

FINAL
Site Management Plan
2015 Annual Update
Long Beach Naval Complex
Long Beach, California

January 2016

Prepared for:



Department of the Navy
Base Realignment and Closure,
Program Management Office West
San Diego, California

Prepared under:

Contract Number: N62473-12-C-4807
DCN: TRVT-4807-0000-0030

Prepared by:



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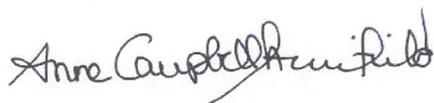
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Review and Approval

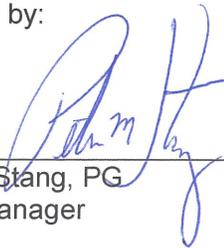
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Acronyms and Abbreviations

µg/L	micrograms/liter
AOC	Area of Concern
AOEC	Area of Ecological Concern
AOPC	Area of Potential Concern
BCP	BRAC Cleanup Plan
BCT	BRAC Cleanup Team
bgs	below ground surface
BRAC	Base Realignment and Closure
CCL	calculated concentration limit
CDPH	California Department of Public Health
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
COC	contaminant of concern
COPC	contaminant of potential concern
CRUP	Covenant to Restrict the Use of Property
DCE	dichloroethene
DERP	Defense Environmental Restoration Program
DTSC	California Department of Toxic Substances Control
ESD	explanation of significant difference
°F	degrees Fahrenheit
FFSRA	Federal Facility Site Remediation Agreement
GPCAB	Geology, Permitting, and Corrective Action Branch
HRC [®]	Hydrogen Release Compound [®]
IC	Institutional Control
IR	Installation Restoration
LBNC	Long Beach Naval Complex
LBNSY	Long Beach Naval Shipyard
MNA	monitored natural attenuation
MTBE	methyl tertiary butyl ether
NAVSTA	Naval Station Long Beach

Navy	Department of the Navy
NFA	No Further Action
NPL	National Priorities List
NTCRA	Non-Time-Critical Removal Action
OMF	(DTSC) Office of Military Facilities
PA	Preliminary Assessment
PCB	polychlorinated biphenyl
POLB	Port of Long Beach
RAP	Remedial Action Plan
RACR	Remedial Action Completion Report
RASO	(Navy) Radiological Affairs Support Office
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
ROD	Record of Decision
RPM	Remedial Project Manager
RWQCB	Regional Water Quality Control Board
SAP	Sampling and Analysis Plan
SSS	Sanitary Sewer System
SMP	Site Management Plan
SWMU	Solid Waste Management Unit
SWS	Storm Water System
TM	Technical Memorandum
TPH	total petroleum hydrocarbon
U.S. EPA	United States Environmental Protection Agency
UST	Underground Storage Tank

Section 1 Purpose and Scope

This Site Management Plan (SMP) 2015 Annual Update outlines activities and establishes schedules for May 16, 2015 through May 15, 2016, and deadlines for all environmental response actions that will be undertaken pursuant to the July 17, 2000, Federal Facility Site Remediation Agreement (FFSRA) between the Department of the Navy (Navy) and the California Environmental Protection Agency Department of Toxic Substances Control (DTSC) at the Former Long Beach Naval Complex (LBNC) located in Long Beach, Los Angeles County, California ([NAVFAC Southwest 2000](#)). As stated in the FFSRA, DTSC is the lead state agency for oversight and approval of response actions. The roles of other regulatory agencies involved in Former LBNC are described in Section 6. This 2015 Annual SMP Update includes updates as of May 16, 2015 to 14 Installation Restoration (IR) Sites and the closure of the final Compliance Program Site (Building 101, Former Area of Concern [AOC] MISC 7).

In accordance with the negotiated requirements of the FFSRA, the SMP ([CDM 2001](#)) and associated annual updates ([CDM 2002, 2003, 2004, 2005, and 2006](#); and [MARRS 2007, 2008a, 2008b, 2009a, 2009b, 2010, 2011, 2012, and Trevet 2013b, 2014a](#)) serve as a scheduling and coordination tool for managing the environmental restoration activities being implemented at a number of IR Sites and AOCs at Former LBNC. The SMP provides a framework to help assure the overall objectives (i.e., protection of public health, welfare, and the environment) and requirements of the FFSRA are met.

The FFSRA initially required three quarterly and an annual update of the SMP each year to list all identified IR Sites and AOCs pursuant to the FFSRA, including activities and schedules for each Site. SMP updates were also required to include a list of the remedial actions necessary to mitigate any immediate threats to human health or the environment.

Pursuant to FFSRA Section 14.1, on January 10, 2008, the Navy requested to adjust the frequency of the SMP updates from three quarterly and one annual to one semiannual and one annual update. In a letter dated February 19, 2008, DTSC concurred with submitting one semiannual and one annual update of the SMP. Semiannual updates to the SMP were submitted in December 2008 and December 2009. During the June 8, 2010, Base Realignment and Closure (BRAC) Cleanup Team (BCT) meeting, the Navy requested, pursuant to FFSRA Section 14.1, to adjust the frequency of the SMP updates to one annual update, because the number of Sites requiring updates had decreased. All BCT member agencies concurred with submittal of one annual update on June 15, of each year covering the 1-year period up to May 16.

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Section 2 Background of Long Beach Naval Complex

This Section describes background information including the location, description, and environmental setting of the LBNC.

2.1 Location

LBNC consists of two adjacent former naval installations, Naval Station Long Beach (NAVSTA) and Long Beach Naval Shipyard (LBNSY). LBNC is located on Terminal Island at the western boundary of the City of Long Beach, Los Angeles County, California (Figure 1). Most of the LBNC property lies within the City of Long Beach, while some of the western portion lies within the City of Los Angeles. Both Former NAVSTA and Former LBNSY occupy portions of the Long Beach Harbor West Basin. Current land use surrounding LBNC is port-related, commercial, and industrial. Figure 2 shows the Former LBNC Site layout.

2.2 Facility Description

During the 1940s, NAVSTA was acquired from the City of Long Beach and expanded. In 1946, NAVSTA was officially commissioned as “United States Naval Station Terminal Island” and was chartered to provide welfare, recreation, and social facilities in addition to maintaining facilities for the operation and berthing of tugboats, barges, and similar vessels. In 1948, the renamed U.S. Naval Station Long Beach provided support mainly for active service ships and inactive ships of the Reserve Fleet.

LBNSY’s primary function since its inception in 1940 was the repair and overhaul of Navy vessels. During the 1940s and 1950s, LBNSY operated and expanded in support of World War II and Korean War efforts as the U.S. Naval Drydocks, the Terminal Island Naval Shipyard, and LBNSY.

In 1963, a condemnation action affecting both NAVSTA and LBNSY exempted specific improvements on the properties, excluded mineral estates, and designated certain easements to be retained by the City of Long Beach. In 1974, NAVSTA was disestablished and redesignated as Naval Support Activity, and in 1979, it was redesignated as NAVSTA. NAVSTA was closed operationally on September 30, 1994, under BRAC II, and a portion was transferred to the LBNSY. LBNSY was later closed operationally on September 30, 1997, under BRAC IV.

2.3 Environmental Setting

This Section discusses the climate and hydrogeology at LBNC.

2.3.1 Climate

The local climate is semiarid, characterized by mild winters and warm summers. Mean monthly temperatures (30-year average 1981–2010) range from a low of 56.3 degrees Fahrenheit (°F) in December to a high of 74.4°F in August. Annual precipitation is 12.26 inches, also based on a 30-year average (NOAA 2010).

2.3.2 Hydrogeology

LBNC is located in the southern portion of the West Coast Groundwater Basin. The most significant formations are the Holocene alluvial deposits, the Upper Pleistocene Lakewood Formation, and the Lower Pleistocene San Pedro Formation.

IR Sites 1, 2, 3, and 4 are located on the Navy Mole, a man-made peninsula that shelters the Long Beach Middle Harbor. Soils that compose the Navy Mole are generally fine-grained, silty-sand dredged from the adjacent harbor areas. Surface soils are light brown, poorly graded, silty sands and estimated to be medium dense.

IR Sites 5 through 14 are located on Terminal Island, in the northern part of the Peninsular Range Geomorphic Province, which is dominated by northwest-trending geologic structures. The dominant structural feature in the Long Beach area is the Newport-Inglewood Structural Zone, expressed 4 miles northeast of LBNC by a chain of elongated, low hills and fault scarps caused by northwest-trending, left-stepping, en echelon faulting (Randall et al. 1983). Detailed information regarding major subsurface features and subsidence issues near LBNC can be found in the Remedial Investigation (RI) Report (Bechtel National, Inc. 1996).

The shallowest water-bearing zone beneath Terminal Island is in the surficial deposits, comprising the man-made fills and near-surface native soils (upper Recent deposits). Groundwater is first encountered in these sediments from 8 to 10 feet below ground surface (bgs) on the Navy Mole and approximately 20 to 24 feet bgs on the Former NAVSTA and LBNSY. Although major aquifers are important water-producing zones within the West Coast Basin, seawater intrusion has limited their usefulness in areas near the coast, including the Terminal Island area. Terminal Island is surrounded by saline surface waters and groundwater in the upper Recent deposits is non-potable and saline, with a mineral content approaching that of seawater (Jacobs Engineering Group, Inc. 1993). The upper Recent deposits are not identified as a potential water-producing zone by the California Department of Water Resources (DWR) (Bechtel National, Inc. 1996). Several pumping stations that may be influencing the groundwater flow regime have been identified on or near the eastern part of Terminal Island (Bechtel National, Inc. 1996).

Section 3 Environmental Regulatory Compliance

In response to environmental impacts resulting from past hazardous waste-handling and disposal practices, the U.S. Congress directed the U.S. Environmental Protection Agency (U.S. EPA) to develop a program to manage and control past disposal and spill Sites. This program is known as the 1980 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the 1986 Superfund Amendments and Reauthorization Act, and is commonly referred to as Superfund. These laws established a phased process for investigating and cleaning up hazardous waste disposal and spill Sites nationwide.

The Department of Defense established the Defense Environmental Restoration Program (DERP), which is modeled after and is consistent with the CERCLA program. In 1981, the Navy initiated the IR Program to identify, investigate, and clean up or control releases of hazardous substances to reduce the risk to human health and the environment. The Navy performs all non-petroleum-related restoration activities at both National Priority List (NPL) and non-NPL Sites, in accordance with the National Oil and Hazardous Substance Pollution Contingency Plan (commonly referred to as National Contingency Plan) and CERCLA. LBNC is not listed on the U.S. EPA NPL. [Figure 3](#) outlines the CERCLA-based environmental requirements accommodated under the DERP/IR Program.

This 2015 Annual SMP Update outlines all milestones and deadlines for restoration and compliance activities required at LBNC pursuant to the July 17, 2000, FFSRA. The FFSRA for LBNC integrates environmental response obligations under the IR Program, state regulations, and all other applicable or relevant and appropriate requirements.

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Section 4 Environmental Response Actions

The 1999 BRAC Cleanup Plan (BCP) for LBNC identified 15 IR Sites, 2 former housing area Sites, 196 AOCs, and 22 areas of potential concern (AOPCs) that required environmental response actions ([NAVFAC Southwest 1999](#)). Since the issuance of the BCP, many of these Sites have been further evaluated and/or remediated and determined to require no further action (NFA). This 2015 Annual SMP Update includes updates as of May 16, 2015 to 14 IR Sites (1 through 14) and the closure of the final Compliance Program Site (Building 101, Former AOC MISC 7).

References made to “open Sites” in this SMP Update should be interpreted as meaning the above-mentioned Sites where continued environmental response actions are required. [Table 1](#) lists these open Sites along with their descriptions, current cleanup status, waste characteristics, and operation dates. Additionally, [Figure 4](#) depicts the locations of the 14 IR Sites and the final Compliance Program Site (Building 101, Former AOC MISC 7) which received NFA from the Los Angeles Regional Water Quality Control Board (RWQCB) on December 22, 2014 ([RWQCB 2014b](#)). [Appendix A](#) contains a full listing of the NFA-approved and NFA-pending regulatory approval Sites at LBNC. [Appendix A](#) also lists the document name and date that the NFA determination for each of these Sites was approved.

4.1 Installation Restoration Sites

This Section presents the current status of the open Sites since the last SMP update of May 2014. Additional information about the investigative history of each Site is provided in [Table 1](#) and in the previous SMP Annual Updates referenced in [Section 1](#) of this document.

In 1983, an Initial Assessment Study, equivalent to a CERCLA Preliminary Assessment (PA), identified 12 potentially contaminated Sites on Former NAVSTA and Former LBNSY properties ([Brown and Caldwell 1983](#)). In 1991, site investigations were conducted to verify the presence of hazardous substances and assess whether contamination at these Sites existed at concentrations that warranted further action. Site investigation reports ([Jacobs Engineering Group, Inc. 1992a and 1992b](#)) recommended further investigation for IR Sites 1 through 6A (NAVSTA property), IR Site 7 (NAVSTA and LBNSY property), and IR Sites 8 through 13 (LBNSY property). In 1996, IR Site 14 was added to the LBNC IR Program for further groundwater and soil investigation ([Bechtel 1998](#)).

In 2004, the Navy completed the first five-year review process which included IR Sites 1 through 6A and 14. The second five-year review at the Former LBNC completed in December 2009, evaluated selected remedies at IR Sites 1 through 6A and 8 through 14 ([Chadux Tt 2009](#)). A five-year review for the IR Sites was completed in December 2014; the next review is scheduled to be completed in December 2019.

4.1.1 IR Sites 1 and 2

Installation Restoration Program

A Record of Decision (ROD) was issued in June 2000 to address chemical contaminants at IR Sites 1 and 2 ([Navy BRAC PMO 2000](#)). The selected remedy included removal and disposal of contaminated soil and debris and in situ air sparging/soil vapor extraction, long-term groundwater monitoring, and institutional controls (ICs). Groundwater monitoring was discontinued with RWQCB concurrence in April 2008, and IC monitoring was implemented. As required by CERCLA, five-year reviews have been conducted at IR Sites 1 and 2. The first was conducted in 2004 once long-term monitoring commenced, the second in 2009, and the third was completed in December 2014. The Third Five-Year Review Report identified subsidence at IR Sites 1 and 2, near former well location MW-2 (the wells at IR Sites 1 and 2 were properly destroyed in 2010); and recommended updating signs posted on the fence-line at Gull Park be updated with current contact information ([Navy BRAC PMO 2014b](#)).

Radiological Investigations

On September 5, 2008, the Navy issued the *Final Work Plan Supplemental Radiological Assessment of Installation Restoration Sites 1 and 2, Long Beach Naval Complex, Long Beach, California* ([Cabrera Services, Inc. 2008](#)). The radiological field investigation was completed in late December 2008. A draft report of the supplemental field activities, was submitted to DTSC, California Department of Public Health (CDPH) (through DTSC), and the RWQCB in mid-June 2009. The Navy received comments from CDPH (through DTSC) in mid-August 2009. During this period, the Navy's Radiological Affairs Support Office (RASO) elected to reopen the Draft Report for further Navy comments based on review of new sample results taken during waste-profiling activities. The Navy BRAC office received the comments from RASO in late May 2011.

The *Final Supplemental Radiological Investigation Report* was issued in May 2014 ([Cabrera Services, Inc. 2014](#)); it included responses to regulatory agency comments, and a summary of changes made between the draft and final version. The Final Report presented additional human-health evaluations for Radium-226 and concluded that the results show a low exposure risk under the industrial site worker scenario at IR Sites 1 and 2. The Navy received comments from CDPH (through DTSC) dated November 10, 2014. The comments provided by CDPH suggest that the information provided in the Final Report indicates that IR Sites 1 and 2 remain radiologically "impacted", and are not suitable for a Radiological Unrestricted Release Recommendation (RURR). The Navy is planning to conduct additional site characterization and a revised risk assessment based on findings in the Report. If necessary, an Explanation of Significant Differences (ESD) to the Record of Decision (ROD) will be prepared, as well as a Land Use Control Remedial Design.

Additional note: Soil was excavated and stockpiled from IR Sites 1 and 2 locations (by Port of Long Beach's [POLB's] tenant Sea Launch) during the installation of fiber-optic lines in late 2010. DTSC was notified and a Work Plan was prepared and implemented by the POLB tenant with regulatory oversight. The stockpiled soil was later sampled for radiological contaminants of concern (COCs) and was determined to be non-impacted. The soil was removed from the Site and taken to an off-site landfill for disposal.

4.1.2 IR Sites 3 through 6A

The ROD for IR Sites 3, 4, 5, and 6A was signed in June 1999 ([Navy BRAC PMO 1999](#)). The selected remedy for IR Sites 3 and 6A was a combination of ICs (e.g., deed restrictions for industrial use, non-residential/non-recreational) and groundwater monitoring. The selected remedy for IR Sites 4 and 5 was ICs.

IR Site 3 was granted conditional NFA status by the DTSC on August 5, 2003, and by the RWQCB on July 11, 2003, after it was demonstrated that concentrations of the contaminants of potential concern (COPCs) were decreasing or stable at the site. Similarly, IR Site 6A also was granted conditional NFA by the RWQCB and DTSC in 2000. However, the RWQCB and DTSC had requested a final round of groundwater sampling during the previous five-year review ([DTSC 2003](#)). The final groundwater monitoring event was conducted in May 2004 and documented in a Groundwater Sampling Report dated September 2004 ([Battelle 2004a](#)). The DTSC and RWQCB concurred with the conclusions in the report for IR Sites 3 and 6A on November 2, 2004, and January 6, 2005, respectively, granting a "Response Complete" status for IR Sites 3 and 6A ([ChaduxTt 2009](#)).

The groundwater monitoring wells at Sites 3, 4, 5, and 6A were properly destroyed in September 2008. The Navy prepared a Well Decommissioning Summary Report and submitted it to the DTSC and RWQCB on January 9, 2009. No regulatory agency concurrence was required for the Report. [Appendix A](#) provides a brief summary of this report. Although IR Sites 3 and 6A have received Response Complete status, five-year reviews are required because ICs remain in place. The third five-year review was completed in December 2014.

4.1.3 IR Site 7

The ROD for IR Site 7 issued on September 19, 2007 ([Navy BRAC PMO 2007](#)) documented the selected remedy for each of the 7 Areas of Ecological Concerns (AOECs) A through G. For AOEC D, the agencies concurred with no-action prior to preparation of the Feasibility Study Report; this decision was documented in the ROD. For AOEC B, the no-action alternative was selected. The remedy selected in the ROD for AOECs E, F, and G was ICs.

Primary and secondary remedies were selected for AOECs A and C to provide flexibility to the POLB during remedy implementation. Dredging, transportation, and placement of chemically

impacted sediment at off-site (outside IR Site 7) POLB projects when appropriate was selected as the primary remedy for AOECs A and C. Due to uncertainties regarding the availability of off-site POLB projects, the DON selected a secondary remedy for these AOECs. The secondary remedy for AOECs A and C included dredging and containing chemically impacted sediments on-site (inside IR Site 7) along the inboard face of the Navy Mole.

In 2007, additional sediment sampling and analysis was conducted by the POLB to further delineate the vertical and horizontal extent of sediment contamination within the dredge areas of IR Site 7 and to evaluate the suitability of this material for use as slip fill material at Pier G.

Sediment samples were collected to determine if contaminants exceeded hazardous waste levels, as defined by the California Code of Regulation (CCR) Title 22. Measured leachate concentrations were all well below Soluble Threshold Limit Concentrations (STLCs), indicating dredged material would not be considered hazardous waste and thus would not pose a risk to groundwater resources following placement within the Pier G slip fill.

The POLB prepared an RD/RA for the placement of dredged material from IR Site 7 in an engineered Pier G slip fill site to provide long-term containment and isolation from future exposure.

The selected remedies for IR Site 7 were implemented by POLB per consensual agreement with DTSC. Removal and discharge of sediments at AOEC A and C were completed by POLB in February 2011. The *Contaminated Sediment Remediation Implementation Report IR Site 7 (West Basin) Sediment Remediation* was prepared by POLB for site closure in March 2013 ([Anchor QEA, LP 2013](#)). POLB responded to agencies' comments on the Report. DTSC approved the final report by letter dated June 26, 2013, and concluded the remedial action specified in the ROD has been achieved ([DTSC 2013](#)).

4.1.4 IR Sites 8 and 10

The ROD for IR Sites 8 and 10 was issued in September 2004 ([Navy BRAC PMO 2004](#)). The selected remedy for these Sites was groundwater monitoring and ICs.

The DTSC and RWQCB concurred with the Navy's recommendation to cease groundwater monitoring at IR Sites 8 and 10, based on recommendations in the 2007 and 2006 Annual Groundwater Monitoring Reports, respectively.

