# Proposed Plan
# NASA Crows Landing

**Crows Landing, California** **June 1999**

## INTRODUCTION

The U.S Navy invites you to comment on the results of environmental investigations and their proposed plan for Installation Restoration Program (IRP) Sites 10, 12, 13, 14, 16, and 18 at National Aeronautics and Space Administration (NASA) (Formerly Naval Auxiliary Landing Field) Crows Landing Fight Facility (Figure 1).

As explained in this **proposed plan**, the Navy proposes that no action be taken at Sites 10, 12, 13, 14, 16, and 18 because the **human health risk assessment** and the **ecological risk assessment** for these sites concluded that the low chemical concentrations detected do not pose risks to human health and the environment based on current and future **exposure pathways**. This information is contained in the July 1997 **remedial investigation (RI)** report. The RI report is available for public review at the Patterson Public Library information repository (see page 5). This proposed plan highlights information from and is intended to be a companion to the RI report. This proposed plan explains why the Navy is proposing that no action be taken at these sites and gives the public the opportunity to be involved in the decision making process for the cleanup.

All words that appear in **bold** print are defined in the glossary on page 4.

This proposed plan also provides information on public involvement opportunities. The public comment period on the proposed plan begins June 11, 1999 and ends July 12, 1999. You are encouraged to comment on the Navy's proposed no action plan for these sites. The Navy will select a final remedy for Sites 10, 12, 13, 14, 16, and 18 after the public comment period has ended. The Navy is issuing this proposed plan as part of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) to ensure that the public has an opportunity to comment on the proposed action.

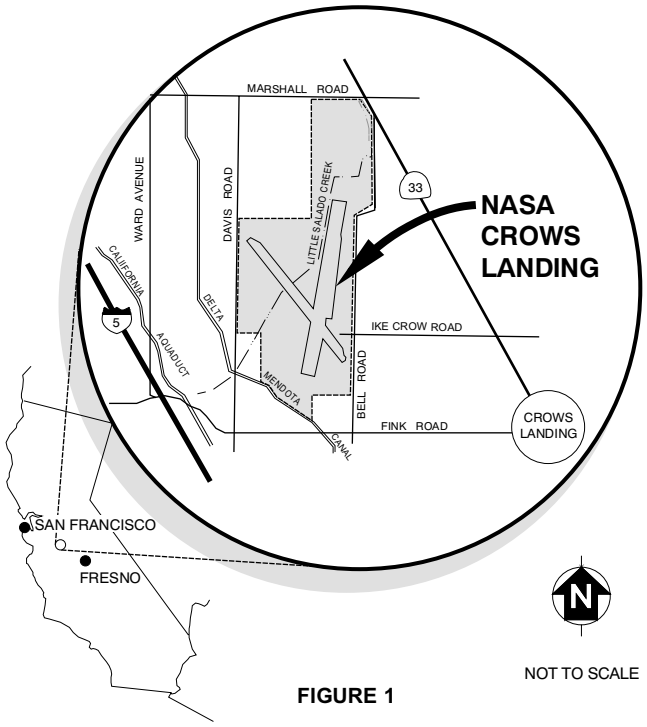



**FIGURE 1**

*Location of NASA Crows Landing*

The Navy is responsible for planning and implementing cleanup actions to remediate contamination that resulted from past Navy operations at NASA Crows Landing. The Navy has conducted environmental investigations in cooperation with the California Environmental Protection Agency Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB), Central Valley Region.

## CONTENTS



## YOUR COMMENTS MAKE A DIFFERENCE!

The Navy's decision may be different from the alternative presented in this proposed plan if new information or comments submitted during the comment period are adequate to support changes. Please comment on the Navy's proposed plan. Elsewhere in this fact sheet, you will find specific information on how you can participate during the comment period.

**PUBLIC MEETING - JUNE 23, 1999 - SEE PAGE 5 FOR DETAILS**

## SITE BACKGROUND

NASA Crows Landing is located in Stanislaus County, California, approximately 80 miles southeast of San Francisco. The site consists of 1,500 acres of land in the northwestern part of the San Joaquin Valley between the towns of Patterson and Crows Landing. The base was commissioned by the U.S. Navy as Naval Auxilary Landing Field (NALF) Crows Landing in May 1943. NALF Crows Landing originally served as a training field during World War II. The facility was largely inactive after World War II until the early 1950s, when the facility was used during the Korean Conflict for fleet carrier landing practice. Throughout the 1970s and 1980s, NALF Crows Landing was used for practice operations by the Navy, Air Force, Army, and Coast Guard. NASA took over operation of NALF Crows Landing from the Navy in 1994 but is now vacating the facility and preparing to transfer the property to new ownership. The name of the facility was changed to NASA Crows Landing when NASA took over its operation in 1994.

