Memo To: Camillus Town Board Date. June 29, 2010

From: Barton & Loguidice, P.C.

Subj: Review of Human Health Risk Assessment, Onondaga Lake, Lake Bottom Subsite: Sediment Consolidation Area, Camillus, New York, June 2010

At the request of the Town, Barton & Loguidice, P.C. (B&L) has reviewed the above referenced document. The following comments are offered based on B&L's experience and review of the document. B&L's staff does not include toxicologists so some of the concerns expressed are in the form of comments or questions. We have hired risk assessments to be performed by subcontractors in the past, so we are somewhat familiar with them, and the process of conducting them.

Following is a simplified overview of how a Risk Assessment is performed For airborne contaminants, historical meteorological data is combined with surrounding topographical data in a computer program. The air emissions source is often an emissions point, such as a smokestack from an industry. In this case it is ground based and assumed to be emissions from an area. The computer program predicts what the ground based concentrations will be at receptors at various distances from the source, and the frequency of occurrence. This is the "dispersion modeling" step of the process. The results of the modeling are provided to toxicologists and other scientists who will compare the receptor concentrations to assumed data on, for instance, cancer potential at those concentrations. The results are usually stated in a mathematical probability of occurrence. 10^{-6} equals 1 per million, 4×10^{-6} equals 4 per million, 10^{-4} equals 1 per 10,000, and so on.

In general, this SCA HHRA does not address many of the questions asked relative to the impact of the SCA on the health and welfare of those who live and work near the site. The HHRA is limited to potential for new cancer cases in the most impacted area from airborne emissions, and the potential for new cancer cases from direct contact with the sediments. The most impacted receptor area is believed to be Thomas/James Avenue but is not directly stated as such in the HHRA.

Our specific comments follow:

A. B&L does not agree with EPA that "the plans for the SCA will not result in unacceptable risks for the surrounding community". Our primary basis for disagreement is the EPA estimate of cancer risk from inhalation equal to 4 in a million from ethylbenzene and naphthalene plus an additional 2 in a million from other carcinogenic chemicals, for a total of 6 in a million cancer risk from inhalation. In our experience, the normal goal for cancer risk in permitting new facilities with long-term exposure is 1 in a million maximum risk.

B. B&L does not agree with EPA's approach (p. 31) that "if monitored air concentrations indicate a trend toward chemicals reaching this maximum annual average concentration for a sustained period of time, risk managers can modify site operations to reduce those concentrations". B&L believes that there are design features, such as settling basins, clarifiers, and enclosed agitation chambers that could be included in original construction that would substantially decrease the potential for air emissions. B&L has made those suggestions to DEC at recent meetings. Any reasonable measures, either construction or operation based, to reduce emissions should be included in the original construction/operation.

C. The activity proposed for the SCA differs from most in that the potential air emissions have the potential to vary wildly, depending on the weather for extended periods of time. For example, Camillus has in the past experienced long periods of sunny weather with little to no rain. The amount of evaporation from fluids leaving the geotubes will be very much more on sunny summer days compared to overcast fall days. The HHRA deals in averages and provides no information on what the health impacts might be if there is an extended period of exposure at many times the average. EPA should address those questions.

D. Many questions have been asked about the combined effects of the various contaminants. EPA reduces allowable exposure limits by 90% to account for that but there is no justification provided. EPA should address those concerns in a more specific fashion.

E. The HHRA appears to be based on dispersion modeling performed by Parsons several years ago. There is no statement that EPA has either crosschecked that modeling in detail, or rerun the model to see if they arrived at comparable results.

F. The dispersion modeling (Parsons) identifies residential areas of concern. However, there is no quantitative comparison to identify which specific area(s) was (were) the highest risk and how the other areas compare. That information would be useful in developing future monitoring programs for those neighborhoods. Figure 2, SCA Buffer Zones and Surrounding Communities, is attached, as is the Wind Rose for the SCA, which shows proportionally, the direction the wind is from. The dispersion modeling uses Wind Rose data to determine the most impacted communities.

G. The HHRA identifies significant risks to those who might enter the site and become exposed to the sediments. This information is critical in requiring access limitation and 24/7 security.

H. The impact of airborne dust from the SCA construction and operation reaching receptors was not addressed. This issue has been a public concern in the past and should be addressed.

