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Now that the ICSWTS has been promulgated as one of the components of a final remedy at the Lemon Lane Superfund site in Bloomington, it is now time to present the facility, its operational plan, and performance validation for public comment. Considering that the facility has been in full operation for more than two years since its "pilot" status under EPA, enough performance data should be available to show:

- ◆ its performance history,
- ◆ its present and future operational plans,
- ◆ its effectiveness in prevention of PCB release from the landfill,
- ◆ its long-term performance capabilities,
- ◆ its potential as part of the final solution to all LL releases of PCBs, and
- ◆ its ability to meet state and federal requirements.

Performance History – Although you make a report each public meeting of the Citizens' Information Committee, no data are presented on the actual removal of PCBs. Little data are given on concentrations of PCBs in the effluent, and none on either the influent or what is actually released from the IC Spring. Cycling millions of gallons through the facility with no solid data on PCB levels is neither informative on its past performance, nor usable in constructing models of future performance. In addition, the report of August, 2004 gives analytical results at the 0.5 ppb reporting level, when you have maintained that the current cleanup goal is 0.3 ppb. Doesn't the new contractor understand the performance criteria and the need to have the laboratory use that as the lowest quantitation level?

Operational Plans – Although the operators may have some concept of how to operate the plant, nothing has been revealed to indicate that any systematic operation plans have been prepared. There must be some situations and response procedures that are by now somewhat routine, as well as contingency plans for inclement weather or system interrupts. A situation has already developed (which is the operation of the system in the face of sequences of large rain events) that appears to require some planning. As has already been seen, attempting to capture all the water that the spring yields in one storm event involves collecting relatively large levels of PCBs that decline over the event. Then, a subsequent intense rainfall event causes flushing of elevated levels of PCBs that may have to bypass the facility due to a lack of storage capacity. How do your operators handle this occurrence? Instead of basing operation on water flow alone, Couldn't PCB level should be the decisional driver?

Effectiveness – Although the intention of any Superfund remediation must focus on a significant reduction in the exposure and damage to human health and the environment, as can be seen from what little risk reduction analysis that has occurred, little change to the threat has occurred. The stream sediment has not been removed. The quantity of PCBs removed in the excavation has not been calculated to show a significant reduction, and the epikarst storage has not been reduced in the excavation. Large quantities are still resident in the consolidated material, concentrations in the springs have not been significantly reduced, and airborne releases may have in fact been exacerbated by the treatment system. No systematic attempt has been carried out to test the system performance. I have attached a figure of the plant flow process showing the numerous points at which air releases are likely, and where sampling should occur to prove both component effectiveness and/or escapes to the atmosphere.

In addition to failing to adequately assess system performance in the low frequency of effluent sampling, no data are presented to show PCB capture in the sludge and activated carbon. The sludge is allowed to dry in a bin, which is open to the air. PCBs in wet sediment are well known to be extremely volatile. And further, the technique to assess PCB content which should be a total analysis rather than the TCLP

procedure which is RCRA and specifically unusable and unsuitable for PCBs. It is not difficult to suspect that in order to qualify this waste for a non-TSCA landfill, the material is being allowed to aerate and lose its PCB content, samples are taken from the dry surface and do not represent the mass of material, and the level is further “reduced” by the chosen analytical technique which does not correctly quantify the PCB content. By disposal of potentially hazardous material in a non-TSCA landfill, the disposal is potentially becoming a future remediation problem. Further the carbon is not analyzed at all. There is not much evidence that this system does little more than expensively pump water and release PCBs to the air.

Long-Term Performance – Considering that the system has already proven to be undersized for flow from IS Spring, early plans for linking this facility to water releases from other springs are not likely without increases in treatment capacity. A significant component of this aspect is that much of the reasoning and remediation investigations are flawed. The sampling was not coordinated with large storm events, and the dye testing involved spurious injection points with little surety of actually tracing PCB movement. Further current system performance is based not on achieving regulatory cleanup requirements, but rather on what was easily achievable based on conventional drinking water processing techniques, rather than what is required by state regulations. Simply because one is a state-operated facility does not justify getting around requirements using interoffice shenanigans in the permitting process. As is being done at Neal’s for a number of cycles of five-year reviews, permits are given without adequate regulatory justification or opportunity for public input.

Complete Solution - Because the Lemon Lane site was remediated with no epikarst PCB removal, no basal liner beneath the consolidation area, and a typical 30-year lifetime RCRA cover (without a leachate collection system), penetration of precipitation and PCB release will likely increase over time. Considering that significant PCB quantities are still on site, and mobilization will increase, what effort is going into assessing how long the release will continue, and the potential of this facility to manage the problem. In addition, the ongoing release of PCBs to the air both in the treatment process and the released water continues with little attention to prevention. It is particularly noteworthy that, as part of the remediation plan stream sediment will be removed from Clear Cr. However, without complete removal of PCBs from the ICS effluent, sediment contamination will continue. How can this treatment facility be considered as the final solution to PCB releases if so much is left on site to be released and the system operation is not effective?

Regulatory Requirements – Although the system was installed as an emergency action and operated as a pilot facility, it is now discussed as part of the final remedy.