

Naval Weapons Station Seal Beach



NEWSLETTER OF THE ENVIRONMENTAL INVESTIGATION AND CLEANUP PROGRAM

OCTOBER 2007



FIGURE 1:
NAVWPNSTA Seal Beach
Location Map

This is the fourth in a series of updates developed to keep you informed about the progress of the Installation Restoration Program at Naval Weapons Station (NAVWPNSTA) Seal Beach. In this update we provide a status report of the Installation Restoration Program sites on NAVWPNSTA Seal Beach, emphasizing the significant progress that has been achieved in the cleanup and closure of these sites. Three earlier updates have been distributed over the past several years to provide information about specific activities at NAVWPNSTA Seal Beach. These earlier updates, and Installation Restoration Program reports and documents, are available from the local information repositories, contact persons, and at the NAVWPNSTA Seal Beach web site at <http://www.cnic.navy.mil/sealbeach/Programs/Env/IRP/index.htm> (see back page for more information).

Significant progress has been achieved at Naval Weapons Station (NAVWPNSTA) Seal Beach – 66 of the 75 identified sites of potential contamination have been closed. Closure applies to sites that have undergone successful cleanup as well as sites where investigations by the Navy and concurrence of the regulatory agencies ruled out the need for cleanup, normally due to a lack of significant contamination. This extensive effort has also involved implementing state-of-the-art cleanup technology to address areas of contaminated groundwater beneath NAVWPNSTA Seal Beach. Cleanup efforts have also expanded wetlands inside the Seal Beach National Wildlife Refuge.

At NAVWPNSTA Seal Beach and other military facilities in the United

States, the Department of Defense (DoD), of which the Navy is a component, is investigating and cleaning up hazardous waste sites through its various environmental programs. The Navy's cornerstone program for environmental cleanup is the **Installation Restoration (IR) Program**.

In the past, some hazardous waste disposal practices, although acceptable at the time, resulted in the release of pollutants into surrounding soil and **groundwater**. The IR Program addresses these sites through compliance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA; also known as "Superfund") focusing on protecting human health and the environment. The IR Program is broader than Superfund because it also addresses unexploded **ordnance**, underground and aboveground storage tanks, and other programs. Some of the sites identified under the IR Program have been shifted to other NAVWPNSTA Seal Beach environmental programs that specifically regulate current handling and disposal of hazardous materials and wastes. IR Program funding comes from the Navy's Environmental Restoration, Navy (ER,N) budget.

State and local environmental regulatory agencies are actively working with the Navy to achieve and maintain a healthy and safe environment for NAVWPNSTA Seal Beach personnel and the surrounding community. NAVWPNSTA Seal Beach, the California Environmental Protection Agency (Cal/EPA), Department of Toxic Substances Control (DTSC), the California Regional Water Quality Control Board, Santa Ana Region (RWQCB), and the Orange County Health Care Agency are cleanup partners in the station's IR Program. DTSC is the lead state regulatory agency for the IR Program, and RWQCB provides technical oversight of IR sites with water quality concerns and/or underground storage tanks (see Figure 2).

The public also plays an important part in the success of the IR Program. The Navy holds comment periods and public meetings for proposed cleanups. Notices of these events are placed in local newspapers and on the NAVWPNSTA Seal Beach web site. In addition, citizens representing the diverse interests of the surrounding communities joined together in 1995 to form a **Restoration Advisory Board (RAB)**. The RAB reviews the Navy's cleanup plans and reports, providing valuable input to the cleanup team of Navy, regulatory agencies, and contractors. For more information on the RAB, see page 10.

Installation Restoration Program Goal

The goal of the DoD's IR Program is to reduce, in a cost-effective manner, the risk to human health and the environment from hazardous substance contamination resulting from past DoD activities in the U.S. and its territories. The IR Program uses Risk Management as the primary philosophy in programming, budgeting, and executing the Program.

— Navy/Marine Corps Installation Restoration Manual



FIGURE 2:
NAVWPNSTA Seal Beach Cleanup Team

Regulatory Compliance

All federal agencies – DoD included – are required to comply with environmental laws and regulations. The environmental regulatory compliance program at NAVWPNSTA Seal Beach addresses many federal and state laws as well as local requirements. The following is a list of some of the more pertinent requirements.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA) – Established “Superfund”; addresses the investigation and cleanup of past hazardous materials spills, releases, and disposal. The DoD’s Installation Restoration Program meets, and in some cases exceeds, the requirements of CERCLA.

Resource Conservation and Recovery Act (RCRA) of 1976 – Regulates the current handling and disposal of hazardous materials and hazardous wastes.

Clean Water Act of 1977 – Restores and maintains the chemical, physical, and biological integrity of the nation’s waters.

Clean Air Act of 1970 – Establishes ambient air quality standards for basic air

pollutants, regulates the releases of hazardous substances to the ambient air, and mandates that federal agencies comply with state statutes and regulations regarding clean air.

