FINAL ENVIRONMENTAL ASSESSMENT

MOFFETT FIELD
COMPREHENSIVE USE PLAN

MOFFETT FIELD, CALIFORNIA

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PREPARED FOR:
NASA Ames Research Center

AUGUST 1994

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This environmental assessment considers development under Future Concept 1 of the Comprehensive Use Plan.

PREPARED BY
BRADY AND ASSOCIATES, INC.
PLANNERS AND LANDSCAPE ARCHITECTS

Moffett Field Comprehensive Use Plan
Final Environmental Assessment
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List of Abbreviations and Acronyms

ABAG	Association of Bay Area Governments
AICUZ	Air Installations Compatible Use Zones
AQS	Air Quality Standard
BAAQMD	Bay Area Air Quality Management District
BCDC	Bay Conservation and Development Commission
BLM	U.S. Bureau of Land Management
CANG	California Air National Guard
CAP	Clean Air Plan
CARB	California Air Resources Board
CDF	California Department of Forestry
CDFG	California Department of Fish and Game
CNDD	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CUP	Comprehensive Use Plan
dB	Decibel (a measure of noise level)
dBA	A-weighted decibel
DHS	California Department of Health Services
DOD	U.S. Department of Defense
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FIP	Federal Implementation Plan
FONSI	Finding of No Significant Impact
HC	Hydrocarbons
HOV	High Occupancy Vehicle Lane
IRP	Installation Restoration Program
Ldn	Day-night average noise level
Leq	Equivalent noise level
LOS	Level of Service

LTO	Landing/Takeoff Operation
mBtus	Million British Thermal Units
MEW	Middlefield-Ellis-Whisman Superfund Site
MMP	Mitigation Monitoring Plan
MSL	Mean Sea Level
MWh	Megawatt Hours
NAS	Naval Air Station
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Policy Act
NOA	Notice of Availability
NOC	Notice of Completion
NOD	Notice of Determination
NOI	Notice of Intent
NOP	Notice of Preparation
NOx	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
OARF	Outdoor Aeronautics Research Facility
OSHA	Occupational Safety and Health Agency
PCB	Polychlorinated Biphenyl
PG&E	Pacific Gas and Electric Company
PM_{10}	Suspended particulate material less than 10 μm in diameter
POTW	Sunnyvale Public Owned Treatment Works
ppb	Parts per billion
ppm	Parts per million
psi	Pounds pe square inch (pressure)
RWQCB	Regional Water Quality Control Board, California
SARA	Superfund Amendments and Reauthorization Act
SCCHD	Santa Clara County Health Department
SHPO	State Historic Preservation Officer
SOx	Sulfer Oxides
State OES	California State Office of Emergency Services
TAC	Toxic Air Contaminant
TSP	Total Suspended Particulates
UBC	Uniform Building Code
USAF	Unitied States Air Force
USFWS	United States Fish and Wildlife Service
V/C	Volume to Capacity Ratio

Chapter I
INTRODUCTION

■ ■ ■

This document is an Environmental Assessment (EA) prepared under the National Environmental Policy Act (NEPA) for Future Concept 1 of the Moffett Field Comprehensive Use Plan (hereinafter referred to as the "Plan"). Adoption of Future Concept 1 is the proposed action analyzed by this Environmental Assessment.

A. Background

As part of federal budget reduction measures and military downsizing, closure of federal military installations throughout the United States has been evaluated and, in some cases, subsequent military base closure has occurred. The Base Closure and Realignment Commission was formed to evaluate these closures and downsizings.

On April 15, 1991, the Commission recommended that the Navy (Department of Defense) discontinue use and occupancy of Moffett Field. The Commission also recommended that the property continue to operate in a federal capacity. Based on this recommendation, Congress and the President of the United States made the final decision to discontinue the Navy's occupancy of the Moffett Field property, but continue operation of Moffett Field as a federal installation. These actions were exempt from NEPA.

Moffett Field is subject to the Federal Property and Administrative Services Act of 1949, which sets the framework for disposal of federal property. The availability of the property for alternative federal ownership was reported to the General Services Administration. Subsequently, the National Aeronautics and Space Administration (NASA) successfully negotiated for the stewardship of Moffett Field. This transfer of federal property stewardship is also exempt from NEPA regulations.

B. The Comprehensive Use Plan

The Comprehensive Use Plan was developed by the National Aeronautics and Space Administration (NASA) in order to effectively implement the transfer of stewardship of Moffett Field Naval Air Station (NAS) to NASA from the Department of Defense (DOD) in July 1994. The property will remain a federal facility under the Comprehensive Use Plan. The Plan is only conceptual in nature. No specific development projects are planned at this time.

C. NEPA Regulations

Prior to development of the Comprehensive Use Plan, the actions related to the transition of Moffett Field have been exempt from NEPA.

Adoption of the Comprehensive Use Plan by NASA is considered a "major federal action" under NEPA regulations [40 CFR 1508.18(b)(2)].

NASA, acting as lead agency, determined that an Environmental Assessment was required to determine the potential for adverse environmental effects. This document is a program-level Environmental Assessment and thus analyzes the environmental impacts of implementing Future Concept 1 of the Comprehensive Use Plan. Site-specific projects under Future Concept 1 of the Comprehensive Use Plan will require additional environmental review before implementation.

An Environmental Assessment is the primary tool used by a federal agency to determine whether to prepare an Environmental Impact Statement (EIS). This report provides a project description, environmental checklist, explanation of checklist answers, and a summary of mitigation measures to be incorporated into the project. As stipulated in the NEPA regulations, an EIS would be required if a project would have the potential to significantly affect the quality of the human environment. If a project has no significant environmental effect, or where it can be shown that mitigation measures have been incorporated into the project which would minimize or reduce impacts to a non-significant level, a Finding of No Significant Impact (FONSI) may be issued.

D. Environmental Assessment Content

The information contained in this report is based on the investigations of NASA, Boeing, and Department of Defense staff; planning consultants; and environmental specialists. Analysis was based on 1993 existing conditions. A registered transportation engineer, noise specialists, and air quality and emissions experts performed some of the field work and analyses included in this report. In addition existing conditions information, including extensive biological, hazardous materials, and archeological documentation was available from previous studies of the site, including the Navy's Baseline Environmental Report (BER). This information is summarized throughout this document and is incorporated by reference into this Environmental Assessment. Specific documents are given in footnotes throughout this document, as well as in Chapter VIII: References and Contacts.

E. Public Involvement

On June 3, 1993, NASA held a public open house to solicit input on preparation of the Comprehensive Use Plan. On November 15, 1993 another public open house was held to gather public input on the Comprehensive Use Plan and the environmental analysis of the Comprehensive Use Plan. In addition, the Draft Environmental Assessment was circulated for public review and comment by NASA in April 1994. The Draft Environmental Assessment was available for a 30-day review period, which closed on May 11, 1994. A public forum was held on April 18, 1994 to solicit public input and comment on the Comprehensive Use Plan and the Draft Environmental Assessment.

This document has been revised in response to public comments on the Draft Environmental Assessment. Within this Final Environmental Assessment, verbatim copies of all comments received on the Draft Environmental Assessment and responses to substantive comments are included in Chapter VII.

Chapter II
PROPOSED ACTION AND ALTERNATIVES

■ ■ ■

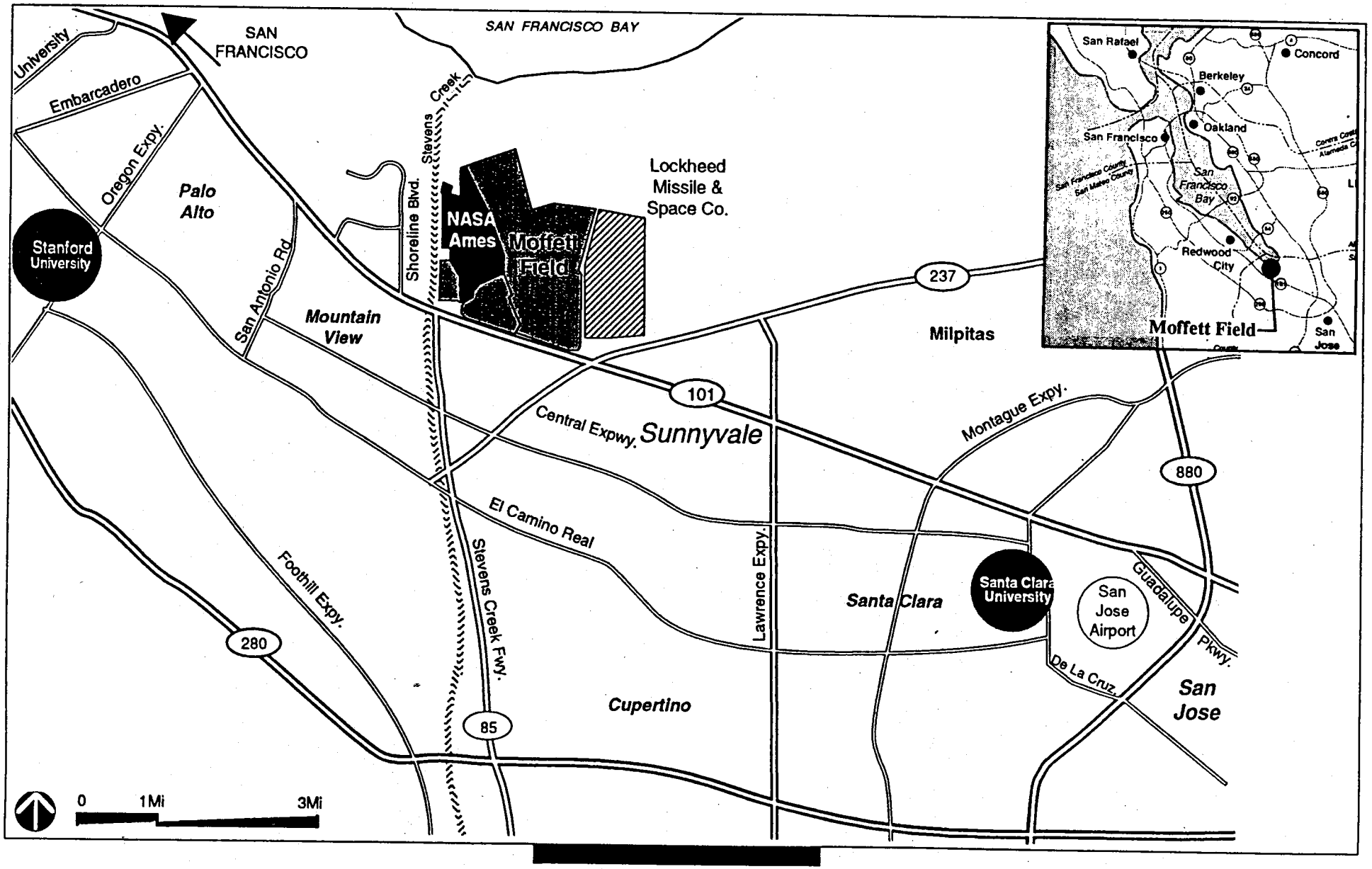
A. Location

Moffett Field is located on the southwestern shoreline of the San Francisco Bay, about 25 miles (40 kilometers) east of the Pacific Coast, as shown in Figure 1. The City of Mountain View is adjacent to the western and southern boundaries of Moffett Field and the eastern and southern boundaries adjoin the City of Sunnyvale. Downtown San Jose is about seven miles southeast, and the City of San Francisco is about 32 miles (52 kilometers) northwest. US Highway 101 passes just south of the facility site.

The study area encompasses approximately 1,700 acres (688 hectares). This area includes both the existing NASA Ames Research Center and the Moffett Field Naval Air Station. The study area does not include the Onizuka Air Force Base Housing since this area will be excluded from the transfer to NASA stewardship and will remain under Department of Defense control in the care of Onizuka Air Force Base. Existing land uses at Moffett Field are described in Table 1.

B. Purpose and Need

On April 15, 1991, the Base Closure and Realignment Commission recommended that the Navy cease operations at Moffett Field. In October 1991, Congress and the President of the United States approved the recommendation of the Base Closure and Realignment Commission to disestablish the NAS at Moffett Field. The availability of the airfield had become essential for Ames aerospace and aeronautic research over time. The recommendation of the Base Closure and Realignment Commission that Moffett Field remain a federal installation was accepted with enthusiastic support from the neighboring communities of Mountain View and Sunnyvale. NASA Ames Research Center has accepted responsibility for operating Moffett Field as a shared federal facility. The active duty Navy is scheduled to leave Moffett Field by July 1994.



NASA

MOFFETT FIELD
COMPREHENSIVE USE PLAN
ENVIRONMENTAL ASSESSMENT

FIGURE 1

Vicinity Map

Table 1
EXISTING DEVELOPMENT

Developed Lands (buildings, roads, and parking areas)	705 acres
Airfield	445 acres
Golf Course	140 acres
Vacant/Developable Lands	220 acres
Wetlands	≈190 acres

Moffett Field has been a federal airfield used for research, development, training and operational activities for 60 years. There are no plans to change this use and Moffett Field will remain as property of the U.S. Government. NASA Ames Research Center and other federal entities, such as the California Air National Guard and the Navy Air Reserve, will continue to operate at Moffett Field. These entities are known as Resident Agencies.

It was estimated that the removal of the Navy from Moffett Field would eventually result in the direct and indirect loss of approximately 6,800 jobs[1], mostly by residents of Santa Clara County. However, these estimates did not consider the continued use of Moffett Field by NASA and other federal entities. Potential losses would add to the economic problems already recorded and anticipated for Santa Clara County and the vicinity. NASA can play a key role in the revitalization of Silicon Valley through continued operation of Moffett Field and interaction with local and regional firms in the development of new products and services.

Continued operation of Moffett Field and the transfer of the facility to NASA stewardship is necessary to ensure that the field remains an economic resource for the region and that the research and development missions established by Congress and the President can continue to be supported. The Comprehensive Use Plan will provide guidance for NASA in developing Moffett Field in an economically viable and well conceived fashion.

[1] NAS Moffett Field Draft Base Closure and Realignment Environmental Impact Statement (DEIS). Refined in the subsequent update of Impact of Defense Cuts on California, California Commission on State Finance, May 1993.

C. Project Objectives

The purpose of the Comprehensive Use Plan is to satisfy the following three objectives:

- Provide guidance to NASA management for decisions that affect the future of Moffett Field.
- Provide future alternatives for consideration in an Environmental Assessment or EIS of the Comprehensive Use Plan.
- Provide background information for related planning efforts such as the Facilities Master Plan and the Airport Master Plan, both scheduled to commence upon completion of the Comprehensive Use Plan.

D. Description of Proposed Action

1. Background

In response to the recommendation of the Defense Base Closure and Realignment Commission and support by the local community that Moffett Field remain a federal facility, the Naval Air Station at Moffett Field will transfer to NASA in July of 1994.

Transfer of the facility will include all land, buildings, facilities, infrastructure, and other property, excluding the base family housing and related community support facilities. The area excluded from the transfer to NASA will remain under Department of Defense control in the care of Onizuka Air Force Base and is not covered by this environmental review.

Although there is no change in the use or ownership of the federal property at Moffett Field, NASA is preparing the Comprehensive Use Plan to consider future development projects and to provide information to those concerned with the management, planning and development of Moffett Field. The Plan provides information on proposed future uses at Moffett Field by NASA and various Resident Agencies (agencies which reside and use Moffett Field through agreement with NASA) up to the year 2010. The proposed projects and new or altered uses by NASA and the Resident Agencies are conceptual in nature. At the time a specific development project is proposed, additional site-specific environmental review will be required prior to final action on the proposal. In addition, several permits may be required for individual development projects as applicable. A range of these permits, agencies, and permitting authority is given in Table 2.

2. The Proposed Action

Future Concept 1, as identified in the Comprehensive Use Plan, is an estimation of operations that could occur at Ames Research Center and Moffett Field in 2010 with NASA acting as the custodial federal agency (see Figure 2). It assumes that the full capacity for the site will not be utilized. However, it proposes likely buildout (expected growth) given past growth at the facility and projected funding capability. Table 3 compares Future Concept 1 with the existing conditions and the alternative of no project. Table 4 shows the building program for Future Concept 1. The Comprehensive Use Plan identifies this scenario as the Preferred Alternative. This Environmental Assessment considers development under this concept as "the proposed action".

3. Actions Which Require Further Analysis

Additional general analysis of Future Concept 2 and the No Project Alternative are included in Section F of this chapter. However, if Future Concept 2 is to be considered the preferred alternative in the future and proposed for adoption, additional environmental analysis will be required prior to its adoption as the Comprehensive Use Plan.

This Environmental Assessment does not analyze the impacts of the closure or transfer of Moffett Field. These impacts were analyzed in the NAS Moffett Field Base Closure and Realignment Draft EIS.[2] Since that time, the Navy has determined that its departure from Moffett Field is Categorically Excluded from NEPA. In addition, future site-specific development projects, the Facilities Master Plan, and the Airport Master Plan will require additional environmental analysis as they are not part of the scope of this Environmental Assessment.

E. Alternatives to the Proposed Action

This section identifies alternatives considered for future development of Moffett Field. This environmental assessment analyzes the development scenario outlined as Future Concept 1 in the Comprehensive Use Plan. This alternative is the preferred development scenario identified by NASA for

[2] Candidate Base Closure/Realignment in San Francisco Bay Area Draft EIS. July 1990.

Table 2
APPLICABLE REQUIREMENTS FOR INDIVIDUAL PROJECTS

Description	Agency	Authority
Water Quality Standards	RWQCB	NPDES Stormwater Permit
Discharge into U.S. Waters, including wetlands	Army Corps	Section 404 of the CWA 33 U.S.C. 1344, Exec. Order 11990
Oil Spill Prevention	RWQCB	Section 311 of the CWA
Construction in or fill of "navigable waters"	Army Corps	Section 10 of the Rivers and Harbors Act of 1899, 33 U.S.C. 403
Construction in Floodplains	FEMA	Executive Order 11988, Floodplain Management
Endangered Species	USFWS	Endangered Species Act, 16 U.S.C. 1536, 1973
Historic and Archaeology Resources	Advisory Council on Historic Prevention SHPO	Section 106, 16 U.S.C. 470
Superfund Cleanup	EPA, RWQCB	RCRA, CERCLA
Air Emissions - stationary sources	BAAQMD	Clean Air Act
Stream bed alteration	Fish and Game	Streambed Alteration Agreement
Underground Storage Tanks	Santa Clara County Health Department	Santa Clara County Storage Ordinance
Hazardous Materials Storage	Santa Clara County Health Department	Santa Clara County Storage Ordinance
Asbestos Abatement	OSHA, BAAQMD	Clean Air Act
Industrial Waste Water	Palo Alto, Sunnyvale	Industrial Wastewater Ordinance
Construction in or adjacent to Stevens Creek	Santa Clara Valley Water District	District Ordinance 83-2

Table 3
PROJECT DESCRIPTION

	Existing Conditions 1993	CUP Concept 1 2010	No Project 2010
Employees[a]	10,000	10,610	7,940
Developed Acres	1,150	1,250	1,150
Square Footage of Buildings	5,615,528	6,705,328	5,615,528

[a] Additional employees that would result if the National Wind Tunnel Complex is sited at Moffett Field are not a part of the Plan proposal.

Table 4
INCREMENTAL PROGRAM FOR THE PROPOSED ACTION
FUTURE CONCEPT #1

Activity	Additional Developed Land (acres)	Additional Building Square Footage	Additional Employees [a]
1. Flight Operations (including direct support)	25	132,500	185
2. Research & Development (including direct support)	60	811,600	65
3. Administration Support (including public activities)	5	35,000	140
4. Operational Support (including warehousing)	5	49,000	100
5. Personnel Support (including recreation)	5	61,700	120
TOTAL	**100**	**1,089,800**	**610**

[a] Additional employees that would result if the National Wind Tunnel Complex is sited at Moffett Field are not a part of the Plan proposal.

Moffett Field. However, the Comprehensive Use Plan also outlines development under the Future Concept 2. This scenario allows much more development and employees at Moffett Field, and a corresponding increase in expected environmental impacts.

In addition to the two Comprehensive Use Plan alternatives, there is the No Action Alternative. Under this alternative, only the existing uses, plus any activities directed by future BRAC actions or other regulations would occur.

The development scenarios of the alternatives are compared in Table 5.

1. Future Concept 2

The type of development outlined in Future Concept 2 in the Comprehensive Use Plan is similar to Future Concept 1, except it contains a higher level of density and development. The development plan of Future Concept 2 is shown in Figure 3. Future Concept 2 is an intensive mix of activities which represent a possible development plan for Moffett Field in 2010, as shown in Table 5 and 6. It represents a mix of activities and does not emphasize any particular type of development.

Development of Future Concept 2 would result in approximately 13,900 employees by 2010 and more than 8 million square feet of building area. This equals 3,290 more employees and over 1.5 million more square feet than development under Future Concept 1.

Due to this alternative's intensive development and the anticipated operational impacts associated with it, it was not selected as the preferred development alternative. It was determined that the rapid and extensive growth represented by Future Concept 2 would result in potential impacts to traffic, air quality, noise, environmental hazards, biological resources, and utilities and services.

It should be noted that, even though Future Concept 2 is identified as an alternative in this Environmental Assessment and is shown as an alternative in the Comprehensive Use Plan, its impacts are not in detail. Since development is allowed at a much greater intensity under Future Concept 2, additional environmental review under NEPA would be required for its adoption as a development program.

Table 5
COMPARISON OF ALTERNATIVES

	Existing Conditions 1993	CUP Concept 1 (Project) 2010	CUP Concept 2 2010	No Action Alternative 2010
Employees[a]	10,000	10,610	13,900	7,940
Developed Acres	1,150	1,250	1,350	1,150
Square Footage of Buildings	5,615,528	6,705,328	8,245,428	5,615,528

[a] Additional employees that would result if the National Wind Tunnel Complex is sited at Moffett Field are not a part of the Plan proposal.

Table 6
INCREMENTAL PROGRAM FOR FUTURE CONCEPT #2

Activity	Additional Developed Land (acres)	Additional Building Square Footage	Additional Employees [a]
1. Flight Operations (including direct support)	70	647,900	965
2. Research & Development (including direct support)	75	1,229,600	1,045
3. Administration Support (including public activities)	20	226,000	905
4. Operational Support (including warehousing)	20	287,700	645
5. Personnel Support (including recreation)	15	169,700	340
TOTAL	**200**	**2,629,900**	**3,900**

[a] Additional employees that would result if the National Wind Tunnel Complex is sited at Moffett Field are not a part of the Plan proposal.

Table 7
NO PROJECT ALTERNATIVE EMPLOYMENT

Resident Agency	Civilian	Active	Reserve	Contractor	Other	Total
Navy Reserve	--	125	250	--	--	375
California Air National Guard (CANG)	200	100	1,000	--	--	1,300
Army	50	135	125	--	--	310
Air Force	--	5	--	--	70	75
NASA	2,000	--	--	3,350	440	5,790
Other	90	--	--	--	--	90
Total						**7,940**

2. No Action Alternative

Under the No Action Alternative, neither of the two Comprehensive Use Plan scenarios would be adopted. Employment would be expected to decrease from 10,000 to 7,940 with the departure of the majority of the Navy's civilian and active duty personnel. Only existing agencies and agencies directed to Moffett Field by the Base Closure and Realignment Commission or other federal action or regulation, would reside at Moffett Field. These employment levels are described in Table 7. No new construction would be expected under the No Action Alternative.

This alternative was not selected as the preferred development alternative since it would not help to relieve current employment and economic hardships. In addition, since the field would still remain a secure federal facility under order of the federal government, many of the facilities at Moffett Field would stand idle or underutilized. However, operation of the facility and the airfield would continue. It is expected that flight operations would remain at existing levels.

Chapter III
EXISTING ENVIRONMENTAL CONDITIONS

■ ■ ■

A summary of the existing environmental conditions follows. Further environmental analysis is given in Chapter V.

A. Earth

Moffett Field is located in one of the most seismically active regions of the United States. Although seismic hazards do exist, structures can be designed, sited, and constructed to reduce the possibility of serious damage or human harm during earthquakes. In addition, a potential for 100-year flooding exists on the northern portion of the site.

B. Water

The major water resources in the vicinity of Moffett Field are the San Francisco Bay, Stevens Creek, and the Santa Clara Valley groundwater basin. In addition, Moffett Field obtains the majority of its water supply through the San Francisco Water Company.

C. Plant Life

Moffett Field contains three distinct terrestrial habitats: urban, cropland, and wetlands. The vegetation which comprises the urban habitat includes typical urban tree, shrub, and ground cover. In addition, small grain and alfalfa crops and annual weedy plants that grow in disturbed areas comprise the cropland habitats, and cordgrass, pickleweed, salt grass, and brackish marsh vegetation are found in the wetland areas.

D. Animal Life

Wildlife at Moffett Field largely consists of migratory and wintering birds, visiting birds from nearby bayfront and open water habitats, and several resident species of birds and small mammals.

E. Natural Resources

Moffett Field does not contain any significant natural resources in their natural state. Use of natural resources at Moffett Field includes fossil fuels, timber, concrete and asphalt.

F. Cultural Resources

No remnants of any prehistoric cultural artifacts are known to exist at Moffett Field. However, a total of 135 structures are listed in the National Register. Shenandoah Plaza is also listed as a designated historic district.

G. Land Use and Public Policy

Moffett Field is currently used for flight operations, research and development, administrative support, and operational and personnel support. In addition, much of the northern property is open space and wetlands. Public land use policies which affect the site include those of the cities of Mountain View and Sunnyvale, Santa Clara County, the California Airport Noise Standards, federal noise standards, and Bay Conservation and Development Commission regulations.

H. Aesthetics

The wide open spaces of the airfield and the wetlands, in addition to the views of the San Francisco Bay, provide a pleasant visual environment. There are also a substantial number of well preserved buildings and structures that date back to the original construction of Moffett Field that provide visual interest.

I. Population and Housing

Moffett Field employee population is currently approximately 10,000. Historically, housing has been available in the residential areas of Onizuka Air Force Base, however, these areas are not part of the project site. In addition, there are 300 residential units within the study area.

J. Services and Utilities

Fire protection, police protection and security are provided by NASA through private contract. PG&E provides power and natural gas and AT&T/Pacific Bell provides telephone service to the site.

Water supply is provided through contract with the San Francisco Water Company. Sanitary sewer discharges are then transported and then treated at the Sunnyvale public owned treatment works and the City of Mountain View collection system/Palo Alto Regional Water Quality Control Plant.

K. Hazardous Substances

A considerable variety of hazardous and toxic substances are used at Moffett Field. In addition, there are several hazardous waste sites on the property which have been identified, and some which have been scheduled for cleanup.

L. Transportation and Circulation

Transportation to and from Moffett Field is predominantly by automobile. There are four gates and two main interchanges along Highway 101 which provide access to the site. In addition, a NASA shuttle provides transportation to and from the Mountain View CalTrain station, and Santa Clara County buses provide service to Moffett Field.

M. Noise

The noise environment in the vicinity of Moffett Field is dominated by aircraft noise, ground transportation noise, noise emanating from nearby industrial activities, and noise generated by existing wind tunnel facilities at Moffett Field.

N. Air

Moffett Field is in the San Francisco Area Air Basin. Air quality at the site is not a severe constraint to development. Currently, ozone and particulate matter (PM_{10}) air quality standards have been exceeded in the San Francisco Bay Area Air Basin. Moffett Field contributes minor amounts of air pollutants to the basin.

Chapter IV
ENVIRONMENTAL ASSESSMENT SUMMARY

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Table 8 provides a summary of anticipated impacts of Future Concept 1 based on information available from NASA records, contact with responsible agencies, consultant research and field work. Documents which were reviewed and incorporated by reference into this document include the existing operating procedures by NASA and the Navy, the Candidate Base Closures/Realignment Draft Environmental Impact Statement, NASA's Environmental Resources Document, and other pertinent environmental and planning documents. Information from these documents is summarized in Chapter V. A complete list of references is found in Chapter VIII. An explanation of the entries on the checklist is provided in Chapter V, Explanation of Findings.

Table 8
ENVIRONMENTAL IMPACT SUMMARY

Environmental Issue Area	Substantial Unavoidable Effect	Potentially Substantial Unmitigated Effect	Potential Substantial Effect Mitigation Measure Required	No Substantial Effect
1. Earth. Will the proposal result in:				
a. Unstable earth conditions or changes to geologic substructures.			X	
b. Disruption, displacement, compaction or uncovering of the soil.				X
c. Changes in topography or ground surface relief features.				X
d. Destruction, covering or modification of any unique geologic or physical features.				X
e. An increase in wind or water erosion of soils, either on or off the site.			X	
f. Changes in siltation, deposition or erosion which may modify the channel of a stream or creek.			X	
g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards.			X	
2. Water. Will the proposal result in:				
a. Changes in currents, or the course or direction of water movement in either marine or fresh waters.			X	
b. Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff, and/or changes in the amount or level of water in any water body.				X
c. Discharge into surface waters, or any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity.				X
d. Alterations to the course or flow of flood waters, or exposure of people or property to water related hazards such as flooding.				X
e. Alteration of the direction, rate of flow, or amount of ground waters either through direct addition or withdrawal, or through interception of an aquifer by cuts or excavations.				X
f. Substantial reduction in the amount of water otherwise available for public water supplies.				X
3. Plant Life. Will the proposal result in:				
a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants).			X	
b. Reduction of the numbers of any unique, rare or endangered species of plants.			X	
c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species.				X
d. Reduction in acreage of any agricultural crop.				X

Table 8 *continued*

Environmental Issue Area	Substantial Unavoidable Effect	Potentially Substantial Unmitigated Effect	Potential Substantial Effect Mitigation Measure Required	No Substantial Effect
4. Animal Life. Will the proposal result in:				
a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms or insects).			X	
b. Reduction of the numbers of any unique, rare or endangered species of animals.			X	
c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals.				X
d. Deterioration to existing fish or wildlife habitat.			X	
5. Natural Resources. Will the proposal result in:				
a. Increase in the rate of use of any natural resources.				X
b. Substantial depletion of any non-renewable natural resource.				X
6. Cultural Resources. Will the proposal result in:				
a. Alteration of a significant archaeological or historic site, structure, object or building.			X	
b. Restriction of existing religious or sacred uses within the potential impact area.				X
7. Land Use & Public Policy. Will the proposal result in:				
a. Substantial alteration of the present or planned land use of an area.				X
b. Non-conformance with public policy and regulations.				X
8. Aesthetics. Will the proposal result in:				
a. The obstruction of any scenic vista or view open to the public, or result in the creation of an aesthetically offensive site open to public view.				X
b. Production of new light or glare.				X
9. Population and Housing. Will the proposal result in:				
a. Alteration of the location, density or growth rate of the human population of an area.				X
b. Demand or creation of additional housing, or affects on existing housing.				X
10. Services and Utilities. Will the proposal have an effect upon, or result in a need for new or altered services in any of the following areas:				
a. Fire protection.				X
b. Police protection and security.				X
c. Schools.				X
d. Parks or other recreational facilities.				X
e. Maintenance of public facilities, including roads.				X
f. Power or natural gas.				X

Table 8 *continued*

Environmental Issue Area	Substantial Unavoidable Effect	Potentially Substantial Unmitigated Effect	Potential Substantial Effect Mitigation Measure Required	No Substantial Effect
g. Communications systems.				X
h. Water.			X	
i. Sewer or septic tanks.			X	
j. Storm water drainage.			X	
k. Solid waste disposal.				X
l. Use of substantial amounts of fuel or energy.				X
11. Risk of Upset/Human Health. Will the proposal result in:				
a. Risk of an explosion or the release of hazardous substances (including but not limited to oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions.			X	
b. Possible interference with an emergency response plan or an emergency evacuation plan.				X
c. Creation of any health hazard or potential health hazard (excluding mental health).				X
d. Exposure of people to potential health hazards.			X	
12. Transportation/Circulation. Will the proposal result in:				
a. Generation of substantial additional vehicular movement.				X
b. Effects on existing parking facilities, or demand for new parking.				X
c. Substantial impact upon existing transportation systems.				X
d. Alteration to present patterns of circulation or movement of people and/or goods.				X
e. Alterations to waterborne, rail or air traffic.				X
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians.				X
13. Noise. Will the proposal result in:				
a. Increases in existing noise levels.			X	
b. Exposure of people to severe noise levels.				X
14. Air. Will the proposal result in:				
a. Substantial air emissions or deterioration of ambient air quality.				X
b. The creation of objectionable odors.				X
c. Alteration of air movement, moisture, or temperature, or any change in climate either locally or regionally.			X	

Chapter V
ENVIRONMENTAL IMPACTS OF PROPOSED ACTION

■ ■ ■

1. Earth

a. Unstable Earth Conditions or Changes to Geologic Substructures. The site is comprised of silty clay soils that have a high shrink-swell potential as shown on Figure 4.[1] The potential for bay mud compression and/or liquefaction of the sand layers located within the site and subsequent settlement hazards are present. These stability concerns are especially prevalent near the banks of Stevens Creek. Future Concept 1 of the Comprehensive Use Plan does not propose any new development in the area directly adjacent to the Creek. However, construction over any of the soils on the site shall require appropriate mitigation to alleviate any potential problems associated with soil expansion and contraction. With the following mitigation measure, no substantial impacts are anticipated.

> **Mitigation Measure EARTH-1.** Geotechnical investigations shall be required on a project-by-project basis for new construction and appropriate foundations shall be designed and constructed in conformance with the Uniform Building Code.

b. Soil Disruption, Displacement, Compaction, or Uncovering. Due to the essentially level terrain and existing development on the site, very little soil will be excavated for construction that would be proposed under buildout of Future Concept 1 of the Comprehensive Use Plan.

c. Changes in Topography or Surface Relief Features. The topography in the area is flat except for the levees between the San Francisco Bay, Stevens Creek, and the site. In general, development of Future Concept 1 of the Comprehensive Use Plan will not result in the addition of large amounts of soil or the removal of any special topographic or surface relief features. However, development of the bridge over Stevens Creek to align with

[1] U.S. Department of Agriculture. Soil Map. Soil Conservation Service.

Charleston Road in Mountain View will require grading. Minor grading will not substantially alter topography or important surface relief features.

d. Destruction of Unique Geologic or Physical Features. No such features exist on the site.

e. Wind or Water Erosion, On- or Off-site. Some temporary on-site erosion could occur during construction of individual projects of Future Concept 1 of the Comprehensive Use Plan. No long-term conditions which could lead to erosion would occur after construction.

> **Mitigation Measure EARTH-2.** During construction of individual development projects, measures shall be implemented to lessen the impacts of wind and water erosion. These measures shall include compaction and watering of the soils during construction.

f. Modification of Creek Channel Due to Siltation, Deposition or Erosion. The neighboring Stevens Creek channel will not receive any substantial additional flows with the implementation of Future Concept 1 of the Comprehensive Use Plan. Runoff from the western part of the site is currently collected by the site's storm-drainage system and is discharged to the diked, non-tidal ponding area on the northern portion of the site. During periods of heavy storm runoff, excess runoff collects in a storm-water retention pond, and is eventually discharged into Stevens Creek. Water from the eastern part of the site is pumped to a channel that flows to the Guadalupe Slough and the San Francisco Bay. Future Concept 1 of Comprehensive Use Plan would allow approximately 100 acres (40 hectares) of additional land coverage (ex. buildings, roads, parking lots) within the boundaries of the area already developed resulting in a nine percent increase in impervious surfaces. This increase will not result in a substantial increase in runoff. Discharge is currently taking place and is not likely to change with implementation of Future Concept 1 of the Comprehensive Use Plan due to a high existing percentage of impervious surfaces.

