descriptions from the construction of intermediate aquifer wells drilled in August and September 1985 show varying amounts of sands, phosphatic materials, limestone, and sandstone to be present along with clay materials in the upper Hawthorn Group. The top of the Hawthorn Group, as identified by a strong peak on the natural gamma ray geophysical log presented in the IT Corp. report, shown the Hawthorn Group to be present at 25 feet bls in ITF-1, 28 feet bls in ITF-2, and 33 feet bls in ITF-3. This correlates well with the lithologic descriptions. The following descriptions exemplify the heterogeneous nature of the Hawthorn Group materials at the site. It should be noted, that these three wells provide general water quality and lithologic information, as they are not located in the impacted areas on the Koppers portion of the site.

- The lithologic description for intermediate aquifer well ITF-1 (on the southwest

corner of the Koppers Property) reported sand from 0-20 feet below land surface (bls). From 20-80 feet bls, the materials reportedly encountered included clays, phosphatic materials, limestone, and sand. The clays were reportedly interbedded with thin lenses of phosphatic material, limestone, and sand, and contained a hard limestone layer from 74-80 feet bls.

- In the drilling of ITF-2 (on the north eastern part of the Koppers property), Hawthorn Group clay materials were first reported at 20 feet bls with sands at 25 feet bls and a hard lense of limestone at 33 feet below land surface. The lithology for ITF -2 was described as a clay with thin lenses limestone/sandstone and phosphatic materials, as found at ITF-1, with limestone/sandstone layers reported at 69, 76-79, and 81 feet bls.
- Well ITF-3 (located in the central portion of the Cabot Carbon portion of the site) indicates the top of the Hawthorn Group at 27 feet bls, with minor sand and some limestone/sandstone lenses from 47-50 feet below land surface. Hard limestone was reportedly encountered from 76-81 feet bls.

As stated at the Public Meeting conducted in Alachua County on May 21, 2000, EPA intends to conduct extensive testing of the Hawthorne Group materials and groundwater monitoring of the intermediate aquifer as part of the design and implementation of the selected ROD.

Recommendations

ACEPD recommends that additional testing of the Hawthorne Group materials and intermediate aquifer groundwater monitoring be implemented by EPA. ACEPD also requests the opportunity to provide EPA input on the effectiveness of the Hawthorn Group materials based on the results of the testing and monitoring. Additionally, ACEPD recommends that EPA consider the evaluation of a contingency alternative in the case that the Hawthorn Group materials under the site are proven to be unsuitable for containment purposes.

3. Intermediate Aquifer Contamination

Background

ACEPD has concerns about the potential that intermediate aquifer (IA), or intermediate aquifer system contamination exists at the Cabot Carbon/Koppers site. To date, there has been only minimal monitoring of the IA on the site. Three IA wells were installed during the assessment conducted by IT Corp. in 1985. None of the existing IA wells are located near the impacted areas on the Koppers portion of the site.

- The Hawthorne Group materials consist of a heterogeneous deposit of sands, clays, carbonates, and phosphates. Within the Hawthorne Group there are clay and sandy clay confining units. There are other units with varying amounts of

sand, clay, carbonate, and phosphate, that are more permeable and may contain intermediate, or secondary artesian, aquifer units. Typically, there may be several productive units within the Hawthorne Group at an individual location that will produce enough water for individual irrigation and/or potable supply wells.