Endangered Species Act of 1973 – Requires federal agencies to ensure that their actions do not jeopardize the continued existence of listed species or destroy or adversely modify the critical habitats of those species.

National Historic Preservation Act (NHPA) of 1966 (as amended) – Requires CERCLA remedial actions to take into account the effects of remedial activities on any historic properties or cultural resources included on or eligible for the National Register of Historic Places. Other related statutes include the Archaeological and Historic Preservation Act (AHPA) of 1974, the Archaeological Resources Protection Act (ARPA) of 1979, and the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990.

National Environmental Policy Act (NEPA) of 1969 – Assures that environmental factors are given the same consideration as other factors in decision-making by federal offices.

Executive Order 11990 – Wetlands Protection - Directs federal agencies to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial qualities of these lands.

California Health and Safety Code, Division 20, Chapter 6.5, et seq. – Contains the state’s hazardous waste management laws for the protection of human health and the environment.

Title 22 of the California Code of Regulations (Division 4.5, Health Standards for the Management of Hazardous Waste) – Implements the hazardous waste management statutes contained in the California Health and Safety Code. Establishes minimum standards that define the acceptable management of hazardous waste and applies to the transfer, treatment, storage, and disposal of hazardous waste.

Porter-Cologne Water Quality Control Act of 1969 (Division 7 of the California Water Code) – Established the State Water Resources Control Board and nine Regional Water Boards around the state. The Act instructs the Water Boards to preserve and enhance the quality of California’s water resources for the benefit of present and future generations.

For more information...

... on federal environmental laws and regulations, visit the U.S. Environmental Protection Agency’s web site at <http://www.epa.gov/epahome/laws.htm>

...on state laws and regulations, visit the web sites for the State Water Resources Control Board at http://www.swrcb.ca.gov/water_laws/index.html

and the California Department of Toxic Substances Control at <http://www.dtsc.ca.gov/LawsRegsPolicies/index.cfm>

Installation Restoration Program Sites

Due to the nature and extent of its operations, the Navy has used toxic and hazardous materials over several decades. Since environmental studies began in 1985 at NAVWPNSTA Seal Beach, 75 potentially contaminated sites — IR sites, **solid waste management units (SWMUs)**, underground and aboveground storage tanks, and areas of concern (AOCs) — have been identified through the IR Program. Figure 3 (below) summarizes the status of all 75 sites. The Cleanup Team is committed to continuing the success of site investigation and cleanup and to bringing each IR Program site to closure. To date, 13 IR sites have been cleaned up through **removal actions** (see Table 1 on page 6).

An additional 48 IR sites have been closed following environmental investigations and concurrence of no further action by the regulatory agencies. Eight sites have been addressed under other (Non-IR) environmental programs. Of the 75 sites identified, 66 sites have been officially closed. Based on current data, it is expected that removal actions, **removal site evaluations, remedial actions**, or periodic groundwater sampling to monitor site conditions may be required for six remaining IR sites. The six currently active sites are shown on Figure 4 and discussed starting on page 4. Table 2 (page 7) lists all 75 hazardous waste sites identified at NAVWPNSTA Seal Beach and their status.

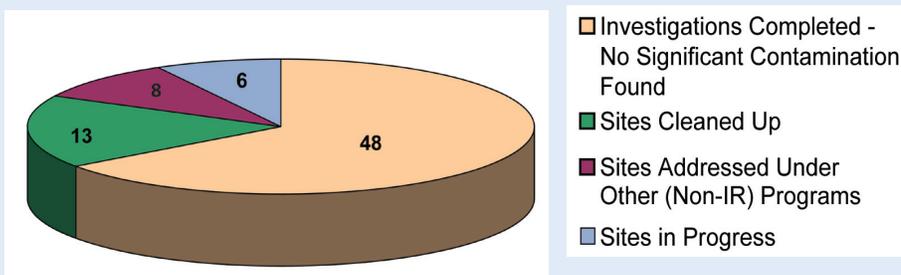
NAVWPNSTA Seal Beach History

NAVWPNSTA Seal Beach is located approximately 26 miles south of the Los Angeles urban center. The station comprises 5,000 acres of land located on the Pacific coast within the city of Seal Beach in Orange County, California (see Figure 1). About 911 acres in the southwest portion of the station have been designated as the Seal Beach National Wildlife Refuge. Major urban areas surrounding NAVWPNSTA Seal Beach are the cities of Long Beach, Westminster, Huntington Beach, Los Alamitos, and Seal Beach.



The main entrance to the weapons station.