However, construction of the bridge over Stevens Creek as outlined in Future Concept 1 of the Comprehensive Use Plan could lead to short and long-term increases in erosion and siltation of the Stevens Creek. To mitigate this impact, the following measure shall be implemented.

> **Mitigation Measure EARTH-3.** Development in the vicinity of Stevens Creek shall be designed to limit channel modification and erosion.

g. Exposure to Geologic Hazards. The site is located in one of the most seismically active regions in the United States. The severity of ground shaking that will occur on Moffett Field during a future earthquake will depend on the proximity and magnitude of the seismic event. Hazards associated with earthquakes and the site include liquefaction, differential settlement, and lurch cracking. These hazards are most prevalent along Stevens Creek, though they have potential to occur throughout the site. Consideration of these potential hazards will be subject to existing codes. For example, all new structures and infrastructure will be designed and constructed according to the appropriate Uniform Building Code so as to reduce the possibility of human injury and loss of life during any seismic event.

However, over the decades of the 1940s to 1970s, extensive groundwater pumping has caused a two- to eight-foot subsidence of the land surface that has resulted in problems with water drainage, foundations, basements and below-ground utility systems. Potential damage to structures could occur if proper engineering is not done. As a practical matter, these studies are routinely carried out prior to construction. All new construction, including buildings and infrastructure will be designed and constructed with appropriate site analysis of the geologic conditions of the site. The following mitigation measure shall be undertaken.

> **Mitigation Measure EARTH-4.** Geotechnical investigations shall be required on a project-by-project basis and appropriate foundations shall be designed and constructed to mitigate the risk associated with liquefaction and other geotechnical hazards.

2. Water

a. Course of Water Movement in Fresh or Marine Waters. No such changes are proposed as part of Future Concept 1 of the Comprehensive Use Plan. Stevens Creek would not be altered as part of the Plan. The only development proposed in the vicinity of the Creek would be the bridge connecting the Ames Research Center to Charleston Road in Mountain View. The U.S. Army Corps of Engineers has permit authority over bridge construction and through its process will review the effects of the project on water movement. In addition, a permit from the Santa Clara Valley Water District will be required for any construction project adjacent to Stevens Creek. The following mitigation shall be implemented to ensure that construction of this bridge does not alter the course of Stevens Creek.

Mitigation Measure WATER-1. Development of Moffett Field, especially in the vicinity of Stevens Creek, (including construction of the connecting bridge), shall be designed and operated to prevent channel modification, erosion, siltation, and the introduction of pollutants into surface waters including Stevens Creek, and the San Francisco Bay.

b. Absorption Rates, Drainage Patterns, or Rate and Amount of Runoff. No major changes in the absorption rates, drainage patterns, or the rate and amount of runoff are expected with the implementation of Future Concept 1 of the Comprehensive Use Plan since there is a high percentage of existing impervious surfaces. The Plan outlines development of approximately 100 acres (40 hectares) of land, resulting in a total developed land acreage of 1,250 acres (506 hectares). This development represents less than a nine percent increase in impervious surfaces.

c. Discharge into Surface Water. Runoff from Moffett Field is not expected to substantially change with implementation of Future Concept 1 of the Comprehensive Use Plan. A National Pollutant Discharge Elimination System (NPDES) permit for stormwater runoff is in place for Moffett Field pursuant to the Clean Water Act. Pollutants in the discharge from Moffett Field will be regulated by the Regional Water Quality Control Board and significant harmful pollutants will not be permitted to enter San Francisco Bay as a result of the proposed action. In some cases, low levels of organic compounds have been found in the effluent, but these levels are not considered significant and will not be impacted by implementation of Future Concept 1 of the Plan.[2] The Ames Research Center and Moffett Field runoff represents a very small fraction of the total runoff toward Stevens Creek and the San Francisco Bay and no substantial impacts are expected from incremental runoff.

d. Course or Flow of Flood Waters. The northern portion of Moffett Field is located within the 100-year tide elevation and is therefore subject to 100-year tidal flooding as shown in Figure 4.[3] Storm water runoff and overflow in the vicinity of Stevens Creek could also present some potential problems. Development of Future Concept 1 of the Comprehensive Use Plan is generally outside of the 100-year flood line. However, the proposed Research and Development construction located in Planning Area 9 and the Fuel Farms located in Planning Area 8 are currently within the 100-year

[2] Environmental Resources Document. NASA Ames Research Center, Moffett Field, CA. June 1992.

[3] NEESA. April 1984 (84-01).

flood area. In addition, levee failures could potentially cause flooding hazards within Moffett Field.

NASA's Facility Project Implementation Handbook states that new development should not occur within flood plains when other sites are feasible. In addition, all new and existing facilities that are subject to flood damage would be provided with flood proofing measures, such as elevating ground floors above the flood elevation.[4]

In order to assure protection from 100-year tidal flooding, the U.S. Navy had planned a new levee to be constructed after Fiscal Year 1994. However, with the transfer of the facility in 1994, NASA has planned the improvements for fiscal year 1999.

Building construction on Moffett Field must meet Federal Emergency Management Agency (FEMA) requirements for flood elevations. Federal requirements are also expected to prevent the exposure of people or property to flood hazard.

e. Direction, Rate of Flow, or Quantity of Groundwater. Moffett Field is within the Santa Clara Valley ground-water basin. Historically, ground waters were a major source of water in the County until serious overdrafts caused a rapid decline in the water tables, a deterioration of water quality and ground subsidence in the Santa Clara Valley. Groundwater in the recent past has only been used for watering the golf course and by the agricultural lessee at Moffett Field for crop irrigation purposes and is not used for drinking water supply.[5] The potable water supply for Moffett Field is supplied by the City of San Francisco Water Company, which obtains water primarily from the Hetch Hetchy Reservoir in the Sierra Nevada. Development under Future Concept 1 of the Comprehensive Use Plan will continue to use this water supply and will also have a greater use of reclaimed water. In addition, the amount of impervious surfaces is not expected to increase as a result of Future Concept 1 of the Comprehensive Use Plan to a point which will substantially affect groundwater. It is not expected that any impacts related to direction, rate of flow, or quantity of groundwater will occur because of these factors.

[4] Facility Project Implementation Handbook. National Aeronautics and Space Administration. 1981.

[5] Environmental Resources Document. NASA Ames Research Center, Moffett Field, CA. June 1992.

f. Amount of Water Available for Public Supply. Implementation of Future Concept 1 of the Comprehensive Use Plan would require water supply for approximately 10,610 employees, in addition to water uses for general operations such as washing and rinsing aircraft and in wind tunnel cooling towers. Currently, Moffett Field has approximately 10,000 employees.

Moffett Field's water supply is obtained through contract with the San Francisco Water Company. No substantial changes will result in the amount of water used by Moffett Field as a result of Future Concept 1 of the Comprehensive Use Plan. The most significant amount of water used at Ames is and will continue to be for cooling of wind tunnel facilities. An average of 600 gallons per minute evaporates from the Unitary cooling tower. Ames is investigating conservation options, such as using either treated ground water or reclaimed water from Sunnyvale or Palo Alto as the cooling-water supply.[6] The City of Mountain View would also be involved in providing cooling-water supply, as a partner in the Palo Alto treatment facility. It is known that Palo Alto can meet the reclaimed water demands at Moffett Field and Sunnyvale is already building a pipeline to serve reclaimed water to Moffett Field. Reclaimed water could be used for wind tunnel cooling, as well as for golf course irrigation. Additional discussion of water usage can be found in Section 10.h. of this chapter.

3. Plant Life[6]

a. Diversity or Number of Plant Species. Moffett Field contains three distinct terrestrial habitats: urban, cropland, and wetlands with remnant grasslands. The vegetation which comprises the urban habitat includes typical urban tree, shrub, and ground cover. In addition, small grain and alfalfa crops and annual weedy plants that grow in disturbed areas comprise the cropland habitats, and cordgrass, pickleweed, salt grass, and brackish marsh vegetation are found in the wetland areas.

Tidal salt marshes, tidal brackish marshes, and mudflats historically covered extensive areas in the South Bay. These marshes exhibit a characteristic vertical zonation of plant species. Pacific cordgrass, a highly productive marsh plant, occupies the lowest tidal zones, merging into stands of pickleweed and other halophytes at higher marsh levels.

[6] Information for this section was adapted from NAS Moffett Field Natural Resources Management Plan, July 1990; and Candidate Base Closure/Realignment in SF Bay Area Draft EIS, July 1990.

The levees and debris that fringe Moffett Field have eliminated regular tidal action. Undeveloped low areas north of Moffett Field are used to store storm water runoff. This has resulted in the establishment of freshwater vegetation in upper reaches. At the margin of the tidal areas where freshwater runoff creates low salinity conditions, freshwater vegetation becomes dominant. Cattail and bulrush form a 100-foot corridor that is interlaced by water channels.

The remnant salt marshes are limited to the tidal waters of the San Francisco Bay and Stevens Creek which is adjacent to Ames Research Center and Moffett Field. There is also a remnant salt marsh in the southern portion of the non-tidal water retention pond. This marsh changes to a brackish marsh in areas more influenced by fresh water.[7] Cordgrass, pickleweed, and salt grass dominate these areas as elevations get progressively higher. In addition to pickleweed, alkali heath, brass buttons, and Jaumea cornosa occur along the upper fringes of the tidal marsh.

All undeveloped high ground is dominated by disturbed vegetation. This vegetation includes sweet clover, vetch, mustard, and fennel. Ruderal vegetation is scattered around the high ground along Moffett Channel and Stevens Creek. In addition, scattered remnants of grasslands are found adjacent to the main runway and in uncultivated areas throughout the site.

The development proposed by Future Concept 1 of the Comprehensive Use Plan would not intrude into any of the vegetative areas described above, with the exception of the development of the bridge connection across Stevens Creek. All proposed new or changed facilities, with this exception, are with the urban areas of Moffett Field. Before development of the bridge, site specific surveys and environmental review shall occur to determine the extent of plant species in the vicinity of the proposed projects through the following mitigation measure.

> **Mitigation Measure PLANT-1.** Prior to construction of projects in the vicinity of Stevens Creek and the wetlands area, site specific focused surveys and environmental review shall occur to evaluate the site-specific status of plant habitats, including rare and endangered plant species. Any adverse effects on such habitats and related species shall be mitigated through habitat replacement projects. Development plans

[7] Phase 1 Site-Wide Qualitative Habitat and Receptor Characterization. WESCO. NAS Moffett Field. October 1993.

shall ensure that there is no net loss of wetland functions, values, or acreages.

In keeping with the national goal of "no net loss" of wetlands, Future Concept 1 of the Plan appropriately preserves wetland resources. Consistent with the Section 404(b)(1) of the Clean Water Act, the proposed action meets all of the following criteria:

- The proposed project will not cause or contribute to significant degradation of waters of the United States, including wetlands (40 CFR 230.1(c)).
- The proposed project does not violate water quality standards, toxic effluent standards, or jeopardize the continued existence of federally listed species or their critical habitat (40 CFT 230.10(b)).
- All appropriate and practicable steps are taken to minimize adverse impacts on the aquatic ecosystem (40 CFR 320.10(d)).

b. Number of Unique, Rare or Endangered Plant Species. As described above, the vegetation which occurs on Moffett Field includes typical urban trees, shrubs, and ground cover; approximately 115 acres (47 hectares) of cropland including small grain and alfalfa crops and annual weedy plants that grow in disturbed areas; and cordgrass, pickleweed, salt grass, and brackish marsh vegetation.

The threatened or endangered plant species that could possibly occur on the site are shown in Table 9. The majority of the development proposed by Future Concept 1 of the Comprehensive Use Plan would not impede into any predominant vegetative areas, therefore no impacts are expected as a result of implementation of the Plan. The only exception would be development of the bridge connection across Stevens Creek.

Before development of the bridge, site specific environmental analysis and surveys shall occur through Mitigation Measure PLANT-1 to determine the extent of unique, rare, or endangered plant species in the vicinity of the proposed projects, as follows.

Mitigation Measure PLANT-1. Prior to construction of projects in the vicinity of Stevens Creek and the wetlands area, site specific focused surveys and environmental review shall occur to evaluate the site-specific status of plant habitats, including rare and endangered plant

Table 9[8]
SENSITIVE PLANTS POSSIBLY OCCURRING AT MOFFETT FIELD

Plant		Sensitivity Status		
Common Name	**Scientific Name**	**Federal**	**State**	**CNPS**
Pt. Reyes bird's beak	*Cordylanthus spp.*	Endangered	Endangered	1B
Marsh gum plant	*Grindelia humilils*	Category 2	--	3
Delta tule pea	*Lathyrus jepsonii spp.*	Category 2	--	1B
Hairless popcorn flower	*Plagiobothrys glaber*[a]	Category 2	--	3

Listing Status Categories

Federal Endangered = Designated species pursuant to Section 4 (Federal Endangered Species Act of 1973, as amended).

Federal Category 2 = Taxa for which existing information indicates that listing may be warranted, but for which substantial biological information to support a proposed rule is lacking.

California Endangered = Designated species pursuant to Section 1904 (Native Plant Protection Endangered Act of 1977), and Section 2072.7 (California Endangered Species Act of 1984).

CNPS List 1B = Plants rare, threatened, or endangered in California and elsewhere.

CNPS List 3 = Plant about which more information is needed (a review list).

species. Any adverse effects on such habitats and related species shall be mitigated through habitat replacement projects. Development plans shall ensure that there is no net loss of wetland functions, values, or acreages.

Potential adverse effects on such species should be mitigated through habitat replacement projects. Mitigation Measure PLANT-1 as described above outlines these requirements. In addition, any federally protected species will be evaluated and addressed pursuant to the U.S. Endangered Species Act (ESA) prior to construction.

[8] Western Ecological Service Company, Inc. (WESCO). Phase I Site-wide Qualitative Habitat and Receptor Characterization Study. NAS Moffett Field. October 1993.

c. New Plant Species, or Barrier to Replenishment. Landscaping of additional facilities will introduce new plants into the area. However, these plant species are likely to be similar to those that already exist at Ames Research Center and Moffett Field. Landscaping with native plants is encouraged by NASA policy. It is not expected that this introduction of plants would have any substantial impact or would cause a barrier to the normal replenishment of existing species.

d. Agricultural Crop Acreage. None of the agricultural outlease properties on the site will be developed through Future Concept 1 of the Comprehensive Use Plan. These properties are concentrated at the southern end of the runway and comprise approximately 115 acres (47 hectares). These lands are irrigated fields which have included small grain, alfalfa crops, and annual weedy plants. Currently, there are no plans to renew the agriculture lease of these properties. It is expected that the fields will be left to fallow and will be mowed in the future. These agricultural lands are considered insignificant and these future plans are not a result of Future Concept 1 of the Comprehensive Use Plan. No impacts are anticipated.

4. Animal Life[9]

a. Diversity or Number of Animal Species. Wildlife at Moffett Field largely consists of migratory and wintering birds, visiting birds from nearby bayfront and open water habitats, and several resident species of birds and small mammals.

Urban and developed areas are utilized by resident and migratory wildlife. Rows of mature hardwoods and conifer trees provide habitat for birds that forage at higher levels. Water is available to wildlife from lawn irrigation and through ponds. Open space, maintained as large expanses of lawn, is also utilized by wildlife more adapted to human presence. Wildlife species that occur in the area include raccoons, opossums, California ground squirrels, and burrowing owls.

The Bay is a major stopover point along the Pacific flyway, the coastal migratory bird route. Shore bird species include black-necked stilts, killdeer, least sandpipers and avocets, great blue herons, great egrets, and song sparrows. Waterfowl species found at Moffett Field include American coots

[9] Information for this section was adapted from NAS Moffett Field Natural Resources Management Plan, July 1990; Candidate Base Closure/Realignment in SF Bay Area Draft EIS, July 1990; and Environmental Resources Document, NASA Ames Research Center, Moffett Field, June 1992.

and American widgeons, lesser scaups, canvasbacks, ruddy ducks, mallards, gadwalls, pintails, northern shovelers, cinnamon teals, Forster's tern, ring-billed gulls, Bonaparte's gull, and western and eared grebes. Upland areas, including levee bands and man-made hills, provide habitat for house finches, meadowlarks, sparrows, horned larks, mourning doves and ring-necked pheasants.

Because there is limited development proposed by Future Concept 1 of the Comprehensive Use Plan and this development would not impede into any sensitive habitat areas, no impacts are expected as a result of implementation of the Plan. The only exception would be development of the bridge connection across Stevens Creek.

Development of the bridge across Stevens Creek shall require site specific environmental review and surveys to determine the extent of wildlife species in the vicinity of the bridge and the impact the project would have on wildlife populations. This mitigation is outlined in Mitigation Measure PLANT-1 as described above.

b. Reduction in the Numbers of Rare or Endangered Species. According to the California Natural Diversity Database (June 1993), several rare or endangered species are known to inhabit the South Bay region in the vicinity of Moffett Field as listed in the California Endangered Species Act and the Federal Endangered Species Act.

Moreover other "candidate species" under the California Endangered Species Act or State species of special concern by the California Department of Fish and Game have been observed at Moffett Field. These species are shown in Table 10.

In addition to the species listed in Table 10, the following other special status species have been documented in the South Bay and may occur at Moffett Field. However, these species have not been observed on the Moffett Field site.

- San Francisco garter snake
- Saltmarsh wandering shrew[10]
- Southern Bald Eagle
- Red-legged frog
- California tiger salamander

[10] Likely to occur. Nearest CNDDB (1993) record is from Alviso.

Table 10
SENSITIVE ANIMAL SPECIES OCCURRING AT MOFFETT FIELD

Common Name	Scientific Name	Sensitivity Status
Salt marsh harvest mouse[a]	*Reithrodontonys raviventris raviventris*	FE/SE
California least tern	*Sterna antillarum browni*	FE/SE
California clapper rail[b,c]	*Laterallus jamaicensis coturniculus*	FE/SE
California brown pelican[d]	*Pelecanus occidentalis californicus*	FE/SE
American peregrine falcon[e]	*Falco peregrinus anatum*	FE/SE
Black-shouldered kite[f]	*Elanus caeruleus*	CFP
San Francisco forktail damselfly[g,h]	*Ishenura gemina*	C2
Loggerhead shrike[i]	*Lanius ludovicianus*	C2
Saltmarsh common yellowthroat[j]	*Geothlypis trichas sinuosa*	C2
Western burrowing owl[k]	*Athene cunicularia hypugaea*	CSC
Northern harrier	*Circus cyaneus*	CSC
Golden eagle	*Aquila chrysaetos*	CSC
American white pelican[l]	*Pelecanue erythrorhynchos*	CSC

[a] Reported from pickleweed dominated salt marsh of Moffett Field in 1991 (Hass 1991).

[b] U.S. Fish and Wildlife Service. Breeding Census for the California Clapper Rail (*Rallus longirostris obsoletus*) at Naval Air Station Moffett Field and Guadalupe Slough. San Francisco Bay National Wildlife Refuge. Newark, California. September 1992.

[c] One pair was observed in Stevens Creek.

[d] Reported on Naval Air Station Moffett Field (Haas 1993). Likely an occasional visitor to Cargill salt pond and NASA/Navy stormwater retention pond.

[e] Hass, J. 1993.

[f] Observed in the vicinity of the OU6 area; seasonally saturated diked wetlands.

[g] Present in Patrol Road and Marriage Road ditches (Smith and Hafernik 1993).

[h] Public Works Environmental Division Direction. A Survey of the san Francisco Forktail Damselfly (*Ischnura gemina*) at Moffett Field Naval Air Station. Naval Air Station Moffett Field, California. January 1993.

[i] Observed in vicinity of Stevens Creek and between the southern most IRP Site 15 and the Moffett Field runway (WESCO, 1993).

[j] Observed in the seasonally saturated diked wetland of OU6 area (WESCO, 1993).

[k] Lynne Trulio, Ph.D. Quarterly Update 4 - Study of the Ecology of the Burrowing Owl at Moffett Naval Air Station. Department of Geography and Environmental Studies. San Jose State University. June, 1993.

[l] Observed on Cargill Salt Pond. Also reported by J. Hass (1993). Likely occasional visitor to the NASA/Navy stormwater retention pond.

Status

FE - Federally listed as endangered
ST - State listed as threatened
C1 - Federal candidate for listing, Category 1
CFP - California fully protected
C2 - Federal candidate for listing, Category 2
CSC - State Species of Special Concern
SE - State listed as endangered

- Western pond turtle[11]
- Mimic tryonia[12]
- Western snowy plover[13]
- Long-billed curlew[14]
- Short-eared owl[15]
- Tricolored blackbird[16]
- California black rail[17]
- Townsend's big-eared bat
- Pallid bat

Figure 5 shows the location of known rare and endangered species habitats. Observations of these species, as listed in Table 9, were made at many of these locations and they should be considered sensitive habitat areas. In addition, Western burrowing owl habitat and sighting areas are shown in Figure 6. Additional information on burrowing owls can be found in the *Quarterly Updates—Study of the Ecology of the Burrowing Owl at Moffett NAS* produced by San Jose State University.

An additional endangered species survey is currently underway by the U.S. Fish and Wildlife Service. This study will provide information on the likelihood of suitable habitat of endangered species through field investigations and mapping of habitat areas. In addition, a management plan shall be developed if suitable habitat exists. It is expected that the site-specific status of sensitive animal species shall be established through the Fish and Wildlife survey prior to the development of specific construction projects outlined in Future Concept 1 of the Comprehensive Use Plan. If special

[11] Local occurrence has not been documented. Unidentified turtles were observed in Patrol Road Ditch (WESCO, 1993).

[12] Reported from salt evaporation pond east of Alviso Slough (CNDDB 1993).

[13] Nearest CNDDB (1993) record is from Alviso.

[14] Local occurrence is likely but has not been documented (WESCO, 1993).

[15] Nearest CNDDB (1993) record is from Bair Island, San Mateo County.

[16] Nearest CNDDB (1993) record is from Coyote Hills Regional Park, Alameda County.

[17] USFWS California Black Rail Study. October 1993.

status species are found, they shall be protected through appropriate mitigation. No action on specific construction projects or substantial changes in operations shall occur until the requirements of the Endangered Species Act have been satisfied. With the following measure, no substantial impacts are expected to occur. In addition, known burrowing owl nests and habitat, as shown on Figure 6, shall be protected through the following mitigation measure.

> **Mitigation Measure ANIMAL-1.** Focused environmental analysis shall be conducted to evaluate the site-specific status of sensitive animal species prior to the development of construction projects outlined in Future Concept 1 of the Comprehensive Use Plan. If special status species or habitats are found, they shall be protected through appropriate site-specific mitigation measures such as relocation or habitat restoration. The Endangered Species Act shall be satisfied prior to site-specific development or substantial changes in operations. Development plans shall ensure that there is no net loss of wetland functions, values, or acreages.

c. Introduction of New Species or a Barrier to Migration or Movement of Animals. No such impacts are anticipated as a result of Future Concept 1 of the Comprehensive Use Plan.

d. Deterioration to Existing Fish or Wildlife Habitat. Moffett Field contains three distinct terrestrial habitats: urban, cropland, and wetlands.

(1) Urban. The urban habitat covers most of Ames Research Center and Moffett Field. It comprises about 1,150 acres (466 hectares) and includes buildings, landscaped areas, flight line areas. In addition, the golf course comprises an additional 140 acres (57 hectares). Vegetation in these areas includes irrigated turf and landscaped trees and shrubs. Freshwater ponds in the golf course provide important habitat and drinking water for wildlife. Impacts to urban habitat areas are not anticipated as part of Future Concept 1 of the Comprehensive Use Plan.

(2) Cropland. Cropland has previously comprised about 115 acres of land. Vegetation consists of small grain, alfalfa crops, and annual weedy plants. Development of Future Concept 1 of the Comprehensive Use Plan will not encroach into the areas previously used for agriculture purposes at Moffett Field.

(3) Wetlands. Wetlands with remnant grasslands are the most sensitive and significant natural habitats at Ames Research Center and Moffett Field. About 100 acres of wetland habitat around the north end of the flight line area are mostly composed of former tidal areas, and include marsh vegetation around the edges on dikes and levees. These habitat areas are shown on Figure 5. The tidal marshes provide nursery areas for fish and shellfish, as well as nesting and feeding areas for resident birds and mammals. The development proposed by Future Concept 1 of the Comprehensive Use Plan would not intrude into any of the wetland habitat areas described above, with the exception of the development of the bridge connection across Stevens Creek.

Smaller non-tidal wetlands which occur throughout the northern portion of the site, predominantly on the golf course, also provide important habitat as resting and feeding areas for animal life. These wetlands are also identified on Figure 5.

Prior to development of the bridge, site specific environmental review and surveys shall be required to determine the extent of habitat areas and the impacts associated with development in the vicinity of the proposed projects. This mitigation is outlined in Mitigation Measure PLANT-1 as follows.

> **Mitigation Measure PLANT-1.** Prior to construction of projects in the vicinity of Stevens Creek and the wetlands area, site specific focused surveys and environmental review shall occur to evaluate the site-specific status of plant habitats, including rare and endangered plant species. Any adverse effects on such habitats and related species shall be mitigated through habitat replacement projects. Development plans shall ensure that there is no net loss of wetland functions, values, or acreages.

In addition, Executive Order 11988, Protection of Wetlands, will be satisfied prior to any proposed construction in wetland areas at Moffett Field.

5. Natural Resources

a. Increase in the Rate of Use of Any Natural Resources. Timber, concrete, and asphalt may be used for construction as a result of Future Concept 1 of the Comprehensive Use Plan, and fossil fuel would be consumed throughout daily operations of Moffett Field. However, the project would not cause a substantial increase in the rate of use of any natural resources. Total building construction over the 15-year period covered by the CUP is approximately 1 million square feet (93,000 square meters). An approximate

average of 70,000 square feet (6,510 square meters) per year of construction activity could occur.

b. Substantial Depletion of Any Non-renewable Natural Resource. The project would result in an increased consumption of non-renewable resources as described under 5a. However, consumption rates associated with this project would not significantly change from existing consumption rates, so impacts would not be significant.

6. Cultural Resources

a. Alteration of a Significant Archaeological or Historic Site or Structure.

(1) Archaeological Resources. The Moffett Field vicinity has been extensively studied for archaeological resources as part of Navy, NASA, and other development and highway projects. The Crittendon Kitchen Midden (CA-SCL-23) and several other archeological sites have been recorded at Moffett Field. Most of these were noted in a 1909 survey and located in 1912. Others were identified in 1925, and adjacent studies have been conducted in the 1980s and 1990s. A large shellmound suggested evidence that intensive occupation had occurred for many centuries. Investigations in this part of the Bay Area indicate that it has been occupied continuously for up to 3,600 years. Most of the evidence of such occupation has been destroyed, however, by urban development, bay fill, and agricultural production.[18] An archeological study was recently conducted on a 60-acre (24 hectares) site on the northwest portion of Ames Research Center in November 1993 to determine the presence or absence of the previously recorded Kitchen Midden. No remnants of the Kitchen Midden or any other prehistoric cultural artifacts were found in this area. Agricultural practices, the commercial use of mound sites for top soil and fill, and possibly the construction of the current facilities appear to have destroyed this previously documented site.[19] Although it is not anticipated, there is a potential that subsurface cultural resources could be encountered during construction activities, therefore the following mitigation measure shall be required.

[18] Cultural Resources Review for the Ames Research Center Environmental Resources Document. David Chavez, Santa Clara County, CA. March 1981.

[19] Basin Research Associates, Inc. Archaeological Test Program. CA-SCL-23 and Vicinity. Bentley Engineering. NASA Ames Research Center. Moffett Field, CA. November 1993.

Mitigation Measure CULT-1. In the event that human remains and/or cultural materials are found, all project-related construction shall cease within a 50-foot radius in order to proceed with the testing and mitigation measures required pursuant to Section 7050.5 of the Health and Safety Code, and Section 5097.94 of the Public Resources Code of the State of California. The State Historic Preservation Officer and the NASA Federal Preservation Officer shall be contacted as soon as possible. Construction in the affected area will not resume until the regulations of the Advisory Council on Historic Preservation (30 CFR Part 800) have been satisfied.

In the event of the discovery of human remains, the Santa Clara Coroner should be notified by the project manager. The Coroner shall make the determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his or her authority, he/she will notify the Native American Heritage Commission, who will attempt to identify the descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to State law, then the remains should be reinterred with items associated with the Native American burial on the property in a location not subject to further disturbance.

(2) Historic Resources. Historic use of Moffett Field has been carefully documented in nominations submitted by the Navy for inclusion of Shenandoah Plaza as a designated historic district in the National Register of Historic Places. The Shenandoah Plaza Historic District was designated an official historic district in the National Register of Historic Places by the National Park Service in February 1994. This designation included Shenandoah Plaza and Hangers 1, 2 and 3. In addition, the submittal has been reviewed by the State Historic Preservation Officer. A total of 135 structures were evaluated for eligibility for the National Register. Of these, 58 are from the Pre-World War II era. Three of these, built in 1933, were "determined eligible for listing" on their own. Structures from the original Sunnyvale Naval Air Station were part of the Navy's effort to develop a Lighter Than Air program to patrol the Pacific with dirigibles. The most notable buildings are Hangars 1, 2 and 3, plus 23 other buildings, structures or objects that make up the Central District. Several others are either modified,

outside of the central district, or non-contributory due to style, size, and function.[20]

A 1933 campus plan that is still perceptible in the core of the site included administrative, residential, and naval structures in a formal pattern with extensive landscaping. The bulk of the structures in the Central District are a combination of the Spanish Colonial and Mission Revival style. Hangar 1 is recognized as an engineering feat, enclosing eight acres of land without internal support in the Streamline Moderne Style, and is already regarded as a Naval Historic Landmark. These historic structures are shown in Figure 7.

The Unitary Plan Wind Tunnel complex in the existing Ames Research Center has already been designated a National Historic Landmark based on its association with the development of the U.S. space program.[21] Future Concept 1 of the Comprehensive Use Plan could result in impacts to the landmark or listed historic structures and district. The Comprehensive Use Plan includes minor modifications to the Central District. No impacts are likely in the vicinity of the wind tunnels or hangers.

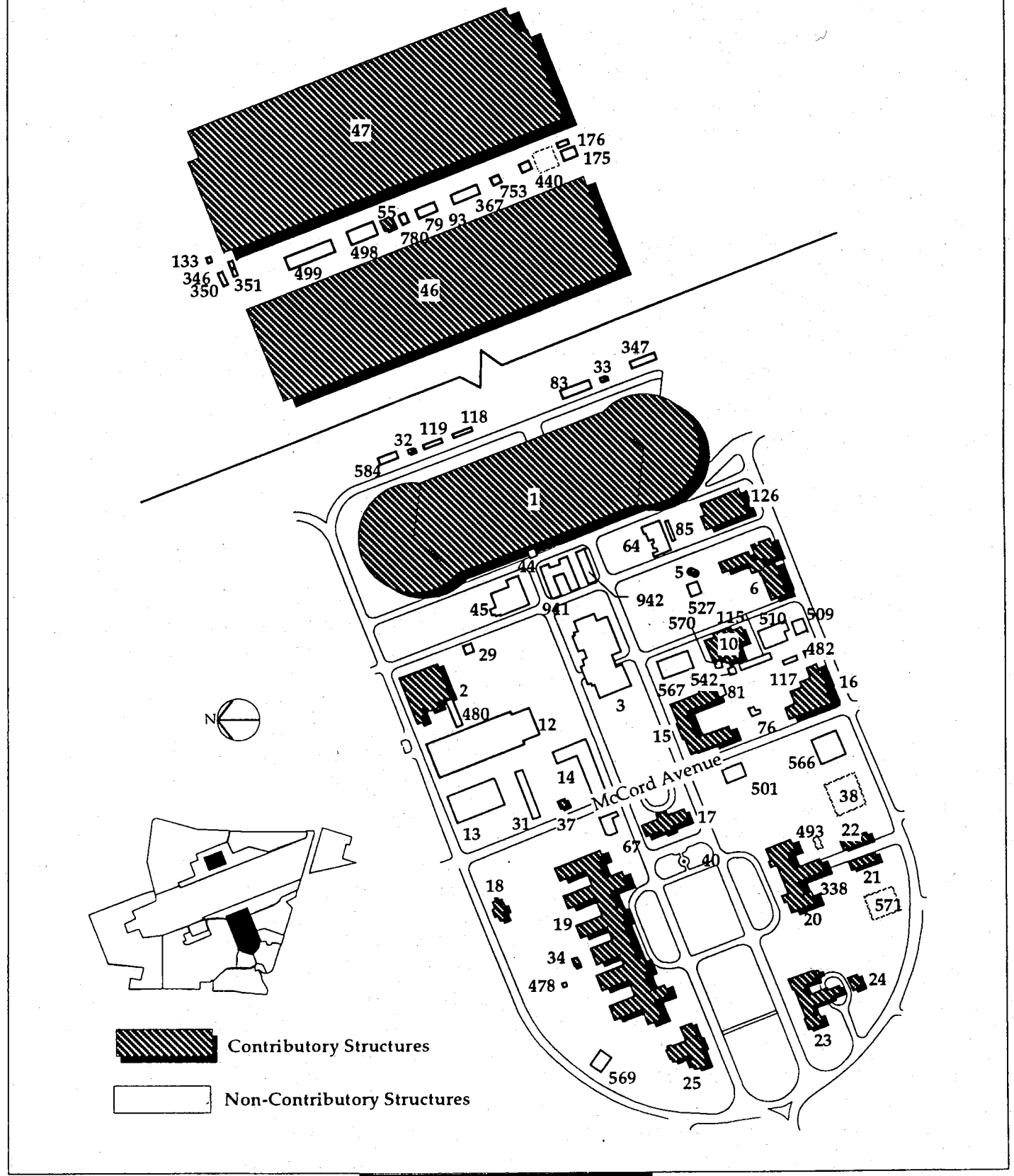
The following mitigation measure will seek to ensure the protection of historic structures and districts.

> **Mitigation Measure CULT-2.** Any project undertaken within the vicinity of designated or potentially historic resources, structures, or districts, including modification or removal of contributing elements of the district, shall be subject to review by the State Historic Preservation Officer through the Section 106 process of the National Historic Preservation Act. Any agreed upon mitigation, such as plan modification, design harmony, and (in the case of demolition) additional detailed historic documentation, shall be undertaken. In addition, modification, or demolition of any non-contributory building over 50 years in age may require Section 106 review.

Prior to construction of any site-specific project, a NEPA review, in addition to the Section 106 process, will be completed.

[20] Historic Resources Inventory. State of California Resources Agency. Department of Parks and Recreation. Office of Historic Preservation.

[21] Environmental Resources Document. NASA Ames Research Center, Moffett Field, CA. June 1992.