The Navy issued a draft Remedial Action Completion Report (RACR) for IR Sites 8 and 10 on October 17, 2008, to document attainment of the remedial goals. The remedial goals are the calculated concentration limits (CCLs). In June 2009, the Navy revised the CCLs at the request of DTSC, which lowered the CCLs for chromium in both wells being monitored at IR Site 8, and for barium and pyrene in both wells being monitored at IR Site 10. The revised CCLs were

documented in the *Technical Memorandum, Revised Addendum to the Remedial Design/ Remedial Action Work Plan for IR Sites 8 through 13*, and included as an attachment to the 2008 Annual Groundwater Monitoring Report ([Battelle 2009c](#)).

The Navy issued the final RACR for Sites 8 and 10 to document the completion of remediation and long-term groundwater monitoring in July 2009, with the updated remedial goals ([Battelle 2009a](#)). The DTSC and RWQCB concurred with the Final RACR in August 2009 and February 2009, respectively.

IR Sites 8 and 10 are included in the transfer parcel discussed in the *Finding of Suitability to Transfer* ([Navy BRAC PMO 2014a](#)). In 2014, the Navy requested concurrence from the RWQCB and DTSC for removal of certain ICs that were no longer necessary because groundwater RAOs had been achieved at IR Sites 8 and 10. The following are the ICs that remain in place at IR Sites 8 and 10:

1. Protect human health and the environment by ensuring that land use remains industrial and by prohibiting use by specific sensitive populations.
2. Prevent unauthorized disturbance of soil, and prevent unauthorized disturbance and/or use of groundwater.

The RWQCB concurred with the revised ICs by letter dated April 3, 2014 ([RWQCB 2014a](#)), and DTSC concurred by letter dated May 28, 2014 ([DTSC 2014](#)). A five-year review report, including IR Sites 8 and 10, was issued in December 2009. The second five-year review was completed in December 2014.

4.1.5 IR Sites 9, 11, 12, and 13

Two separate RODs were issued for IR Sites 9, 11, 12, and 13: one for IR Site 9 and one for IR Sites 11, 12, and 13.

The Final ROD for IR Site 9 was issued in August 2005 ([Navy BRAC PMO 2005](#)). The selected remedy for IR Site 9 was groundwater monitoring, monitored natural attenuation (MNA), and ICs.

The Final ROD for IR Sites 11, 12, and 13 was issued in August 2006 ([Navy BRAC PMO 2006](#)). The selected remedy for these Sites was groundwater monitoring and ICs.

The groundwater remedial goals, CCLs, for IR Sites 9, 11, 12, and 13 were revised based on refinement of the assumptions used for groundwater modeling at these Sites. The process of revising the remedial goals was documented in the *Technical Memorandum, Revised Addendum to the Remedial Design/Remedial Action Work Plan for IR Sites 8 through 13*, and included as an

attachment to the *2008 Annual Groundwater Monitoring Report*. The Report was submitted on July 31, 2009, and DTSC concurred with the Report on October 22, 2009.

IR Site 9

The Navy issued a technical memorandum (TM) on September 1, 2010, documenting the Navy's recommendation for discontinuation of groundwater monitoring at IR Site 9 ([Battelle 2010](#)). Results from groundwater monitoring conducted at IR Site 9 indicated COCs would not migrate to the surface water at concentrations in excess of established water quality criteria. Reductive dechlorination is occurring, and concentrations of the COCs tetrachloroethene (also known as perchloroethene) and trichloroethene are decreasing. Therefore, it has been determined that remedial action objectives established in the Final ROD/Remedial Action Plan (RAP) for IR Site 9 have been achieved. DTSC and RWQCB concurred with NFA for IR Site 9 groundwater on April 1, 2011, and February 28, 2011, respectively.

The Navy issued a Draft RACR for Site 9 on October 7, 2011, to document the completion of remediation and long-term groundwater monitoring. The Navy issued a Revised Draft RACR on February 17, 2012, to further document the evaluation and removal of certain ICs that are no longer necessary, given that the groundwater remedial action is complete, and that the ROD/RAP for this Site states that the ICs may be removed when remediation goals have been met. A Final RACR was issued in June 2012. RWQCB comments on the Final RACR were resolved during a teleconference on August 30, 2012, and the following two ICs were retained:

1. Protect human health and the environment by ensuring that land use remains industrial and by prohibiting use by specific sensitive populations.
2. Prevent unauthorized disturbance of soil and prevent unauthorized disturbance or use of groundwater.

DTSC and RWQCB concurred with recommendations in the RACR in letters dated May 16, 2012 and October 8, 2012 ([RWQCB 2012](#)). A Revised Final RACR for IR Site 9 was issued November 29, 2012 ([Battelle 2012](#)). IR Site 9 is included in the transfer parcel discussed in the *Finding of Suitability to Transfer* ([Navy BRAC PMO 2014a](#)).

The second five-year review was completed in December 2014.

IR Sites 11, 12, and 13

The Navy conducted groundwater monitoring at IR Sites 11, 12, and 13 in November 2011. DTSC concurred with recommendations to discontinue monitoring at wells NW-11-04, NW-12-01, and NW-12-03, and requested another round of sampling for well NW-12-08 by letter dated July 24, 2012. Monitoring results for samples collected in November 2012 and December 2013 at well NW-12-08 for arsenic were 166 J (estimated) micrograms/liter ($\mu\text{g/L}$), and 68 $\mu\text{g/L}$ respectively. Although the December 2013 result was a marked decrease from the previous

monitoring event, the results exceeded the RG for arsenic (59 µg/L). No sample was collected in December 2014 due to the placement of shipping containers over the well head NW-12-08. The arsenic concentration reported in the sample collected May 1, 2015 (21st Round) was 158 µg/L, which exceeds the remedial goal of 59 µg/L.

The Navy issued a Draft RACR for IR Sites 11, 12, and 13 on April 9, 2012, to document the completion of remediation and long-term groundwater monitoring performed. Similar to IR Site 9, this Report also documented the evaluation and removal of certain ICs that are no longer necessary. The Report recommended retaining the same two specific ICs as listed for IR Site 9, above, for IR Sites 11, 12, and 13. The RACR also noted that ICs required by the ROD/RAP are already in place for these Sites in the form of a Covenant to Restrict the Use of Property (CRUP) entered into between the City of Long Beach and DTSC in July 2004. The CRUP contains certain land use restrictions on the use of property where IR Sites 11, 12, and 13 are located. The RACR recommended that the City of Long Beach should continue to maintain the existing surficial barrier at IR Site 12 in the form of parking and roadways.

The second five-year review was completed in December 2014. The Second Five-Year Review Report identified the elevated concentrations of arsenic reported in monitoring well NW-12-08 as an issue and recommended reevaluation of the conceptual site model ([Navy BRAC PMO 2014b](#)).

The Navy is currently preparing a technical memorandum to update the conceptual site model. The Navy plans to destroy wells and prepare a Revised Draft RACR for IR Sites 11, 12, and 13. The Final RACR for IR Sites 11, 12 and 13 is expected to be completed by mid-2016 which will include a review of the IR Sites 11, 12, and 13, past and current land use, groundwater data, and historical non-CERCLA oil field activities. As a result of the preliminary findings, the Navy plans to make recommendations concerning arsenic CCLs.

4.1.6 IR Site 14

An Action Memorandum was issued in September 2000 that described the need for a non-time-critical removal action (NTCRA) at IR Site 14 ([Battelle 2000](#)). This Action Memorandum recommended electrical resistive heating as the NTCRA technology. However, because of concerns that it would negatively impact subsurface structures, resistive heating was not implemented. The Navy decided to implement the contingency remedy of excavation and disposal of contaminated soil and enhanced MNA for groundwater. Soil excavation and disposal is complete. An enhanced MNA remedy for groundwater at IR Site 14 is still being implemented.

Nutrients have been injected into groundwater at IR Site 14 to enhance MNA during three separate events. Hydrogen Release Compound[®] (HRC[®]) was injected into groundwater at IR

Site 14 in 2002 and 2005. Emulsified oil and bacterial cultures were injected in February and March 2009. The objective of the nutrient injections has been to create conditions in groundwater that allow for the reductive dechlorination of volatile organic compounds.

Before the initial injection of HRC[®] in 2002, the Navy obtained a General Waste Discharge Permit from RWQCB to allow injection in connection with the removal action activities. However, this Permit was not required because the environmental work at IR Site 14 was conducted pursuant to CERCLA. The Navy requested the termination of this permit on August 20, 2010. RWQCB concurred and terminated the Permit on September 1, 2010.

Groundwater monitoring was conducted quarterly for the first year following the emulsified oil/bacterial injections until February 2010. Groundwater monitoring continued on a semiannual schedule with sampling conducted in February and August.

In October 2010, The Navy issued a revised Sampling and Analysis Plan (SAP) for IR Site 14 (OTIE 2010). The purpose of the revised SAP was to update Site closure criteria presented as data quality objectives and to include a revised exit strategy for groundwater monitoring. DTSC and RWQCB concurred with the revised SAP plan on October 4, and September 15, 2010, respectively.

Results from December 2013 groundwater monitoring show all reported COC concentrations in monitoring wells at IR Site 14 are below cleanup goals. COCs have been reported in injection wells during semiannual groundwater monitoring at concentrations exceeding cleanup goals. Between 2012 and 2015, the Navy and BCT discussed concerns that groundwater samples collected from injection wells are not representative of aquifer conditions.

The Navy concluded the RAOs for the Site have been achieved, and recommended removal of injection wells as no additional nutrient injections are required. At the request of DTSC and RWQCB, the Navy recommended the installation of three new monitoring wells to replace three former injection wells. The new monitoring wells will be constructed with screen intervals similar to existing monitoring wells in the Source Area. Samples will be collected after the wells are installed and developed and during regularly scheduled monitoring events. Groundwater monitoring is planned for October 2015, January 2016, April 2016, and October 2016.

The third five-year review was completed in December 2014.

4.2 Areas of Concern

A total of 345 AOCs were identified at LBNC. In 2009, as part of transfer activities, the Navy reviewed the status of selected AOCs. All AOCs have received NFA approval, or are being addressed by CERCLA or the Compliance Program. The final AOC (Building 101, AOC Misc

7), assigned to the Compliance Program, received NFA required concurrence from the RWQCB in December 2014 as discussed in more detail below ([RWQCB 2014b](#)).

4.3 Compliance Program Sites

Compliance activities at LBNC included Sites containing underground storage tanks (USTs), aboveground storage tanks, hazardous materials/waste management, solid waste management, polychlorinated biphenyls (PCBs), asbestos, Resource Conservation and Recovery Act (RCRA) facilities, National Pollutant Discharge Elimination System permits, oil/water separators, radon, wastewater discharges, lead-based paint, pesticides, air, and ordnance. All Compliance Program activities are complete. The Compliance Program Site at Building 101 (Former AOC MISC 7) received concurrence for NFA December 22, 2014 and is closed ([Appendix A](#)) ([RWQCB 2014b](#)).

The *Final Preliminary Assessment/Sampling Report, for 171 Group B Areas of Concern*, provides details about the area South of Building 101 known as the site of a former service station and identified as AOC MISC 7. In 1945 15 USTs (356-362, 369-376) were installed at the former gasoline station. The tanks were used to store gasoline, diesel fuel, with gas, kerosene, and lube oil and range in capacity from 500 to 10,000 gallons. In 1967, an additional three tanks were installed (101.3, 101.4 and 101.5). Each of these tanks was used to store lube oil and ranged in capacity from 500 to 720 gallons. In 1986 two more tanks were installed (101.1 and 101.2) and one additional tank was installed at an unknown time (101.6). In 1968, 11 of the tanks were removed (356, 358-362, and 370-374). Three additional tanks were removed prior to 1993 (101.5, 375, and 376). One tank was removed in 1993 (369) and one was removed before 1997 (101.4). In 1997 four tanks were removed (101.1, 101.2, 101.3 and 357). A final tank was removed some time before 1998 (101.6) ([CDM 2000](#)). AOC MISC 7 was deferred to the Compliance Program for closure.

The *Summary Groundwater Monitoring Report for Building 101, September 2003 through March 2006*, submitted to regulatory agencies in June 2006, recommended Site closure ([Geofon 2006](#)). In a letter dated July 18, 2006, the RWQCB stated that it did not have any comments on the document.

In a letter dated September 6, 2011, the RWQCB stated it could not concur with NFA at Building 101 as a result of potential continuing sources of methyl tertiary butyl ether (MTBE), incomplete characterization of oxygenates, and the need to evaluate potential remedial efforts for MTBE. RWQCB comments were based on temporal observations at individual monitoring wells from the last two quarterly groundwater monitoring events.

The Navy submitted a *Groundwater Monitoring Work Plan for Former Building 101 Site, Former Long Beach Naval Complex, Long Beach, California*, in September 2013 ([Trevet](#)

2013a), to collect additional samples from existing wells and analyze them for MTBE and benzene, toluene, ethylbenzene, and total xylenes. Monitoring results obtained for MTBE, and BTEX in groundwater samples collected in September 2013 are lower than screening levels established in the Revised Final Corrective Action Plan. MTBE was detected in the six groundwater samples at concentrations ranging from 0.13J (estimated) to 87 µg/L; benzene was detected in one of six groundwater samples at a concentration of 0.2J µg/L (estimated); toluene and total xylenes were not detected in any of the six groundwater samples; ethylbenzene was detected in one of six groundwater samples at a concentration of 0.15 J µg/L (estimated) (Trevet 2014b).

The *Final Groundwater Monitoring Report* submitted November 25, 2014, recommended NFA based on the evaluation of results from 10 groundwater monitoring rounds conducted during the period from September 2003 to September 2013. The Report recommended that groundwater monitoring be discontinued and that the Site be closed with a concurrence for NFA by the RWQCB because the Site meets all the requirements for closure under the State Water Resources Control Board Low-Threat UST Case Closure Policy (Trevet 2014b). The RWQCB concurred with NFA in December 2014 (RWQCB 2014b).

4.4 Detailed Schedule

A detailed schedule for SMP activities at LBNC through fiscal year 2015 is provided in Table 2. Subject to the distinction between primary and secondary documents described below, the near-term milestones (i.e., submittals and activities to be completed within the current fiscal year) are enforceable, per the FFSRA, Section 12.2. For the purposes of this SMP, the current fiscal year (2015) ends on September 30, 2015. Dates and activities in this schedule beyond the current fiscal year are not enforceable because site-specific circumstances may change and affect the schedule.

As required by the FFSRA, this detailed schedule shows all activities, durations, start dates, and finish dates for the open Sites that will occur in the next 2 years (ending September 30, 2017).

The detailed schedule distinguishes between secondary and primary documents as agreed upon by all parties at the June 2, 2009, BCT meeting. Although previous SMPs for LBNC did not specifically make this distinction, it is standard practice to identify primary and secondary documents in SMPs. Primary documents are CERCLA documents such as remedial investigations, feasibility studies, proposed plans, RODs, RACRs, and the RCRA equivalent of these CERCLA documents. Primary documents are subject to dispute resolution procedures in the FFSRA and require written justification for schedule extension requests as described in the FFSRA.

In contrast, secondary documents are either in support of primary documents or they are post-ROD or post-Remedy in Place documents (documents that are generated during the Long-Term Maintenance phase of the CERCLA/RCRA cleanup process). Examples of secondary documents are work plans, sampling and analysis plans, health and safety plans, five-year review reports, groundwater monitoring reports, TMs, and remedy optimization reports/evaluations. Although the regulators may comment on secondary documents, these documents are not subject to the formal document review and approval or dispute resolution processes and do not require written justification for schedule extension requests.

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Section 5 RCRA Status

The Navy obtained a Hazardous Waste Facility Permit (CA6170023109) for the storage of hazardous wastes at LBNC in August 1983. The permit authorized temporary (less than 1 year) storage of containerized hazardous waste at Building 118 until 1988. The permit was extended to 1990 for the construction of a new hazardous waste storage facility at Building 314. In May 1990, a new permit was issued under the same permit number for temporary storage of hazardous waste at Building 314. The permit expired in May 1995 and was not renewed because of plans for base closure.

A total of 33 hazardous waste storage and accumulation areas or solid waste management units (SWMUs), shown on [Figure 5](#), were described in the RCRA Facility Assessment Report prepared by DTSC (formerly Department of Health Services) in November 1989 ([DHS 1989](#)). These SWMUs included Buildings 118 and 314. At the 31 other SWMUs, wastes were stored for fewer than 90 days; therefore, they were not included on the Hazardous Waste Facility Permits.

The Navy entered into a FFSRA with the State of California on July 17, 2000, wherein DTSC agreed that the Navy may demonstrate compliance with RCRA corrective action obligations with the documents prepared in taking any necessary response action under CERCLA. This agreement to integrate RCRA corrective action obligations into the Navy's CERCLA response actions has been critical to completing the IR Program at LBNC. In 2003, DTSC notified the Navy that corrective action determinations are required for all SWMUs named in the Hazardous Waste Facility Permit (CA6170023109) to administratively close the permit.

In a letter dated March 19, 2003, the Navy requested that DTSC grant corrective action determinations for all SWMUs that have obtained NFA approval through the CERCLA process. DTSC explained in meetings on May 29 and July 29, 2003 that DTSC Office of Military Facilities (OMF) oversees all CERCLA response actions and DTSC Geology, Permitting, and Corrective Action Branch (GPCAB) oversees all RCRA response actions. DTSC GPCAB indicated that it accepts all NFA determinations granted by OMF, but does not plan to issue corrective action determinations on a SWMU-by-SWMU basis. Rather, it prefers to issue corrective action determinations globally for a given parcel. Regardless, DTSC indicated that the property transferee will not be named in the expired RCRA permit upon property transfer, and that corrective action determinations are not requisite for property transfer.

As summarized in [Table 3](#), DTSC OMF granted NFA at SWMUs 3 through 7, 10 through 14, 16 through 19, and 24 and 25. This was based on the findings of the PAs performed for Group A and Group B AOCs completed in April 1997 ([LBNSY-ED 1997](#)) and April 2000 ([LBNSY-ED 2000](#)). RWQCB approved NFA for SWMU 33.

The permit for Building 314 was issued in 1990 and expired in 1995. Closure of the Former Building 314 RCRA-permitted unit (SWMU 2) was issued in a letter indicating an “Acceptance of Closure Certification” by DTSC in September 2002.

The permit for Building 118 was issued in 1983 and expired in 1990. Closure of the Former Building 118 RCRA-permitted unit (SWMU 1) was issued in a DTSC letter granting a “Closure Certification Acknowledgement,” dated March 8, 2006. Based on these letters, no additional actions related to RCRA Hazardous Waste Storage Permits are needed for Former LBNSY. The RCRA permits issued under U.S. EPA ID No. CA6170023109 for Buildings 118 and 314 at Former LBNSY are considered closed.

Section 6 BRAC Cleanup Team (BCT) and BCT Project Team

The BCT is the primary forum in which issues affecting the cleanup and reuse of a closed installation are addressed. The BCT has the authority, responsibility, and accountability for the environmental cleanup programs at the LBNC, which emphasize cleanup actions that facilitate reuse. The BCT is currently composed of at least one representative from the Navy, DTSC, and RWQCB. The BCT is supported by the BCT Project Team, which is composed of a variety of individuals such as Navy Remedial Project Managers, state and federal stakeholder representatives, local redevelopment authority representatives, and technical contractors. The BCT and BCT Project Team members are listed in [Table 4](#).

The BCT Project Team reviewed a draft of the 2015 SMP and provided comments. Responses to the DTSC comments are attached as Appendix B.

The BCT and BCT Project Team were holding bimonthly meetings until October 2010. During the October 5, 2010, BCT meeting, all BCT members agreed to reduce the meeting frequency to quarterly due to reduction in the number of open Sites. These BCT meetings serve as the forum for assessing progress, obtaining consensus on problem issues, and discussing environmental activities and programs that affect timely reuse.

Since the last SMP Annual Update ([Trevet 2014a](#)), the BCT held meetings on the following dates:

- August 12, 2014
- November 12, 2014
- February 10, 2015
- May 12, 2015

Final meeting minutes for each of these BCT meetings are available in the LBNC Administrative Record.

Administrative Record

Official Records Management Office Mailing Address:

Naval Facilities Engineering Command, Southwest
ATTN: Diane Silva, Command Records Manager, Code EV33
1220 Pacific Highway (NBSD Bldg. 3519)
San Diego, California 92132

Physical Office Address:

Diane Silva, Command Records Manager
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San Diego, California 92136
Phone: (619) 556-1280
E-mail:diane.silva@navy.mil

Information Repository

The Information Repository for LBNC and LBNSY Environmental Restoration program is located at the Long Beach Public Library. Hours of operation are Tuesday from 12:00 p.m. to 8:00 p.m., Wednesday from 12:00 p.m. to 6:00 p.m., Thursday from 12:00 p.m. to 7:00 p.m., and Friday and Saturday from 10:00 a.m. to 5:00 p.m. The library is closed on Sunday and Monday.