FIGURE 3:
Cleanup Progress at Naval Weapons Station Seal Beach

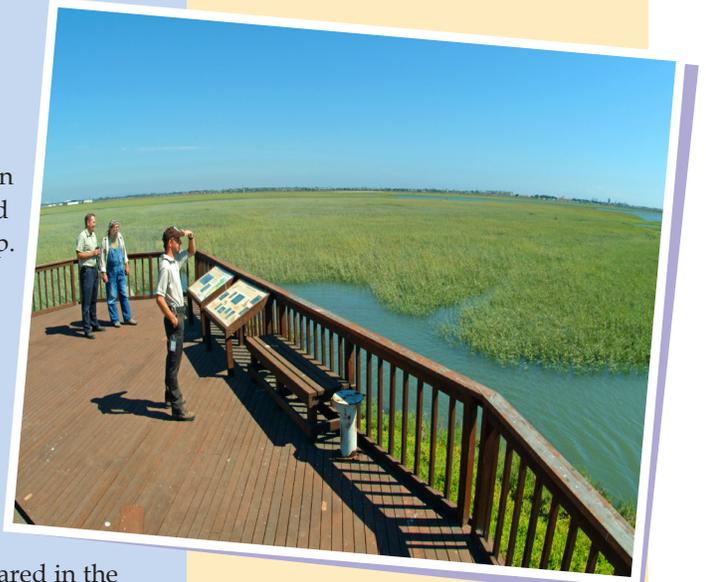


The station was originally commissioned in 1944, at the height of World War II, as a Naval Ammunition and Net Depot. The name has changed several times since then, and in 1998 the base was redesignated Naval Weapons Station Seal Beach. It is one of several weapons stations maintained by the Navy to provide fleet combatants with ready-for-use ordnance. The station includes a headquarters with administrative areas as well as waterfront, storage, testing, and production facilities that support the station's mission. The station serves as the munitions supply point for a majority of the operating Navy forces in the Pacific.

IR Sites in Progress

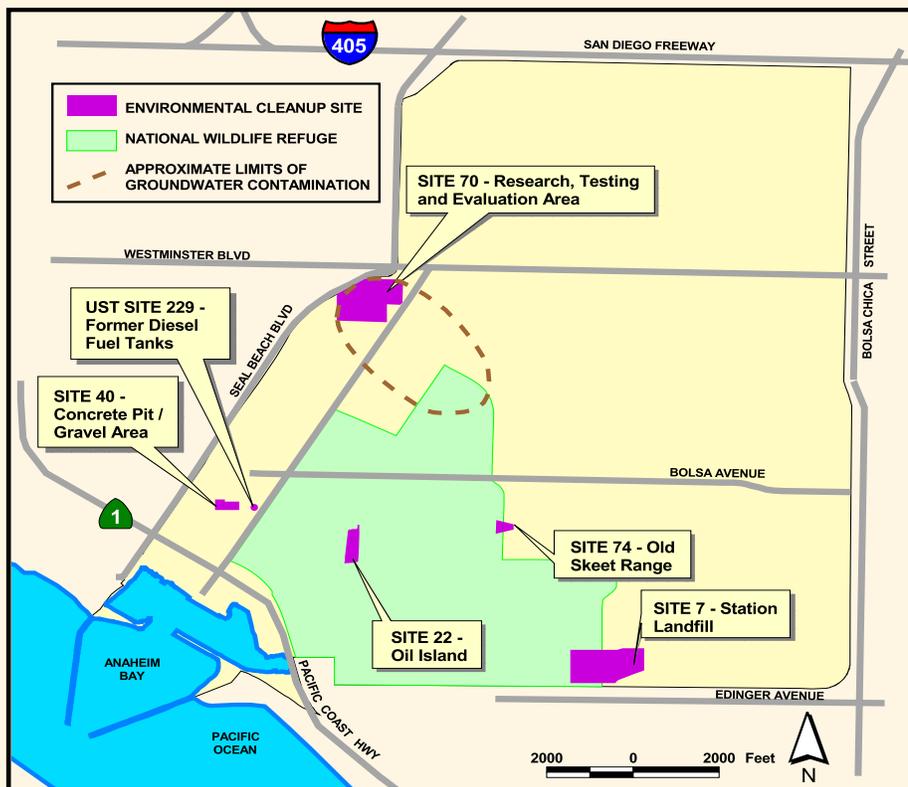
► **Site 7 – Station Landfill.** From the mid-1950s to 1973 trash, debris, and other wastes such as solvents, transformer oil, lubricants, paint sludge, asbestos, photo solutions, and mercury were disposed of at Site 7. Based on groundwater studies and field investigations, the Navy conducted periodic groundwater sampling to monitor site conditions, and implemented a removal action to excavate landfill contents in selected areas, dispose of them off-site at an appropriate permitted waste facility, and to repair the existing soil cover. Periodic inspection of the soil cover is ongoing.

► **Site 22 – Oil Island.** This area is the site of a commercial oil production facility currently operated by Breitburn Energy Corp. Oil production waste-holding impoundments (reservoirs to confine wastes) were in use at Site 22 in 1954. Wastes held there reportedly included drilling muds, drill cuttings, and oily wastes. A remedial investigation report prepared in the late 1990s recommended a removal action to clean up contaminated



An observation platform overlooks the Seal Beach National Wildlife Refuge that encompasses 911 acres.

