

Barney,

I completed a Tier 1 (with some site specific data) for the Benzene and chlorinated hydrocarbons found in the groundwater on site. For the chlorinated hydrocarbons, I input the highest concentrations detected on site since 1993. For Benzene, I choose the only detect that was identified in the current monitoring event in MW-4 at .0076 mg/L. I did not choose the highest benzene hit that was identified in MW-3 in the year 1991 because MW-3 has had more than 4 consecutive quarters of non-detect since 1994 including the current event.

The only changes I made to the input parameters were - Depth to groundwater which according to the report ranges from 7 to 14 feet. So I took an average of 10 ft, \

I was not sure if you also wanted me to evaluate the risk from subsurface soils, but the report did not include any tables depicting the laboratory results of soil samples. However, in page 1, it is mentioned that after the tank removal, over excavation was conducted and the confirmation soil sample results indicated the continued presence of gasoline and this was at nearly 14 feet. I am not sure how significant the contamination was at this depth. So let me know if you want me to evaluate anything else

Based on the results of the risk evaluation, as you can see in the printout, (Worksheet 9.3), the it does not appear that the Benzene or the chlorinated hydrocarbons are a problem.

Madhulla:

Needs to evaluate subsurface soil to outdoor / indoor air: not likely pathway ↓  
Residual soil contamination <sup>(assumed)</sup> @ ~12-14' bgs in soil sple BIA =  
2900 ppm TPHg + (29, 98, 77 & 23 ppm BTEX respectively.

I've included a map of former tank pit, <sup>orig</sup> sple, ~~overexc.~~ sple locations & analysis results. Also an additional stow mw. was done in 1993 (B-1 through B-8.) ~~They~~ Their results also attached. ~~the~~ ~~report~~   
 ~~just like~~ Plus the report.

I guess you need to evaluate soil + GW vapor intrusion to indoor + outdoor air.

Thanks

Barney

Barney,

(Benzene in GW)

Since you have given me additional soil and groundwater data, I went back and re-evaluated the site with the new concentrations. For the groundwater to indoor and outdoor air pathway, I used the highest groundwater concentration found in boring B-6 (grab groundwater sample) of 84 ppb and it was not a problem for outdoor to indoor pathway for 10-5 risk

For the subsurface soil to indoor and outdoor air, for the current scenario, there seems to be no problem around the building as shown in the site location map. However, for the future scenario, I averaged all the soil concentrations including confirmation samples collected subsequent to overexcavation and, boring B1 to B8 series, which came to be nearly 4 ppm. As you can see in the output results, it does not seem to be a problem for a 10-5 risk.

Now for the solvents, I compared the previous concentrations that I have evaluated with the ones you have given me recently. Except for carbon tetrachloride, for all the other chemicals, the concentrations that I had used previously is the highest concentration and it is not a problem for the groundwater to indoor pathway. I gather that solvents were not found in the soil. For CCL4, the highest conc is 1.3 ppm <sup>(B-7)</sup> and since the SSTL's are less than that it may be a problem. However, if you take an average of all the concentrations found, then it is fine.

Also, I did not evaluate the construction worker scenario, since all the contaminants were found greater than the five feet depth.

Madhulla