



Proposed Plan Installation Restoration Site 09, Former Foundry and Site 10, Former Bus Painting Shop Naval Station Treasure Island

September 29, 2006

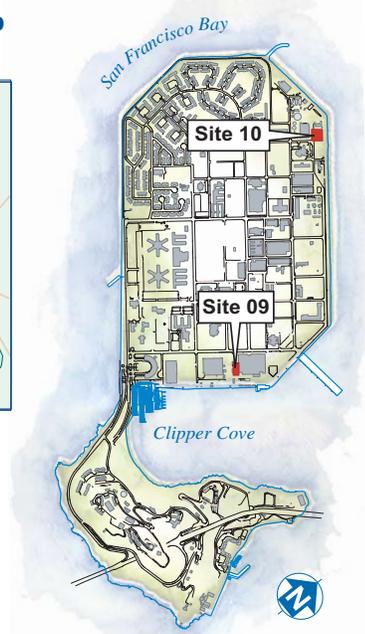
INTRODUCTION

The U.S. Department of the Navy (Navy) is responsible for planning and implementing cleanup actions to remediate contamination that may have resulted from historical operations at Naval Station Treasure Island (NAVSTA TI) (Figure 1). The Navy's **Installation Restoration (IR) Program** has conducted environmental investigations at Site 09, the former foundry, and Site 10, the former bus painting shop at NAVSTA TI (Figures 2 and 3). The investigations were conducted in cooperation with the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC), the Cal/EPA Regional Water Quality Control Board (Water Board), and the U.S. Environmental Protection Agency (EPA).

In this Proposed Plan, the Navy proposes that no environmental cleanup action be taken for Sites 09 and 10. This no action plan is proposed because the **human health and ecological risk assessment** reports for each site evaluated during the **remedial investigation (RI)** concluded that the low chemical concentrations detected do not pose **unacceptable risks** to human health or the environment based on current and future **exposure pathways**. This Proposed Plan explains further why the Navy is proposing no action.

A "Glossary of Terms" is located at the end of this document to assist the reader in understanding terms used in this Proposed Plan. All words that appear in bold print are defined in the glossary.

Figure 1. Site Location Map



INVITATION TO COMMENT

The Navy encourages you to participate by submitting written or oral comments on the Proposed Plan for no action for Sites 09 and 10. The Navy is issuing this Proposed Plan pursuant to Section 117(a) of the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)** and Section 300.430(f)(2) of the **National Oil and Hazardous Substance Pollution Contingency Plan** to ensure that the public has an opportunity to comment on the Proposed Plan for no action. The Navy invites you to attend a public meeting scheduled on **October 17, 2006 at 6:00 p.m. at the Casa de la Vista, Building 271**, on TI to discuss this Proposed Plan. The 30-day public comment period will end on October 31, 2006. This Proposed Plan highlights information from the Final RI Report for Sites 09 and 10, dated February 26, 2005. For a detailed review, the Final RI Report is available for public review at the San Francisco Public Library information repository at the following address:

100 Larkin Street (at Grove)
San Francisco, CA 94102-4733

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SITE BACKGROUND

TI is located in the central San Francisco Bay region, just north of the San Francisco-Oakland Bay Bridge, and within the City and County of San Francisco. TI was built in 1936 and 1937 on the Yerba Buena Shoals, a sand spit extending from the northwest point of Yerba Buena Island. It was used initially for the Golden Gate International Exposition in 1939. TI was leased to the Navy in 1941, which operated the facility for various activities throughout the years including the Naval Technical Training Center; waterfront facilities; troop and family housing; personnel support; a Navy brig; and a Navy and Marine Corps museum. The Navy gained title to TI in 1943. In 1993, NAVSTA TI was designated for closure under the Base Closure and Realignment Act of 1990. Naval operations were shut down in 1997. The base is in the process of being transferred. Planned reuse of the property is currently coordinated by the City of San Francisco.

Site 09, the Former Foundry, includes approximately 11,000 square feet in the southern end of TI and includes Building 41 (the former foundry) and the paved area immediately adjacent to the northwest, west, and south sides of the building (Figure 2). Building 41 has been used for multiple purposes since the early 1940s, including a forge and foundry, a paint shop, a vehicle maintenance shop, a welding training school, a small boat maintenance shop, a wood shop for building movie sets, and a storage building for oil spill containment equipment. The building is currently vacant.