Main Branch of the Long Beach Public Library
Government Publications Department
101 Pacific Avenue
Long Beach, California 90822
(562) 570-7500

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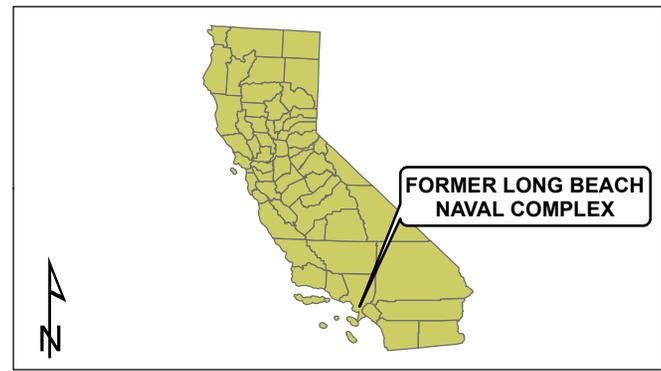
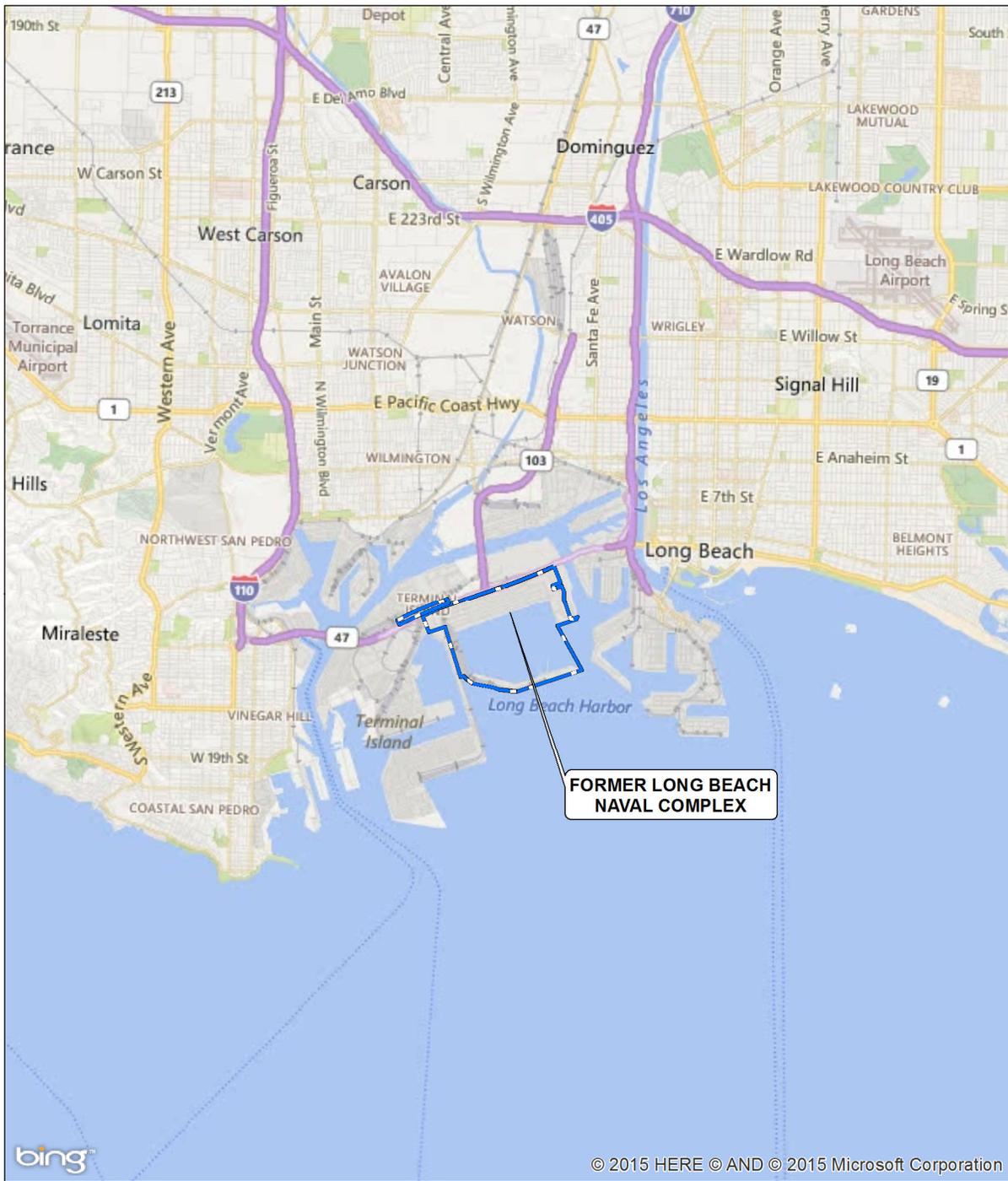
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Figures

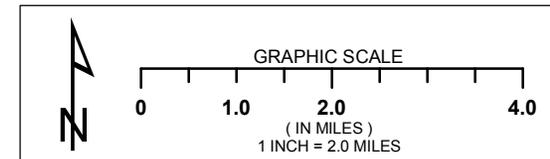
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LEGEND

 LBNC PROPERTY BOUNDARY

NOTES:
LBNC - LONG BEACH NAVAL COMPLEX



DEPARTMENT OF THE NAVY

SAN DIEGO, CALIFORNIA

**NAVAL FACILITIES
ENGINEERING COMMAND**

SITE MANAGEMENT PLAN
FORMER LONG BEACH NAVAL COMPLEX
LONG BEACH, CALIFORNIA

FIGURE 1

SITE VICINITY



DATE: OCTOBER 2015

CONTRACT NO.: N62473-12-C-4807

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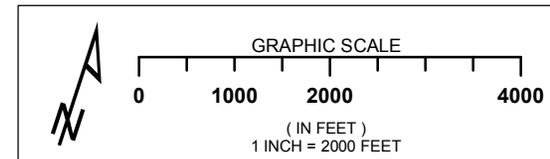


LEGEND

- NAVSTA AND LBNSY PROPERTY BOUNDARY
- ▭ LBNC PROPERTY BOUNDARY
- ▭ FORMER LONG BEACH NAVAL SHIPYARD
- ▭ FORMER NAVAL STATION LONG BEACH

NOTES:

- DFSP - DEFENSE FUEL SUPPORT POINT
- LBNC - LONG BEACH NAVAL COMPLEX
- LBNSY - LONG BEACH NAVAL SHIPYARD
- NAVSTA - NAVAL STATION LONG BEACH



DEPARTMENT OF THE NAVY

SAN DIEGO, CALIFORNIA

**NAVAL FACILITIES
ENGINEERING COMMAND**

SITE MANAGEMENT PLAN
FORMER LONG BEACH NAVAL COMPLEX
LONG BEACH, CALIFORNIA

FIGURE 2

LBNC SITE LAYOUT



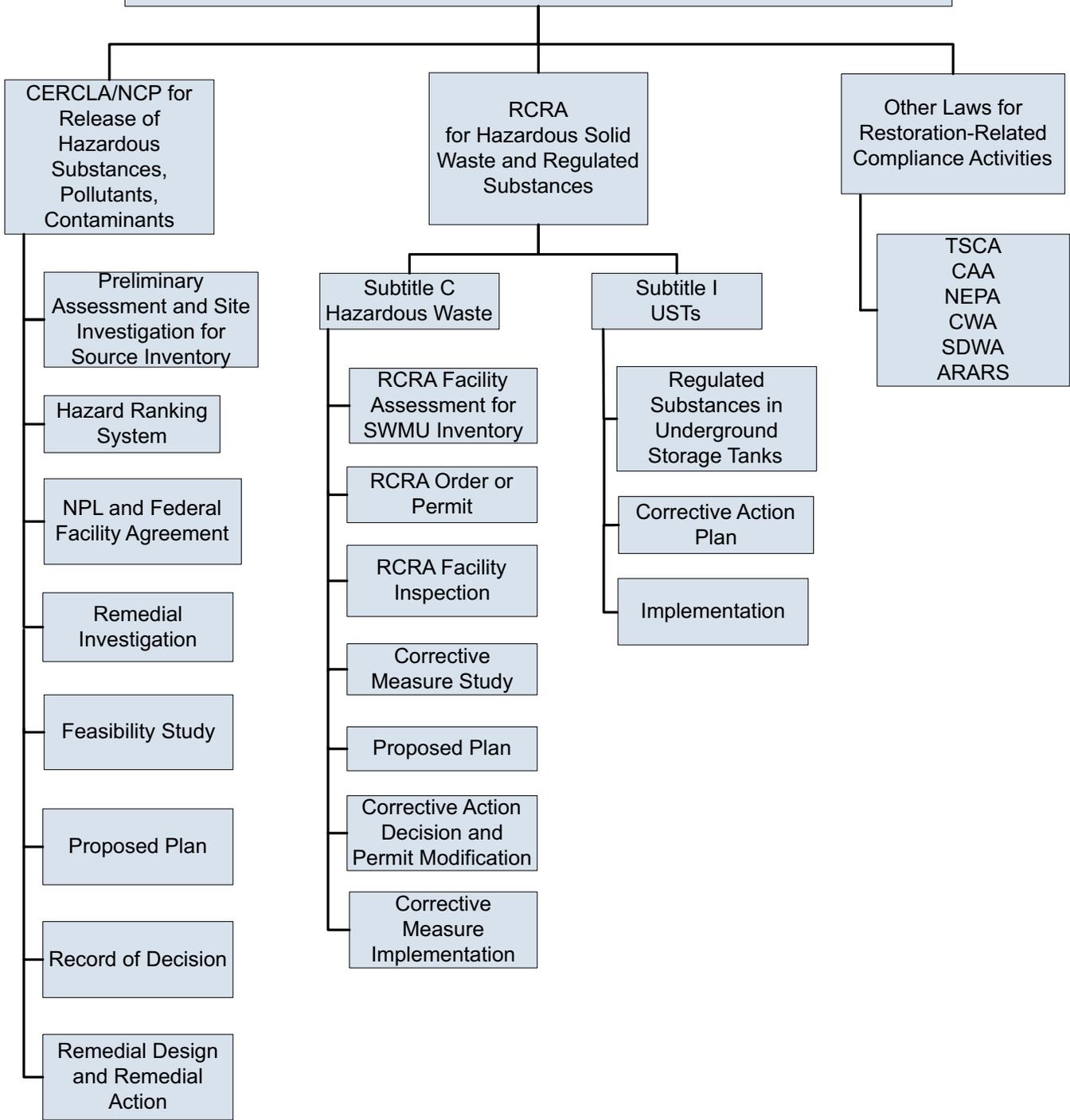
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Geomatics

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Defense Environmental Restoration Program/ IR Program



LEGEND

- ARARs - Applicable or Relevant and Appropriate Requirements
- CAA - Clean Air Act
- CERCLA - Comprehensive Environmental Response Compensation and Liability Act
- CWA - Clean Water Act
- DERP - Defense Environmental Restoration Program
- IR - Installation Restoration
- NCP - National Contingency Plan
- NEPA - National Environmental Protection Act
- NPL - National Priorities List
- RCRA - Resource Conservation and Recovery Act
- SDWA - Safe Drinking Water Act
- SWMU - Solid Waste Management Unit
- TSCA - Toxic Substances Control Act
- USTs - Underground Storage Tanks

**NAVAL FACILITIES
ENGINEERING COMMAND**



SITE MANAGEMENT PLAN
FORMER LONG BEACH NAVAL COMPLEX
LONG BEACH, CALIFORNIA

FIGURE 3

ENVIRONMENTAL REQUIREMENTS ACCOMMODATED
UNDER DERP/IR PROGRAM



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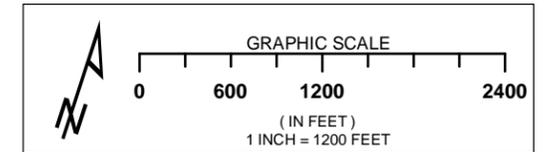
LEGEND

- LBNC PROPERTY BOUNDARY
- LOCATION OF FORMER BUILDING 101

IR STATUS

- LTM, ICs
- MNA
- NFA, ICs
- RAD

NOTES:
 CERCLA - COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT
 DFSP - DEFENSE FUEL SUPPORT POINT
 IC - INSTITUTIONAL CONTROLS
 IR - INSTALLATION RESTORATION
 LBNC - LONG BEACH NAVAL COMPLEX
 LTM - LONG TERM MONITORING
 MNA - MONITORED NATURAL ATTENUATION
 NFA - NO FURTHER ACTION
 NTCRA - NON-TIME CRITICAL REMOVAL ACTION
 RACR - REMOVAL ACTION COMPLETION REPORT
 RAD - RADIOLOGICAL ASSESSMENT IN PROGRESS
 RC - RESPONSE COMPLETE
 ROD - RECORD OF DECISION
 TCE - TRICHLOROETHENE



Site Number	Site Name	Document	Status
IR Site 1	Mole Solid Waste Operations	RACR 9/2007	RAD
IR Site 2	Chemical Materials and Waste Storage Area	RACR 9/2007	RAD
IR Site 3	Industrial Waste Disposal Pits	RC 3/2004	NFA, ICs
IR Site 4	Mole Extension Operations	Closed 3/2000	NFA, ICs
IR Site 5	Skeet Range Solid Waste Fill Area	Closed 3/2000	NFA, ICs
IR Site 6A	Boat Disposal Location	RC 3/2004	NFA, ICs
R Site 7	Harbor Sediments	Implementation Report	NFA, ICs
IR Site 8	Building 210, TCE Disposal Site	RACR 10/2008	NFA, ICs
IR Site 9	Building 129, Ground Floor Spills	RACR 11/2012	NFA, ICs
IR Site 10	Parking Lot H, Past Operations	RACR 10/2008	NFA, ICs
IR Site 11	Hillside East of Dry dock No. 1	ROD 8/2006	LTM, ICs
IR Site 12	Parking Lot X, Toxic Sandblast Disposal	ROD 8/2006	LTM, ICs
IR Site 13	Tank Farm near Building 303 (Hazardous Waste Storage)	ROD 8/2006	LTM, ICs
IR Site 14	Former Dry Cleaning Facility	NTCRA 2002	MNA

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND

SAN DIEGO, CALIFORNIA

SITE MANAGEMENT PLAN
 FORMER LONG BEACH NAVAL COMPLEX
 LONG BEACH, CALIFORNIA

FIGURE 4
 SITE LOCATION

DATE: OCTOBER 2015
 CONTRACT NO.: N62473-12-C-4807

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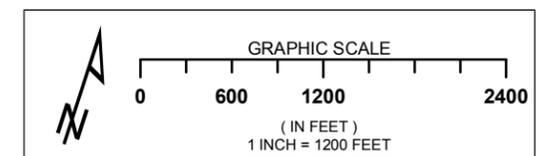


LEGEND

- 33 NO FURTHER ACTION
- 27 LONG TERM MONITORING IN PROGRESS OR NFA REQUESTED
- LBNC PROPERTY BOUNDARY

NOTES:

- IR - INSTALLATION RESTORATION
- LTM - LONG TERM MONITORING
- SWMU - SOLID WASTE MANAGEMENT UNIT
- NFA - NO FURTHER ACTION
- PCB - POLYCHLORINATED BIPHENYL
- RD/RA - REMEDIAL DESIGN/REMEDIAL ACTION
- ROD - RECORD OF DECISION
- RWQCB - CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
- SWMU - SOLID WASTE MANAGEMENT UNIT
- TCE - TRICHLOROETHENE
- UST - UNDERGROUND STORAGE TANKS



SWMU	Description	Status
1	Building 118 Hazardous Waste Storage Facility (Permitted Facility)	NFA (March 2006)
2	Building 314 Hazardous Waste Storage Facility (Permitted Facility)	NFA (September 2002)
3	Building 202 (Paint Shop) 90-day Accumulation Area	NFA (April 2000)
4	Building 54 (Transportation Shop) 90-day Accumulation Area	NFA (April 2001)
5	Building 130 (Sheet Metal Shop, Shop 17) 90-day Accumulation Area and Process Tank Area	NFA (April 2002)
6	Building 129 (Marine Machine Shop) 90-day Accumulation Area and Process Tank Area	NFA (April 2003)
7	Building 132 (Machine Shop) and 90-day Accumulation Area	NFA (April 2004)
8	Plating Operations (Shop 5106 in Building 210) and 90-day Accumulation Area	NFA (IR Site 16 September 2005)
9	Electrical Shop (Shop 51), Electronics Shop (Shop 66), Weapons Shop (Shop 67) in Building 210 and 90-day Accumulation Area	NFA (April 1997; April 2000)
10	Building 210 PCB 90-day Accumulation Area	NFA (April 1997; April 2000)
11	Building 128 (Shipfitter Shop) and 90-day Accumulation Area	NFA (April 2000; February 2001)
12	Building 7 (Public Works Maintenance Shop) 90-day Accumulation Area	NFA (April 1997)
13	Utilities Shop Operations (Shop 03)	NFA (April 1997)
14	Pipefitters Shop (Shop 56) in Building 132 East	NFA (April 2000)
15	Supply Department (Code 500)	IR Site 9 - NFA (October 2012)
16	Supply Department Buildings 59, P-30 and P-41	No contamination
17	Building 52	NFA (April 1997; April 2000)
18	On-site Still (Freon Cleaning and Reclamation Unit) in Building 210	No contamination
19	On-site Still (TCE Reclamation) in Building 128	NFA (April 2001; June 2001)
20	Parking Lot H Past Operations	IR Site 10 - NFA (August 2009; February 2009)
21	Hillside East of Drydock 1	IR Site 11 (LTM in progress)
22	Parking Lot X	IR Site 12 (LTM in progress)
23	Tank Farm 303 and Building 303 90-day Accumulation Area	IR Site 13 (LTM in progress)
24	Pier Accumulation Areas	NFA (April 1997)
25	Donut Oil Water Separators	NFA (April 2001)
26	Mole Solid Waste Operations Site	IR Site 1 (Radiological Assessment in Progress)
27	Chemical Material and Waste Storage Area	IR Site 2 (Radiological Assessment in Progress)
28	Industrial Waste Disposal Site	IR Site 3 - Response Complete (November 2004; January 2005)
29	Mole Extension Sites	IR Site 4 - Response Complete (November 2004; January 2005)
30	Skeet Range Solid Waste Fill Area	IR Site 5 - Response Complete (November 2004; January 2005)
31	Boat Disposal Location	IR Site 6 - Response Complete (November 2004; January 2005)
32	Harbor Sediments	IR Site 7 - NFA (June 2013)
33	Underground Storage Tanks	NFA (RWQCB)

Source: Esri

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
 SAN DIEGO, CALIFORNIA

SITE MANAGEMENT PLAN
 FORMER LONG BEACH NAVAL COMPLEX
 LONG BEACH, CALIFORNIA

FIGURE 5

SWMU LOCATION AND STATUS



DATE: OCTOBER 2015
 CONTRACT NO.: N62473-12-C-4807

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Tables

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Table 1. Site Management Plan Sites

Site No.	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
IR Site 1	Mole Solid Waste Operations	Active remediation of chemical contaminants is complete. A final RACR was issued September 2007. Radiological conditions are currently being addressed. A final WP to collect additional radiological data was submitted to DTSC and CDPH in September 2008. Radiological fieldwork was completed in December 2008. The Final Supplemental Radiological Survey Report was submitted May19, 2014. The third five year review was completed in December 2014. The Navy plans to perform additional site characterization and a revised risk assessment based on the Report. If necessary an Explanation of Significant Differences to the ROD will be prepared.	Trash, garbage, metal scrap, sandblast grit, asbestos, and radiological point sources	Mid-1940s to mid-1960s
IR Site 2	Chemical Materials and Waste Storage Area	Active remediation of chemical contaminants is complete. A final RACR was issued September 2007. Radiological conditions are currently being addressed. A final WP to collect additional radiological data was submitted to DTSC and CDPH in September 2008. Radiological fieldwork was completed in December 2008. The Final Supplemental Radiological Survey Report was submitted May19, 2014. The third five year review was completed in December 2014. The Navy plans to perform additional site characterization and a revised risk assessment based on the Report. If necessary an Explanation of Significant Differences to the ROD will be prepared.	Waste oils, acids, solvents, paints, and chromic acid	Mid-1960s to 1980
IR Site 3	Industrial Waste Disposal Pits	DTSC and RWQCB concurred in November 2004 and January 2005, respectively, that IR Site 3 achieved response complete status. Groundwater monitoring is complete. The Navy has properly destroyed the groundwater monitoring wells at IR Site 3. The third five year review was completed in December 2014.	Waste oil, caustic waste, acidic wastes, sludge, and trash	Late 1940s to early 1970s
IR Site 4	Mole Extension Operations	IR Site 4 was closed with approval of DTSC and RWQCB March 15, 2000. The Navy has properly destroyed the groundwater monitoring wells at IR Site	Construction debris, sandblast grit, petroleum products, asbestos, trash, and soil	1950s to 1972

