

INTEROFFICE MEMORANDUM

Date: 05-Aug-1993 08:30am EDT
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TO: 2 addressees

CC: 5 addressees

Subject: C-8 in site drinking water

The attached communication puts some perspective on the recent results of C-8 in our site's drinking water.

Roger.

ALP000734

EID128090

C-8 IN WASHINGTON WORKS DRINKING WATER

Recent sampling of the four Washington Works drinking water wells have shown C-8 levels of 0.1, 0.5, 2.9 & 3.3 parts per billion. These values are surprisingly high but do not pose a health threat to our employees.

The allowable exposure level of C-8 for our employees is set by our corporate AEL. This level is 0.01 mg/m³ or 0.56 ppb. This is an airborne control level. A control level for employee drinking water has not been set because such a control level was not deemed necessary.

Exposure to C-8 is best understood by examining the AEL on a daily dose level basis. At the AEL an employee can be safely exposed to a 12 hour dose of 0.10 mg of C-8. If an employee were to drink water with a C-8 level of 3.3 ppb he would only be exposed to a daily dose of 0.006 mg., or 1/20th of the AEL (note: C-8 is essentially fully absorbed by the human body if breathed or consumed).

At this time all operating areas on site are in compliance to the AEL for airborne C-8 exposure. The slight additional exposure imposed by drinking water with C-8 levels of 3-4 ppb should not affect our compliance to the daily dose of C-8 allowed by the AEL.

We should not get confused by the current CEG (Community Exposure Guideline) for C-8 in water of 1.0 ppb. This guide level is for exposure to the general public and not for the healthy workforce here on site.

However, this situation should not be taken lightly. The site environmental group and the C-8 team will endeavor to fully understand these recent sample results and provide you with future programs.

Attached is the technical basis for the allowable dose exposure levels from Haskell.

ALP000735

A WORKER EXPOSED TO THE ALLOWABLE AIRBORN CONCENTRATION (AEL) OF C-8 OF 0.01 MG/M3 WOULD RESULT IN A DAILY DOSE OF 0.1 MG PRESENTED TO HIS/HER LUNG DAILY. THIS AMOUNT IS ACCEPTABLE AND WILL NOT PRODUCE ADVERSE HEALTH EFFECTS. THE COMMUNITY EXPOSURE GUIDE OF 0.0003 MG/M3 IS RECOMMENDED FOR THE GENERAL POPULATION AND WOULD RESULT IN A DAILY DOSE OF 0.006 MG PRESENTED TO HIS/HER LUNG DAILY. THE DIFFERENCE IN RECOMMENDED CONCENTRATIONS IS THAT A) THE COMMUNITY DOES CONTAIN PERSONS WHO MIGHT BE MORE SUSCEPTIBLE TO THE ADVERSE EFFECTS OF CHEMICALS (THE AGED, THE YOUNG, THOSE WITH PRE-EXISTING DISEASE CONDITIONS THAT MIGHT MODIFY THEIR ABILITY FOR NORMAL WORKING SCHEDULES) AND THAT B) THE EXPOSURE IS CONTINUOUS (24 HOUR) INSTEAD OF INTERMITTENT.

A WORKER DRINKING WATER CONTAINING 3 PPB AND DRINKING ONLY FROM THE PLANT WOULD GET A DAILY DOSE (IN HIS 2 LITERS/DAY) OF 0.006 MG (PRESENTED TO THE GASTROINTESTINAL TRACT). THIS CAN BE COMPARED TO THE AEL ACCEPTABLE DAILY DOSE OF 0.1 MG/DAY. RECOGNIZE HOWEVER THAT THE AMOUNT POTENTIALLY ENTERING THE BODY IS ADDITIVE AND THAT AMOUNTS ENTERING VIA INGESTION NEED TO BE CONSIDERED IN ADDITION TO THAT ENTERING FOLLOWING THE USUAL INDUSTRIAL ROUTES (DERMAL AND INHALATION).

I HOPE THERE IS SOMETHING USEFUL IN THESE "TALKING POINTS".

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