Site 10, the Former Bus Painting Shop, includes approximately 32,000 square feet in the northeastern section of TI, north of 13th Street, between Avenue N and the island shoreline (Figure 3). Site 10 includes Building 335 (the former bus painting shop) and the area immediately surrounding the building. Building 335 was built during the mid-1940s. It was used throughout the years as a bus painting shop, a paint mixing facility, and a building where pesticides and chlorinated herbicides were mixed and handled. At one time, it reportedly contained a self-service steam rack used to clean vehicles, drums, garbage cans, and related equipment. Currently, the building and surrounding area are leased by a local landscaping contractor for use as an equipment storage and staging area, as well as a wood-chipping area.

According to the Draft Naval Station Treasure Island Reuse Plan, dated 1996, Site 09 and surrounding area are designated for reuse as a Film Production/Conference Center. This includes land that could be used for publicly oriented recreation/cultural/entertainment and specifically as a film/events district. The reuse for the area that includes Site 10 is designated as Residential/Open Space/Publicly Oriented Uses. This includes land designated for institutional use, specifically as a public facilities district. Residential housing may be associated with the proposed reuse at both Sites 09 and 10.

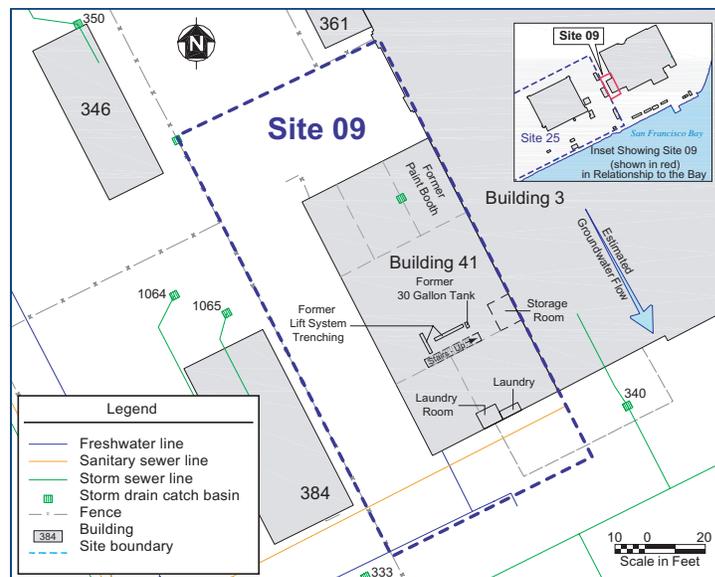


Figure 2. Site 09 - Former Foundry Detailed Site Map

SITE CHARACTERISTICS

Investigations at both sites began in 1988 with a **preliminary assessment (PA)** of each site. The PA report concluded that each site warranted further investigation because of the potential for contamination of soil and groundwater from past site activities. From 1992 to 1996, Phase I, Phase IIA, and Phase IIB RIs were performed at each site. The RIs included the collection of sediment, soil, and groundwater data, and the hydrogeologic characterization of each site. An additional RI was also performed in the fall of 2002 to eliminate data gaps identified from the previous investigations. In addition to the site-specific investigations, data from basewide investigations including the basewide groundwater monitoring program, the environmental baseline study, the TI aquifer testing, and the TI ambient metals studies were also used in characterizing Sites 09 and 10.

At Site 09, Building 41 has a concrete foundation; the rest of the site is paved with asphalt. The entire site is underlain by sandy dredge fill. The sandy fill consists of sand and minor gravels, with silt and clay lenses scattered throughout the sand. Groundwater at Site 09 was encountered at approximately 7 feet below ground surface during the 2002 sampling event. Based on general NAVSTA TI hydrogeology and basewide groundwater monitoring data, groundwater at Site 09 flows to the south and southeast, toward the shoreline.

