



## HARPETH RIVER WATERSHED ASSOCIATION

October 23, 2007

Ms. Ashley Holt  
State Remediation Section  
Tennessee Division of Solid Waste Management  
5<sup>th</sup> Floor, L&C Tower  
401 Church Street  
Nashville, TN 37243

By Electronic Mail and First Class Mail

RE: Comments on Egyptian Lacquer Manufacturing Company's (ELMCO) Corrective Action Plan

Dear Ms. Holt,

The Harpeth River Watershed Association's mission is to protect and restore the ecological integrity of the Harpeth. Our organization has hundreds of members throughout the Harpeth River watershed, including the area that has been contaminated by ELMCO. It is our intention through submission of these comments to provide TDEC with information to help with the determination of whether or not to accept ELMCO's proposed Corrective Action Plan (CAP) submitted on August 28<sup>th</sup> 2007. The fundamental aspects of the CAP is to address the dissolved phase of chemicals in contaminated groundwater in the vicinity of ELMCO by using Monitored Natural Attenuation (MNA) or in layman's terms, to let nature take its course.

As part of this comment letter are four attachments: our June-July 2007 Dissolved Oxygen study in the downtown Franklin area of the Harpeth river, and three separate comments letters to us from different consulting firms with expertise in hazardous waste contamination and remediation. Based on this analyses and data, the proposed CAP is woefully inadequate because it does not meet EPA guidelines for appropriate use of MNA and does not meet the requirements of TDEC's Consent Order and Agreement. If this proposed CAP were accepted, this would allow for ongoing violations of the Tennessee Water Quality Control Act, such as water quality standard violations for dissolved oxygen and violations for unpermitted discharges; the federal Clean Water Act; and various sections of the Resource Control and Recovery Act (RCRA) (see Aquaeter p. 2, Leed p. 6).

The CAP was due to TDEC in June of 2007, however ELMCO was given an extension in order to have time to carry out the requirements of the Order. Though the

CAP was not submitted until August 28<sup>th</sup>, the most basic requirements of the Order were not fulfilled including “adequately defining the vertical and horizontal extent of the contaminant plume” and “a description of current contamination conditions and the risks they pose.” By not having fulfilled these basic requirements, ELMCO is subject to fines imposed for non-compliance with the Order. Also, we would recommend modifications to the Consent Order to establish specific timelines and numeric standards for the clean-up process such that both ELMCO and the public would have clear expectations of when the remediation process should be completed and what the final results are expected to be (Quarles p. 2).

Foremost among the basic requirements of the existing Order was that the contamination plume was to be defined in extent and nature. This has not been accomplished as no work has been completed to define the plume beyond the ELMCO facility site. Even on the ELMCO site, further investigation around the manufacturing building site away from the above-ground tank farm was not conducted even though data indicate that there is potential groundwater contamination in this area of the site which would more likely explain pathways to the seeps into the main Harpeth versus the ones in Liberty Creek (see Quarles p. 9, #13). The Contamination plume definition was not only required in the Order, it was also promised in a letter from Chuck Head, TDEC’s Senior Director of Land Resources to HRWA in May 2007.

EPA has specific guidelines for the use of Monitored Natural Attenuation as a remediation approach, but this proposed CAP does not meet any of them. All three attached comments address this to some extent, but Quarles (pp. 4-6) is the most extensive. One key requirement is that the contamination plume be defined which has not been done here. MNA is also not appropriate in complex geologic conditions (such as karst or limestone bedrock) which we have here, when the contamination plume migrates off site, and only if the approach will be “protective of human health and the environment.” The fact that the contaminated plume migrates off site, under people’s homes through the fissures in the karst bedrock into Liberty Creek and the Harpeth River automatically signals that MNA would not be appropriate here. Additionally, approving MNA would violate Tennessee Water Quality Control Act and RCRA regulations by allowing an unpermitted discharge of hazardous waste into waters of the state that causes water quality standard violations.

Other alternatives to MNA are available and have not been proven to be technically impracticable or too costly from the minimal work provided in the CAP. In fact, a number of different options that would substantially remediate this site are outlined by Aquaeter (pp. 3-6) that would allow the contamination to be treated before the hazardous waste reaches the Harpeth and in many instances, before they flow under people’s homes that live down gradient from some of the underground pools of contaminated groundwater. According to Aquaeter, a number of biologically based remediation approaches would work on the site, and some could have been implemented already for less than what has been spent to date. We specifically asked Aquaeter to provide this after Bill Penny, legal counsel for ELMCO, asked us what we would suggest

at the end of a meeting with Triad, himself and HRWA that you attended as an observer on September 10.