- In the northern area of Gainesville, the upper unit of the Hawthorn Group usually consists of clay with varying amounts of quartz sand and phosphate. Except for the limited lithologic information obtained during construction of the three onsite IA wells, no site specific information is available on the thickness, composition, permeability, or the lateral continuity of the upper clays (or any materials) in the Hawthorn Group. The lithologic information from the construction of these wells does not adequately characterize the upper Hawthorn Group materials on the site.
- The site is located within the one-foot drawdown contour of the Murphree Wellfield and is in the tertiary wellfield protection zone. Aquifer tests conducted 1992, at the Murphree Wellfield have shown that water levels in the IA respond (drop) with increased pumpage of the Floridan aquifer wells at the Murphree Wellfield. The Murphree Wellfield, which supplies water to the entire Gainesville urban area, is located approximately 2 miles northeast of the site.
- On April 17, 1999, ACEPD staff received a complaint regarding "odors of creosote" observed by a resident when a well drilling contractor installed an irrigation well on an adjacent property which abuts the west fence line of the Koppers facility. The resident stated that the odors were observed at depths between 70 and 90 feet below land surface (bls). The ACEPD was not contacted until the well driller had set casing to a depth of 150-160 feet bls. Samples obtained by ACEPD staff after completion of the well did not indicate the presence of VOCs (EPA Method 8260) or semi-volatiles (EPA Method 8270). However, this indicates the potential for the presence of IA contamination on the western side of the Cabot Carbon/Koppers site.
- On April 26, 2000, when a contractor for the Cabot Corp. was preparing to abandon the former production wells at the site, gas was observed flowing upward out of one of the wells. A gas sample was obtained and analyzed. The results of analysis showed the sample to contain hydrocarbons and pinenes, an indication that contaminants may have been migrating downward, escaping into the air through the well. Water samples from the production wells showed extremely low concentrations of organic constituents.

Recommendations

ACEPD recommends additional monitoring of the IA on the site, specifically near the impacted areas. Given the presence of sands and carbonates higher in the section than the zone of the IA currently monitored at approximately 75-80 feet bls, there may be existing IA contamination on the site that has not been located. The materials

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between the base of the surficial and the current unit being monitored in the intermediate aquifer (approximately 75-80 feet bls) should be assessed for contamination. The ACEPD requests the opportunity to comment on all proposed assessment plans, including plans for soil borings/well construction to further assess intermediate aquifer impacts. Additionally, ACEPD recommends that available historical records be reviewed in order to determine if any former production wells are still onsite. Such wells represent a potential conduit for contaminants into the deeper aquifers and should be properly abandoned.

4. Bioremediation

In the feasibility study, alternatives involving bioremediation (4,6,8,9) were identified as not highly rated due to questions regarding their effectiveness for treating the COC, however these alternatives have the potential to reduce volume of COC onsite and could be implemented on a section of the site, on a pilot study scale, at the same time that EPA's preferred alternative (Alternative 7-F) is being designed. The information gathered from this pilot study could be essential if the testing and monitoring discussed in item 2 proves that the site Hawthorn Group material under the site is not an acceptable confining layer.

