



inter-office communication

To:	Paul Jayko, NWDO-DERR	Date: 16 January 2009
From:	Janusz Z. Byczkowski, DERR, CO	
Subject:	Final Feasibility Study for Groundwater TNT and Red Water Pond Areas, Former Plum Brook Ordnance Works Sandusky, Ohio , April 2007. Site: US NASA PLUM BROOK, TAYLOR & COLUMBUS Rds., SANDUSKY, OH 44870; ERIE Cnt.; OHID# 322-0552.	

The following memo is regarding the document "**Final Feasibility Study for Groundwater TNT and Red Water Pond Areas, Former Plum Brook Ordnance Works Sandusky, Ohio**", dated December, 2008.

If you have any questions or need further technical support, please call me at: 614-644-3070 or e-mail at jbyczkowski@epa.state.oh.us.

DOCUMENT TITLE: Final Feasibility Study for Groundwater TNT and Red Water Pond Areas					PRP Response
SITE: US NASA PLUM BROOK, TAYLOR & COLUMBUS Rds., SANDUSKY, OH 44870; ERIE Cnt.; OHID# 322-0552.			DOCUMENT/DATE: Final/December 2008		
Ohio EPA – Division of Emergency and Remedial Response COMMENTS					
REVIEWER: Dr. Janusz Z. Byczkowski, DERR, CO; Tel: 614-644-3070; e-mail: jbyczkowski@epa.state.oh.us .					
Review/DATE: 1/16/2009					
Comment Number	Sect. Page/Line#	Cross Ref.	Comment	Recommendation	
1.			<p>General Remark: After reviewing this document from risk assessor's point of view, I would suggest a minor revision of the Document.</p> <p>If you have any questions or need further technical support, please give me a call at: 614-644-3070 or e-mail at jbyczkowski@epa.state.oh.us.</p>	Before OEPA can concur with this FS, the Document should be re-check for typos and errors, revised to include some OEPA-DERR - RI/FS programmatic recommendations, and to follow the other suggestions listed below.	
2.	ES. P. ES-3 L # 14 and # 22		<p>Specific Issues:</p> <p>This Document states: <i>"...The Army likewise uses HI of 1 for noncancer hazard, but uses an ILCR criterion of 1E-4 as a threshold to determine whether a remedial action may be required due to cancer risk..."</i> and then <i>...In summary, four areas (TNTA, the PRRWP Area, the WARWP Area, and downgradient areas) exceed the OEPA cancer or noncancer criteria, and two areas (TNTA and WARWP Area) exceed the Army cancer or noncancer criteria..."</i></p> <p>Comment: Following the National Contingency Plan (NCP), cancer risk (ILCR) 1E-6 is the lower bound <i>de minimis</i> value which should be used as a "<i>threshold</i>"</p>	Please clarify these statements.	

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			<p>or "<i>cancer risk trigger level</i>" for remedial action (described in NCP as a "point of departure"). This first quoted statement should be rephrased to do not contradict the NCP. Similarly rephrased should be statements in the first paragraph on page I-40; in the first line on page I-43, in line 9 on page I-46, etc. (Please note that the NCP specifically stated: "... <i>The 10⁻⁶ risk level shall be used as the point of departure for determining remediation goals for alternatives when ARARs are not available or are not sufficiently protective because of the presence of multiple contaminants at a site or multiple pathways of exposure...</i>").</p> <p>The second of the quoted above statements, the "<i>summary</i>", does not reflect information provided in the first statement. Instead, it may suggest that OEPA and the Army use different cancer or noncancer criteria. This is inaccurate. Thus, according to OEPA-DERR (2004b) for multiple chemicals, the fixed cumulative human health goals of ILCR=1E-5 and HI=1 should be met.</p> <p>References: OEPA - DERR (2004b) Human Health Cumulative Carcinogenic Risk and Non-carcinogenic Hazard Goals for DERR Remedial Response and Office of Federal Facility Oversight. Technical Decision Compendium, 28 April 2004. On-line: http://www.epa.state.oh.us/derr/rules/riskgoal.pdf National Oil and Hazardous Substances Pollution Contingency Plan (NCP): 40CFR section 300.430(e)(2)(i)</p>		

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			http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=2449f8e62cf59d4e4ea6ef28fd1830a9&rgn=div8&view=text&node=40:27.0.1.1.1.5.1.7&idn_o=40 .		
3.	ES. P. ES-4 L # 3		<p>This Document states:</p> <p><i>"...groundwater modeling is conservative [...] The uncertainties associated with both of these components are likely to introduce bias that tends to overestimate rather than underestimate resulting groundwater concentrations The application of groundwater modeling results must be interpreted using best professional judgment, taking into account these uncertainties..."</i></p> <p>Comment: As written, this statement may be misleading to risk managers. Thus, the uncertainty, inherent to ground water modeling methodology, is symmetrical and the model itself produces the same likelihood of overestimated as underestimated results. Rather, as explained in the <i>Section 1.7</i>, these are the extreme modeling scenarios and selection of the upper bound parameter values that can produce the biased results.</p>	Please rephrase this statement.	
4.	P. ES-6 Table ES-1; and Table 3-1		<p>This Document states:</p> <p><i>"... 1,3,5-Trinitrotoluene..."</i></p> <p>Comment: The chemical name listed in this table seems to be in error, as it is impossible to nitrate toluene in the carbon #1 position, using normal chemical synthesis method. This name may refer, for example, to 2,4,6-Trinitrotoluene, 1,3,5-Trinitrobenzene, or yet some other chemical.</p>	Please check for errors and correct names of chemicals referred to in this document.	

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			Please note, that the Chemical Abstract Service numbers (CAS) are the unique identifiers of chemical species and they should be used whenever applicable.		
5	P. ES-7 Table ES-2		This document states in Table ES-2; row 4; column 2: "...TNT Area B ... 16.400 ..." Comment: There is a typo in the numerical value: "." instead of " ," Similarly, there is a typo in Table ES-3; Row 3; Column 3 "...\$1401,000..." – missing comma.	Please perform quality reading of the document and correct typos .	
6.	S. 1.8.6 P. I- 46; L# 25		This document states in the last paragraph on page I-46: " <i>...potential future users of groundwater at the property boundary are unlikely to suffer adverse site-related human health effects or unacceptable additional risk of cancer...</i> " Comment: This statement does not reflect the conclusion of risk assessment described earlier, and thus, it may be misleading to risk managers.	Please rephrase this statement.	