

**FINAL
MEETING MINUTES
RESTORATION ADVISORY BOARD
ENVIRONMENTAL RESTORATION PROGRAM**

LONG BEACH NAVAL COMPLEX
LONG BEACH, CALIFORNIA
FEBRUARY 20, 2008

These minutes reflect general issues discussed, agreements reached, and action items identified at the Restoration Advisory Board (RAB) meeting for the Environmental Restoration (ER) Program at the Former Long Beach Naval Complex, Long Beach, California. The meeting was held from 6:30 p.m. to 7:30 p.m. on February 20, 2008, at the Long Beach Public Library in Long Beach, California. A list of participants and their affiliations is provided below, and the meeting agenda is included as Attachment A.

Alan Hsu, DTSC – **Present**
Christine Houston, POLB – **Present**
Darwin Thorpe, RAB Member – **Present**
Dennis Parker, Navy – **Present**
Howard Hargrove, RAB – **Present**
John Essington, RAB Co-chair – **Present**
John Hill, Navy Co-chair – **Present**
Leda Hargrove, Long Beach Resident – **Present**

La Rae Landers, Navy – **Present**
Martin Hausladen, USEPA – Absent
Miliama Moeone, MARRS – **Present**
Riaz Chaudhary, MARRS - **Present**
Robert Ehe, RWQCB – Absent
Sarah Ann Moore, Navy – Absent
Tim Chauvel, DTSC - Absent

Administrative Issues

John Hill (Navy) called the Restoration Advisory Board (RAB) meeting to order at 6:30 p.m. welcoming all attendees. He introduced himself and self introductions were made by all those present.

Mr. Hill explained this meeting was originally scheduled for October 2007; however, it was rescheduled due to the wildfires in the San Diego area to tonight, February 20, 2008.

Approval of draft meeting minutes of 25 October 2006

On motion duly made, seconded, and unanimously carried, the following resolution was adopted:

RAB approved the Draft Meeting Minutes of 25 October 2006 as final without comments.

Mr. Hill summarized accomplishments of the Navy's Environmental Restoration Program. He stated Records of Decision (RODs) have been issued for 13 sites, clean up actions have been implemented on several sites, and much of the former Naval Station and Shipyard is being used by the Port of Long Beach (POLB) for port facilities. There is still on going work at some sites, the progress and status of which will be discussed later in this meeting.

Approval of New RAB Rules of Operation

Mr. Hill stated John Essington (RAB Co-chair) had a conversation with the Navy about updating the RAB rules of operation. The rules of operation have been changed as follows:

1. The Navy organization now responsible for the Environmental Restoration program is the Base Realignment and Closure (BRAC) Program Management Office .
2. The Navy's environmental program is now called Environmental Restoration (ER) in lieu of Installation Restoration (IR) Program. The ER Program consists of the IR Program and the Military Munitions Response Program (MMRP).
3. RAB rules for membership have not changed. The updated application for RAB membership will be available on the BRAC website www.bracpmo.navy.mil. The website lists all the Navy BRAC installations including the Long Beach Naval Complex. The public can visit the website to read about environmental cleanup accomplishments over the years.
4. Future RAB meetings will be held on an as needed basis determined by the RAB Co-chairs. Future RAB meetings will be held as significant milestones within the CERCLA process are reached for the remaining ER sites. To save time and minimize resources, an attempt will be made to hold future RAB meetings on the same night as other required public meetings, such as public meetings for Proposed Plans.

On motion duly made, seconded, and unanimously carried, the following resolution was adopted:

Approval of the new RAB rules of operation.

Mr. Hill and Mr. Essington signed the new RAB rules. A copy will be posted to the BRAC website.

Environmental Restoration (ER) Program Update

The Navy distributed a handout that provided updated status of each IR site (Attachment B). Dennis Parker (Navy) gave a brief power point presentation.