In 1984, the Navy began environmental studies to investigate past use and disposal of hazardous materials at NALF Crows Landing. Eight sites under the installation restoration program have been identified. The past use and disposal of hazardous materials at each site are different. In addition, the contaminated **media** at each site are different. A **feasibility study** is in progress for two of the sites: Site 11, the Disposal Pits Area, and Site 17, the Demolished Hangars Area. This proposed plan specifically pertains to the remaining six sites: 10, 12, 13, 14, 16, and 18 (Figure 2).

Site 10 is a former rubble disposal area located at the southeastern end of the northwest-trending runway (Figure 2). A pit was reportedly dug at this location and used for rubble disposal in 1952 and 1953. Rubble was thought to include scrap lumber, drywall, metal, ash, wire, and pipe from building construction and demolition. Rubble was placed in the pit, burned, and covered with soil. Today, no visible evidence of the pit remains.

Site 12, the maintenance shop area, is on the eastern side of the base (Figure 2). Site 12 consists of an area called a "waste bowser", the vehicle parts wash rack pad, and a pesticide mixing area, all located in the immediate vicinity of the auto maintenance building.

- The "waste bowser" was a stationary, aboveground storage tank used to collect solvents and waste oil from vehicle maintenance and repair, and was located west of the auto maintenance building. Solvents and waste oil were collected in buckets inside the building and periodically emptied into the bowser. Reportedly, some spillage occurred during transfer, resulting in minor surface staining. The "waste bowser" was removed in 1982, and surface staining is no longer visible.

- The vehicle parts wash rack pad was used from 1959 to the early 1990s, and was located adjacent to the western side of the auto maintenance building. The area consisted of a concrete pad with drains near the center that apparently drained into the adjacent gravel and bare soil. The wash rack pad was originally used to steam clean solvents from vehicle parts, but solvent-coated parts were no longer being washed on this pad by the early 1990s.

- The pesticide mixing area consisted of an outside faucet surrounded by gravel and bare soil located southwest of the auto maintenance building. The pesticide mixing area was used from 1978 to the early 1990s to mix pesticides and rinse sprayer tanks. During mixing, foam overflow from the sprayer tanks reportedly spilled onto the surrounding gravel and bare soil. In addition, **rinsate** from the sprayer tanks was reportedly poured onto the surrounding gravel and bare soil or sprayed onto nearby roads.

Site 13, the TACAN transformer oil spill area, is located near the TACAN transmitter building west of the runway intersection (Figure 2). The site consists of a concrete pad with three transformers. In 1962, a transformer caught fire and leaked oil onto the unbermed pad. It was not known whether the transformer oil contained **polychlorinated biphenyls (PCBs)**. Later, the pad was enlarged and an unspecified quantity of adjacent surface soil was excavated. Today, there are three transformers on the pad; however, these are not the same transformers that were there at the time of the fire.

Site 14, the fire training area, is located in the main administration area on the eastern side of the base (Figure 2). The area consisted of an unlined burn pit used for fire training exercises, which were conducted periodically from 1943 to 1987. Typical fire training exercises consisted of pouring 200 to 300 gallons of jet fuel, often mixed with crankcase oil and cleaning solvents, over a mock airplane and igniting it. The fire was then extinguished with water.

Site 16, the pesticide rinse area, is in the administration area on the southern end of the base adjacent to the base water storage tank and pump house (Figure 2). The area consisted of an outside faucet and concrete pad surrounded by gravel and soil. The site was used from the 1950s to 1978 for mixing pesticides and rinsing 200-gallon sprayer tanks. During mixing, foam overflow from the sprayer tanks reportedly spilled onto the surrounding gravel and bare soil. In addition, rinse water from the sprayer tanks was reportedly poured onto the surrounding gravel and bare soil or sprayed onto nearby roads.

Site 18, the firing range, consists of two separate areas: an area where live ammunition has been found, and an earthen berm possibly used as a firing range bullet backstop.

- The live ammunition area is located adjacent to Little Salado Creek south of the access road to the TACAN building (Site 13) (Figure 2). A single 20 millimeter (mm) shell was discovered in late 1991 by a farmer who was excavating in the area. Additional excavation at that time by the explosive ordnance detail from Naval Shipyard Mare Island recovered one additional, highly corroded 20-mm shell stamped 1952. No other ammunition was found in the area, and the origin of the 20-mm shells is not certain.

