

Dear Jan,

My friend, Dick Clogg, got hold of this report for us. As you can see, it's dated, but it's the <sup>most</sup> ~~most~~ recent one he could find. At my request, he's put in an FOIA request for all other available information.

Dick recently spoke to Steve Whitman while Steve was in Boston, so I assume CEML has some idea of what's happening.

Let me bring you up-to-date.

I've been concerned about the way the health issues at Marion have been handled by our side; we seemed short on facts and a bit long on rhetoric. So, I figured I should take advantage of my old doctor contacts to see if we could clarify the situation as much as possible. Dick, who has a doctorate in public health and specializes in environmental toxicology, seemed like the perfect person. Dick, incidentally, is excellent politically and is potentially a real ally.

The key points on the report are:

① PCB's - all the water specimens from the prison were far below the established "safe" levels. (in other words, no problem). They did suggest that further specimens be taken from the lake during a period of turbulence when the bottom is muddy; they <sup>also</sup> suggest that the fish be tested.

In summary, if the reports are accurate, & if the toxic levels have not changed, the water is safe by established standards.

That, of course, doesn't mean we shouldn't demand independent testing, and Dick will help if we want him to.

② BUT,

The levels of chloroform and trihalomethanes are very high. They are breakdown products of the interaction between the chlorine added and the naturally occurring organic products in the water (p.3).

Trihalomethanes can have long term carcinogenic effects and short term non-toxic carcinogenic toxic effects (SNARLS).

In terms of long term exposure carcinogenic effect, the levels at Marion give rise to an estimate (p.6) of  $1.096 \times 10^{-3}$  - a ~~level~~<sup>figure</sup> that is 100-1000 times (not %) ~~than~~ those that normally considered "acceptable" for environmental toxins. In addition, Dick told me that he went to a conference last year where a paper was presented that said that bladder cancer has been associated with levels of chlorine thought "safe" at the time (1986) of this study.

The SNARL discussion (p.4,5) is misleading. It tends to deal with acute ingestion only & those side effects - it discusses 24 hr and 7 day exposures. Lifetime SNARL has not been estimated. Most importantly, the SNARL for exposure of 3-5 years (the average time prisoners spend at Marion) is not discussed. It seems to me very likely (albeit not established) that chlorine levels found at Marion could cause a range of non-lethal toxic effects over a period of months & years.

Go to the bottom p.4 & top of p.5: the actual figure of chlorine in the Marion water is not much lower than the 0.54 mgm/L cited for non-carcinogenic effects. That's for a 7 day exposure using an estimate of 2 quarts (liters) of water/day. There is every reason to believe that the "safe" levels for exposure that continues for years would be much, much lower than the actual levels recorded [for example, note that

The NAS SNARL for 24 hr. exposure was 22 mg/L, but for 7 days, it dropped by a factor of 7 to 3.2 mg/L. Would a safe daily level for a year be  $1/52$  of 3.2 mg/L? Not exactly, but it might be close.

On p. 5, they cite 2 human chronic toxicity studies that seem to contradict the data from the SNARL studies. It's important that we get those 2 studies and any other ones that have since been done. I'll ask Duch to get them. The medical problems associated with chlorine toxicity are listed on p. 5; "ataxia" means a loss of balance. The figure of 1.12 g/work-day is about 1000 times greater than the calculated exposure at Maroon.

Their concluding statement that "drinking water supplies of concern should not pose a short-term public health threat" is clearly ambiguous: "should not" is not "will not", and what is the scientific definition of "short-term"?

They recommend that chlorine & trihalomethanes be reduced.  
Has this been done?

They recommend continued testing.  
Has that been done?

There are also manganese levels that are borderline, but I'm not sure there's much to be said about them.

I'm going to try to follow-up on the health effects of chlorine; if there's anything else you'd like me to do, just let me know.

If Keatonmeyer has a hearing, perhaps we can get Duch to testify for our side.

Take care.

Alan