Washington State Department of Ecology
Water Quality Program

Memorandum

D R A F T

June 28, 2000

TO: Ron Lavigne
Asst. Atty. General

Jeanne Tran
Permit Management, NWRO

FROM: Kirk Cook
Hydrogeologist, HQ-WQP

RE: RI Report, Appeal of UIC Order and SWD Permit

After reviewing the draft RI report from HartCrowser and the settlement proposal submitted by J.H. Baxter I feel that there are significant issues to be resolved prior to the Water Quality Program finalizing any proposed settlement. I have a few general comments that will be followed by specific concerns that must be addressed prior to our meeting with J.H. Baxter and their representatives regarding settlement.

General Comments

Many of the issues that appear in the settlement proposal will require an acceptance of the RI report. Unless the Water Quality Program waits until the Toxics Clean-Up Program either approves of or rejects the RI, we will be putting ourselves in a position of "approving" the report. We should not put ourselves in a position that potentially will conflict with the program that has authority. There is a distinct possibility that our acceptance of several of J.H. Baxter's proposals and positions could provide them with a foundation that can be used to defend themselves against any action the Hazardous Waste and Toxics Reduction Program or the EPA RCRA program may take as a result of previous findings. Again, I do not believe that is a position we wish to place ourselves. I would advise that we wait until the Toxics Clean-Up program completes their review of the RI report and registers their opinion regarding acceptability before we consider any settlement options.

Remedial Investigation Findings (Settlement Propsal)

The current situation at the Baxter facility is such that it is extremely difficult to isolate the various "components" of the PCP contamination, be it past practices from the alleged

NAPL pool, surface infiltration, or infiltration as a result of French drain use. While it really has no bearing on our order, HartCrowser's attempt to disregard the contribution from surface and French drain infiltration potentially has ramifications to RCRA actions that EPA may be considering. It is J.H. Baxter's position that the PCP contamination observed in MW-3, BSX-1 and HCMW-7 are the result of "past practices" and not from stormwater entering French drains. This position is based on conceptual and fate and transport modeling. HartCrowser is basing their conclusion regarding the effects from surface and French drain infiltration on results of the MULTIMED model and a derived dissolved PCP concentration of 40 ug/L as an input value for PCP in stormwater in that model. In my opinion there are several problems with how the consultant got to this position.

1) The 40 ug/L value was based on the position that previous samples were turbid and because of the behavior of PCP the dissolved portion (that which would move in ground water is substantially below that indicated in previous analyzed samples). The 40 ug/L was derived using assumptions for which there are no references cited. This number is also 2 to 3 times lower than another method used that indicated 100 to 400 ug/L was appropriate.

2) HartCrowser used only turbidity as "correcting factor" for PCP. PCP is highly pH sensitive. Under acidic conditions it will more readily adsorb to soil and sediments. In graphing pH vs TSS/PCP concentration for the French drains monitored, the trend line indicates a significant relationship between rising pH and a smaller quotient. Without consideration of soil and saturated zone pH the initial model input of 40 ug/L and the model operation itself is questionable.

3) The MULTIMED model is based on a steady state assumption. This assumption does not accurately reflect the introduction of "slugs" of contaminated stormwater (that occur during every rainfall event) into surface and French drain infiltration avenues that would tend to produce short term peaks in ground water PCP concentrations over that predicted in the model results.

4) After discussing the use of the model with Hydrogeologists within the Toxics Clean-up Program who have much more experience in using the MULTIMED model (and like models), I have some concerns regarding other input parameters used in the model that may cause additional predicted PCP concentration increases beyond that presented in the RI.

In summary, I do not believe there is sufficient technical justification for the statement that stormwater entering the French drains are unlikely to be a significant contributor to the contamination observed in the groundwater. HartCrowser (in the RI, page 26) does not discount the idea that in at least several points infiltration due to use of French drains has contaminated groundwater. Statements within the Order that draw a linkage between use of the French drains and groundwater contamination should remain unchanged.

Monitoring Under the State Waste Discharge Permit

Monitoring for the purposes of compliance with the State Waste Discharge Permit is problematic. There are two sources of PCP at the site, the NAPL source attributed to past practices and PCP carried with stormwater infiltrated through French drains and surface percolation. The permit is concerned with the later. J.H. Baxter has submitted, as possible monitoring locations, HCMW-6, HCMW-5, and MW-2 as sites for the monitoring of groundwater compliance. There is merit to accepting HCMW-5 as a monitoring location for the **Kiln** area, and MW-2 as a monitoring location for the **Treated Pole Storage Area**. The problem comes in monitoring of the **Drip Pad** and the sites of French drains 13/14 and 23. I propose that HCMW-6 be removed from consideration and instead site three vadose zone monitoring locations near MW-3 (between 5 and 15 feet), near the site of French drain 23, and between the site of MW-3 and FD 23. It is optimal that the monitoring devices be installed as deep as possible but above the highest groundwater level measured. The results of the vadose zone monitoring will be considered as meeting the point of compliance.

Parcel B: Untreated Wood Storage Area

Water quality monitoring locations for the untreated wood storage area should remain as indicated in the Permit. I disagree with the proposal and request by Baxter for relief from the requirement to immediately close any drain where PCP is detected. Upon detection of PCP in the stormwater entering the French drains, Baxter should resample immediately. If the results are confirmed closure should immediately take place. It is VERY clear that the Underground Injection Control regulations both on a state and federal level require this action. As stated before, because we do not have permit authority not requiring immediately closure would be looked upon as permitting the action—something we simply cannot condone.

Interim Stormwater Management

No infiltration beyond that which would occur through surface seepage should be allowed. Allowance for infiltration, promotes groundwater degradation, dispersion of the existing contamination, and opens us up to running headlong into EPA RCRA folks. Therefore, Option One should be taken off the table. The lined lagoon option appears to be valid from the standpoint of Water Quality; however, we again run into the possibility of a conflict with EPA in that we are creating an impoundment for hazardous waste. Option three contains a problem in that we are allowing treatment to occur thereby permitting a TSD without benefit of RCRA (our hazardous waste folks and EPA should hit the roof on this one). Option four has several major problems not the least of which is the discharge to the Arlington WWTP of a hazardous waste. From a technical and policy standpoint, I would vote for Option five – Coordination with MTCA and work out the details with them. I think that affords us a certain amount of protection from being perceived as getting out in front of RCRA and MTCA.