

Comments to the Lemon Proposed Plan for Operable Units 2 & 3  
Joe Hailer, August 11, 2006

Page 1 – Apparently only the bypass water is to be treated at ICS. There are many other springs draining the site (despite contentions that ICS is the drainage point for a multi-acre “drainage basin”. These include Slaughterhouse, Weimer, and Cascades. Where is the comprehensive drainage basin study that proves this assumption?

Page 4 –Despite contentions that the OU-1 was implemented, little evidence shows that it was effective. The contention that removal of the source was impossible; a strong effort to actually penetrate the sourcing zones has never been attempted. Even when found, no attempt to ‘suck out’ the pollution was not implemented. In spite of the Viacom attempt to hit the primary conduit, evidence exists that, in addition to the SE corner, other areas are loaded with PCBs and are amenable to removal. Why not? Most of the effort to characterize the site by wells has been done at the periphery, not the essential area. Penetrating the RCRA cover with 6” holes will not damage the overall protection. Little justification is presented to justify any technical implacability waivers.

Page 5 – A suggestion that the ST. Louis/ Harrodsburg contact is the basal resistant for further penetration ignores that this contact dips SW to the Illinois Basin. Whether it slows deeper penetration it does not inhibit the lateral transport in the subsurface. How is this taken into consideration?

Page 9 – Why are discharged volumes to untreated? Also, discharges after settling are considered to be PCB-reduced, there is little evidence that this is actually so. No mass balance study of the system has been done and presented. The sludge sampling plan was made available at the library, but not a report on results. Claims of ‘settling’ in the tanks as a treatment method have never been substantiated. Because the tanks are open to the atmosphere, it is quite likely that a large component of this ‘treatment’ is probably volatilization. The air study near the plant did show significant releases from the facility.

Page 10 – Although this document considers the Viacom attempt to target a ‘source’ conduit, have they suggested a better plan to extract the contamination than waiting for it to exit ICS? Further, groundwater contamination has actually not been addressed. Everything seems to focus on ICS as the total of the water from the site. Actually two other significant components are the waters exiting the site via other springs, and what does not come out of the springs, but is still in the subsurface. The springs act as ‘overflows’ of the karst, but without a water budget study, we are ignoring the contamination in the subsurface water system.

Page 18 – Risk assessments focusing on cancer are incomplete. Far more serious are the chronic effects of PCBs as endocrine disruptors. Why has this element not been addressed?

Page 20 – Clear Cr. is not the only drainage that needs addressing. In fact the plan to basically and incorrectly conclusion to do nothing suggests why ignoring other stretches

of Lemon Lane drainage are ignored. For example the stretch from ICS at 3rd street south to the confluence with Clear Cr. has long been ignored. Why?

What basis is there to the assumption that ICS drains a 300 acre site? There are other springs that radiate all around the landfill. Dye trace studies with injection into karst feature are not definitive. Just because traces are found in ICS does not preclude transport to other areas or drainages. Were they all tested simultaneously and in a mass balance scheme to ensure recovery of all dye injected? It really appears that you have an answer and are stretching the flimsy data to fit it.

Page 22 – Where does the figure of 30.5 extra tanks come from? Please justify. Just because the total untreated volume may require 30.5 tanks, that is not the mode of operation. The storage tanks are not for long-term storage, but just as ‘load-leveling’ devices. Even one additional tank would significantly add to the ability of the 1,000 gpm system to catch up with storm events without releases. A TI waiver is not justified. If it is based on 30.5 tanks, it is specious.

Deed restrictions at the area behind Hinkle’s to restrict residential use are reasonable, but ignores the whole stretch of the properties south of the 3rd street which includes many residential areas. Why?

Page 24 – What is ‘Estimated Present Worth Cost’ and what is its significance in this situation?

Table 6 shows Alternative 3 is so much superior to the present system. Why not switch over to this new and improved technology? At a capacity of 5,000 gpm it certainly can increase system capacity. Of course nothing is presented to technically justify these glowing pluses? Where has the technology been field tested? Actually, direct exposure of activated carbon to sediment loaded water is carbon-killer. For the same reason that the present system takes elaborate steps to filter out solids before passage thro the GAC, shows the need for protecting carbon from sediments. How does the ‘new’ technology get around that? Table 6 admits this but with no verification of the 3+ mark for ‘Reliability of Technology’.

The whole concept of ‘clarification’ as a treatment process has never been tested or proven. Please discontinue relying on that step as a viable component. With open tanks, air emissions are part of the reason we might see a reduction in PCB levels in the water. The air testing that was done a few years ago showed significant air releases from the plant. Hopefully the plant operators are knowledgeable about their exposure and are routinely assessed for cumulative threat to their endocrine system.