IR Sites 1 and 2 – Waste Storage/Disposal Area

The Navy dismantled the groundwater *in situ* air sparging/soil vapor extraction (IAS/SVE) system in November 2007. The operation of the IAS/SVE system was a highly successful. The system removed approximately 2,800 lbs of contaminants from the groundwater. A Remediation Action Completion Report (RACR) was issued to document the successful completion of active remediation at IR Sites 1 and 2. The RACR included descriptions of the IAS/SVE system, soil and debris removal, and well decommissioning activities.

The Navy performed three (3) years of groundwater monitoring after the IAS/SVE system was shutdown to verify there were no rebound of contaminant concentrations. The Navy has recommended that no additional groundwater monitoring be conducted at these sites, and is waiting concurrence from the Los Angeles Regional Water Quality Control Board (RWQCB) and Department of Toxic Substances Control (DTSC).

Future activities at these sites include monitoring of institutional controls and performance of radiological assessment.

The primary focus of the radiological assessment is to evaluate if residual levels of radiation at IR Sites 1 and 2 are protective of human health. In response to a question, Dennis Parker

(Navy) stated the presence of elevated radiation levels was originally detected during the soil and debris removal operations. The presence of elevated radiation levels was unexpected since IR Sites 1 and 2 had not previously been identified as having the potential for radiological contaminants.

The initial assessment indicated the sources of radiation at IR Sites 1 and 2 are disposal pits where sand blast wastes and discrete radiological sources such as deck markers and dials were disposed. The main activity planned for this year is to perform a supplemental radiological assessment.

In responding to questions about the extent of radiation, Mr. Parker stated the initial assessment indicated the primary sources of radiation are the discrete radiological sources disposed in the pits. There did not appear to be extensive radiological contamination in soil and groundwater. The emphasis of current assessment is to evaluate the levels of radiation on the surface at IR Sites 1 and 2. The Navy has experience assessing similar sites at other BRAC facilities

Mr. Parker explained institutional controls are required at IR Sites 1 and 2 to ensure any contaminants remaining in the subsurface onsite are not disturbed. The institutional controls include a prohibition on using groundwater as drinking water, no removal of excavated soil from the site without DTSC approval, and limiting the site to industrial uses. Currently, the Navy is monitoring the institutional controls. There is a potential to transfer monitoring responsibility along with the transfer of property to a new owner such as POLB. The restrictions will be part of the lease or deed and there will be reporting requirements for the user/owner to comply with the institutional controls.

There were several questions about where a listing of the institutional controls would be available. Mr. Parker explained a listing of such controls will be included as covenants in the lease/deed for transfer of the property. These documents will be available in the Long Beach Library.

Mr. Hill explained the Navy previously attempted to create a database of all documents, but found it to be very expensive to develop and maintain. The Department of Defense (DoD) involved in another effort to devise a method for maintaining records and making them available to the public. The Navy intends to keep RAB and public informed.

Presently, any work within IR sites requires prior approval by the BRAC Cleanup Team (BCT), which comprises the Navy and the regulatory agencies. When the property is transferred, the permanent use restriction will be part of deed recorded in the County Recorder's office. These will be public records available from the County, Navy, or POLB.

Christine Houston (POLB) explained that a positive aspect of the former Long Beach Naval Complex properties is they are within an operating port, and there is tight security for various work areas. Also, deed restrictions are recorded on "Dig Alert". So any work involving excavation can be flagged through "Dig Alert", which provides an added layer of protection.

IR Site 7

The Final ROD was issued in September 2007. It requires removal and discharge of sediments offsite for Areas of Ecological Concern (AOECs) A and C; institutional controls for AOECs E, F and G; and no action for AOECs B and D. The Final ROD completes the Navy actions for IR Site 7. The remedial actions specified in ROD will be implemented by POLB. The Navy will have a limited oversight role. The purpose of sediment removal is to provide a clean substrate for benthic organisms to colonize. The institutional controls will be used to prevent the

disturbance of sediments which could expose benthic organisms to contaminants. With the help of maps, Mr. Parker discussed the areas from which the sediments will be removed, and deposited into an existing slip which has already been permitted to receive the sediments.

POLB will be paying for the sediment removal project as part of the lease agreement with the Navy. Mr. Hill indicated the Navy waved the rent for lease in exchange for POLB paying for the remediation action.

