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May 31, 2017

Ms. Kelsey Helton
Florida Department of Environmental Protection
Waste Cleanup Program
Waste Site Cleanup Section
2600 Blair Stone Road,
MS 4520
Tallahassee, FL 32399-2400

Re: Cabot Corporation Comments On HSW Engineering Inc.'s April 28, 2017 Draft Report On The Northeast Lagoon

Dear Kelsey:

This letter is in response to your request for comments on HSW Engineering Inc.'s ("HSW") April 28, 2017 draft "Path-Forward Summary Report" regarding the Northeast Lagoon in Gainesville, Florida. The Northeast Lagoon has been the subject of numerous investigations dating back decades. Those investigations included assessments by U.S. EPA, as well as FDEP's own consultant, MACTEC. As you know, none of those prior investigations found any association between Cabot and the Northeast Lagoon. Therefore, Cabot is very surprised by HSW's draft report and findings.

Unfortunately, HSW's assessment of the facts and data is incomplete and in many cases, incorrect. HSW also ignores the findings of MACTEC's 2009 assessment, including its conclusion that the Northeast Lagoon had a function related to rail road activities. Instead, HSW's analysis relies on an expert opinion developed in cost recovery litigation back in the 1990's, most of which was later retracted by the expert (as discussed below).

This letter addresses the most significant deficiencies in HSW's draft report and presents relevant information that HSW either failed to consider or elected to omit as part of its "source attribution" for the Northeast Lagoon. That information includes Cabot's ownership of and operations on its former property in Gainesville, Florida, as well as the results of Cabot's prior investigations of the history of the Northeast Lagoon – all of which demonstrates Cabot has no association with the Northeast Lagoon.

HSW's Discussion of Previous Assessments and Interim Remedies Is Incorrect

HSW's discussion of previous assessments and interim remedies implemented at the former Northeast Lagoon presented in Section 1.3 of their report is not accurate. In April 1985, Florida DEP installed a lift station known as "Project Jumpstart" that intercepted the base flow of the North Main Street surface ditch as an interim remedial measure. Cabot then designed and installed the 2000 foot long subsurface groundwater interceptor trench in the mid 1990's as part of implementation of the 1990 Record of Decision (ROD). EPA asked that Cabot investigate a "suspect" lagoon north of its former property while Cabot was implementing the 1990 ROD remedy. Cabot's investigation confirmed the existence of the Northeast Lagoon and the presence of various contaminants that were inconsistent with Cabot's former operations.

EPA subsequently issued General Notice Letters for the Northeast Lagoon to several parties, including CSX, Koppers Company, Beazer East, Alachua County, the City of Gainesville and Florida Department of Transportation, as well as Cabot. In Cabot's case, EPA presented no information indicating that former Cabot Carbon operations had caused or contributed to any of the contamination in the Northeast Lagoon. Nonetheless, Cabot agreed to perform certain work to avoid delay of the other clean-up activities that were underway on its former property, voluntarily entered into an Administrative Order of Consent (AOC), and removed over 4600 tons of contaminated soil from the former Northeast Lagoon area. This work facilitated Cabot's installation of the groundwater interceptor trench, which has been operating since then and proven very effective in addressing contamination in the surficial aquifer, as designed.

Cabot Never Owned the Northeast Lagoon

No part of the Northeast Lagoon lay on property formerly owned by Cabot. Cabot acquired its Gainesville property from Retort Chemical Company in 1945 as part of an asset purchase of Retort's pine tar facility located south of the Northeast Lagoon. The Northeast Lagoon is neither identified as an acquired asset in any of Cabot-Retort transactional documents nor included among the real property acquired in Cabot's purchase. The relevant chain of title for the Northeast Lagoon property does not identify Cabot as an owner of that property for any period of time.