Table 1. Site Management Plan Sites

Site No.	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
		4. The third five year review was completed in December 2014.		
IR Site 5	Skeet Range Solid Waste Fill Area	IR Site 5 was closed with approval of DTSC and RWQCB March 15, 2000. The Navy has properly destroyed the groundwater monitoring wells at IR Site 5. The third five year review was completed in December 2014.	Bed frames, desks, solid waste, and construction debris	Mid-1930s to 1968
IR Site 6A	Boat Disposal Location	DTSC and RWQCB concurred in November 2004 and January 2005, respectively, that IR Site 6A achieved response complete status. Groundwater monitoring is complete. The Navy has properly destroyed the groundwater monitoring wells at IR Site 6A. The third five year review was completed in December 2014.	Sandblast grit, old boats, waste oil, and solid waste	1942 to 1965
IR Site 7	Harbor Sediments	The ROD was signed on September 19, 2007. POLB has assumed responsibility for implementation of the selected remedies in the ROD. Removal and discharge of sediments at AOECs A and C were completed by POLB in February 2011. The POLB submitted the Final Contaminated Sediment Remediation Implementation Report, in March 2013. DTSC concurred no further action was required by letter dated June 26, 2013.	Industrial wastewater including rust preventative, lead caulking material, waste oil, solvents, PCBs, acids, and grease; stormwater lines and dry dock flushing were discharged to the harbor	Early 1940s to mid-1970s
IR Site 8	Building 210, TCE Disposal Site	RWQCB and DTSC concurred with cessation of groundwater monitoring. Final RACR was submitted in July 2009. DTSC and RWQCB concurred with the Final RACR in August 2009 and February 2009, respectively. The second five year review was completed in December 2014.	TCE	1974 to 1980
IR Site 9	Building 129, Ground Floor Spills	The remedial goals were updated and documented in the Revised Addendum to the RD/RA Work Plan for IR Sites 8 through 13 in July 2009. The Navy submitted a TM on September 1, 2010, to cease groundwater monitoring. DTSC and RWQCB concurred with NFA for groundwater on April 1, 2011, and February 28,	Former Electronics/Weapons Shop and Former Quonset Hut. PCE; TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; and VC	1940 to 1973

Table 1. Site Management Plan Sites

Site No.	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
		<p>2011, respectively. The Navy issued a revised draft RACR for IR Site 9 on February 17, 2012, to document the achievement of cleanup objectives, the discontinuation of long-term groundwater monitoring, and the evaluation and removal of certain ICs that are no longer necessary. DTSC concurred with the revised draft RACR on May 16, 2012. Final RACR was issued in June 2012. Revisions to the final ICs presented in the RACR were accepted by Navy, DTSC, and RWQCB by teleconference on August 30, 2012. A revised Final RACR was issued November 29, 2012. The second five year review was completed in December 2014.</p>		
IR Site 10	Parking Lot H, Past Operations	<p>RWQCB and DTSC concurred to cease groundwater monitoring. Final RACR was submitted in July 2009. DTSC and RWQCB concurred with the final RACR in August 2009 and February 2009, respectively. The second five year review was completed in December 2014.</p>	Former Scrap Yard; barium and pyrene	1952 to 1957
IR Site 11	Hillside East of Drydock No. 1	<p>Navy continues to monitor groundwater for arsenic in conjunction with IR Sites 12 and 13. Remedial goals were updated and documented in the Revised Addendum to the RD/RA WP for IR Sites 8 through 13 in July 2009. Navy issued a revised draft RACR for IR Sites 11, 12, and 13 on April 9, 2012, to document the achievement of cleanup objectives, the discontinuation of long-term groundwater monitoring, and the evaluation and removal of certain ICs that are no longer necessary. Navy is revising the conceptual site model and anticipates submitting a technical memorandum in August 2015, followed by a Revised Draft RACR in 2016.</p>	Sandblast grit, mercury, chromium, and arsenic	1975

Table 1. Site Management Plan Sites

Site No.	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
IR Site 12	Parking Lot X, Toxic Sandblast Disposal	The Navy continues to monitor groundwater for arsenic in conjunction with IR Sites 12 and 13. Remedial goals were updated and documented in the Revised Addendum to the RD/RA WP for IR Sites 8 through 13 in July 2009. Navy issued a revised draft RACR for IR Sites 11, 12, and 13 on April 9, 2012, to document the achievement of cleanup objectives, the discontinuation of long-term groundwater monitoring, and the evaluation and removal of certain ICs that are no longer necessary. The Navy is revising the conceptual site model and anticipates submitting a technical memorandum in August 2015, followed by a Revised Draft RACR in 2016.	Toxic sandblast grit and arsenic	1971 to 1975
IR Site 13	Tank Farm near Building 303 (Hazardous Waste Storage)	Navy continues to monitor groundwater for arsenic. Remedial goals were updated and documented in the Revised Addendum to the RD/RA WP for IR Sites 8 through 13 in July 2009. Navy issued a revised draft RACR for IR Sites 11, 12, and 13 on April 9, 2012, to document the achievement of cleanup objectives, the discontinuation of long-term groundwater monitoring, and the evaluation and removal of certain ICs that are no longer necessary. The Navy is revising the conceptual site model and anticipates submitting a technical memorandum in August 2015, followed by a Revised Draft RACR in 2016.	Hazardous waste and arsenic	1970s to Present
IR Site 14	Former Dry Cleaning Facility	Navy continues to implement the enhanced MNA remedy for groundwater. Nutrient injections of emulsified oil and bacteria were completed in February and March 2009. Groundwater monitoring and evaluation of bioremediation continue on a semiannual schedule.	Dry cleaning solvents; PCE; TCE; 1,1-DCE; cis-1, 2-DCE; trans-1, 2-DCE; and VC	Late 1950s to mid-1960s
Building 101	Former Service Station (1960–1996)	Previous studies from 1998 to 2006 have shown dissolved concentrations of MTBE and BTEX migrating to the northeast with varied concentrations attenuating during Site investigations between 1998 and 2006. A	TPH, MTBE, BTEX	1960 to 1996

Table 1. Site Management Plan Sites

Site No.	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
		groundwater monitoring work plan for Former Building Site 101 was submitted in September 2013. Sampling was completed on September 10, 2013. A Final Report presented results of the sampling event and requested no further action. No further action required. Approved December 22, 2014.		

Acronyms and Abbreviation:

- AOEC = Area of Ecological Concern
- BTEX = benzene, toluene, ethylbenzene, and xylenes
- CDPH = California Department of Public Health
- DCE = dichloroethene
- DTSC = Department of Toxic Substances Control
- IC = Institutional Control
- IR = Installation Restoration
- MNA = monitored natural attenuation
- MTBE = methyl tertiary butyl ether
- Navy = Department of the Navy
- NFA = no further action
- PCE = perchloroethylene
- POLB = Port of Long Beach
- RACR = Remedial Action Completion Report
- RASO = (Navy) Radiological Affairs Support Office
- RD/RA = Remedial Design/Remedial Action
- ROD = Record of Decision
- RWQCB = Regional Water Quality Control Board
- TCE = trichloroethene
- TM = Technical Memorandum
- TPH = total petroleum hydrocarbons
- VC = vinyl chloride
- WP = work plan

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Table 2. Detailed SMP Schedule for Long Beach Naval Complex

Status	Task Name	Duration	Start	Finish	Type *
	BASE-WIDE FIVE YEAR REVIEW				
Completed	Five Year Review - First for Installation Restoration (IR) Sites 1 through 6A, and 14	183 d	Thu 7/1/04	Thu 12/30/04	Sec.
Completed	Five Year Review - Second for IR Sites 1 through 6A, and 14; First for IR Sites 8 through 13	156 d	Wed 7/1/09	Thu 12/3/09	Sec.
Completed	Five Year Review - Third for IR Sites 1 through 6A, and 14; Second for IR Sites 8 through 13; First for IR Site 9	156 d	Tue 7/1/14	Wed 12/3/14	Sec.
<i>Scheduled</i>	<i>Five Year Review – Fourth for IR Sites 1 through 6A, and 14; Third for IR Sites 8 through 13; Second for IR Site 9</i>	<i>156d</i>	<i>Mon 7/1/19</i>	<i>Tue 12/3/19</i>	<i>Sec.</i>
Underway	IR SITES 1 and 2	5006 d	Fri 6/9/00	Fri 2/21/2014	
Completed	Record of Decision/Remedial Action Plan (ROD/RAP)	1 d	Fri 6/9/00	Fri 6/9/00	Prim.
Completed	Remedial Design (RD)	96 d	Mon 6/12/00	Fri 9/15/00	Prim.
Completed	Remedial Action (RA)	1065 d	Mon 10/2/00	Mon 9/1/03	Prim.
Completed	Long Term Monitoring (LTM)	1782 d	Mon 2/3/03	Thu 12/20/07	Sec.
Completed	Dismantle IAS/SVE System	128 d	Wed 10/18/06	Thu 2/22/07	Sec.
Completed	Remedial Action Closure Report (RACR)	236 d	Thu 2/1/07	Mon 9/24/07	Prim.
Completed	Radiological Investigation	2800 d	Mon 9/18/06	Fri 5/9/2014	Sec.
Completed	Work Plan	719 d	Mon 9/18/06	Fri 9/5/08	Sec.
Completed	Radiological Survey Report	1980 d	Tue 12/16/08	Fri 5/19/14	Prim.
Scheduled	Additional Site Characterization				
<i>Scheduled</i>	<i>Draft Work Plan</i>	<i>60 d</i>	<i>Fri 4/15/16</i>	<i>Tue 6/14/16</i>	<i>Sec.</i>
<i>Scheduled</i>	<i>Final Work Plan</i>	<i>45 d</i>	<i>Tue 6/15/16</i>	<i>Fri 7/29/16</i>	<i>Sec.</i>
Scheduled	Field Work	105 d	Fri 7/29/16	Fri 11/11/16	
Scheduled	Draft Report	60 d	Thu 4/27/17	Mon 6/26/17	Prim.
Scheduled	Final Report	45 d	Mon 6/26/17	Thu 8/10/17	Prim.
	IR SITE 7	2409 d	Wed 2/14/01	Wed 9/19/07	
	In a letter dated June 26, 2013, DTSC approved the POLB's Final Report and concurred that the remedial action specified in the ROD has been achieved.				
Underway	IR SITES 9, 11, 12, and 13	6861 d	Mon 12/30/96	Mon 12/14/15	
Completed	ROD/RAP	1719 d	Fri 2/15/02	Mon 10/30/06	Prim.
Completed	Remedial Design	1013 d	Thu 9/30/04	Mon 7/9/07	Prim.

Table 2. Detailed SMP Schedule for Long Beach Naval Complex

Status	Task Name	Duration	Start	Finish	Type *
Underway	Long Term Monitoring (LTM)	5948 d	Mon 12/30/96	Fri 4/12/13	Sec.
Completed	LTM Implementation	3498 d	Mon 12/30/96	Fri 7/28/06	Sec.
Completed	Sixth Quarterly Report	120 d	Wed 9/21/05	Wed 1/18/06	Sec.
Completed	Seventh Quarterly Report (Informal Data Submittal)	1 d	Thu 2/2/06	Thu 2/2/06	Sec.
Completed	2nd Annual Report (Eighth Quarterly Report)	133 d	Tue 3/21/06	Mon 7/31/06	Sec.
Completed	First Semiannual Groundwater (GW) Monitoring Report	140 d	Fri 6/16/06	Thu 11/2/06	Sec.
Completed	2006 Annual GW Monitoring Report	165 d	Fri 1/26/07	Mon 7/9/07	Sec.
Completed	2007 Semiannual GW Monitoring Report	120 d	Tue 7/10/07	Tue 11/6/07	Sec.
Completed	2007 Annual GW Monitoring Report	144 d	Fri 11/30/07	Mon 4/21/08	Sec.
Completed	2008 Semiannual GW Monitoring Report	177 d	Thu 5/15/08	Fri 11/7/08	Sec.
Completed	2008 Annual GW Monitoring Report	243 d	Mon 12/1/08	Fri 7/31/09	Sec.
Completed	2009 Semiannual GW Monitoring Report	137 d	Mon 5/18/09	Thu 10/1/09	Sec.
Completed	2009 Annual GW Monitoring Report	157 d	Mon 11/16/09	Wed 4/21/10	Sec.
Completed	2010 Annual GW Monitoring Report	151 d	Tue 11/16/10	Fri 4/15/11	Sec.
Completed	2011 Annual GW Monitoring Report (Sites 11, 12, and 13 only; no further action [NFA] for Site 9)	149 d	Wed 11/16/11	Thu 4/12/12	Sec.
Completed	Technical Memorandum: 2012 and 2013 Annual GW Monitoring Results (Sites 11, 12, and 13 only; NFA for Site 9)	657 d	Fri 11/16/12	Thu 9/4/2014	Sec.
Underway	2015 Annual GW Monitoring Report (Sites 11, 12, and 13 only; NFA for Site 9)	227 d	Fri 5/1/15	Mon 12/14/15	Sec.
<i>Scheduled</i>	<i>Draft Report</i>	<i>122 d</i>	<i>Fri 5/1/15</i>	<i>Mon 8/31/15</i>	<i>Sec.</i>
<i>Scheduled</i>	<i>Regulatory Agency Review</i>	<i>60 d</i>	<i>Mon 8/31/15</i>	<i>Fri 10/30/15</i>	<i>Sec</i>
<i>Scheduled</i>	<i>Final Report</i>	<i>45 d</i>	<i>Fri 10/30/15</i>	<i>Mon 12/14/15</i>	<i>Sec.</i>
Completed	IR SITE 9 Technical Memorandum for Remedial Action Completion Report	831 d	Mon 3/1/10	Fri 6/8/12	Sec.
Completed	IR Site 9 RACR	577 d	Tue 5/3/11	Thu 11/29/12	Prim.
Underway	IR SITE 11, 12, and 13 RACR	1856 d	Thu 5/5/11	Fri 6/3/16	
Underway	Remedial Action Completion Report	1856 d	Thu 5/5/11	Fri 6/3/16	Prim.
Completed	Draft RACR	341 d	Thu 5/5/11	Mon 4/9/12	Prim.
Completed	Regulatory Agency Review	207 d	Tue 4/10/12	Fri 11/2/12	Prim.

Table 2. Detailed SMP Schedule for Long Beach Naval Complex

Status	Task Name	Duration	Start	Finish	Type *
Underway	Revised Draft RACR IR Sites 11, 12, and 13	824 d	Sat 11/3/12	Thu 6/3/16	Prim.
Scheduled	Regulatory Agency Review	60 d	Thu 2/4/16	Mon 4/4/16	Prim.
Scheduled	Final RACR	60 d	Mon 4/4/16	Fri 6/3/16	Prim.
Underway	IR SITE 14	5580 d	Mon 4/9/01	Tue 7/19/16	
Completed	Removal Action	250 d	Mon 4/9/01	Fri 12/14/01	Prim.
Completed	Removal Action Report	154 d	Fri 8/24/01	Thu 1/24/02	Prim.
Completed	Monitored Natural Attenuation (MNA)	1119 d	Fri 5/31/02	Wed 6/22/05	Sec.
Underway	Semiannual GW Monitoring Report	4143 d	Wed 3/16/05	Tue 7/19/16	Sec.
Completed	First Semiannual GW Monitoring	78 d	Wed 3/16/05	Wed 6/1/05	Sec.
Completed	Hydrogen Release Compound Injection	3 d	Mon 4/4/05	Wed 4/6/05	Sec.
Completed	Second Semiannual GW Monitoring Report	71 d	Mon 5/16/05	Mon 7/25/05	Sec.
Completed	Third Semiannual GW Monitoring Report	70 d	Fri 10/7/05	Thu 12/15/05	Sec.
Completed	Fourth Semiannual GW Monitoring Report	67 d	Mon 3/27/06	Thu 6/1/06	Sec.
Completed	Fifth Semiannual GW Monitoring Report	133 d	Fri 9/15/06	Thu 1/25/07	Sec.
Completed	Sixth Semiannual GW Monitoring Report	127 d	Thu 3/15/07	Thu 7/19/07	Sec.
Completed	Seventh Semiannual GW Monitoring Report	145 d	Mon 9/24/07	Fri 2/15/08	Sec.
Completed	Eighth Semiannual GW Monitoring Report	120 d	Fri 5/23/08	Fri 9/19/08	Sec.
Completed	Ninth Semiannual GW Monitoring Report	131 d	Fri 11/14/08	Tue 3/24/09	Sec.
Completed	Tenth Semiannual GW Monitoring Report	95 d	Mon 6/1/09	Thu 9/3/09	Sec.
Completed	Eleventh Semiannual GW Monitoring Report	129 d	Tue 12/1/09	Thu 4/8/10	Sec.
Completed	Twelfth Semiannual GW Monitoring Report	122 d	Wed 9/1/10	Fri 12/31/10	Sec.
Completed	Thirteenth Semiannual GW Monitoring Report	92 d	Tue 3/1/11	Tue 5/31/11	Sec.
Completed	Fourteenth Semiannual GW Monitoring Report	182 d	Thu 9/1/11	Wed 2/29/12	Sec.
Completed	Fifteenth and Sixteenth Combined Semiannual GW Monitoring Reports	432 d	Thu 3/1/12	Mon 5/6/13	Sec.
Completed	Seventeenth Semiannual GW Monitoring Report	216 d	Fri 3/1/13	Thu 10/3/13	Sec.

Table 2. Detailed SMP Schedule for Long Beach Naval Complex

Status	Task Name	Duration	Start	Finish	Type *
Completed	Eighteenth Semiannual GW Monitoring Report	218 d	1/2/14	Fri 8/8/2014	Sec.
Completed	Revised Sampling and Analysis Plan	1365 d	Mon 3/1/10	Sun 11/24/13	Sec.
Completed	Work Plan: Injection Well Destruction and Monitoring Well Installation	228 d	Thu 1/15/15	Wed 7/22/15	Sec.
<i>Scheduled</i>	<i>First Event Report, Revised Monitoring Network</i>	<i>89 d</i>	<i>Tue 9/15/15</i>	<i>Fri 1/15/16</i>	<i>Sec.</i>
<i>Scheduled</i>	<i>Second Event Report, Revised Monitoring Network</i>	<i>89 d</i>	<i>Tue 12/15/15</i>	<i>Fri 4/15/16</i>	<i>Sec.</i>
<i>Scheduled</i>	<i>Third Event Report, Revised Monitoring Network</i>	<i>89 d</i>	<i>Tue 3/15/16</i>	<i>Fri 7/15/16</i>	<i>Sec.</i>
<i>Scheduled</i>	<i>Fourth Event Report, Revised Monitoring Network</i>	<i>89 d</i>	<i>Wed 6/15/16</i>	<i>10/15/16</i>	<i>Sec.</i>
Completed	Building 101	541 d	Wed 2/13/13	Sun 11/24/13	
Completed	Groundwater Monitoring Work Plan	208 d	Wed 2/13/13	Tue 9/10/13	Prim.
Completed	Field Activities	1 d	Tue 9/10/13	Tue 9/10/13	
Completed	2013 Groundwater Monitoring Report and Request for Closure under Low Threat UST Program	541 d	Tue 9/10/2013	Tue 11/25/2014	Prim.

Notes:

Bold typeface indicates scheduled primary document, italicized typeface indicates scheduled secondary document.

