Summary Report -- Supplemental Sediment Survey for Tarry Deposits in Springstead and Hogtown Creeks Downstream of the Cabot-Koppers Superfund Site

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This report summarizes the results of a supplemental creek sediment survey conducted in October 2010 by ACEPD to gather additional information on the extent and depth of tarry contamination in the sediments of Springstead and Hogtown Creeks downstream of the Cabot-Koppers Superfund Site. This survey was conducted as a supplement to an earlier sediment survey performed by ACEPD in December 2008 and subsequent creek investigations conducted in May 2010, July 2010 and September 2010.

The results of the December 2008 survey were reported in the ACEPD report to USEPA Region 4 titled "Sediment Quality in Springstead and Hogtown Creeks near the Cabot Koppers Superfund Site" dated August 2009. This initial December 2008 investigation focused on areas of obvious deposition such as point and mid channel bars. Subsequent to this initial investigation, ACEPD received information from citizens about other potential areas of tarry deposits. As a result, additional reconnaissance activities were undertaken in July 2009 and May 2010 on Hogtown Creek downstream of the NW 29th Road where the previous study ended to document the presence or absence of observable contamination. Additionally, in September 2010, ACEPD staff along with Mr. Mark Taylor of Weston, consultant for the Cabot Corporation, located an additional area of "tar-like material" in Hogtown Creek near but separate from one of the previously reported tarry deposit areas, HA. Upon further investigation, ACEPD staff also located an area of tarry contamination which had not been previously identified in a flat area of stream bed that was not an obvious depositional area. The results of the May, July and September 2010 investigations were reported by ACEPD to USEPA Region 4 in the report titled "Supplemental Creek Sediment Survey of Hogtown Creek Downstream of Cabot -Koppers Superfund Site Task 5- USEPA Cooperative Agreement V97468702 dated September 30, 2010.

Based on the September 2010 findings of the additional tarry deposit area, ACEPD determined that it was necessary to conduct a reexamination of the extent of sediment contamination in the Hogtown and Springstead Creeks especially looking at areas that were not investigated in the initial December 2008 survey. This recent investigation, which is summarized below, was conducted during the second week of October 2010.

A visual and olfactory reconnaissance of Springstead Creek and portions of Hogtown Creek downstream of its confluence with Springstead Creek was conducted to characterize sediments and locate any areas of observable contamination. **Figure 1** shows the segments of the creeks that were surveyed. ACEPD staff conducted the surveys by walking the creeks and noting any areas of observable "tar-like" materials and, using a soil probe, evaluated the buried sediments at all sand bars and within the stream bed. Soil probes were driven into the sediments to 4 feet (unless refusal from clay or other obstructions were encountered) approximately every 2 to 3 feet on center. Two to four staff members from ACEPD transected the stream bed and inserted the soil probes every step as they advanced up the creeks. The survey began on Hogtown Creek at NW 29th Rd on October 5, 2010 and continued upstream to the confluence with Springstead Creek and then up Springstead Creek to NW 6th Street. The sediments

upstream of NW 6th Street were not evaluated again since this is an erosional section of the stream with little sediment deposition and there was no tar like material found in this reach during the initial sediment screening completed in November 2009. Hogtown Creek from NW 23rd Avenue to NW 29th Road was also evaluated for sediment contamination.

Numerous locations that were not previously identified in previous surveys showed evidence of tar-like contamination. **Figure 1** shows the survey area and the locations and estimated relative magnitude of the tar depositions. **Table 1** presents the location coordinates and the numerical estimates of the cubic feet of tar- like material potentially present at that location. The numbered points in Figure 1 correspond to the GPS Point number in Table 1. Photographs were made of several of the locations which contained tarry deposits as referenced in Table 1. When tar like material was observed on a soil probe the area was delineated using clean soil probes and an estimate of the volume was noted. The areas were marked with flagging, GPS coordinates were taken and pictures of the area were also taken. The amount of staining on the soil probes was noted as an indicator of the relative concentration of the tar in the sediments. The areas identified with tar like contaminants ranged from small areas of less than a few cubic feet with slight staining to large areas of approximately 3000 cubic feet that produced heavy staining on the soil probes.