Cabot Never Operated the Northeast Lagoon

The Northeast Lagoon is plainly visible in photographs from the 1930's, long before Cabot began operations in Gainesville. Contemporaneous detailed descriptions of Cabot's production process and operations make no mention of the Northeast Lagoon, and former Cabot employees interviewed and/or deposed (by Cabot and by adverse parties in the prior litigation in the 1990's) knew of no Cabot-related use of the Northeast Lagoon. In fact, none of these former Cabot employees knew of the Northeast Lagoon's existence. Also, Cabot did not use the railroad's line or its right-of-way where the Northeast Lagoon was constructed. Rather, Cabot used the ACL Railroad, which runs along the western side of the former Cabot property.

Cabot Never Discharged Wastewater Into the Northeast Lagoon.

HSW acknowledges "there is no physical connectivity between the former Cabot Carbon facility and the Northeast Lagoon Site" and that there are no documents regarding the discharge of "process wastewater containing residual pine tar" by Cabot Carbon into the Northeast Lagoon. Nevertheless, HSW attempts to create a correlation between the Northeast Lagoon and the former Cabot Carbon operation based almost exclusively on a Report by Wayne Grip on behalf of an adverse party in previous litigation. However, as presented in the report by Lynn Usery (Cabot's aerial photography expert) and conceded by Mr. Grip in deposition, the presence of raised berms (2 to 3 feet high on the southern edge) associated with the Northeast Lagoon would have precluded any Cabot Carbon process wastewater from entering the Lagoon. Further, aerial photos from the 1930's (i.e., during active railroad operations and pre-dating Cabot Carbon operations) show that the Lagoon was in use and filled with liquid to a level approximately 1 to 2 feet below the retaining walls.

HSW also incorrectly asserts that *"there appears to be a correlation between timing of the presence and later regression of the former Northeast Lagoon versus the three former Cabot Carbon unlined lagoons (the former Northeast Lagoon footprint was distinctively receding as the three unlined lagoons were present as shown on aerial photography), indicate that the former Northeast Lagoon served as similar function to those of the three unlined onsite lagoons."* This claim is absolute conjecture unsupported by facts and contradicted by the historical record. In July 1930, JG&G abandoned the northernmost 17.75 miles of railroad line. Significantly, it did not abandon the line in Gainesville, two miles south, or at its crossing with the ACL, less than a mile to the south, but rather at the Northeast Lagoon. The trains which ran along this line used both wood-fired steam and coal-fired steam, and it was common practice for steam-powered locomotives to clean out their fireboxes at the end of a run by empting the ashes into a water filled pit—a finding that MACTEC reconfirmed in its report. The absence of any other manmade access or transportation routes, such as a road, in the immediate vicinity of the Northeast lagoon at that time make a railroad associated use of the Northeast Lagoon most likely. By 1939, which is six years before Cabot even began operations at the adjacent Cabot Carbon Site, the railroad line was retired by JG&G and subsequent photos show the Northeast Lagoon to be inactive.

With respect to Cabot Carbon's former operations, during the first few years the facility's process stream which contained pine tar, pine oil and pyroligneous acid was directed into a concrete lined pond where the tar and oil were allowed to separate before being recovered and refined into commercial products. The leftover process water was discharged to the swamp northeast of the plant. Beginning in 1949, the process stream was redirected into the three earthen product settling lagoons, all of which were constructed on the western side of Cabot's former property. Contrary to the incorrect assumption made by HSW, these lagoons were not wastewater lagoons, but designed to maximize pine tar production yield via gravity separation—a function that could not be served by the Northeast Lagoon, located more than 1,000 feet away on third party property, which was relatively isolated and inaccessible from the Cabot Carbon property. HSW cites no evidence because there is none suggesting that Cabot Carbon's operations ever involved any use of the Northeast Lagoon or that Cabot's process materials or wastewater was discharged to the Northeast Lagoon. The only wastewater generated from the Cabot Carbon process was discharged into the swamp northeast of the plant and therefore, did not need to be managed in a lagoon as implied by HSW.

Lastly, HSW's review of the historical record ignores that approximately 1/3 of the Northeast Lagoon was located within the JG&G right-of-way. Various other individuals and companies that undertook pine wood related processes, such naval stores and turpentine production, owned the remaining 2/3 portion. Cabot was not one of those companies. The former landowners of the Northeast Lagoon may have been another source of waste materials disposed in the Northeast Lagoon.