ELMCO has not done enough investigative work to rule out detrimental impacts from long term exposure to these contaminants for the people who live and work in the area, both residents of Daniels Drive and students at Battle Ground Academy primarily because the plume has not been characterized. If the contamination continues to be present under these homes and if it has migrated under Liberty Creek to Battle Ground Academy, ELMCO has no assurances that this will also not affect property values, which are obviously of concern to property owners. (Aquaeter p. 2 #3) From a quality of life standpoint the residents in the vicinity of the seeps still have to deal with the strong odors that come from the seeps which flow with ELMCO's chemical releases ten months after the problem was brought to TDEC's attention. In a January meeting with stakeholders from the City of Franklin, HRWA, Battle Ground Academy and several TDEC divisions, Deputy Commissioner Paul Sloan said that TDEC would make certain that the contamination would be cleaned up in a timely manner. This has yet to happen.

All three expert comments attached refute the claim that there are no detrimental effects to long term exposure for fish and wildlife has not been substantiated given that only one acute toxicity test has been performed and given that dissolved oxygen levels are below standards in the river because of the chemical seeps. HRWA completed a dissolved oxygen study in June and July of 2007 of the five river miles between the city of Franklin's water withdrawal point for its drinking water plant to the city's sewage treatment plant discharge point. In between are the chemical seeps from ELMCO (see map in study). The study found that dissolved oxygen levels immediately downstream of the Harpeth seep 2 and just downstream of Liberty Creek never reached state standards of 5 mg/l at anytime. This field data indicates that the chemicals are a significant contributing factor to low dissolved oxygen levels and violations of the TWCQA. This impact on water quality was also verified in a phone conversation with Joey Holland of TDEC Water Pollution Control. Liberty Creek itself is virtually dead at this point from the build up of bacteria and sediment toxicity conditions and has been for a number of months. This situation does not allow either body of water to meet its state designated use for fish and wildlife. With a quick visit to Liberty Creek or Harpeth River one can easily still see and smell the hazardous chemicals illegally entering waters of the State.

Virtually no improvement in the condition of the river or Liberty Creek has occurred after the emergency response that TDEC initiated in February. The September lab results provided monthly by TDEC's Water Pollution Control Division indicate that the levels of acetone and toluene in both the Harpeth and Liberty Creek are very close to what they were in January. The open trench dug to capture and remove the floating toluene moving toward Liberty Creek is not capturing all of the free product since there are still active seeps in the creek down gradient of the trench. The open trenches are also contributing air pollution as the chemicals volatilize, according to the CAP and Triad at the public hearing.

This unpermitted continued release of hazardous waste into the Harpeth and Liberty Creek is in direct violation of the anti-degradation rules under the CWA and TNWQCA. The Harpeth River is listed on the 303(d) list as impaired and not meeting state standards for nutrient enrichment and low dissolved oxygen. The EPA prepared the TMDL, approved in 2004, for the Harpeth for nutrient enrichment/low dissolved oxygen which called for significant reduction in pollution loads that cause or contribute to low oxygen levels. As shown by HRWA's summer Dissolved Oxygen study, the chemical releases are contributing to low dissolved oxygen levels. Under the anti-degradation statement (1200-4-3-.06) no new or increased discharges are allowed if the receiving stream is not meeting water quality standards. Thus, the proposed MNA that would allow chemicals to continue to enter waters of the state for an undefined period of time violate the TWQCA and cannot be approved and could not be permitted under the TNWQCA. The EPA TMDL calls for significant reductions in pollutant loads both from nonpoint sources and from the NPDES permitted sources (the sewage treatment plants). Approving MNA would also not meet the TMDL and would essentially put an increased burden on the permitted downstream sewage treatment plants to meet tighter limits than the TMDL already recommends to ensure that the Harpeth meets water quality standards.

This letter does not capture all of the excellent analysis, recommendations, and points noted by the expert consultants: Mark Quarles of Globally Green Consulting; John Michael Corn and Michael Corn of AquaEter; and Jeff Leed of Leed Environmental. Both Quarles and Leed's comments focus on issues with the proposed CAP and bring to bear dozens of points that render the CAP inadequate and unacceptable. Quarles has a specific section on the EPA's MNA guidelines. Aquaeter's comments provide a variety of remedial alternatives that could be considered and are workable for this site. Both Leed and Aquaeter comment on regulatory violations with the proposing and approving Monitored Natural Attenuation for this hazardous chemical release site. Both Aquaeter and Quarles note a concern that approving this proposed CAP to use MNA would not meet core EPA requirements for implementing state agencies as well.

Our experts have all noted the severity of this chemical pollution problem that has been ongoing since it was identified in January by the City of Franklin staff. This is not an inactive hazardous substance site as defined in the Order. ELMCO is currently conducting business manufacturing with these solvents and there is ongoing release of regulated hazardous wastes to the waters of the state from the contaminated groundwater plume in violation of federal and state water pollution and hazardous waste management statutes and regulations. While Triad did not provide an estimate of the quantity of contaminated groundwater, Aquaeter worked from the CAP information and estimated 10,000 to 30,000 gallons of RCRA hazardous wastes in the plume. Also, based on the CAP information, Aquaeter notes that ELMCO is likely emitting enough volatiles from the above-ground storage tanks into the air to need an Air Permit under the Clean Air Act. This would corroborate reports of smelling chemicals off and on for the past decade or so that was stated by residents during the public hearing.