FIGURE 4:
Naval Weapons Station Seal Beach Site Map



soil and groundwater. In 2002, additional investigation activities were undertaken by Breitburn to further define the nature and extent of contamination and potential impacts to ecological receptors. The company subsequently developed and implemented a site management plan to deter wildlife from visiting or inhabiting the site.

► **Site 40 – Concrete Pit/Gravel Area.** From the mid 1940s to 1978, oil and solvents used during locomotive maintenance activities in the Locomotive Repair Shop (Building 240) were discharged to an adjacent gravel area, which led to contamination of groundwater below the site. An extended removal site evaluation report was prepared in 1999 that addressed the nature and extent of contamination. A *feasibility study* to evaluate cleanup alternatives was completed in 2000. Following successful pilot testing, in 2004 the

Did You Know?

You can read more about the Navy's environmental program on the Internet!

<http://www.cnrc.navy.mil/sealbeach/Programs/Env/IRP/index.htm>

To access the Naval Facilities Engineering Command, Southwest Environmental Web Page click on the link in the first paragraph under Environmental Cleanup.

Navy selected and implemented a remedy to clean up the chlorinated solvent groundwater contamination at Site 40 using *in situ* enhanced bioremediation, monitored natural attenuation, and land use controls. Periodic groundwater sampling to monitor site conditions is in progress and will continue through implementation of remedial action.

► **Site 70 – Research, Testing & Evaluation Area.** Site 70 is the location of a facility built and operated by NASA (the National Aeronautics and Space Administration) between 1962 and 1973 for the design and manufacture of the second stage (S-II) of the Saturn V launch vehicle for the Apollo Program. During that time, chlorinated solvents (primarily trichloroethene, [TCE]) used in the manufacturing process were released to the environment, resulting in contamination of the groundwater under Site 70. A feasibility study to evaluate cleanup alternatives was completed in 2005, and in 2006 the Navy selected *in situ* enhanced bioremediation, monitored natural attenuation, and land use controls as the remedy for groundwater contamination at the site. Remedial action construction began in mid-2007 and operation is scheduled to begin in early 2008. Periodic groundwater sampling to monitor site conditions will continue throughout implementation of the remedial action.

► **Site 74 – Old Skeet Range.** From the late 1960s to the early 1990s, skeet shooting activities took place at Site 74. Contaminants of concern identified in studies include the metals lead and antimony in site soil and sediments, which could pose significant ecological risk due to Site 74's proximity to the Seal Beach National Wildlife Refuge. An Engineering Evaluation and Cost Analysis (EE/CA) is currently evaluating removal action alternatives that are appropriate for the site,



A civilian technician prepares to do maintenance on a Standard SM-2 missile at the base Standard Missile Shop.

including combinations of excavation, capping, and no action. A Net Environmental Benefit Analysis (NEBA) is being done as part of the EE/CA process to specifically assess the environmental impacts of the alternatives being considered. The Navy's planned removal action will balance wetlands habitat protection with the reduction of risk to wildlife from contaminants.

► **UST Site 229 – Former Diesel Fuel Tanks.** Two 10,000-gallon steel diesel fuel tanks were removed from the former Building 229 area in 1991. Petroleum hydrocarbons were reported in soil samples collected during excavation of the tanks. In 1992, petroleum hydrocarbons were also reported in soil and groundwater samples collected in the vicinity of the former excavation. A site assessment is planned for fiscal year 2008 under the IR Program.

FIGURE 5:
Fiscal Years 1994-2006
IR Program Expenditures

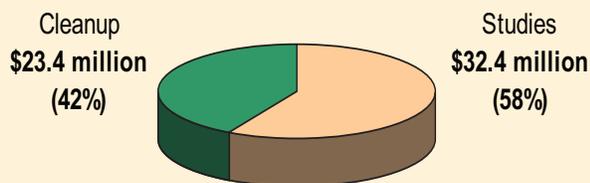


FIGURE 6:
Fiscal Year 2007
Authorized Budget



Significant progress has been made on the IR Program sites at NAVWPNSTA Seal Beach. To date, funding has been expended through two contracts — one for the studies and one for cleanup — and the amounts spent over the past 13 years are shown in Figure 5. Investigation (studies) and cleanup activities currently are being conducted at the six sites discussed above. Figure 6 presents the Fiscal Year 2007 budget, which shows that the program has moved out of the site study phase and into the site cleanup phase.

Removal Actions at 13 sites at NAVWPNSTA Seal Beach have been completed. These actions demonstrate the Navy's commitment to cleaning up hazardous wastes.