NASA

MOFFETT FIELD

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FIGURE 7

Shenandoah Historic District

b. Restriction of Existing Religious or Sacred Uses. No such uses are known to exist in the vicinity of the site.

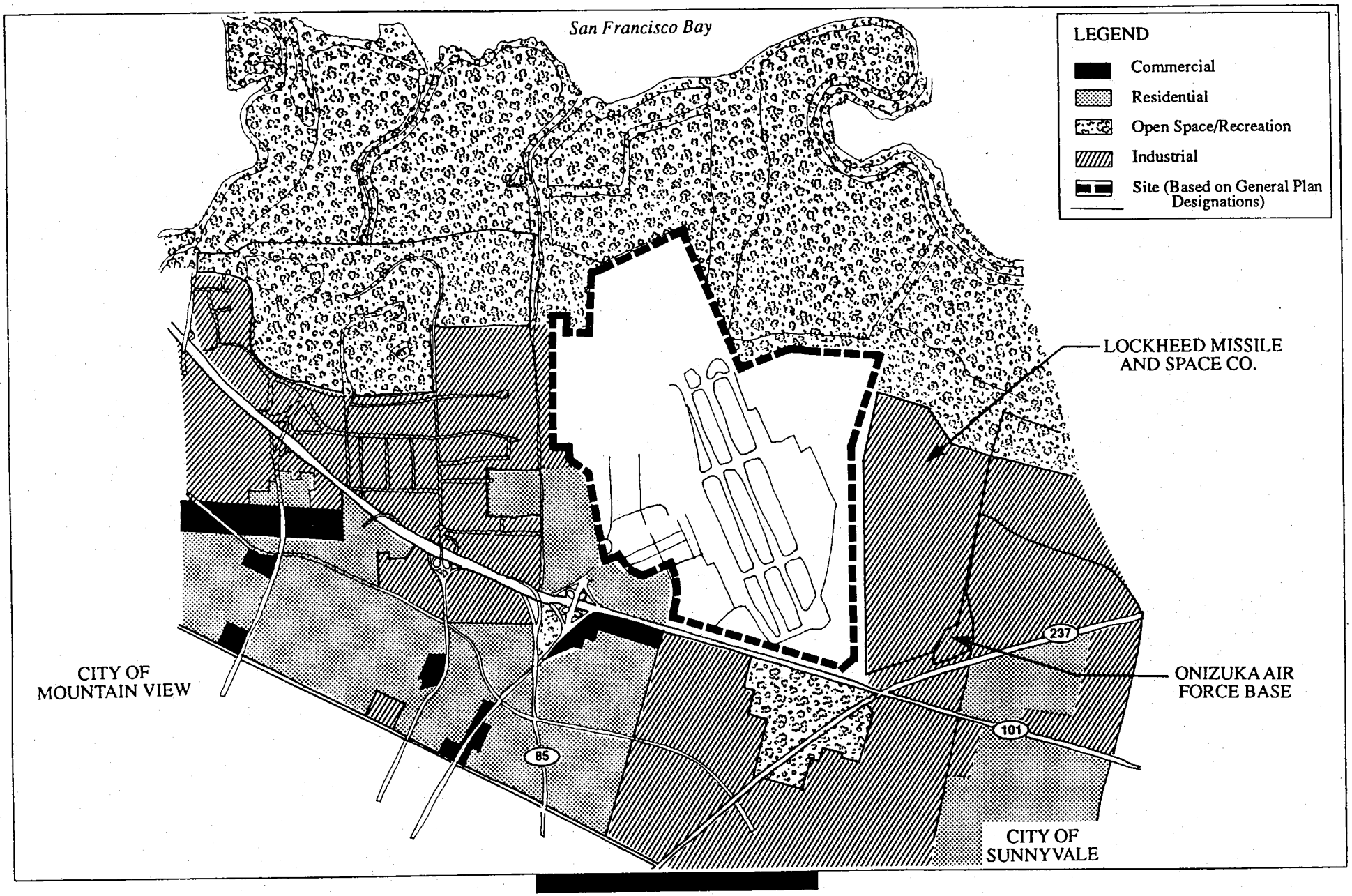
7. Land Use and Public Policy

a. Substantial Alteration of the Present or Planned Land Use of an Area. The land uses and activities that currently occur on Moffett Field include the following:

- Flight Operations
- Research and Development
- Administrative Support
- Operational Support
- Personnel Support
- Open Space and Wetlands

These uses will continue when NASA takes over operation of Moffett Field. Ames Research Center will continue to develop in a manner consistent with its history. The new facilities proposed through implementation of Future Concept 1 of the Comprehensive Use Plan include facilities which will facilitate aerospace research, space sciences, information sciences and life sciences. In addition, Moffett Field has been used by other federal agencies as tenants. It is expected that Moffett Field will continue to be used by other federal agencies and tenants, however some will be new tenants and uses may change in intensity and scope. Substantial changes in intensity or scope beyond what is proposed under Future Concept 1 of the Plan will require environmental review prior to implementation.

b. Conformance with Public Policy. Ames and Moffett Field are primarily part of the unincorporated land of the County of Santa Clara. Adjacent properties are within the city limits of the City of Sunnyvale and the City of Mountain View, which control zoning and land use of those properties. The surrounding land uses are shown in Figure 8. In general, the land uses surrounding Moffett Field are compatible with the airfield. The majority of properties are industrial in nature. The exceptions include a mobile home park located to the west of the site, the Onizuka Air Force Base housing to the south west of the site, adjacent low and medium density residential areas in the City of Mountain View, and residential properties to the southeast in the City of Sunnyvale.



MOFFETT FIELD
COMPREHENSIVE USE PLAN
ENVIRONMENTAL ASSESSMENT

FIGURE 8

NASA

Surrounding Land Uses

Although Moffett Field is constitutionally exempt from the application of local land use plans and policies, NASA intends to cooperate with the cities of Sunnyvale and Mountain View on matters of mutual concern. In addition, NASA will attempt, whenever possible, to meet local guidelines and standards. Consistency with the cities' plans and policies to the extent practical, even if not required by law, will facilitate cooperation with the municipalities. NASA considers these local planning policies and guidelines as advisory resources.

Land use compatibility and local land use policy issues related to the continued use of Moffett Field include those related to noise, safety, and future development of the Bay Trail by the Association of Bay Area Governments (ABAG). These issue areas are described below.

(1) Noise. The majority of noise sensitive land uses located in the vicinity of Moffett Field are located in the City of Mountain View and the City of Sunnyvale. In addition, the housing of Onizuka Air Force Base is located adjacent to Moffett Field.

(a) City of Mountain View. The majority of Mountain View's noise issues are related to noise generated from wind tunnels. According to the Mountain View Planning Department, the City gets complaints from time to time concerning noise. Most of these complaints concern a low level hum which is audible late at night during wind tunnel operation. If an additional wind tunnel is constructed, it shall require environmental review prior to any final action on such a proposal.

The City of Mountain View requires that the outside noise level of residential properties be less than 55 Day-Night Average Sound Level (Ldn) and the interior noise level be less than 45 Ldn. In addition, interior noise levels for industrial development must be less than 55 Ldn.[22] Aircraft noise is not expected to impact the City of Mountain View substantially because the City is not located directly under aircraft arrival and departure routes.

(b) City of Sunnyvale. The City of Sunnyvale requires that outside noise levels for residential properties be below 60 dBA and outside noise levels for industrial properties be below 75 dBA.[23] In addition, any continuous or recurrent noise or sound shall not exceed 75 dBA at the

[22] Michael Percy, City of Mountain View Planning Department, personal communication, November 1, 1993.

[23] Brice McQueen, City of Sunnyvale Planning Department, personal communication, November 2, 1993.

property line and individual noise generators, such as mechanical units, cannot generate noise above 50 dBA at any point on a common property line with a property in a residential zoning district.[24] These standards are applied when new noise generation sources or new housing is proposed. Noise generated by aircraft at Moffett Field currently exceeds these noise standards.[25] The City of Sunnyvale is currently updating its noise ordinance and is anticipating the update of the Noise Sub-Element of the General Plan. City staff is currently working with NASA to address some of the noise issues related to existing and future wind tunnel operations. No substantial increases in noise are expected with implementation of Future Concept 1 of the Comprehensive Use Plan and the appropriate mitigation measures given in Section 13.

(c) California Airport Noise Standards. According to the State Airport Noise Standards[26], the level of noise acceptable to a reasonable person residing in the vicinity of an airport is Community Noise Equivalent Level (CNEL) 65 dB. This criterion was chosen for persons residing in urban residential areas where houses are of typical California construction and may have windows partially open. The CNEL 65 dB level was selected with reference to speech, sleep, and community reaction. The stated purpose of these standards is to provide a basis for resolving existing noise problems in communities surrounding airports and to prevent the development of new noise problems. However, it should be noted that NASA is not currently subject to these regulations, and military aircraft operations are not counted when making a statutory determination of whether or not an airport is a noise problem.

Those properties which are expected to be most affected by current and projected noise from Moffett Field are the residential properties south of East Maude Avenue and east of Matilda Avenue. Noise analyses completed for this Environmental Assessment project noise levels at these residential properties to exceed CNEL 60 dB and, in some cases, CNEL 65 dB. However, with appropriate implementation of mitigation measures, airfield activities related to Future Concept 1 of the Comprehensive Use Plan are not expected to substantially increase current noise levels. Noise levels could exceed CNEL 65 dB in some residential areas. These issues are further

[24] Omid Shakeri, City of Sunnyvale Planning Department, personal communication. December 28, 1993.

[25] P&D Technologies. Aviation Reuse Activities, Moffett Field. April 1992.

[26] State of California, Code of Regulations. Title 21. Subchapter 6. "Noise Standards".

discussed and maps of current and projected noise levels are given in the noise analysis in Section 13.

(d) Federal Noise Standards. The Federal Aviation Administration (FAA) has adopted guidelines based on the following criteria as the basis for its airport noise compatibility planning program:[27]

- Federal Interagency Committee on Urban Noise: "*Guidelines for Considering Noise in Land Use Planning and Control*", and
- American National Standards Institute (ANSI) publication, "*Sound Level Descriptions for Determination of Compatible Land Use,*" (ANSI Report S3.23-1980).

These guidelines were developed in cooperation with the Environmental Protection Agency (EPA) as directed by the Aviation Safety and Noise Abatement Act of 1979, and represent the criteria used by the FAA in the review and approval of airport noise exposure maps and airport noise compatibility programs submitted under Part 150 of the Federal Aviation Regulations (FAR Part 150). Though Moffett Field is not currently regulated by the FAA or the Federal Aviation Regulations, NASA is using these regulations as guidelines in planning for the future of Moffett Field. All land uses, including residential are allowed in areas which have a noise level below CNEL 65 dB. In addition, commercial and industrial land uses are generally allowed in areas below CNEL 75 dB with limited design considerations.

The compatibility of Future Concept 1 of the Comprehensive Use Plan with the federal noise standards are similar to the compatibility of the Plan with State standards, as discussed above.

(2) Safety. Currently, land uses on and surrounding Moffett Field are subject to accident potential zones which occur on either end of the airfield. These zones, known as Air Installations Compatible Use Zones (AICUZ), are zones which were established by the Department of Defense for use of the airfield by the Navy. These advisory zones will no longer apply when NASA acquires Moffett Field.[28] Because the governing agency of the federal airfield will not be the Department of Defense, it is unclear which regulations will govern its future use. The majority of regulations established

[27] Federal Aviation Administration. Federal Aviation Regulations (FAR), Part 150. Airport Noise Compatibility Planning. Pub. L. 97-449. January 12, 1983, as amended.

[28] John D. Gordon. Airfield Operations, Bentley. Personal Communication. October 28, 1993.

by the FAA are for commercial airports. In absence of such regulations, NASA will be using FAA commercial airport regulations as guidelines as a matter of policy. NASA is currently pursuing an amendment to the FAR Part 77 and is actively initiating procedures applicable to FAR Part 169. These efforts seek to ensure that the appropriate regulations and procedures are applicable to Moffett Field once the property is transferred to NASA. No substantial changes of uses will result from implementation of the Comprehensive Use Plan, therefore, no substantial safety impacts are anticipated.

(3) Bay Trail Development. The Association of Bay Area Governments (ABAG), in cooperation with the South Bay Ad Hoc Committee of the San Francisco Bay Trail coalition, is studying the feasibility of extending the Bay Trail to the north of Moffett Field. The trail was conceived as a 400-mile (644 kilometers) hiking and bicycling trail around the entire San Francisco Bay. The alignment preferred by the Ad Hoc Committee is along the northern side of Moffett Field, near the waters of the San Francisco Bay. An early version of the Bay Trail alignment was outside of the CUP study area and called for a pathway on top of Cargill Salt Company's main levee. Cargill Salt is opposed to this proposed Bay Trail alignment because they currently dispose of dredged materials onto the current levees.

NASA has concerns over the development of the northern route of the Bay Trail because it would bring public users of the trail within the vicinity of active ordnance magazines, ordnance handling pads, a firing range, and the end of the runway. Ordnance and weapons storage will continue in its present location at Moffett Field. Use of the small arms firing range is expected to continue to operate in the future with the transfer to NASA. These facilities are used and managed by the Air National Guard, who will continue as a resident agency at Moffett Field. Laser research is also periodically conducted in close proximity to the northern alignment. Several of these safety hazards could be potentially minimized through temporary closure of the proposed Bay Trail. The trail could be closed, for example, during ammunition and weapons transport. In addition, design elements, such as vegetative buffers and fencing, could minimize the chances of trail users getting off the trail and onto the airport runways and the potentially unsafe areas.[29]

An alternative southern route has been proposed by NASA to go around the south end of the facility. Although the southern route would also be in close

[29] Jill Keimach. San Francisco Bay Trail Project. Association of Bay Area Governments (ABAG). Personal Communication. April 4, 1994.

proximity to the runways, there would be less public safety concerns related to operations at Moffett Field. However, this alignment would also create safety hazards associated with traffic. The southern route parallels traffic and traverses several intersections, making it unattractive and unenjoyable for both pedestrian and bicycle users. This route is also not near the Bay. In addition, the southern route is substantially longer than the northern route, creating an indirect connection between the surrounding sections of the Bay Trail.[30] The proposed alignments of the Bay Trail and uses which present safety concerns according to NASA are shown on Figure 9.

NASA-Ames is committed to working with the South Bay Ad Hoc Committee to implement a Bay Trail route. Although NASA recognizes the Committee's preferred route, there are public safety concerns that must be examined, as described above. Therefore, NASA has not yet approved a specific alignment and is working with the South Bay Ad Hoc Committee to examine both the southern and northern alignments. Prior to implementation of either route, appropriate environmental analysis will be required. Neither Bay Trail proposal is part of Future Concept 1 of the Comprehensive Use Plan.

(4) San Francisco Bay Conservation and Development Commission. The San Francisco Bay Conservation and Development Commission (BCDC) regulates filling and dredging in the San Francisco Bay and has jurisdiction over activities within a 100-foot (30 meter) shoreline band. The BCDC also has jurisdiction over proposed filling of salt ponds or managed wetlands. The San Francisco Bay Plan developed by the Bay Conservation and Development Commission (BCDC) designates Moffett Field as an Airport Priority Use Area. The note on BCDC Bay Plan Map 6 states: "If and when not needed by Navy, site should be evaluated for commercial airport by regional airport system study." Future Concept 1 of Comprehensive Use Plan will not trigger the airport study because the military continues to need the airfield and will use it as part of a use agreement with NASA. Thus, Future Concept 1 of the Comprehensive Use Plan will be consistent with the Airport Priority Use designation.

[30] Larry Ames. Santa Clara County Trails Advisory Committee. Personal Communication. April 4, 1994.

8. Aesthetics

a. The Obstruction of any Public View or the Creation of an Aesthetically Offensive Site. The wide open spaces of the airfield and the wetlands, in addition to the views of the San Francisco Bay, provide a pleasant visual environment. Numerous birds and animals inhabit the marshes and provide interesting observation possibilities. In addition, there are a substantial number of well-preserved buildings that date back to the original construction of Moffett Field. Also, Moffett Field is the site of three impressive structures known as Hangars 1, 2 and 3.

No substantial impacts on aesthetics will result from implementation of Future Concept 1 of the Comprehensive Use Plan. As shown in Figure 2, new and reused buildings will be located adjacent to existing structures and not obstruct views. In addition, important building and historic structures will be preserved by Future Concept 1 of the Comprehensive Use Plan. Any site-specific construction, modification or demolition will require environmental review prior to implementation.

b. Production of New Light or Glare. The construction of new buildings and facilities at Moffett Field will result in light and glare during and after construction. Light and glare from the facilities presently exists. Projects proposed under Future Concept 1 of the Comprehensive Use Plan will not increase light and glare as they will be clustered within existing development. These impacts are thus considered to be negligible.

9. Population and Housing

a. Alteration of the Location, Density or Growth Rate of Population. There will be an increase in the number of employees at Moffett Field by the year 2010 of 610 persons, an average of 40 employees per year. These additional personnel would result in a total employee population of 10,610. Ames Research Center and Moffett Field previously had approximately 13,000 employees in 1991. Employees presently number approximately 10,000. No substantial impacts are anticipated due to this small change in employment.

b. Demand or Creation of Additional Housing or Effect on Existing Housing. As described above, there will be an increase of 610 Moffett Field personnel, resulting in a total employee population of 10,610. The increase in employees could result in a minor need for additional housing regionally. Housing will be partially provided to military resident agency staff by the 300 residential units currently on Moffett Field. In addition, housing will continue to be available in the residential areas of Onizuka Air Force Base in the

southwest corner of Moffett Field for military use. There are a total of 800 family units in this location. Though these units are not a part of the Comprehensive Use Plan, they are used by military employees. The housing supply is more than adequate to meet the demand created by the Future Concept 1 of Comprehensive Use Plan, thus no substantial impacts on housing will result from its implementation.

10. Services and Utilities

a. Fire Protection. Fire protection at Moffett Field is currently provided by the Navy. When NASA acquires Moffett Field, fire protection services will be provided by the Air National Guard. The Moffett Field Fire Department currently houses 47 personnel in Facility 580, which is situated almost directly in the center of Moffett Field, adjacent to the airfield. This location provides excellent access to the runways and immediate access to both sides of Moffett Field. The department maintains three structural fire pumpers; three crash, fire and rescue vehicles; and five other support and command vehicles. A cooperative Response Agreement also exists with the City of Sunnyvale and the City of Mountain View Fire Departments. When the Navy leaves Moffett Field, these agreements will no longer be in effect. However, NASA is currently pursuing entering into the Santa Clara County Mutual Aid Agreement. It is expected that this agreement will be signed in July 1994.

As stated, the Air National Guard will implement fire protection at Moffett Field with NASA's stewardship. Fire protection responsibility will shift from the Navy to NASA. An agreement between NASA and the Air National Guard is expected by July of 1994 to provide fire services. There will only be a slight increase in the number of employees at Moffett Field from 10,000 to 10,610 by the year 2010. With the current and planned facilities and capabilities, no substantial increase in demand for fire protection will occur.

b. Police Protection and Security. Police protection and security at Moffett Field is provided through private contractors. NASA currently provides gate security through private contract. Once the facility is transferred, all security at Moffett Field will be the responsibility of NASA. Moffett Field will continue to operate as a closed federal facility. The field is surrounded by a security fence, and security clearance is required prior to entry through one of three guarded access gates. Two additional security gates would be added through implementation of Future Concept 1 of the Comprehensive Use Plan. These gates would be located at the Stevens Creek Bridge Connection and the adjacent Onizuka Air Force Base Housing on the western boundary of the study area in Planning Area 9.

NASA will continue to implement security and police protection at Moffett Field. There will only be a slight increase in the number of employees at Moffett Field from 10,000 to 10,610. No substantial increase in demand for security service will result from implementation of the Plan.

c. Schools. The majority of children of employees stationed at Moffett Field attend Mountain View Elementary, Whisman Elementary, Sunnyvale Elementary, and Mountain View/Los Altos High School.[31] There will be a change in the number of employees at Moffett Field, most likely creating an indirect change in the number of families with children living in the area. However, this change is expected to be minimal and no substantial impacts are expected.

d. Parks or Other Recreational Facilities. Park and recreation facilities are currently concentrated in the southern and northern portions of the planning area. It is proposed that these uses will continue to exist and will be improved with implementation of Future Concept 1 of the Comprehensive Use Plan. Approximately 11 percent of the land uses of Moffett Field are currently dedicated to morale, welfare, and recreation.

The 18-hole golf course located in the northern portion of the study area (Planning Area 8) would be retained and would continue to be used with implementation of Future Concept 1 of the Comprehensive Use Plan. This golf course area will not be open to the public.

As described in the Comprehensive Use Plan, Planning Area 6 in the southern area of Moffett Field will include personnel-related services as the predominant use. Recreation facilities and services, which are used exclusively by Moffett Field employees and resident agencies, will be concentrated in this area through a reorganization of underutilized sites and new development. There are currently playing fields, a community park, picnic grounds, and a bowling alley in this area. With implementation of the plan, these uses will continue, a new 60,000 square foot (5,400 square meters) Commissary will be added, and improvements to the existing bowling alley will be made.

With these described improvements, there will be an increase in park and recreation facilities. The proposed employee population will only slightly increase, and the described improvements would more than adequately compensate for this increase.

[31] Candidate Base Closure/Realignment in San Francisco Bay Area EIS. July 1990.

e. Maintenance of Public Facilities, Including Roads. Moffett Field provides many service facilities normally provided and maintained by the public sector. Services will continue to be provided with implementation of the Plan. Road use for employees and construction equipment will increase. However, no impacts are expected due to the relatively small increase in existing employees and construction activity. Over the 15-year planning period, an approximate total of 1 million square feet (93,000 square meters) will be constructed, an average of approximately 70,000 square feet (6,510 square meters) per year.

f. Power or Natural Gas. The electrical system, as it stands now, is vulnerable to significant power outage due to the configuration of substation "A" and to the inadequacy of the NASA cross-connection. Improvements to mitigate these conditions are currently planned for under the CoF/MILCON program for Moffett Field.[32] With these improvements no significant impacts are anticipated. The 1993 electrical usage at Moffett Field was 820,000 megawatt hours (MWh), or approximately 82 MWh per employee annually.[33] With the anticipated increase in employment, energy usage at Moffett Field is expected to increase to approximately 870,000 MWh annually. However, it should be noted that this approximation is based on employment increases. Significant changes in equipment operations at Moffett Field could change these estimations.

Natural gas is supplied independently by PG&E. The gas is primarily used for steam generation, hot water, and space heating. Consumption in 1993 totalled 590,000 million British thermal units (mBtus) or 59 mBtus per employee annually.[34] The addition of approximately 1 million square feet and 610 employees of development would increase consumption. Projected usage is 626,000 mBtus annually for an employment of 10,610. However, it should be noted that this approximation is based on employment increases. Significant changes in equipment operations at Moffett Field could change these estimations. No substantial changes in the amount of natural gas used by Moffett Field is expected as a result of Future Concept 1 of the Comprehensive Use Plan. There are no existing problems with the natural gas system.

[32] Operations and Integration, Moffett Field Development Project Office, NASA. Report on the Infrastructure of Naval Air Station Moffett Field. February 1993.

[33] Rose Ashford. December 29, 1993.

[34] Candidate Base Closure/Realignment in San Francisco Bay Area Draft EIS. July 1990.

In 1973, the NASA Energy Conservation Program was officially initiated at Ames-Moffett. The aim of the program was a 50 percent reduction in utilities energy consumption from FY 1973 to FY 1985. This program was largely successful; total energy consumption at Ames-Moffett was reduced 41 percent from FY 1973 to FY 1980. In addition, electrical energy consumption decreased from approximately 313,000 megawatt hours (MWh) in FY 1973 to approximately 146,000 MWh in FY 1985, a greater than 50 percent reduction. Wind tunnel testing is often scheduled with PG&E to avoid use of the facilities during PG&E peak demand periods.[35] Major conservation efforts have been implemented at Ames-Moffett to reduce energy demand.

g. Communications Systems. Communications systems will continue to be provided to the site by AT&T/Pacific Bell and on the site by various data, video, and radio systems. No substantial changes or impacts are anticipated to communications systems as a result of the proposed Future Concept 1 of Comprehensive Use Plan.

h. Water. Implementation of Future Concept 1 of the Comprehensive Use Plan would require water supply for approximately 10,610 employees, in addition to water uses for field operations such as cooling or washing and rinsing aircraft. This water supply is obtained through contract with the San Francisco Water Company. In 1991, the Field used a total of 412 million gallons (1,560 million liters) for a total employment of 13,000 people.[36] Currently, annual water usage is approximately 160 million gallons (606 million liters) for Ames Research Center and 150 million gallons (568 million liters) for Moffett Field NAS. The most significant amount of water used at Ames is for cooling the wind-tunnel facilities. An average of 600 gallons (2,271 liters) per minute evaporates from the Unitary Plan Wind tunnel cooling tower. Water for Moffett Field is stored for use in a 200,000 gallon (757,080 liter) tank, which is known as Facility 5.[37]

Significant changes in the amount of water used by Moffett Field would result if additional wind tunnel facilities are added. The most significant amount of water used will continue to be for cooling. Ames is investigating conservation options, such as using either treated ground water or reclaimed water from

[35] Environmental Resources Document. National Aeronautics and Space Administration. Ames Research Center. Moffett Field, CA. June 1992.

[36] Naval Air Station Moffett Field Existing Conditions Report, Phase 2. NASA Ames Research Center Facilities Planning Office. May 22, 1992.

[37] Operations and Integration. Moffett Field Development Project Office, NASA Report on Infrastructure of NAS Moffett Field. February 1993.

Sunnyvale or Palo Alto as the cooling-water supply. In light of these conservation options, significant impacts will be lessened. However, an environmental review of any new proposed wind tunnel facilities shall be required.

Mitigation Measure SERV-1. Environmental analysis of any new wind tunnel facilities shall be required.

i. Sewer or Septic Tanks. Moffett Field's sanitary sewer system includes two separate systems. The first is with the City of Mountain View for a specific number of housing units, which are located in the Onizuka housing area, and a maximum discharge of 300,000 gallons (1,135,620 liters) per day from NASA facilities. This discharge includes approximately 2/3 of NASA's current total discharge. It should be noted that Future Concept 1 of the Comprehensive Use Plan does not affect the Onizuka housing area. The second sewer system is a high-volume rate contract with the City of Sunnyvale, which has no specified maximum discharge.

(1) Sunnyvale Public Owned Treatment Works (POTW). Ames and Moffett Field discharged approximately 49 million gallons (185 million liters) of sewage into the Sunnyvale system in 1991, of which 20-30 million gallons (76-114 million liters) is attributable to NASA Ames.[38] This equals a generation rate of approximately 10.3 gallons (39 liters) per day per employee in 1991. Approximately 50,000 gallons (189,270 liters) per day of industrial wastes are included in this total. Based on this estimated generation rate, it is projected that Moffett Field will discharge approximately 40 million gallons of sewage annually at buildout of Future Concept 1 of the Comprehensive Use Plan, assuming a total employee population of 10,610. No significant impacts to current sewage generation is expected as a result of Future Concept 1 of the Comprehensive Use Plan.

An environmental assessment of any new wind tunnel facilities will be required to assess whether significant amounts of sewage will be generated by construction of such facilities through Mitigation Measure SERV-1. The current wind tunnel facilities use the most significant amounts of water on the Ames site. However, much of this water evaporates from the cooling tower, thereby not requiring sewage disposal. The City of Sunnyvale has indicated that they will accept up to 1.7 million gallons daily of sewage effluent if

[38] Kathleen Kovar. Natural Resources Department. Ames Research Center. Personal Communication. November 11, 1993.

construction of new wind tunnel facilities occurs. Additional environmental analysis shall occur if a specific wind tunnel proposal is made.

(2) City of Mountain View. Navy housing and approximately 2/3 of the existing NASA/Ames site discharges to the Mountain View sewage collection system. These discharges are then transported to and treated at the Palo Alto Regional Water Quality Control Plant. Because the majority of Moffett field is served by the Sunnyvale Public Owned Treatment Works, increases in employee population and aircraft operations are generally not expected to impact the City of Mountain View's contract. The only impact to the Mountain View system could be the construction of a new wind tunnel, which would require additional environmental review.

j. Storm Water Drainage. The storm drainage area of Moffett Field divides into two sub-basins: the area to the west of the runways and the area to the east of and including the runways. The run-off from the area is currently moderate, with higher run-off occurring where extensive paved surfaces such as aircraft runways, are present and lower run-off occurring where underdeveloped or heavily vegetated areas predominate.

Run-off on the west side, drains north through underground storm pipes and drainage ditches to the marsh area northwest of the runway. Water from the storm water retention pond should drain via tide gates to Stevens Creek and ultimately to the San Francisco Bay during low tide. However, sediments in the creek have covered the tide gates and rendered them ineffective. Currently, water flows from the marsh through a culvert under the perimeter road into the stormwater retention pond where it is held and allowed to evaporate. Pumps are also used to pump water out of the marsh area and into Stevens Creek during times of very heavy rainfall.

On the east side, the capacity of the Moffett channel is not adequate to drain by gravity flow because subsidence has lowered the elevation of the outflow flap gates relative to the Sunnyvale west outfall channel.[39] In 1985, the Navy installed a 42-inch metal pipe to divert the flow from the channel to Lockheed's storage pond. This configuration has permitted storm water to be discharged to the Sunnyvale West Outfall through Lockheed's pumping station.

[39] Operations and Integration. Moffett Field Development Project Office, NASA. Report on the Infrastructure of Naval Air Station Moffett Field. February 1993.

Currently, there are also problems with the storm water lift station that pumps from the open channel into the Moffett channel. The control equipment, located in Building 191, is old and ineffective. In addition, one of the lift pumps was removed in January 1992.

The amount of increased runoff expected with the implementation of Future Concept 1 of the Comprehensive Use Plan will be relatively small. The Plan outlines development of approximately 100 additional acres of land, resulting in a total developed land acreage of approximately 1,250. This development represents less than a nine percent increase in impervious surfaces.

Improvements in site drainage are currently included in the fiscal 1999 plan. These improvements will be adequate to remedy existing problems as well as meet demands created by Future Concept 1 of the Comprehensive Use Plan. The improvement needs were studied in a Report on Infrastructure developed in February 1993 and recommendations from the report were incorporated into capital improvement plans.

> **Mitigation Measure SERV-2.** A permanent solution to the discharge problems associated with the inoperable tide gates in the western sub-basin shall be established and the current lift station in Building 191 shall be upgraded.

k. Solid Waste Disposal. Moffett Field has no active landfills. Solid waste collection and disposal is handled through Waste Management, Inc., a private contractor. A total of 4,216 tons of solid waste was collected from NAS Moffett Field from October 1991 to September 1992. The collection needs throughout Moffett Field have declined, largely due to the recent implementation of a monthly recycling program and an overall decrease in employee population. With these continued recycling efforts, and only a slight increase in employees at Moffett Field, the amount of solid waste is not expected to increase significantly and no significant environmental impacts are anticipated.

l. Use of Substantial Amounts of Fuel or Energy. Approximately 1 million gallons of aviation fuel per month fulfills present requirements at Moffett Field. Since the number of air operations at Moffett Field will only increase from 75,000 operations to 80,000 operations with NASA's acquisition, no substantial changes in the amount of fuel used at the facility are expected.

In addition, the NASA Facility Project Implementation Handbook requires that distribution systems meet present and future energy demand.[40]

11. Risk of Upset/Human Health

a. Risk of an Explosion or the Release of Hazardous Substances. Risks related to explosions or the release of hazardous substances include those related to weapons and ordnance storage and fuel distribution and storage. Impacts related to hazardous materials contamination in soils and groundwater are described in section "d." below.

(1) Weapons and Ordnance Storage. Moffett Field is used as one of nine Pacific Fleet Support Stations and is designated as a Secondary Ammunition Stock Point. This designation has resulted in the storage of weapons stockpiles. Weapons and ordnance storage currently occurs in several areas at Moffett Field.

No changes to the existing condition will result from the adoption of Future Concept 1 of the Comprehensive Use Plan. Ordnance and weapons storage will continue at Moffett Field, but no increase in storage facilities will occur. However, new fuel farms are proposed to be developed in the golf course area. These storage areas will not conflict with any other uses proposed at Moffett Field and they will be regulated by the Santa Clara County Health Department. Additional development of office and research facilities will not occur in the vicinity of proposed and existing storage areas.

(2) Fuel Distribution and Storage. The distribution of fuel to and within Moffett Field creates additional environmental considerations for implementation of Future Concept 1 of the Comprehensive Use Plan. The existing fuel farm provides for the storage and delivery of fuel for aircraft, vehicles, and other uses such as emergency generator engines. Jet fuel is received by barge and pumped to several large storage tanks. From these tanks, fuel is dispensed to aircraft using hydrants located at the fuel facility on the eastern portion of the airfield. The fuel farm consists of two main storage areas: the north fuel farm and the south fuel farm. The majority of the south fuel farm tanks have been taken out of service and removal is expected by 1995. The north fuel farm consists of four 567,000 gallon storage tanks and a 105,000 gallon "day" tank where fuel for immediate use is stored.[41]

[40] Facility Project Implementation Handbook. National Aeronautics and Space Administration. 1991.

[41] Fuel Farm Storage Tanks. NAS Moffett Field. US Navy. Memorandum.

In evaluating the fuel system according to the California Underground Storage Tank regulations, several potential environmental impacts and requirements have been identified.[42] They are summarized below:

- Aviation fuel is received by barge in Guadalupe Slough. The receiving area is inadequate for current use requirements. A monitoring program to detect fuel releases to water and soil shall be established along with a spill prevention control and counter measure plan.
- Once fuel is received from the barge, it is stored in one of four single wall steel semi-buried tanks located in the north fuel farm. These tanks are in good condition for their age, but are not secondarily contained, and must be either retrofitted with double wall liners and leak alarms, or replaced.
- The on-site above-ground delivery system is currently functional and meets environmental standards. All potential leaks would be above ground and visible. Being above ground, however, means a potential for contact, and the positions do not meet USAF standards for physical clearance.

To ensure that the existing north fuel farm tanks do not pose a threat to the environment, the Navy has tested the tanks for tightness. No evidence of leaking has been found and only minor repair and upgrading are required. In addition, several physical tests are in progress to test the structure of the tanks.[43]

The following mitigation measures shall be implemented to ensure the safety of the site is maintained.

> **Mitigation Measure RISK-1.** A monitoring program to detect fuel releases to the water and soil and spill prevention control and counter measure plan shall be established immediately to address potential impacts associated with the receipt of aviation fuel by barge through the Guadalupe Slough.

[42] NAS Existing Conditions Report, Phase 2. NASA Ames Research Center Facilities Planning Office. May 22, 1992.

[43] Fuel Farm Storage Tanks. NAS Moffett Field. US Navy. Memorandum.

Mitigation Measure RISK-2. Development of new fuel farms shall require site-specific environmental analysis to determine the extent of environmental hazards. Appropriate mitigation shall be developed to lessen to a level of insignificance the risk of explosion or the release of hazardous substances and all new development must adhere to the California Underground Storage tank regulations. If this is not possible, the fuel farms shall not be developed.