Table 3. Solid Waste Management Unit (SWMU) Status

SWMU	Description	Status
1	Building 118 Hazardous Waste Storage Facility (Permitted Facility)	NFA
2	Building 314 Hazardous Waste Storage Facility (Permitted Facility)	NFA
3	Building 202 (Paint Shop) 90-day Accumulation Area	NFA
4	Building 54 (Transportation Shop) 90-day Accumulation Area	NFA
5	Building 130 (Sheet Metal Shop, Shop 17) 90-day Accumulation Area and Process Tank Area	NFA
6	Building 129 (Marine Machine Shop) 90-day Accumulation Area and Process Tank Area	NFA
7	Building 132 (Machine Shop) and 90-day Accumulation Area	NFA
8	Plating Operations (Shop 5106 in Building 210) and 90-day Accumulation Area	NFA
9	Electrical Shop (Shop 51), Electronics Shop (Shop 66), Weapons Shop (Shop 67) in Building 210 and 90-day Accumulation Area	NFA
10	Building 210 PCB 90-day Accumulation Area	NFA
11	Building 128 (Shipfitter Shop) and 90-day Accumulation Area	NFA
12	Building 7 (Public Works Maintenance Shop) 90-day Accumulation Area	NFA
13	Utilities Shop Operations (Shop 03)	NFA
14	Pipefitters Shop (Shop 56) in Building 132 East	NFA
15	Supply Department (Code 500)	IR Site 9 – NFA ¹
16	Supply Department Buildings 59, P-30 and P-41	NFA
17	Building 52	NFA
18	On-site Still (Freon® Cleaning and Reclamation Unit) in Building 210	NFA
19	On-site Still (TCE Reclamation) in Building 128	NFA

Table 3. Solid Waste Management Unit (SWMU) Status

SWMU	Description	Status
20	Parking Lot H Past Operations	IR Site 10 – NFA ¹
21	Hillside East of Drydock 1	IR Site 11
22	Parking Lot X	IR Site 12
23	Tank Farm 303 and Building 303 90-day Accumulation Area	IR Site 13
24	Pier Accumulation Areas	NFA
25	Donut Oil Water Separators	NFA
26	Mole Solid Waste Operations Site	IR Site 1
27	Chemical Material and Waste Storage Area	IR Site 2
28	Industrial Waste Disposal Site	IR Site 3 – NFA ¹
29	Mole Extension Sites	IR Site 4 – NFA ¹
30	Skeet Range Solid Waste Fill Area	IR Site 5 – NFA ¹
31	Boat Disposal Location	IR Site 6A – NFA ¹
32	Harbor Sediments	IR Site 7 NFA
33	Underground Storage Tanks	NFA (RWQCB)

Note:

1. Institutional Controls are still needed at these Sites.

Acronyms and Abbreviations:

IR = Installation Restoration

NFA = no further action

PCB = polychlorinated biphenyl

RWQCB = California Regional Water Quality Control Board

SWMU = Solid Waste Management Unit

TCE = trichloroethene

Table 4. BCT and BCT Project Team Members at LBNC

Name	Role/Responsibility	Phone	Affiliation
BCT Members			
James Callian	BEC	619-524-4603	Navy
Alan Hsu	PM	714-484-5395	DTSC
Robert Ehe	PM	213-576-6740	RWQCB
BCT Project Team Members			
Jim Whitcomb	Lead RPM	619-524-5892	Navy
Dennis Parker	RPM	619-524-5759	Navy
Steve Banister	RPM	619-524-5902	Navy
Patricia McFadden	LBNC CSO	415-427-4720	Navy
Charles Perry	Environmental BLTL	619-524-5927	Navy
Christine Houston	Environmental Remediation Specialist	562-590-4160	POLB

Acronyms and Abbreviations:

BEC	=	BRAC Environmental Coordinator
BCT	=	BRAC Cleanup Team
BLTL	=	Business Line Team Leader
BRAC	=	Base Realignment and Closure
CSO	=	Caretaker Site Office
DTSC	=	Department of Toxic Substances Control
LBNC	=	Long Beach Naval Complex
Navy	=	Department of the Navy
PM	=	Project Manager
POLB	=	Port of Long Beach
RPM	=	Remedial Project Manager

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Appendix A: Sites with No Further Action Required

Table A.1 Sites with No Further Action Required

Table A.2 Sites with No Further Action Required with Institutional Controls in Place

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Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
Areas of Concern (AOCs)				
ADD 1	Can Crushing Unit	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Non-hazardous recyclable metals.	1980s to 1990s
ADD 2	Coolant Recovery Tanks, Building 132	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	The system was reportedly never operated. No wastes were generated.	Never operated
ADD 3	Wood Block Floors at Building 50	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Potential for spills onto the wood block floors from phosphoric acid, wetting agents, chromate inhibitor, and TCE.	1940s to 1990s
ADD 4	Process Tanks at Building 109	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC. Closure Report for 15 AOCs completed in December 2009. No further action approved February 2, 2010, by the DTSC and March 25, 2010, by the RWQCB.	Paint and varnish remover (unspecified). Sodium Hydroxide. Wastewater from stripping operations.	1940s to 1990s
ADD 5	Process tanks at Building 131	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Cee Bee J84A – caustic soda and sodium gluconate; solvent dry cleaner; hydrochloric acid; sulfuric acid; rinse water. Cee Bee A215 – moderately alkaline, chlorinated solvents, phenolic bodies, sodium chromate and wetting agents; sulfuric acid; rinse water.	1980s to 1990s
ADD 6	Floor Drain at Building P-11	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Not Available.	Not Available.

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
ADD 7	Sump at Warehouse A	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Discharges of moderately alkaline solutions, chlorinated solvents, phenols, sodium chromate, and wetting agents.	Not Available.
ADD 8	Storage Area, Temporary Building 2	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Not Available.	Not Available.
ADD 9	Storage Area, Temporary Building 3	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Not Available.	Not Available.
ADD 10	Building 173, Sandblast Pit/Conveyer System	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	None.	1955 to 1990s
ADD 11	Drydocks and Sewer Lift stations throughout LBNSY, Mercury manometers	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	None known.	1940s to 1990s
ADD 12	Building 197, Mercury Gage Repair Area	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Potentially waste mercury.	Approx. 1967 to 1990s
ADD 13	Building 104, Mercury Sealed Motor Pump-stand Area	The PA for the 171 Group B AOCs completed in April 2000. Contaminated soil was removed and Closure Report was prepared. No further action required. Closure Report approved February 9, 2001, by the DTSC.	Mercury removed from the pumps was recycled.	1960s to 1990s
ADD 14	Building 150, Mercury Sealed Motor Pump-stand Area	The PA for the 171 Group B AOCs completed in April 2000. Contaminated soil was removed and Closure Report was prepared. No further action required. Closure Report approved February 9, 2001, by the DTSC.	Mercury removed from the pumps was recycled.	1960s to 1990s
HIST 1	Former Oil Production Operations, Including Storage Tanks, Pipelines, Wells, etc.	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Small spills associated with oil production and operations. Potential for releases of oil from cracks in pipelines.	1937 to present

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
HIST 2	Former Acetylene Generating Plant and Sludge Pit (Bldg. 51 demolished)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Sludge consisting of calcium hydroxide in lime slurry.	1944 to 1955
HIST 3	Acetylene Generating Plant and Sludge Pit, Bldg. 162 A	The PA for 25 Group B AOCs was issued in June 1998. Sampling was conducted at 9 of the 25 AOCs, including this Site. The Sampling Report for 9 Group B AOCs was issued in November 1998. No further action required. Approved December 14, 1998, by the DTSC.	Waste lime sludge (with 10% water) was likely discharged to adjacent sludge pit.	1943 to 1960
HIST 4	Incinerator (Bldg. 163 demolished)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Ash disposed of as domestic waste. Some airborne ash was emitted.	1944 to 1960
HIST 5	Gun Mount Storage, Cleaning, and Repair Yard	The PA for 25 Group B AOCs was issued in June 1998. Sampling was conducted at 9 of the 25 AOCs, including this Site. The Sampling Report for 9 Group B AOCs was issued in November 1998. No further action required. Approved December 14, 1998, by the DTSC.	Waste solvent, lubricating oil, hydraulic fluid, and grease.	Late 1950s to 1975
HIST 6	Plate Abrasive Blasting (Bldg. 125 demolished)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	None.	1963 to mid-1970s
HIST 7	Plate Abrasive Blasting	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	None.	Mid-1970s to 1993
HIST 8	Former Chemical Cleaning Area	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC. Closure Report for 15 AOCs completed in December 2009. No further action approved February 2, 2010, by the DTSC and March 25, 2010, by the RWQCB.	Waste detergent used during cleaning operations.	1960s to 1993

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
HIST 9	Former Storage Area Scrap Metal and Oils	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Scrap metal, and potentially oil.	1970 to 1975
HWF 1	Bldg. 118 (former) Treatment, Storage, and Disposal Facility (TSDF)	The PA for the 171 Group B AOCs completed in April 2000. In February 2002, DTSC requested that additional samples be collected to determine if soil in the vicinity of Bldg. 118 contributes to hexavalent chromium contamination in groundwater. Additional data were collected, and the Navy requested clean closure certification in a Report describing field investigation results in May 2002. DTSC requested that four additional monitoring wells be installed and monitored quarterly for 1 year. Four quarterly groundwater monitoring events were performed from September 2004 to June 2005. The Second Annual Groundwater Monitoring Report was submitted for review on February 7, 2006, and recommended clean closure for Building 118. No further action required. Approved March 8, 2006, by the DTSC.	Paints, solvents, resins, PCBs, petroleum products, coolants, coatings, metals, pesticides, containers, caustics, acids.	1980 to 1990
HWF 2	Bldg. 314 TSDF	The PA for the 171 Group B AOCs completed in April 2000. Health Risk Assessment submitted for review in May 2002. No further action required. Approved September 2002 by the DTSC for Site closure.	Paints, solvents, resins, PCBs, oils, coolants, coatings, metals, pesticides and acids.	Constructed 1989; operated 1990 to 1996
HWF 3	Bldg. 451 Less-Than-90-Day	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Aerosol paint/solvent cans, core sand, film processing chemicals, kerosene, TCE, and welding slag.	1994 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
HWF 4	Bldg. 54 Less-Than-90-Day	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Various operational wastes including aerosol paint, antifreeze, hydraulic fluid, lead-acid batteries, oil, oil filters, paint, sludge with heavy metals (from Bldg. 108), and spill pads with oil.	1980s to 1996
HWF 5	Bldg. 98 Less-Than-90-Day Asbestos (including SAP #98-64-1)	The PA for 25 Group B AOCs was issued in June 1998. Sampling was conducted at 9 of the 25 AOCs, including this Site. The Sampling Report for 9 Group B AOCs was issued in November 1998. No further action required. Approved December 14, 1998, by the DTSC.	Solid fiberglass waste (dust), solvents. Solid asbestos waste. Asbestos-contaminated rinse water.	1956 to 1980 1980 to 1997
HWF 6	Bldg. 311 Less-Than-90-Day	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Various wastes including adhesive, aerosol paint cans, aerosol solvent cans (1,1,1-TCA), caustic sludge, chrome-stained mylar and lead tape, desiccant, developer, glass bead dust, grease, hardener, hydraulic oil, hydra/flush fluid, isopropyl alcohol, light ballasts, oil, oil and resin, oil and solvent, nickel cadmium battery packs, paint chips, Safe Step, solvent, 12-volt DC batteries.	1980 to 1996
HWF 7	Bldg. 452 Less-Than-90-Day	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Various wastes including waste oil, aerosol paint, hydraulic fluid, antifreeze, oil filters, spill pads with oil, sludge with heavy metals, and lead-acid vehicle batteries.	1993 to 1996
HWF 8	Bldg. 453 Less-Than-90-Day	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Aerosol oilcans, adhesives, batteries, sandblast grit, waste paint.	1980 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
HWF 9	Bldg. 454 Less-Than-90-Day	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Various operational wastes including absorbent pads, adhesive, aerosol cans, antifreeze, blasting grit, epoxy resin, fuel filters, grinding swarf, hydraulic oil, JP-5, paint, preservative grease, rags, rosin, and 1,1,1-TCA.	1989 to 1996
HWF 10	Bldg. 455 Less-Than-90-Day	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Various operational wastes including absorbent pads, adhesive, aerosol cans, ammonium oxide, antifreeze, batteries, bonding material, contaminated rubber hoses, epoxy, glass beads, grease, grinding swarf, hydraulic oil, JP-5, mercuric nitrate, oil, oil filters, oily rags, paint, paint sludge, primer, refrigerator cartridges, silicon seal, 1,1,1-TCA, trisodium phosphate, and toluene.	1989 to 1996
HWF 11	Bldg. 457 Less-Than-90-Day	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Aerosol paint cans, paint epoxy/enamel, oily rags, rags saturated with acetone.	1980 to 1997
HWF 12	Bldg. 886 Less-Than-90-Day	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Various solid wastes including aluminum oxide dust, steel shot with non-skid dust, steel shot dust, oily sludge, garnet dust, garnet dust black slag with paint chips, black slag dust, sludge and sandblast grit, sandblast grit, sand grit with sea growth, steel grit with paint chips, and rust non-skid with paint chips.	1980 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
HWF 13	Bldg. 54 Less-Than-180-Day Battery Storage	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Lead-acid vehicle batteries.	Prior to 1965 to 1996
IWS 1	Pipeline	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved February 28, 2000, by CUPA and May 31, 2000, by the DTSC.	Heavy metals, dissolved sulfides, nitrates, cyanide, oil and grease, and hexavalent chromium.	1986 to 1997
IWS 2	IWTP, Bldg. 108 (FTU4)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved February 28, 2000, by CUPA and May 31, 2000, by the DTSC.	IWTP received wastewater containing heavy metals, dissolved sulfides, oil and grease, petroleum products, chromates, nitrates/nitrites, and other acids and bases.	1990 to 1996
IWS 3	Bilge and Oily Wastewater Treatment System (FTU6) (Including SAP #903-01)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved April 17, 2001, by CUPA.	Oily wastewater.	1993 to 1997
IWS 4	Liquid Industrial Wastewater (FTU 9 and 10)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved April 17, 2001, by CUPA.	Wastewater and associated contaminants removed from the wastewater including heavy metals, oils, and particulates.	Approx. 1993 to 1997.
IWS 5	O/W Separator and Clarifier Bldg. 132 (FTU5)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved April 17, 2001, by CUPA.	Rinse water containing oils and grease, metals, rosin wastes, boiler condensate, and valve cleaning wastes.	Approx. 1960s to 1996
IWS 6	O/W Separator and Clarifier Bldg. 54 (FTU7)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved April 17, 2001, by CUPA.	Rinse water containing oils and grease.	1963 to 1996
IWS 7	O/W Separator and Clarifier Bldg. 210 (FTU8)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved April 17, 2001, by CUPA.	Oily wastewater from stream-cleaning operations.	1970 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
MISC 1	Wood Block Floors Bldg. 128	The PA for the 171 Group B AOCs completed in April 2000. Contaminated soil was removed and Closure Report was prepared. No further action required. Approved February 9, 2001, by the DTSC. Closure Report for 15 AOCs completed in December 2009. No further action approved February 2, 2010, by the DTSC and March 25, 2010, by the RWQCB.	Potential spills from Building 128 activities onto the wood block floors.	1945 to 1996
MISC 2	Wood Block Floors Bldg. 129	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC. Closure Report for 15 AOCs completed in December 2009. No further action approved February 2, 2010, by the DTSC and March 25, 2010, by the RWQCB.	Potential spills (hydraulic oil, waste oils, greases, degreasers and solvents) from Building 129 activities onto the wood block floors.	1940 to 1996
MISC 3	Wood Block Floors Bldg. 130	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Potential for spillage of caustics, acids, oils, and hydraulic fluids used in Building 130 operations.	1945 to 1996
MISC 4	Wood Block Floors Bldg. 132	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Potential for spills onto the wood block floors from grease, oily rags and absorbent, waste oil, sandblast grit, glass bead dust, aluminum oxide dust, hydrochloric acid, caustic soda, chromic acid, rust preventative, brazing flux, TCE, and asbestos construction material.	1940s to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
MISC 5	Dirt Floor Foundry/Heat Treat Bldg. 128	The PA for the 171 Group B AOCs completed in April 2000. Contaminated soil was removed and Closure Report was prepared. No further action required. Approved February 9, 2001, by the DTSC. Closure Report for 15 AOCs completed in December 2009. No further action approved February 2, 2010, by the DTSC and March 25, 2010, by the RWQCB.	Materials spilled on the dirt floor including: Olivine sand, oil, metal slag, used glass beads, and TCA.	Prior to 1955 to 1997
MISC 6	Diesel Test Cells Including USTs 129.3 to 129.9 (Bldg. 129)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC. Closure Report for 15 AOCs completed in December 2009. No further action approved February 2, 2010, by the DTSC and March 25, 2010, by the RWQCB.	Potential spills from general maintenance and leaks from engines, sumps, USTs, and associated pipelines.	1944 to 1996
MISC 7	Shipyards Gas Station, Including USTs 356-362, 369-376, and 101.1-101.6 (Building 101)	The PA for the 171 Group B AOCs completed in April 2000. This AOC is addressed under the compliance program as the Building 101 Gasoline Station. No further action was recommended in the Summary Groundwater Monitoring Report in June 2006. Additional sampling was conducted in 2013. A Final Report presented results of the sampling event and requested no further action. No further action required. Approved December 22, 2014.	Potential leaks from USTs and spills caused by misuse.	1945 to 1997
MISC 8	Transportation Facility Yard Associated with Bldg. 54	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Potential spills from waste oil, gasoline, paint thinner, grease, caustics, acids, solvents, battery waste, and rinse water from washing activities. Potential leaks from sumps, drains, and pits.	1945 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
MISC 9	Public Works Facility Yard Associated with Bldg. 5	The PA for 25 Group B AOCs was issued in June 1998. Sampling was conducted at 9 of the 25 AOCs, including this Site. The Sampling Report for 9 Group B AOCs was issued in November 1998. No further action required. Approved December 14, 1998, by the DTSC.	Possible leaking vehicle fluids. Paint, paint-related waste, solvents. Oils and greases, solvents. Pesticides.	1942 to 1990s
PCB 1	Disconnect Switch 10A-1AC (Pier 2 Substation 10A) PCBs	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	PCBs.	Not available.
PCB 2	Disconnect Switch Y10-2 (Pier 2 Substation 10) PCBs	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	PCBs.	Not available.
PCB 3	Oil Switch Y6-2 (Pier 3 Substation 6) PCBs	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	PCBs.	Not available.
PCB 4	Transformer 107-1AC (Pier 3 Substation 6) PCBs	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Non-PCB oil.	Not available.
PCB 5	Transformer 10A-1AC (Pier 2 Substation 10A) PCBs	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	PCBs.	Not available.
PCB 6	Transformer 10 A-2AC (Pier 2 Substation 10A) PCBs	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	PCBs.	Not available.
PCB 7	Transformer 10B-1AC (Pier 2 Substation 10B) PCBs	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	PCBs.	Not available.
PCB 8	Transformer 10B-2AC (Pier 2 Substation 10B) PCBs	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	PCBs.	Not available.

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
PCB 9	Transformer 151-5AE (Bldg. 151 Substation 2) PCBs	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Non-PCB oil.	Not available.
PCB 10	Transformer 26-1AB and 26-2AB (Bldg. 162 Substation 26) PCBs	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	PCBs.	Not available.
PCB 11	Transformer 27-1AC (Pier E North Substation 27) PCBs	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	PCBs.	Not available.
PCB 12	Transformer 27-2AC (Pier E North Substation 27) PCBs	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	PCBs.	Not available.
PCB 13	Transformer 2A-1AC (Drydock 1 West Tunnel) PCBs	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	PCBs.	Not available.
PCB 14	Transformer 31-2AC (Pier E South Substation 31) PCBs	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	PCBs.	Not available.
PCB 15	Transformer 59-1AC (Bldg. 59 South Side) PCBs	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	PCBs.	Not available.
PCB 16	Shop 917, Ventilation Gasket Removal (Bldg. 130)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	PCB-contaminated gaskets, nuts, bolts, and coveralls. Paint.	Unknown to approx. 1996.
PCB 17	Equip #618444 Sump A (50.26 ppm); Sump B (51.00 ppm)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Potential for spills on the floor areas surrounding the press.	Not Available.
PCB 18	Equip #116076C (19.74 ppm)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Potential for PCB-contaminated oil to spill on floor areas surrounding the equipment.	Not Available.

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
PCB 19	Bldg. 129, PCB Solid Waste SAP #129-1180-1	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	PCB Solid Waste.	1944 to 1997
PCB 20	Bldg. 130, PCB Gaskets SAP #130-17-10 and PCB Coveralls SAP #130-17-2	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	PCB-contaminated gaskets, nuts, bolts, and coveralls.	1993 to 1996
PCB 21	Bldg. 210, PCB Capacitors SAP#210-34-12	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	PCB capacitor waste.	1970 to 1996
PT 1	Plating Shop Bldg. 210	Chromium contamination was discovered in groundwater during building demolition activities in January 2001. Therefore, this Site was investigated further under the IR program as IR Site 16. Report for 15 AOCs completed in December 2009. No further action required. Approved February 2, 2010, by the DTSC and March 25, 2010, by the RWQCB.	Sodium hydroxide solution, TCE, hydrochloric acid solution, chromium acid solution, dilute caustic, aluminum etchant, methylene chloride, nitric acid.	1974 to 1997
PT 2	Plating Shop (closed) Bldg. 129 (NW)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC. Closure Report for 15 AOCs completed in December 2009. No further action approved February 2, 2010, by the DTSC and March 25, 2010, by the RWQCB.	Cadmium, chromium, nickel, copper, silver, cyanide, rinse water, hydrochloric, sulfuric, and nitric acids; and solvent degreaser TCE.	Early 1940s to 1974
PT 3	Plating Shop (closed) Bldg. 205	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC. Closure Report for 15 AOCs completed in December 2009. No further action approved February 2, 2010, by the DTSC and March 25, 2010, by the RWQCB.	Used degreasers, oils, and/or grease from cleaning operations.	Approx. 1978 to the late 1980s.