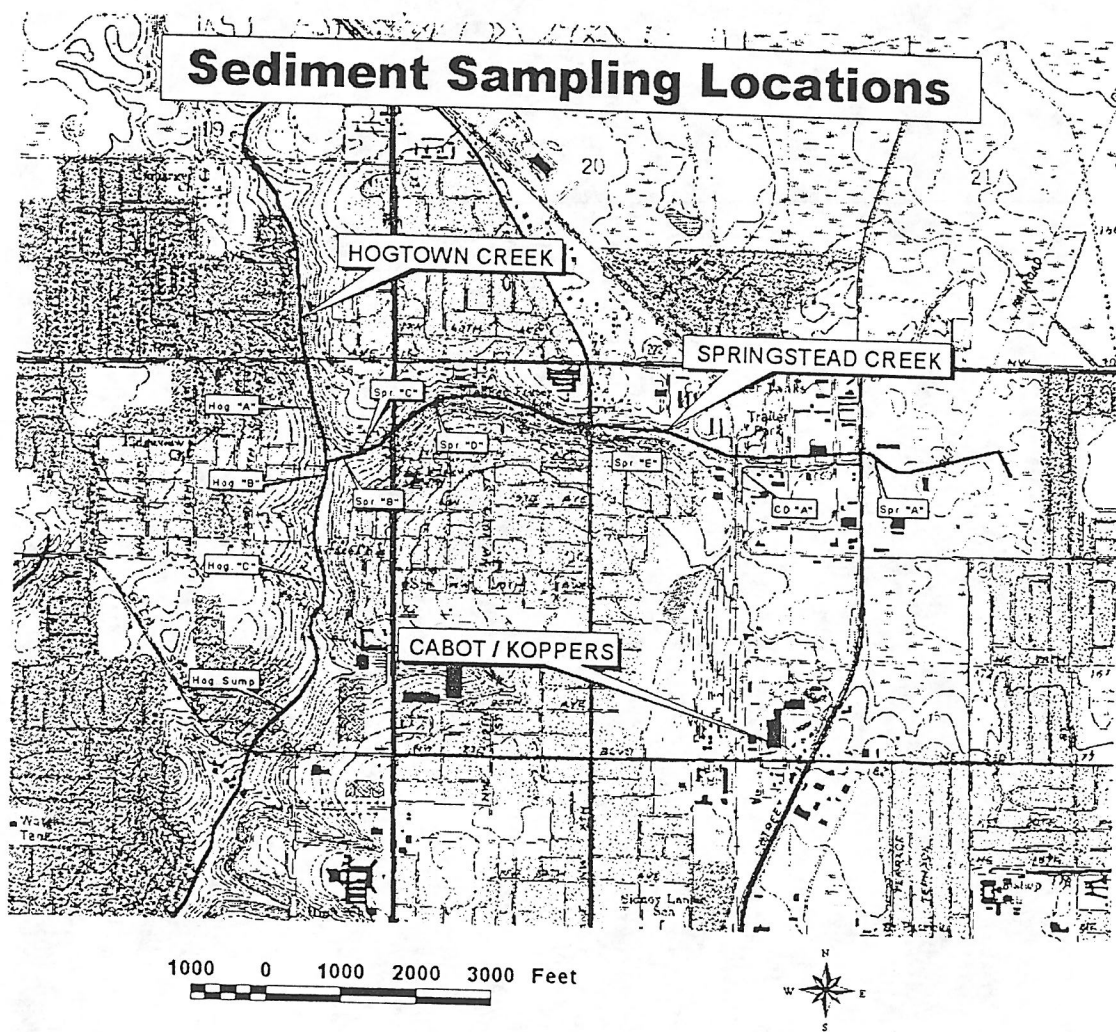
5. Future Land Use

EPA's preferred alternative (Alternative 7-F) as well as all other alternatives presented in the feasibility study rely on total or partial onsite containment of the soil and groundwater contaminated by the chemicals of concern (COC) and the use of institutional controls to limit human exposure. This alternative will limit any future non-industrial development on the site. Future site development will be limited not only by the remaining onsite contamination, but also by the institutional controls, which will act as a deterrent for non-industrial uses. The ROD should be set up in such a way as to avoid this situation by requiring the responsible party to conduct additional cleanup triggered by land use changes.

FIGURE 1



FIGURE 2



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ALACHUA COUNTY EPD HOGTOWN CREEK AND SPRINGSTEAD CREEK SEDIMENT SAMPLING RESULTS SUMMARY, 1994-2000

Volatile Organic Compounds (VOCs)

Sample Site	Spr. "B"/"C"	Hog. "C"	Spr. "C"	Spr. "C" dupe	Spr. "B"	Hog. "C"	Spr. "C"	Spr. "D"	Spr. "C"	Hog. "B"	Spr. "C"	Hog. Sump
Date	6/29/94	9/29/95	9/29/95	9/29/95	9/29/95	9/23/96	9/23/96	9/23/96	9/23/96	9/24/99	9/24/99	9/28/00
Lab	OAL	PC&B	PC&B	PC&B	PC&B	PPB	PPB	PPB	PPB	PC&B	PC&B	STL
Concentration Units	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
1,2-Dibromomethane	ND*	134	258	404	334	ND	ND	ND	ND	ND	ND	NR**
Ethylbenzene	19,000	ND	1,070	1,290	1,630	15	134,000	22,600	7,26	15	75,500	ND***
Styrene	8,700	ND	ND	ND	ND	ND	ND	4,430	ND	ND	ND	ND***
Toluene	32,000	106	128	436	5,860	30	2,160	31,300	1.43	9	150,000	ND***
Xylenes	85,000	2,000	7,880	5,500	19,340	1,044	33,500	66,500	16.7	86	219,500	ND***