TABLE 1: Site Cleanups Completed

Site No.	Actions Taken	Dates Completed
1	Excavation and off-site disposal of primarily metals-contaminated soils. Contamination resulted from discharge of industrial waste-water from Building 71.	Implemented between June and November 1999. Closure report approved by DTSC in December 1999.
4	Excavation of lead-contaminated soil from hot spots at Perimeter Road South Areas of Potential Concern and off-site disposal of the contaminated soils.	Implemented between December 2003 and April 2004. Closure report approved by DTSC in September 2004.
5	Excavation and off-site disposal of debris and contaminated soil from the former Clean Fill Disposal Area; and sifting of the excavated material for ordnance and verification and clearance of the ordnance material.	Implemented between September 2001 and April 2002. Closure report approved by DTSC in May 2003.
8	Excavation and off-site disposal of lead-contaminated soil from the Building 235 battery shop discharge line adjacent to the Seal Beach National Wildlife Refuge.	Implemented in April 1998. Closure report approved by DTSC in October 1999.
9	Excavation and off-site disposal of metals-contaminated soil as a result of sandblast grit disposal.	Implemented in June 1995. Closure report approved by DTSC in August 1998.
19	Excavation and off-site disposal of sandblast grit, debris, and soils primarily contaminated with heavy metals.	Implemented in August 1998. Closure report approved by DTSC in November 1999.
20	Decontamination of floors in Building 68 where a mercury spill occurred.	Implemented in August 1994. Closure report approved by DTSC in July 1995.
42	Excavation and off-site disposal of metals-contaminated soil from the former Auto Shop Sump/Waste Oil Tank area.	Implemented between September and October 2006. Closure report approved by DTSC in June 2007.
44/45	Excavation and off-site disposal of metals-contaminated soil from the Former Waste Otto Fuel Drum Storage Area and Building 88 Floor Drain Outlet areas in and around Building 88, the torpedo maintenance building.	Implemented between September and October 2006. Closure report approved by DTSC in June 2007.
73	Excavation, removal, and off-site disposal of metals-contaminated soil from the former Water Tower Area.	Implemented between January and March 2003. Closure report approved by DTSC in December 2003.
SWMU 24	Excavation, removal, and off-site disposal of metals-contaminated soil from the former stationary demilitarization furnace facility.	Implemented between October and December 2002. Closure report approved by DTSC in August 2003.
SWMU 57	Excavation and off-site disposal of metals-contaminated soil from the areas encompassing a former paint locker (Building 86) and Building 59.	Implemented between September and October 2006. Closure report approved by DTSC in June 2007.

TABLE 2: Summary of Installation Restoration Program Locations at NAVWPNSTA Seal Beach

AOC:	Area of Concern	PCBs:	polychlorinated biphenyls	SWMU:	solid waste management unit
IRP:	Installation Restoration Program	RCRA:	Resource Conservation and Recovery Act	TCA:	trichloroethane
NASA:	National Aeronautics and Space Administration	RT&E:	Research, Testing, and Evaluation	TCE:	trichloroethene
NFRAP:	No Further Response Action Planned due to a lack of significant contamination found or cleanup complete	SITES:	Identified during 1985 Initial Assessment Study and 1990 Addendum to the Preliminary Assessment carried out under CERCLA.	UST:	underground storage tank
PAHs:	polyaromatic hydrocarbons	+	Sites addressed under other (Non-IR) programs	✓	Work completed under IR Program

IRP Site No.	BRIEF DESCRIPTION	SOURCE TYPE	RELEASE PERIOD	WASTE TYPES	CURRENT STATUS	WORK CMLPTD.
1	Wastewater Settling Pond	Wastewater Settling Pond	1945-1971	Chromic acid, alkali, acid, and metals-contaminated wastewater	Removal Action implemented in 1999; NFRAP	✓
2	Evaporation Pond	Wastewater Evaporating Pond	1945-1971	Explosive D (Ammonium Picrate)	NFRAP	✓
3	Cleaning Water Settling Pond	Wastewater Evaporating Pond	1944-early 1950s	Explosive D (Ammonium Picrate)	NFRAP	✓
4	Perimeter Road	Dust control on roads	mid 1960s-1973	Waste oils	Removal Action implemented in 2004; additional groundwater monitoring completed in 2004; NFRAP	✓
5	Clean Fill Disposal Area	Landfill	1943-1944	Construction debris and fill. Reported disposal of live ordnance.	Removal Action implemented in 2001; additional groundwater monitoring completed in 2006; NFRAP	✓
6	Explosives Burning Ground	Explosives burning ground	1945-1971	Various types of ordnance contaminants	NFRAP	✓
7	Station Landfill	Landfill	mid 1950s-1973	Solvents, transformer oil, lubricants, lacquer thinner, Polaroid developing solution, paint sludge, asbestos, and mercury	Removal Action implemented in 2004; periodic groundwater and cover monitoring in place	✓
8	Battery Shop Drainage from Bldg. 235	Wastewater drainage	1945-1975	Neutralized waste battery acid, lead	Removal Action implemented for soil April 1998; NFRAP for groundwater	✓
9	Sandblast Grit Disposal	Surface disposal	mid 1950s-mid 1960s	Sandblast grit with metals	Removal Action implemented June 1995; NFRAP	✓
10	Marsh Spill Area	Unknown	Unknown	Acid	NFRAP	✓
11	Pesticide Storage Trailer	Pesticide storage trailer	1983 during fire	Organic and inorganic pesticides	NFRAP	✓
12	NASA Island	Open burning ground	1968-1972	Explosive wastes and protein-type fire-fighting foams	NFRAP	✓
13	Raw Sewage Spill	Sewer	1969	Raw sanitary sewage	NFRAP	✓
14	Abandoned USTs	Three USTs	mid 1940s-mid 1960s	Diesel and leaded gasoline	NFRAP	✓
15	Diesel Fuel Spill	Spill	October 1983	Diesel	NFRAP	✓
16	Primer/Salvage Yard	Work and disposal yard	1944-1982	Fog oil, smokeless powder, black powder, and ordnance debris	NFRAP	✓
17	Bldg. 52 Mercury Spill	Spill in laboratory building	1970	Mercury	NFRAP	✓
18	Rubble Disposal	Landfill	Unknown	Waste from chapel demolition - rubble and inert construction waste	NFRAP	✓
19	Bldg. 241 Disposal Pit	Landfill trenches	1970-mid 1970s	Paint, solvent, mineral oil, waste paints and solvents, automobiles	Removal Action implemented August 1998; NFRAP	✓
20	Bldg. 68 Mercury Spill	Spills in building	1960-1967	Mercury	Removal Action completed 1994; NFRAP	✓