The geology of Site 10 is similar to Site 09, except that the surface material varies throughout the site. The western and southern sides of Building 335 are mostly covered by asphalt. The asphalt is underlain by sandy dredge fill. The surface material on the northern and eastern sides of the building consists of a combination of soil, gravel, and wood

chips because of the landscaping activities presently taking place at the site. The sandy fill consists of relatively permeable sands with interbedded clays and silts. Groundwater at Site 10 was encountered at approximately 7 feet below ground surface during the 2002 sampling event. Based on general TI hydrogeology and basewide groundwater monitoring and flow data, groundwater at Site 10 likely flows to the northeast, toward the shoreline.

No major sources of organic or inorganic contamination were identified in soil or groundwater at either Site 09 or Site 10. Small and isolated amounts of contamination in soil were identified at various locations. Only soil contamination that remains at the IR sites was evaluated during the human health and ecological risk assessments.

At Site 09, two areas of soil contamination were identified. The former hydraulic lift system was considered a potential source of **total petroleum hydrocarbon** (TPH) contamination. The hydraulic lift and associated underground storage tank were removed before the initial RI work. Analytical results for samples collected during the RI reported TPH concentrations below the screening criteria. Soil samples collected downgradient of the hydraulic lift system near the southeast corner of Site 09 boundary contained concentrations of TPH as diesel at 7,600 milligrams per kilogram (mg/kg) and 7,100 mg/kg. Based on the investigation findings, it was concluded that TPH contamination is localized and did not impact groundwater at the site.

The term “hazardous substance” is defined in CERCLA Section 101(14) to include substances listed under four other environmental statutes (as well as those designated under CERCLA Section 102(a)). The definition excludes “petroleum, including crude oil or any fraction thereof,” unless specifically listed or designated under CERCLA. At NAVSTA TI, petroleum contamination is addressed as part of the Navy petroleum program.

In August 2004, as part of a petroleum investigation at adjacent petroleum Site 14/22, a Navy contractor encountered a 2-inch thick layer of heavy (very viscous) petroleum that migrated off the petroleum site boundary, north toward Site 10. The petroleum was found at a consistent depth of 5 to 6 inches below grade in an approximately 20-by-20-foot irregularly shaped area. The nuisance soil was excavated to a depth of 1 foot below grade under petroleum “nuisance” criteria and sampled for **dioxins**, TPH, **volatile organic compounds** (VOC), and **polycyclic aromatic hydrocarbons** (PAH). Nuisance soil is defined as either odorous or visibly impacted soil present from 0 to 2 feet below ground surface in unpaved areas. Following excavation, four soil confirmation samples were collected from the excavation sidewalls. Non-detected to low concentrations of TPH were detected in the soils.

No VOCs were detected in the samples and PAHs were detected at low concentrations. Sampling confirmed the complete removal of the petroleum layer. The excavation area was subsequently backfilled with clean imported topsoil. The Navy received no further action concurrence from the Water Board for the petroleum layer.

During the same petroleum program investigations at adjacent Site 14/22, a burnt layer was also encountered in the northern Site 14/22 excavation. In association with the petroleum contamination, the burnt layer of soil was removed up to the southern Site 10 boundary. A trenching investigation for polychlorodibenzo-p-dioxins and polychlorodibenzofurans (collectively known as dioxins) in soils extending north onto Site 10 was completed in November 2005 to confirm the extent of burnt material and dioxins. Further investigation of the burnt layer at Site 10 was conducted and soil samples were collected from the layer, with dioxins identified at concentrations above TI background levels. Shallow soil trenching and removal, along with confirmation soil sampling, was completed. Based on results from confirmation samples, dioxin-impacted soils above TI background levels were successfully removed. The analytical results were reviewed with the Base Realignment and Closure Cleanup Team (BCT), and based on concurrence from the DTSC, the trench was backfilled with clean soil.