In Table 6 criteria 4 mentions ‘Type & Quantity of (Process) Residuals’ provides poor effectiveness for Alternative 3, but superior marks for Alternative 1, i.e., the current system. What does this mean? Are we getting a worse result with the proposed alternative than we have now?

Further the 'ability to monitor effectiveness' is low for Alt 1, but high for #3. What changes in measurement technology cause this difference, and for that matter, the variability over all the alternatives?

Page 27 – Operable Unit 3 seems to 'focus' on Clear Cr. alone. What about the sediments in the stretch south of 3rd St. before joining Clear Cr. It passes through residential areas with children playing in the water (personally observed).

Further, the whole discussion with data that definitely requires attention, and then, a conclusion that nothing to be done. Is that appropriate?

If the cleanup target is 1 ppm, why not remove everything that is above 1 ppm and not manipulate the data with averages of 5 ppm? (And additionally, what is an average with a range? statistically meaningless.) And, again how does the EPA justify a 'no action' decision with such strong evidence of contamination? Is there a reliance on nature to cleanse itself? The sediment is not locked in place. Every storm event moves it> Are we back to the 'solution to pollution is dilution'?

Table 4 indicates that all sediment should be removed, particularly the deeper material. To get at it requires removal of the upper material. Do it all!  
Every storm event spreads the contamination further downstream.

What is a 'non-drainage' area?

Table 5 shows differences in pre-mean concentrations for 12-31" differ ring from Table 4. Why?

Table 5 goals of 5 ppm are unjustified for consideration. First the goal is 1 ppm. Second, to get at the 5 ppm hotspots actually mobilizes contaminated material for transport downstream. Do it all!

And then to conclude that 'no-action' is acceptable is pure mendacity. Why, when your own data says that total removal is needed? And, don't forget the stretch south of 3rd ST before Clear Cr.

Page 28 – More on Table 6 Why does Alt 1 have a significant reduction of toxicity compared to the marginal acceptability of Alt 3? It would seem that this would be a primary goal of the whole cleanup. Why is it not considered as significant? Again, what makes Alt 3 a 4+ in measuring effectiveness? Won't it be the same technology as used now for Alt 1 (which doesn't meet the state's maximum discharge level for PCBs? And, again, there is no evidence that Alt 3 is a proven technology. It needs more evidence than a paper explanation. Smacks of 'dry labbing' an experiment.

Page 30 – The ARARs discussion blithely dismisses the need for an NPDES permit. What justifies this? Previous explanations that the ICS treatment facility was an 'emergency' response was too glib, but to continue this in the face of discharging a hazardous substance to waters is unconscionable. Why not use a technology that gets to

the state's goal and a monitoring method to prove it under an NPDES permit? Because the EPA has the power to get around regulations, does not justify doing so. Greater confidence in the system would be to hold the EPA to its own regs.

How can Indiana DEM accept a 0.3 ppb goal when there is a legal requirement for a much lower limit? Analytical technology does exist to get reliable data. Although it does require some innovations in sample handling, concentration, and instrumentation, it can be done, if there is a will to accomplish it.

The TI waiver is a copout. Alt 3 claims significant improvements in managing the storm excesses, yet there is a clear implication that 1,000 plus gpm will still be released. Does this also imply that the current storage tanks will not be used?

Under 329 IAC 4.1 – 4 waste sludge generated by the plant must be appropriately managed. First, does the facility adhere to the 90 day limit on storage before disposal? Because no mass balance study on the removal effectiveness has been done, and exposure of wet sludge to air allows significant volatilization of PCBs, reliance on sludge analyses that permit disposal in a Vigo Co. landfill rather than a hazardous waste landfill are very questionable. If the EPA was scrupulous about protection of human health and ecological systems, there would actually be proof that these systems worked in isolating PCBs rather than wasting money on sham cleanups.

Page 31 – One of the problems with 326 IAC 2-4.1 is that it specifies tonnages. It doesn't take into account the varying toxicities of the substances. A serious loophole that you are using to promote 'the solution to pollution is dilution'. Unconscionable. PCBs are endocrine disruptors and there is no evidence of a lowest tolerance limit for the impacts.

The dismissal of the clear evidence of sediment contamination in Clear Cr. that calls for total removal to prevent ongoing damage as the sediment moves downstream is again unjustified and unconscionable. Every storm disturbs the contaminated material and moves it downstream.

Page 32 – Alt 3 is not clear about 'multimedia' approach. This needs further clarification and explanation. Simple passage through activated carbon suggests that the current system is somewhat elaborate and over-engineered. However the explanation that the solids need removal before carbon treatment would not be overwhelmed and inactivated still seems reasonable. What component in the 'new' technology of Alt 3 avoids the need to remove solids?

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