Chemical Signature

HSW did not conduct any critical evaluation of the extensive soil and groundwater quality database that is available for the Cabot Site and the Northeast Lagoon in asserting that the contaminants in the Northeast Lagoon are attributable to the former Cabot Carbon processes. The report merely assembles tables and figures from prior investigations into attachments and then argues that since phenols and terpenes (markers of pine processing) are present at both the former Cabot Site and at the Northeast

Lagoon, they must have originated from the same source. In addition, the report cites hydrocarbon fingerprinting conducted in the mid-1990s to assert that the chemical signature in the Northeast Lagoon is consistent with wood oil and similar to the signature at the former Cabot property. These "conclusions" are simplistic and contradicted by the available source characterization data.

A comparison of soil samples collected at the Cabot Site and the Northeast Lagoon make clear that the chemical signatures are materially different. Specifically, soil samples obtained from the Northeast Lagoon have much higher concentrations of a number of PAHs compared to soil samples obtained from the former Cabot Carbon facility (see Figures 1a and 1b). The Cabot data set includes the samples of pine tar impacted soils collected during the recently concluded Supplemental Remedial Investigation (Gradient, 2017) and samples collected by US EPA in 2016. These differences in relative abundance of PAHs in soils at the Northeast Lagoon and the Cabot site contradict HSW's claim that the contaminants originated from the same source.

HSW's assertion that the petroleum hydrocarbon chemical signature in the Northeast Lagoon is consistent with wood oil, similar to the signature at the former Cabot property, is similarly flawed. A comparison of phenols and terpene concentrations measured in soil samples collected at the Northeast and Cabot Lagoons demonstrates that the chemical signatures are distinct (see attached Figures 4 and 5 of Cabot's 2007 report to EPA). As discussed earlier, HSW also ignores that approximately two-thirds of the Northeast Lagoon was located on property owned by entities that engaged in wood processing operations in the 1930's and early 1940's (*e.g.*, synthesis of naval stores, turpentine). In addition, since it was standard practice to dispose locomotive wastes at the end of the rail lines, such disposal may also have contributed to the contamination present in the Northeast Lagoon.

MACTEC's 2009 Site Inspection for FDEP Performed a Much More Thorough and Complete Review and Evaluation of The Factual History

The FDEP retained MACTEC in 2009 to conduct a formal Site Investigation (SI) for the Northeast Lagoon. The SI's principal objective was to determine the presence, nature and origin of contamination at the Northeast Lagoon. To meet this objective, MACTEC conducted an extensive review of historical information, aerial photography, soil and groundwater sampling results, and property records.

Based on the results of this review, MACTEC, concluded that the Northeast Lagoon was "never owned or used" by Cabot. Instead, it concluded that the Northeast Lagoon "had a function related to railroad activities that would be expected at the end of a run." This conclusion, MACTEC noted, was further supported by the sampling data. MACTEC determined that the chemical signature of the constituents at the Northeast Lagoon is unlike Cabot's former pine tar and charcoal production. The wastes in the Northeast Lagoon, MACTEC concluded, are likely from the locomotive fire box wastes. Furthermore, MACTEC evaluated the potential for any migration of groundwater contamination from Cabot's former property to the Northeast Lagoon, and ruled out the possibility:

> *It is possible that the Cabot related groundwater contaminants have comingled with the Northeast Lagoon groundwater plume. However, control groundwater samples, located on the*

upgradient, southern edge of the Northeast Lagoon footprint, seems to preclude that possibility. (MACTEC, 2009 at pp. 35-36)

The Proposed Investigation Ignores Years Of Soil and Surficial Groundwater Assessment And a Wealth of Data in the Northeast Lagoon Area.

Soil contamination in the Northeast Lagoon is well characterized and most of the impacted soils were removed by Cabot and by FDOT during the widening of North Main Street. Cabot excavated and disposed over 4,600 tons of contaminated soils during the installation of the groundwater interceptor trench since it was in the way of the project. Contaminated soils have also been removed during redevelopment in the area. Any affected soils that remain are underneath pavement.