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
PT 4	Cleaning/Plating Shop (closed) Bldg. 132 (NE)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Cee Bee C-47, caustic solution, sequestering and wetting agents. Caustic and detergent residue.	Early 1960s to the late 1980s
PT 5	Plating Shop (closed) Bldg. 132 Second Floor	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	1,1,1-TCA, caustic cleaner, muriatic acid, chromic acid, microbright acid solution, and alkali.	1978 to mid-1990s
PT 6	Sheet Metal Cleaning/Plating Shop (closed) Bldg. 130	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Kelite Alsite-alkaline aluminum etchant; Kelite 814-aluminum desmutter acid, containing potassium dichromate; degreaser solvent (specific type unknown); Cee Bee, Konverkote No. 1 chromic acid, containing hexavalent chromium; residue from dip tanks.	1942 to 1980s
PT 7	Cleaning Dip Tanks (closed) Bldg. 129 (SE)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC. Closure Report for 15 AOCs completed in December 2009. No further action approved February 2, 2010, by the DTSC and March 25, 2010, by the RWQCB.	Condensate including oil, grease, detergents, and inorganic solids; Rinse water including oil and grease, detergent, methylene chloride, cresol, chromic acid, nitric acid, sulfuric acid, copper, and zinc; wastewater; overflow wastewater containing organic contaminants such as phenolic compounds.	Approx. 1977 to the late 1980s
PT 8	Tin Dip Tanks (closed) Bldg. 132 (W)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Spilled metal waste from tanks and rinse wastewater.	1940s to 1990s
PT 9	Dip Tanks (closed) Bldg. 131 (NW)	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Non-toxic scouring powder and tanks.	1944 to 1997

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
PT 10	Quenching Tanks Bldg. 128 (E, NE)	The PA for the 171 Group B AOCs completed in April 2000. Further groundwater sampling completed in 2001. No further action required. Approved by the DTSC April 10, 2001, and by the RWQCB June 13, 2001. Closure Report for 15 AOCs completed in December 2009. No further action approved February 2, 2010, by the DTSC and March 25, 2010, by the RWQCB.	Metals, oil, and grease in the quench tank wastewater. Waste: 1,1,1-TCA from solvent degreaser tank.	1945 to 1996
PT 11	Plasma Arc Cutting Tank Bldg. 128 (S)	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC. Closure Report for 15 AOCs completed in December 2009. No further action approved February 2, 2010, by the DTSC and March 25, 2010, by the RWQCB.	Metal slag waste from the plasma arc cutting process.	1940s to 1996
SAP 1	Bldg. 6 and 7, 1st Floor, Waste Adhesive	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste adhesive.	1942 to 1996
SAP 2	Bldg. 7 NW End, Outside, 1st Floor, Waste Paint, SAP #37444	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste paint.	1942 to 1996
SAP 3	Bldg. 9 Various Locations, 1st Floor, Waste Oil	The PA for 25 Group B AOCs was issued in June 1998. No further action required. Approved August 26, 1998, by the DTSC.	Waste oil.	1992 to 1996
SAP 4	Bldg. 9 Various Locations, 1st Floor, Waste Paint	The Final PA Report for 25 Group B AOCs was issued in June 1998. No further action required. Approved August 26, 1998, by the DTSC.	Waste paint.	1992 to 1996
SAP 5	Bldg. 9 Various Locations, 1st Floor, Waste Adhesive	The Final PA Report for 25 Group B AOCs was issued in June 1998. No further action required. Approved August 26, 1998, by the DTSC.	Waste adhesive.	1992 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 6	Bldg. 9 Various Locations, 1st Floor, Waste Aerosol Solvent	The Final PA Report for 25 Group B AOCs was issued in June 1998. No further action required. Approved August 26, 1998, by the DTSC.	Waste aerosol solvent.	1992 to 1996
SAP 7	Bldg. 9 Various Locations, 1st Floor, Waste Batteries	The Final PA Report for 25 Group B AOCs was issued in June 1998. No further action required. Approved August 26, 1998, by the DTSC.	Waste batteries.	1992 to 1996
SAP 8	Bldg. 53 North End, 1st Floor, Cosmoline Grease, SAP #B-53-1	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Cosmoline grease.	1996
SAP 9	Bldg. 52, 1st Floor, Empty Aerosol Cans Paint, SAP #52-92-1	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Empty aerosol paint cans.	1993 to 1996
SAP 10	Bldg. 52, 1st Floor, Outside, X-Ray Film Development Waste, SAP #52-92-2	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	X-ray film development waste.	1993 to 1996
SAP 11	Bldg. 52, 1st Floor, Outside, Empty Aerosol Cans, Oil Base, SAP #52-92-3	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Empty aerosol cans, oil base.	1993 to 1996
SAP 12	Bldg. 52, 1st Floor, Outside, Empty Aerosol Cans Solvent Base, SAP #52-92-4	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Empty aerosol cans, solvent base.	1993 to 1996
SAP 13	Bldg. 52, 1st Floor, Batteries, SAP #52-92-5	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste flashlight batteries. Sizes from A to D cell.	1995 to 1996
SAP 14	Bldg. 52, 1st Floor, VP-30 Penetrant Rinse Water, SAP #52-92-7	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Penetrant rinse water.	1995 to 1996
SAP 15	Bldg. 52, 1st Floor, X-Ray Film Processing Waste, SAP #52-92-9	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	X-ray film processing waste.	1995 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 16	Bldg. 54, Service Bay, 1st Floor, Waste Grease, SAP #54-457-1	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste grease.	1995 to 1997
SAP 17	Bldg. 54, Service Bay, 1st Floor, Recyclable Oil, SAP #54-457-2	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Recyclable oil.	1995 to 1997
SAP 18	Bldg. 54, Service Bay, 1st Floor, Waste Solvent, SAP #54-457-3	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste solvent.	1995 to 1997
SAP 19	Bldg. 54, Service Bay, 1st Floor, Recyclable Antifreeze, SAP #54-457-4	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Recyclable antifreeze.	1995 to 1997
SAP 20	Bldg. 54, Service Bay, 1st Floor, Waste Fuel Filters, SAP #54-457-5	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste fuel filters.	1995 to 1997
SAP 21	Bldg. 54, Service Bay, 1st Floor, Waste Transmission Fluid, SAP #54-457-6	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste transmission fluid.	1995 to 1997
SAP 22	Bldg. 54, Service Bay, 1st Floor, Recyclable Dirty Rags, SAP #54-457-8	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Recyclable dirty rags.	1995 to 1997
SAP 23	Bldg. 54, Steam Wash Rack, 1st Floor, Grease, SAP #54-98-01	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste grease.	1995 to 1997
SAP 24	Bldg. 91, 1st Floor, Waste Oil	The PA for 25 Group B AOCs was issued in June 1998. No further action required. Approved August 26, 1998, by the DTSC.	Waste oil.	1992 to 1996
SAP 25	Bldg. 128 Machine Section, 1st Floor, Empty Aerosol Penetrant, Lube Cans, SAP #128-11-13	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Empty aerosol penetrant, lube cans.	1993 to 1997

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 26	Bldg. 128 Machine Section, 1st Floor, Waste Oil and Water, SAP #128-11-16	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste oil and water.	1993 to 1997
SAP 27	Bldg. 128, Fabrication Section, 1st Floor, Aerosol Cans (Solvent), SAP #128-11-10	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Aerosol cans (solvent).	1993 to 1997
SAP 28	Bldg. 128, Foundry, 1st Floor, Metal Dust, SAP #128-41-6	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Metal dust.	1993 to 1997
SAP 29	Bldg. 128, Foundry, 1st Floor, Sandblast Grit, SAP #128-41-7	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Sandblast grit.	1993 to 1997
SAP 30	Bldg. 128, Layout and Machine Section, 1st Floor, Oily Rags, SAP #128-11-19	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Oily rags.	1993 to 1997
SAP 31	Bldg. 128, Layout Section, 1st Floor, Empty Aerosol Paint Cans, SAP #128-11-15	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Empty aerosol paint cans.	1993 to 1997
SAP 32	Bldg. 128, 1st Floor, Safe Step with Oil, SAP #128-11-17	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Safe Step with oil.	1993 to 1997
SAP 33	Bldg. 128, Layout and Machine Section, 1st Floor, Oily Rags, SAP #128-11-14	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Oily rags.	1993 to 1997
SAP 34	Bldg. 128, Assembly Section, 1st Floor, Floor Sweeping w/Contaminant Metal Dust, SAP #128-11-21	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Floor sweepings with contaminated metal dust.	1993 to 1997
SAP 35	Bldg. 128, Columns C-25, 1st Floor, CM-100 Sludge (Dry), SAP #128-11-22	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	CM-100 dry sludge.	1993 to 1997

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 36	Bldg. 128, Columns C-23, 1st Floor, CM-100 Sludge (Dry), SAP #128-11-23	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	CM-100 dry sludge.	1996 to 1997
SAP 37	Bldg. 128, Heat Treat Section, 1st Floor, Used Glass Bead (Sandblast), SAP #128-41-12	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Used glass bead dust (sandblast).	1993 to 1997
SAP 38	Bldg. 128, Foundry Outer West Wall, 1st Floor, Exhaust Ventilation Debris, SAP #128-41-14	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Exhaust ventilation debris.	1995 to 1997
SAP 39	Bldg. 128, Various, 1st Floor, Aerosol Cans (Oil Based), SAP #128-41-2	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Aerosol paint cans (oil based).	1993 to 1997
SAP 40	Bldg. 128, Foundry Outer West Wall, 1st Floor, Exhaust Ventilation Debris, SAP #128-41-23	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Exhaust ventilation debris.	1995 to 1997
SAP 41	Bldg. 128, Foundry, 1st Floor, Metal Slag, SAP #128-41-4	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Metal slag.	1993 to 1997
SAP 42	Bldg. 128, Foundry, 1st Floor, Used Core Sand, SAP #128-41-5	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Used core sand.	1993 to 1997
SAP 43	Bldg. 128, Various, 1st Floor, Used Absorbent, SAP #128-41-8	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Used absorbent.	1993 to 1997
SAP 44	Bldg. 128, Tube and Fabrication Section, 1st Floor, Aerosol Cans (Paint), SAP #128-41-9	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Aerosol paint cans.	1993 to 1997

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 45	Bldg. 129, Air Compressor Repair, 1st Floor, Oily Absorbent Pads, SAP #129-38-10	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Oily absorbent pads.	1994 to 1996
SAP 46	Bldg. 129, 1st Floor, Hydraulic Oil, SAP #129-2	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Hydraulic oil.	1995 to 1996
SAP 47	Bldg. 129, 1st Floor, Oily Rags, SAP #129-3	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Oily rags.	1995 to 1996
SAP 48	Bldg. 129, Air Compressor Repair, 1st Floor, Oily Rags, SAP #129-38-11	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Oily rags.	1994 to 1996
SAP 49	Bldg. 129, 1st Floor, Lubricating Oil, SAP #129-4	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Lubricating oil.	1995 to 1996
SAP 50	Bldg. 129, 1st Floor, Lubricating Oil, SAP #129-4	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Oily absorbent pads.	1995 to 1996
SAP 51	Bldg. 129, 1st Floor, Sandblast Grit Waste, SAP #129-5	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Spent sandblast grit.	1995 to 1996
SAP 52	Bldg. 129 Test Cell/Shop, 1st Floor, Hydraulic Oil 2110TH	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste hydraulic oil.	1992 to 1996
SAP 53	Bldg. 129 Test Cell/Shop, 1st Floor, Hydraulic Oil 2135TH	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste hydraulic oil.	1992 to 1996
SAP 54	Bldg. 129 Test Cell, 1st Floor, Lube Oil PE-30	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste lube oil.	1992 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 55	Bldg. 129 Test Cell, 1st Floor, Lube Oil 9250	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste lube oil.	1992 to 1996
SAP 56	Bldg. 129 Test Cell, 1st Floor, Fyrquel Preservative	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste Fyrquel preservative.	1992 to 1996
SAP 57	Bldg. 129 Test Cell/Shop, 1st Floor, Lube Oil 80/90	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste lube oil.	1992 to 1996
SAP 58	Bldg. 129 Test Cell, 1st Floor, Fyrquel Lubricant	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste Fyrquel lubricant.	1992 to 1996
SAP 59	Bldg. 129 North End, 1st Floor, Vacuum Pump Oil	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Vacuum pump oil.	1992 to 1996
SAP 60	Bldg. 129 North End, 1st Floor, Refrigeration Oil	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste refrigeration oil.	1992 to 1996
SAP 61	Bldg. 130, 1st Floor, Paint Waste, SAP #130-17-10	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste Paint.	1994 to 1996
SAP 62	Bldg. 130, 1st Floor, Absorbent Pads and Oily Rags, SAP #130-17-3	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste absorbent pads and oily rags.	1993 to 1996
SAP 63	Bldg. 130, 1st Floor, Formula 202 (Empty Aerosols) Lube, SAP #130-17-4	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Empty aerosol lube cans (Formula 202).	1993 to 1996
SAP 64	Bldg. 130, 1st Floor, Rags, SAP #130-17-5	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste rags used for cleaning machinery.	1993 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 65	Bldg. 130, 1st Floor, Layout Blue (Empty Aerosols-Paint), SAP #130-17-6	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Empty aerosol paint cans (layout blue).	1993 to 1996
SAP 66	Bldg. 130, 1st Floor, Plasma Arc Waste (Heavy Metals), SAP #130-17-7	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Plasma arc waste (heavy metals).	1993 to 1996
SAP 67	Bldg. 130, 1st Floor, Blast Off Rags (Caustic), SAP #130-17-5	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Blastoff rags used for cleaning machines.	1993 to 1996
SAP 68	Bldg. 130, 1st Floor, Butyl-acetate, SAP #130-17-9	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Butyl acetate used as a degreaser.	1993 to 1996
SAP 69	Bldg. 131, 1st Floor, Waste Oil Hydraulic, SAP #131-06-1	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste oil hydraulics.	1944 to 1997
SAP 70	Bldg. 131, 1st Floor, Spent Respirator Cartridges and Filters, SAP #131-06-2	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Spent respirator cartridges and filters.	1944 to 1997
SAP 71	Bldg. 131, 1st Floor, Aerosol Cans, SAP #131-06-3	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Aerosol cans.	1944 to 1997
SAP 72	Bldg. 131, 1st Floor, Spent Batteries, SAP #131-06-4	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Spent batteries.	1944 to 1997
SAP 73	Bldg. 131, 1st Floor, Absorbent Pads, Safe Step, SAP #131-06-5	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Absorbent pads.	1944 to 1997
SAP 74	Bldg. 132 Pump Section, 1st Floor, Oily Rags, SAP #132-31-1	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Oily rags.	1993 to 1997

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 75	Bldg. 132, 1st Intermediate, Waste Grease, SAP #132-31-12	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste grease.	1944 to 1996
SAP 76	Bldg. 132 Shop 37-14, 1st Floor, Oily Absorbent, SAP #132-31-13	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Oily absorbent.	1993 to 1997
SAP 77	Bldg. 132, 2nd Floor, Oily Rags, SAP #132-31-17	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Oily rags.	1994 to 1996
SAP 78	Bldg. 132 Pump Section, 1st Floor, Oily Absorbent, SAP #132-31-2	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Oily absorbent.	1993 to 1997
SAP 79	Bldg. 132 Machine Shop, 1st Floor, Waste Oil, SAP #132-31-3	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste oil.	1993 to 1997
SAP 80	Bldg. 132 Pump Section, 1st Floor, Used Absorbent Pads, SAP #132-31-4	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Used absorbent pads.	1993 to 1997
SAP 81	Bldg. 132 Machine Shop, 1st Floor, Oily Absorbent Socks, SAP 132-31-5	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Oily absorbent socks.	1993 to 1997
SAP 82	Bldg. 132 Grinding Section, 1st Floor, Grinding Swarf, SAP #132-31-6	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Grinding swarf.	1993 to 1997
SAP 83	Bldg. 132 Shops, 1st Floor, Oil Rags, SAP #132-56-1	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Oily rags from cleanup.	1993 to 1997
SAP 84	Bldg. 132 Waveguide Shop, 1st Floor, Waste Oil, SAP #132-56-10	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste oil.	1993 to 1997

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 85	Bldg. 132 Shops, 1st Floor, Aerosol, Gas, SAP #132-56-2	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste aerosol (gas).	1993 to 1997
SAP 86	Bldg. 132 Shops, 1st Floor, Absorbents, SAP #132-56-3	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Used absorbents.	1993 to 1997
SAP 87	Bldg. 132 Waveguide Shop, 1st Floor, TCA, SAP #132-56-4	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	1, 1, 1-TCA.	1993 to 1997
SAP 88	Bldg. 132 Waveguide Shop, 1st Floor, Spent Alcohol, SAP #132-56-5	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Spent alcohol from cleanup activities.	1993 to 1997
SAP 89	Bldg. 132 Shops, 1st Floor, Glass Beads, SAP #132-56-7	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Spent glass beads from sandblasting activities.	1993 to 1997
SAP 90	Bldg. 132 Shops, 1st Floor, Brazing Flux, SAP #132-56-8	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste brazing flux.	1993 to 1997
SAP 91	Bldg. 132 Shops, 1st Floor, Consumable Batteries, SAP #132-56-9	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Used consumable batteries from flashlights, clocks, and pagers.	1994 to 1997
SAP 92	Bldg. 132 Shops, 1st Floor, Asbestos Construction Materials, SAP #132E-56-11	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste asbestos construction materials.	1994 to 1997
SAP 93	Bldg. 132 Prop Shop, 1st Floor, Electrode Slag Surfacing, SAP #B-132-26-18	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Electrode slag surfacing generated from welding activities.	1995 to 1997
SAP 94	Bldg. 132, 1st Floor, Alkaline Batteries, SAP #B-132-38-1	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Alkaline batteries generated from ship and shop operations.	1995 to 1997

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 95	Bldg. 132 J131, 1st Floor, Oily Rags, SAP #B-132-938-02	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Oily rags.	1995 to 1997
SAP 96	Bldg. 132, 1st Floor, Absorbent Pads, SAP #B-132-938-03	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste absorbent pads.	1995 to 1997
SAP 97	Bldg. 132 L-50-06, 1st Floor, 1,1,1, TCA	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste 1,1,1-TCA.	1992 to 1997
SAP 98	Bldg. 132 N-04, 1st Floor, Wood Rosin	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste wood rosin.	1992 to 1997
SAP 99	Bldg. 132 L-04, 1st Floor, Rubber Hoses Contaminated	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Contaminated rubber hoses.	1992 to 1997
SAP 100	Bldg. 132 M-1, 1st Floor, Oily Absorbent Material Safe Step	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Oily absorbent material (Safe Step).	1992 to 1997
SAP 101	Bldg. 132 1-50-7, 1st Floor, Oil Waste	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste tungsten rods.	1992 to 1997
SAP 102	Bldg. 132 In-shop/On-ship, 1st Floor, Tungsten Rod	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste tungsten rods.	1992 to 1997
SAP 103	Bldg. 132 In-shop, 1st Floor, Cobalt Rod	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste cobalt rods.	1992 to 1997
SAP 104	Bldg. 132 In-shop/On-ship, 1st Floor, Monel Rod	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste Monel rods.	1992 to 1997

