

# Alachua County Environmental Protection Department

Chris Bird, Director

May 6, 2010

Mr. Scott Miller  
Remedial Project Manager  
USEPA Region 4  
61 Forsyth Street, SW  
Atlanta, GA 30303

Re: ACEPD Comments on the Draft Pollution Prevention Plan for Tar Removal Springstead & Hogtown Creeks Gainesville, Florida, submitted by Weston, April 18, 2010 for Cabot Corporation

Dear Scott:

The Alachua County Environmental Protection Department (ACEPD) and the City of Gainesville Public Works Department (COGPWD) have reviewed the Draft Pollution Prevention for Plan Tar Removal Springstead & Hogtown Creeks Gainesville, Florida, submitted by Weston, dated April 2010. The comments below are a summation of those developed by ACEPD and COGPWD. While we support the plan for tar removal, both agencies have comments and questions related to the potential for surface water impacts when conducting sediment removal. The Best Management Practices (BMPs) described in the above referenced document do not sufficiently protect surface water quality in the creeks.

1. In the Turbidity Monitoring Section there is no discussion of monitoring if or when visible turbidity is observed during excavation of tarry material. Monitoring of turbidity downstream of the excavations is needed during all in-stream sediment removal activities. The plan should be revised to include a description of excavation event-related turbidity monitoring. Field measurements and sampling should be conducted as set forth in Florida Department of Environmental Protection (FDEP) Standard Operating Procedures (SOPs) effective 13/3/2008 (or most recent guidance) for field sample collection <http://www.dep.state.fl.us/labs/bars/sas/qa/sops.htm>. Records of meter calibration shall meet or exceed these standards and calibration data and all turbidity data collected as part of the project must be available in the field for inspection. In addition to GPS locations for the areas of excavation, GPS locations shall be recorded for the points where turbidity is measured during the excavation activities. Should GPS location determination be impractical in the stream under the dense tree canopy, these locations must be measured, marked, and referenced to a permanent structure so that these locations can be properly identified and mapped.
2. In addition to the written description of the removal process and appropriate BMPs, the consultant shall provide sketches of the proposed means of capturing or controlling sediments during the excavation. ACEPD and the COGPWD must reapprove any alterations of earlier approved specific plans prior to their implementation.
3. Under baseflow conditions water depth in Springstead Creek near the Koppers site is approximately 0.5 to 1 foot and discharge is on the order of 1 to 1.4 cubic feet per second (cfs). However, stormflow conditions produce much greater flows; in February 2009 velocity measurements on Springstead Creek during one storm event resulted in a discharge of 60.4 cfs in the creek just

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upstream of the Koppers site. In Hogtown Creek baseflow discharge determined from the gage at NW 16<sup>th</sup> Avenue just downstream of the area of proposed excavations averaged 6 cfs for fiscal year 2008/2009 in a wider channel. Discharge during storm events in Hogtown Creek is generally an order of magnitude higher, with discharge during some events exceeding 100 cfs. In Springstead and Hogtown Creeks in the areas of proposed tar removal the stage change in creek during moderate storm events would be on the order of 1 to 2 feet. Extremely heavy, intense rainfall would result in much higher discharge and stage.