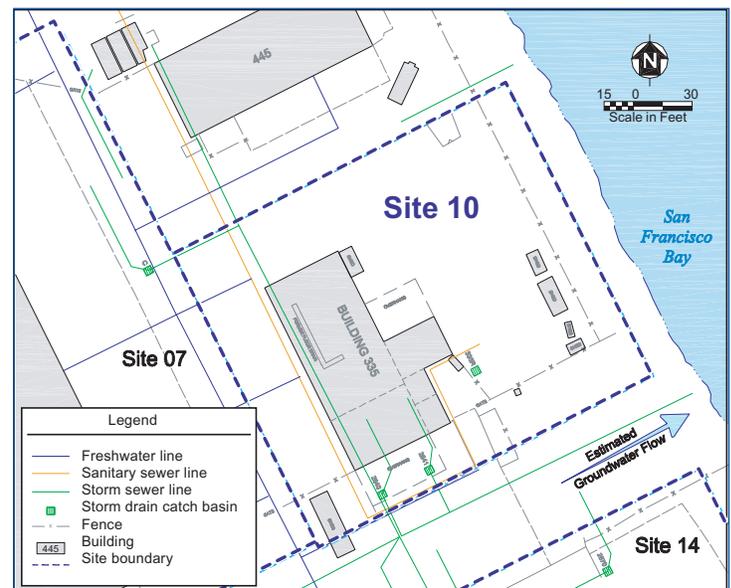


Figure 3. Site 10 - Former Bus Painting Shop Detailed Site Map

SUMMARY OF SITE RISKS

The Navy conducted baseline human health and ecological risk assessments as part of the remedial investigations at Sites 09 and 10. The risk assessments were completed using data collected from 1994 through 2002. Based on the results of the risk assessment, the Navy, DTSC, EPA, and Water Board agree that no action is necessary at Sites 09 and 10. A summary of the risk assessments follows.

Human Health Risk Assessment

For the human health risk assessment at Sites 09 and 10, the Navy calculated both cancer risks and noncancer **hazard indices** for an array of current and future residential and industrial exposure scenarios that were consistent with the proposed reuse of the property. An individual human health risk assessment was prepared for each IR site.

The Navy characterized cancer risks associated with exposure to contamination classified as carcinogens as an estimate of the probability (excess risk) that an individual will develop cancer over a 70-year lifetime as a direct result of exposure to potential carcinogens. For example, a cancer risk of 1×10^{-6} indicates that an individual has a one in one million probability of developing cancer during a lifetime as a result of the assumed exposure conditions.

For known or suspected carcinogens, acceptable additional cancer risk falls within a range between one person in ten thousand (1×10^{-4}) and one person in one million (1×10^{-6}), known as the risk management range. Risks less than one in one million (that is, less than 1×10^{-6}) are considered to be acceptable. Risks greater than one in ten thousand (that is, greater than 1×10^{-4}) may indicate the need for further evaluation.

Because groundwater at Sites 09 and 10 is not a source of drinking water, potential exposure to chemicals in groundwater would occur only through the inhalation of volatiles migrating upward into the air (breathing zone). For this reason, only VOCs were evaluated as possible **chemicals of potential concern** in groundwater. Following further evaluation, no VOCs were identified as chemicals of concern at either Sites 09 or 10. Chemicals of potential concern identified in soil at Sites 09 and 10 included iron and the PAHs benzo(a)pyrene and dibenz(a,h)anthracene.

The human health risk assessment report concluded that the following scenarios are within the risk management range or considered to be insignificant risks at both IR Sites 09 and 10.

- Current industrial worker
- Future industrial worker
- Future construction worker
- Future resident adults and children

In addition, the noncancer hazard index for a specific organ (or **target organ**) in the body calculated for the same risk scenarios for each site was less than one. A hazard index value of 1.0 or less indicates that adverse noncancer human health effects are not expected to occur. However, a total hazard index exceeding 1 doesn't necessarily mean that adverse effects are "expected to occur" or are "significant." If the

total hazard index is greater than 1, a segregated analysis of the hazard indices for each target organ is then performed to determine whether the noncancer health effects of chemicals to different target organs are possible.

Ecological Risk Assessment

A screening level ecological risk assessment for Sites 09 and 10 at NAVSTA TI was conducted following Navy policy and EPA guidance. The terrestrial habitat of TI is of poor quality for wildlife species because the island is predominantly covered with urbanized areas. The Navy and federal and state regulators have agreed that TI did not contain significant habitat and should not be considered for a detailed ecological risk assessment for terrestrial **receptors**.

