

Coastal Hazards Removal Project,
Santa Barbara Channel

Project Description

Site No.	Hazard Site Name/Location	Hazard Description	Hazard Removal Method ²	Site Access Route	Staging Area	Project Equipment Requirements ³ Project Personnel Requirements ⁴	Project Duration (hours) ¹	
Please refer to Hazard Site Exhibit book for further specifics and available photographs of these hazards.								
1	Tajiguas Creek Hazard site is located approximately 8-10 feet seaward of seawall	30 Railroad Irons	B	thru private property via Arroyo Cuemada	on private property		16	
2	El Capitan State Beach	a - 184 6" H Piles b - 3 Well Casings	a - B* b - B*	via gated paved road before park entrance station, east side	state park maint. yard		60	
3	Las Varas Canyon Exact hazard site location is currently unknown.	a - 75 6" H Piles b - 3 Well Casings	DELETED - HAZARD DOES NOT EXIST ANY LONGER					
4	Ellwood West of VENOCO Ellwood Pier Hazard site is located approximately 750 feet west of Ellwood Pier.	a - 25 6" H Piles b - Possible Well Casing	a - B*, S _{BD} b - B*, S _{BD}	thru VENOCO pier lot access and private property owner	above Ellwood Pier parking lot - private property		16	
5	Ellwood - East of VENOCO Ellwood Pier Eastern most pier hazard is located approximately 200 yards east of Venoco Well Pier (PRC-421).	a - 128 6" H Piles b - 20 Wood Piles c - 2 12" Well Casings d - 40' Length of Wood Sheet Piles	a - B, S _{BD} , S b - B, S _{BD} , S c - B, S _{BD} , S d - B	Haskell Beach for locations W of Bell Canyon Creek (or, for all of this hazard if creek not flowing) VENOCO easement thru Sandpiper Golf Course for locations E of Bell Canyon Creek if creek is flowing	in front of VENOCO Gas Plant - Hollister Ave. frontage rd, keep clear for emergency vehicles		90	

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6	Santa Barbara Shores (A) Hazard site is located south of Santa Barbara Shores Drive about 200 yards southeast of GPS waypoint A-76.	a - 80 6" H Piles b - 3 14" Well Casings c - 500' of 6" Pipeline	a - B* b - B, S _{BD} c - B, S	primary- through gate on Santa Barbara Shores Dr. and along dirt road to bluff, east along bluff to old paved road then east on dirt road to beach. secondary- VENOCO gate off Storke Rd, behind Ocean Meadows Golf Course and UCSB, down old road just west of EMT to beach.	primary - on bluff top, erect temp fencing secondary - within VENOCO Ellwood Marine Terminal (EMT) fence		56
7	Santa Barbara Shores (B) Hazard site is located immediately south of Santa Barbara Shores Drive.	a - 79 6" H Piles b - 59 Railroad Irons c - 900' of Wood Sheet Pile - as directed, out of 5120' overall length of site d - 131 10" Wood Posts with or without metal tieback rods	a - B* b - B* c - B d - B	primary- through gate on Santa Barbara Shores Dr. and along dirt road to bluff, east along bluff to old paved road then east on dirt road to beach. secondary- VENOCO gate off Storke Rd, behind Ocean Meadows Golf Course and UCSB, down old road just west of EMT to beach.	primary - on bluff top, erect temp fencing secondary - within VENOCO Ellwood Marine Terminal (EMT) fence		60

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8	Sands Beach at Devereaux Slough Hazards site is located approximately 48 yards, bearing 218 degrees (magnetic north) from the "Ecological Area" sign; the first 2.75-inch pipe hazard is located approximately 230 yards bearing 152 degrees (magnetic north) from the first hazard location.	a - 30 2.5" Pipe Frames b - 2 6" Well Casings c - 12-inch Steel Beam	a - B b - B c - B	via Storke Rd to El Colegio Rd and past Devereaux Ranch School to gravel parking lot - thru chain link fence onto beach	primary - in gravel parking lot at access location secondary - UCSB maint. yard		16
9	Devereaux Point Hazard site is located southeast of UCSB Coal Oil Point Facility.	a - 8 6" H Piles b - 4 6" Well Casings	a - B* b - B	via Storke Rd to El Colegio Rd and past Devereaux Ranch School to gravel parking lot - thru chain link fence onto beach	primary - in gravel parking lot at access location secondary - UCSB maint. yard		8
10	Isla Vista Hazard site is located at Isla Vista (Seven Well Sites).	a - 55 6" H Piles b - 4 6" Well Casings	a - B* b - B	via Storke Rd to El Colegio Rd and past Devereaux Ranch School to gravel parking lot - thru chain link fence onto beach	primary - in gravel parking lot at access location secondary - UCSB maint. yard		32