4. The Best Management Practices and Contingency Planning Section should be revised to reflect appropriate measures for use in shallow, deeply incised, narrow stream channels. Turbidity curtains are not typically the appropriate BMP for use across a channel in flowing water. The depth of water in the creek, in many cases is only 6-inches to 1-foot. Under higher flow conditions it may not be possible to keep turbidity curtains or tarps in place and their general utility is questionable. The narrow width of the stream also makes the contingency plan of using multiple turbidity curtains impractical and under stormflow conditions ineffective. The goal is to filter the water or allow the particulates in the turbid water to drop out of the water column and not be released downstream. Impermeable barriers, such as turbidity curtains, form a dam. The proposed method of installation, burial in the sediments, will fail by the bottom of the curtain “blowing out” as the water pressure on the upstream side of the curtain increases. Hence, turbid water will be released with no filtration.
5. The *Florida Stormwater Erosion and Sedimentation Control Inspector’s Manual* (FDEP July 2008) provides information on use and implementation of BMPs to control erosion, sedimentation, and turbidity. This document is one resource that should be consulted for guidance in selecting and implementing BMPs. It will likely take a combination of BMPs to effectively control the discharge of turbid water, sediments, and contaminants during excavation and removal of materials.
6. There is no discussion of stabilizing the stream banks or the excavations during the tar removal process. In-stream the sediments will contain substantial amounts of water and will rapidly fill an excavated area during tar removal. Proposed methods to stabilize these excavations and associated stream banks must be provided. The use of sand bags to redirect the flow in creek away from the work area may be an effective technique to use in stabilizing the area in and around the in-stream excavations. The use of sandbags may help prevent sand from filling in the excavated area as the contaminated sediments are removed. This work would need to be conducted in conjunction with use of absorbent booms to control the hydrocarbon sheen formed on remaining water in the excavation and/or in downstream waters. The sandbags, absorbent booms, and other materials used will be contaminated with tarry materials and will need to be properly handled and disposed.
7. ACEPD recommends performing a pilot removal of contaminated sediments in one or more areas to perfect the technique(s) used for removal and stabilization of sediments. ACEPD continues to believe that the best option for mechanical sediment removal is a shovel and bucket or wheelbarrow. The use of heavy equipment in the creek is likely to cause increased turbidity and has the potential to destabilize banks and streambed materials. This is of particular importance in these urban creeks, which are heavily shaded by trees and naturally have little low growing, rooted vegetation stabilizing the banks. Much of this low growing vegetation currently consists of ferns, moss, and other delicate species and once removed reestablishment of vegetation is difficult in these areas.
8. The contingency plans for turbidity control by use of a pump around system should be reevaluated. Under stormflow conditions, the velocity and volume increase substantially and the use of a pump

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around system will be an ineffective option. If this technique is chosen, the discharge from this activity may also cause turbidity and must be controlled and monitored to see that it does not cause a violation of the turbidity standard. ACEPD and the COGPWD strongly recommend not attempting to conduct any sediment removal during periods of high rainfall or when rainfall is imminent. The contingency plan should include suspension of work in addition to any abatement measures used to reduce excessive sediment release. Work can resume when turbidity readings are less than the allowed differential and water levels and velocities have returned to baseflow conditions.

9. The use of backfill in most areas will be unnecessary, as sand from the streambed will rapidly fill any excavated area. Where possible, the use of backfill should be avoided as it only adds materials to a stream that currently receives too much eroded in-stream material during storm events. Should fill materials need to be added, sampling of the materials prior to use must follow FDEP SOPs (effective 13/3/2008 or most recent guidance) for field sample collection and analyses <http://www.dep.state.fl.us/labs/bars/sas/qa/sops.htm>. Backfilling has the potential to cause more turbidity and presents the associated logistic controls for controlling the turbidity. Since both streams already have significant mobile sediment bedloads upstream of the areas to be excavated, it seems unnecessary to fill the excavation void with imported fill.
10. No mention was made in the plan about a staging area for materials removed. It is our understanding that the Koppers Site and City of Gainesville Public Works maintenance yard are not available for use. Please include information about the proposed staging area in the revision of this plan.

ACEPD and COGPW are available to have further discussions with Mr. Wayne Reiber of Cabot Corporation and their consultant, Mr. Mark Taylor of Weston, about the issues raised in this letter. We are all interested in making sure this project occurs in a manner which provides appropriate pollution prevention especially with regards to the turbidity concerns. If you have any questions, please contact me or Robin Hallbourg at 352-264-6800 or Mr. Stewart Pearson at the City of Gainesville at 393-8803.

Sincerely,



John J. Mousa, Ph.D.

Pollution Prevention Manager

cc: Wayne Reiber, Cabot Corporation  
Mark Taylor, Weston  
Stewart Pearson, City of Gainesville  
Fred Murry, City of Gainesville  
Kelsey Helton, FDEP  
Robin Hallbourg