Mitigation Measure RISK-3. The existing jet fuel system at Moffett Field shall comply with the California Underground Storage Tank regulations. Any substantial change or replacement of the existing fuel distribution system will require additional environmental analysis under NEPA.

b. Interference with an Emergency Response Plan. Although no formal written agreements exist between Moffett Field and local or state emergency response entities, it is generally agreed that Moffett Field would serve well as a regional staging area in the event of a large disaster. Interference with these capabilities or any other emergency response plan would not occur with adoption of Future Concept 1 of the Comprehensive Use Plan.

c. Creation of any Health Hazard. It is not expected that development of Future Concept 1 of the Comprehensive Use Plan will result in the creation of any additional health hazards.

d. Exposure of People to Potential Health Hazards. The US Navy is committed to cleanup of all Installation Restoration Program (IRP) sites to levels negotiated with regulatory agencies. The Navy will retain full responsibility for all environmental requirements and regulations arising out of or related to the activities of the Navy. This responsibility includes the following:

- The remediation of any soil contamination resulting from prior use of lead paints;
- The identification of all asbestos materials and the abatement of any friable asbestos;
- The remediation of any contamination or hazardous materials in the sanitary or storm drain systems;
- The remediation of any improperly disposed of hazardous waste at the hazardous waste packaging areas;
- The remediation of any contamination resulting from the delivery and storage of fuel;

- The repair or replacement of any leaking PCB transformer and the remediation of any leaks;
- The removal or closure of underground storage tanks and the remediation of any contamination from any underground storage tank;[44] and
- The remediation and removal of contaminated soil and/or groundwater.

The Installation Restoration Program (IRP) was established by the US Navy to evaluate, investigate, and remediate sites with ground water and/or soil contamination problems resulting from past hazardous waste management practices.

Nineteen sites have been identified at Moffett Field as potential hazardous waste disposal or spill locations under the IRP, as shown on Figure 10. The Navy incinerator has been closed to prevent hazardous emissions. Another large site of approximately 320 acres (130 hectares) has been identified by the federal EPA as a contaminated Superfund site. The site, known as the Middlefield-Ellis-Whisman (MEW) Superfund Site, is generally outside of the Comprehensive Use Plan study area, however the plume of expected contaminated groundwater attributable to the site extends beneath the western portion of NAS Moffett Field, as shown in Figure 10. The primary contaminants are trichloroethylene and other chlorinated solvents. The site will be remediated by a regional groundwater extraction system. The area of groundwater contamination of Moffett Field is approximately 400 acres. These existing sites are considered a constraint to new development at Moffett Field. In general, development of Future Concept 1 of the Comprehensive Use Plan occurs on sites which are uncontaminated, or the least contaminated. Prior to construction of individual projects of Future Concept 1 of the Comprehensive Use Plan, site-specific evaluation will occur to determine the extent of contamination and hazards related to development. In the event that contaminated soil or groundwater is identified prior to or during construction, environmental remediation shall occur by the Navy.

In addition to continued environmental clean-up efforts, several plans related to hazardous wastes have been developed. These include: the Hazardous Waste Management Plan, which will ensure that Moffett Field meets all federal, State, and local regulations regarding hazardous wastes; Hazardous Waste Minimization Plans, which outline reduction measures for hazardous

[44] Memorandum of understanding between the Department of the Navy and NASA regarding Moffett Field, California. December 22, 1992.

waste output; the Spill Contingency Plan, which contains a thorough coverage of response organization and procedures, and site specific spill contingency plans; and the Hazard Communication Program Plan, which identifies sources of information regarding hazardous materials. These plans, which were originally developed for the Navy, have been or will be adopted, as applicable, by NASA.

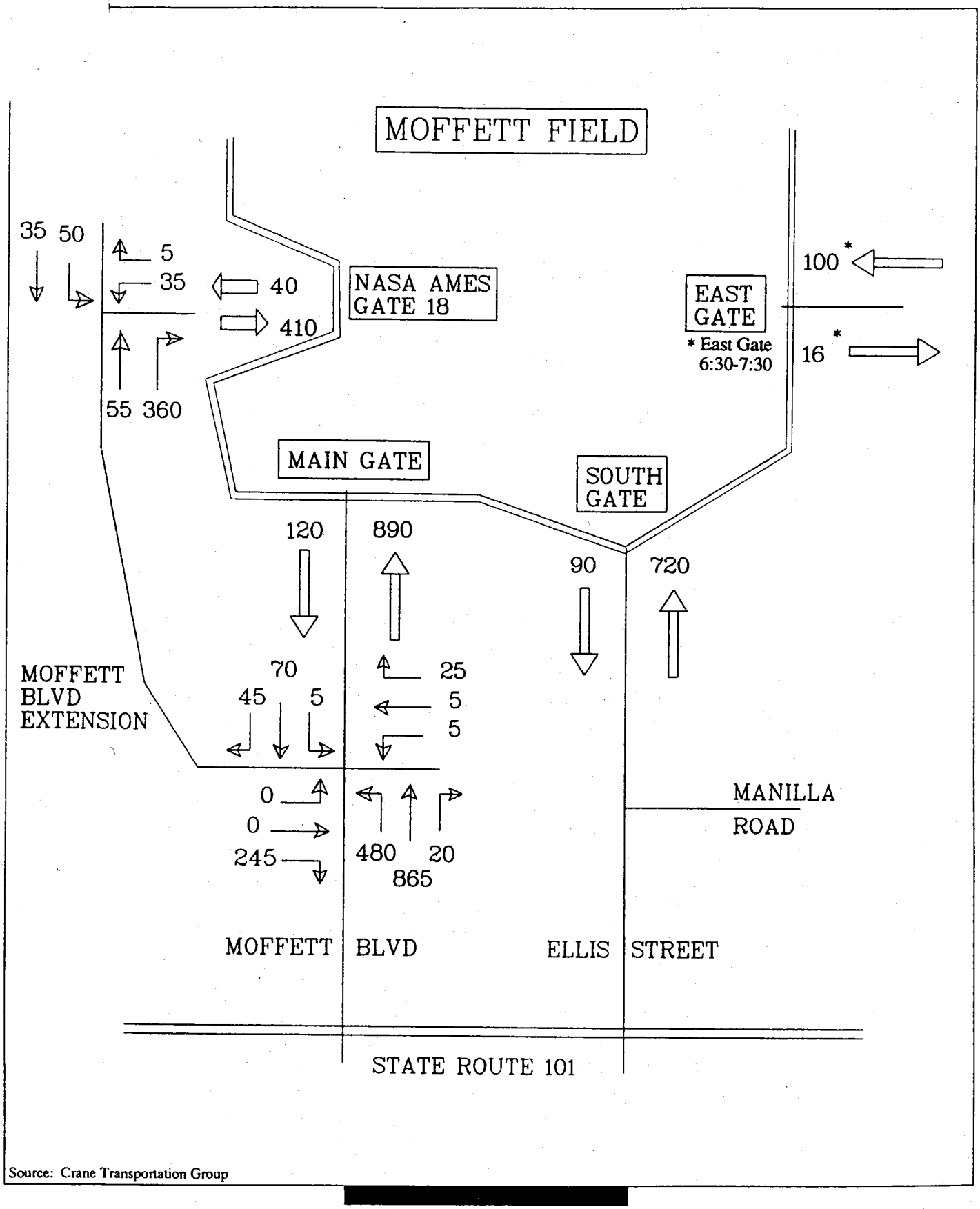
With the current regulation and clean-up of hazardous materials, along with site-specific review for individual projects as outlined below, no impacts are anticipated as a result of Future Concept 1 of the Comprehensive Use Plan.

> **Mitigation Measure RISK-3.** Prior to construction of individual projects of Future Concept 1 of the Comprehensive Use Plan, site-specific evaluation shall occur to determine the extent of contamination and hazards related to development. In the event contaminated soil and/or groundwater is encountered, it will be remediated or disposed of properly by the Navy.

12. Transportation/Circulation

Traffic counts and observations by a registered traffic engineer were conducted on Thursday, November 4, 1993 at each of the four gates providing access to Moffett Field and at the two main interchanges along Highway 101 which provide access to Moffett Field (at Ellis Street and at Moffett Boulevard). Counts were conducted during the morning inbound commute (from 6:30 to 8:30 AM) because this was the time period when the most significant traffic congestion has occurred in close proximity to the base gates. Volumes during the peak traffic hour of the morning (6:45 to 7:45) are presented in Figures 11 and 12. Both the Main Gate, at Moffett Boulevard, and the South Gate, at Ellis Street, experienced similar volume levels, while the NASA Ames Gate experienced volumes about half these levels. The East Gate, which closes at 7:30 AM, serves less than 15 percent of the traffic being accommodated by the Main Gate. Overall, from 6:45 to 7:45 AM, the four gates served a total of 2,120 inbound and 266 outbound vehicles.

Inbound back-ups occurred on the approaches to both the Main Gate and the South Gate (see Figure 13). On the Moffett Boulevard approach to the Main Gate, which has two inbound lanes, back-ups of 12 to 18 vehicles occurred intermittently during the entire peak commute hour. These back-ups, however, did not extend into the Highway 101 interchange. Back-ups occurred both at the gate as well as at the all-way stop intersection with the Moffett Boulevard Extension immediately in front of the gate. Inbound vehicles making a left turn from Moffett Boulevard to the Moffett Boulevard



Source: Crane Transportation Group

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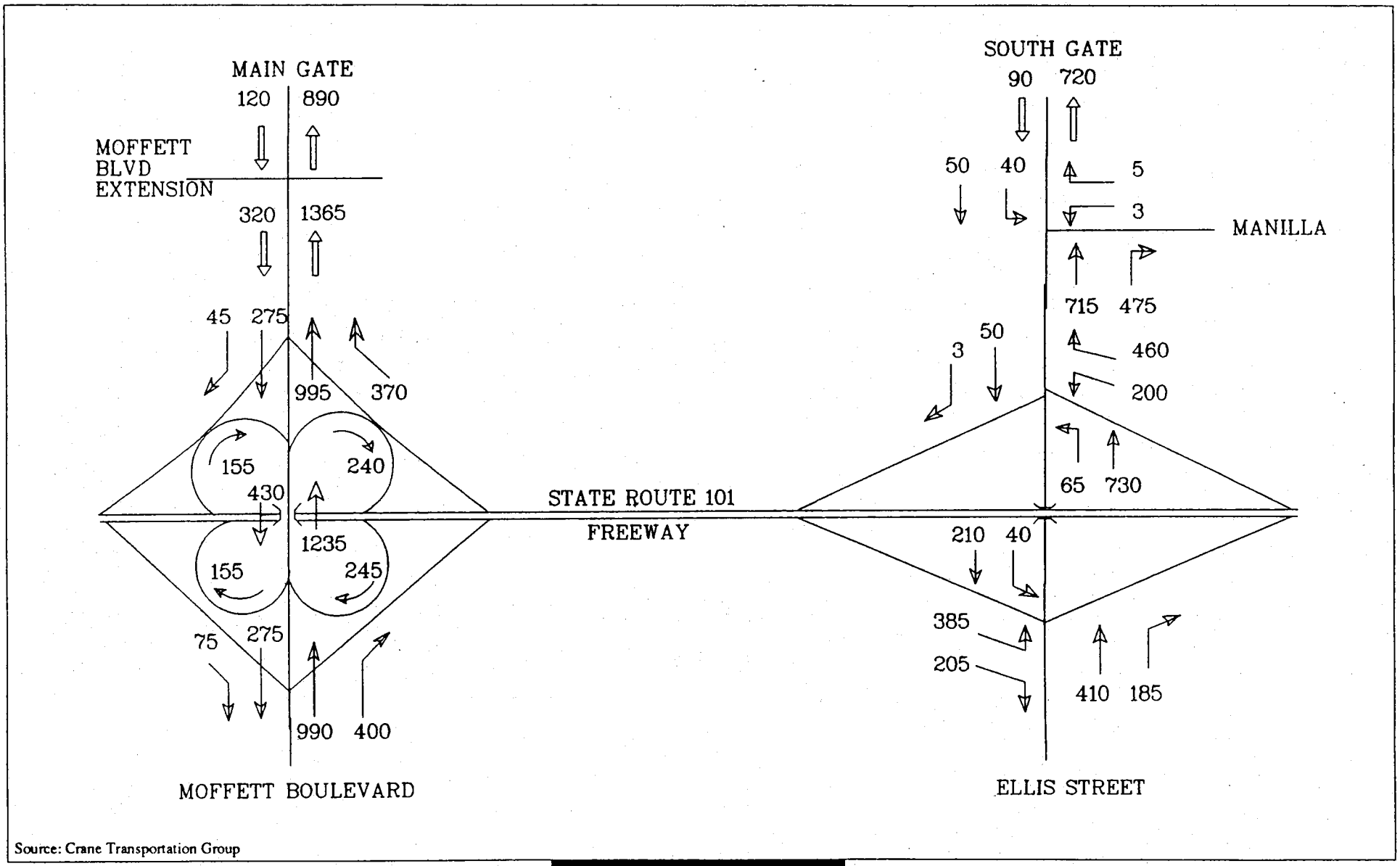
FIGURE 11

Moffett Field Gate Volumes
AM Peak Hour (6:45-7:45)
Thursday, November 4, 1993



Source: Crane Transportation Group

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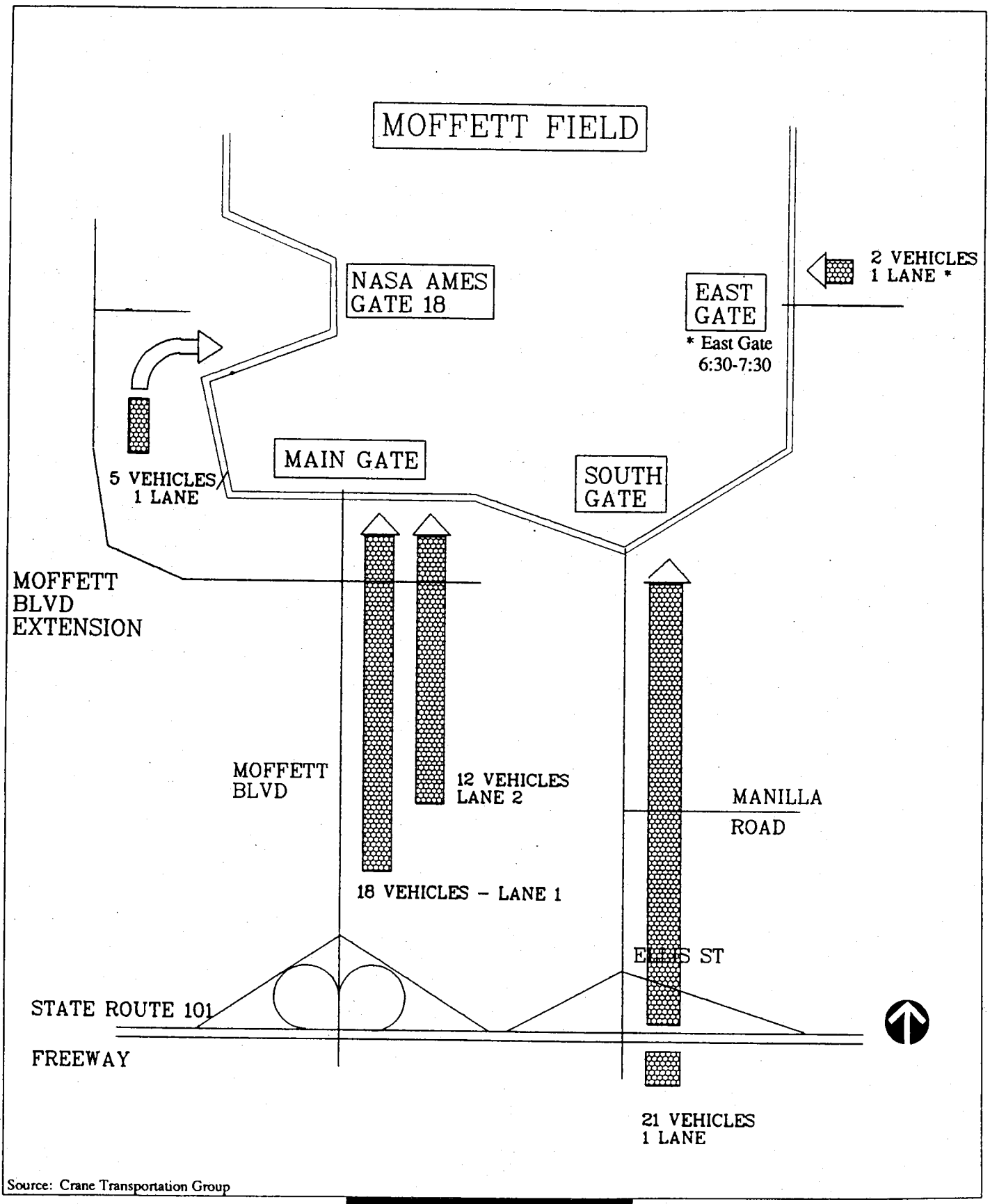
FIGURE 12

AM Peak Hour Turn Movement Volumes
(6:45-7:45) Wednesday, November 3, 1993



Source: Crane Transportation Group

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FIGURE 13

Moffett Field Gates
Maximum Back-Ups
AM Peak Hour (6:45-7:45)
Thursday, November 4, 1993

Extension (to access the NASA Ames Gate along the Moffett Extension) add to the inbound back-ups on the approach to this intersection. At the South Gate, inbound vehicle back-ups from the single-lane entry typically extended to, or just past, the Manila Road intersection. When back-ups become extensive, a traffic control person generally directs traffic at the Moffett Extension intersection. However, this is usually not required. At only one observed occurrence did a back-up from the gate extend through the Ellis Street interchange with Highway 101.

All ramps at the Moffett Boulevard and Ellis Street interchanges have AM peak hour volume levels well below acceptable ramp capacity limits. Flow and surface street weaving movements associated with the cloverleaf ramps at the Moffett Boulevard interchange all work at acceptable levels. However, vehicles weaving between the north to eastbound off-ramp and the left turn lane on the Moffett Boulevard approach to the Moffett Boulevard Extension (across two through lanes of traffic) frequently experienced some difficultly due to the back-ups in the through traffic lanes and due to the short distance available for this weave movement (less than 300 feet). The 8-lane Highway 101 experienced stop and go traffic in the southbound direction, with the exception of the High-Occupancy-Vehicle lane, during the entire AM peak inbound traffic hour at Moffett Field. However, this stop and go traffic is not attributable solely to Moffett Field.

a. Generation of Substantial Vehicular Movement. Implementation of Future Concept 1 of the Comprehensive Use Plan will not generate substantial additional vehicular movement. The most that traffic could be expected to increase based on existing commuting patterns and vehicle use would be equal to the level of employment growth, which would be 6 percent. However, it is anticipated that traffic will not even grow at these levels due to implementation of alternative modes of transportation currently being developed by NASA or in future plans for surrounding transit developments. These current efforts by NASA include existing shuttle bus access to the CalTrain depot in Mountain View, current bike locker facilities and provision of bicycles for internal use by employees at Moffett Field. NASA is also proposing an expanded site-wide shuttle bus system and expanded encouragement of car/vanpools. In addition, development of an extension of the Santa Clara County Transit light rail system and a light rail station adjacent to the southern boundary of Moffett Field may occur sometime in the future.

b. Effects on Existing Parking Facilities. The anticipated 6 percent increase in employment is not expected to have an impact on exiting parking facilities or result in a demand for new parking. The increasing use of alternative modes of transportation, as described above, are anticipated to lessen the demand for parking. In addition, more parking is proposed in Future Concept 1 of the Comprehensive Use Plan.

c. Substantial Impact upon Existing Transportation Systems. Because employment is only expected to increase by 6 percent, and existing transportation systems are to remain relatively constant, no substantial impacts to existing transportation systems are anticipated.

d. Alteration to Present Patterns of Circulation. Development of Future Concept 1 of the Comprehensive Use Plan is not expected to result in any substantial alteration to the present patterns of circulation. Several implementation measures to improve the circulation system can be anticipated. These possible alterations are as follows:

- Increased use of modes of transportation other that the single occupancy vehicle;
- Continuation of the Moffett Boulevard Extension across Stevens Creek;
- Provision of a second inbound lane at the South Gate; and
- Elimination of all east to north left turns from Moffett Boulevard to the Moffett Boulevard Extension from 6:30 to 8:30 AM.

It is expected that the impacts resulting from these alterations will be positive. However, specific traffic analyses shall be completed prior to construction of the Stevens Creek bridge.

> **Mitigation Measure TRAFFIC-1.** Prior to construction of the Stevens Creek bridge, traffic analyses shall be conducted to determine the traffic impact of re-routing Moffett Field traffic through the Moffett Boulevard Extension. These analyses shall be conducted in cooperation with the City of Mountain View.

e. Alterations to Waterborne, Rail or Air Traffic. The air traffic environment near Moffett Field includes high density traffic from the nearby general aviation of San Jose International and San Francisco International airports. From the standpoint of air traffic, the aerospace within the region is strictly controlled by a system that involves complex aerospace restrictions and tower/air route controllers.

Minor alterations to air traffic are to be anticipated as a result of the acquisition of Moffett Field by NASA due to a change in the types of aircraft being based at the field and the number of aircraft operations. However, it is anticipated that with the current controls that govern the airspace, these alterations will not have a significant impact. No alterations to waterborne or rail traffic are anticipated as a result of Future Concept 1 of the Comprehensive Use Plan.

f. Increase in Traffic Hazards to Motor Vehicles, Bicyclists or Pedestrians. Because employment is only expected to increase by 6 percent, and existing transportation systems are to remain relatively constant, no substantial increase in traffic hazard to motor vehicles, bicyclists or pedestrians are anticipated.

13. Noise

a. Increases in Existing Noise Levels.

(1) Aircraft Noise. Moffett Field will remain the home to a variety of unique and one-of-a-kind aircraft. In addition to the NASA and military aircraft, which would be based at Moffett Field, there are a variety of government and civilian aircraft which would use the airfield. These aircraft include U.S. Air Force Lockheed C-5 and C-141 transports, civilian Boeing 747 cargo jets used to support the Moffett Field Complex, and a variety of smaller executive and business aircraft. A listing of these aircraft is given in Appendix B.

While people may respond more to individual aircraft noise events, the long-term effects of prolonged exposure to noise best correlate with cumulative noise exposure metrics. A cumulative noise metric is one which provides a single number which is equivalent to the total noise exposure over a specified time period.

The Community Noise Equivalent Level (CNEL) is the cumulative noise metric adopted by the State of California for assessing aircraft noise impacts. A similar metric, the Day-Night Average Sound Level (Ldn or DNL) is the adopted FAA cumulative noise metric. CNEL is expressed in decibels and represents the average daytime noise level during a 24-hour day, and is adjusted to account for people's lower tolerance for noise intrusions during the evening and nighttime periods relative to the daytime period. Ldn is similar to CNEL, but does not have the penalty for evening operations. For comparative purposes, however, CNEL and Ldn are deemed to be identical.

Noise contours have been prepared for the cumulative effects of the baseline and 2010 operational scenarios. The FAA's Integrated Noise Model, version 3.10, was used to perform calculations and produce contours of noise exposure for this study.

(a) Baseline Aircraft Operations and Noise Levels. Historically, aviation activities at Moffett Field have averaged about 80,000 annual operations. Of these operations approximately 60,000 have actually occurred on the airfield, while the remaining 20,000 operations were typically overflights by aircraft traversing the Moffett Field airspace.

However, as a result of the announced transfer of Moffett Field to NASA and the phase-out of active duty P-3 squadrons, overall aviation activity at Moffett Field has decreased over the past few years. During the twelve-month period from November 1992 through October 1993, aviation activity at Moffett Field totalled about 51,500 operations. Of these operations, some 13,000 were overflights and only about 38,500 operations actually took place at the field. From this baseline year, noise measurements were estimated. These noise contours are shown in Figure 14.

(b) Forecast 2010 Aircraft Operations and Noise Levels. For the purposes of assessing potential noise impacts from Future Concept 1 of the Comprehensive Use Plan and future NASA, military, and government contractor aircraft operations, a projected activity level of approximately 80,000 annual operations serves as the 2010 forecast conditions. The figure of 80,000 annual operations includes approximately 20,000 overflights by aircraft crossing Moffett Field Airspace. These overflights are not factored into the noise modeling assumptions because they would not have any measurable effect on community noise impacts. These noise levels are shown on Figure 15.

The increased operations at Moffett Field will result in increases in noise levels attributable to aircraft. However, these noise levels generally will result in increases less than CNEL 3 dB. A 3 dB increase in average noise levels is barely detectable and is not considered a substantial impact.
The only exception would be the eastern and western noise contour "wings" created by future helicopter operations at the airfield. The 60 dB noise contour uniquely picks up the noise generated by these helicopters. These noise levels would represent an increase of more that 3 dB and would therefore be considered substantial. Flight tracks and flight procedures currently in use at Moffett Field were used to establish these noise contours.

Mitigation Measure NOISE-1. Viet Nam War-era UH-1 helicopters shall be removed from the helicopter fleet mix and replaced by a quieter helicopter type.

Mitigation Measure NOISE-2. The helicopter touch-and-go training patterns for Runways 14 and 32 shall be shifted approximately 4,000 feet toward the San Francisco Bay to eliminate direct overflight of residential areas, and to take advantage of the noise buffer afforded byindustrial land uses to the northeast of the Mountain View-Alviso Freeway, and by the freeway itself.

Mitigation Measure NOISE-3. To eliminate potential noise impacts on residential areas to the west of Middlefield Road, the north-eastern Runway 14L-32R shall be designated the preferential use runway for helicopter touch-and-go activities. Approximately 75 percent of all local helicopter training operations should be on this runway.

The implementation of the above mitigation measures should eliminate any substantial potential noise impacts from helicopter operations on nearby residential areas, and the noise levels shown in Figure 15 would be mitigated to a level of insignificance. Noise levels with the implementation of the expected noise abatement routes and mitigation measures are shown in Figure 16.

Noise levels at some residential properties are expected to increase beyond the 65 dB threshold described in the previous Public Policy section. These properties are south of East Maude Avenue and east of Matilda Avenue in the City of Sunnyvale. Noise analyses completed for this Environmental Assessment project noise levels at these residential properties to exceed CNEL 60 dB and, in some cases, CNEL 65 dB. The FAA has determined that beyond the 65 dB noise levels residential development would only be allowed where the community determines that residential uses must be allowed. These residential areas have been subject to much greater noise levels attributable to Moffett Field in the past when the field operated at full capacity. The increases in noise are expected to be a less than 3 dB increase from 1992-1993 levels and not detectible by these residences, therefore, no substantial impacts are anticipated.

(2) Wind Tunnel Noise. The addition of new wind tunnel facilities has the potential to increase existing noise levels significantly. New proposed wind tunnel facilities shall require individual environmental analysis, paying particular attention to noise impacts to surrounding development. New wind tunnel facilities shall be compatible, to the extent practical, with surrounding

land uses and the policies of the cities of Sunnyvale and Mountain View. The following mitigation measure will require further assessment of wind tunnel facilities.

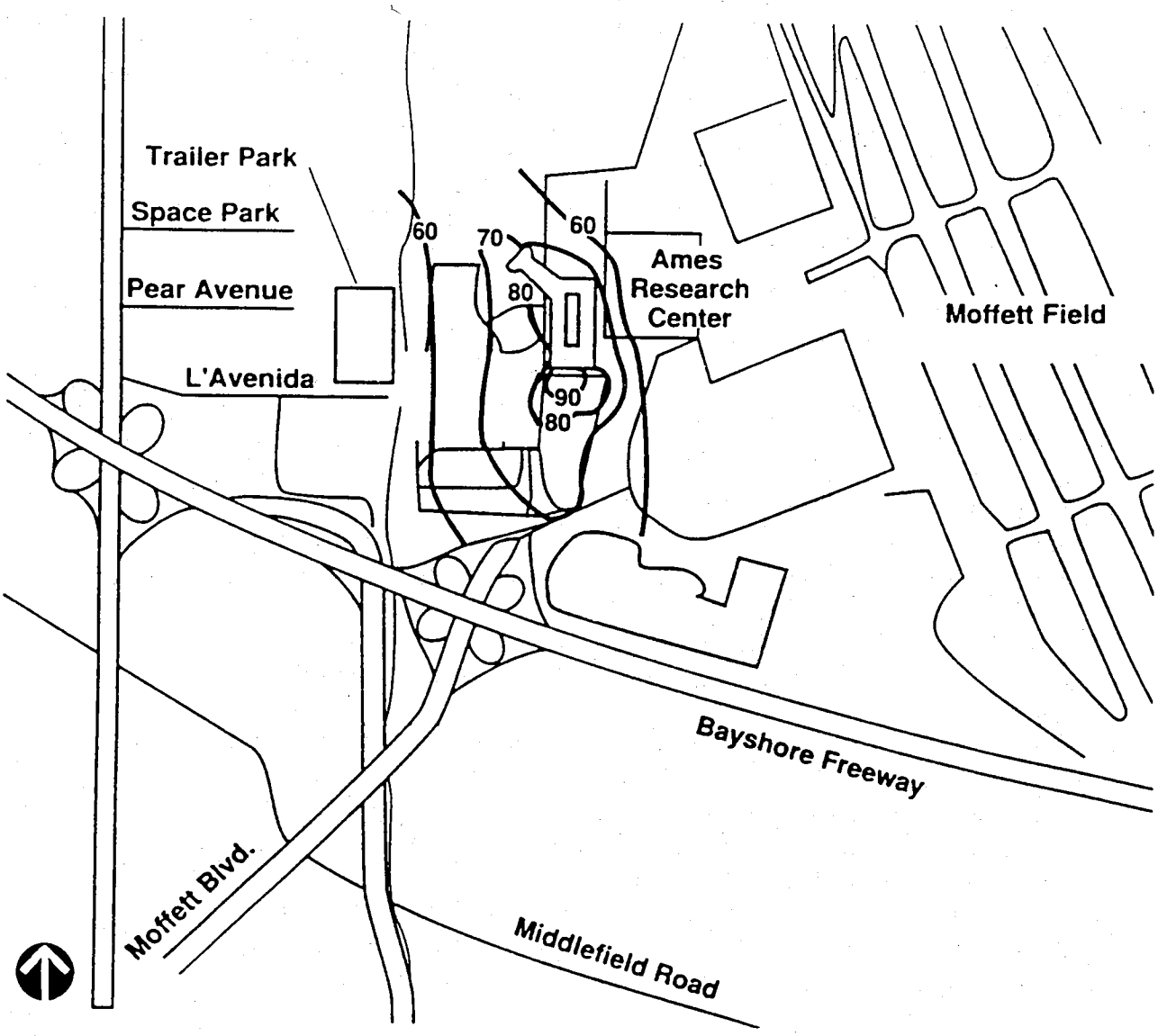
> **Mitigation Measure NOISE-4.** Environmental analysis of any new or modified wind tunnel facilities shall be required to assess whether significant noise impacts will occur. All feasible noise attenuation will be considered and mitigation of impacts shall be required to bring such impacts to a less-than-significant level.

b. Exposure of People to Severe Noise Levels. NASA's noise regulations require that individuals at Moffett Field not be exposed to noise levels exceeding 85 dBA. Based on current practices and preventive measures on the airstrip, it is expected that individuals involved with airfield operations will not be exposed to noise levels exceeding 85 dBA.

Noise associated with the 80 x 120 foot wind tunnel, as shown on Figure 17, also currently generates significant noise at Moffett Field. The wind tunnel produces noise levels up to 90 dBA. According to the Mountain View Planning Department, the City gets complaints from time to time concerning noise from the wind tunnel. Most of these complaints concern a low level hum which is audible late at night during wind tunnel operation. In the trailer park to the west of the existing Ames-Moffett site, the nighttime noise levels can reach approximately 55 dBA,[45] which is equal to Mountain View's outside residential noise standard of 55 dBA. The area expected to experience adverse noise impacts consists of housing and offices located within 5,000 feet (1,524 meters) of wind tunnel facilities.[46] However, it should be noted that office uses would not be impacted by nighttime operation of the facility. New Moffett Field development outlined in Future Concept 1 of the Comprehensive Use Plan does not occur in the vicinity of the wind tunnel, therefore no substantial impacts are anticipated. However, if new construction is to occur adjacent to the wind tunnel, or if additional wind tunnel facilities are proposed, an analysis of the noise and wind tunnel intake environment will be required prior to development.

[45] Soderman, P. Fixed Wing Aerodynamics Branch, Ames Research Center, Moffett Field, California. April 1991.

[46] Charles M. Salter Associates, Inc. and Ames Chief Engineering Office



Source: Salter, Charles M. Noise Section. Ames Research Center Environmental Resources Document, Mountain View, CA, March 1991.

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FIGURE 17

Existing Wind Tunnel Noise Contours

14. Air

a. Substantial Air Emissions or Deterioration of Air Quality. Potential air quality impacts include those related to compliance with the 1991 Clean Air Plan, compliance with the State Implementation Plan, aircraft pollutants, vehicular pollutants, stationary sources, and construction related impacts.

(1) Aircraft Pollutants. An aircraft's air pollutant emissions are a function of three factors:

- The various engine emission rates during the different phases of the landing/takeoff operation (LTO) cycle;
- The amount of time spent in each phase of the LTO cycle; and
- The number of engines on the aircraft.

The LTO cycle is broken down into four distinct phases based on engine speed, including taxi/idle, takeoff, climbout, and approach. The approach and climbout phases begin and end when the aircraft reaches a height of approximately 3,000 feet (914 meters). This height is considered the average inversion level in the United States, and it is assumed that aircraft emissions above this mixing depth are not pertinent to local air quality.

The aircraft operating at Moffett Field generally are older aircraft compared to a fleet operating at a commercial airport in California. Many of the aircraft engines were produced prior to the hydrocarbon emissions standards established by the Environmental Protection Agency (EPA) in 1984. Newer engines and emission inventories at commercial airports generally show nitrogen oxides emissions higher than hydrocarbons. Preparation of a land use plan does not trigger a consistency review by EPA because there are presently no emissions limitation standards for airports in California. EPA is presently considering developing emissions limitations for airports as part of a Federal Implementation Plan (FIP) for three areas of California; the South Coast Air Basin, Ventura County, and the Sacramento Air Basin. Moffett Field will not be covered by the FIP.

Indirect regulations of aircraft emissions can be triggered due to conformity provisions of the Clean Air Act, if federal money is being spent in a way that may increase air emissions. For example, addition of a runway using federal funding could trigger federal review because the project could increase capacity and emissions. No improvements to increase the runway are proposed in Future Concept 1 of the Comprehensive Use Plan.

Baseline air emissions from aircraft operating at Moffett Field were calculated for a one year period during 1992 and 1993. A forecast of emissions was also calculated for the year 2010 based on projected changes in the number of operations and the fleet mix of aircraft operating at the airfield.

Future Concept 1 of the Comprehensive Use Plan increases aircraft operations below 3,000 feet 56 percent from 38,546 to 59,971. The daily operations of all aircraft currently operating at Moffett Field and those expected to operate at Moffett Field in 2010 are shown in Table 11.

Additional aircraft operations are projected to occur above 3,000 feet, but they are not included in this analysis, as discussed above.