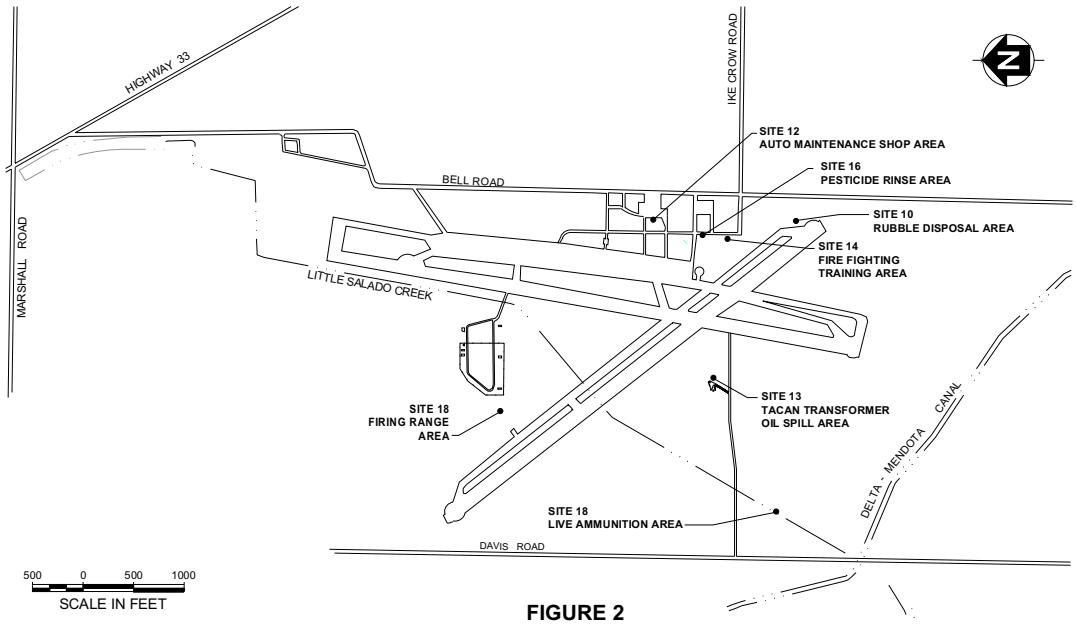



**FIGURE 2**

***Location of Proposed No Action Sites at NASA Crows Landing***

The other part of Site 18, the firing range, consisted of an earthen berm located adjacent to the northwest-trending runway (Figure 2). The earthen berm was constructed in the late 1940s and was removed by the mid-1950s. The area was apparently used as a small arms firing range, with the small arms being fired from the opposite side of the earthen berm toward the runway. The area where the earthen berm was located has been used for crop production since the mid-1950s.

## NATURE AND EXTENT OF CONTAMINATION

The Navy conducted RIs at all six sites. Site 10 was not included in the RI report as the Navy and regulatory agencies had initially determined that no further studies were necessary at the site. However, to ensure that the site was thoroughly investigated, two trenches were later excavated to evaluate the presence of buried debris, rubble, or other material. One trench was oriented in the east-west direction. The other trench was oriented in the north-south direction. The intersection of the two trenches was centered on the spot identified as the former IRP site 10 location. During excavation, the site was monitored to assess the presence of subsurface material that would require permanent removal and off-site disposal. No stained soil, buried debris, or other evidence of a disposal pit was observed. Both trenches were backfilled with the original soil and compacted to match the surroundings.

The RI was conducted at Site 12 (maintenance shop area) to further evaluate low levels of fuel-related compounds and pesticides in soil and fuel-related compounds in **groundwater** that were discovered during earlier investigations at the site. The low levels of fuel-related compounds were probably associated with a previously unknown leaking underground storage tank which was discovered during the RI. The tank was no longer present. All contaminated soil was removed during the RI investigation. The low level of pesticides present is consistent with long-term pesticide use in the area.

During the initial phase of investigations at Site 13 in the TACAN transformer oil spill area, no PCBs were found, but low levels of pesticides were detected in the soil. The RI at Site 13 was conducted to determine if the low levels of pesticides or metals might contaminate groundwater. Results of the RI showed that the low levels of metals and pesticides are not posing a threat to groundwater quality. As part of the RI, soil samples were collected and analyzed from the site and adjacent agricultural land and the levels of pesticides were similar in both areas.