The surficial aquifer groundwater impacts are also well defined, limited, and have improved significantly due to the operation of the groundwater interceptor trench for more than 20 years. The groundwater interception trench installed by Cabot to address contamination from the Cabot Carbon Site runs through the footprint of the Northeast Lagoon and consequently addresses the surficial aquifer groundwater plume associated with the Northeast Lagoon. A number of monitoring wells and assessments have confirmed that contamination does not extend downgradient to the east beyond North Main Street. Groundwater cleanup goals are being met at most monitoring wells near the Northeast Lagoon, and concentrations have even improved at wells within the Northeast Lagoon footprint (ITW-13/14).

Conclusion

More than two decades of investigations have found no evidence that Cabot Carbon ever owned, operated, or arranged for the disposal of hazardous substances at the Northeast Lagoon. The bias and uneven presentation of information in the HSW report and its attempt to create linkage between the Northeast Lagoon and the former Cabot Carbon operation is clear. As such, FDEP cannot rely on HSW's findings as legal grounds for taking any enforcement action against Cabot for further investigation and potential remedial work in the former Northeast Lagoon area. Given the significant deficiencies in HSW's draft report and findings, Cabot requests that FDEP provide written responses to these comments.

Sincerely,

Wayne Reiber

Wayne Reiber
Manager, Environmental Assessment and Remediation
Cabot Corporation

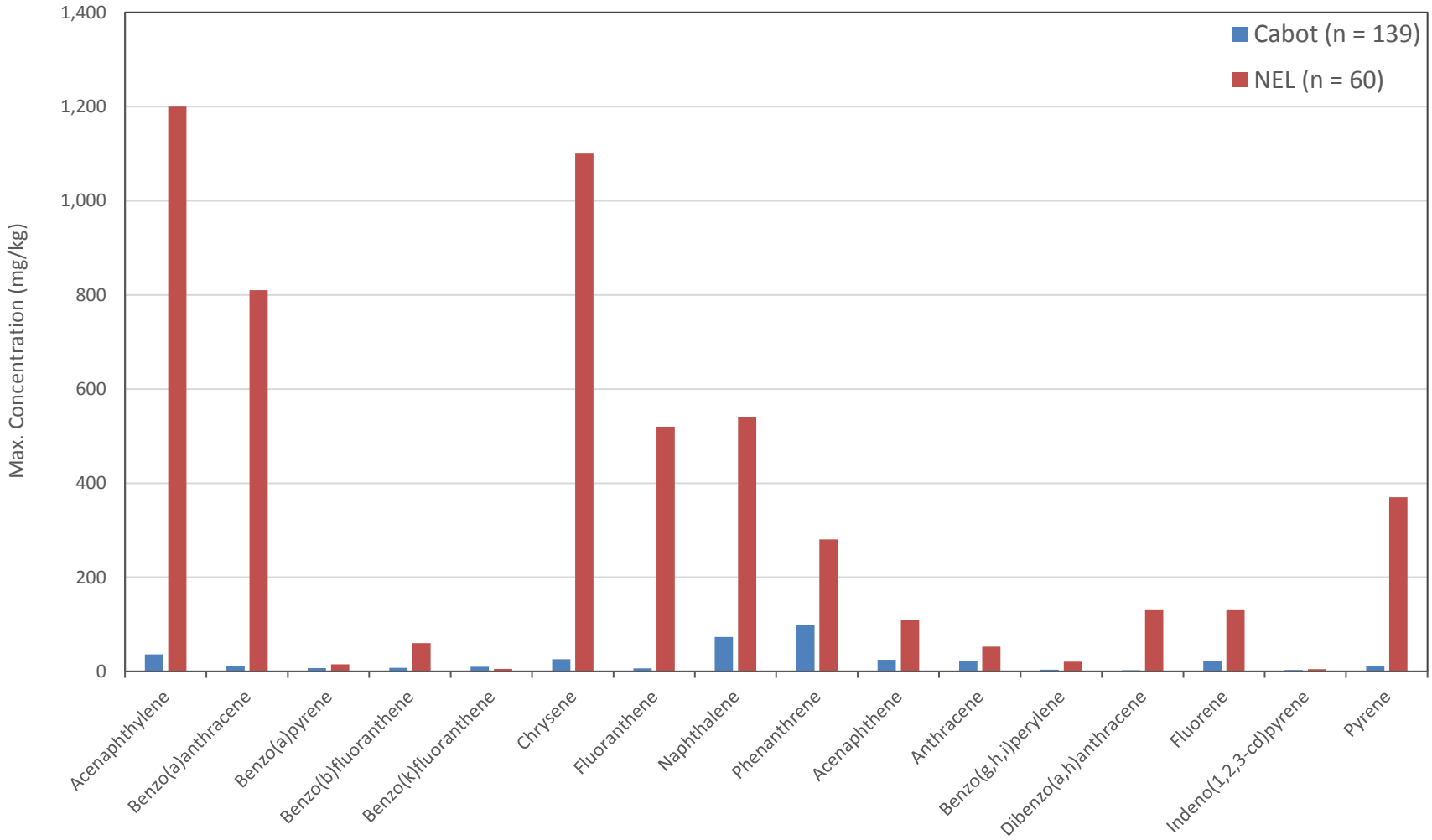


Figure 1a Comparison of Maximum Cabot *vs*. NEL PAH Levels. NEL = Northeast Lagoon; PAH = Polycyclic Aromatic Hydrocarbon. Only detected PAHs were included in the analysis.

