



COPA

**Coalition Opposed To PCB Ash In Monroe County Inc.
2454 N Curry Pike
Bloomington, Indiana 47404**

14 August 2007
US EPA Region 5
Chicago, Illinois

Reference: Public Comment on Neal's Landfill Remedial Alternative's

Mr. Tom Alcamo,

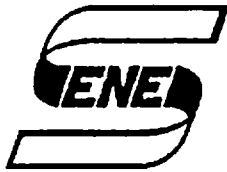
COPA contracted with SENES of Oak Ridge, Tennessee to review both human and ecological risk associated with the remedial alternatives for Neal's Landfill, Bloomington, Indiana.

Please accept the attached SENES review as our comments for the record as they relate to the selection of the proposed alternative. Philosophically, COPA would like to see zero PCB mass escape and would prefer alternatives that would eliminate any discharge of PCBs into the environment, however, we do agree that the selected alternative meets the guidelines of reducing risk to acceptable levels.

Sincerely,

Mike Baker
President





SENES Oak Ridge Inc.

Center for Risk Analysis

F. Owen Hoffman, Ph.D., President

*Specialists in Energy, Nuclear
and Environmental Sciences.*

*Custom Applications in Human Health
and Ecological Assessment.*

August 13, 2007

Mr. Mike Baker
COPA
c/o Quality Mill Supply
2454 Curry Pike
Bloomington, Indiana 47404

Re: Review of the Proposed Plan for remediation of Neal's Landfill

Dear Mr. Baker:

In response to your recent request, I have reviewed the "Proposed Plan for the Record of Decision Amendment" for Operable Units 2 and 3 of the Neal's Landfill Superfund Site, as well as several of the major background documents. The background documents include the final (2006) versions of EPA's human health and focused ecological risk assessments, the most recent descriptions of the modeling and associated uncertainty analysis carried out by Quantitative Environmental Analysis LLC, and the descriptions of the various remedial alternatives considered for Neal's Landfill.

EPA's assessments found that risks based on recent measurements of PCBs in fish in Conard's Branch and Richland Creek are at a level that justifies remedial attention. Estimated risks to humans (primarily from consumption of fish) are borderline; estimated risks to fish-eating mammals (mink and kingfisher) are somewhat higher, corresponding to their greater consumption of fish on a per unit body weight basis. Remediation goals in terms of PCB concentrations in fish were set to bring both human and ecological risks down below a level of concern. These goals are 0.2 ppm PCBs in fillets of fish from Richland Creek, and PCB concentrations in whole fish of 1.8-2.3 ppm in Conard's Branch and 0.7-0.9 ppm in Richland Creek.

Fate, transport, and bioaccumulation modeling was carried out to identify the major contributors to PCB concentrations in fish (e.g., water by source, sediment, low- vs. high-flow situations) and to evaluate the various proposed remedial actions. An important finding from the modeling is that the low-flow situations and sediments contribute most to the PCB concentrations in fish in Conard's Branch and Richland Creek, while high-flow situations (storm events), even though they involve a large proportion of the PCB mass, contribute substantially less to the local fish. Thus, addressing the high-flow situations (e.g., by adding holding ponds or tanks) would reduce

the total mass of PCBs released from the Neal's Landfill site but would not have a major effect on reducing PCB concentrations in local fish. During the high-flow situations, the water volume and associated PCB mass move downstream quickly, and simply are not in Conard's Branch and Richland Creek (the relevant reaches) long enough to affect average PCB concentrations in fish over time in those areas.

Proposed remedial actions include continuation of the existing spring treatment facility, increasing the capacity of the spring treatment facility, improving the water collection system feeding the spring treatment facility (so that less water bypasses the facility), cleaning up sediment and flood plain soil in Conard's Branch, and increasing stormwater holding capacity (with either storage tanks or settling basins). Combinations of these actions (and a no-action scenario) have been described under seven Alternatives. Institutional controls to limit human access and exposure are also planned. All alternatives (except the no-action scenario) include appropriate operation and maintenance activities, as well as ongoing monitoring of PCB concentrations in fish and water.

Alternative 1 is a no-action scenario, in which the existing spring treatment facility would be shut down and no further remedial activities would occur. This alternative would result in an increase in PCBs in fish and would clearly not meet the remediation goals.

Alternative 2 is a no-additional-action scenario. The existing spring treatment facility would continue to operate, but no other remedial activities would occur. This alternative is not expected to meet the remediation goals.

Alternative 3 includes improvements in the water collection system, remediation of sediment and flood plain soil, and continuation of the existing spring treatment facility. This alternative, which is EPA's preferred alternative, would meet the fish remediation goals within 10 years, although it would not remove the largest PCB mass, since it does not address the high-flow (storm) situations.