In 1987, the Navy was to replace the unlined burn pit at Site 14 with a concrete-lined structure. Soil-containing fuel-related compounds were encountered, stockpiled, and later treated to remove contamination. The purpose of the RI was to determine if there was any contaminated soil in the stockpile at Site 14. The RI concluded that the soil was clean and it has since been used as backfill in excavations at Sites 12 and 16. Also, analysis of samples collected at the site show that groundwater has not been contaminated as a result of past activities.

Based on the site history, pesticides were the primary contaminant of concern at Site 16. However, no pesticides were found during initial soil sampling investigations at Site 16 but there were some elevated levels of metals in the soil. The soil with high metals content was removed during the investigation and the excavation was backfilled with clean soil from Site 14.

The purpose of the RI at Site 18 (firing range) was to determine if the site was affected by possible metals contamination from firing range activities. The RI showed that lead concentrations in soil, the most likely contaminant, were similar to background conditions. The investigation concluded that the firing range did not result in metals contamination.

## SUMMARY OF SITE RISKS

As part of the RI process, the Navy prepares human health and ecological risk assessments to evaluate the potential effects to human health and the environment as a result of exposure to chemicals identified at each site. The human health and ecological risk assessments identify contaminants, exposure pathways, potential human and ecological **receptors**, and the possible risks of exposure to the contaminants.

Sites 10, 14, and 16 were eliminated from consideration in the initial steps of the human health risk assessment because either no contaminants were identified or contaminants had been removed.

Human health risk assessments were completed for the remaining sites because low levels of pesticides are present in soil at Site 13 and low levels of metals are present in soil at Sites 12 and 18.

The U.S. Environmental Protection Agency (EPA) has established an acceptable range of risk levels as a means of estimating the potential human health risks caused by exposure to contaminants. Risks are calculated based on the types of contaminants present at a site and possible exposure pathways. For example, at Sites 12, 13, and 18 humans could be exposed to contaminants in the soil through skin contact and inhaling dust particles.

The Navy evaluated possible risks under two scenarios: site workers and potential residential users. The determination that no action at these sites would be appropriate is based on potential risks associated with potential residential use, that is, an individual living at the site continually for 30 years.

The carcinogenic (cancer-causing) risk hazard for Sites 12, 13, and 18 were within EPAs target risk range for both scenarios; that is, the potential risks are low and would not require action according to federal and state laws. The sites were also below EPA's noncarcinogenic (noncancer-causing) hazard threshold and, thus, do not pose a risk.

The first phase of an ecological risk assessment was conducted to determine the potential for contact between ecological receptors (animals and plants) and contaminants. The results of the assessment indicate there is no risk to ecological receptors at Sites 10, 14, and 16 because no contamination is present. The ecological risk assessment also concluded that low chemical concentrations in soils at Sites 12, 13, and 18 do not pose a risk to ecological receptors.

In summary, based on the results of the human health risk assessment and the ecological risk assessment, these sites do not pose a risk to human health or the environment.

### THE NEXT STEPS

The Navy will evaluate the comments received during the public comment period and choose a final decision for the site. The final decision will be documented in a **Remedial Action Plan.**

## DESCRIPTION OF THE NO ACTION PREFERRED ALTERNATIVE

Under CERCLA and State of California law, no action is appropriate for sites when there is no current or potential threat to human health or the environment. Specifically, no action is warranted at sites where (1) no release of CERCLA hazardous substances has occurred, (2) a risk assessment indicates that the sites do not pose an unacceptable risk to human health or the environment, and (3) a previous cleanup action has eliminated existing or potential unacceptable risks to human health or the environment. No action decisions, where appropriate, are consistent with the Navy's overall effort to accelerate cleanup at NASA Crows Landing. By identifying and completing studies at sites that do not require action, resources can be concentrated on the sites that do require cleanup. As previously mentioned, no contamination was found at Site 10 and contamination has been removed from Sites 14 and 16. The human health risk assessments for Sites 12, 13, and 18 concluded that under occupational (site worker) and residential exposure scenarios, chemical concentrations in soil do not pose a threat to human health. The ecological risk assessment also concluded that there is no risk to the environment. Therefore, no action is appropriate for Sites 10, 12, 13, 14, 16, and 18.

## GLOSSARY

**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 a chemical contacts a living organism.

**Feasibility Study** - a study in which potential cleanup methods are identified and evaluated based on their effectiveness, availability, and cost, among other factors.

**Groundwater** - water present below the ground surface in saturated bedrock or sediment that can be recovered in a well.