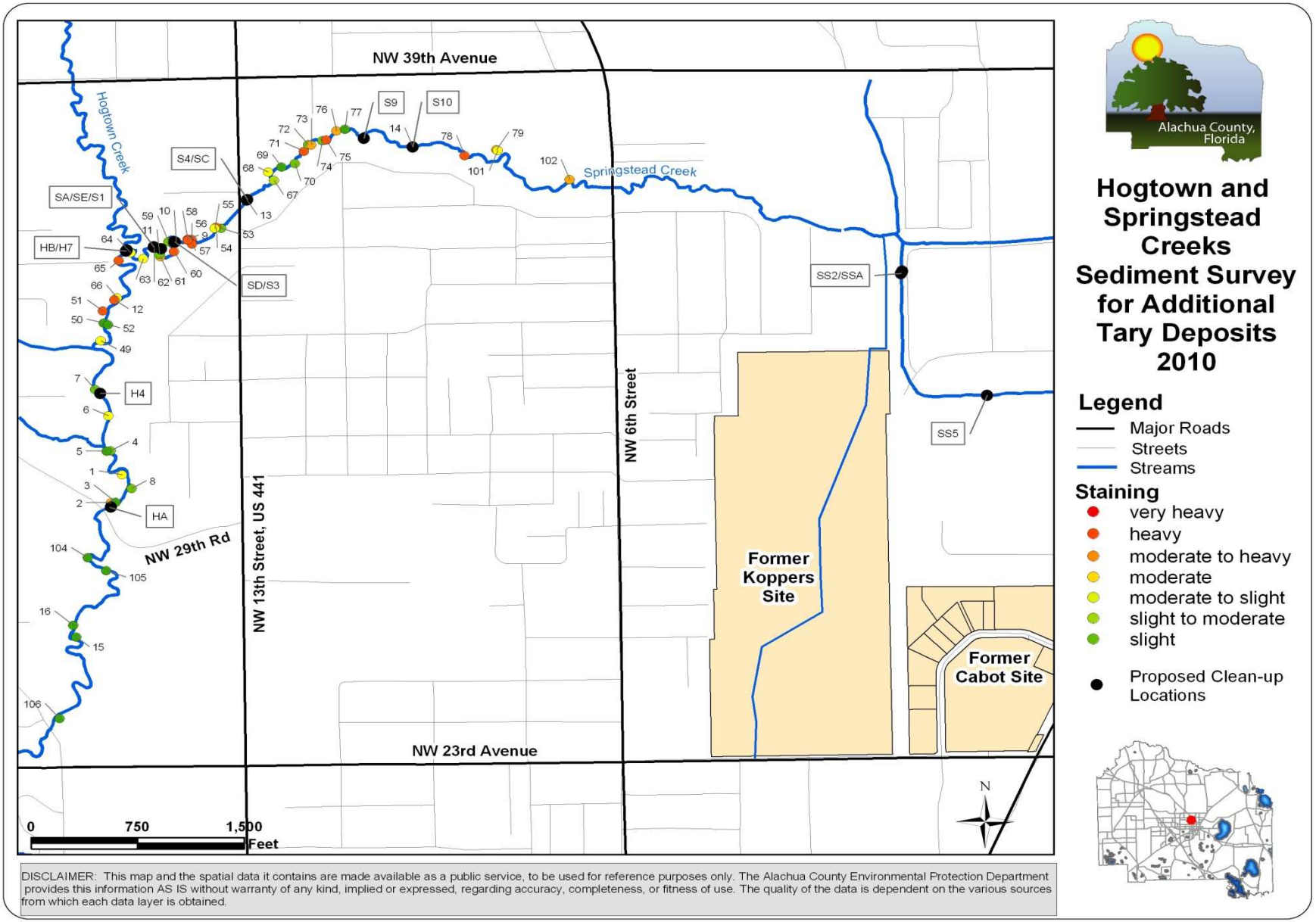

FIGURE 1. Hogtown and Springstead Creeks Sediment Survey for Additional Tar Deposits October 2010

TABLE 1. Data Table with Location Coordinates and Estimated Magnitude of Contamination Found October 2010

