

**RESPONSE TO COMMENTS
 DRAFT FEASIBILITY STUDY REPORT
 FORMER LONG BEACH NAVAL SHIPYARD, IRP SITES 9, 12, AND 13
 LONG BEACH, CALIFORNIA**

<p>Comments by: Sue Hakim RPM, Base Closure and Reuse Unit Department of Toxic Substances Control</p> <p>Date: 01 November 2000</p> <p>Responses by: Bob Schilling, Doug Peeler BNI</p> <p>Date: 04 April 2000</p>	<p>CLEAN II Program Contract No. N68711-92-D-4670 CTO-0176 File Code: 02221</p>
COMMENTS	RESPONSES TO COMMENTS
<p>1. Please submit the quantitative estimates of the risk reduction for each of the remedial alternatives proposed for remediation of IR Sites 9, 12, and 13 groundwater, and IR Site 12 soil for DTSC's review before finalizing the document.</p>	<p>1. Results of the residual risk assessment will be included in the Draft Final Feasibility Study Report currently scheduled to be issued for regulatory review in mid-May 2001.</p>
<p>2. In your response to specific comment number 15, on page 22 of 30, you propose to do an estimate of the rate at which vinyl chloride may be migrating from groundwater as a part of the remedial design phase for the selected remedial alternative. Please perform this estimation as part of the feasibility study to help in the decision making process of selecting the appropriate remedial alternative.</p>	<p>2. At this time, the data necessary to determine at what rate biodegradation is occurring, and in the process, determine the rate at which chlorinated VOCs are partitioning from groundwater to vadose zone soil, is not available. The current groundwater monitoring program is designed to identify contaminant concentrations and distribution in the groundwater over time, but does not currently provide all the necessary data that would allow for rate determinations as a part of the FS. The suite of analytes for the quarterly groundwater monitoring program would be amended during the remedial design phase commensurate with the preferred remedial alternative. If monitored natural attenuation is selected, analysis for nitrate, sulfide, sulfate, iron (II), methane, ethene/ethane, dissolved organic carbon, hydrogen, and other water quality parameters would be added. The analysis results would provide data to determine the degree of reducing environment present, verify the presence and determine the rate of anaerobic dechlorination, and estimate rates of partitioning from groundwater to soil under the existing site conditions. However, monitoring over a period of years may be necessary before the rates of change caused by relatively slow natural processes could be determined.</p> <p>In the response to GSU Specific Comment No. 4 (page 14 and 15 of 30), the results of the June 2000 quarterly groundwater monitoring program for IRP Sites 9, 12, and 13 were noted. No trend in vinyl chloride concentrations (increasing or decreasing) has been identified since the inception of the program in 1999 (considering data collected from the 1995 RI to the present). Statistical evaluation of the groundwater data using the Mann-Kendall trend test was performed; none of the 17 wells monitored exhibited statistically increasing</p>

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FORMER LONG BEACH NAVAL SHIPYARD, IRP SITES 9, 12, AND 13
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2.(continued)

trends for any of the IRP Site 9 analytes (COPCs reported above the detection limit three or more times). This result suggests that the rate of breakdown of other chlorinated VOCs to vinyl chloride may be equal to the rate vinyl chloride is in turn breaking down to non-chlorinated VOCs (ethylene, chloroethane, and carbon dioxide) or that any trend in concentrations is as yet imperceptible.

The human-health risk assessment performed for the industrial scenario estimated the risk from exposure to vinyl chloride concentrations reported in groundwater through the inhalation pathway. This involved calculating the anticipated concentrations in air based on the concentrations reported in groundwater for the potential COCs and the parameters defining the exposure model for the maintenance/utility worker.

Some significant factors in the exposure scenario evaluated have or are expected to change as a result of the planned re-development. The buildings that once occupied IRP Site 9 have been removed, 10 to 12 feet of clean imported fill is planned to be added to the site surface during redevelopment, and no new buildings are proposed for construction in the site area. Vinyl chloride is quite volatile and dissipates readily in air. Without structures in which vinyl chloride and other COCs might be concentrated after leaving the groundwater and reaching the ground surface where human receptors could be exposed, the projected risk level for the future use of the site is reduced. Planned future use of the site as a paved overseas shipping container storage yard will involve limited human occupation and need for utilities on site, an outdoor setting, reduced potential for excavation, and no direct exposure to groundwater, therefore, the potential human-health risk presented by vinyl chloride in the groundwater would also be reduced. In the event that excavation becomes necessary, institutional controls in the form of health and safety procedures will provide maintenance/utility workers with an appropriate level of protection from potential exposure to subsurface contaminants that may have volatilized from the groundwater beneath the site.

From the foregoing discussion, the Navy believes that the Feasibility Study Report provides sufficient information to select a remedial alternative without the need to estimate the rate at which vinyl chloride may be migrating from the groundwater into the soil. Such estimates at this time would be speculative at best, and because of the high degree of uncertainty would be of little importance in the overall selection process.



CLEAN II Program
Bechtel Job No. 22214
Contract No. N68711-92-D-4670
File Code: 02181, 02221

IN REPLY REFERENCE: CTO-0176/0116

April 16, 2001

Contracting Officer
Naval Facilities Engineering Command
Southwest Division
Mr. Richard Selby, Code 02R1
1220 Pacific Highway
San Diego, CA 92132-5190

Subject: Responses to DTSC Comments of 01 November 2000
Draft Feasibility Study Report
Installation Restoration Program Sites 9, 12, and 13
Former Long Beach Naval Shipyard, Long Beach, California

Attention: M. Orpilla, 06CT.MO, Contract Specialist

Dear Mr. Selby:

Enclosed please find 5 copies of the responses to DTSC comments of 01 November 2000 on the Draft Feasibility Study (FS) Report, Installation Restoration Program Sites 9, 12, and 13, Former Long Beach Naval Shipyard, Long Beach, California. These responses to comments will be included with the initial responses to agency comments on the Draft FS Report, in Appendix E of the Final FS Report. Copies of these responses have also been forwarded to the agencies and Port of Long Beach for their review; the transmittal letter is attached.

If you have any questions, please contact Bob Schilling, CTOL, at (562) 799-6758.

Very truly yours,

Thurman L. Heironimus, R.G.
Project Manager

THH/BS/sp
Enclosure

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BECHTEL NATIONAL INC.

CLEAN II TRANSMITTAL/DELIVERABLE RECEIPT

Contract No. N-68711-92-D-4670

Document Control No. CTO-0176/0116

File Code: 02181, 02221

TO: Contracting Officer
Naval Facilities Engineering Command
Southwest Division
Mr. Richard Selby, Code 02R1
1220 Pacific Highway
San Diego, CA 92132-5190

DATE: April 16, 2001
CTO #: 0176
LOCATION: Long Beach Naval Shipyard

FROM: *Thurman L. Heironimus*
Thurman L. Heironimus, Project Manager

DESCRIPTION: Responses to DTSC Comments of 01 November 2000 - Draft Feasibility Study Report
Installation Restoration Program Sites 9, 12, and 13

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O = Original Transmittal Sheet
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