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

**Media** - the physical environments, such as soil or groundwater, that may be contaminated by hazardous substances.

**Polychlorinated Biphenyls (PCB)** - toxic chemicals formerly used in transformers to keep them cool. These are long-lasting manmade compounds, many of which bioaccumulate and are toxic to human and ecological receptors.

**Proposed Plan** - a document that reviews the cleanup alternatives, summarizes the recommended cleanup actions, explains the reasons for recommending them, and solicits comments from the community.

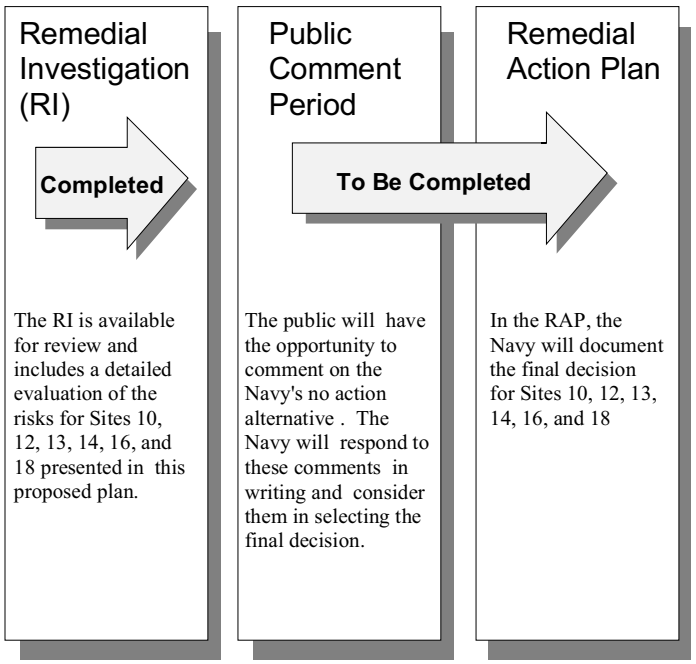
**Receptors** - any organism (human or ecological) that may be exposed to contaminants from a site.

**Remedial Action Plan** - a public document that specifies the final cleanup alternative to be used at a site. The Remedial Action Plan is based on information from the RI and on public comments and concerns.

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

**Rinsate** - water rinsed out of containers during the cleaning process.

## CERCLA Process: What's next at Sites 10,12,13,14,16, and 18?




### DATES TO REMEMBER

*Public Review and Comment:*
June 11, 1999 until July 12, 1999

*Public Meeting:*
Wednesday, June 23, 1999
7:00 p.m. - 9:00 p.m.
City Council Chambers Large Room
48 North Salado
Patterson, California

### FOR MORE INFORMATION

If you have any questions about NASA Crows Landing please contact: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### COMMUNITY PARTICIPATION

The Navy invites the public to become involved in the process of selecting the proposed remedy. Comments from communities surrounding NASA Crows Landing are valuable in helping the Navy select a final remedy for these sites. Based on the new information or public comments, the Navy may change the no action alternative.

There are two ways for you to provide your comments during the public comment period, between June 11 and July 12, 1999. You may send written comments to Mr. Hubert Chan at the following address:

Department of the Navy
Engineering Field Activity West
Naval Facilities Engineering Command
900 Commodore Drive, Building 210
San Bruno, California 94066-5006

Alternatively, you may submit your comments to the Navy during the public meeting on June 23, 1999. The meeting will be held in the City Council Chambers Large Room, 48 North Salado in Patterson, California. A court reporter will be present at the meeting to record comments for a written record.

After the public comment period is over, the Navy will review and consider the submitted comments before making a final decision on the remedial action alternative to be used at these sites. All site-related documents are available for review at the Patterson Public Library.

Patterson Public Library
Reference Desk
46 Salado Avenue at 3rd Street
Patterson, California 95363
(209) 892-6473

## MAILING LIST

If you would like to be included on the Navy's mailing list for NASA Crows Landing, please fill out, detach, and mail this form to Mr. Hubert Chan at the address below.

NAME: _____ PHONE: _____ FAX: _____

MAILING ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

Navy Environmental Office
Mr. Hubert Chan
Department of the Navy
Engineering Field Activity West
Naval Facilities Engineering Command
900 Commodore Drive, Building 210
San Bruno, California 94066-5006

COMMENTS:

Comments must be postmarked by July 12, 1999. If you have any questions about the comment period, please contact Mr. Hubert Chan (415) 244-2562