GPS Point	Lattitude	Longitude	Staining	Length (feet)	Width (feet)	Depth (feet)	Cubic Feet	Location	Comments	Photos
1	29.68018	-82.34175	moderate	40	10	3	1200	right bank	location found by Greg Owen	349
2	29.67960	-82.34201	moderate to heavy	4	2	3	24	right bank		346-347
3	29.67960	-82.34190	slight	3	2	1	6	mid channel		348
4	29.68069	-82.34199	slight to moderate	3	3	1	9	left bank		
5	29.68069	-82.34208	slight	20	5	2	200	left bank		
6	29.68143	-82.34203	moderate	10	3	3	90	mid channel		
7	29.68199	-82.34231	slight to moderate	10	5	2	100	5' from right bank		
8	29.67989	-82.34155	slight to moderate	12	6	3	216	5' from left bank		289-291
49	29.68302	-82.34216	moderate	1	1	4	4	left bank		
50	29.68339	-82.34209	slight	5	2	4	40	left bank		
51	29.68365	-82.34210	heavy			< 0.5	4	right bank		
52	29.68336	-82.34199	slight	1	1	2	2	left bank		350
53	29.68535	-82.33944	slight to moderate	3	3	3	27	mid channel		
54	29.68538	-82.33955	heavy	6	3	3	54	right bank		
55	29.68536	-82.33958	moderate	1	1	2	2	right bank		
56	29.68513	-82.34010	heavy			2	unknown	left bank		309
9	29.68513	-82.34019	very heavy	10	15	2	300	right bank to left bank		310-315
57	29.68503	-82.34009	heavy	3	3	3	27	left bank	several small spots	316-319
58	29.68512	-82.34019	heavy	15	10	4	600	right bank to left bank		320
10	29.68509	-82.34044	heavy	35	15	3	1575	left bank to mid channel		321-323
59	29.68509	-82.34061	slight to moderate				unknown	left bank	buried in point bar	324
60	29.68488	-82.34049	heavy	20	4	3	240	right bank		325-327
61	29.68478	-82.34080	moderate to heavy	2	2	2	8	right bank		328-329
11	29.68483	-82.34082	slight to moderate	4	2	2	16	right bank		
62	29.68495	-82.34093	moderate			2	10	left and right banks	2 spots on either bank	330-331
63	29.68474	-82.34119	moderate	10	3	2	60	mid channel		332
64	29.68487	-82.34145	moderate	3	3	2	18	mid channel	a little on right bank 10' downstream of flagging	
65	29.68471	-82.34173	heavy	1	1	2	2	left bank		333
66	29.68392	-82.34178	moderate	10	10	2	200	left bank to mid channel		334-335
12	29.68388	-82.34184	heavy	6	4	2	48	right bank		
13	29.68594	-82.33886	heavy	50	20	3	3000	right bank to left bank	Location SC	
67	29.68634	-82.33825	moderate to slight	5	4	2	40	left bank		336
68	29.68652	-82.33836	moderate	1	1	2	2	right bank		337
69	29.68663	-82.33807	slight	6	3	2	36	right bank to mid channel		338
70	29.68670	-82.33778	slight to moderate	2	2	2	8	mid channel		339
71	29.68695	-82.33757	heavy	6	4	2	48	left bank		343
72	29.68709	-82.33748	slight to moderate	6	3	2	36	left bank to mid channel		342
73	29.68708	-82.33741	moderate to heavy	8	5	2	80	left bank		340-341
74	29.68716	-82.33715	slight to moderate			2	4	left and right banks	2 spots on either bank	344-345
75	29.68718	-82.33707	heavy	40	10	3	1200	right bank to mid channel	exposed at surface	346-348
76	29.68737	-82.33684	moderate to heavy	6	3	2	36	left bank		349
77	29.68740	-82.33665	slight	5	2	2	20	right bank		350
14	29.68700	-82.33516	heavy	50	10	3	1500	left bank to right bank	Location S10	352
78	29.68680	-82.33401	heavy	12	4	3	144	right bank		353-354
79	29.68691	-82.33330	moderate to heavy	10	4	3	120	left bank		355
101	29.68689	-82.33327	moderate	2	2	2	8	left bank		356
102	29.68625	-82.33169	moderate to heavy	6	6	3	108	right bank		357
104	29.67844	-82.34255	slight	1	1	2	2	left bank		358-359
105	29.67816	-82.34214	slight	2	2	2	8	mid channel		360
106	29.67506	-82.34325	slight	1	1	1	1	mid channel	could not replicate staining	361-364
15	29.67677	-82.34284	slight	1	1	1	1	left bank	could not replicate staining	365-366
16	29.67702	-82.34290	slight	1	1	1	1	left bank	could not replicate staining	