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11	Goleta Beach- East End The first pier hazard site is located at the bottom of the trail leading from "The Gas Company" access gate, the last pier site is located 22 feet west of black rocks at the end of the beach.	a - 500 10" H Piles b - 25 6' Diameter Concrete-Filled Well Caissons					
DELETED - MOST HAZARDS REMOVED AS PART OF PREVIOUS PROJECT							
12	East Beach, Santa Barbara Hazard site is located within the granted lands of the City of Santa Barbara.	2 100' Steel Groins with Wood Caps					
DELETED - LAND OWNER (CLARK ESTATE) HAS TAKEN OVER THIS WORK							
13	Biltmore, South Birham Hazard site is located in front of Biltmore Hotel.	30' Steel Groin	B _{limited}	beach parking from closest street location	staging not necessary	hand crew only, carry equipment and debris.	8
14	Miramar, Santa Barbara-Carpinteria	6 Wood Piles	B	primary-thru gated SB County Parks ramp at corner of Posilipo Lane & Fernald Point Lane secondary-thru gated SB County Parks ramp at end of Eucalyptus Lane	within Miramar Hotel construction site		8

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15	Fernald Pt., Santa Barbara	60' Steel Sheet Pile	B	primary-thru gated SB County Parks ramp at corner of Posilipo Lane & Fernald Point Lane secondary-thru gated SB County Parks ramp at end of Eucalyptus Lane	within Miramar Hotel construction site		16
16	Ortega at Summerland East End-Padaro Lane A power cable hazard is located approximately 75 feet east of the county "Danger" sign located at the base of the beach access trail, the H-iron beam hazards are located approximately 12 feet east of the concrete retaining wall.	a - 180 Railroad Iron b - 31 6" H Piles c - 1 8" Well Casing d - 3 12" Well Casings e - 600' Electrical Cable (from former Platform Hilda)	a - B b - B* c - B d - B e - B, S	primary-thru road adjacent to Summerland Sanitary District and recycle plant above Summerland Beach secondary-thru road at Lookout Park.	fenced yard at Summerland Sanitary District plant above Summerland Beach		100
17	Santa Barbara at Santa Claus Lane The hazard sites are located on the ocean side of the boulder breakwater along Santa Clause Lane and the Southern Pacific Railroad right-of-way.	a - 12 8" H Piles b - 850 Railroad Irons	a - B b - B	across low spot (gap) in rip-rap armor stone at location approx 100 yds east of Santa Claus Lane Fwy 101 exit overpass	CalTrans yard on Santa Claus Lane		56

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18	Carpinteria State Beach Hazard site is located near mouth of Carpinteria Creek.	a - 2 12" Well Casings b- angle bar in conglomerate tar	a - B b - B	from Carpinteria State Beach, via Palm Ave entrance over bridge to east end and onto sand	CleanSeas lot or VENOCO Casitas Pier parking lot		8
19	Casitas Pier - East Side Hazard site is located within seal sanctuary and rookery, approximately 270 feet, bearing 101 degrees (magnetic north) from red "Stop - Seal Rookery" sign on driveway next to pier.	10 12" H Piles	B*	VENOCO Casitas Pier turnaround	CleanSeas lot or VENOCO Casitas Pier parking lot	work with hand crews only - place equipment onto beach and haul debris from beach with truck on pier	8
20	Rincon/Mussels Shoals at Mussel Rock/Pitas Pt. Hazard site is located near foot of beach stair to 6766 Breakers Way - west of pier.	30 6" H Piles	B, S _{BD}	Mussel Shoals Rd to Ocean Ave to pier/causeway access road	Rincon Pier parking lot		16
21	Ventura River, Ventura Hazard site is located at south side of the Ventura River approximately 50 feet south/southwest of boulder shore protection.	18 8" H Piles	B	Fairground frontage road at turnaround	Fairgrounds or CalTrans yard adjacent to fairgrounds at NW corner		16

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22	Ortega Hill, East Fernald Point Hazard site is located east of Fernald Point beginning approximately 8-10 feet south of concrete retaining wall.	80 H Beams	B	primary-thru gated SB County Parks ramp at corner of Posilipo Lane & Fernald Point Lane secondary-thru gated SB County Parks ramp at end of Eucalyptus Lane	within Miramar Hotel construction site		16
23	Rincon Point	5 Railroad Irons	B _{limited}	walk in from west parking lot	staging not necessary	hand crew only, carry equipment and debris.	8
24	Pauley Well	Remove abandoned offshore wellhead	O	offshore via boat	not applicable		24