TABLE 1

Semi-volatiles (base neutral acid extractables, BNAEs)

Site	Spr. #2	Spr. #2/Spr. "C"	Hog. "C"	Spr. "C"	Spr. "D"	Hog. "B"	Hog. "C"	Spr. #2/Spr. "C"	Spr. "D"	Hog. "B"	Spr. #2/Spr. "C"	Hog. Sump #
Date	9/7/94	8/16/95	8/27/95	8/27/95	8/27/95	9/23/96	9/23/96	9/23/96	9/23/96	9/24/99	9/24/99	9/28/00
Lab	OAL	OAL	UFEES	UFEES	UFEES	PPB	PPB	PPB	PPB	PC&B	PC&B	STL
Concentration Units	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg	ug/Kg
Acenaphthene	19,000	21,000	2,017	461	270.5	ND	13,200	14,850	ND	ND	11,550	ND
Acenaphthylene	31,000	36,000	ND	ND	ND	ND	37,950	59,400	ND	ND	23,100	ND
Anthracene	18,000	21,000	3,187	1,664.5	1201.5	ND	ND	ND	ND	ND	9,900	1,400
Benzo(a)anthracene	11,000	8,900	49	ND	ND	ND	ND	ND	ND	ND	ND	600
Benzo(a)pyrene	ND	ND	71	ND	57	ND	ND	ND	ND	ND	ND	2,000
Benzo(b)fluoranthene	ND	ND	ND	114	ND	ND	ND	ND	ND	ND	ND	540
Bis(2-ethylhexyl) phthalate	ND	ND	ND	ND	211.5	ND	ND	ND	ND	ND	ND	NA ##
Chrysene	12,000	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,600
Dibenz(a,h)anthracene	ND	ND	490	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-butyl phthalate	ND	ND	ND	647	ND	ND	ND	ND	ND	ND	ND	NA
Dibenzofuran	21,000	22,000	ND	ND	ND	ND	ND	24,750	ND	ND	57,750	NA
2,4-Dimethylphenol	41,000	27,000	ND	75	143	ND	ND	462,000	18,150	ND	ND	6,000
Fluorene	25,000	25,000	1,782	490	304	ND	ND	16,500	ND	ND	16,500	790
2-Methylnaphthalene	80,000	96,000	1,285	ND	ND	ND	42,900	59,400	ND	ND	51,150	2,100
4-Methylphenol	9,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Naphthalene	61,000	77,000	ND	529.5	392	ND	33,000	62,700	ND	ND	39,600	690
Phenanthrene	140,000	120,000	1,947.5	1,009	726.5	132,000	64,350	66,000	9,900	46,200	52,800	3,600
Pyrene	26,000	20,000	1,739	325	257	ND	9,900	9,900	ND	ND	ND	4,600

Metals (arsenic, chromium, and copper only)

Site	Spr. "A"	Spr. "B"	Spr. "C"	Spr. "D"	Spr. "E"	Spr. "E" dupe	Hog. "A"	Hog. "B"	Hog. "C"	CD "A"	Spr. "C"	Spr. "D"
Date	10/19/95	10/19/95	10/19/95	10/19/95	10/19/95	10/19/95	10/19/95	10/19/95	10/19/95	10/19/95	10/23/96	10/23/96
Lab	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB	PPB
Concentration Units	ug/g	ug/g	ug/g	ug/g	ug/g	ug/g	ug/g	ug/g	ug/g	ug/g	ug/g	ug/g
Arsenic	0.7	1	0.5	0.4	2.8	4.1	0.7	0.5	0.7	0.3	0.638	0.638
Chromium	7.3	6	3.2	1.7	11.8	13.9	5.3	2.9	4.8	1.2	2.8	2.8
Copper	0.7	3.3	26.1	37	7.2	9.2	0.8	27.5	19.8	0.8	33.4	33.4

* ND=not detectable
 ** NR=not reported
 *** Sample analyzed outside holding time.
 # Sample analyzed only for polynuclear aromatic hydrocarbons (PAHs).
 ## NA=not analyzed