Groundwater discharge to the San Francisco Bay is a potential concern because marine **ecological receptors** could be affected. The Sites 09 and 10 ecological risk assessment addressed chemicals identified in groundwater at each site and the potential risk to aquatic receptors associated with chemical groundwater migration to the offshore surface waters of the San Francisco Bay. Groundwater is not of ecological concern until it meets or becomes surface water, or when it can transport dissolved chemicals into the offshore environment. The Sites 09 and 10 ecological risk assessment focused on groundwater chemicals, which have the potential to migrate to the offshore environment and are bioavailable or potentially bioavailable to aquatic receptors.

Contaminants reported in groundwater were screened against TI screening criteria. **Chemicals of potential ecological concern** identified for Site 09 included nickel and the pesticides alpha-chlordane and endosulfan II. No contaminants of potential ecological concern were identified for Site 10. The contaminants were evaluated by simulating the **fate and transport** of nickel, alpha-chlordane, and endosulfan II in groundwater to the San Francisco Bay using an analytical model. Based on the results of the ecological risk assessment, groundwater at Sites 09 and 10 does not pose an unacceptable risk to aquatic receptors offshore of NAVSTA TI.

DESCRIPTION OF THE NO ACTION PROPOSED PLAN

Under CERCLA, no action is appropriate for sites when there is no current or potential threat to human health or the environment. The 2005 Final RI Report made the following recommendations:

- No additional soil or groundwater data are needed at Sites 09 and 10. The current level of site characterization is adequate to complete the human health and ecological risk assessments.

- Based on the results of the human health risk assessment, remedial action is not required for soil or groundwater at Sites 09 and 10.
- Based on the results of the ecological risk assessment, remedial action is not required for soil or groundwater at Sites 09 and 10.
- The IR Program effort for soil and groundwater at Sites 09 and 10 should be to pursue site closure through a no action **Record of Decision**.

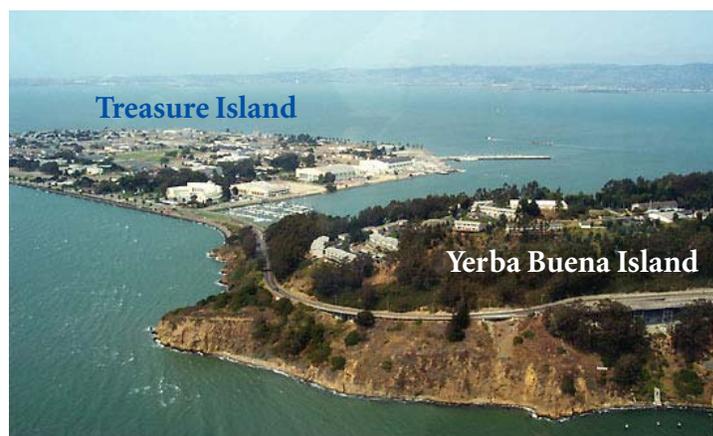
Based on the results of the RI and the human health and ecological risk assessments, there is no unacceptable risk to human health or the environment and no action is warranted for Sites 09 and 10 at TI for unrestricted use.

MULTI-AGENCY ENVIRONMENTAL TEAM SUPPORTIVE STATEMENT

The Base Realignment and Closure Cleanup Team (BCT) is comprised of the Navy, U.S. EPA, Cal EPA DTSC, and Water Board. The primary goals of the BCT are to protect human health and the environment, coordinate environmental investigations, and expedite the environmental cleanup at NAVSTA TI. The BCT reviewed all major documents and activities associated with Sites 09 and 10 including the RI Report. Based on these reviews and discussions on key documents, the BCT supports the Navy's recommendation for no action at Sites 9 and 10 for unrestricted use.

THE NEXT STEP FOR SITES 09 AND 10

The 30-day public comment period will end October 31, 2006. After the comment period has ended, the Navy will consider the comments received on this Proposed Plan before making a final decision for Sites 09 and 10. The Navy's decision will be recorded as a Record of Decision, which will include all of the comments received on this Proposed Plan, as well as the Navy's responses. A public notice will be placed in the San Francisco Chronicle announcing when the Record of Decision is available to the public in the San Francisco Public Library information repository.



OPPORTUNITIES FOR COMMUNITY INVOLVEMENT

**Public Meeting: October 17, 2006
6:00-7:00 P.M.**

**Location: Casa de la Vista, Building 271
Treasure Island**

You are invited to this community meeting to discuss the information presented in this Proposed Plan for Sites 09 and 10. Navy representatives will provide visual displays and information on the environmental investigations conducted for Sites 09 and 10. You will have an opportunity to ask questions and formally comment on the Navy's no action proposed for Sites 09 and 10 as presented in this Proposed Plan.