TABLE 2: Summary of Installation Restoration Program Locations at NAVWPNSTA Seal Beach (cont'd.)

IRP SITE No.	BRIEF DESCRIPTION	SOURCE TYPE	RELEASE PERIOD	WASTE TYPES	CURRENT STATUS	WORK CMLPTD.
21	Disposal Berm	Land application	1966-1974	Freon [®] , waste oils, and black powder	NFRAP	✓
22	Oil Island	Oil production waste holding impoundments	1954	Drilling muds, oily wastes, drill cuttings	Site management is being implemented by responsible party to deter wildlife; not funded by Navy	
23	Bldg. 434 Sample Explosive Demolition Area	Open burning ground	1964-1978	Black powder	NFRAP	✓
24	Bldg. 437 Quench Water Disposal Area	Land application	1950-1960	Experimental propellant contaminated wastewater	NFRAP	✓
25	Bldg. 95 Foam Testing	Fire-suppressant testing yard	1972-1976	Fire-suppressant foams, gasoline	NFRAP	✓
35	Drum Storage Area	Storage yard	Unknown	Unknown liquids - Otto fuel, paints, and solvents suspected	NFRAP	✓
36	Primary Settling Tank	Settling tank	1945-1971	Explosive D (Ammonium Picrate)	NFRAP	✓
37	Bolsa Avenue Storage Yard	Storage yard	Unknown	Transformers, capacitors, waste oil drums	NFRAP	✓
38	X-ray Shop Leach Field	Drainage ditch (land application)	1956-1968	Waste photoprocessing chemicals (Hypoclear and developer)	NFRAP	✓
39	Waste Missile Fuel Tanks	USTs	1958-mid 1970s	Dimmer (missile) fuel	UST Program; no longer in IRP; closed under UST Program	+
40	Concrete Pit/Gravel Area	Engine Work Area and Drainage	late 1940s-1978	Oils and chlorinated solvents	Remedial Action being implemented	
41	Waste Otto Fuel Tank	UST	1982-1983	Waste Otto fuel	UST Program; no longer in IRP; closed under UST Program	+
42	Auto Shop Sump/ Waste Oil Tank	UST	1950-1972	Waste oil	Removal Action implemented in 2006; NFRAP	✓
43	Battery Shop Sump	Sumps/drains	1945-1978	Neutralized battery acid, cold dip parts cleaner	NFRAP	✓
44	Former Waste Otto Fuel Drum Storage	Drum storage yard	mid 1940s-late 1970s	Unused Otto fuel	Removal Action implemented for the sediment; NFRAP	✓
45	Bldg. 88 Floor Drain Outlet	Floor drain in operations area	Unknown-early 1980s	Unknown	Removal Action implemented in 2006; NFRAP	✓
46	Paint Booth Filters	Air filter area for paint booth	Unknown	Paint filters	NFRAP	✓
47	Sea Scout Anaheim Bay Area	Temporary drum storage	Unknown	Unknown	NFRAP	✓
48	Fuel Spill	Diesel dispensing drum	Unknown	Diesel	NFRAP	✓
49	Boiler and Water Treatment Storage Area	Storage area	Unknown	Sodium phosphate, sulfide, nitrite, muriatic acid, sulfuric acid, liquid chlorine	Operating facility; not in IRP	
50	Public Works Small Bldgs. Area	Container storage	Unknown	Solvents, oils, and pesticides	Operating facility; not in IRP	
51	Electrical Shop	Transformer repair shop	1968-1978	PCBs	Operating facility; not in IRP	
SWMUs 20, 21	Waste Acid Storage Tanks	Aboveground storage tanks	1982-unknown	Stripping and pickling wastes, methylene chloride, retardant, surfactant, phenolic, organic acid; chromic acid, fluoride salts, ferrocyanide salts	Closed RCRA permitted facility; not in IRP	+
SWMU 23	Hazardous Waste Storage Facility	Containerized storage area	1983-unknown	Trichloroethane (TCA), waste batteries, acid, Freon [®] , lacquer thinner, oil, pesticides, paints, methylene chloride	RCRA permitted facility not in IRP; closed under RCRA	+
SWMU 41	Drummed Waste Oil Storage Area	Drum storage area	1972-unknown	Waste oils	NFRAP	✓

TABLE 2: Summary of Installation Restoration Program Locations at NAVWPNSTA Seal Beach (cont'd.)