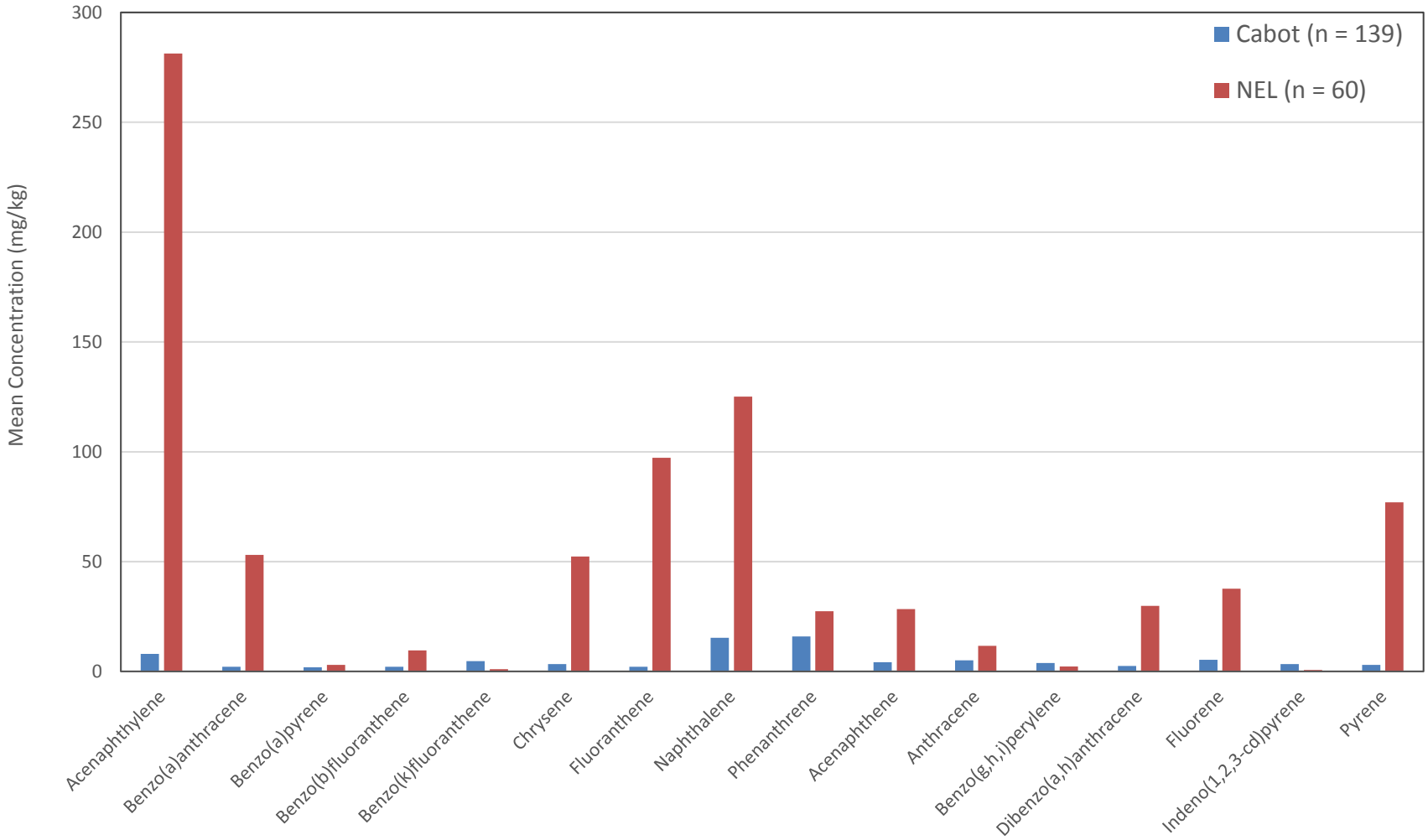


Figure 1b Comparison of Mean Cabot *vs*. NEL PAH Levels. NEL = Northeast Lagoon; PAH = Polycyclic Aromatic Hydrocarbon. Only detected PAHs were included in the analysis.

Figure 4
Phenol and Terpene Concentrations in Soils (Normalized to Oil Content)
Former Cabot Lagoon vs. Northeast Lagoon

