

Norwalk Tank Farm Cleanup

Presented to the OCCS October 17, 1996



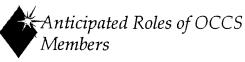
– Goals of first OCCS Meeting

- ◆ Introduce academia members to OCCS
- ◆ Outline OCCS's mission
- ◆ Review site history with academia members
- ◆ Prepare conceptual outline of OCCS tasks
- ullet Site tour for academia members

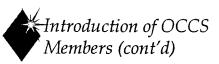


Introduction of OCCS Members

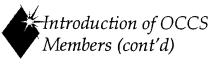
- ◆ RP's-DFOLA & SFPP, L.P.
- ◆ DFOLA is part of DLA/DOD
- Responsible for all military fuel supplies
- ◆ Lt. Colonel Gross & Joe Trani are primary contacts
- ◆ SFPP, L.P. is a publicly traded utility co.
- Primary products pipeline in western U.S.
- ◆ Comments by DFOLA & SFPP



- Work products drafted by RP's & our consultants
- Community members & academia are reviewers who ensure that community concerns are incorporated & that methods are scientifically sound
- Regulatory agencies also review for technical accuracy
 See regulatory needs are met
- ◆ We believe this process is a fair for RAB/Community & will ensure credibility of findings & recommended actions



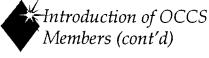
- Government Agencies
- ◆ State-Regional Water Quality Control Board-Los Angles Region (RWQCB)
- ◆ Primary contacts-Hugh Marley & Wendy Phillips
- ◆ State-Cal EPA Dept. of Toxics Substances Control (DTSC)
- ◆ Primary contact-Omo Patrick
- ◆ Comments by RWQCB & DTSC?



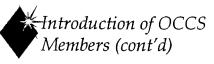
- Community members
- ◆ Dr. Gene Garcia
- ◆ Mr. Bill Miller
- ◆ Both voted by members of the RAB to represent community in OCCS
- ◆ Comments by Gene & Bill?

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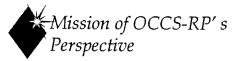
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- ◆ Consultant members
- ◆ For DFOLA-GTI & WCFS
- ◆ GTI-Neil Irish & Dan Swensson
- ◆ WCFS-Tim Whyte
- ◆ Comments by GTI & WCFS?



- ◆ Consultant members
- ◆ For SFPP, L.P.-Geomatrix SOMA
- ◆ Geomatrix-Tony Daus & Don Sandstrom
- ◆ SOMA-Mansour Sepehr
- ◆ Comments by Geomatrix & SOMA?



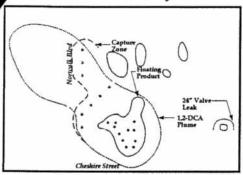
- ◆ Cleanup & closure of western offsite DCA & MTBE groundwater plumes
- ◆ Use risk based corrective action process (RBCA)
- ◆ RBCA process will consider both regulatory & political issues
- Openness, community/regulatory involvement and education along the way will result in "buyin & buy-off" of OCCS findings & recommendations

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Map of Major Plumes DFSC/SFPP Norwalk Facility



Why Use a	RBCA	Cleanup
Process?		•

- ◆ Infeasible to clean up DCA to MCL of 0.5 ppb
- ◆ Most of contamination mass still onsite
- West side barrier system will stop offsite plume mass increase
- ◆ RBCA plan approved by RAB in July, 1996

Distribution of 1,2-DCA Mass in Groundwater

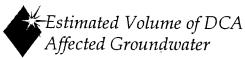
- ◆ Est. Total 1,2-DCA Mass in GW: -Approx. 106.78 pound
- ◆ ON-SITE: 72.26 lb
- ◆ OFF-SITE: 34.52 lb



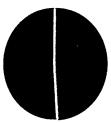
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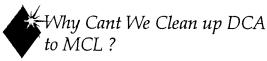
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- ◆ Onsite + Offsite
- Approx. 84,600,000 Gallons
- ◆ ON-SITE:
- Approx. 43,300,000 Gallons
- OFF-SITE:
- Approx. 41,300,000 Gallons





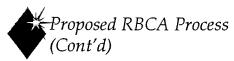
- ◆ MCL is so low (Detection Level) 0.5 ppb
- ◆ Technically infeasible with current technologies
- ◆ Base cleanup level on Health Risk, then back calculate acceptable cleanup level



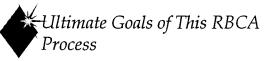
Proposed RBCA Process

- ◆ Model DCA plume movement with/without remedial action
- Predict if plume becomes stable or continues to spread
- ◆ Conduct additional public health risk assessment
- Define clean up levels

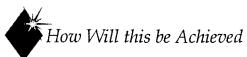
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- ◆ Risk level drives cleanup level
- Cleanup technologies selected based upon cleanup level & feasibility
- Technologies may include, Intrinsic Bioremediation, horizontal pumping wells, air sparging, oxygen addition, In-Situ Bio or other innovative technologies
- Work may include pilot tests of new/proven technologies



- ◆ Clean up of off-site DCA plume to an acceptable level
- ◆ Receive a "no further action letter" from RWQCB/DTSC
- ◆ All parties involves have confidence in methods used & cleanup results



- ◆ A joint forum including community, regulators, academia & the RP's
- All parties buy into plan at beginning rather than trying to convince them at the end of the process
- Community involvement will ensure that nonregulatory issues are addressed in the process
- Presents a great opportunity to all parties to overcome the problem via a credible & sound process that will be an example for other sites