Even though right now ELMCO is regulated as a small quantity generator of hazardous wastes as Chuck Head explained in his letter to HRWA May 17, it is not

unreasonable based on the amount of hazardous chemicals released into the environment by ELMCO to consider treating it as a full quantity generator. According to Chuck Head's letter, this would mean the company would need a Part B permit under RCRA and would be obligated to follow the RCRA Correction Action rules. HRWA requested in our May letter to TDEC that the clean-up by ELMCO would be conducted as an "equivalent of a full RCRA facility assessment and RCRA facility investigation." In Chuck Head's response, TDEC indicated that it was approaching ELMCO in this fashion. However, as noted in Leed's comments, ELMCO's proposed CAP simply bypasses many of the important components of the RCRA corrective action plan and corrective measures study process. Thus, this is not an "RCRA equivalent" proposal.

Essentially, the proposed CAP to use Monitored Natural Attenuation puts the burden of the pollution of hazardous chemical releases into the environment from ELMCO onto other permitted entities such as the city of Franklin and the two other downstream sewage treatment plants, the neighboring residential area, the public who enjoy the Harpeth and walk along the right-of-ways, and the environment in general. None of these entities caused this pollution problem, ELMCO did. In summary, to ensure that there is a timely removal of the pollution we recommend the following based on the expertise provided to us. Many of these points are components of a RCRA equivalent facility assessment and investigation, and RCRA corrective measures study and implementation.

1. That this proposed groundwater Corrective Active Plan be rejected
2. The Order be amended to include goals and metrics for clean-up, quarterly progress reports, penalties and deadlines
3. Notice of violation and penalties for not meeting the Order with this proposed groundwater CAP
4. Redesign the interceptor trench to capture all of the free product and install air pollution controls (either by closing the trench or with a capture system for emissions)
5. Conduct a thorough on-site investigation to see if additional sources exist and determine the localized groundwater (30 days to design and implement; and 15 days to report)
6. Expand the soil/groundwater investigation off-site to characterize the contamination plume (30 days; 15 days)
7. Conduct a meaningful seasonal air migration pathway analysis
8. Conduct ambient air monitoring with appropriate EPA methods to test down to the NOAEL concentrations
9. Consider effects of all the chemicals cumulatively, rather than each singularly
10. Prepare a new CAP after conducting what is still needed as suggested above for comprehensive assessment and investigation (45 days after investigations done)
11. Prepare a new CAP with complete feasibility study of remediation options, costs, and with each cost projected back to present value for the lifetime of the remediation (suggest 20 years).

If you have any questions regarding our submission, please do not hesitate to call me, Pam Davee, or any of the experts whose comments we have provided. We look forward to your response to our comments and final decision regarding the proposed CAP and having ELMCO move quickly to develop and implement a remediation plan that substantially meets RCRA requirement. It is imperative that there is a timely removal of the hazardous chemicals from the area which will result in reducing the risk to public health, reducing the risk to private property damage, improving the water quality and aquatic habitat in Liberty Creek and the Harpeth, and increasing the enjoyment of the Harpeth River in this area of downtown Franklin.

Sincerely,



Dorene Bolze  
Executive Director

Attachments:

- 1) Globally Green Consulting Comment Letter to Ashley Holt and Technical Comments by Mark Quarles, P.G.
- 2) AquAeTer Comment Letter to Dorie Bolze on Egyptian Lacquer Manufacturing Company's Corrective Action Plan by John Michael Corn, P.E. and Michael Corn, P.E.
- 3) Leed Environmental, Inc. Comment letter to Dorie Bolze by Jeff Leed. President
- 4) Harpeth River Watershed Association Dissolved Oxygen Study June and July 2007

cc: Paul Sloan, Deputy Commissioner of TDEC  
Joe Sanders, TDEC General Counsel  
Mike Apple, Director Solid and Hazardous Waste Management  
Chuck Head, Senior Director, Land Programs  
David Draughon, Senior Director for Water Resources  
Paul Davis, Director Water Pollution Control  
Joey Holland, Director of Nashville TDEC EAC Office and staff  
Bonnie Bashor and staff at TN Department of Health  
Susan Minor, Andy Graham, and Lawrence Sullivan, Battleground Academy  
City of Franklin Board of Mayor and Aldermen and senior city staff  
James Giattina, EPA Region IV, Director Water Management Division  
Kumar Narindor, EPA Region IV, Chief RCRA and OPA Enforcement  
Hector Danois, EPA Region IV, Coordinator RCRA Enforcement and  
Compliance Branch  
State Senator Douglas Henry  
State Senator Jack Johnson  
State Representative Glen Casada  
State Representative Charles Sergeant

Marc Driskill, Property Owner of Liberty Creek  
Residents of Daniels Drive Neighborhood adjacent to ELMCO  
Bill Penny, ELMCO legal counsel, Stites and Harbison  
Dwight Hinch and Chris Scott, TriAD  
Kerry Maddox, General Manager Egyptian Lacquer Manufacturing Company