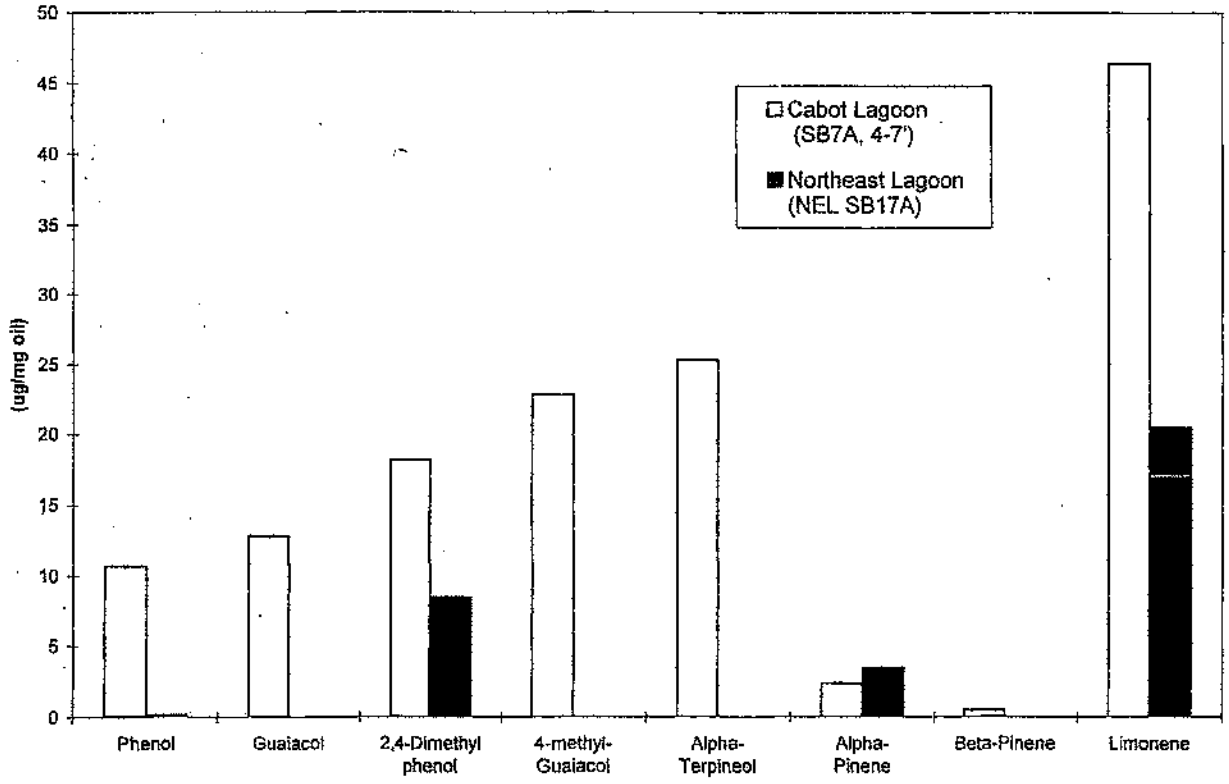
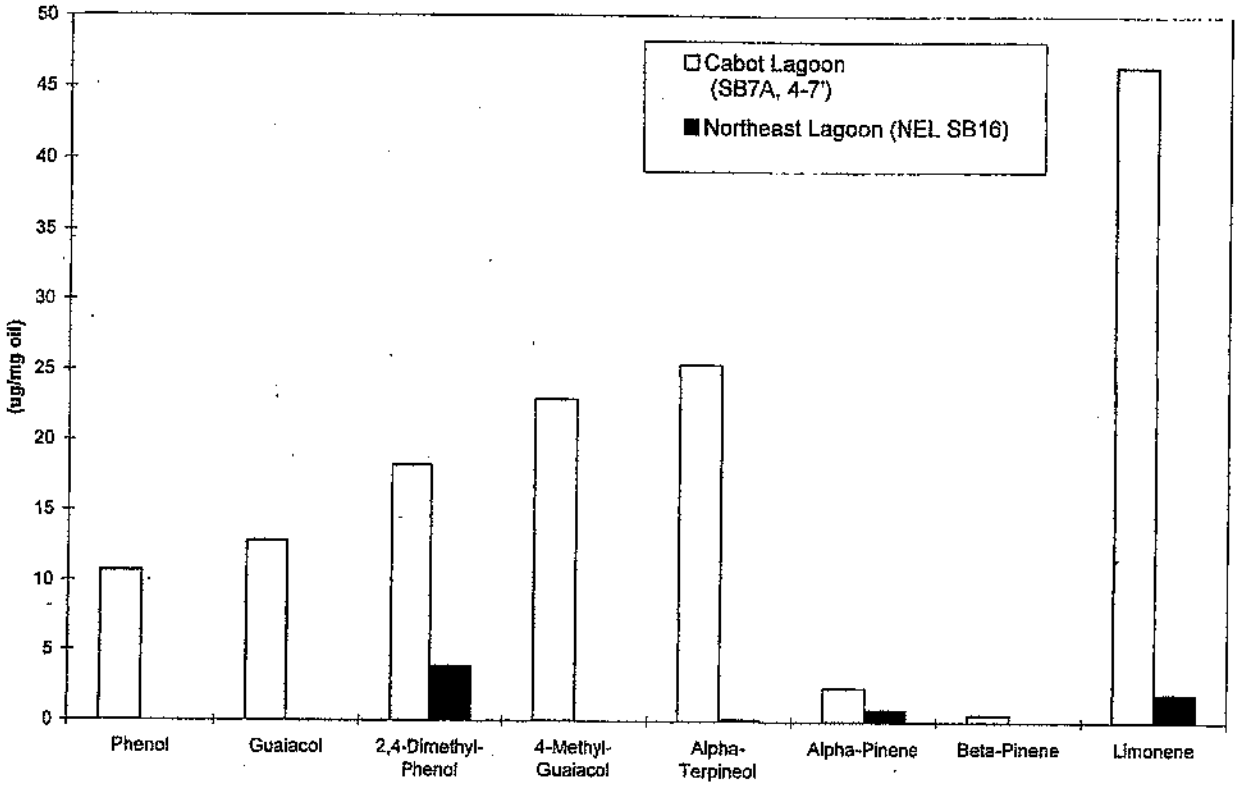


Figure 5
Phenol and Terpene Concentrations in Soils (Normalized to Oil Content)
Former Cabot Lagoon vs. Northeast Lagoon



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