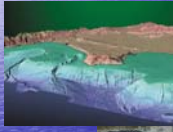


# The Palos Verdes Shelf



Site Review & Update  
September 13, 2007



# Non-Time Critical Removal Process



- Nature & Extent
- Risk Assessment
- Community Involvement
- Screen Technologies
- Pilot Testing
- Evaluate Alternatives
- 3 Criteria Analysis
- Community Involvement
- Public Comment
- Response to Comments
- Action Memorandum
- 5 Year Review

# The Superfund Remedial Process

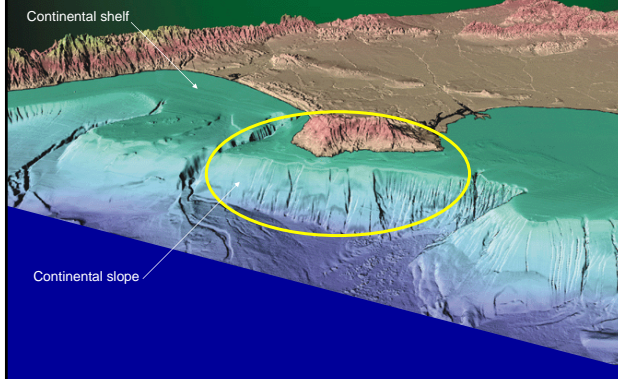


- Nature & Extent
- Risk Assessment
- Community Involvement
- Screen Technologies
- Pilot Testing
- Evaluate Alternatives
- 3 Criteria Analysis
- Community Involvement
- Proposed Plan
- Public Hearing
- Public Comment
- Response to Comments
- Record of Decision
- Pilot Testing
- Modeling
- Formal Design
- Community Involvement
- Construct
- Shakedown
- Operate
- Maintain
- 5 Year Review

# Removal & Remediation

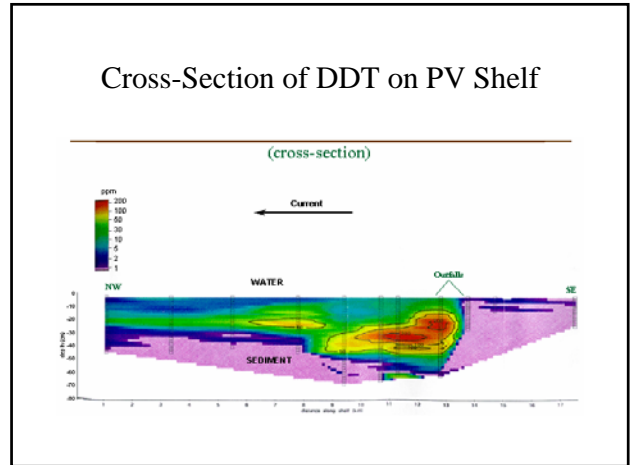
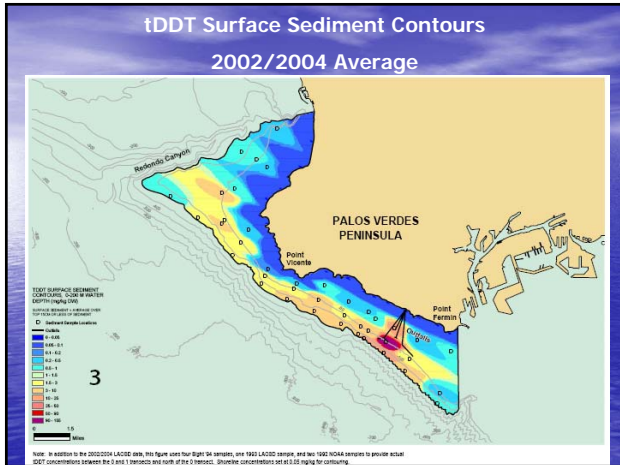
- 1 Engineering Evaluation/Cost Analysis and pilot capping project 2000
- 1 Action Memorandum 2001
- 1 Field Studies 2004
- 1 Ocean Fish Survey 2002-2004
- 1 RI Report 2007
- 1 Feasibility Study 2007
- 1 Record of Decision 2008

# Palos Verdes Shelf



# Remedial Investigation Report

- Nature and Extent of Contamination
- Fate and Transport of Contaminants
- Current Risk to Human Health and the Environment



### Changes in Sediment

Surface sediment on shelf that exceed 10 ppm DDT

1992 = 8.2 sq. km  
2004 = 3.6 sq. km (56% smaller)

1 ppm DDT

1992 = 44.5 sq. km  
2004 = 39.1 sq. km (12% smaller)

1 ppm PCBs

1992 = 8.4 sq. km  
2004 = 6.2 sq. km (26% smaller)

### Fate and Transport of Effluent-Affected Sediments

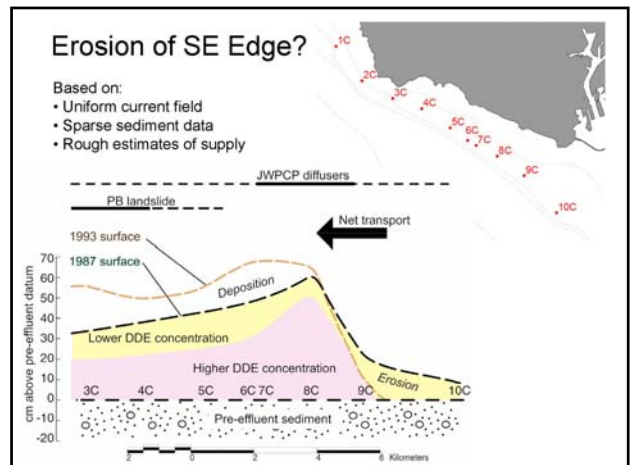
Processes acting on the Deposit

- Sediment mixing by invertebrates
- Chemical degradation
- Transport by internal waves and currents

### The current field controls:

1. Grain size of sediments on the shelf
2. Fate and transport of DDT in the sediments

Sediment patterns from Chris Murray, Battelle



### Summary of Risk

<i>Fish Species</i>	Cancer Risk 95% UCL Conc.		Noncancer HQ 95% UCL Conc.	
	RME	CTE	RME	CTE
White croaker	$6 \times 10^{-3}$	$6 \times 10^{-4}$	183	37
Barred Sandbass	$3 \times 10^{-4}$	$3 \times 10^{-5}$	10	2
CA Scorpionfish	$3 \times 10^{-4}$	$3 \times 10^{-5}$	8	2
Kelp bass	$1 \times 10^{-4}$	$1 \times 10^{-5}$	5	0.9
Rockfish	$1 \times 10^{-4}$	$1 \times 10^{-5}$	5	0.9
Surfperch	$7 \times 10^{-5}$	$6 \times 10^{-6}$	2	0.5

### Next Step: Feasibility Study

Standard Remedies for Sediment Sites

- Dredging
- Capping
- Monitored Natural Recovery

These remedies are being analyzed in the FS; any remedy will require continuation of ICs program