IRP SITE No.	BRIEF DESCRIPTION	SOURCE TYPE	RELEASE PERIOD	WASTE TYPES	CURRENT STATUS	WORK CMLTD.
SWMUs 42, 43	Maintenance Shop Oil/Water Separators	Oil/water separators	1980-unknown	Waste oils	NFRAP	✓
SWMU 17	Waste Otto Fuel Drum Storage Area	Drum storage area	late 1970s-unknown	Waste Otto fuel and agitene solvent	NFRAP	✓
SWMU 22	Photo Shop Drainage System	Sink drains	1978-unknown	Waste photoprocessing chemicals (Hypoclear & developer)	NFRAP	✓
SWMU 24	Stationary Demilitarization Furnace	Furnace with cyclone and baghouse	1984-1998	Class C ordnance and combustion products	Removal Action implemented for soil in 2002; NFRAP	✓
SWMU 50	Water Scrubber Collector System	Air treatment unit for removal of sandblast grit	1980s-unknown	Waste paint and sandblast grit	NFRAP	✓
SWMU 51	Abandoned Paint Locker	Paint locker	Unknown	Old paints and solvents	NFRAP	✓
SWMU 52	Hazardous Waste Drum Storage	Drum storage area	Unknown	Sandblasting waste and contaminated rags in 55-gallon drums	NFRAP	✓
SWMU 53	Hazardous Waste Drum Storage	Drum storage area	Unknown	Paint-related wastes: empty cans, rags, and other flammable material	NFRAP	✓
SWMU 54	Hazardous Waste Drum Storage	Drum storage area	1984-unknown	Lead sludge and particulates collected in cyclone from SWMU 24	NFRAP	✓
SWMU 55	Hazardous Waste Drum Storage	Drum storage area	1980s-unknown	Sludge from water scrubber at SWMU 50	NFRAP	✓
SWMU 56	Hazardous Waste Drum Storage	Drum storage area	1987-unknown	Waste paint thinner	NFRAP	✓
SWMU 57	Paint Locker Area	Paint locker	Unknown	Paints, alcohols, trichloroethene (TCE), other solvents	Removal Action implemented in 2006; NFRAP	✓
SWMU 58	Paint Locker Area	Paint locker	Unknown	Paints, alcohols, TCE, other solvents	NFRAP	✓
SWMU 59	Paint Locker Area	Paint locker	Unknown	Paints, alcohols, TCE, other solvents	NFRAP	✓
SWMU 60	Paint Locker Area	Paint locker	Unknown	Paints, alcohols, TCE, other solvents	NFRAP	✓
SWMU 61	Paint Locker Area	Paint locker	Unknown	Paints, alcohols, TCE, other solvents	NFRAP	✓
SWMU 62	Paint Locker Area	Paint locker	Unknown	Paints, alcohols, TCE, other solvents	NFRAP	✓
SWMU 63	Paint Locker Area	Paint locker	Unknown	Paints, alcohols, TCE, other solvents	NFRAP	✓
SWMU 64	Paint Locker Area	Paint locker	Unknown	Paints, alcohols, TCE, other solvents	NFRAP	✓
SWMU 65	Sandblast Grit Cyclones	Air treatment unit for paint booths	Unknown	Waste paint and sandblasting grit	NFRAP	✓
SWMU 66	Sandblast Grit Cyclones	Air treatment unit for paint booths	Unknown	Waste paint and sandblasting grit	NFRAP	✓
SWMU 69	Hazardous Waste Drum Storage	Drum storage area	Unknown	TCA, rags, toluene, and absorbent	NFRAP	✓
AOC 7	Railroad Supply Yard	Railroad supply yard	Unknown	Sandblast grit and unknown products	NFRAP	✓
70	RT&E Area	Space program RT&E activities	Unknown	TCE, industrial wastewater	Remedial Action planned; currently in construction phase	
73	Water Tower Area	Sandblasting and paint operations	1944-2003	Lead, copper, cadmium, other metals, and PAHs	Removal Action implemented in 2003; NFRAP	✓
74	Old Skeet Range	Skeet shooting	late 1960s - early 1990s	Lead, antimony, and PAHs	Removal Action planned	
-	Bldg. 128 Strip Pit	Metal finishing operations	1975-unknown	Copper, TCE, and other VOCs	NFRAP	✓
-	UST Site 229	Diesel UST	Unknown-1991	Diesel	Site Assessment planned	

Restoration Advisory Board: An Important Player in The Navy's Environmental Program

Since 1995 the NAVWPNSTA Seal Beach Restoration Advisory Board (RAB) has provided a forum for community members, the Navy, and regulatory agencies to discuss cleanup issues and approaches. RAB members review and provide community input on IR Program documents, cleanup plans, and other IR issues. RAB members also participate in site visits to observe environmental investigations and cleanup actions.