IR Sites 8 through 13

IR Sites 8 through 13 are former waste storage areas including buildings and parking lots in the north and east portion of the former Naval Shipyard. The Navy issued a final Remedial Design/Remedial Action (RD/RA) Work Plan. The RD/RA Work Plan provides the methodology to assess if the Remedial Action Objectives (RAOs) for IR Sites 8 through 13 are being met. The RD/RA Work Plan includes process to evaluate when it is appropriate to stop groundwater monitoring at each site. To date the DTSC and RWQCB have concurred to discontinuing groundwater monitoring at IR Site 10. As appropriate, the Navy will request discontinuing monitoring at other site in annual groundwater monitoring reports. If elevated contaminant levels are reported over a sustained period at a certain site, the Navy will re-evaluate the remedy to determine if an alternate approach is needed to reduce contaminants to acceptable level.

IR Site 14

IR Site 14 is a former dry cleaning facility where soil and groundwater were contaminated with chlorinated hydrocarbons. Contaminated soils were excavated in 2001. In 2002 and 2005, Hydrogen Release Compound (HRC) was injected into groundwater to stimulate reductive dechlorination of the chlorinated hydrocarbons. Results from subsequent groundwater monitoring events indicate the HRC injections were successful in reducing tetrachloroethene (PCE) and trichloroethene (TCE) concentrations below site-specific RAOs. However, cis-1,2-dichloroethene (DCE) and vinyl chloride (VC) concentrations remain above site-specific RAOs. This is indicative of a phenomenon known as "DCE stall." Mr. Parker explained the reductive dechlorination process of how PCE (the chemical used in dry cleaning) breaks down to TCE, cis-1,2-DCE, VC, and finally into ethene (non-toxic).

The Navy conducted an optimization study to evaluate options for reducing cis-1,2-DCE and VC concentrations. The optimization study recommended performing bio-stimulation (injecting emulsified oil) and bio-augmentation (injecting dehalococoides bacteria).. The Navy plans to implement the recommendations from the optimization study once funding is procured.

Open Forum for RAB Members and Members of the Audience

Darwin Thorpe (RAB Member) suggested Navy publish the result of optimization study involving bio-stimulation and bio-augmentation for IR Site 14. Mr. Hill indicated the Navy having a yearly BRAC Navy/Community RAB Co-chair conference to share success stories and lessons learned. The Navy also publishes newsletters to share success stories.

Mr. Essington inquired about a model of a ship (Frank E. Evans) that was removed from the former Naval Station. He was curious about where the model may have been shipped or stored. Mr. Hill indicated it may be at Naval Weapons Station Seal Beach. He volunteered to make a few phone calls to Seal Beach to verify the models existence.

Adjournment

The meeting was adjourned at 7:30 pm. The next RAB meeting was not scheduled.

Final RAB meeting minutes of 25 October 2006 are located at the following location.

Long Beach Information Repository

Long Beach Public Library, Government Publications Section (lower level)

101 Pacific Avenue

Long Beach, CA 90822

Telephone Number: (562) 570-7500

Hours of Operation: Mon 1000-2000, Tue-Sat 1000-1730, and Sun 1200-1700

Navy contact for additional information

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Environmental Restoration Program Update for Long Beach Naval Complex