The additional operations expected at Moffett Field resulted in 2010 forecast emissions of 166 tons per year for hydrocarbons, 241 tons per year for carbon monoxide, and 95 tons per year for nitrogen oxides, as shown in Table 12. Estimated annual emission increases equal 49 tons for hydrocarbons, 34 tons for carbon monoxide, and 33 tons for nitrogen oxides. The complete air analysis can be found in Appendix B.

Aircraft operations at Moffett Field totaled 86,214 prior to 1991. The aircraft operations, and thus the aircraft emissions, at Moffett Field have since decreased with the decreased use of the Field by the Navy. The total number of aircraft operations proposed by Future Concept 1 of the Comprehensive Use Plan is 80,000, less than total operations prior to 1991.

In addition, the aircraft operating at Moffett Field through the Comprehensive Use Plan will generally decrease fleet average emissions, as shown in Table 13. During the base period of 1992 to 1993, the fleet average emissions at Moffett Field were 12.12 pounds per landing/takeoff operation (LTO) cycle for hydrocarbons, 21.50 pounds per LTO for carbon monoxide, and 6.39 pounds per LTO for nitrogen oxides. The fleet average emissions in 2010 are expected to be 12.67 pounds per LTO cycle for hydrocarbons, 18.59 pounds per LTO for carbon monoxide, and 6.30 pounds per LTO for nitrogen oxides. Except for the hydrocarbon emissions, which are projected to increase slightly, average exhaust emissions are expected to decrease.

To provide an understanding of the magnitude of aircraft operations in the San Francisco Air basin, an analysis of total operations in the Bay Area was undertaken. This comparison includes all aircraft from the three major international airports in the Bay Area, (San Francisco International, Oakland International and San Jose International), plus the minor public and private airstrips throughout the region. The total aircraft operations expected at these

Table 11
MOFFETT FIELD DAILY OPERATIONS

Aircraft Type	1992-1993 Base Year Operations	Year 2010 Total Operations
C5A	0.4	--
C5B	--	1.5
C9	0.2	0.4
C12/King Air	4.3	15.8
C130	6.2	42.2
C141	0.9	1.4
DC8	0.7	0.7
ER2	0.7	0.7
GIII	--	0.3
GIV	--	0.3
H-1	1.9	5.4
H-53	0.4	6.7
H-60	13.4	50.3
LEAR 25	0.7	0.7
P3	50.9	26.4
1-Prop-Fixed	12.9	--
1-Prop-Variable	6.5	--
Jet Trainer/Fighter	5.5	11.5
Totals	105.4	164.3

Table 12
TOTAL ANNUAL AIRCRAFT EMISSIONS

	Existing Conditions (1992-1993)	CUP Concept 1 (2010)	Increase
Annual Aircraft Operations			
Aircraft Operations below 3,000 feet	51,500	80,000	28,500
Annual Aircraft Emissions			
Hydrocarbons (Hc)	117 tons	116 tons	49 tons
Carbon Monoxide (CO)	207 tons	241 tons	34 tons
Nitrogen Oxides (NOx)	62 tons	95 tons	33 tons

Table 13
AVERAGE LANDING/TAKEOFF OPERATION (LTO) EMISSIONS

	Existing Conditions (1992-1993)	Comprehensive Use Plan Future Concept 1 (2010)
Hydrocarbons (HC)	12.12 lbs	12.67 lbs
Carbon Monoxide (CO)	21.50 lbs	18.59 lbs
Nitrogen Oxides (NO_x)	6.39 lbs	6.30 lbs

airfields is shown in Table 14. As can be seen in the table, the 80,000 operations projected by NASA are only approximately two percent of the total aircraft operations expected in the San Francisco Bay Area. Or, when compared to the three major international airports, Moffett Field operations only represent 7 percent of major airport aircraft operations.

The significance of aircraft emissions changes can be evaluated by comparing project impacts with federal impact criteria. The Environmental Protection Agency has established *de minimus* pollutant increments for different air basins with respect to conformity with the State Implementation Plan. The federal *de minimus* thresholds are 100 tons per year for ozone precursors (hydrocarbons and nitrogen oxides), carbon monoxide, sulfer dioxide and PM_{10}.

Comparison of the incremental changes in aircraft emissions shown in Table 12 with these thresholds shows that aircraft-related emissions would not have a substantial impact on regional air quality.

Table 14
REGIONAL AIRCRAFT OPERATIONS

Airfield Type/Location	Annual Operations	Percent of Total
San Francisco International[a]	376,000	11%
Oakland International[b]	414,000	12%
San Jose International[c]	322,000	9%
San Francisco Bay Area Minor Airstrips[d]	2,277,000	66%
Moffett Field[e]	80,000	2%
Total Operations	3,458,000	100%

[a] Projected 1996 Aircraft Operations. San Francisco International Airport Master Plan Final Environmental Impact Report. City and County of San Francisco Department of City Planning. May 1992.
[b] Oakland International Airport Monthly Activity Report. December 1992.
[c] San Jose International Airport Monthly Activity Report. December 1992.
[d] Aircraft Operations, 1990. Bay Area Air Quality Management District.
[e] Moffett Field Comprehensive Use Plan, Future Concept 1. Projected Aircraft Operations for 2010.

(2) Vehicular Pollutants. The use of motorized vehicles can lead to the formation of two pollutants of primary concern. Ozone, which becomes regionally distributed, forms from ozone precursors [Hydrocarbons (HC), Nitrogen Oxides (NOx), Sulfur Oxides (SO_x), and Particulate Matter (PM_{10})] generated during cold starts. Carbon monoxide, which concentrates near its point of formation, is formed in areas of heavy traffic congestion due to incomplete fuel combustion.

The impact of project-related traffic increases on regional air quality has been estimated using the URBEMIS-3 program developed by the California Air Resources Board. New trips associated with additional employment at Moffett Field would result in an additional 36 tons per year of hydrocarbons, 58 tons per year of nitrogen oxides, 6 tons per year of PM_{10} and 7 tons per year of sulfur oxides.

Comparing these impacts with the federal *de minimus* thresholds reveals that project traffic-related impacts on regional air quality would not be significant when combined with the aircraft-related impacts shown in Table 12.

Level of Service (LOS) is a qualitative description of intersection operations. It is based on the relative ease or difficulty with which vehicles are able to pass through an intersection, and is measured by delay or the relationship between the volume of vehicles entering the intersection and its capacity. An

intersection's level of service can range from LOS A, or free-flow conditions with little or no delay, to LOS F, or stop-and-go conditions with excessive delays.

No intersections are expected to reach a Level of Service of E or F as a result of Future Concept 1 of the Comprehensive Use Plan and, therefore, no carbon monoxide hot spots will be anticipated.

(3) Stationary Sources. Moffett Field operates several facilities that engage in industrial processes that regularly emit air pollutants. These facilities which are permitted by the Bay Area Air Quality Management District, include boilers, degreasers, paint spray booths, and fueling equipment. Moffett Field also emits several toxic pollutant compounds in accordance with AB 2588 and the California Air Toxics "Hot Spots" Information and Assessment Act of 1987. As part of Future Concept 1 of the Comprehensive Use Plan, 132,500 square feet (12,309 square meters) of flight operation expansion, 811,600 square feet (75,398 square meters) of R&D and 61,700 square feet (5,732 square meters) of operational support, including warehousing is proposed. A new aircraft fueling system is proposed to replace the existing system. Motorpool facilities will also be consolidated.

All of these facilities could emit air pollutants. However, all existing facilities are currently permitted and proposed facilities will require permits from the Bay Area Air Quality Management District prior to their construction or use. Additionally, it is expected that the Central Steam Plant in Building 10 will be replaced, thereby leading to a reduction in air emissions.

(4) Construction Impacts. Construction activity can degrade air quality by increasing dust and other suspended particulates during excavation, earth moving activities, and construction of buildings. Dust levels within and immediately adjacent to the project site could increase during demolition and construction. Some vehicular emissions will be created during construction due to delivery of materials and use of heavy construction equipment. In order to mitigate these potential impacts, the following mitigation measure shall be implemented to reduce fugitive dust generated during project-related construction activities and to reduce vehicular emissions associated with construction activities.

Mitigation Measure AIR-1. The following measures shall be taken to decrease construction related air quality impacts:

- Construction-related dirt on approach routes to the construction sites shall be cleaned on a periodical basis;

- Watering techniques shall be employed to reduce construction-generated dust particles; and
- Any earth transported shall be covered.
- Diesel emissions shall be as low as reasonably achievable. For example, construction equipment with a diesel drive internal combustion engine shall be required to use a diesel fuel with a maximum of 0.05 percent sulfur and a 4-degree retard; and
- Construction equipment shall be properly maintained and serviced to minimize exhaust emissions.

(5) 1991 Clean Air Plan. The 1991 Clean Air Plan developed by the Bay Area Air Quality Management District is based on population projections developed by the Association of Bay Area Governments (ABAG) in 1990. If a project doesn't cause regional population and employment to exceed the 1990 projections, it is generally consistent with the Clean Air Plan. Since 1990, the employment at Moffett Field has actually decreased. Total civilian employment has dropped 2.4 percent to 840,000 in Santa Clara County which is 150,000 below the 1990 forecast for the County. Clearly, the addition of 610 jobs will not be incompatible with the Clean Air Plan.

(6) State Implementation Plan. The State Implementation Plan (SIP) is a plan that the State of California is required to prepare under the federal Clean Air Act. The California SIP is prepared by the California Air Resources Board and must be approved by the U.S. Environmental Protection Agency. It must identify actions and programs to be undertaken by the State and its subdivisions to implement their responsibilities under the Clean Air Act. The SIP is made up of the regional air plans of the areas that are in non-attainment status for one or more criteria pollutants. For the Bay Area, the California SIP includes the 1991 Clean Air Plan, as discussed above. Future Concept 1 of the Comprehensive Use Plan is considered to be consistent with the 1991 Clean Air Plan.

(7) Conformity Determination. In conformance with the Clean Air Act of 1990, the Environmental Protection Agency has recently adopted a "Conformity Rule" which states that no department, agency or instrumentality of the Federal Government shall engage in, or support in any way, any activity which does not conform to a State or local implementation plan after is has been approved under Section 110. The determination shall be based on the most recent estimates of emissions, and such estimates shall be determined from the most recent population, employment, travel and congestion estimates

as determined by the metropolitan planning organization or other agency authorized to make such estimates.

De minimus standards have been set for conformity analyses based on the Act's major stationary sources definitions for the various pollutants and the rating of the air basin. The threshold for increases in emissions are 100 tons per year for ozone precursors (hydrocarbons and nitrogen oxides), carbon monoxide, sulfur dioxide, and PM_{10}.

The EPA's final rule states that projects that fall below *de minimus* level are exempt from the requirements of the rule. Therefore, it is not necessary for a federal agency to document emission levels for a *de minimus* action. Because emissions are expected to fall significantly under these thresholds, no significant conflicts are anticipated.

b. The Creation of Objectionable Odors. No unusual or harmful odors would result from construction related to Future Concept 1 of the Comprehensive Use Plan. Odorous emissions may continue to emanate from existing uses such as the incinerator, paint spray booths, and fueling equipment. However, these uses are fully permitted sources and are not expected to impact the public. The airfield will remain a restricted use federal facility, and the continued creation of objectionable odors from continuing operations will be restricted to the site itself.

c. Air Movement, Moisture, Temperature, or Climate Change. No such changes would result from project construction or occupancy. At this time, no changes are proposed to the existing wind tunnels. However, if new wind tunnel facilities are proposed, they will require individual environmental analysis, paying particular attention to intake and wind impacts to surrounding development.

> **Mitigation Measure AIR-2.** Environmental analysis of any new wind tunnel facilities shall be required to assess whether impacts associated with intake and wind will occur.

Chapter VI
SUMMARY OF MITIGATION MEASURES

■ ■ ■

In order to mitigate the potential impacts associated with the proposed Comprehensive Use Plan, the mitigation measures listed below shall be incorporated into the Plan at the time it is approved.

Mitigation measures will be undertaken for ten of the fourteen environmental factors evaluated in the Environmental Impact Summary, including earth, water, plant life, animal life, cultural resources, services and utilities, human health, noise, and air.

A. Earth

Mitigation Measure EARTH-1. Geotechnical investigations shall be required on a project-by-project basis for new construction and appropriate foundations shall be designed and constructed in conformance with the Uniform Building Code.

Mitigation Measure EARTH-2. During construction of individual development projects, measures shall be implemented to lessen the impacts of wind and water erosion. These measures shall include compaction and watering of the soils during construction.

Mitigation Measure EARTH-3. Development in the vicinity of Stevens Creek shall be designed to limit channel modification and erosion.

Mitigation Measure EARTH-4. Geotechnical investigations shall be required on a project-by-project basis and appropriate foundations shall be designed and constructed to mitigate the risk associated with liquefaction and other geotechnical hazards.

B. Water

Mitigation Measure WATER-1. Development in the vicinity of Stevens Creek (including construction of the connecting bridge), shall be designed and operated to prevent channel modification, erosion, siltation, and the introduction of pollutants into surface waters including Stevens Creek and the San Francisco Bay.

C. Plant Life

Mitigation Measure PLANT-1. Prior to construction of projects in the vicinity of Stevens Creek and the wetlands area, site specific focused surveys and environmental review shall occur to evaluate the site-specific status of plant habitats, including rare and endangered plant species. Any adverse effects on such habitats and related species shall be mitigated through habitat replacement projects. Development plans shall ensure that there is no net loss of wetland functions, values, or acreages.

D. Animal Life

Mitigation Measure ANIMAL-1. Focused environmental analysis shall be conducted to evaluate the site-specific status of sensitive animal species prior to the development of construction projects outlined in Future Concept 1 of the Comprehensive Use Plan. If special status species or habitats are found, they shall be protected through appropriate site-specific mitigation measures such as relocation or habitat restoration. The Endangered Species Act shall be satisfied prior to site-specific development or substantial changes in operations. Development plans shall ensure that there is no net loss of wetland functions, values, or acreages.

E. Cultural Resources

Mitigation Measure CULT-1. In the event that human remains and/or cultural materials are found, all project related construction shall cease within a 50-foot radius in order to proceed with the testing and mitigation measures required pursuant to Section 7050.5 of the Health and Safety Code, and Section 5097.94 of the Public Resources Code of the State of California. The State Historic Preservation Officer and the

NASA Federal Preservation Officer shall be contacted as soon as possible. Construction in the affected area will not resume until the regulations of the Advisory Council on Historic Preservation (30 CFR Part 800) have been satisfied. In the event of the discovery of human remains, the Santa Clara Coroner should be notified by the project manager. The Coroner shall make the determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his or her authority, he/she will notify the Native American Heritage Commission, who will attempt to identify the descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to State law, then the remains should be reinterred with items associated with the Native American burial on the property in a location not subject to further disturbance.

Mitigation Measure CULT-2. Any project undertaken within the vicinity of designated or potentially historic resources, structures, or districts, including modification or removal of contributing elements of the district, shall be subject to review by the State Historic Preservation Officer through the Section 106 process of the National Historic Preservation Act. Any agreed upon mitigation, such as plan modification, design harmony, and (in the case of demolition) additional detailed historic documentation, shall be undertaken. In addition, modification, or demolition of any non-contributory building over 50 years in age may require Section 106 review.

F. Services and Utilities

Mitigation Measure SERV-1. Environmental analysis of any new wind tunnel facilities shall be required.

Mitigation Measure SERV-2. A permanent solution to the discharge problems associated with the inoperable tide gates in the western sub-basin shall be established and the current lift station in Building 191 shall be upgraded.

G. Risk of Upset/Human Health

Mitigation Measure RISK-1. A monitoring program to detect fuel releases to the water and soil and spill prevention control and counter measure plan shall be established immediately to address potential

impacts associated with the receipt of aviation fuel by barge through the Guadalupe Slough.

Mitigation Measure RISK-2. Development of new fuel farms shall require site-specific environmental analysis to determine the extent of environmental hazards. Appropriate mitigation shall be developed to lessen to a level of insignificance the risk of explosion or the release of hazardous substances and all new development must adhere to the California Underground Storage tank regulations. If this is not possible, the fuel farms shall not be developed.

Mitigation Measure RISK-3. The existing jet fuel system at Moffett Field shall comply with the California Underground Storage Tank regulations. Any substantial change or replacement of the existing fuel distribution system will require additional environmental analysis under NEPA.

Mitigation Measure RISK-4. Prior to construction of individual projects of Future Concept 1 of Comprehensive Use Plan, site-specific evaluation shall occur to determine the extent of contamination and hazards related to development. In the event contaminated soil and/or groundwater is encountered, it will be remediated or disposed of properly by the Navy.

H. Transportation/Circulation

Mitigation Measure TRAFFIC-1. Prior to construction of the Stevens Creek bridge, traffic analyses shall be conducted to determine the traffic impact of re-routing Moffett Field traffic through the Moffett Boulevard Extension. These analyses shall be conducted in cooperation with the City of Mountain View.

I. Noise

Mitigation Measure NOISE-1. Viet Nam War-era UH-1 helicopters shall be removed from the helicopter fleet mix and replaced by a quieter helicopter type.

Mitigation Measure NOISE-2. The helicopter touch-and-go training patterns for Runways 14 and 32 shall be shifted approximately 4,000 feet toward the San Francisco Bay to eliminate direct overflight of

residential areas, and to take advantage of the noise buffer afforded by industrial land uses to the northeast of the Mountain View-Alviso Freeway, and by the freeway itself.

Mitigation Measure NOISE-3. To eliminate potential noise impacts on residential areas to the west of Middlefield Road, the north-eastern Runway 14L-32R shall be designated the preferential use runway for helicopter touch-and-go activities. Approximately 75 percent of all local helicopter training operations should be on this runway.

Mitigation Measure NOISE-4. Environmental analysis of any new or modified wind tunnel facilities shall be required to assess whether significant noise impacts will occur. All feasible noise attenuation will be considered and mitigation of impacts shall be required to bring such impacts to a less-than-significant level.

J. Air

Mitigation Measure AIR-1. The following measures shall be taken to decrease construction related air quality impacts:

- Construction-related dirt on approach routes to the construction sites shall be cleaned on a periodical basis;
- Watering techniques shall be employed to reduce construction-generated dust particles; and
- Any earth transported shall be covered.
- Diesel emissions shall be as low as reasonably achievable. For example, construction equipment with a diesel drive internal combustion engine shall be required to use a diesel fuel with a maximum of 0.05 percent sulfur and a 4-degree retard; and
- Construction equipment shall be properly maintained and serviced to minimize exhaust emissions.

Mitigation Measure AIR-2. Environmental analysis of any new wind tunnel facilities shall be required to assess whether impacts associated with intake and wind will occur.

Chapter VII
DRAFT ENVIRONMENTAL ASSESSMENT COMMENTS AND RESPONSES

■ ■ ■

A. Introduction

Public involvement is an important part of the NEPA process. The success of NEPA as an environmental disclosure law is based on open decision-making. In preparing Environmental Assessments (EA), federal agencies must involve environmental agencies and the public to the extent practicable.

NASA held its first open house on June 3, 1993 to alert the public that it would prepare a Comprehensive Use Plan and to solicit public input. On November 15, 1993 another public open house was held to gather public input on the Comprehensive Use Plan (CUP) and the environmental analysis of the Plan. In addition, the Draft Environmental Assessment was circulated for public review and comment by the National Aeronautics and Space Administration in April 1994. The Draft Environmental Assessment was available for a 30-day review period, which closed on May 11, 1994. A public forum was held on April 18, 1994 to solicit public input and comment on the Comprehensive Use Plan and the Draft Environmental Assessment.

Copies of all written and oral comments received on the Draft Environmental Assessment are contained in this chapter, including comments made at the April 18, 1994 public forum. This chapter is divided into three sections, which are outlined below.

- This *Introduction* notes the purpose and content of the Comments and Responses Chapter.
- The *List of Commentors* includes a list of all agencies and individuals who submitted written comments on the Draft Environmental Assessment.
- The *Comments and Responses* section include a reproduction of each letter received during the public review period, a summary of comments made at the public meeting, and responses to each comment.

It should be noted that this chapter is not a required component of an Environmental Assessment. It has been included to facilitate public review

and involvement in the transfer of Moffett Field to the National Aeronautics and Space Administration. Plans for Moffett Field are unique to those covered by the Defense Base Closure and Realignment Act of 1990. There has been some public confusion and controversy regarding the status of Moffett Field. It is the hope of NASA that this section of the Final Environmental Assessment can aid in the understanding of the process of change currently taking place at Moffett Field.

B. List of Commentors

Public Agencies

1. Brian Hunter; Department of Fish and Game; April 20, 1994.
2. Cherilyn Widell; Office of Historic Preservation; May 2, 1994.
3. Ralph G. Tonseth; City of San Jose; May 4, 1994.
4. Robert Pallarino; United States Environmental Protection Agency; May 5, 1994.
5. Leslie Byster; Silicon Valley Toxics Coalition; May 6, 1994.
6. Leslie Byster; Silicon Valley Toxics Coalition; May 6, 1994.
7. Marc J. Klemencic; Santa Clara Valley Water District; May 6, 1994.
8. James T. Burroughs; The Resources Agency of California; May 9, 1994.
9. Nadine P. Levin; City of Mountain View; May 9, 1994.
10. Gail A. Price; City of Sunnyvale; May 9, 1994.
11. David J. Farrel; United States Environmental Protection Agency; May 13, 1994.

Private Individuals

12. Susan E. Luttner; April 6, 1994.
13. Lawrence Lowell Ames; April 17, 1994.
14. Stella L. Haisfield; April 25, 1994.
15. Dr. Jane E. Nielson & Dr. H.G. Wilshire; May 1, 1994.
16. Jim Stauffer; May 5, 1994.
17. Peter Drekmeier; May 9, 1994.
18. Tom Rivell; May 10, 1994.

Organizations

19. David T. Smernoff & James A. Steinmetz; Bay Area Action; April 22, 1994.
20. Paul Burks; Citizens' Advisory Board for the Moffett NAS Superfund Site and the MEW Companies Superfund Site; May 4, 1994.

21. Lenny Siegel; Pacific Studies Center; May 5, 1994.
22. Debbie Mytels; Peninsula Conservation Center Foundation; May 6, 1994.
23. Jill Keimach; South Bay Ad Hoc Committee; May 10, 1994.

Oral Comments

24. Public Meeting; April 18, 1994

C. Comments and Responses

This section includes a reproduction of each letter received during the public review and comment period and a summary of the comments received at the public forum held April 18, 1994. Comments were received from the general public, public agencies and interested organizations. Each comment and response is labeled with a reference number in the margin.

Where the same comment has been made more than once, a response may direct the reader to a previous response. When a response required revisions to the Draft Environmental Assessment, changes have been made to the text and are shown in this Final Environmental Assessment.

STATE OF CALIFORNIA - THE RESOURCES AGENCY
PETE WILSON, Governor
DEPARTMENT OF FISH AND GAME
POST OFFICE BOX 47
YOUNTVILLE, CALIFORNIA 94599
(707) 944-5500

1

April 20, 1994

Ms. Sandra Olliges
NASA Ames Research Center
Safety, Health, and Medical Services
M/S 218-1
Moffett Field, California 94035-1000

Dear Ms. Olliges:

FONSI, Moffett Field Draft Comprehensive Use Plan

Department of Fish and Game personnel have reviewed the Moffett Field Draft Comprehensive Use Plan. The Plan outlines proposed future uses and development at Moffett Field. The facility will remain in Federal ownership and retain its present mission of aviation research, development, and training. The site borders San Francisco Bay and contains significant wetland and other habitat values. 1-1

The Department concurs with the adoption of Future Concept 1 as the preferred alternative. The level of new construction under this alternative is lower than that proposed in Future Concept 2, which will reduce the potential for impacts to biological resources. We support NASA's intention to protect wetlands and sensitive species at Moffett Field, and we are willing to work with NASA on measures to avoid or mitigate impacts which could result from future projects. We recommend consultation early in the design process, as this allows for more efficient incorporation of biological needs into project design.

Thank you for the opportunity to review and comment on this project. If you have any questions, please contact Jeannine M. DeWald, Associate Wildlife Biologist, at (408) 429-9252.

Sincerely,

Brian Hunter
Regional Manager
Region 3

LETTER 1: Brian Hunter, Department of Fish and Game

1-1: Comment noted. This letter acknowledges that the Comprehensive Use Plan outlines future uses and development at Moffett Field and an understanding that the facility will remain in federal ownership and retain its present mission of aviation research, development and training.

The Department of Fish and Game concurs that the level of new construction under Future Concept 1 will reduce the potential for impacts to biological resources. The Department supports NASA's intention to protect wetlands and sensitive species at Moffett Field.

STATE OF CALIFORNIA — THE RESOURCES AGENCY
OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION
P.O. BOX 942896
SACRAMENTO 94296-0001
(916) 653-6624
FAX: (916) 653-9824

PETE WILSON, Governor

May 2, 1994

REPLY TO: NASA940408A

Sandy Olliges, Manager
Environmental Program
NASA, Ames Research Center
MOFFETT FIELD CA 94035-1000

Project: Moffett Field Comprehensive Use Plan

Dear Ms. Olliges:

The Office of Historic Preservation (OHP) has received the *Draft Environmental Assessment Moffett Field Comprehensive Use Plan* (EA). I have reviewed and provide the following comments on the documentation you submitted in support of the cited project.

The plan notes that one archaeological site, CA-SCl-23, was previously recorded at Moffett Field. A testing program was undertaken within the last year to determine the location and condition of the site. The testing program was unable to locate the site within the general vicinity of its record location. It was concluded that the property has been destroyed.

The EA states that an ongoing inventory of the structures at Moffett Field has identified 135 structures that may be eligible for the national register. Many of these are within the Central District. The plan indicates that within the Central District one building will have a new use and several new buildings will be built. Likewise, two new buildings are planned between the two lighter-than-air hangers. The plan states that the **Mitigation Measure CULT-1** will ensure the protection of historic structures and districts. The plan also states, "Prior to construction of any site-specific project, a NEPA review, including the Section 106 process, will be completed."

Consultation on Section 106 actions usually takes place in conjunction with the development of an EA. In this way, the effects of a proposed plan can be stated in the document. Without prior consultation with my office, the effect to historic properties of a proposal is only the authors opinion. Is this in compliance with 44 CFR 10? 2-1

The plan states that the mitigation measure will "ensure" protection of historic structures and districts. However, the mitigation measure only stipulates consultation with the State Historic Preservation Officer. The mitigation measure acknowledges that federal actions may result in modification or removal of contributing elements of the district. This does not appear to provide any assurance of protection. 2-2

Please provide me with information on the actions that you have taken to consider historic properties in conjunction with the proposed undertakings listed in the EA. This should include a clear representation of the Area of Potential Effect (APE) for each of the undertakings and the relationship of any properties to the APE. 2-3

Your consideration of historic properties in the project planning process is appreciated. If you have any questions regarding our review of this undertaking, please call Gary Reinoehl of our staff at (916) 653-5099.

Sincerely,

Cherilyn Widell
State Historic Preservation Officer

LETTER 2: Cherilyn Widell, Office of Historic Preservation

2:1 NASA is currently in the process of formally requesting Section 106 review for the CUP from the Office of Historic Preservation. Any site-specific project that is in the vicinity of a property listed or eligible for listing in the National Register of Historic Places will not be undertaken until the requirements of 36 CFR Part 800 are satisfied.

2-2: Revisions have been made to respond to the commentors concerns.

2-3: Please refer to Response 2-1.

CITY OF SAN JOSÉ, CALIFORNIA

SAN JOSE INTERNATIONAL AIRPORT
1661 AIRPORT BOULEVARD C-205
SAN JOSE, CALIFORNIA 95110-1285

Ralph G. Tonseth
Director of Aviation

May 4, 1994

Sandy Olliges
Environmental Program Manager
NASA Ames Research Center
MS 218-1
Moffett Field, CA 94035-1000

RE: COMMENTS ON DRAFT MOFFETT FIELD COMPREHENSIVE USE PLAN AND DRAFT ENVIRONMENTAL ASSESSMENT

Dear Ms. Olliges:

The following comments are being submitted within the public review period regarding the Draft Moffett Field Comprehensive Use Plan and Draft Environmental Assessment.

1. The documents should disclose that (a) there is no Federal law mandating that NASA restrict Moffett Field to only Federal users, (b) there are local and regional interests in possible future civil aviation use at Moffett, and (c) there are a number of joint use airports in existence. Attached is information related to the City of San Jose's long standing interest in the disposition of Moffett Field. **3-1**

2. Given the above comment, the EA should be expanded to include an alternative that assumes some level of civil aviation use and development by the year 2010. **3-2**

3. The EA's noise analysis appears inadequate. No detailed data or exhibits showing aircraft operational assumptions and other critical INM inputs or impacted land uses are provided. Also, the EA only presents mitigation measures that reduce impacts to a less than 3 db increase, without providing information to support the assumption that a 3 db CNEL increase is the threshold for significance. **3-3**

Based on these comments, we conclude that the EA is incomplete and, therefore, the issuance of a Finding Of No Significant Impact cannot be made at this time.

If you have any questions or need additional information, please contact me at (408) 277-5366 or Chris Sarbaugh at (408) 277-4731.

Sincerely,

Ralph G. Tonseth
Director of Aviation

RGT:CS
Attachments
cc: John Pfeifer, FAA

CITY OF SAN JOSÉ, CALIFORNIA

DEPARTMENT OF CITY PLANNING
801 NORTH FIRST STREET
SAN JOSE, CA 95110-1795

GARY J. SCHOENNAUER
DIRECTOR OF PLANNING

October 1, 1990

Mr. William Van Peters
Environmental Planning Branch
Western Facilities Engineering Command
The Department of the Army
P.O. Box 727
San Bruno, CA 94066-0720

Dear Mr. Peters:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement prepared for the San Francisco Bay Area Candidate Base Closures/Realignment. The City has completed its review of the document and offers the following comment.

The project description for Alternatives 1 and 2 is not consistent with the information presented in the document relative to NAS Moffett Field. The project is defined as the closure of Moffett, but the analysis indicates that the project is limited to terminating Navy operations at Moffett. The Draft EIS does not clearly state whether or not the Airfield at Moffett would remain open to serve the current non-Navy users under Alternatives 1 and 2.

Without a clear project description, it is not possible to adequately assess the environmental impacts of the proposed alternative actions. If Alternatives 1 and 2 are defined as only the termination of Navy activity at Moffett, then the project descriptions need to include the explicit assumption that airfield use would continue under non-Navy ownership. If Alternatives 1 and 2 are defined as the closure of Moffett, then the EIS must address the displacement of the other tenants and airfield users and the potentially significant effects on air traffic at other airports in the Bay Area, including San Jose International. If the EIS assumes complete closure, it should also identify continued operation of the Moffett Airfield under non-Navy ownership as mitigation or as an additional alternative.

Thank you again for providing a copy of the Draft EIS for our review. We would also appreciate the opportunity to review the Administrative Final EIS. Future correspondence regarding this document should be directed to Stan Ketchum of my staff at the address identified above. Stan can be reached by telephone at (408) 277-4576.

Sincerely,

Stan Ketchum

for Gary J. Schoennauer
Director of Planning

cc: Ralph Tonseth, Airport Department

0698L

DON EDWARDS
10TH DISTRICT, CALIFORNIA

COMMITTEE ON
JUDICIARY

CHAIRMAN
SUBCOMMITTEE ON
CIVIL AND
CONSTITUTIONAL RIGHTS

COMMITTEE ON
VETERANS' AFFAIRS

Congress of the United States

House of Representatives

Washington, DC 20515

WASHINGTON OFFICE:
(202) 225-3072

DISTRICT OFFICES:
1042 WEST HEDDING STREET
SUITE 100
SAN JOSE, CA 95126
(408) 247-1711

38750 PASEO PADRE PARKWAY
FREMONT, CA 94536
(415) 792-5320

December 14, 1990

Mr. Ralph G. Tonseth
Director of Aviation
City of San Jose
1661 Airport Boulevard, Suite C205
San Jose, California 95110

Dear Ralph:

My District Coordinator, Terry Poche, has let me know of your interest in having the City of San Jose apply for a dual use arrangement with Moffett Naval Air Station for general aviation.

As you may know, a request for such a plan would have to be initiated from a local government. Officials at the Department of the Navy have informed me that the City of San Jose is the appropriate authority to make this application.

Enclosed is the information necessary to make the application. I hope you will find it helpful, and if you have any further questions, please do not hesitate to contact me.

With warmest regards.

Sincerely,

Don

Don Edwards
Member of Congress

DE:sn
Enclosure

CITY OF SAN JOSÉ, CALIFORNIA

801 NORTH FIRST STREET
SAN JOSE, CA 95110
(408) 277-4237

SUSAN HAMMER
MAYOR

January 10, 1991

Mr. H. Lawrence Garrett III
Secretary of the Navy
Department of the Navy
The Pentagon
Washington, D. C. 20350

Dear Secretary Garrett:

Last Spring, the Department of the Navy held public scoping hearings to solicit input and identify issues and concerns to be addressed in an Environmental Impact Statement (EIS) evaluating the potential environmental and socioeconomic effects of " . . . the possible closure and/or realignment of Naval activities in the San Francisco Bay Area", including Moffett Naval Air Station. At that time, the City of San Jose Airport Department submitted written comments requesting that the EIS evaluate the continued use of a portion of the airfield for non-military aircraft.

Recent events have heightened the importance of seriously considering future aviation use of a portion of Moffett Field. The on-going Airport Master Plan Update for San Jose International Airport has found that the space needs of all users cannot be adequately met at the existing Airport. The potential may exist to meet some of these facility needs at Moffett Field.

If Moffett Field were to be closed, several users of the airfield would remain including NASA. It can be inferred from the EIS that the airfield will remain to serve NASA and the other users. In effect, Moffett Field would remain as a viable aviation facility.

Recent legislation introduced in the U. S. Congress would give local government jurisdictions adjacent to the facility priority in acquiring military bases that are closed. The City of San Jose supports this concept but favors a modified approach which would emphasize the regional nature and importance of many of these facilities, particularly Moffett Field.

Cities, such as San Jose, which are not directly adjacent to a military facility, but are in close proximity, should be considered for participation in the reuse of closed bases. This is particularly appropriate when regional benefits, such as expanded civil aviation use and the accompanying reduction in general/commercial aviation conflicts at San Jose International Airport can be demonstrated.

The City of San Jose recognizes the significant concerns regarding civilian use of Moffett Field expressed by the City Councils of Mountain View and Sunnyvale. Discussions of the ultimate reuse of Moffett Field must take into account the needs, costs and benefits to all affected jurisdictions within the region. Should the decision to close Moffett Field be confirmed, the City of San Jose stands ready to be an active participant in these discussions.

On December 4, 1990, the San Jose City Council voted unanimously to transmit to the Department of the Navy the City's strong position in favor of civil aviation use of a portion of Moffett Field.