So far in 2007, the RAB has held four meetings with the next one scheduled for Tuesday, November 13th from 6 to 8 p.m., at the Seal Beach City Council Chamber, 211 Eighth Street in Seal Beach. RAB meetings are open to the public and the Navy encourages community members to attend. Meetings are announced through mailers sent to all names on the IR Program mailing list. For more information on RAB meetings or becoming a RAB member, contact Mr. Jack Jordan, RAB Community Co-chair, at (562) 430-3288 or the Station Public Affairs Officer at (562) 626-7215.



Restoration Advisory Board members are given an on-site briefing at one of the injection wells associated with the Site 70 enhanced bioremediation project.



An endangered California brown pelican observes munitions loading operations at the Naval Weapons Station Seal Beach wharf.



The Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), a state-endangered species, makes its home at the Seal Beach National Wildlife Refuge (USFWS photo).



Sonic drilling technology was used during the installation of approximately 240 groundwater injection and monitoring wells for the IR Site 70 remedial action. Sonic drilling significantly reduced the amount of drilling waste and provided real-time, detailed geological information, which benefited the construction of an effective remediation network.

Glossary of Terms

Feasibility Study – A phase in the environmental investigation process that develops and evaluates the suitability of appropriate cleanup remedies or solutions.

Groundwater – Water within the earth that moves through permeable rock, sand, or gravel.

In situ – Refers to a treatment system that treats contaminants “in place,” such as the treatment of contaminated groundwater beneath a hazardous waste site.

Installation Restoration (IR) Program – A comprehensive environmental program developed by the Department of Defense (DoD) to identify, investigate, and clean up hazardous waste sites at all DoD facilities (Navy, Army, Air Force, Marine Corps).

No Further Response Action Planned (NFRAP) – The decision that is reached when all action necessary for the protection of human health and the environment has been completed at an IR Program site, either through cleanup or a determination that the site contains no significant contamination.

Ordnance – Military equipment and supplies, primarily referring to weapons, ammunition, and related support gear. Unexploded ordnance consists of remnants of intact ordnance from earlier activities. Both ordnance and unexploded ordnance may present a safety hazard.

Remedial Action – The long-term cleanup action that is carried out to remove the risk to human health and the environment caused by contaminants at a site.

Removal Action – The short-term or interim cleanup action that is carried out to remove the risk to human health and the environment caused by contaminants at a site.

Removal Site Evaluation – An early phase in the environmental investigation process that evaluates the need to remove contaminants. It includes assessment of the presence and extent of contamination as well as risk to human health and the environment.

Restoration Advisory Board (RAB) – An advisory board composed of members of the community, regulatory agencies, and the Navy that meets to discuss, review, and provide input on environmental investigation and cleanup activities and decisions.

Solid Waste Management Unit (SWMU; pronounced “schmoo”) – As identified under the Resource Conservation and Recovery Act (RCRA), a current (or former) industrial facility that treats, stores, or disposes of hazardous waste and that is generally permitted.

Ordnance storage magazines aboard Naval Weapons Station Seal Beach.



IR Program Manager
NAVWPNSTA, Building 110
800 Seal Beach Boulevard
Seal Beach, CA 90740-5000

Address Correction Requested

If you wish to be added to the mailing list, or no longer wish to receive mailings, please contact the IR Program Manager at (562) 626-7897, or return this page with address label attached

INFORMATION REPOSITORIES: AVAILABLE TO YOU!!

Information repositories have been established to provide public access to technical reports and other IR Program information. Documents, RAB meeting minutes, newsletters, public meeting announcements, and other IR Program items are available for review at the following locations:

Seal Beach Public Library
Mary Wilson Branch
707 Electric Avenue
Seal Beach, CA 90740
(562) 431-3584 (call for
library hours)

NAVWPNSTA Seal Beach
Environmental Office, Building 110
800 Seal Beach Boulevard
Seal Beach, CA 90740-5000
(562) 626-7897 (call for an appt. to
obtain entrance to the station)

FOR MORE INFORMATION...

...On the IR Program at NAVWPNSTA Seal Beach, including documents and the latest updates, visit the Seal Beach IR Program website at

<http://www.cnrc.navy.mil/SealBeach/Programs/Env/IRP/index.htm> or contact:

IR Program Manager
NAVWPNSTA Seal Beach
800 Seal Beach Boulevard
Seal Beach, CA 90740-5000
(562) 626-7897
nwssbpao@navy.mil

Ms. Katherine Leibel
Remedial Project Manager
CA Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630
(714) 484-5446
kleibel@dtsc.ca.gov



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