20 February 2008

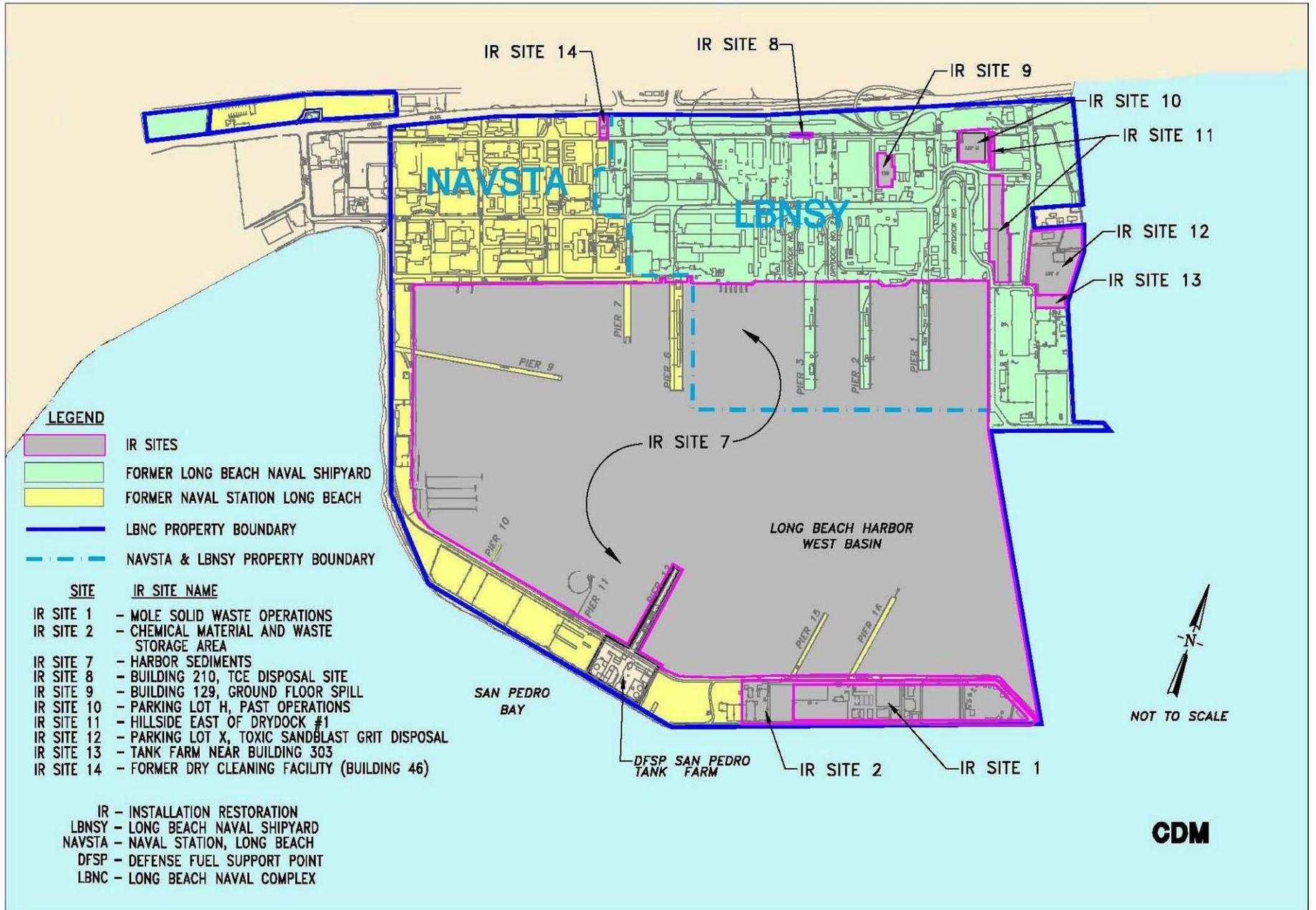
Restoration Advisory Board Meeting



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IR Sites 1 and 2 – Waste Storage/Disposal Area

Accomplishments

- Dismantled the groundwater in situ air sparging/soil vapor extraction system
- Issued Final Remedial Action Completion Report
- Performed additional year of groundwater monitoring