- Notes: **1** **Project Durations** are based on 8 hour days, except #24 which is based on 12 hour days. The durations shown are what is expected to be the time reasonably expected to perform the work. However, this work is sensitive to tidal variation and wave action which are beyond our control, consequently, the actual time to perform the hazard removal may exceed the number indicated.
- 2** **Hazard Methods of Removal** consist of six (6) categories as described below:
Beach (B) - Work is conducted from/on the beach with approach via vehicles on land. Removal method characterized as excavate/expose and cut/burn.
Beach* (B*) - Work is expected to be conducted from/on the beach, but depending upon tides, it may be required to perform some shallow diving in limited water depth. Removal method characterized as excavate/expose and cut/burn. Approach via vehicles on land.
Shallow Diving (S) - Work is conducted by shallow air diving with approach via boat on water. Removal method characterized as excavate/expose and cut/burn.
Shallow Diving (S_{BD}) - Work is conducted by shallow air diving in limited water depth with approach via land. Removal method characterized as excavate/expose and cut/burn.
Vibratory (V) - Work is conducted from/on the beach using vibratory pile extractors with approach via vehicles on land.
Offshore (O) - Work is conducted by deep air/gas diving with approach via boat on water.
- 3** **Project Equipment Requirements** consist of five (5) categories and one (1) sub-category as described below.
Note: In all cases, equivalent equipment substitutions, i.e. manufacturer, model, etc. may be made depending upon equipment availability at time of work commencement.
- Basic Beach Spread (1) 1 T Stake Bed Truck, Ford F-350 (Staging Area)
(1) 5 T 20' Stake Bed/Flat Bed Truck (Staging Area)
(1) R/T Forklift (Staging Area) (make/model??)
(2) 20' Roll Off Bins; 1 for metal debris, 1 for wood debris (Staging Area)
(1) Backhoe, CAT 416D 4x4
(1) Skip Loader, CASE 4-390
(1) 2-Wheel Material Trailer w/ 6-1/2' x 15' Bed
(1) Lincoln 400A Welding Machine
(1) Oxyacetylene Torch/Bottles/Hoses
(2) Gasoline-Powered Chainsaws
(1) Broco Torch
(1) Miscellaneous Tool/Job Box, including shovels, rigging, etc.
(1) 350 gpm Gasoline-Powered Self-Priming Water (Trash) Pump
(1) 14 gpm Diesel-Powered Hydraulic Power Unit
- Limited Beach Spread (1) Oxyacetylene Torch/Bottles/Hoses
(2) Shovels
- Shallow Beach Diving (1) 25 cfm Diesel-Powered Surface-Supplied Air Compressor & 600' Umbilicals

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- (1) High-Pressure Air Cylinder (Volume Tank)
 - Shallow Water Offshore (below 60' FSW)
 - (1) "McGaw" 106' Dive Support Vessel
 - (2) 25 cfm Diesel-Powered Surface-Supplied Air Compressors
 - (2) High-Pressure Air Cylinders (Volume Tanks)
 - (1) Lincoln 400A Welding Machine
 - (1) Broco Torch
 - (1) 460 gpm Jet Pump & Hoses
 - (1) 300 cfm Diesel-Powered Tool Air Compressor
 - (1) 14 gpm Diesel-Powered Hydraulic Power Unit
 - (2) Offshore Dumpsters (5' x 6' Trash Bins)
 - (1) Pneumatic and/or Hydraulic Chain Saws
 - (1) Rigging/Offshore Tool Box
 - Deep Water Offshore
 - (1) "American Patriot" 165' Dive Support Vessel
 - (1) "McGaw" 106' Tug/Anchor Handling Vessel
 - (2) 120 cfm Diesel-Powered Breathing Air Compressors w/Volume Tanks
 - (2) Decompression Chambers
 - (1) ROV & Operating System w/Umblicals
 - (1) Lincoln 400A Diesel-Powered Welding Machine
 - (1) 3-Stage Jet Pump, 600-800 gpm, 450psi
 - (1) 750 cfm Diesel-Powered Tool Air Compressor
 - (1) 14 gpm Diesel-Powered Hydraulic Power Unit
 - (2) Offshore Dumpsters (5' x 6' Trash Bins)
 - (2) 125kW Diesel-Powered Generators
 - (1) Surveying Equipment
 - 4 Project Personnel Requirements** consist of five (5) categories and one (1) sub-category as described below.
 - Basic Beach Crew
 - (1) Demolition/Removal Supervisor
 - (1) Backhoe Operator
 - (2) Cutting Torch Operators
 - (2) Unskilled Laborers
 - (1) Rigger
 - Limited Beach Crew
 - (1) Demolition/Removal Supervisor
 - (2) Cutting Torch Operators
 - (2) Unskilled Laborers
 - Shallow Beach Diving
 - (1) Dive Supervisor

	(1) Dive Tender	
	(4) Divers	
Shallow Water Offshore	(1) Vessel Captain	
	(1) Mate	
	(1) Engineer	
	(1) Cook	
	(1) Dive Supervisor	
	(1) Dive Tender	
	(4) Divers	
Deep Water Offshore	(2) Vessel Captains	
	(5) Crew	
	(1) Project Manager	
	(1) Wellhead Consultant	
	(1) Dive Superintendent	
	(1) Dive Supervisor	
	(5) Dive Tender	
	(5) Divers	
	(3) ROV Operators/Support	
	(1) Surveyor	
	(1) Vessel Captain	
	(1) Mate	
	(1) Engineer	
	(1) Cook	

Aboard "American Patriot"

Aboard "McGaw"