Sincerely,

Susan Hammer
Mayor

cc: Honorable Tom Campbell
U. S. House of Representatives

Honorable Don Edwards
U. S. House of Representatives

Honorable Norman Y. Mineta
U. S. House of Representatives

Kevin Duggan, City Manager
City of Mountain View

Thomas F. Lewcock, City Manager
City of Sunnyvale

William Zaner, City Manager
City of Palo Alto

CITY OF SAN JOSÉ, CALIFORNIA

AIRPORT DEPARTMENT
1661 AIRPORT BOULEVARD, SUITE C-205
SAN JOSE, CALIFORNIA 95110-1285
Tele: (408) 277-5366
Fax: (408) 277-3191

Ralph G. Tonseth
Director of Aviation

September 19, 1991

Dale Compton
Director
NASA Ames Research Center
MS 200-1
Moffett Field, CA 94035

Dear Mr. Compton:

The City of San Jose has been following with interest the efforts of NASA Ames Research Center, Lockheed and ESL to plan for the future use of Moffett Field. San Jose has also expressed an interest in its continued use as an aviation facility and has offered to help manage such an operation.

It seemed appropriate at this juncture for representatives of NASA, ESL Lockheed and the City of San Jose to discuss this important issue. I would like to schedule a meeting with you or a representative of your organization, along with representatives of Lockheed and ESL, to discuss opportunities for regional cooperation on commercial and general aviation issues, especially as they relate to the future of Moffett Field.

I would be happy to meet at your office. Possible dates that I am available for a meeting include: September 30, October 2, the mornings of October 9 and 11, and 3:00 p.m. on either October 7 or 9.

Thank you for your assistance. I look forward to hearing from you or a representative of NASA Ames Research Center.

Sincerely,

Ralph G. Tonseth
Director of Aviation

cc:
Art Money, President, ESL
John McMahon, President, Lockheed Missiles & Space Company

CITY OF SAN JOSÉ, CALIFORNIA

801 NORTH FIRST STREET
SAN JOSE, CA 95110
(408) 277-4237

SUSAN HAMMER
MAYOR

October 21, 1991

Honorable Norman Y. Mineta
House of Representatives
Washington, DC 20515

SUBJECT: MOFFETT FIELD DISPOSITION PROCESS

Dear Congressman ~~Mineta~~, Norm

As you know, Congress accepted the 1991 Defense Base Closure and Realignment Commission report on July 1. NAS Moffett Field is one of the bases targeted in the report for closure. I am writing to you to express The City of San Jose's interest in the future of the facility.

The disposition of NAS Moffett Field is a serious concern to San Jose for a number of reasons. The facility has the potential to be a major component of the regional air transportation system of Santa Clara County. While San Jose does not border NAS Moffett Field, its future use will have a great impact on the City's residents as well.

The City of San Jose should play a role in planning for the facility's future use. As Mayor of the City of San Jose, I am requesting your assistance to ensure that the federal process used to plan for the disposition and re-use of NAS Moffett Field be an open one that involves all affected communities and interests groups.

The City of San Jose stands ready to assist in this process and would be glad to host any meetings or hearings that would be required.

For your information, letters regarding this topic, have been sent to Congressmen Tom Campbell and Don Edwards, and Senators Alan Cranston and John Seymour.

If you have any questions or need additional information, please contact me at (408) 277-4237, or Ralph Tonseth at (408) 277-5366.

Sincerely,

Susan Hammer
Mayor

cc: Richard Cheney
Secretary of the Department of Defense

Blanca Alvarado, Councilmember
Joe Head, Councilmember

Council Agenda: 12/8/92
Item #:

CITY OF SAN JOSE - MEMORANDUM

TO: MAYOR AND COUNCIL

FROM: MAYOR SUSAN HAMMER
COUNCILMEMBERS
BLANCA ALVARADO AND
JOE HEAD

SUBJECT: **Position Statement on Moffett Field**

DATE: November 24, 1992

APPROVED Susan Hammer Blanca Alvarado Joe Head DATE

COUNCIL DISTRICT: CITY WIDE

RECOMMENDATION

We recommend that the City Council approve the following modification of the City of San Jose position on Moffett Field.

BACKGROUND

In April of 1992, the Council approved the General Aviation Task Force recommendations on the future of Moffett Field. After meeting with representatives of Sunnyvale and Mountain View as well as the Federal Aviation Administration (FAA), it became clear that a longer range position on Moffett Field is needed.

POSITION OF THE CITY OF SAN JOSE ON THE FUTURE OF MOFFETT FIELD

- The City of San Jose (City) supports the transfer of Moffett Field to the National Aeronautics and Space Administration (NASA) as recommended by the Defense Base Closure and Realignment Commission.

- The City recognizes NASA Ames Research Center as a unique and irreplaceable facility which conducts important research into, and provides vital new technology for, military and civilian aviation as well as for space exploration.

- The City also acknowledges that NASA's current flight test programs at Moffett Field are incompatible with civil aviation operations.

- The City clearly understands that the NASA Research Center is a key component of the economic and industrial base of Santa Clara County and fully supports its continued presence and activities.

- The City also recognizes that Moffett Field is an essential and integral part of the aeronautical and technical industries of this region. Therefore, as a vital part of this industry, the facility should be preserved as a long-term aviation asset for Santa Clara County.

- Further, the City believes that in these times of rapidly changing government priorities and economic uncertainties, there may come a time when NASA's mission and/or flight programs at Moffett Field may cease or become compatible with civil aviation uses. In that event, the City believes it is in the best interests of long-term regional aviation transportation to have in place a contingency plan that spells out the alternative aviation uses of Moffett Field in a post-NASA era. This could best be achieved by conducting a Master Plan consistent with the long-term planning efforts of the Metropolitan Transportation Commission and the cities of Santa Clara County.

ORDER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

5000.5D

1/5/89

SUBJ: LIST OF JOINT-USE AIRPORTS

1. PURPOSE. This order transmits, for information purposes, a list of military installations where, by agreement, the Federal military department permits some degree of civil use.

2. DISTRIBUTION. This order is distributed to division level in Washington headquarters of the Office of Airport Standards, Office of Airport Planning and Programming, Regional Airports Divisions, and all Airports District Offices.

3. CANCELLATION. Order 5000.5C, List of Joint-Use Airports, dated February 1, 1983, is cancelled.

4. PRINCIPAL CHANGES. The list of military installations where civil activities are allowed has been updated by the Department of Defense and is enclosed as Appendix 1.

Paul L. Galis
Director, Office of Airport
Planning and Programming

This reprint succeeds previously distributed Order 5000.5D dated 1/5/89.

Distribution: A-W(AS/PP)-2, A-X(AS)-2, A-FAS-1(STD)

Initiated By: APP-400

MILITARY/CIVIL-USE AIRPORT

Codes for civil use:

1. Open to all civil aviation under a joint use agreement.
2. Joint-Use agreement for limited use.
3. Weather alternate for schedule air carriers by permit or prior permission.

STATE	LOCATION	CODE
ALASKA	Allen AAF	1/3
	Barter Island Dew Station	2
	Eielson AFB	3
	Elmendorf AFB	3
	Point Lay Dew Station	2
	Shemya AFB	3
	**Wainwright AAF	2/3
ARIZONA	Libby AAF/Sierra Vista Municipal	1/3
	#*Yuma MCAS/Yuma International	1
CALIFORNIA	George AFB	3
	Palmdale AF Plant 42	2/3
	Travis AFB	2/3
	El Centro NAF	3
	Alameda NAS	3
	Miramar NAS	3
	Moffett Field NAS	3
DELAWARE	Dover AFB	2
FLORIDA	Eglin AFB	2/3
	Key West NAS	3
	Tyndall AFB	3
GEORGIA	Dobbins AFB	3
GUAM	#Agana NAS	1
	Andersen AFB	3
HAWAII	Barbers Point NAS	3
	Dillingham	1
	Ford Island	2
IDAHO	Mountain Home AFB	3
KANSAS	McConnell AFB	3
	Sherman AAF	1

\# Must obtain Navy facility license
* Airport with FAA/AIP agreement
** Prior permission required

LOUISIANA	England AFB	3
	Polk AAF	2
MASSACHUSETTS	Westover AFB	2
MICHIGAN	Grayling AAF	1
	K. I. Sawyer AFB	3
	Wurtsmith AFB	3
MISSOURI	**Forney AAF	2
MONTANA	Malmstrom AFB	3
NEBRASKA	Offutt AFB	3
NEVADA	Nellis AFB	3
	Fallon NAS	3
NEW HAMPSHIRE	Pease AFB	3
NEW MEXICO	Cannon AFB	3
NORTH DAKOTA	Grand Forks AFB	3
	Minot AFB	3
OHIO	Rickenbacker ANGB	2
OKLAHOMA	Altus AFB	3
PUERTO RICO	Roosevelt Roads NS	3
SOUTH CAROLINA	*Charleston AFB	1
	Myrtle Beach AFB	2
SOUTH DAKOTA	Ellsworth AFB	3
TEXAS	Dyess AFB	3
	Kelly AFB	3
	Laughlin AFB	3
	Sheppard AFB	1
UTAH	Hill AFB	3
VIRGINIA	Blackstone AAF/Allen C. Perkinson Municipal	1
	Langley AFB	3
WASHINGTON	Fairchild AFB	3
	McChord AFB	3
	Gray AAF	2
WISCONSIN	McCoy/Sparta AAF	1

NOTE: Richards Gebaur AFB, MO and Ellington AFB, TX were deleted, they are now civil airports.

LETTER 3: Ralph G. Tonseth, City of San Jose

3-1: As noted by this commentor, there is considerable local and regional interest in possible future civilian aviation use at Moffett Field.

This project's purpose and need was largely determined on April 15, 1991, when Base Closure and Realignment Commission recommended that Moffett Field should continue to operate as a federal airfield used for research, development, training and operational activities. The Base Closure and Realignment Commission, Congress, and the President of the United States consider Moffett Field essential to the activities and operations of federal entities, such as the California Air National Guard, the Navy Air Reserve, and NASA itself. Uses other that those associated with federal activities are not considered at Moffett Field because the airfield must continue to be available, in its full capacity, for federal uses. Thus, the development of an alternative for Moffett Field to be used as a commercial and/or general aviation airport was not considered because it does not meet the project purpose and need which is to continue to use Moffett field as a solely federal facility to support national defense, and research and development.

Guidance is provided by the *Federal Property and Administrative Services Act of 1949*. The Act provides the statutory foundation by which the federal government can dispose of real property no longer required by federal agencies. The process is essentially a two step process, as outlined below:

- Properties deemed excess to the needs of the Department of Defense are reported to the GSA for utilization by other federal executive agencies having a requirement for such property; and
- Disposal as surplus property to a non-federal public agency or other organizations if no federal agency requires the property.

The federal guidelines are quite clear on this process, and in the case of Moffett Field are reinforced by the recommendations of the Defense Base Closure and Realignment Commission to maintain Moffett Field as a federal facility under the ownership and control of NASA. These recommendations were approved

by the President and Congress and carry the weight of federal law. In light of this, and since portions of Moffett Field have been declared to be excess only to the needs of the Department of Defense, the base transfer process, by law, stops at the first step. Thus, NASA is the only agency currently empowered by Congress to negotiate with the Department of Defense for the transfer of the facility.[1]

In addition, introduction of commercial cargo and general aviation operations would significantly affect Moffett Field's ability to continue to serve its defense and research-related tenants. More information related to these issues can be found in the *Assessment of Aviation and Community Impacts of Moffett Field Transfer* prepared for the cities of Sunnyvale and Mountain View by P&D Aviation.

3-2: See response 3-1.

3-3: Comment noted. The information requested has been incorporated into this Environmental Assessment as Appendix A.

A 3 dB increase is the level at which the human ear would be able to detect a noticeable change in the noise environment. In addition, this threshold of significance is commonly used in analyses under the California Environmental Quality Act. As a point of reference, a 5 dB increase is considered a clearly noticeable change and can be compared to the sound of leaves rustling in the wind.[2]

[1] *Assessment of Aviation and Community Impacts of Moffett Field Transfer.* The cities of Mountain View and Sunnyvale. P&D Aviation. July 10, 1992.

[2] Olson Laboratories Inc.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

May 5, 1994

Ms. Sandy Olliges
Assistant Chief
Office of Safety, Health and Environmental Services
National Aeronautics and Space Administration
Ames Research Center
Moffett Field, CA 94035-1000

Dear Ms. Olliges:

I am writing in response to your April 7, 1994 letter. I would like to clarify the requirements of EPA's November 30, 1993 regulation on determining conformity of general Federal actions to State and Federal implementation plans.

The situation regarding Moffett Field appears to involve two Federal actions. One action is the transfer of Moffett Field from the Navy to NASA. The other action would consist of the transfer of aircraft from other military installations in the Bay Area to Moffett Field.

The first action, transferring Moffett Field from the Navy to NASA, would be exempt from the conformity requirements based on §93.153(c)(xx). This section exempts transfers of real property, including land, facilities, and related personal property from a Federal entity to another Federal entity.

The second action, moving aircraft from other military installations to Moffett Field, may require a conformity determination since it would involve an increase in air emissions from Moffett Field due to the additional aircraft being relocated there. Section 93.158 of the regulation provides a number of options for determining conformity. As you probably are aware, the regulation establishes de minimis levels for actions required to have conformity determinations. If you are required to make a determination, I would certainly be available to assist you in interpreting the requirements of the regulations. **4-1**

Please contact me at your convenience if you would like to discuss this matter further. My telephone number is (415) 744-1212.

Sincerely,

Robert Pallarino
Air Planning Branch
Air and Toxics Division

cc: Tom Addison, BAAQMD

LETTER 4: Robert Pallarino, United States Environmental Protection Agency

4-1: Comment noted. NASA is aware of such regulations and will continue to seek guidance from the United States Environmental Protection Agency. A discussion of the project's requirement for a conformity determination is contained on page 98 of this Environmental Assessment.

Silicon Valley Toxics Coalition

760 North First Street
San Jose, California 95112
(408) 287-6707
FAX (408) 287-6771

Ted Smith
Executive Director

May 6, 1994

Ms. Sandy Olliges
Environmental Manager
NASA Ames Research Center
Moffett Field, CA 94035

Dear Sandy:

We appreciate the opportunity to comment on the Draft Environmental Assessment on the Moffett Field Comprehensive Use Plan (EA) (April 7, 1994). NASA-Ames is a major resource to our community and nation. Sound planning and thorough analysis of the environmental impacts of future use of the US Naval Air Station at Moffett Field after stewardship is transferred to NASA will only enhance its role.

Unfortunately, the Draft Environmental Assessment is narrow in focus because possible the future uses of Moffett Field put forth in the Comprehensive Use Plan (CUP) are so limited. The CUP only identifies two alternatives for Moffett Field which are similar as far as use, but differ only on the degree of use. Subsequently, the Draft EA is limited and does not adequately address the impact of continued operations at Moffett Field with new "Tenants", as NASA steps in. The Draft Finding of No Significant Impact (FONSI), is clearly inappropriate. Our major areas of concern are: 5-1

1. **Air Field Uses** - The CUP puts forth a scenario that will increase flight operations to 1991 levels of 80,000 flight operations a year, with approximately, 20,000 overflights. However, the noise levels generated by the helicopters are increased 3 Db. The measures suggested to mitigate this noise are not adequate. One of the mitigation measures suggests moving the overflights from the residential area closer to the Bay. While this might lessen the impact on the residential community, it increases impacts on the area adjacent to the Bay--the wetlands. The wetlands are already a degraded area and the home to endangered species. 5-2

We believe the impact of increased flights and their closer proximity to the wetlands area, will have a significantly detrimental affect on the wetlands area.

We further believe that the noise levels have not been adequately analyzed, with the transfer of 24 helicopters from Hamilton and Alameda Air Fields, as the noise generated by helicopters "hovering" and `touch-and-go' operations is significantly different from aircraft takeoffs and landings. 5-3

2. **Degradation of wetlands and endangered species** The EA is inadequate in considering public access to the wetlands area of the facility. The EA makes no provision for restoration of the wetlands, nor does it state how the wetlands will be protected and enhanced. With the Navy leaving, there is a great opportunity to protect and restore these wetlands. 5-4

3. **Total Aircraft Emissions** - The additional flight operations projected for the next 17 years will increase hydrocarbon air emissions 25%; carbon monoxide 4%; and nitrogen oxides 15% (EA page 90.) The CUP also increases aircraft operations below 3000 feet to be increased 56%. It is absurd to argue that the reduction of emissions into the northern section of the San Francisco Air Basin because of the transfer of air operation from Hamilton and Alameda does not mean an increase in air emissions in the southern section of the air basin "balances out in the end". Tens of thousands of South bay residents--who already live in a smoggy polluted non-attainment area--will clearly experience a significant impact. The Draft Finding of No Significant Impact is clearly an indefensible legal farce. 5-5

4. **Fuel Storage** - Plans for Moffett assume continued operation of a major Defense Fuel Support Center at the site. Fuel storage poses significant threats to the environment. One of our major concerns is the presence of 4 jet fuel tanks, each with a 567,000 gallon capacity. These tanks, according to Navy admissions, do not meet double-wall requirements" (pg. 65) and are sitting in groundwater. The EA states that these will be removed in 1998, in accordance with Underground storage Tank regulations. However, the immediate concern of a petroleum leak from the tanks remains paramount. Our technical consultants found 1) that monitoring wells were not properly located; 2) if a discharge occurs after the Navy leaves, it is not clear who is responsible for quick response and clean up; and 3) a catastrophic release would be irreversible. 5-6

We urge that these tanks must be emptied and removed prior to transfer and that the appropriate party who will be responsible to ensure a quick response and thorough clean up if discharges occur must be identified.

The EA admits that the receiving area at Guadalupe Slough is "inadequate for current use" and a monitoring program "needs to be established along with a spill prevention control and counter measure plan". (EA page 64). 5-7

We agree with the EA that a monitoring program at Guadalupe Slough must be established and that a spill prevention control and counter measure plan be implemented. However, we believe that a timetable

for this program must be established and reviewed before the Slough is used for the next shipment. 5-7 cont.

5. **Weapons and munitions storage.** Despite the closure of Moffett Field as a military installation, both alternatives of the CUP call for continued storage of munitions, ordnance and weapons at Moffett Field. Both the fuel tanks and the munitions storage have been used to justify land-use decisions such as withholding permission for the northern extension of the Bay Front Trail. 5-8

We believe the munitions and weapons storage must be removed, reduced or eliminated, to allow public safe access to the northern route of the Bay Trail. There is no public purpose served for NASA to manage and maintain a munitions storage facility on site.

The Finding of No Significant Impact must be re-evaluated. There are significant areas of concern that have not been adequately addressed or "mitigated" by the Draft EA. It is also critical to clarify the baseline of activity the FONSI used. While the Draft EA argues that there has been no Significant Impact based on the level of activity in 1991, there has been a drop in activity between 1993 and 1991. 1993 should be used as the baseline year, not 1991. 5-9

Some problems with scope of the EA became apparent at the public forum NASA held on April 18. One is that because the EA is taking a programmatic approach it fails to see the cumulative impacts of each individual project on the entire area. As a result the mitigation measures aren't able to take into account the projects that have been previously undertaken. Other problems were mentioned at the public, however because there is no public record from that hearing, the breadth of community concern will not be fully recognized. 5-10

The closure of Moffett Field and its transfer to NASA provides many opportunities. It is essential that this opportunity establishes a model process that includes a land-use policy that involves the community as stakeholders. It can be seen as a process that makes environmental restoration and preservation a priority. We are very concerned that the limited uses of Moffett put forth by NASA are indicative of the lack of public participation on a meaningful level. This limited view makes it difficult to view the entire biotic community at Moffett Field and the valuable resources and acreage it holds. 5-11

Sincerely,

Leslie Byster

Leslie Byster
Program Director

LETTER 5: Leslie Byster, Silicon Valley Toxics Coalition

5-1: The Environmental Assessment evaluates a range of alternatives which meet the project purpose and need as required by NEPA. NEPA regulations require that an agency of the federal government study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflict concerning alternative uses of available resources 102 (2)(E). Environmental Assessments shall include a "brief discussion" of the alternatives considered for accomplishing the goal of the proposal, as provided in this Environmental Assessment.

The Base Closure and Realignment Commission, Congress, and the President of the United States consider the use of Moffett Field by federal entities essential to continued federal activities by resident agencies such as the California Air National Guard, the Navy Air Reserve, and NASA itself.[3] The range of alternatives available to NASA to fulfill the goal of continued operation of the airfield as a federal facility are limited. Uses other that those associated with federal activities have not been considered at Moffett Field since the airfield must continue to be available, in its full capacity, for these federal uses.

It is true that a number of alternatives were studied by local jurisdictions. For example, in July 1992 the cities of Mountain View and Sunnyvale prepared the *Assessment of Aviation and Community Impacts of Moffett Field Transfer* to assess various alternatives community members and organizations have proposed at Moffett Field. Though many of these alternatives were not considered realistic by NASA and the Department of Defense, they were reviewed to determine community priorities for the future of Moffett Field. The alternatives that were reviewed included:

- NASA/Government Operations
- NASA/Government Operation plus Air Cargo
- NASA/Government plus General Aviation

[3] The Defense Base Closure and Realignment Commission's report to the President recommended that Moffett Field "remain in federal custody and support of non-DOD (Department of Defense) agencies and industry".

- NASA/Government Operation plus General Aviation and Air Cargo

It was found that a major civilian general aviation and air cargo operation component at Moffett Filed could very likely result in:

- Increased cumulative noise impact levels;
- Substantial increases in the frequency of single event noise intrusions;
- Severe impact on NASA's operational effectiveness and efficiency; and
- Increased safety risks to NASA facilities and the community.

5-2: Please refer to Response 3-3. According to the Santa Clara County General Plan, noise levels up to 80 dB are acceptable in open space, conservation, and recreation areas. As documented on page 87 of the Environmental Assessment, average noise levels with mitigation will be below 75 CNEL in the wetland areas. In addition, the Department of Fish and Game concurs that Future Concept 1 will reduce the potential for impacts to biological and wetland resources (Letter 1). In addition, the Bay Plan prepared by the Bay Conservation and Development Commission (BCDC) identifies the take-off of aircraft over the Bay a priority use in order to avoid urban areas.

5-3: The noise analysis contained in this Environmental Assessment includes the projected operations of the 24 new helicopters. The different hovering and touch-and-go patterns that are significantly different from aircraft takeoffs and landings were assessed in the noise analysis.

5-4: Future Concept 1 of the Comprehensive Use Plan does not allow for construction in the wetlands area with the exception of the bridge at Stevens Creek. A project specific environmental analysis will be required for the project when design details are known and an actual project is proposed. Mitigation Measure PLANT-1 and ANIMAL-1 provide for focused environmental analysis of this project as well as projects proposed in the vicinity of the wetlands. The Department of Fish and Game concurs that the level of new construction under Future Concept 1 will reduce the potential for impacts to biological resources. NASA intends

to protect wetlands and sensitive species at Moffett Field, and is supported by the Department of Fish and Game.

NASA is not required under NEPA to restore wetlands as a result of assuming responsibility for this facility, nor does this Environmental Assessment need to include a restoration plan. An endangered species survey is currently being prepared by the U.S. Fish and Wildlife Service for NASA. NASA will develop a management plan based on the results of this study.

5-5: The air emissions analysis has been amended in this Final Environmental Analysis to respond to the commentors concerns regarding the air quality analysis. Credits for aircraft from Hamilton and Alameda airfields have been omitted from the analysis to focus on local impacts.

The Environmental Protection Agency has set *de minimus* standards for analyzing the significance of air emission increases for federal installations, as discussed on pages 94 and 98 of this Final Environmental Assessment. The threshold for significance for emissions are 100 tons per year for ozone precursors (hydrocarbons and nitrogen oxides), carbon monoxide, sulfur dioxide and PM_{10}. Because increases in emissions are expected to fall significantly under these thresholds, no substantial impacts are anticipated.

All current and proposed sources of air pollutants will meet all federal, State and local rules and regulations. All stationary sources will be permitted through the BAAQMD.

5-6: Comment noted. NEPA requires that all proposed major federal actions be analyzed for environmental impacts. The Comprehensive Use Plan proposes possible construction of new facilities, new land and new employees. Carrying out the plan which will result in these actions occurring are what must be considered pursuant to NEPA. NEPA does not require an environmental analysis of current uses. In addition, existing conditions are analyzed in the Navy's Baseline Environmental report (BER).

The Navy retains complete responsibility for compliance with all terms and provisions of the Federal Facility Agreement (FFA) and all other environmental restoration and remediation

requirements and regulations related to on-going activities of the Navy or its contractors or subcontractors associated with the Naval Air Station at Moffett Field. This includes the removal or closure of underground storage tanks and the remediation of any contamination from those tanks. Specifics of the agreement between the Navy and NASA can be found in the *Memorandum of Understanding Between the Department of the Navy and NASA regarding Moffett Field, CA*, dated December 22, 1992.

At this time NASA is working on an agreement with the Defense Fuel Supply Center (DFSC) whereby DFSC would operate the fuel system and would be responsible for all environmental compliance and restoration thereof, including the eventual removal or closure of the storage tanks.

Mitigation Measure RISK-2 requires site-specific environmental analysis prior to the development of a new fuel farm. The existing fuel farm tanks have undergone integrity testing. No evidence of leaks has been found, as stated on page 69 of this document. In addition, as described in Mitigation Measure RISK-3 of this Final Environmental Assessment, the existing jet fuel system at Moffett Field shall be in compliance with the California Underground Storage Tank regulations by December 1998. Finally, RISK-4 requires site-specific hazardous materials investigation and evaluation prior to individual construction projects under the Comprehensive Use Plan.

5-7: Mitigation Measure RISK-1 has been added to this Final Environmental Analysis to respond to this comment. This mitigation measure is expected to offset any substantial impacts of implementation of Concept 1 of the Comprehensive Use Plan.

5-8: Moffett Field will continue to be used to support national defense. Ordnance storage is necessary for training activities which are carried out from this facility.

NASA is committed to working toward implementation of the Bay Trail and has convened a working group to examine Bay Trail issues and potential solutions. The Air National Guard which is responsible for the operation and maintenance of the ordnance areas at Moffett Field and other effected resident agencies, are be involved in the Bay Trail working group sessions.

5-9: The Environmental Assessment uses existing conditions in 1993, as described in Table 3 of this Final Environmental Assessment, as the baseline for analysis. This baseline assumes an employment of 10,000 employees and a total building square footage of 5,615,528. The Environmental Assessment does not argue that there has been no significant impact based on the level of activity in 1991. In some cases, these numbers have been included for reference to provide an overall understanding of the limited scope of activities proposed by NASA under the Comprehensive Use Plan.

5-10: The Environmental Assessment analyzes the effects of adopting and developing a use plan. As a result, the impacts identified must be addressed from a programmatic point of view. This level of analysis is recognized as appropriate in the NEPA guidelines (40 CFR. 1502.4(b)). The traffic and air quality analyses in this Environmental Assessment consider cumulative impacts. In addition, site-specific development will require additional environmental review.

5-11: Community concerns raised at the public forum on April 18, 1994 were documented and are contained in this Final Environmental Assessment. Responses have been made as appropriate.

5-12: Please refer to Response 5-1. The conclusion that many opportunities are offered by the transfer to NASA must be put in context. Opportunities to decrease job loss by continuing federal operations rather than eliminating them can be realized by the Comprehensive Use Plan. Development of a plan which does not focus on national defense and research and development to support national defense does not exist because of Congressional and Presidential actions.

NASA has made several attempts to inform the public of development of the Comprehensive Use Plan and associated environmental review. Three public meetings were held between June 1993 and April 1994. On June 3 and November 15, 1993 public meetings were held to gather public input on the Comprehensive Use Plan and the environmental analysis of the Plan. In addition, the Draft Environmental Assessment was circulated for public review and comment by the National Aeronautics and Space Administration in April 1994 to over 200

agencies, organizations and individuals. The Draft Environmental Assessment was available for a 30-day review period, which closed on May 11, 1994. A public forum was held on April 18, 1994 to solicit public input and comment on the Comprehensive Use Plan and the Draft Environmental Assessment. In addition, responses to comments have been included in this Final Environmental Assessment to further respond to public inquiry.

In addition, during the period from January to June 1992, the cities of Mountain View and Sunnyvale conducted a number of public informational meetings during which public testimony was taken regarding future use of Moffett Field. This public testimony is documented in the *Assessment of Aviation and Community Impacts of Moffett Field Transfer* prepared by P&D Aviation for the cities of Mountain View and Sunnyvale.

Silicon Valley Toxics Coalition

760 North First Street
San Jose, California 95112
(408) 287-6707
FAX (408) 287-6771

Ted Smith
Executive Director

6

May 6, 1994

Dr. Ken Munechika
NASA Ames Research Center
Mail Stop 200-1
PO Box 1000
Moffett Field, CA 94035

Dear Dr. Munechika:

6-1

As members of the Community Advisory Board for the Moffett Naval Air Station and the MEW Companies Superfund Sites established by the Silicon Valley Toxics Coalition, we respectfully request that NASA expand the opportunities for public involvement in consideration of the Draft Environmental Assessment. A number of us attended the April 18 meeting held by NASA to release the document, but we were disappointed in the lack of general community notice and the lack of substantive responses. We feel that the public interest would be served by a fully publicized public hearing, at which members of the public could make comments on the Comprehensive Use Plan, the Draft Environmental Assessment, and the Draft Finding of No Significant Impact. This meeting should be convened as a public hearing under the National Environmental Policy Act (NEPA) with NSA responding, according to the NEPA process, to each comment before the documents are finalized.

We believe a full public hearing is merited because 1) there is substantial environmental controversy surrounding NASA's proposed use of Moffett Field and 2) there is substantial public interest in the hearing. According to §1506.6 of the Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR Parts 1500-1508), these are precisely the criteria to be considered by your agency when determining whether to hold a public hearing.

Once you determine a time and place for this hearing, we would be glad to assist you in publicizing the event. We believe that 60 days notice is ample time to allow interested parties to know of the hearing.

The Ames Research Center is a valued part of our community. We believe, however, that its expansion should proceed in full consultation with all interested members of the community. We believe that many members of the neighboring communities remain unaware of NASA's plans to expand activity at Moffett Field from their current levels.

6-1 cont.

Sincerely,

Leslie Byster, Paul Lesti and Paul Burks
for the Community Advisory Board

LETTER 6: Leslie Byster, Silicon Valley Toxics Coalition

6-1: Please refer to Responses 5-11 and 5-12.

7

Santa Clara Valley Water District

5750 ALMADEN EXPRESSWAY
SAN JOSE, CA 95118-3686
TELEPHONE (408) 265-2600
FACSIMILE (408) 266-0271
AN AFFIRMATIVE ACTION EMPLOYER

May 6, 1994

Ms. Sandra Olliges
NASA Ames Research Center
Safety, Health, and Medical Services
M/S 218-1
Moffett Field, CA 94035-1000

Dear Ms. Olliges:

Subject: The Draft Environmental Assessment for Moffett Field

The District has reviewed the Draft Environmental Assessment and has the following comments:

Page 29, Paragraph 2a:

District Ordinance 83-2 requires the acquisition of a District permit prior to construction adjacent to or within a District facility. Specifically, a District permit will also be required for the construction of the proposed bridge crossing of Stevens Creek. 7-1

Page 30, Paragraph 2c:

The third sentence states that "harmful pollutants will not be permitted to enter San Francisco Bay." It is not clear through review of this DEIS how this will be accomplished. In addition, the fourth sentence states that "low levels of organic compounds have been found in the effluent, but these levels are not considered significant..." The DEIS would be more complete if it included a brief discussion of the source(s) of these compounds and who made the determination that they are not considered significant. 7-2

Page 96, Section B, Mitigation Measure WATER-1:

Consider revising the paragraph to read:

> "Development on the site, especially in the vicinity of Stevens Creek (including construction of the connecting bridge), shall be designed and operated to prevent channel modification, erosion, siltation, and the introduction of pollutants into surface waters including Stevens Creek, Guadalupe Slough, and San Francisco Bay." 7-3

We appreciate the opportunity to review this document.

Sincerely,

Marc J. Klemencic, P.E.
Division Engineer
Design Coordination Division

LETTER 7: Marc J. Klemencic, Santa Clara Valley Water District

7-1: Comment noted. Page 31 of this Environmental Assessment has been amended to reflect the comment.

7-2: The commentor indicates incorrectly that the Environmental Assessment is an Draft Environmental Impact Statement (DEIS).

Moffett Field is regulated by the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) pursuant to the Clean Water Act. No significant pollutants will be allowed to enter the Bay as a result of the compliance with these regulations and the permit requirements of the SFRWQCB. More information on the levels of organic compounds can be found in the *Environmental Resources Document, NASA Ames Research Center, Moffett Field, June 1992* in addition to monitoring reports prepared by Chemical Waste Management, Inc. These documents are submitted to the SFRWQCB and the Santa Clara Valley Water District and can be acquired from the NASA Ames Research Center.

7-3: Mitigation Measure WATER-1 has been amended as suggested.

The Resources Agency

Pete Wilson
Governor

Douglas P. Wheeler
Secretary

of California

California Conservation Corps • Department of Boating & Waterways • Department of Conservation
Department of Fish & Game • Department of Forestry & Fire Protection • Department of Parks & Recreation • Department of Water Resources

May 9, 1994

NASA Ames Research Center
ATTN: Sandy Olliges
MS 218-1
Moffett Field, California 94035

Dear Ms. Olliges:

The State has reviewed the Draft Environmental Assessment, Moffett Field Comprehensive Use Plan, Santa Clara County, submitted through the Office of Planning and Research. 8-1

We coordinated review of this document with the San Francisco Bay Regional Water Quality Control Board; the California Coastal, Native American Heritage, and State Lands Commissions; and the Departments of Conservation, Fish and Game, Parks and Recreation, Toxics Substance Control, and Transportation.

The Department of Fish and Game replied directly by copy of their correspondence dated February 9, 1994.

Thank you for providing an opportunity to review this project.

Sincerely,

for James T. Burroughs
Deputy Secretary and General Counsel

cc: Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814
(SCH 94044005)

The Resources Building Sacramento, CA 95814 (916) 653-5656 FAX (916) 653-8102

LETTER 8: James T. Burroughs, The Resources Agency of California

8-1: Comment noted. This letter acknowledges the State of California's receipt and distribution of the Draft Environmental Assessment.

CITY OF MOUNTAIN VIEW

Office of the City Manager • 500 Castro Street • Post Office Box 7540 • Mountain View, CA 94039-7540
415 903-6301 • FAX 415 962-0384

May 09, 1994

Ms. Sandy Olliges
Environmental Program Manager
NASA Ames Research Center
Mail Stop 218-1
Moffett Field, California 94035-1000

Dear Ms. Olliges;

The City of Mountain View staff has reviewed the Moffett Field Comprehensive Use Plan Draft Environmental Assessment and Finding of No Significant Impact (FONSI). This letter presents our comments based on that review. For ease of review the comments (attached to this cover letter) are noted by page number of the document.

If after reviewing the comments there is need for clarification or amplification, please feel free to contact me at 903-6301. We look forward to receiving the final Comprehensive Use Plan, and Environmental Assessment, along with the future studies that are referenced in the Environmental Assessment.

