



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

J.F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203-2211

received
8-18-92

August 12, 1992

Mr. Francisco La Greca
U.S. Department of the Navy
Northern Division
10 Industrial Highway
Code 1823, Mail Stop 82
Lester, PA 19113-2090

Dear Mr. La Greca:

Pursuant to EPA's August 5, 1992 correspondence regarding comments on the "draft" Interim Record of Decision (ROD) for Ground Water Remediation near Tanks 53 and 56 at the Naval Education and Training Center (NETC), please find attached specific comments on the human health risk assessment discussion in the draft ROD.

Since EPA just received the Summary of ARARs portion of the draft document yesterday afternoon, it is unable to provide comment on the entire document by August 12 as requested in your August 5 letter. A copy of the ARARs analysis has been forwarded to EPA Region I's Office of Regional Counsel for review and comment. I will forward any comments received on this portion of the draft ROD as soon as they are made available to this office.

Should you have any questions in regards to the attached, please do not hesitate to call me at (617) 573-5764.

Sincerely,

A handwritten signature in cursive script that reads "Carol A. Keating".

Carol A. Keating
Remedial Project Manager
Federal Facilities Superfund Section

Attachment

cc: Paul Kulpa, RIDEM
Rachel Marino, NETC Newport
Robert Smith, TRC Environmental Corporation
Bob DiBiccaro, EPA ORC

3353



ATTACHMENT I

The comments provided below are EPA's comments pertaining to the human health risk assessment portion of the draft "Interim Record of Decision (ROD) for Ground Water Remediation near Tanks 53 and 56." The draft ROD was submitted by the U.S. Department of the Navy for the Naval Education and Training Center (NETC) in Newport, Rhode Island.

- Page 7, ¶ 1 - To alleviate any possible confusion and to be consistent with the format of the Phase I RI submission, reference to **Appendix II** should be changed to **Volume II**.
- Page 7, ¶ 4, 3rd line - Delete "... the evaluation of risk associated with Tank Farm Five..."
- Page 8, ¶ 2, 9th line - Reference to "worst case" should be deleted and replaced with "reasonable maximum."
- Page 8, ¶ 4, 2nd line - "**The hazard index...**" should be revised to read, "**A hazard quotient...**"
- Page 15, ¶ 7, 3rd sentence - This sentence should be revised to read, "However, UV/oxidation **provides greater reduction** of potential human health and environment risks than air stripping..."
- Page 17, ¶ 5 - Insert "Interim Ground Water" before "Cleanup Levels" in Item A.

A. Interim Ground Water Cleanup Levels - The first three sentences should be deleted and replaced with the following:

Interim ground water cleanup levels have been established in ground water for all contaminants of concern identified in the Phase I Remedial Investigation baseline risk assessment found to pose an unacceptable risk to either human health or the environment. Interim cleanup levels have been set based on the ARARs (e.g., Drinking Water Maximum Contaminant Level Goals (MCLGs) and MCLs) if available, or other suitable criteria described below. [Need to indicate here whether State requirements that are "promulgated" and "more stringent" than Federal requirements are ARARs for purposes of this interim remedial action.]

- Page 18, ¶ 2 - Please replace this paragraph with the following:

Because the aquifer under the Site is classified as GA-NA by the State of Rhode Island, which is a potential source of drinking water, MCLs and non-zero MCLGs established under

the Safe Drinking Water Act are ARARs. [Need to indicate here whether State requirements that are "promulgated" and "more stringent" than Federal requirements are ARARs for purposes of this interim remedial action.] May want to consider adding language such as, "In situations where a promulgated State standard is more stringent than values established under the Safe Drinking Water Act, the State standard was used as the interim cleanup level.

- Page 18, ¶ 4 - Please replace this paragraph with the following model language:

Cleanup levels for compounds in ground water exhibiting non-carcinogenic effects have been set at the MCLG. In the absence of a MCLG, cleanup levels for non-carcinogenic effects have been set a level thought to be without appreciable risk of an adverse effect when exposure occurs over a lifetime (hazard index =1).

- Page 18, ¶ 5 - Need to insert a table into this section, similar to the sample table below (Table I from the model ROD), which summarizes the Interim Cleanup Levels for all carcinogenic and non-carcinogenic contaminants of concern identified in the ground water. With the exception of the first sentence, the rest of the paragraph should remain as is.

[EXAMPLE]

TABLE I: GROUND WATER CLEANUP LEVELS

Carcinogenic				
Contaminants of Concern	Cleanup Level (ppb)	Basis	Level of Risk	
Benzene	5	MCL	5×10^{-6}	
Trichloroethylene	5	MCL	2×10^{-6}	
Pentachloroethylene	5	PMCL	7×10^{-6}	
P-dichlorobenzene	75	MCLG	8×10^{-6}	
		SUM	2×10^{-5}	
Non-carcinogenic				
Contaminants of Concern	Cleanup Level (ppb)	Basis	Target Endpoint of Toxicity	Hazard Index
Toluene	2,000	MCLG	CNS	.2
Methyl Ethyl Ketone	50	HI	Fetotox	1
Xylene	300	HI	Body Weight	1
Copper	1,300	MCLG	GI	.2
		SUM*		1

* Note: The hazard index is summed for only those indicator compounds with the same or similar target endpoints. When two or more compounds have the same target endpoint of toxicity, you should flag them so that it is clear what the sum corresponds to. Abbreviations for each effect may have to be developed. Also,

the values in this Table are for illustrative purposes only.

- Table 1 - Consistent with the language in the model ROD, a table depicting the carcinogenic or non-carcinogenic risks for all contaminants of concern in ground water evaluated to reflect present and potential future risk via all exposure pathways evaluated, needs to be inserted into Section VI - Summary of Site Risks. (If all of the data necessary to complete this table has not yet been collected, e.g. to be collected during Phase II RI activities, a more thorough discussion on risks should be deferred until the final ROD.) This table should follow the format outlined in the model ROD. It has been reproduced below for reference.

CARCINOGENIC RISKS FOR THE POSSIBLE FUTURE INGESTION OF GROUNDWATER

Contaminant of Concern	Concentration (ug/l)		Exposure Factor (l/kg/day)	Cancer of Potency (mg/kg/day)	Risk Estimate	
	avg	max			avg	RME
Benzene	3	580	2.9×10^{-2}	2.9×10^{-2}	2×10^{-6}	5×10^{-4}
Chloroform	4	200	2.9×10^{-2}	6.1×10^{-3}	7×10^{-7}	3×10^{-5}
				SUM	3×10^{-6}	5×10^{-4}

NON-CARCINOGENIC RISKS FOR THE POSSIBLE FUTURE INGESTION OF GROUNDWATER

Contaminant of concern	Concentration (ug/l)		Exposure Factor (l/kg/day)	Reference Dose (mg/kg/day)	Target Endpoint of Toxicity	Hazard Index	
	avg	max				avg	RME
Xyl n	150	3000	2.9×10^{-2}	2	Wgt. Loss	2×10^{-3}	4×10^{-2}
MEK	30	1200	2.9×10^{-2}	5×10^{-2}	Feto-Toxicity	2×10^{-2}	8×10^{-1}
				SUM*		2×10^{-2}	8×10^{-1}

*NOTE: The hazard index is summed for only those compounds with the same or similar target endpoints. When two or more compounds have the same target endpoint of toxicity, they should be flagged so that it is clear what the sum corresponds to.