I. The HHRA is silent on whether any of the airborne contaminants are a causative agent for allergies, asthma, emphysema, or similar diseases. These issues are of significant concern to nearby residences and should be addressed.

J. It appears that the State Fairgrounds as a receptor of air emissions was not addressed. While this is not a "Camillus" issue, it might be advantageous to contact the Fairgrounds to become involved. The Fair operates with 100,000± attendees plus staff and exhibitors on some days. It is also an active host for many functions throughout the year with large numbers of individuals on site on a frequent basis. In many ways it is similar to a small city which is directly in the dispersion exposure pathway. The HHRA did not address potential for exposure to Fairgrounds' attendees and employees and that should be done.

In conclusion, the HHRA as it currently exists is incomplete and leaves many unanswered questions.

/jms

Attachments

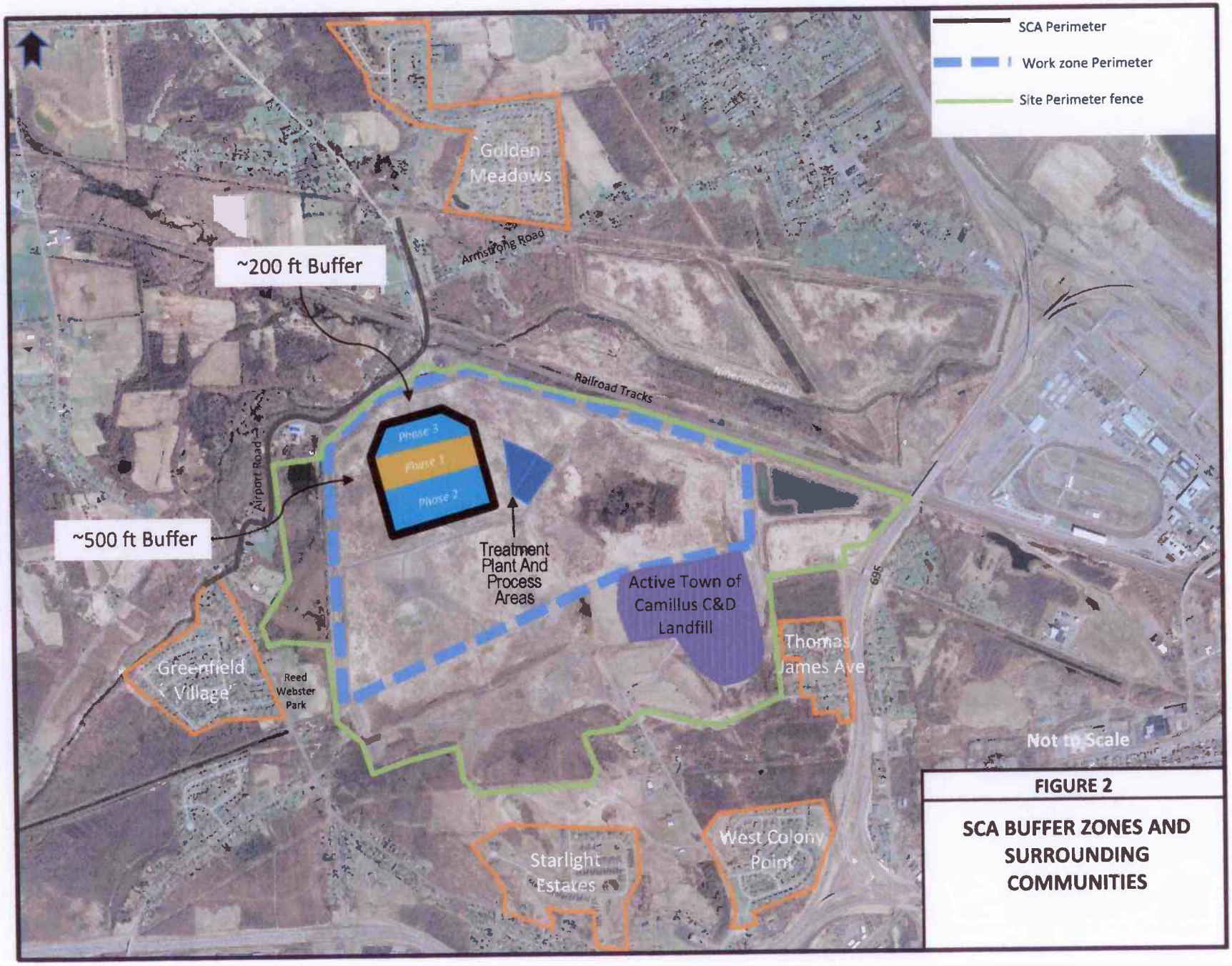
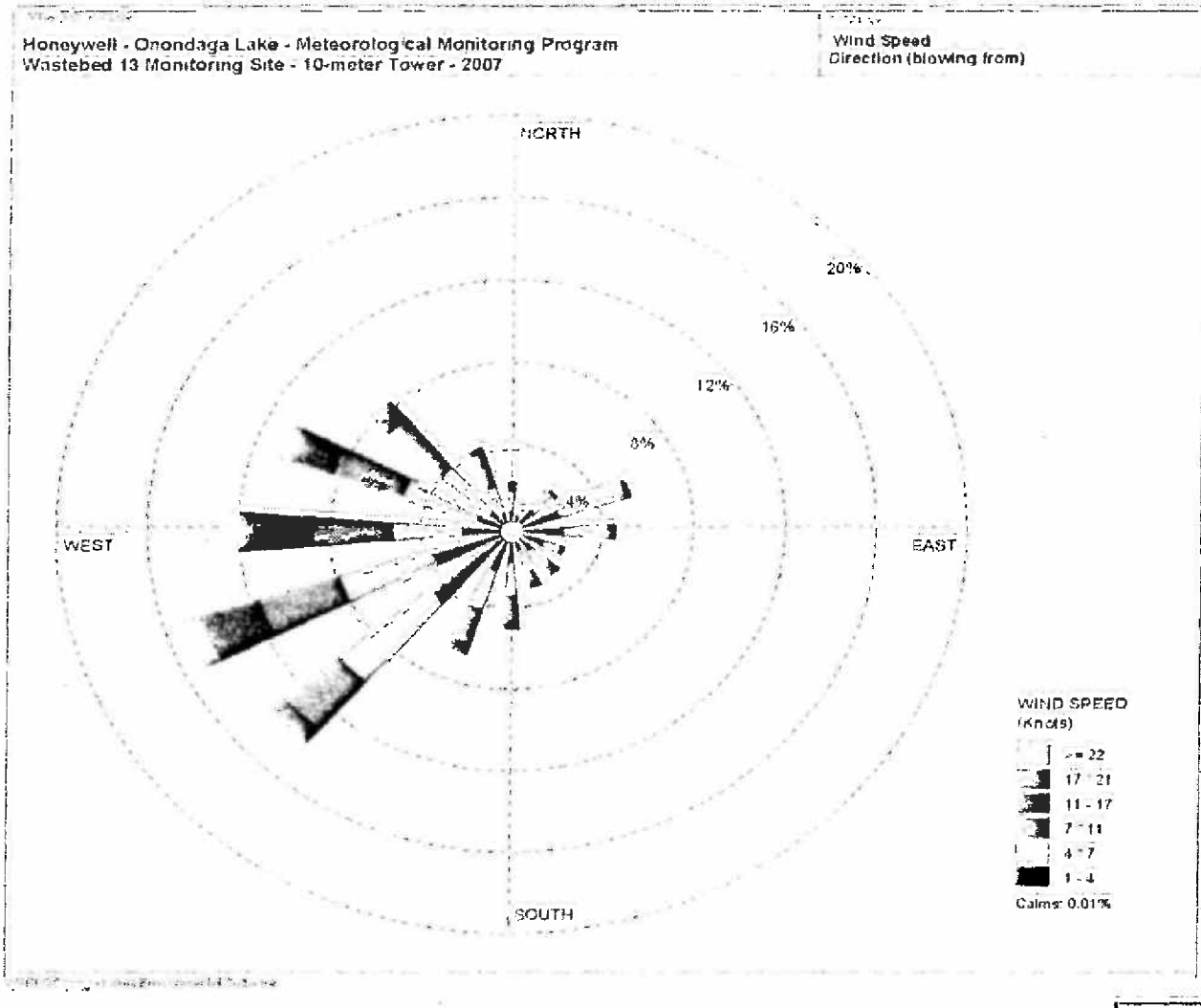


FIGURE 2

SCA BUFFER ZONES AND SURROUNDING COMMUNITIES



P:\HON-SYR\443584 - Operations'09 Reports'9.01 - Dispersion Modeling Protocol\Figures