Alternative 4 is the same as Alternative 3 with the addition of 2 million gallons of stormwater storage. This alternative does address some of the high-flow situations and increases the mass of PCBs removed, in comparison with Alternative 3.

Alternatives 5 and 6 involve doubling the capacity of the existing spring treatment facility, with corresponding increases in the amount of water treated and PCB mass removed. Improvements in the water collection system and removal of contaminated sediment and flood plain soil are also included. Alternative 6 includes the 2 million gallons of stormwater storage described in Alternative 4.

Alternative 7 is the same as Alternative 3 with the addition of 3 settling ponds totaling 18 acres, rather than the 2 million gallons of storage described in Alternative 4. The settling ponds increase both the total water volume treated and the PCB mass removed.

Alternatives 4-7 will also meet the fish remediation goals within 10 years, since they will do at least as well as Alternative 3 in reducing PCB concentrations in local fish. However, much of

the PCB mass removed by Alternatives 4-7 would not have contributed to PCB concentrations in local fish, but would have gone downstream during storm events, and so the additional reduction in PCB concentrations expected in local fish is small in comparison to the reduction expected for implementation of Alternative 3. For this reason, and considering the costs of the various alternatives, Alternative 3 has been selected by EPA as the Preferred Alternative. Alternative 3 achieves the fish remediation goals within 10 years, even though it does not remove the largest PCB mass.

Based on the available information, I agree with the selection of Alternative 3. This alternative addresses the local contamination (sediment and flood plain soils in Conard's Branch), increases the amount of water treated (especially by reducing the amount of low-flow water that bypasses the treatment facility), and is expected to achieve the fish remediation goals in the desired time frame. In addition, of the Alternatives that are expected to achieve the goals, it is the most cost-effective.

Obviously it would have been good to be able to divert the groundwater conduit upstream from the contaminated area, but that proved not to be possible, since the conduit could not be located. Alternatives 4, 6, and 7 (which include tanks or settling basins to increase stormwater capacity) would remove more PCB mass, but would have little additional effect on the fish remediation goals, in terms of the PCB concentrations in fish in Conard's Branch and Richland Creek. In addition, the use of tanks or settling basins would require considerable land area. The settling basins in particular would introduce their own set of problems due to the large volumes of contaminated water and sediment open to wildlife and perhaps to livestock or people.

In principle, I could support implementing Alternative 5, doubling of the capacity of the spring treatment facility, which would increase the amount of water treated and the PCB mass removed. However, the improvements in treatment and in the achievement of the fish remediation goals do not seem to be enough to justify the increased cost. I would suggest that this option be revisited in the future, however, if either the existing spring treatment facility were to need major attention of some sort or the monitoring activities show that the remediation goals are not being achieved. In addition, given that PCBs persist in the environment, if there is sufficient concern about the PCBs being redistributed downstream, even though local and downstream fish concentrations stay below a level of concern, then Alternative 5 should be revisited. This alternative would increase the mass of PCBs removed and not going downstream, as well as reaching local fish remediation goals, but without the potentially major drawbacks of the storage tanks or settling basins.

It is important to remember that the remediation alternatives and their estimated effectiveness are based on the fate, transport, and bioaccumulation modeling that has been performed. The modeling seems to have been very responsibly done, and part of the value of such a model is the ability to make predictions for alternative situations that could exist in the future or for the effects of alternative remedial actions. As with any model, of course, its accuracy depends on the accuracy, completeness, and relevance of the available information. Therefore, the ongoing monitoring of PCB concentrations in water and fish that is planned for the Neal's Landfill site is essential, to be certain that the remedial effects predicted by the model are seen in fact. The monitoring data will also provide additional information with which to improve the model if later

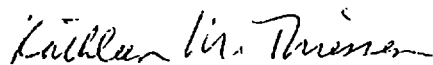
reassessment is necessary (e.g., if the monitoring data do not show the anticipated improvement, remediation goals are changed for some reason, or there are major changes in water flow characteristics or other important parameters).

One small comment on the human health risk assessment is in order. In Appendix A of that report (p. A-14), there is a comment that the estimated rate of increase in harvestable fish biomass with increasing downstream distance could be underestimated. This would mean that estimated sustainable ingestion rates for downstream locations would be underestimated, and consequently, the calculated risks for those locations would be underestimated. However, it is doubtful that any underestimate in ingestion rates or calculated risks would be large, and even doubling the ingestion rates would be unlikely to change the decisions that were made on the basis of the human health risk assessment.

In summary, I agree with the selection of Alternative 3 for the further remediation of Neal's Landfill. In certain situations, I could also support the selection of Alternative 5. Ongoing monitoring activities are essential to ensure that the remediation goals are being met and to help in reassessment if the goals are either changed or not being met.

Please let me know if you have any questions or would like more detailed explanations about something.

Sincerely,



Kathleen M. Thiessen, Ph.D.
Senior Scientist