Sincerely,

Nadine P. Levin
Assistant City Manager

cc: CM

CITY OF MOUNTAIN VIEW COMMENTS ON MOFFETT FIELD COMPREHENSIVE USE PLAN DRAFT ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

I. Page 3l. In regards to the water supply reference it should be noted that the City of Mountain View is a partner in the Palo Alto treatment facility and as such would be involved in providing cooling-water supply to the new wind tunnel complex. It is suggested that a reference be made to the potential use of reclaimed water for irrigation of the golf course. **9-1**

2. Page 32. Staff feels it is appropriate that if any wetlands are destroyed by the construction of the proposed bridge that they would need to be replaced. **9-2**

3. Page 48. It is not clear from the language provided what the definition of "substantial change" is in regard to changes in use that would trigger an environmental review. We suggest for purposes of clarity that it be defined. **9-3**

4. Page 50. Staff feels that it is appropriate to discuss the noise impacts of flight patterns and explain why a "right hand pattern" is not used which would take the flights away from the more populated areas of Mountain View. **9-4**

5. Page 50: There is a perception that there is an engine test standard(s) in operation at Moffett Field, a reference to this would be appropriate especially if there is any thought of increasing the number of such standards. **9-5**

6. Page 57: The City currently has a cooperative response agreement with the Navy as stated in the assessment. When the Navy leaves that agreement will no longer be in effect. There has been discussion between the City Fire Department and NASA regarding entering into the Santa Clara County mutual aid agreement. The assessment should reflect this situation. **9-6**

7. Page 59: The discussion of the power usage doesn't appear to take into account a new wind tunnel complex needs. **9-7**

8. Page 64: City staff feels a reference should be made that if there is any change in method of distribution of fuel that an environmental assessment would be undertaken. **9-8**

9. Page 66-67: In general the City staff feels that more information on the contamination is necessary and specifically information relative to the migration. It would be helpful to have included reference to a ground water model. **9-9**

l0.Page 68-74:
a. Bridge references should be clear that a decision to construct will involve the City and must also meet the needs of the City. Additionally, there is a need to analyze the traffic impact on the west end of the bridge. **9-10**

b. Is unclear if the transportation analysis considered the geometrics when CALTRANS alignment changes, or if the analysis considered the impact of the extension of the LRT on the Ellis gate. | 9-11

ll. Page 75- City staff feels there are several aircraft related issues, as follows: | 9-12

a. What is the impact of weekend (reserve) uses- will there be more aircraft operations on the weekends than during the week ?
Will the arrangement with Crow's landing be maintained and if not how will this change the touch and landings?

12. Page 89- Table l0 is difficult to understand, and should be clarified. Staff is confused as to what is meant by base year operations, and net operations and why the transfer of operations from other bases (Alameda and Hamilton) will lower the year 20l0 total operations number. | 9-13

LETTER 9: Nadine P. Levin, City of Mountain View

9-1: Comment noted. Page 36 of this Final Environmental Assessment has been amended as suggested by the commentor.

9-2: Comment noted. Mitigation Measure PLANT-1 provides for site specific surveys and environmental review prior to bridge construction, in addition to the replacement of any disturbed habitats.

9-3: In the context of the referenced paragraph, substantial change includes any operations or development not foreseen under Future Concept 1 of the Comprehensive Use Plan. The text of this Environmental Assessment has been amended appropriately.

9-4: Detailed noise analyses and mitigation measures are provided in the subsequent noise section beginning on page 80. The referenced section only describes noise policies of surrounding jurisdictions and Moffett Field's compliance with such policies. Because Moffett Field has parallel runways, a left-hand pattern is used on the left runway and a right-hand pattern is used on the right runway. Only in exceptional circumstances would both runways utilize a right-hand pattern, as suggested by the commentor because of safety considerations.

9-5: This Environmental Assessment has been revised to reflect the current status of the mutual aid agreement. The Moffett Field Fire Department is working with Mountain View to establish a new agreement. It is expected that this agreement will be signed in July 1994.

9-6: Comment noted. Page 61 of this Environmental Assessment has been amended to include the commentor's revisions.

9-7: This Environmental Assessment does not analyze the impacts of a new wind tunnel complex. If this project were proposed, additional environmental analysis would be required.

9-8: Comment noted. Mitigation Measure RISK-3 has been amended to address the commentor's concerns.

9-9: More information on the hazardous materials present at Moffett Field and the remediation efforts planned and in progress can be

found in the Installation Restoration Program, the Hazardous Waste Minimization Plan, the Spill Contingency Plan, and the Hazardous Communication Program Plan. These documents are incorporated into this Environmental Assessment by reference, as directed by NEPA regulations. The commentors may contact the Navy directly for this information.

9-10: Mitigation Measure TRAFFIC-1 has been added to this Environmental Assessment to address the commentor's concerns.

9-11: These projects are not necessary to implement the Comprehensive Use Plan and they do not affect the transportation analysis for implementation of Future Concept 1.

9-12: There is a potential that more aircraft operations could occur during the weekend, than are currently experienced, due to reserve unit activity. However, these variations in aircraft operations are not expected to cause impacts beyond those identified in this Environmental Assessment.

Operation of Crows Landing Auxiliary Landing Field is currently under the custodial responsibility of NASA and will be maintained by NASA. Touch and go operations will not be affected.

9-13: This analysis has been omitted from this Environmental Assessment. Table 11 has been revised to reflect actual operations that will occur at Moffett Field without a credit for aircraft being transferred from Alameda and Hamilton airfields.

May 9, 1994

Ms. Sandy Olliges
Environmental Program Manager
NASA Ames Research Center
Mail Stop 218-1
Moffett Field, CA 94035-1000

Dear Ms. Olliges,

The City of Sunnyvale sent comments regarding the Moffett Field Comprehensive Use Plan under separate cover in early April, 1994. The following comments are related to the Moffett Field Comprehensive Use Plan Draft Environmental Assessment and Finding of No Significant Impact (FONSI).

Course or Flow of Flood Waters (p. 30)

In our earlier correspondence on the Comprehensive Use Plan we asked for additional information about how flooding will be addressed in the event of a 100-year flood. I would be use to note some examples of "flood proofing measures" mentioned at the bottom of p. 30. What is the status and significance of the "proposed improvement plans" noted in the last paragraph which also discusses the Federal Emergency Management Agency (FEMA) requirements? 10-1

Bay Trail (pgs. 52ff)

The Bay Trail is a significant regional recreational amenity that will benefit the local and regional community-at-large. The accessibility and continuity of the Bay Trail is an important community issue. The Bay Trail alignment, however, is not fully addressed in the Draft Moffett Field Comprehensive Use Plan as the environmental assessment document notes. The City of Sunnyvale concurs with ABAG, the South Bay Ad Hoc Committee and the County of Santa Clara regarding support of the northern alignment of the trail. However, the proximity of the trail near potential safety hazards strongly suggests that further mitigations/approaches need to be further studied. We support NASA's recognition of the South Bay Ad Hoc Committee's support of the northern alignment of the route and their willingness to further examine other options. 10-2

Since the draft environmental assessment states on page 54 that the Bay Trail proposal is part of the Comprehensive Use Plan, the city would want to be assured that this would

not preclude continued study and eventual implementation of the chosen alignment of the Bay Trail.

Land Use and Public Policy

Noise (pgs.50ff)

Noise is a significant issue for all communities. The section (1)(b) needs to be reworded to better reflect the city's existing polices and practices. The noise ordinance notes that any noise or sound which is recurrent or continuous shall not exceed 75 decibels at any point on the property line. The noise or sound level shall not exceed 50 decibels at any point on a common property line with property in a residential zoning district. It should also be noted that the city's noise ordinance is currently being rewritten and the anticipated update of the Noise Sub-Element will take place during the next 12-18 months. City staff is working with Moffett Park/NASA to address some of the noise issues potentially related to the expansion of the wind tunnels on the Moffett site. **10-3**

Wind Tunnel Noise (pgs. 82ff)

The City of Sunnyvale strongly supports the statement on page 82 that "New proposed wind tunnel facilities shall require individual environmental analysis, paying particular attention to noise impacts to surrounding development." The next sentence mentions that the tunnel facilities shall be ..."compatible, to the extent **practible**, with surrounding land uses and policies of the cities of Sunnyvale and Mountain View." The text should read either practical or practicable. **10-4**

The city assumes that the wind tunnels will be located at Moffett Field for a considerable period of time. Within this context, the city would like an additional phrase added which confirms that all feasible alternatives (meeting technical and fiscal constraints) will be examined in order to bring the noise impacts to a less-than-significant level.

Mitigation Measure NOISE-4. Environmental analyses will be required to assess significant noise impacts and the required mitigation measures to address them. In order to address the noise impacts of facilities which will or may be introduced over time, the city would like the following words added--- mitigation impacts should address any new **or modified** wind tunnel facilities in order to bring such impacts to a less-than-significant level.

We look forward to working with you on these important issues.

Sincerely,

Gail A. Price

Gail A. Price
Principal Planner

LETTER 10: Gail A. Price, City of Sunnyvale

10-1: Development outlined in the Comprehensive Use Plan generally occurs outside of the 100-year flood plain. In addition, building construction on Moffett Field must meet Federal Emergency Management Agency (FEMA) requirements for flood elevations. Page 33 of this Environmental Assessment has been amended to clarify this issue. No significant impacts are anticipated.

10-2: The Bay Trail proposal is not part of the Comprehensive Use Plan, as described on pages 56-57 of this Environmental Assessment. Additional environmental analysis by trail proponents will be required when a specific route for the Bay Trail is proposed.

The adoption of Future Concept 1 of the Comprehensive Use Plan will not preclude the eventual implementation of the chosen alignment of the Bay Trail. Impediments to trail construction exist as a result of existing safety and habitat constraints. NASA is committed to working toward implementation of the Bay Trail and is forming a working group to examine Bay Trail issues and potential solutions. Currently, the Air National Guard is responsible for the operation and maintenance of the ordnance areas at Moffett Field. The Air National Guard, and other effected resident agencies, will be involved in the Bay Trail working group sessions.

10-3: Comment noted. Page 54 of this Environmental Assessment have been amended to reflect the commentor's concerns.

10-4: Comment noted. Mitigation Measure NOISE-4 has been amended to include the commentor's suggested language.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, Ca. 94105-3901

MAY 10 1994

Ms. Sandy Olliges, Environmental Program Manager
NASA Ames Research Center
Mail Stop 218-1
Moffett Field, California 94035-1000

Dear MS. Olliges:

The Environmental Protection Agency (EPA) has reviewed the Draft Environmental Assessment (EA) for the project entitled **Moffett Field Comprehensive Use Plan, Moffett Field, California.** Our review is provided pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500 - 1508) and Section 309 of the Clean Air Act.

On April 15, 1991, the Base Closure and realignment Commission recommended that the U.S. Navy cease operations at Moffett Field, which would then be transferred to the National Aeronautical and Space Administration (NASA) Ames Research Center. NASA has developed the Comprehensive Use Plan (CUP) to implement the transfer of Moffett Field from the Navy and to satisfy three objectives: 1) to provide guidance to NASA management for decisions that affect the future of Moffett Field; 2) to provide future alternatives for consideration in an Environmental Assessment or Environmental Impact Statement of the Comprehensive Use Plan; and 3) to provide background information for related planning efforts such as the Facilities Master Plan and the Airport Master Plan, both scheduled to commence upon completion of the Comprehensive Use Plan. Moffett Field will transfer to NASA in July, 1994, and the Navy is scheduled to leave Moffett Field by August 1994.

The Comprehensive Use Plan is conceptual and acknowledges that additional environmental review will be required prior to site-specific development actions. The CUP includes three alternatives: "Future Concept 1", "Future Concept 2" and a No Action Alternative. Future Concept 1 would increase on-site employment from current levels of 10,000 workers to 10,610 workers, and on-site development would increase from 1,150 to 1,250 acres. This alternative would institute new flight operations, research and development uses, and related support activities. Future Concept 2 would increase on-site employment by 4,510 and development by 135 acres (compared with increases projected under Future Concept 1). Under the No Action Alternative, NASA development of Moffett Field would be on an individual project basis. Moffett Field would be developed in a similar manner to Future Concept 1, but in a slower and less cohesive manner.

While the Draft EA does contain an informative discussion of the proposed Comprehensive Use Plan actions, some specific issues should be discussed in greater detail and additional information should be provided. In particular, a biological field survey should be conducted, and detailed wetlands delineation should be conducted for the site. Our detailed comments are provided below. In addition, air quality issues should be examined more quantitatively in the Final EA. 11-1 11-2

EPA is concerned about potential impacts to wetlands and other sensitive habitats at Moffett Field under the Plan. EPA advises NASA to provide more detailed information pertaining to the quantity and location of the existing wetlands on the site. EPA also recommends that the Comprehensive Use Plan restrict any development that would degrade or destroy those wetlands pursuant to Section 404 of the Clean Water Act (refer to enclosed comments). EPA recognizes that while this EA is not intended to address in detail the impacts of each specific reuse alternative, the above changes would be necessary to ensure that the document contains full disclosure of probably impacts. NASA should clarify these issues in the Final EA. 11-3

EPA questions the inclusion of a draft Finding of No Significant Impact (FONSI) with the Draft EA. Because the Draft FONSI is signed and dated, it appears to finalize the conclusion that no significant impacts would occur from the project. Such a predecisional action would be inconsistent with NEPA, which stipulates that a FONSI must be preceded by a Final EA. A draft FONSI may be issued prior to the Final EA, but the draft FONSI should be left unsigned and undated. 11-4

We appreciate the opportunity to comment on the proposed project and request that three copies of the Final EA be sent to the attention of David Farrel (E-3-1) at the letterhead address. If you have any questions or wish to discuss any aspect of our comments, please contact me at (415) 744-1574 or have your staff contact Jeff Philliber at (415) 744-1570.

Sincerely,

Laura Fujii Acting for

David J. Farrel, Chief
Environmental Review Section
Office of Federal Activities

Enclosures: (2)
MOFT.EA.JP

EPA COMMENTS ON DRAFT EA, MOFFETT FIELD COMPREHENSIVE USE PLAN, MOFFETT FIELD, CALIFORNIA, MAY 10, 1994

AIR QUALITY COMMENTS

1. (p. 86-94) Pursuant to the requirements of Section 176(c) of the Clean Air Act (CAA), 42 U.S.C. Section 7506(c), Federal agencies are prohibited from engaging in or supporting in any way an action or activity that does not conform to an applicable State Implementation Plan. Conformity to an implementation plan means conformity to an implementation plan's purpose of eliminating or reducing the severity and number of violations of the national ambient air quality standards and achieving expeditious attainment of such standards. EPA has promulgated regulations at 58 Federal Register 63214 (November 30, 1993) implementing Section 176(c). Among other things, these regulations establish de minimis levels for actions requiring conformity determinations, exempt certain actions from conformity determinations, and create criteria and procedures that Federal agencies must follow for actions required to have conformity determinations. NASA should review these regulations and discuss their applicability in the Final EA. 11-5

The Final EA should include additional information pertaining to air quality and attainment. Bay Area Air Quality Management District (BAAQMD) attainment (and non-attainment) figures should be presented along with state and federal standards for all criteria pollutants. Expected increases in criteria pollutants under the Comprehensive Use Plan should be presented in comparison to base-line or existing levels. For criteria pollutants that are currently in nonattainment, the Final EA should compare expected increases with de minimus thresholds.

2. (p. 93) The Draft EA states that because the Central Steam Plant in Building 10 would be replaced and because new pollutant generators would require BAAQMD permits, stationary air emissions would be expected to decrease. The Draft EA should support this statement by providing data for current and projected emissions from stationary sources. 11-6

3. (p. 95) The Summary of Mitigation Measures states that, even after mitigation, "significant impacts related to air quality would still exist with the increase in airfield operations." This significant impact is not made clear in the text of the Draft EA Environmental Impacts section, nor in the draft Finding of No Significant Impact (FONSI). The Final EA should clearly state all significant impacts. Moreover, the Final FONSI should reflect whether significant impacts are, in fact, disclosed within the Final EA. 11-7

WETLANDS AND WATER QUALITY COMMENTS

11-8

1. (p. 33, 44) The Draft EA reports that development projected under the Comprehensive Use Plan, including the bridge connection across Stevens Creek, could intrude upon and degrade or destroy wetland habitat areas. The Draft EA proposes that detailed investigation of potential impacts to on-site wetlands be conducted individually for specific projects. EPA recommends that the Final EA contain a current wetland delineation, along with mapping, that accurately characterizes the base in terms of wetlands resources. Such delineation is important because the Draft EA does not make clear the extent to which project build-out would directly or indirectly affect wetlands areas, or how much total wetlands area could be affected.

Wetlands are a scarce and valuable resource in California. As approximately 90 percent of such habitat has been lost in the state, every effort should be taken to ensure that existing wetlands are retained. Executive Order 11990, Section 1(a) requires NASA to take action to minimize the destruction, loss, and degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. NASA should include mitigation measures in the Final EA to ensure that future uses of Moffett Field will conform to preservation efforts for important biological resources, including wetlands.

In keeping with the national goal of "no net loss' of wetlands, the Final EA should consider alternatives that will preserve wetland resources. To comply with the Section 404(b)(1) of the Clean Water Act, the proposed action must meet all of the following criteria:

- There is no practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem (40 CFR 230.1(a)).

- The proposed project will not cause or contribute to significant degradation of waters of the United States, including wetlands (40 CFR 230.1(c)). Significant degradation includes loss of fish and wildlife habitat, including cumulative losses.

- The proposed project does not violate water quality standards, toxic effluent standards, or jeopardize the continued existence of federally listed species or their critical habitat (40 CFR 230.10(b)).

- All appropriate and practicable steps are taken to minimize adverse impacts on the aquatic ecosystem (i.e., mitigation) (40 CFR 320.10(d)). This includes incorporation of all appropriate and practicable compensation measures for avoidable losses to waters of the United States, including wetlands. 11-8 cont.

To characterize baseline conditions within the project area, the Final EA should include maps, text, and tables that feature areas occupied by wetlands, and aquatic systems. Direct, indirect and cumulative impacts to these resources should also be fully described in the Final EA. Furthermore, if the proposed realignment were to affect wetlands, a Section 404 permit may be required.

If wetlands are affected either directly or indirectly, the Final EA should contain a mitigation plan that assures no net loss of wetland functions, values, and acreage. Areas that may already qualify as wetland habitat are not generally considered by EPA to be suitable for use as mitigation areas. Although encouraged by EPA, enhancement of existing wetland and riparian habitat is not in itself sufficient mitigation to meet the goal of "no net loss."

2. (p. 34) Mitigation Measure PLANT-1 calls for site specific focused surveys and environmental review to occur in the Stevens Creek and wetlands areas of Moffett Field prior to construction activities in those locations. Based on the results of those surveys, "any adverse effects on such habitats and related species shall be mitigated through habitat replacement projects." EPA contends that focused surveys and environmental review of sensitive wetlands areas should occur as part of the Final EA, as explained above. Based on the results of those surveys, the Final EA should include provisions to protect wetlands, special status species habitat and similar sensitive areas from direct and indirect construction impacts. EPA does not consider "habitat replacement projects" to be adequate standard mitigation for the degradation and loss of wetlands habitat, which could constitute a significant impact. 11-9

3. (p. 64) The Draft EA states that new fuel farms are proposed to be developed in the golf course area. Figure 5 (General Habitat Locations) indicates that seasonal marsh, non-tidal intermittent streams, constructed ponds and tidal channels occur both on and near the golf course. The Final EA should describe the exact locations of the proposed fuel tanks in relation to those wetlands and sensitive areas, and should 11-10

discuss the potential effects that underground tank excavation, placement and operation (including leakage) could have on nearby wetlands and underground and surface water bodies. 11-10 cont.

PUBLIC HEALTH AND SAFETY COMMENTS

1. (p. 52) The Draft EA states that because Air Installations Compatible Use Zones (AICUZ) regulations will no longer apply to Moffett Field upon transfer to NASA, NASA will follow FAA commercial airport regulations as guidelines "as a matter of policy." This implies that NASA will not actually be bound to use either FAA or AICUZ safety guidelines. The Final EA should clarify this situation and, if necessary, include mitigation language that binds NASA to appropriate FAA or AICUZ Safety Guidelines. 11-11

2. (p. 53) The Draft EA states that the use of the small arms firing range is expected to continue under the Comprehensive Use Plan. The need for continued use of the firing range should be explained, and the proposed operation of the range briefly described in the Final EA. 11-12

BIOLOGICAL RESOURCES COMMENTS

1. (p. 41-42) Figure 6 (Burrowing Owl Habitat and Sitings) includes a base map of Moffett Field illustrating two types of areas: a shaded grey area illustrating "Burrowing Owl Habitat," and black dots indicating "Burrow or Burrowing Owl Sighting." The Figure should distinguish between burrowing owl burrows and burrowing owl sightings. This is especially important because the majority of "Burrow or Burrowing Owl Sightings" occur outside of the designated burrowing owl habitat. The location and number of owl burrows that have been found outside of the established habitat should be disclosed, as that information would have implications on what constitutes burrowing owl habitat on Moffett Field and would indicate how many established nesting sites might be disturbed under the CUP. The Final EA should include this information. 11-13

2. (p. 43) Mitigation Measure ANIMAL-1 calls for focused environmental analysis to be conducted to evaluate the site-specific status of sensitive animal species prior to development of construction projects outlined in the Comprehensive Use Plan. If such species or habitats are found, mitigation measures would include relocation or habitat restoration, pursuant to the Endangered Species Act. EPA recommends that biological resource surveys be conducted and included in the Final EA in order to fully disclose the potential future impacts to biological resources at Moffett Field. Project-specific site surveys will 11-14

not adequately assess cumulative impacts to wetlands, habitat and sensitive species on Moffett Field. In addition, EPA does not consider relocation and habit restoration to be adequate mitigation because specific impacts and proposed mitigation measures are not disclosed in detail in the Draft EA. The Final EA should include full disclosure of existing biological resources along with potential impacts and mitigation measures in order that the significance of potential impacts can be assessed. 11-14 cont.

3. In terms of plant and animal habitat, the Final EA should include any specific undertakings that could be accomplished under the proposed Realignment to enhance biodiversity within the boundaries and environs of Moffett Field. 11-15

PUBLIC SERVICES AND UTILITIES COMMENTS

1. (p. 32) The Draft EA states that "it is known that Palo Alto can meet the reclaimed water demands at Moffett Field . . ." The Final EA should cite evidence or provide a source for that statement. 11-16

2. (p. 60) The Final EA should include a brief discussion on the opportunities available for pollution prevention, energy conservation, and waste minimization as part of the Comprehensive Use Plan. It is the EPA's position that those objectives should be integrated into the analysis as part of the physical and economic aspects of the proposed action. 11-17

EPA encourages NASA to identify solid waste stream reduction measures that can be designed into future site development and operations. Such measures should include compliance with Executive Order 12873 and California Assembly Bill 939, that seek to incorporate source reduction, recycling and reuse elements into its operation.

3. (p. 60) EPA encourages the Navy to identify water conservation measures that could be employed by existing and future developments on the site (e.g., water-saving plumbing devices should be installed in the new facilities, drought-tolerant landscaping should be used, as applicable). 11-18

NEPA COMMENTS

1. According to 40 CFR 1508.7, "(c)umulative impacts can result from individually minor but collectively significant actions taking place over a period of time." The Final EA cumulative impacts analysis should include "the incremental impact of the action when added to other past, present and reasonably foreseeable future actions." 11-19

The Comprehensive Use Plan can be used to project on-site cumulative effects as opposed to the piece-meal assessment of project-specific and incremental effects proposed in the Draft EA. For example, when examined separately, studying the relatively small loss of wetlands that could occur with an individual project may not trigger any project-specific significant impacts, while the cumulative effect wetlands loss could be significant. Consequently, the Final EA should address on-site cumulative effects of the CUP for biological resources, wetlands, air quality and related issues. 11-20

2. NASA is required by 40 CFR 1502.14(e) and 1505.2(b) to identify an Environmentally Preferable Alternative in an EIS. EPA encourages NASA to focus on developing an environmentally Preferable Alternative that best balances environmental quality with Department of Defense objectives (although not required in an EA). Such an alternative should seek to protect site-specific natural resources, such as wetlands, and sensitive species habitat, and maintain regional environmental quality for such resources as air quality and water supply. The range of alternatives should be developed in cooperation with relevant local, state, and federal agencies (e.g., U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers, etc.). 11-21

In order that it might mitigate air quality impacts, the Environmentally Preferable Alternative could include limitations on flight times and schedules. For example, the Alternative could restrict the number of planes normally flown during peak nonattainment times and seasons, particularly during seasonal temperature inversions. Other provisions of the Alternative might include greater protection for wildlife resources, habitat, and wetlands areas on the site. For example, the bridge proposed over Stevens Creek could be eliminated or moved.

3. Mitigation is usually required to reduce or eliminate adverse environmental impacts. These measures would then provide the basis for specific commitments carried forward to the FONSI or Record of Decision (ROD). We believe the order of preference for mitigation should be: avoid, minimize, rectify, and compensate (Section 5.2). This guidance should be an integral part of the NASA planning process. 11-22

4. In keeping with the Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (EO 12898), the Final EA should describe the measures taken by NASA to: 1) fully analyze the environmental effects of the proposed Federal action on minority communities and low-income populations, and 2) present opportunities for affected communities to provide input into the NEPA process. The 11-23

intent and requirements of EO 12898 are clearly illustrated in the President's February 11, 1994 Memorandum for the Heads of all departments and Agencies, attached. 11-23 cont.

5. The Draft Finding of No Significant Impact (FONSI) is signed and dated, and appears to finalize the conclusion that no significant impacts would occur from the project. Such a predecisional action would be inconsistent with NEPA, which stipulates that a FONSI must be preceded by a Final EA. A draft FONSI may be issued prior to the Final EA, but the draft FONSI should be left unsigned and undated. The FONSI also does not acknowledge air quality impacts that are identified as significant after mitigation (Draft EA page 95). 11-24

LETTER 11: David J. Farrel, United States Environmental Protection Agency

11-1: Previous biological reports and publications document the location of wetlands and sensitive species habitat at Moffett Field. The wetlands have been formally delineated by the US Army Corps of Engineers. This information was extracted from the reports and is presented in Figure 5 of this Environmental Assessment. Development under Future Concept 1 of the Comprehensive Use Plan does not encroach into these sensitive habitat areas or into areas of jurisdiction wetlands covered by Section 404 of the Clean Water Act.

Mitigation Measure PLANT-1 and ANIMAL-1 provide for focused environmental analysis of any projects proposed in the vicinity of the wetlands. The Department of Fish and Game concurs that the level of new construction under Future Concept 1 will reduce the potential for impacts to biological resources. NASA intends to protect wetlands and sensitive species at Moffett Field, and is supported by the Department of Fish and Game.

11-2: The air quality section of this Environmental Assessment has been revised to fully address air quality issues related to operations under Future Concept 1.

11-3: Refer to Response 11-1.

11-4: The FONSI was circulated in Draft form. It is NASA's policy to sign Draft FONSIs prior to circulation.

11-5: The air quality section of this Environmental Assessment has been revised to fully address air quality issues related to operations under Future Concept 1. The air quality analysis discusses the compatibility of Future Concept 1 of the Comprehensive Use Plan with the 1991 Clean Air Plan, the State Implementation Plan, and conformity with the federal Environmental Protection Agency's "Conformity Rule".

Future Concept 1 of the Comprehensive Use Plan is not expected to substantially increase stationary sources for air emissions. All existing facilities are currently permitted and any proposed facilities will require permits from the Bay Area Air Quality Management District prior to their construction or

use. Additionally, it is expected that the Central Steam Plant in Building 10 will be replaced, thereby leading to a reduction in air emissions.

In addition, the actual transfer of Moffett Field from the Navy to NASA is exempt from the conformity requirements in the *Federal Register* [93.153(c)(xx)]. This section exempts transfers of real property, including land, facilities, and related personal property from a federal entity to another federal entity.

11-6: The level of detail requested by the commentor for an Environmental Assessment on a plan can not be provided until the replacement steam plant is actually designed. The plant was constructed prior to new State and federal requirements and, therefore, replacement by new equipment which meets standards for lower emissions will likely decrease stationary emissions.

11-7: Page 101 of this Environmental Assessment has been amended to address the commentor's concern. Significant air quality impacts are not expected from implementation of Future Concept 1 of the Comprehensive Use Plan. This text was included in the text of the Environmental Assessment inadvertently. With adoption and implementation of all mitigation measures listed in Chapter VI, no significant impacts are anticipated.

11-8: Please refer to Response 11-1. Page 36 of this Environmental Assessment has been revised to include a discussion of the project's conformity with Section 404(b)(1) of the Clean Water Act. The level of detail suggested by the commentor is not feasible in a program level Environmental Assessment. A project level environmental analysis will be required for the bridge. The Comprehensive Use Plan meets the requirements to avoid impacts to wetlands. The only potential construction proposed over a wetland is the bridge, however, it is only conceptual in nature. Mitigation measures have been required to fully offset any impacts from the bridge should it be implemented.

11-9: Mitigation Measures PLANT-1 and ANIMAL-1 have been amended to reflect the commentor's concerns. This Environmental Assessment evaluates Future Concept 1 of the Comprehensive Use Plan. The approval of Future Concept 1 of the Comprehensive Use Plan is a "broad federal action". NEPA allows for the preparation of a programmatic analysis to facilitate

and expedite the preparation of subsequent project-specific NEPA documents. The project-level environmental analysis for the bridge itself will respond to project specific impacts. It is appropriate to include project-specific mitigation measures and requirements for additional environmental analysis when specific projects are proposed. It is not necessary that these site-specific studies occur under this Environmental Assessment.

11-10: Mitigation Measure RISK-2 requires site-specific environmental analysis prior to the development of a new fuel farm. As described above, the action analyzed in this Environmental Assessment is a conceptual use plan which is defined as a "broad federal action" and, therefore, no project specific analyses are required as part of this Environmental Assessment.

11-11: Comment noted. Page 56 of this Environmental Assessment has been expanded to reflect the commentor's concerns. NASA is actively pursuing amendments to the Federal Aviation Regulations to ensure Moffett Field is appropriately governed.

11-12: Comment noted. Page 57 of this Environmental Assessment has been edited to reflect the commentor's concerns.

11-13: Comment noted. Page 41 of this Environmental Assessment has been edited to reflect the commentor's concerns. The information is a summary of technical information on the burrowing owl and can be found in the *Quarterly Updates - Study of the Ecology of the Burrowing Owl at Moffett NAS* prepared for the Navy by Dr. Lynne Trullio. This report is hereby incorporated into this Environmental Assessment by reference. Forty-nine owls were found between June 16 and September 15, 1993. Information on the specific dates of sightings and the current status of each burrow are provided in the quarterly reports.

11-14: Please refer to Response 11-9. In addition, the US Fish and Wildlife Service is currently conducting a year-long detailed endangered species survey.

11-15: Please refer to Responses 11-1 and 11-9.

11-16: William Miks, Plant Manger for Palo Alto; Marvin Rose, City of Sunnyvale; and Richard Brown, Chief of Facility Planning at

Ames, have gone on record to state that both the City of Palo Alto and the City of Sunnyvale have more than adequate reclaimed water to meet the needs of future activities at Moffett Field. These letters are on file at Moffett Field.

11-17: Comment noted. Though NASA supports opportunities for pollution prevention, energy conservation, recycling and waste minimization, discussion of these opportunities is not necessary in this Environmental Assessment and is more appropriately found in the Environmental Resource Document. NASA is in the process of implementing executive orders related to these concerns.

11-18: Comment noted. Though NASA supports water conservation measures, discussion of these opportunities is not necessary in this Environmental Assessment.

11-19: Comment noted. All impact assessments in this Environmental Assessment take into consideration the cumulative impacts of growth under the proposed Future Concept 1 of the Comprehensive Plan Update.

11-20: All impact assessments in the Environmental Assessment take into consideration the cumulative impacts of growth under the proposed Future Concept 1 of the Comprehensive Use Plan.

11-21: This is an Environmental Assessment under NEPA, not an EIS as the commentor suggests.

The Comprehensive Use Plan was developed using a constraints and opportunities analysis as part of the planning process. Thus development is proposed in areas which specifically are not sensitive resource areas. Furthermore, the Comprehensive Use Plan and its associated Environmental Assessment seek to protect site-specific natural resources and sensitive species habitat through the adoption of mitigation measures which will require site-specific analysis and appropriate mitigation prior to specific project development. It would not be feasible to remove the proposed Stevens Creek Bridge since it is the only way to gain access from the north side of the site must cross Stevens Creek.

11-22: As stated above, the planning process involved the methodology recommended by EPA: avoid, minimize and compensate.

Mitigation measures are provided throughout this Environmental Assessment. They will be adopted by NASA as part of the FONSI for the adoption of Future Concept 1 of the Comprehensive Use Plan. These measures are summarized in Chapter VI.

11-23: The proposed action is not expected to affect the population, including minority or low-income communities, as described on page 58 of this Environmental Assessment. The proposed action will only cause an increase of 610 employees, bringing total Moffett Field employment to 10,610 persons. Implementation of Future Concept 1 will not have any impacts on low-income or minority populations.

11-24: Please refer to Responses 11-4 and 11-7.

12

April 6, 1994

Sandra Olliges
NASA Ames Research Center
M/S 218-1
Moffett Field, CA 94035-1000

Re: Environmental Assessment, Moffett Field Comprehensive Use Plan

Dear Ms. Olliges,

Thank you for conducting the public meeting on the Environmental Assessment ~~portion~~ of the Moffett Field Comprehensive Use Plan. My commendations on remaining articulate and poised in front of an occasionally surly audience

12-1

I understand that the EA is a program-level assessment of NASA's taking over administration of the air field. Still, I'm disappointed that the EA, like the Comprehensive Use Plan itself, doesn't consider the alternative of abandoning military operations, cleaning up the accumulated toxics, and even restoring valuable wetlands.

Following up one line of discussion on April 18, I'd like to offer my opinion that most people in the area do not know about the current plan. In 1991 we heard that the base was closing. A year later we heard that NASA was taking over the air field, but we failed to draw the obvious conclusion, that is, that the base wasn't closing. I've been especially interested in Moffett for years, and even I didn't realize until I saw the CUP that this was a base transition and not a base closing. I'm not saying that's necessarily NASA's fault; I'm just saying that the public and the media haven't been following the story at Moffett.

Coincidentally, a friend of mine whose company is looking for new office space told me last week that Sun Microsystems is in exclusive bargaining for the farmer's field site by Shoreline. I hope that means that the bridge at Stevens Creek won't be necessary. I would welcome a space museum, but I would encourage Mountain View and NASA to find a way to place it on the base itself.

Thank you for your attention. I look forward to hearing what kind of public comment you've received on both the EA and the CUP.

Sincerely,

Susan E. Luttner

Susan E. Luttner

4035 Orme Street
Palo Alto, CA 94306

LETTER 12: Susan E. Luttner

12-1: Please refer to Responses 5-1 and 5-12.