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 105	Bldg. 132 N-1, 1st Floor, Solvent Cement Soaked Rags	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste solvent cement soaked rags.	1992 to 1997
SAP 106	Bldg. 132 M-04, 1st Floor, Oily Rages, Soaked	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Soaked oily rags.	1992 to 1997
SAP 107	Bldg. 132 L-05, 1st Floor, Alcohol, Isopropyl	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste isopropyl alcohol.	1992 to 1997
SAP 108	Bldg. 202, 1st Floor, Epoxy and Enamel Paint, SAP #202-71-1	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste epoxy and enamel paint.	1994 to 1996
SAP 109	Bldg. 202, 1st Floor, Epoxy and Enamel Paint, SAP #202-71-2	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste epoxy and enamel paint.	1994 to 1996
SAP 110	Bldg. 204, 1st Floor, Used Garnet, SAP #202-71-10	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Used garnet.	1976 to 1997
SAP 111	Bldg. 202, 1st Floor, Epoxy and Enamel Paint, SAP #202-71-3	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste epoxy and enamel paint.	1994 to 1996
SAP 112	Bldg. 202, 1st Floor, Epoxy and Enamel Paint, SAP #202-71-4	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste epoxy and enamel paint.	1994 to 1996
SAP 113	Bldg. 202, 1st Floor, Epoxy and Enamel Paint, SAP #202-71-5	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste epoxy and enamel paint.	1994 to 1996
SAP 114	Bldg. 202, 1st Floor, Epoxy and Enamel Paint, SAP #202-71-6	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste epoxy and enamel paint.	1994 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 115	Bldg. 206, 1st Floor, Sandblast Grit, SAP #202-71-7	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Sandblast grit.	1977 to 1996
SAP 116	Bldg. 206, 1st Floor, Sandblast Grit, SAP #202-71-8	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Sandblast grit.	1977 to 1996
SAP 117	Bldg. 204, 1st Floor, Used Garnet, SAP #202-71-9	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Used garnet.	1976 to 1997
SAP 118	Bldg. 201, 1st Floor, Lubricating Oil, SAP #201-6	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste oil.	1980 to 1996
SAP 119	Bldg. 210 Outside NE, E-25, 1st Floor, Paint Chips, SAP #210-51-10	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Paint chips.	1970 to 1996
SAP 120	Bldg. 210 Outside NE, E-25, 1st Floor, Glass Bead Blast Waste Material, SAP #210-51-11	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Glass bead blast waste material.	1970 to 1996
SAP 121	Bldg. 210, 1st Floor, Aerosol Cans, Paint, SAP #210-51-14	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Aerosol cans, paints.	1970 to 1996
SAP 122	Bldg. 210, 1st Floor, Aerosol Cans, Lubricant, SAP #210-51-15	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Aerosol cans, lubricant.	1970 to 1996
SAP 123	Bldg. 210, Outside F-7 Steam Rack, 1st Floor, Waste Oil, SAP #210-51-16	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste oil, hydraulic.	1970 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 124	Bldg. 210, Outside F-7 Steam Rack, 1st Floor, Waste Oil, SAP #210-51-16	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC. SAP 124 is a duplicate of SAP 123 (an error from the original PA Report).	Waste oil, hydraulic.	1970 to 1996
SAP 125	Bldg. 210, 1st Floor, Oily Rags, SAP #210-51-18	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Oily rags.	1970 to 1996
SAP 126	Bldg. 210, 1st Floor, Waste Oil, SAP #210-51-23	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste oil.	1970 to 1996
SAP 127	Bldg. 210, 1st Floor, Gear Grease, SAP #210-66-1	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Gear grease.	1970 to 1996
SAP 128	Bldg. 210, 1st Floor, Aerosol Cans, Non-Paint, SAP #210-66-6	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Aerosol cans, non-paint.	1970 to 1996
SAP 129	Bldg. 210, 1st Floor, Waste Lube Oil, SAP #210-66-7	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste lube oil.	1970 to 1996
SAP 130	Bldg. 210, 1st Floor, Oily Pads, SAP #210-67-17	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Oily pads.	1970 to 1996
SAP 131	Bldg. 210, 1st Floor, Waste Oil, SAP #210-67-22	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste oil.	1970 to 1996
SAP 132	Bldg. 210, 1st Floor, Waste Garnet, SAP #210-71-24	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste garnet.	1970 to 1996
SAP 133	Bldg. 210, Spray Booth, Outside E-5, 1st Floor, Waste Paint, Solid, SAP #210-71-25	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste paint (solid).	1993 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 134	Bldg. 300 1st Floor, Mixture of Fixer, Water, and Developer	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Mixture of fixer, water, and developer.	1973 to 1996
SAP 135	Bldg. 300, 1st Floor, Photo Fixer, SAP #300-DPS-2	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Photo fixer.	1973 to 1996
SAP 136	Bldg. 300, 1st Floor, Photo Fixer, SAP #300-DPS-3	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Photo fixer.	1973 to 1996
SAP 137	Bldg. 303, 1st Floor, Spent TCA, SAP #303-72-1	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	TCE.	1976 to 1996
SAP 138	Bldg. 303, 1st Floor, Sand-Glass Beads, SAP #303-72-12	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Spent glass bead.	1976 to 1996
SAP 139	Bldg. 303, 1st Floor, Smoke Tubes, Stannic Chloride, SAP #303-72-13	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Smoke tube, stannic chloride.	1976 to 1996
SAP 140	Bldg. 303, 1st Floor, Stannic Chloride, SAP #303-72-14	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Stannic chloride.	1976 to 1996
SAP 141	Bldg. 303, 1st Floor, Rags with Grease, SAP #303-72-2	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Greasy rags.	1976 to 1996
SAP 142	Bldg. 303, 1st Floor, Safe Step, SAP #303-72-3	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Safe Step absorbent.	1976 to 1996
SAP 143	Bldg. 303, 1st Floor, Rags w/Solvent and Acetone, SAP #303-72-6	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Rags soaked with solvents and acetone.	1976 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 144	Bldg. 303, 1st Floor, Rags Contaminated with Acetone and Resin, SAP #303-72-7	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Rags soaked with acetone and resin.	1976 to 1996
SAP 145	Bldg. 303, 1st Floor, Sandblast Grit	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Spent sandblast grit.	1976 to 1996
SAP 146	Bldg. 356, 1st Floor, Waste, Gas and Diesel, SAP #356-50-1	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Waste gasoline and diesel.	1993 to 1996
SAP 147	Bldg. 104 A, 1st Floor, Absorbent Pads with Oil, SAP #104-07-01	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Oil absorbent pads.	1943 to 1996
SAP 148	Bldg. A Finger Piers, 1st Floor, Spill Pads, SAP #WA-97-1	The PA for 25 Group B AOCs was issued in June 1998. No further action required. Approved August 26, 1998, by the DTSC.	Oil-soaked spill pads; non-RCRA hazardous, solid waste.	1993 to 1995
SAP 149	Bldg. A Finger Piers, 1st Floor, Lube Oil, SAP #WA-97-2	The PA for 25 Group B AOCs was issued in June 1998. No further action required. Approved August 26, 1998, by the DTSC.	Waste oil; non-RCRA hazardous, liquid waste.	1993 to 1995
SAP 150	Bldg. A Finger Piers, 1st Floor, Oil Filters and Waste Oil, SAP #WA-97-3	The PA for 25 Group B AOCs was issued in June 1998. No further action required. Approved August 26, 1998, by the DTSC.	Waste oil and waste oil filters (with up to 20% residual waste oil), non-RCRA hazardous, solid waste.	1993 to 1995
SAP 151	Bldg. A Finger Piers, 1st Floor, Paint Waste, SAP #WA-97-4	The PA for 25 Group B AOCs was issued in June 1998. No further action required. Approved August 26, 1998, by the DTSC.	Waste paint; hazardous waste liquid (UN 1263). Waste spill pads and rags; flammable, solid waste (UN 1325).	1993 to 1995
SAP 152	Bldg. A Finger Piers, 1st Floor, Paint Waste, SAP #WA-97-4	The PA for 25 Group B AOCs was issued in June 1998. No further action required. Approved August 26, 1998, by the DTSC.	Waste aerosol cans, compressed gas (UN 1954), 1993 to 1994. Waste paint chips with lead, March 1994. Waste sandblast grit, December 1 through 21, 1994.	1993 to 1994

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 153	Bldg. 109, 2nd Floor, Monel Electrode, SAP #109-26-2	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Discarded Monel electrodes.	1943 to 1996
SAP 154	Bldg. 129, 2nd Floor, Acid Waste, SAP #129-1180-5	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Acid waste, wet lab.	1944 to 1997
SAP 155	Bldg. 129, 2nd Floor, Acid Waste, SAP #129-1180-2	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Acid waste.	1944 to 1997
SAP 156	Bldg. 129, 2nd Floor, Oil and Solvents, SAP #129-1180-3	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Oil and solvents, general chemistry room.	1944 to 1997
SAP 157	Bldg. 129, 3rd Floor, Fuel Oil, SAP 129-1180-4	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Oil, jet fuel, greases and other petroleum products were tested in this lab.	1944 to 1997
SAP 158	Bldg. 129, 2nd Floor, Acid Waste, SAP #129-1180-5	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC. SAP 158 is a duplicate of SAP 154 (an error from the original PA Report).	Acid waste, wet lab.	1944 to 1997
SAP 159	Bldg. 132, 1st Intermediate, Oily Absorbent, SAP #132-31-10	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Oily absorbents.	1944 to 1996
SAP 160	Bldg. 132, 2nd Floor, Waste Oil, SAP #132-31-14	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste oils.	1944 to 1996
SAP 161	Bldg. 132, 2nd Floor, Oily Absorbent, SAP #132-31-15	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Oily absorbents.	1944 to 1996
SAP 162	Bldg. 132, 2nd Floor, Oily Absorbent Pads, SAP #132-31-18	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Oil absorbent pads.	1944 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 163	Bldg. 132, 2nd Floor, Oily Rags, SAP #132-31-9	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Oily rags.	1944 to 1996
SAP 164	Bldg. 132, 2nd Floor, Oily Rags, SAP #B-132-SIMA-13	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Oily rags.	1944 to 1996
SAP 165	Bldg. 132, 2nd Floor, Sandblast Grit, SAP #B-132-SIMA-14	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Sandblast grit.	1944 to 1996
SAP 166	Bldg. 132, 2nd Floor, Liquid Paint/Solvent	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Liquid paint and solvent.	1944 to 1996
SAP 167	Bldg. 132, 2nd Floor, Liquid Solvent	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Liquid solvent.	1944 to 1996
SAP 168	Bldg. 132, 2nd Floor, Solid Paint/Sweepings	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Solid paint and sweepings.	1944 to 1996
SAP 169	Bldg. 132, 2nd Floor, Glass Bead Dust	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Glass bead dust.	1944 to 1996
SAP 170	Bldg. 132, 2nd Floor, Aluminum Oxide Dust	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Aluminum oxide dust.	1944 to 1996
SAP 171	Bldg. 210, Outside NE, E-24, Chrome Stained Rags and Tape, SAP #210-51-9	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Chrome stained rags and tape.	1993 to 1996
SAP 172	Bldg. 210, 3rd, Floor, C-13, Aerosol Cans Paint, SAP #210-34-32	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Aerosol cans, paint.	1970 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 173	Bldg. 210, 3rd, Floor, C-13, Aerosol Cans, Non-Paint, SAP #210-34-33	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Aerosol cans, non-paint.	1970 to 1996
SAP 174	Bldg. 210, 3rd Floor, Batteries, SAP #210-34-34	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Batteries.	1970 to 1996
SAP 175	Bldg. 210, 2nd Floor, Liquid Developer, SAP #210-51-29	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Liquid developer.	1970 to 1996
SAP 176	Bldg. 210, 2nd Floor, Aluminum and Stainless Steel Etchant, SAP #210-51-30	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Aluminum and stainless steel etchant.	1970 to 1996
SAP 177	Bldg. 210, 2nd Floor, Ferric Chloride Waste Liquid, SAP #210-51-1	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Ferric chloride waste liquid.	1970 to 1996
SAP 178	Bldg. 210, 3rd Floor, Glass Bead Dust, SAP #210-67-43	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Glass bead dust.	1970 to 1996
SAP 179	Bldg. 210, 5th Floor, Paint Rags, SAP #210-71-37	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Paint rags.	1970 to 1996
SAP 180	Bldg. 210, 5th Floor, C-24, Glass Bead Waste Material, SAP #210-71-38	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Glass bead waste.	1970 to 1996
SAP 181	Bldg. 210, 5th Floor, Dry Poly Paint Chips, SAP #210-71-41	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Dry poly paint chips.	1970 to 1996
SAP 182	Bldg. 303, 2nd Floor, Solvents, SAP #303-72-10	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Solvent.	1976 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 183	Bldg. 303, 2nd Floor, Rags Soaked in Solvent, SAP #303-72-11	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Solvent-soaked rags.	1976 to 1996
SAP 184	Bldg. 303, 2nd Floor, Photo Waste, SAP #303-72-9	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Photo waste/silk screen.	1976 to 1996
SAP 185	Bldg. 303, 2nd Floor, Photo Waste, SAP #303-72-9	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC. SAP 185 is a duplicate of SAP 184 (an error from the original PA Report).	Photo waste/silk screen.	1976 to 1996
SAP 186	Bottom Drydock #1, Grease/Oily Waste, Liquid, SAP #SUPSHIP-10	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Grease/oily liquid waste.	1942 to 1996
SAP 187	Tanks, Drydock #1 882 Foot Mark West, Waste Paint, SAP #SUPSHIP-11	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste paint.	1942 to 1996
SAP 188	Tanks, Drydock #1 330 Foot Mark West, Waste Paint, SAP #SUPSHIP-12	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste paint.	1942 to 1996
SAP 189	Tanks, Drydock #1 330 Foot Mark East, Waste Paint, SAP #SUPSHIP-13	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste paint.	1942 to 1996
SAP 190	Tanks, Drydock #1 360 Foot Mark East, Waste Paint, SAP #SUPSHIP-14	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste paint.	1942 to 1996
SAP 191	Tanks, Drydock #1 126 Foot Mark East, Waste Paint, SAP #SUPSHIP-15	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste paint.	1942 to 1996
SAP 192	Tanks, Drydock #1, Waste Paint, SAP #SUPSHIP-16	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste paint.	1942 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 193	Bottom Drydock #1, Waste Paint, SAP #SUPSHIP-17	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste paint.	1942 to 1996
SAP 194	Tanks, Drydock #1, Waste Paint, SAP #SUPSHIP-2	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste paint.	1942 to 1996
SAP 195	Tanks, Drydock #1, Paint Rags/Debris, SAP #SUPSHIP-4	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Paint rags/debris.	1942 to 1996
SAP 196	Drydock #1 at 210 Foot Mark West, Waste Paint, SAP #SUPSHIP-5	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste paint.	1943 to 1996
SAP 197	Drydock at 570 Foot Mark East, Waste Paint, SAP #SUPSHIP-9	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste paint.	1943 to 1996
SAP 198	Drydock #1 at 210 Foot Mark West, Waste Paint, SAP #SUPSHIP-5	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC. SAP 198 is a duplicate of SAP 196 (an error from the original PA Report).	Waste paint.	1943 to 1996
SAP 199	Drydock #3 at 210 Foot Mark East, Waste Paint Sludge, SAP #SUPSHIP-7	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Waste paint sludge.	1943 to 1996
SAP 200	Drydock #3 at 294 Foot Mark East, Paint Rags/Debris, SAP #SUPSHIP-8	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Paint rags/debris.	1943 to 1996
SAP 201	Drydock at 570 Foot Mark East, Waste Paint, SAP #SUPSHIP-9	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC. SAP 201 is a duplicate of SAP 197 (an error from the original PA Report).	Waste paint.	1943 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SAP 202	Pier #2, P-1, Cleanup Solvent, SAP #PR2-71-04	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Cleanup solvent.	1946 to 1996
SAP 203	Pier Echo, Rags, SAP #P-E-38-4	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Rags.	1968 to 1997
SAP 204	Pier Echo, Absorbent Pads, SAP #P-E-38-8	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Absorbent pads.	1968 to 1997
SAP 205	Pier Echo, at 350 Foot Mark, Non-RCRA Hazardous Waste, Oil Absorbent Waste, Oily Rags, SAP #P-E-SUPSHIP-1	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Non-hazardous waste, oil-absorbent waste, oily rags.	1968 to 1997
SSS 1	Sanitary Sewer System Lines	The PA for 25 Group B AOCs was issued in June 1998. Sampling was conducted at 9 of the 25 AOCs, including this Site. The Final Addendum Sampling Report was issued in October 1999 and recommended No further action required. Approved October 14, 1999, by the RWQCB. By letter dated July 16, 2012, RWQCB did not concur with unrestricted reuse for SSS 1. RWQCB previously concurred with no further action by letter dated October 14, 1999. The Navy agreed to include a notice of potential contamination in the deed at the time of transfer.	Sanitary sewage, as well as various hazardous and toxic wastes, disposed of in sinks, sumps, drains, and manholes.	1943 to present (1998)
SSS 2	Pit H	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Sanitary sewage, as well as various hazardous and toxic wastes, disposed of in sinks, sumps, drains, and manholes.	1943 to present (1999)

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SSS 3	Pit B	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Sanitary sewage, as well as various hazardous and toxic wastes, disposed of in sinks, sumps, drains, and manholes.	1943 to present (1999)
SSS 4	Pit G	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Sanitary sewage, as well as various hazardous and toxic wastes, disposed of in sinks, sumps, drains, and manholes.	1943 to present (1999)
SSS 5	Holding Tank Bldg. 207	The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Sanitary sewage, as well as various hazardous and toxic wastes, disposed of in sinks, sumps, drains, and manholes.	1943 to present (1999)
SWS 1	Force Main Lines	The PA for 25 Group B AOCs was issued in June 1998. No further action required. Approved August 26, 1998, by the DTSC.	Stormwater that historically contained varying amounts of toxic and hazardous residuals and wastes.	1955 to present (1998)
SWS 2	Storm Water System Drain Lines	The PA for 25 Group B AOCs was issued in June 1998. Sampling was conducted at 9 of the 25 AOCs, including this Site. The Final Addendum Sampling Report was issued in October 1999. No further action required. Approved October 6, 1999, by the DTSC.	Stormwater, as well as hazardous and toxic wastes, was disposed of in storm drains intentionally and as non-stormwater discharges.	1943 to present (1998)
SWS 3	Drydock 1 Water Tunnels	The PA for 25 Group B AOCs was issued in June 1998. Sampling was conducted at 9 of the 25 AOCs, including this Site. The Sampling Report for 9 Group B AOCs was issued in November 1998. No further action required. Approved December 14, 1998 by the DTSC.	Discharge water containing waste paint, oily waste, rags, and sandblast grit from dry dock operations.	1942 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
SWS 4	Drydock 2 Water Tunnels	The PA for 25 Group B AOCs was issued in June 1998. Sampling was conducted at 9 of the 25 AOCs, including this Site. The Sampling Report for 9 Group B AOCs was issued in November 1998. No further action required. Approved May 30, 2001, by the DTSC. Site Closure Report submitted September 2010, and no further action determination report in July 2012, with two supplements in January 2013. No further action approved for SWS 4 and SWS 5 February 6, 2013 by DTSC.	Discharge water containing waste paint, oily waste, rags, and sandblast grit from dry dock operations.	1943 to 1997
SWS 5	Drydock 3 Water Tunnels	The PA for 25 Group B AOCs was issued in June 1998. Sampling was conducted at 9 of the 25 AOCs. The Sampling Report for 9 Group B AOCs was issued in November 1998. No further action required. Approved May 30, 2001, by the DTSC. Site Closure Report submitted September 2010, and no further action determination report in July 2012, with two supplements in January 2013. No further action approved for SWS 4 and SWS 5 February 6, 2013 by DTSC.	Discharge water containing waste paint, oily waste, rags, and sandblast grit from dry dock operations.	1943 to 1997
UST 1	Fuel Oil Tanks 128-1, 128-2, 128-3	Site Closure Report was completed in January 1999. Approved February 19, 1999, by the RWQCB. The PA for the 171 Group B AOCs completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC.	Diesel fuel, paint waste, and waste from other shipyard activities.	1943 to 1996

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
UST 2	Paint Wash Tank 216-1	The PA for the 171 Group B AOCs was completed in April 2000. UST was removed under Compliance Program in 1999. No further action required. Approved February 7, 2001, by the RWQCB for Site closure. Closure Report for 15 AOCs completed in December 2009. No further action approved February 2, 2010, by the DTSC and March 25, 2010, by the RWQCB.	Rinse water potentially containing sandblast grit contaminated with heavy metals and paint.	1980 to 1993
UST 3	Diesel Fuel Tanks 129-1, 129-2	The PA for the 171 Group B AOCs was completed in April 2000. USTs were removed in 1996. No further action required. Approved May 22, 1998, by the RWQCB for Site closure.	Potential diesel fuel leaks from USTs.	1986 to 1996
UST 4	Paint Wash Tanks 202-1, 202-2, 202-3	The PA for the 171 Group B AOCs was completed in April 2000. No further action required. Approved May 31, 2000, by the DTSC. Closure Report for 15 AOCs completed in December 2009. No further action approved February 2, 2010, by the DTSC and March 25, 2010, by the RWQCB.	Paint waste, alkaline solutions, stripping solutions containing paint, varnish remover, and sodium hydroxide. Also aluminum and steel sandblast grit.	1986 to 1996
UST 5	Cable Test Tank 61-2	The PA for 25 Group B AOCs was issued in June 1998. This Site was closed under the UST program. No further action required.	Saltwater.	Unknown start date to 1996.
UST 6	Transformer Oil Tanks 363, 364; Saltwater Purge Tank 365; Fuel Tank 351; Fuel Oil Tank 150.1	The PA for 25 Group B AOCs was issued in June 1998. This Site was closed under the UST program. No further action required. Approved August 4, 2000, by the RWQCB.	Tank 363 and 364: transformer oil. Tank 365: saltwater purge. Tank 150.1: fuel oil.	1943 to 1996
UST 7	Diesel Fuel Tanks 302-1, 302-2, 302-3	The PA for the 171 Group B AOCs completed in April 2000. USTs were removed in August 1997. No further action required. Approved July 1998 by the RWQCB for Site closure.	Potential diesel fuel leaks from USTs.	1970 to 1997