Current Status

- Active IR remediation complete
- Radiological conditions require assessment

Planned Actions

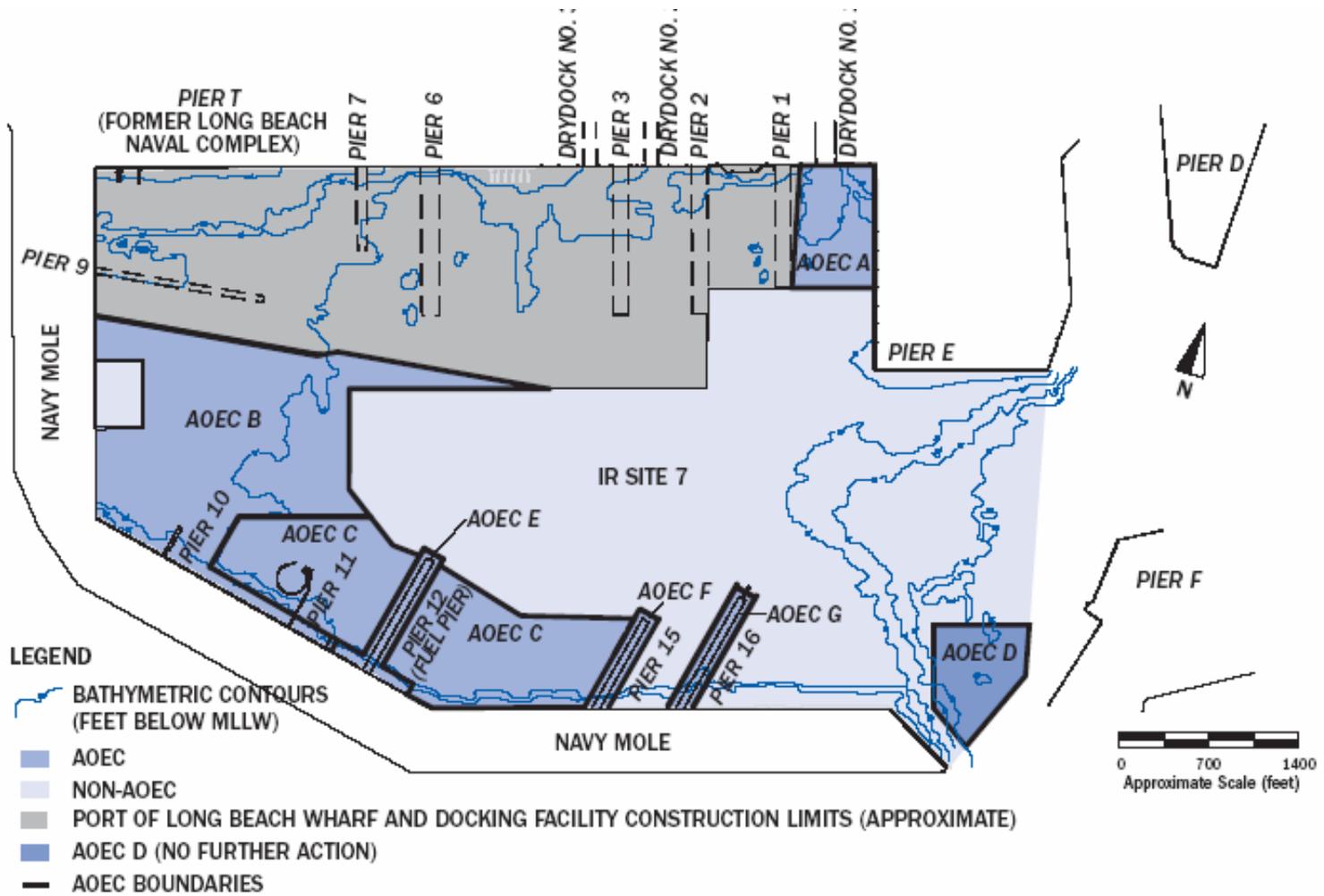
- Achieve concurrence to discontinue groundwater monitoring
- Monitor institutional controls
- Perform radiological assessment





IR Site 7 Harbor Sediments

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IR Site 7 – Harbor Sediments

Accomplishments

- Issued Final Record of Decision – September 2007
 - Remove and discharge sediments offsite (AOECs A and C)
 - Institutional Controls (AOECs E, F and G)
 - No Action (AOECs B and D)

Current Status

- Navy actions complete

Planned Actions

- Port of Long Beach to implement selected remedies



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IR Sites 8 through 13 – Waste Storage Areas

Accomplishments

- Issued Final Remedial Design/Remedial Action Work Plan
- RWQCB concurred with discontinuing groundwater monitoring at IR Site 10