**Public Comment Period Continues through
October 31, 2006**

We encourage you to comment on this Proposed Plan during the 30-day public comment period. Comments may be submitted orally or in writing at the public meeting, or you can mail written comments postmarked no later than October 31, 2006 to: NAVFACENGCOM Southwest Division, Mr. Scott Anderson, at 1455 Frazee Road, Suite 900, San Diego, California 92108-4310 or e-mail (scott.d.anderson@navy.mil) no later than October 31, 2006. Public comments received during this period, or in person at the public meeting on October 17, 2006, will be considered in the final decision-making process for Sites 09 and 10.

GLOSSARY

Chemicals of Potential Ecological Concern: chemicals selected to help calculate site risks to the environment based on their toxicity, mobility, and concentration.

Chemicals of Potential Concern: chemicals selected to help calculate site risks to human health based on their toxicity, mobility, and concentration.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): a law that establishes a program to identify hazardous waste sites and sets up procedures for cleaning up sites to be protective of human health and the environment.

Dioxins: refer to a group of chemical compounds that share certain similar chemical structures and biological characteristics. Dioxins are an unwanted byproduct of combustion, both from natural sources like forest fires and from man-made sources like power plants, backyard burn barrels and industrial processes.

Ecological Receptors: any ecological organism that may be exposed to site contaminants.

Ecological Risk Assessment: an evaluation of the likelihood that plants or animals exposed to contaminants from a site would suffer harm.

Exposure Pathway: the way in which a chemical comes into contact with a living organism, such as touching, breathing, and ingesting.

Fate and Transport: a description of the potential pathways and eventual fate of site chemicals.

Hazard Index: A summation of the hazard quotients for all chemicals to which an individual is exposed. (The hazard quotient is the ratio of the potential exposure to the chemical and the level at which no adverse effects are expected. The value is used to evaluate the potential for noncancer health effects, such as organ damage, from chemical exposure).

Human Health Risk Assessment: an analysis of the potential negative human health effects caused by hazardous substances released from a site.

Installation Restoration Program: a U.S. Department of Defense (DoD) program developed to identify, assess, characterize, and clean up or control contamination from past hazardous waste disposal operations and hazardous materials spills at DoD facilities.

National Oil and Hazardous Substance Pollution Contingency Plan: the government's plan to respond to oil and hazardous substance spills, releases, and sites where these materials have been released.

Polycyclic Aromatic Hydrocarbons (PAH): compounds typically associated with the incomplete combustion of fossil fuels. These compounds are stable and resist common degradation processes in the environment. Many PAHs will bioaccumulate and are toxic to humans and ecological receptors.

Preliminary Assessment (PA): a limited-scope investigation performed on every site listed on EPA's hazardous waste list.

Receptors: any organism (human or ecological) that may be exposed to site contaminants.

Record of Decision: a document containing the final decision and agreement among the installation, the State of California, and EPA concerning selection of the remedial action at a site. The Record of Decision is based on information from the RI and on public comments and concerns.

Remedial Investigation (RI): an investigation in which the types, amounts, and locations of contamination at a site are identified.

Target Organ: the biological organ(s) most adversely affected by exposure to a chemical substance.

Total Petroleum Hydrocarbons (TPH): a black, naturally thick liquid hydrocarbon mixture that is flammable.

Unacceptable Risk: a quantification of potential harm to humans, animals, or plants from exposure to contaminants at elevated levels. An unacceptable risk means there is a potential for deleterious effects and action may be warranted.

Volatile organic compounds (VOC): are organic chemical compounds that are man-made substances that tend to volatilize or evaporate from soil or water. These chemicals are commonly used as solvents, degreasers and dry cleaning chemicals.

Mailing Coupon

If you would like to be added to the Treasure Island/Yerba Buena Island mailing list and receive copies of future newsletters and fact sheets, please fill out the coupon below and mail it to:

Mr. Scott Anderson
Remedial Project Manager
Navy BRAC Program Management Office West
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310

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