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
UST 9	Fuel Oil Tank 53-1	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Lube oil.	Removed 1993
UST 10	Diesel Fuel Tank 207-1	The PA for the 171 Group B AOCs was completed in April 2000. UST was removed in August 1997. No further action required. Approved July 1998 by the RWQCB for Site closure.	Potential diesel fuel leaks from the UST.	1986 to 1997
UST 11	Fuel Tank 353	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Fuel oil.	Removed 1946
UST 12	Solvent Tank 109.1	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Solvents.	Removed 1992
UST 13	Diesel Fuel Tank 104.1	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Fuel oil.	Closed in place 1993
UST 14	Oily Slop Tank 132-1	The PA for the 171 Group B AOCs was completed in April 2000. UST was removed in 1999 under Compliance Program. No further action required. Approved February 7, 2001, by the RWQCB for Site closure.	Rinse water containing oils and grease, metals, rosin wastes, boiler condensate, and valve cleaning wastes.	Approx. 1960s to 1996
UST 15	Diesel Fuel Tank P41.1	The PA for 25 Group B AOCs was issued in June 1998. This Site was closed under the UST program. No further action required.	Diesel fuel leaked from the tank.	1956 to 1992
UST 16	Saltwater Pressure Tank 377	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Saltwater.	Not available
UST 17	Waste Lube Oil Tank 196-1	The PA for the Group A AOC POI was issued in April 1997. No further action required. Approved June 20, 1997, by the DTSC.	Lube oil.	Removed 1993

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
UST 18	Diesel Fuel Tank 162.1	The PA for 25 Group B AOCs was issued in June 1998. No further action required. Approved August 26, 1998, by the DTSC.	No known leakage of diesel fuel.	1986 to 1994
UST 19	Waste Sludge Tank 301-1	The PA for the 171 Group B AOCs was completed in April 2000. UST was removed in May 1997. No further action required. Approved July 1998 by the RWQCB for Site closure.	Potential waste sludge and battery acid leaks from UST.	1952 to Unknown (Removed in 1997)
Areas of Potential Concern (AOPC)				
NSTA 1	Fuel pipeline that traverses NSTA and transports petroleum products to the Mole	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Various petroleum products.	1984 to 1997
NSTA 2	Forced sanitary sewer main (from LBNSY to Sewer Pit E)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Sanitary and Industrial wastewater.	1941 to 1997
NSTA 3	Forced sanitary sewer main (from Mole to Sewer Pit E)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Sanitary and Industrial wastewater.	1945 to 1997
NSTA 4	Gravity sewer lateral that runs from Building 8	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Sanitary and Industrial wastewater.	1941 to 1994
NSTA 5	Building 46 dry cleaning operations	The PA Report (February 1996) recommended further investigation for this AOPC Site. The Site Inspection Report issued in June 1997 requested further investigation of groundwater/soil. Results of Expanded Site Inspection indicated remedial action required for groundwater/soil; AOPC No. 5 has been redesignated as IR Site 14. Therefore, this AOPC is designated as No further action required.	Dry cleaning solvents.	1958 to 1964

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
NSTA 6	Less-than-90-day hazardous waste storage area (west of Building 95, IR Program Site 6A)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Paint cans, paint wastes, paint thinners, oil, and grease.	1990(?) to 1994
NSTA 7	Less-than-90-day hazardous waste storage area (northeast of Building 676)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Paint wastes, waste oils, and greases.	1990(?) to 1994
NSTA 8	Less-than-90-day hazardous waste storage area (east of Building 143)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Waste oil, paint wastes, and oily rags.	1990(?) to 1994
NSTA 9	Less-than-90-day hazardous waste storage area (north of Building 741, Mole, Site 2)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Oil, oily rags.	1990(?) to 1995
NSTA 10	Hazardous waste satellite storage area (Building 152)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Empty paint cans, empty drums, paint wastes, household hazardous waste.	1990(?) to 1994
NSTA 11	Hazardous waste satellite storage area (Building 143)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Waste oil, spent sandblast grit.	1990(?) to 1994
NSTA 12	Hazardous waste satellite storage area (Building 144)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Batteries, hazardous materials.	1990(?) to 1994
NSTA 13	Hazardous waste satellite storage area (inside Building 676, Marine section)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Motor oil, brake pads, floor sweep material.	1990(?) to 1997
NSTA 14	Hazardous waste satellite storage area (inside Building 676, Navy section)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Oily rags, empty waste drums, empty fuel cans.	1990(?) to 1997
NSTA 15	Hazardous waste satellite storage area (Building 831)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Medical waste.	1980(?) to 1995

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
NSTA 16	Hazardous waste satellite storage area (Building 650, Marina)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Batteries, waste oil, paint wastes.	1990(?) to 1997
NSTA 17	Hazardous waste satellite storage area (Building 671, Auto Hobby Shop)	The PA issued in February 1996. Sampling activities conducted and a PA addendum submitted in September 1996. No further action required.	Waste oil, oily rags, crushed oil filters, antifreeze.	1990(?) to 1995
NSTA 18	Hazardous waste satellite storage area (Building 401 Service Station)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Oily rags, floor sweep, waste oil, crushed oil filters, antifreeze, brake pads, metal rotor filings, gas filters.	1990(?) to 1995
NSTA 19	Sewer Pit E treatment facility (Building 307)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Wastewater treatment chemicals: hydrochloric acid, sodium hypochlorite, sodium chlorite, and potassium permanganate.	Unknown to 1997
NSTA 20	Sewer treatment facility (Building 821, Mole)	The PA issued in February 1996. No further action required. Approved March 14, 1996, by the DTSC.	Wastewater treatment chemicals: hydrochloric acid, sodium hypochlorite, sodium chlorite, and potassium permanganate.	Unknown to 1997
NSTA 21	Dip tanks on Mole at SIMA Complex (Building 749 and 756)	The PA issued in February 1996. Sampling activities conducted and a PA addendum submitted in September 1996. No further action required.	Sulfamic acid.	1987 to 1993
NSTA 22	Sandblast Baghouse Area (east side of Building 756)	The PA issued in February 1996. Sampling activities conducted and a PA addendum submitted in September 1996. No further action required.	Spent sandblast grit.	Unknown to 1994

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
Compliance Program Sites				
Building 101	Gasoline Station	<p>Quarterly groundwater monitoring began at Building 101 in September 2003. The 7th and 8th Quarter Groundwater Monitoring Reports were submitted for regulatory review in May 2005 and October 2005, respectively. A reduced sampling event was conducted on March 17, 2006. The Annual Groundwater Monitoring Report, recommending no further action and Site closure, was submitted to the regulatory agencies in June 2006. On September 6, 2011, the RWQCB responded that they could not concur with no further action. The Navy prepared a work plan, and additional sampling was conducted in 2013. A Final Report presented results of the sampling event and requested no further action. No further action required. Approved December 22, 2014.</p>	Lube oil, gasoline (leaded and unleaded), white gas, diesel, kerosene	1960s
Building 118	Former Hazardous Waste Storage	<p>A letter Report, presenting the results of the field investigations and requesting a RCRA permit closure, was submitted in May 2002. DTSC requested that four additional monitoring wells be installed and monitored quarterly for 1 year. Four quarterly groundwater monitoring events were performed from September 2004 to June 2005. The Second Annual Groundwater Monitoring Report was submitted for review on February 7, 2006, and recommended clean closure for Building 118. No further action required. Approved March 8, 2006, by the DTSC.</p>	Temporary (less than 1 year) Storage of containerized hazardous wastes.	1980-1990

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
Building 129	O/W Separator	Removal and sampling completed in 2000. No further action required. Approved February 1, 2001, by the DTSC and December 2001 by the RWQCB.	Fuel oils and solvents.	Not Available
Building 401	Naval Exchange Service Station	Air sparging and soil vacuum extraction system operated from 1995 to 1998, and 1999 to 2000. Groundwater sampling is completed. No further action required. Approved May 14, 2001, by the RWQCB for Site closure.	Unleaded gasoline, diesel, fuel oil, and waste oil.	1970 to 1996
Building 816	Sandblast Grit	Site Investigation completed in July 2000. Remedial Action completed and Final Closure Report submitted in August 2001. No further action required. Approved September 21, 2001, by the RWQCB for Site closure.	Metals, polynuclear aromatic hydrocarbons, total petroleum hydrocarbons.	1973 to 1988
OU-1	Palos Verdes Sites 1A, 1B, and 2 (OU-1)	Groundwater monitoring continued from 1996 to 2007 (12 rounds). The 2007 Final Groundwater Monitoring Report recommended discontinuation of monitoring. Approved September 27, 2007, by the DTSC and October 4, 2007, by the RWQCB. The groundwater monitoring wells were properly destroyed in September 2008. The Final No further action ROD was signed in October 2008 by the Navy and DTSC. No further action required.	1A and 1B: Waste materials from returning WW II Naval ships. 1B and 2: Drilling mud from oil field activities in the 1950s; and sludge waste from fuel tank bottoms.	Unknown
San Pedro Site 5	Former Fire Fighters Training School	Final Non-Time-Critical Removal Action Closure Report issued September 1997. No further action required. Approved October 3, 1997, by the DTSC.	Burning of fuel in open pits and mock ship compartments.	1944 to 1950

Table A-1. Sites with No Further Action Required

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
Installation Restoration (IR) Sites				
IR Site 6B	Old Scrapyard	PA issued in December 1993. Investigations for groundwater showed that the identified concentrations of petroleum products were below Ocean Plan Criteria for groundwater. DTSC and the Navy agreed that the TCE plume would be addressed by the groundwater investigation at IR Site 6A. No further action required. Approved July 28, 1997, by the DTSC for Site closure.	Aviation fuel storage. Miscellaneous scrap storage. Empty container storage.	1942 to Present
IR Site 16 (formerly AOC Site PT 1)	Plating Shop Bldg. 210	The Final ESI Report was completed in June 2005. No further action required. Approved in September 2, 2005. Report for 15 AOCs completed in December 2009. No further action approved February 2, 2010, by the DTSC and March 25, 2010, by the RWQCB.	Sodium hydroxide solution, TCE, hydrochloric acid solution, chromium acid solution, dilute caustic, aluminum etchant, methylene chloride, nitric acid.	1974 to 1997

Acronyms and Abbreviations:

ADD = Miscellaneous New Sites Added	LBNSY = Long Beach Naval Shipyard	ROD = Record of Decision
AOC = Area of Concern	LIW = Liquid Industrial Wastewater	RWQCB = Regional Water Quality Control Board
AOPC = Area of Potential Concern	MISC = Miscellaneous Sites	SAP = Satellite Accumulation Points
CUPA = Certified Unified Program Agency	Navy = Department of the Navy	SIMA = Shore Intermediate Maintenance Activity
DC = Deep Cycle battery	NSTA = Naval Station	SSS = Sanitary Sewer System
DTSC = Department of Toxic Substance Control	OU = Operable Unit	SUPSHIP = Supervisor of Shipbuilding, Conversion, Repair
ESI = Expanded Site Investigation	O/W = Oil/Water	SWS = Storm Water System
FTU = Fixed Treatment Unit	PA = Preliminary Assessment	TCA = Trichloroethane
HIST = Historical Sites	PCB = Polychlorinated Biphenyls	TCE = Trichloroethene
HWF = Hazardous Waste Facilities	POI = Points of Interest	TSDF = treatment, storage, and disposal facility
IR = Installation Restoration	ppm = parts per million	UN = United Nations
IWS = Industrial Wastewater Site	PT = Process Tank Sites	UST = Underground Storage Tank
IWTP = Industrial Wastewater Treatment Plan	RACR = Remedial Action Completion Report	WW = World War
JP = Jet Propellant	RCRA = Resource Conservation and Recovery Act	

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Table A-2. Sites with No Further Action Required with Institutional Controls in Place

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
Installation Restoration (IR) Sites (No Further Action approved; but 5-year reviews and ICs are required)				
IR Sites 1 and 2	Mole Solid Waste and Chemical Material and Waste Storage Area	RI issued in 1996. FS for Sites 1 and 2 completed in 1999. PP published in June 1999. Final ROD issued June 2000, The selected remedy included soil and debris removal and treatment of VOCs in groundwater and groundwater monitoring and ICs. ICs were imposed in an interim basis through the LIFO at IR Sites 1 and 2, until the property transfer. A RACR was issued September 2007. Groundwater monitoring wells were destroyed in 2010. Additional site characterization is ongoing at IR Sites 1 and 2. The Third Five-Year Review was completed in 2014.	Solid wastes including empty wooden and cardboard boxes, construction and demolition debris, rags and other ship yard trash. Unknown quantities of liquid of chemical wastes may have been disposed of at landfill operations.	1944-1980
IR Site 3	Industrial Waste Disposal Pits	RI issued July 1996. FS for Sites 3 through 6A issued April 1998. PP published in May 1998. ROD issued June 1999. LTM for groundwater from August 2000 through August 2002. No further action required. Approved July 11, 2003, by the RWQCB. Additional sampling was required as part of the 2004 five-year review. Concentrations of groundwater COPCs were stable. DTSC and RWQCB concurred with results on November 2, 2004, and January 5, 2005, respectively. The <i>Groundwater Monitoring Wells Decommissioning Report</i> was submitted in January 2009. The second five-year review was completed in December 2009 and the third five-year review was completed in December 2014.	Waste oil, caustic waste, acidic wastes, sludges, and trash	Late 1940s to early 1970s
IR Site 4	Mole Extension Operations	RI issued July 1996. FS for Sites 3 through 6A issued April 1998. PP published in May 1998. ROD issued June 1999. No further action required. Approved November 18, 1998, by	Construction debris, sandblast grit, petroleum products, asbestos, trash, soil	1950s to 1972

Table A-2. Sites with No Further Action Required with Institutional Controls in Place

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
		<p>the RWQCB. LTM for groundwater began in August 2000 and is now complete. Additional sampling was required as part of the 2004 five-year review. Concentrations of groundwater COPCs were stable. DTSC and RWQCB concurred with results on November 2, 2004, and January 5, 2005, respectively. The <i>Groundwater Monitoring Wells Decommissioning Report</i> was submitted in January 2009. The second five-year review was completed in December 2009 and the third five-year review was completed in December 2014.</p>		
IR Site 5	Skeet Range Solid Waste Fill Area	<p>RI issued July 1996. FS for Sites 3 through 6A issued April 1998. PP published in May 1998. ROD issued June 1999. No further action required. Approved April 10, 1997, by the RWQCB. LTM for groundwater began in August 2000 and is now complete. Additional sampling was required as part of the 2004 five-year review. Concentrations of groundwater COPCs were stable. DTSC and RWQCB concurred with results on November 2, 2004, and January 5, 2005, respectively. The <i>Groundwater Monitoring Wells Decommissioning Report</i> was submitted in January 2009. The second five-year review was completed in December 2009 and the third five-year review was completed in December 2014.</p>	Bed frames, desks, solid waste, construction debris	Mid-1930s to 1968
IR Site 6A	Boat Disposal Location	<p>RI issued July 1996. FS for Sites 3 through 6A issued April 1998. PP published in May 1998. ROD issued June 1999. No further action required. Approved March 16, 2000, by the RWQCB. LTM for groundwater began in</p>	Sandblast grit, old boats, waste oil, solid waste	1942 to 1965

Table A-2. Sites with No Further Action Required with Institutional Controls in Place

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
		<p>August 2000 and is now complete. Additional sampling was required as part of the 2004 five-year review. Concentrations of groundwater COPCs were stable. DTSC and RWQCB concurred with results on November 2, 2004, and January 5, 2005, respectively. The <i>Groundwater Monitoring Wells Decommissioning Report</i> was submitted in January 2009. The second five-year review was completed in December 2009 and the third five-year review was completed in December 2014.</p>		
IR Site 8	Building 210, TCE Disposal Site	<p>The ROD was issued in September 2004. Groundwater monitoring was completed in April 2008. RACR was submitted in July 2009. No further action required. Approved August 19, 2009, by the DTSC. The first five-year review was completed in December 2009 and the second five-year review was completed in December 2014.</p>	TCE and chromium	1974 to 1980
IR Site 9	Building 129, Ground Floor Spills	<p>The ROD was issued in August 2005. Selected remedy was groundwater monitoring, MNA, and ICs. The remedial goals were updated and documented in the Revised Addendum to the RD/RA Work Plan for IR Sites 8 through 13 in July 2009. The Navy submitted a technical memorandum in September 2010 to stop groundwater monitoring. DTSC and RWQCB concurred with No further action for groundwater on April 1, 2011, and February 28, 2011, respectively. The Navy issued a revised Draft RACR on February 17, 2012, to document the achievement of cleanup objectives, the discontinuation of long-term groundwater monitoring, and the evaluation</p>	Former Electronics/Weapons Shop and Former Quonset Hut. PCE; TCE; 1,1-DCE; cis-1,2-DCE; trans-1,2-DCE; and VC	1940 to 1973

Table A-2. Sites with No Further Action Required with Institutional Controls in Place

Site ID	Description/Location	Current Status	Waste Characteristics Material/Contaminants	Date of Operation
		and removal of certain ICs that are no longer necessary. No further action required. Approved May 16, 2012, by the DTSC. Final RACR issued in June 2012. The first five-year review was completed in December 2009 and the second five-year review was completed in December 2014.		
IR Site 10	Parking Lot H	The ROD was issued in September 2004. Groundwater monitoring completed in April 2008. RACR was submitted in July 2009. No further action required. Approved August 19, 2009, by the DTSC and February 24, 2009, by the RWQCB. The first five-year review was completed in December 2009 and the second five-year review was completed in December 2014.	Barium and pyrene	1952 to 1957

Abbreviation and Acronyms::

COPC = Contaminant of Potential Concern
DCE = Dichloroethene
DTSC = Department of Toxic Substance Control
FS = Feasibility Study
IC = Institutional Control
IR = Installation Restoration
LTM = Long-Term Monitoring
MNA = Monitored Natural Attenuation
PCE = Perchloroethene

PP = Proposed Plan
RACR = Remedial Action Completion Report
RD/RA = Remedial Design/Remedial Action
RI = Remedial Investigation
ROD = Record of Decision
RWQCB = Regional Water Quality Control Board
TCE = Trichloroethene
VC = Vinyl Chloride

Appendix B: Responses to Agency Comments

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Responses to Agency Comments

Document Title: Draft Site Management Plan, 2015 Annual Update, Long Beach Naval Complex, Long Beach, California(October 2015)

Comments from Alan Hsu, Project Manager, DTSC- dated December 23, 2015		
Comment #.	Comment	Response
1	Section 1 Purpose and Scope, page 1-1 and the Navy's cover letter: The time period covered by SMP is a typographical error. It should be May 16, 2014 through May 15, 2015.	The dates in the Navy cover letter and Section 1 Purpose and Scope, page 1-1 are correct. The Site Management Plan is a look forward at upcoming activities at the installation for the next two years, in addition to reporting the current site status. As stated the purpose of the, "...the Site Management Plan (SMP) outlines activities and establishes schedules and deadlines for all environmental response actions that will be undertaken pursuant to the 17 July 2000 Federal Facility Site Remediation Agreement (FFSRA) between the Department of the Navy (Navy) and the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC) at the Long Beach Naval Complex (LBNC) located in Long Beach, Los Angeles County, California (NAVFAC Southwest, 2000)."
2	Section 4.1.1 Radiological Investigations, page 4-2, at the end of the 5th line in 2nd paragraph after " at IR Sites 1 and 2. ": Please add "The Navy received comments from CDPH (through DTSC) dated November 10, 2014. The comments provided by CDPH suggest that the information provided in the Final Report indicates that IR Sites 1 and 2 remain impacted with radiological wastes, and are not suitable for a Radiological Unrestricted Release Recommendation (RURR)."	The following language was added in Section 4.1.1 Radiological Investigations, page 4-2: "The Navy received comments from CDPH (through DTSC) dated November 10, 2014. The comments provided by CDPH suggest that the information provided in the Final Report indicates that IR Sites 1 and 2 remain radiologically "impacted", and are not suitable for a Radiological Unrestricted Release Recommendation (RURR)."
3	Section 4.1.6 IR Site 14, page 4-8, at the end of 2nd line in 6th paragraph after " no additional nutrient injections are required.": Please add "At the request of DTSC and RWQCB," the Navy also recommended the installation of	The text was revised as follows: "Following a request from DTSC and RWQCB, the Navy

Responses to Agency Comments

Document Title: Draft Site Management Plan, 2015 Annual Update, Long Beach Naval Complex, Long Beach, California(October 2015)

Comments from Alan Hsu, Project Manager, DTSC- dated December 23, 2015		
	three new monitoring wells to replace three former injection wells.	recommended the installation of three new monitoring wells to replace three former injection wells.”