Current Status

- Framework established to direct groundwater monitoring program

Planned Actions

- Get concurrence on additional reductions in monitoring program
- Continue groundwater monitoring
- Reevaluate remedies, if necessary



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IR Site 14 – Dry Cleaning Facility

Accomplishments

- Performed groundwater remediation Optimization Study
 - Biostimulation - inject emulsified oil
 - Bioaugmentation – inject dehalococcoides bacteria
- Continued groundwater monitoring

Current Status

- “DCE stall” in groundwater

Planned Actions

- Implement Optimization Study recommendations



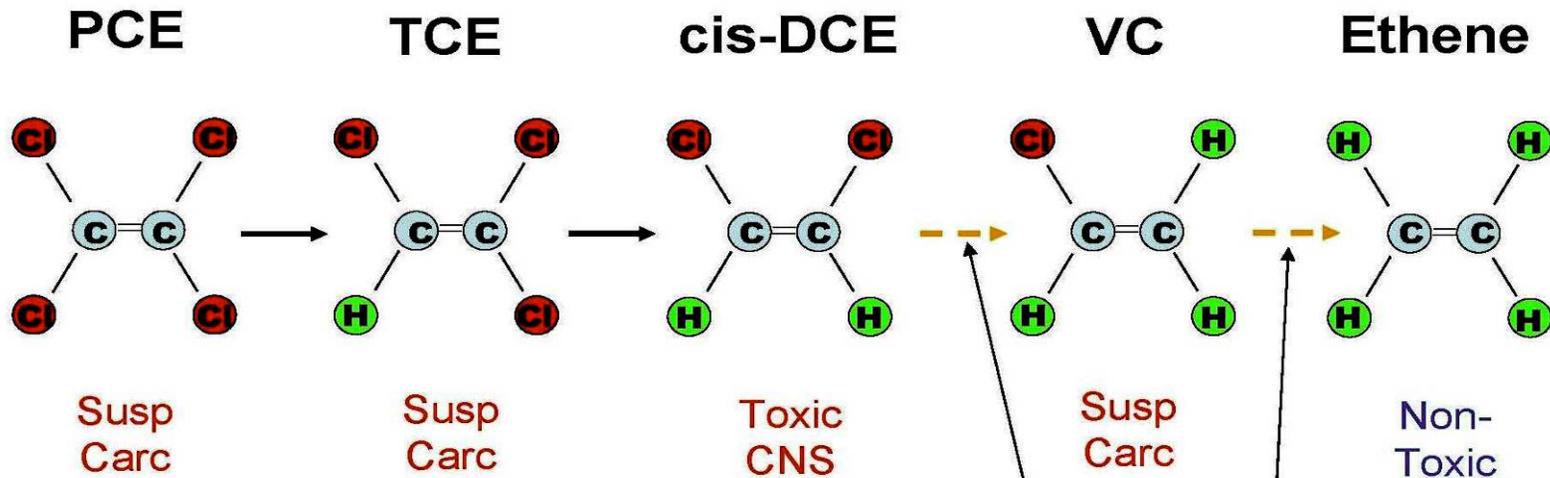


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IR Site 14 – DCE Stall

REDUCTIVE DECHLORINATION



These pathways have apparently stalled at IR Site 14 (DCE Stall)



For More Information...

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- Information repository for LBNC:
Long Beach Public Library
Government Publications Department
101 Pacific Avenue
Long Beach, CA (562) 570-7500
- Contains documents, studies, reports, and data for each of the IR sites



Points of Contact

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- Mr. John Hill, Navy – (619) 532-0985
- Ms. La Rae Landers, Navy (619) 532-0970
- Mr. Dennis Parker, Navy – (619) 532-0954
- Mr. Alan Hsu, Department of Toxic Substances Control – (714) 484-5395
- Mr. Tim Chauvel, Department of Toxic Substances Control – (714) 484-5487
- Mr. Robert Ehe – CA Regional Water Quality Control Board – (213) 576-6740
- Mr. Martin Hausladen – US EPA – (415) 972-3007



Questions

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