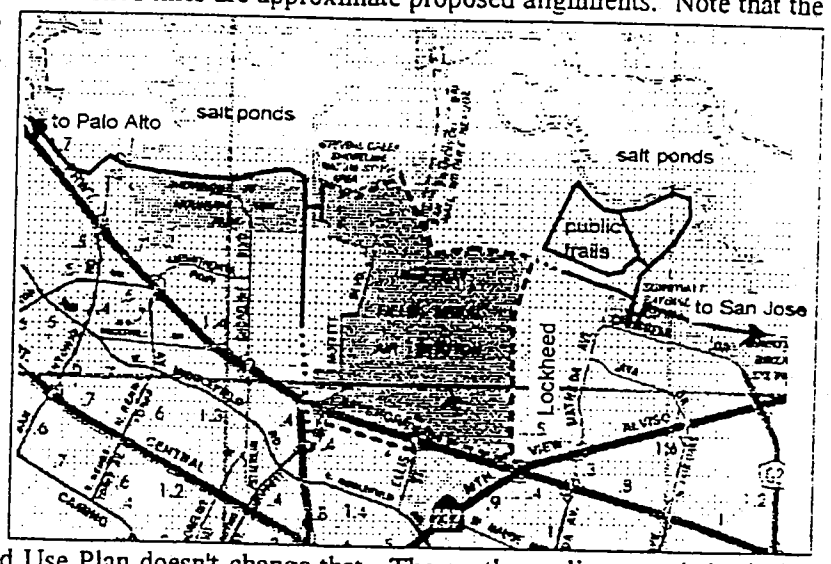
1218 Willow St.
San Jose, CA 95125-4337
April 17, 1994

Sandy Olliges
Environmental Program Manager
NASA Ames Research Center
Mail Stop 218-1
Moffett Field, CA 94035-1000

re: Draft Environmental Assessment, Moffett Field Comprehensive Use Plan: letter DQH:218-1

Dear Environmental Program Manager,

I am writing in regards to the Bay Trail, discussed on pp. 52-54 and shown in Fig. 9. The accompanying map is to put it in context. The solid lines are existing trails, both at Shoreline Park/Stevens Creek Trail in Mt. View, and at Lockheed/Baylands Park in Sunnyvale. The dotted lines are trails that are planned or now being built, and the dashed lines are approximate proposed alignments. Note that the southern route is a considerable detour away from the bay, replacing marsh and bayland settings with freeway frontage roads. In addition to being several miles longer, the southern alignment is also more hazardous: cyclists have difficulty hearing approaching cars over the noise of the adjacent freeway, and the planned extension of the light rail along there will create difficult bike/rail crossings. 13-1



In a sense, the Environmental Assessment's Finding of Negative Impact is correct: there is no Bay Trail now, and the proposed Use Plan doesn't change that. The southern alignment is basically the null option: the trail is to follow the path that Mt. View is constructing, plus existing frontage roads and a path planned by Lockheed. However, before, the Navy was working with the South Bay Ad Hoc Cmte. to try to implement a northern alignment. For example, they were going to seek an exemption from the ordinance exclusionary zone, just as the existing golf course now has. Lockheed is being required by the Air Quality Management District to reduce the fraction of single-passenger commutes, and a northern alignment would provide a safe alternative (bike) commute route from Palo Alto and Mt. View into Lockheed and the adjacent industrial park.

I regret that a scheduling conflict will prevent me from attending the public forum on the 18th. I hope NASA will continue working with the South Bay Ad Hoc Cmte. towards implementing a northern Bay Trail alignment.

Thank you,

Lawrence Lowell Ames.

cc: Jill Keimach, ABAG; Julie Bondurant, S.C.Co. Parks Dept.; Will Carlstrom, Lockheed

LETTER 13: Lawrence Lowell Ames

13-1: Please refer to Response 5-8 and 10-2.

REQUEST FOR INFORMATION/COMMENTS SUBMITTAL FORM FOR THE MOFFETT FIELD COMPREHENSIVE USE PLAN NASA AMES RESEARCH CENTER, MOFFETT FIELD, CA

14

Name Stella L. Haisfield Date April 25, 1994

Mailing Address 245 Sierra Vista Avenue

City/Zip Mt. View, 94043 Phone Number (415) 964-5012
(in the event that inquiry clarification is required by Ames staff)

Affiliated Organization None

In reference to Ames Project Documentation: Draft Environmental Assessment

Please specify the information being requested and/or comments being submitted.
Attach a separate sheet if necessary.

I note from your environmental assessment draft, dated April 7, 1994, that noise mitigation measures are not proposed for the outlying "touch & go" areas, since the report states that the projected increase is not more than 3 dBs. I disagree that 3 dB increase in noise levels (which is 4.6%, using the base level of 65 dBs) is insignificant nor that the projected increase in air operations below 3000 feet of 56% (from 38,546 to 59,973 operations)is insignificant. Therefore,

14-1

(continued)

Received Date (Ames) _____ Received By _____

Please note that an information repository has been established at:

CITY OF SUNNYVALE LIBRARY
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665 West Olive Avenue
Sunnyvale, Ca 94086
(408) 730-7300

SUBMIT FORM TO: Sandra Olliges
NASA Ames Research Center
Safety, Health, and Environmental Services Office
M/S 218-1
Moffett Field, CA 94035-1000

Thank you for your submittal.

Comments are due no later than May 10,1994

I believe that noise mitigation measures should be adopted for the "touch & go" areas.

The environmental assessment draft lacks specificity. For example, table 10, p. 89, lists the number and type of planes expected to fly daily. Elsewhere (Fig. 14,15,16) the maps show that P-3's, C-130's and B-200's, etc. will operate in the "touch & go" areas; nevertheless, there is no mention of B-200's, etc. in table 10. Table 10 would be more helpful if it contained information about the function of the various planes and their noise levels. 14-2

I live in Mountain View in the area bounded by Central Freeway, Rengsdorff Ave., Montecito Ave. and Shoreline Drive. It is south of Middlefield Rd. The area is residential. It slso contains a convalescent hospital, Julia Convalescent Hospital, located on Montecito and Sierra Vista, and a resident home, Redwood Villa, on Montecito near Sierra Vista. I have lived in the same house on Sierra Vista since the beginning of 1984 and do not work. Therefore I feel qualified to comment on noise levels. Until 1991 when it was announced that the Navy was leaving Moffett Field, noise levels were tolerable. The only exception was on the rare occasions when the Navy had an air show. After 1991, when it was announced that the Navy was leaving Moffett Field, air traffic, mostly P-3's, increased to varying levels, both tolerable and disturbing, depending on the factors listed below. 14-3

On the basis of my experience, I make the following suggestions as mitigating factors for noise (also air) pollution:

1. ALTITUDE. The chief factor in determining noise pollution values in the height at which planes fly. Note that the noise pollution is obvious both <u>inside</u> and <u>outside</u> the residences. There is no respite from it. The environmental assessment draft makes no mention of altitude controls for the "touch & go" areas, yet it is vitally important.On occasion at present some of the planes barely skim the trees.

2. VARIATION OF PLANE PATTERNS IN A SPECIFIC AREA. Planes following each other in the same path in an area cause the most pollution and create an intolerable situation. A flight pattern should be created so that planes traverse different streets in a specific neighborhood. In effect, this dilutes the pollution.

3. TOTAL NUMBER OF PLANES IN A TIME INTERVAL. This is related to 2. Variation of plane Patterns, above.

The above measures will take careful planning, but this is preferable to destruction of a neighborhood, even a city, as a desirable place to live. NASA, as overseer, should assume this responsibility.

Steve L Hanfield

LETTER 14: Stella L. Haisfield

14-1: Please refer to Response 3-3.

14-2: More specific information has been incorporated into this Environmental Assessment in Appendix A.

14-3: The impacts of increased air traffic allowed under Future Concept 1 of the Comprehensive Use Plan have been fully analyzed and mitigated for under this Environmental Assessment. With the implementation of applicable mitigation measures, noise is not expected to substantially increase over 1993 levels. As a point of reference, it should be noted that air traffic allowed under Future Concept 1 of the Comprehensive Use Plan will be less than operations taking place in 1991, as described in this Environmental Assessment.

1348 Isabelle Ave.
Mtn. View, CA 94040

May 1, 1994

Sandra Olliges
NASA Ames Research Center
Safety, Health, and Environmental Services Office
MS/218-1
Moffett Field, CA 94035-1000

Dear Ms. Olliges,

We appreciate the opportunity to comment on the Draft Environmental Assessment for the Moffett Field Comprehensive Use Plan.

The DEA correctly identifies the purpose, under NEPA, of preparing an EA, which is to assess the need for an EIS. However, it is our opinion that absence of specific information on what actions may be undertaken under the Comprehensive Use Plan, and therefore the lack of information on potential impacts on the quality of the human environment, indicate that the DEA does not satisfy NEPA requirements. Our specific concerns follow:

1. Virtually no information is given on the present state of the facility by which cumulative impacts could be assessed. The statement (p. 2) that "extensive biological, hazardous materials, and archeological documentation was available from previous studies of the site" does not constitute inclusion by reference, because the results are not even minimally described in the EA, no reference is made to their significance with regard to any action that might be undertaken under the Comprehensive Use Plan, and their accuracy is not verified (40 CFR Chap. V §1506.5). 15-1

2. 2nd Project Objective (p. 5). Because an EA is written to assess the need for an EIS, it cannot dodge the question of whether proposed developments under the Comprehensive Use Plan have the potential to significantly impact the quality of the human environment. 15-2

3. This same objection applies to the statement on p. 6 that "...NASA is preparing the Comprehensive Use Plan which provides information on proposed future uses..." (emphasis added). If the Plan isn't finished, then approval of this EA is like signing a blank check. A "comprehensive" plan is supposed to cover all bases. The same paragraph states that "The proposed projects and new or altered uses by NASA and the Resident Agencies are conceptual in nature." Therefore, the potential impacts are "conceptual in nature" but an EA should provide specific assessment of specific proposed actions in order to determine the need for an EIS. The approach of an EA based on a concept, postponing environmental assessments of each project in the concept, probably violates NEPA. 15-3

4. There is no clear statement of the proposed action assessed by the EA until the bottom of p. 6, where it is stated that developments under the Future Concept 1 are the proposed action. 15-4

5. Inasmuch as the DEA indicates that future projects will have to be assessed under NEPA, neither concept 1 or concept 2 differ significantly from the No Action Alternative (p. 12). According to the DEA, No Action would result in development on a project-by-project basis. The conceptual plans do not actually necessitate that any of the proposed projects be built, some may not be supportable after environmental assessment, and others may be proposed that are not included in the conceptual plan; this does not differ from No Action. It might reasonably be concluded that the assessment of the impact of the No Action Alternative on jobs is not objective. 15-5

6. Chapter III, Existing Environmental Conditions, is completely inadequate and lacking in specifics, and therefore the checklist presented in Chapt. IV has no foundation. 15-6

7. Chapter V, beginning with item (a) under "Earth" appears to confuse the Comprehensive Use Plan with Future Concept 1, which is the proposed action. Chapter V does not provide specific information either on the developments that actually are proposed under the Comprehensive Use Plan, or on potential impacts of the unspecified developments to the quality of the human environment. Instead, Chapt. V is filled with unsubstantiated claims; for example, (in approximate order of their appearance): "**no substantial impacts are anticipated**", "**In general**, development will not result in...", "**very little**" change will be effected, "**minor**" changes will be made, "**some temporary**" effects will occur, "**no major changes...are expected**", "**is not expected to substantially change**", "...development **is generally** outside of the 100-year flood line, "...new development **should not occur** within flood plains **when other sites are feasible**", "...the amount of impervious surfaces **is not expected** to increase...to a point that **will substantially affect...**", "**It is not expected** that any impacts...will occur", "**No substantial changes will result...**", "**It is known that...**", "**...no impacts are expected**", " these plant species **are likely** to be similar to...", "**It is expected that...**", "**No impacts are anticipated.**", " **no impacts are expected...**", "**no substantial impacts are expected...**", "**No such impacts are anticipated...**", "**No impacts are likely...**", "Aircraft noise is **not expected to impact...**", " no **substantial** increases **are expected..**", "with **appropriate implementation of mitigation measures**, ...[the plan is] **not expected to...**, and many, many more phrases of equal non-specificity. The "mitigations" proposed in Chapt. V relate to very general development concerns, but not to any specific proposed development. Thus, nothing in this chapter relates specifically to "the proposed action." In fact, the DEA does not convey in any coherent or straightforward way what actual developments are proposed. 15-7 15-8 15-9

There are, however, coy indications of what Future Concept 1 has in store for residents of the surrounding area. On p. 62, for example, it is remarked that "the only impact to the Mountain View system could be the construction of a new wind tunnel, which would require additional environmental review." On pages 81-82, however, there are much stronger indications of an intention to build new wind tunnel facilities, with highly permissive mitigations that "require" only that impacts will be reduced to a less-than-significant level, **to the extent practible**. Moreover, assessment of impacts will be made for "surrounding development," which is not specified. Decibel ratings are not the only important factor in determining impacts of wind tunnel noise—the quality of the sound and the time it is generated (in late evening, early morning off-peak power use times) are important. We will attest that this noise is disturbing and intrusive at distant points from the existing wind tunnel and also registering complaints is a useless exercise. 15-10

We believe that the DEA should be withdrawn because it does not comply with NEPA's requirement to provide specific description of proposed actions and their potential impacts. The actual course of development that would take place under Alternatives 1 and 2 do not differ in substance from those under the No Action Alternative. Therefore, the document is irrelevant. The citizens of Mtn. View should be told what NASA's actual plans are before piecemeal implementation is undertaken, and we would like to see a straightforward and complete statement of the existing state of the site environment, to allow full assessment of cumulative impacts of any proposed development or series of developments. 15-11

Sincerely,

Jane E. Nielson

Dr. Jane E. Nielson

H.G. Wilshire

Dr. H.G. Wilshire

LETTER 15: Dr. Jane E. Nielson & Dr. H. G. Wilshire

15-1: Comment noted. Page 3 of this Environmental Assessment has been revised to address the commentor's concern. The information found in these documents has been summarized throughout the Environmental Assessment. Footnotes and references have been included throughout the document as appropriate.

15-2: Comment noted. This Environmental Assessment assesses whether Future Concept 1 of the Comprehensive Use Plan has the potential to significantly impact the quality of the human environment.

15-3: This Environmental Assessment evaluates Future Concept 1 of the Comprehensive Use Plan. The Final Environmental Assessment and Finding of No Significant Impact will not be approved prior to approval of Future Concept 1 of the Comprehensive Use Plan. NASA's adoption of these documents will occur simultaneously. According to 40 CFR 1501.3, "Agencies may prepare an Environmental Assessment on any action at any time in order to assist agency planning and decision making."

The approval of Future Concept 1 of the Comprehensive Use Plan is a "broad federal action". NEPA allows for the preparation of a programmatic analysis to facilitate and expedite the preparation of subsequent project-specific NEPA documents. It is appropriate to include project-specific mitigation measures and requirements for additional environmental analysis when specific projects are proposed and designed. At that stage, project specific impacts can be determined. NEPA does not require that these site-specific studies occur under a programmatic-level Environmental Assessment.

15-4: Comment noted. Page 1 of this Environmental Assessment has been amended to address the commentor's concerns.

15-5: Please refer to Response 5-1.

15-6: Chapter III is provided as an introductory chapter. The checklist provided in Chapter IV is provided as a summary of Chapter V: Environmental Impact of Proposed Action. Specific information

required for impact analyses is provided in Chapter V, in addition to documents incorporated into the Environmental Assessment by reference.

15-7: Comment noted. The references to the *Comprehensive Use Plan* throughout the document have been revised to correctly read *Future Concept 1 of the Comprehensive Use Plan.*

15-8: The approval of Future Concept 1 of the Comprehensive Use Plan is a "broad federal action". NEPA allows for the preparation of a programmatic-level analysis to analyze implementation of a plan. Furthermore, the process facilitates and expedites the preparation of subsequent project-specific NEPA documents. When site-specific proposals are made, they will be analyzed under NEPA. Locations of proposed future development are provided in Figure 2 of this Environmental Assessment.

15-9: An Environmental Assessment is a concise public document that a lead agency prepares to determine whether a proposal would result in significant effects on the human environment. Whether a proposed action "significantly" affects or impacts the quality of the human environment is determined by considering the context in which it will occur and the intensity of the action. The conclusions in this Environmental Assessment are based on the investigations of NASA, Boeing, and Department of Defense staff; planning consultants; and environmental specialists. A registered transportation engineer, noise specialists and air quality and emissions experts were also involved in the environmental analyses and determinations.

15-10: Comment noted. Revisions have been made to this Environmental Assessment to address the commentor's concerns. As noted by the commentor, any new or altered wind tunnel facilities will be reviewed under NEPA and mitigation measures will be required as appropriate.

15-11: Please refer to Response 15-8.

REQUEST FOR INFORMATION/COMMENTS SUBMITTAL FORM FOR THE MOFFETT FIELD COMPREHENSIVE USE PLAN NASA AMES RESEARCH CENTER, MOFFETT FIELD, CA

Name Jim Stauffer Date 5 May 1994

Mailing Address 912 Rich Ave # 4

City/Zip Mnt View 94040 Phone Number (408) 365-4868(w) 415/966-1312(H)
(in the event that inquiry clarification is required by Ames staff)

Affiliated Organization Green Party

In reference to Ames Project Documentation: Draft Environmental Assessment

Please specify the information being requested and/or comments being submitted.
Attach a separate sheet if necessary.

See attached

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SUBMIT FORM TO: Sandra Olliges
NASA Ames Research Center
Safety, Health, and Environmental Services Office
M/S 218-1
Moffett Field, CA 94035-1000

Thank you for your submittal.

Comments are due no later than May 10, 1994

I have a concern about public information and involvement in regards to the CUP and EA. I do not believe the citizens of Mountain View and Sunnyvale have been appropriately apprised of NASA's plans for Moffett Field. I would surmise most people were assuming activity at Moffett would decrease with the Navy's departure, which is not the case. 16-1

Placing a public notice one time in one newspaper is not adequate. A more serious effort could be made with public service announcements from radio and TV stations, and notices placed in the local town papers. 16-2

Additionally, the FONSI conclusion of the EA is somewhat misleading if taken out of context by a casual reading. In that each proposed project will require its own detailed study, it is premature to conclude that no significant impact will result from these projects. It is conceivable that an EIS may eventually be required, or that the proposed mitigation efforts could prove to be unfeasible or inadequate. 16-3

I strongly believe that an official (i.e. recorded) public meeting should be held when the final version of the EA is issued. The plans for Moffett may be virtually unalterable at this point, but it is important to have an official record of public reaction to these plans. This could also benefit NASA by precluding future public complaints as the development progresses. 16-4

Jim Stauffer

LETTER 16: Jim Stauffer

16-1: Please refer to Response 5-12. Activity at Moffett Field will decrease with the Navy's departure. In 1991, employment at Moffett Field totaled approximately 13,000. Future Concept 1 of the Comprehensive Use Plan proposes a maximum of 10,610 employees with NASA's acquisition.

16-2: Please refer to Response 5-12.

16-3: Please refer to Response 15-3. It is conceivable that an EIS may be required for site specific projects proposed at Moffett Field. In no way does this Environmental Assessment preclude any additional environmental analysis at Moffett Field for specific development projects.

16-4. Please refer to Response 5-11.

Peter Drekmeier
831 Sutter Avenue
Palo Alto, CA 94303

May 9, 1994

Ms. Sandy Olliges, MS 218-1
NASA Ames Research Center
Moffett Field, CA 94035-1000

Dear Ms. Olliges:

Thank you for the opportunity to comment on the NASA Ames Research Center's Draft Environmental Assessment (DEA) and Draft Comprehensive Use Plan (CUP). These documents are intended to describe the potential for environmental impact of NASA's stewardship of the naval air station following the Navy's departure. Sadly, this has not been accomplished.

An accompanying document, which predates the DEA, claims that the proposed action will not have a significant effect on the environment (a Finding of No Significant Impact or FONSI). It is not clear if it is a Draft FONSI or a Final FONSI as it is signed and dated by the Ames director and another NASA official. It appears improper to issue a final finding based on an unreleased draft assessment.

The DEA and CUP identify two future concepts and select one of them as a preferred option. The DEA claims that adoption of the preferred option will have no significant impact on the environment. The accompanying declaration also claims that all of this has been done "pursuant" to the National Environmental Policy Act (NEPA) and other federal regulations that require federal agencies to assess the environmental impact of their actions.

The action described in the CUP and assessed in the DEA is improperly defined. 17-1

The DEA says that the impact of actions in the housing and "related community support" areas are not going to be assessed. 17-2

The DEA says that "the impacts of the closure or transfer of Moffett Field" will not be analyzed because these impacts were analyzed in the Navy's 1990 Draft Environmental Impact Statement (DEIS). The Navy never responded to public comments on their DEIS and they never published a Final EIS. The Navy's DEIS considered only the impact of their departure and stated that there were no significant adverse environmental impacts. 17-3

The question that has not been answered is:

How is Moffett Field going to be re-used and what will be the environmental impact? 17-4

Since the documents do not answer this question there is no basis to claim that the impact is not significant. NASA has not demonstrated that there is no significant impact and they have not properly defined the action that NEPA requires them to assess. Decisions by federal agencies are subject to judicial review.

My recommendations are:

- Withdraw the DEA and the FONSI
- Solicit public input for reuse of the Moffett Field Naval Air Station
- Develop alternatives that consider benefits to the surrounding communities and/or reuse by non military residents
- Consider the No Action Alternative as required by NEPA (NASA would continue to operate the Ames Research Center as they have in the past with no increased responsibilities)

- Define precisely the actions to be assessed
- Assess the environmental impacts (including cumulative impacts) of these actions, and
- Publish a second draft (or a draft EIS) and reopen the comment period

I believe it is critical that the action to be assessed include the reuse of all Navy facilities (including housing and community support). (The USEPA claims that NASA said they would assess the impact of reuse.) NASA's alternatives appear to indicate that the scoping process was faulty or narrowly defined: additional reuse options should be considered. The alternatives considered by NASA appear to have been developed without public input and don't consider community needs. NEPA requires consideration of all reasonable alternatives. 17-5 17-6

I would like to mention a few other discrepancies in the documents:

NEPA requires consideration of a No Action Alternative. The DEA identifies a No Action Alternative but dismisses it without analysis or justification. The No Action Alternative is to leave the Navy property vacant. An Environmental Assessment must analyze and explain why the No Action Alternative was rejected. 17-7

The City of Mountain View recently published a Draft Environmental Impact Report (DEIR) for their North Bayshore development plan. That area -- less than one-tenth the size of Moffett Field -- is adjacent to the NASA property and very similar to it as far as potential environmental impact is concerned. Mountain View's DEIR identified several significant environmental impacts that could not be mitigated. They include traffic congestion, air pollution and worsening of the housing shortage. It seems implausible that there are significant environmental impacts that cannot be mitigated in the North Bayshore development area but none for the NASA-Moffett project on the other side of Stevens Creek. 17-8

The DEA claims that at least 6,800 jobs will eventually be lost due to the removal of the Navy from Moffett Field and it references a California Finance Commission document for corroboration. The California Finance Commission figure is 3,992. The Commission added that more than 20 percent of the jobs lost in Northern California would be compensated for by Offsetting Base Gains. Inaccurate representations of this type do not enhance NASA's credibility. The state Commission praised others for vigorously developing programs to address defense conversion and involve the communities in the process. The federal Base Closure and Realignment Commission stated, "The successful implementation of any base-reuse strategy hinges upon harnessing the energy and creativity present in a community." 17-9 17-10

NASA's fails to justify many of their decisions with respect to reuse and claims that they were required to adopt them by the Base Closure Commission. The Commission may have exceeded its authority and exhibited very poor judgment when they recommended relocating reserve aviation assets from Alameda to a Moffett Field after they recommended that Moffett Field Naval Air Station be closed because of severe "air space encroachment." It appears that NASA failed to consider relocation of their aircraft operations to the Navy's Crows Alternate Landing Field or to NASA's Dryden Flight Research Facility. 17-11

Other concerns relating to NASA's inability to provide stewardship:

Environmental and Energy Audit: - In 1991 the U.S. General Accounting Office reported that NASA was deficient in implementation of pollution prevention, abatement and control policy. The GAO recommended that NASA establish an environmental audit program to evaluate regulatory compliance. The U.S. Environmental Protection Agency has also recommended that federal agencies prepare environmental audits to identify potential problems. The NASA Administrator has declared that you can't manage what you can't measure. When will NASA publish an environmental audit? 17-12

Solid Waste: - The DEA claims "the recent implementation of a monthly recycling program," (DEA, p. 63). There does not appear to be any evidence of this. California municipalities must to reduce solid waste 50 percent by 2000. I would like to know if NASA and new Moffett tenants will be able to reduce solid waste by a significant amount. Can you give quantities of solid waste generated by NASA and the Navy for the past five years and estimate the quantities of solid waste that will be generated by NASA and resident agencies during the next five years? | 17-13

Hazardous Waste: - There are similar federal requirements for reduction of hazardous waste. Can you give quantities of hazardous waste generated by NASA and the Navy for the past five years and estimate the quantities of hazardous waste that will be generated by NASA and resident agencies during the next five years? | 17-14

Energy Consumption: - Federal Agencies are required to reduce energy consumption 30 percent by 2005 and increase energy efficiency. (Some of NASA's energy intensive facilities are exempted from the first requirement but not from the second.) Is NASA pursuing performance contracting to upgrade its facilities and reduce energy consumption? Is NASA negotiating with PG&E to obtain rebates for installing energy efficient equipment? Can you give the amount of energy consumed by NASA and the Navy for the past five years and estimate the quantities of energy that will be consumed by NASA and resident agencies during the next five years? | 17-15

Water Consumption: - Federal Agencies have been advised to reduce water consumption. Can you give the amount of water consumed by NASA and the Navy for the past five years and estimate the quantities of water that will be consumed by NASA and resident agencies during the next five years? NASA is attempting to get federal funds to build new wind tunnels. Existing wind tunnels are NASA's major consumers of potable water. Will NASA be able to reduce water consumption if new wind tunnels are built? | 17-16

Air Emissions: - Federal Agencies are required to Significantly reduce harmful air emissions. Can you give the quantities of air pollutants emitted by NASA and the Navy for the past five years and estimate the quantities of air pollutants that will be emitted by NASA and resident agencies during the next five years? | 17-17

Pesticide Use: - NASA and the Navy regularly apply pesticides around buildings and landscaped areas. Can you give the quantities of pesticides and herbicides used by NASA and the Navy for the past five years and estimate the quantities that will be used by NASA and resident agencies during the next five years? Will NASA attempt to eliminate the use of pesticides and herbicides? | 17-18

Air Quality: - The City of Mountain View in its North Bayshore Development DEIR acknowledges that development will have a significant, adverse environmental impact on air quality that cannot be mitigated. NASA claims that 610 additional employees will not have a significant impact on air quality. Why does consider the City of Mountain View disagree with NASA on the impact of development on air quality? Is it because NASA fails to properly assess cumulative impact? | 17-19

Traffic: - The City of Mountain View in its North Bayshore Development DEIR acknowledges that a one percent increase in traffic on US101 and SR85 will have a significant, adverse environmental impact that cannot be mitigated. NASA claims that 610 additional employees (6 percent) will not have a significant impact. | 17-20
Why is NASA proposing to add more parking? It encourages people to drive to work and costs tax dollars when we should be discouraging automobile commuters. | 17-21
Will NASA include its BAAQMD-required trip reduction plan and measures of its effectiveness in its EA? Will NASA publish a list of employers (both government and contract) with number of employees for each and provide details of their trip reduction plans? | 17-22
Can you give the Average Vehicle Ridership (riders per vehicle) for current and recent years? NASA recently closed the gate just south of the 40 x 80 wind tunnel and opened a gate just north of the 80 x 120 extension. Why was | 17-23

the environmental impact of these actions not assessed publicly? Why is NASA not publishing notices of environmental actions in the Federal Register? 17-24

Housing: - The Association of Bay Area Governments (ABAG) claims that the housing shortage is one of the major problems in Santa Clara County. The City of Mountain View in its North Bayshore Development DEIR acknowledges that any development that creates new jobs will have a significant, cumulative environmental impact that cannot be mitigated. (An increase in housing demand can lead to increased local and regional traffic congestion and increased air pollutant emissions.) NASA's DEA seems to have neglected cumulative impact entirely. NASA acknowledges a "minor need for additional housing" but does not present any evidence that existing base housing can accommodate the needs of new resident agencies. Some Navy housing has already been converted to offices by NASA. 17-25

Wetlands and Recreation: - The DEA does not state how wetlands on the NASA property will be protected. Why does NASA have no master plan? It would be helpful if NASA would prepare and publish a master plan describing how the land under their stewardship will be protected and the various types of development that will be permitted. The DEA states that explosives on the site are a barrier to development of a recreational trail along the Bay. Will the Navy be leaving their explosives behind? If the new resident agencies will be bringing explosives with them (not desirable), why can't we find a way to store them that will not interfere with the Bay Trail? The Navy has acknowledged that there are major explosives safety problem areas covered by waivers from the Chief of Naval Operations releasing the Commanding Officer of legal responsibility. Is the NASA Administrator authorized to grant similar waivers? 17-26

Regional Planning: - In their DEIR the City of Mountain View mentioned extending Charleston Road and Crittenden Lane across Stevens Creek to link up with a 4-lane extension of Moffett Boulevard. NASA's DEA mentions a bridge over Stevens Creek. (At the public forum on April 18 it was stated that this would provide access to visitors to an Air and Space Museum on Mountain View property.) The use of deadly force is presently authorized at Moffett Field. Will policy this be continued? Obviously this is absurd. If it is necessary to use deadly force, then you must discourage visitation or provide an adequate escort service. 17-27

Historic Preservation: - NASA acknowledges the necessity to protect buildings eligible for listing on the National Register and to protect archaeological resources. However, their past actions make this a cause for concern. In 1978, when NASA last prepared an Environmental Impact Statement for Ames, the Department of Interior instructed them that excavation should be monitored by a competent archaeologist. I have seen no evidence that NASA has followed this advice. NASA recently demolished a wind tunnel (12 Foot PWT) that may have been eligible for National Register listing. When asked why an environmental assessment was not available, a NASA deputy director said that it was not required for reconstruction. This demonstrates a lack of understanding of NEPA requirements since there is no exemption for reconstruction; it is also a mystery as to how demolition and new construction can be classified as reconstruction. 17-28

Airfield Safety: - Numerous aviation safety criteria waivers have been granted to the Navy for the operation of the airfield. The hangars are too high or too close to the runways, the runways are too close to each other and too close to the Bayshore Freeway, the fence is not collapsible, there are improper threshold distance lights and markings, there are other buildings that are too high or too close to the runways including the control tower and NASA wind tunnel(s). How does NASA plan to acquire the necessary safety waivers or eliminate the need for them? 17-29

Handicapped Access and Safety Issues: - NASA does not provide adequate access for handicapped workers and visitors. Many buildings do not have elevators. Many of NASA's older buildings do not meet fire safety codes. NASA does not provide adequate storage for compressed gases and has been cited more than once for OSHA violations. NASA is converting Navy housing to office space. Does it 17-30

make sense to expand facilities while employees work in unsafe buildings and buildings without adequate handicapped access? The DEA states that fire protection will be provided by the National Guard and mentions some of the available fire fighting equipment. Unfortunately, the Navy is moving its equipment elsewhere and it is being replaced by antiquated National Guard equipment. Is it wise to expand facilities before safety concerns can be adequately addressed? 17-31

It seems that NASA is trying to do too much with too little. The agency should be resolving the problems within its present facility, not trying to acquire and manage a much larger facility that is not essential to its mission. These comments may be outside of the scope of a request for comments on environmental documents, but it appears obvious that NASA will not be able to provide the level of stewardship required to manage the facility that they envision.

NEPA is very explicit on the need for federal agencies to publicly assess the environmental impact of their actions and NASA has failed to do that. NASA may not be compelled to follow the recommendations of other government agencies. However, the public interest is best served when the government obeys the law.

Sincerely,

Peter Drekmeier

Peter Drekmeier

cc: Ken K. Munechika, Director, NASA Ames Research Center

Billie J. Mc Garvey, NASA Headquarters, Washington, DC 20546-0001

LETTER 17: Peter Drekmeier

17-1: Please refer to page 1 and 8 of this Environmental Assessment. Adoption of Future Concept 1 of the Comprehensive Plan is the proposed action assessed by this Environmental Assessment.

17-2: The housing and related community support areas are outside the area covered by the Comprehensive Use Plan. However, any impacts that development of Future Concept 1 of the Comprehensive Use Plan may have on these areas adjacent to the planning area are assessed in this Environmental Assessment.

17-3: Comment noted. NASA is not required to analyze the Navy's actions, only environmental effects associated with its own actions. As stated previously, transfer of facilities are exempt from the provisions of NEPA. The Navy's departure from Moffett Field qualified for a Categorical Exclusion under NEPA according to the Navy's guidelines for implementing NEPA. A Categorical Exclusion was issued June 1994 by the Navy.

17-4: Moffett Field is not going to be "re-used". NASA has accepted responsibility for operating Moffett Field as a shared federal facility. This responsibility has historically been that of the Department of Defense, tied directly to the Navy's use of the site. Many of the operations and functions of Moffett Field will remain unchanged.

Resident agencies that currently exist at Moffett Field will continue to operate. These agencies include the Army and Air Force and account for over 2,000 employees at Moffett Field. In addition, NASA employs more than 5,000 persons at Moffett Field.

The major change at Moffett Field will be the departure of the Navy. However, the Navy does not employ the majority of Moffett Field personnel. Without the Navy, current employment at Moffett Field would be approximately 7,940 (375 Navy Reserve, 1,300 CANG, 310 Army, 75 Air Force, 5,790 NASA, and 90 other Moffett Field personnel). However, NASA is planning on expanding the employment potential to 10,610 through adoption of Future Concept 1 of the Comprehensive Use Plan. Future Concept 1 of the Plan will allow NASA to expand their use of the site and allow for the expansion of

existing federal tenants or the introduction of new federal tenants. However, the activities of these tenants are not expected to deviate from those activities currently permitted at Moffett Field. If uses beyond Future Concept 1 of the Comprehensive Use Plan are proposed, additional environmental review would be required.

17-5: The housing and community support areas outside the project area of the Comprehensive Use Plan will remain in the custody of the Department of Defense and will continue to be operated by DOD and are not the responsibility of NASA.

17-6: Please refer to Response 5-1

17-7: Please refer to Response 5-1. Page 18 of this Environmental Assessment has been expanded to address the commentor's concerns. The No Action Alternative would be to not adopt Future Concept 1 of the Comprehensive Use Plan. The No Action Alternative would not be to leave the Navy property vacant, as the commentor suggests. As explained on page 18 of this Environmental Assessment, resident agency and NASA personnel would still exist at the site even after the Navy leaves. Approximately 7,940 employees would still remain at Moffett Field.

17-8: The *North Bayshore Precise Plan DEIR* prepared for the City of Mountain View (January 24, 1994) analyzes development of a General Plan Amendment, rezoning, and Precise Plan for 185 acres of City-owned land within the North Bayshore area. This area is located on the west frontage of Shoreline Boulevard, northwest of Moffett Field. The North Bayshore Precise Plan allows for 1,316,000 square feet of new development and over 3,000 new employees.

Comparatively, Future Concept 1 of the Comprehensive Use Plan allows for development of 1,089,800 new square feet of development as infill within existing development, and only 610 new employees. The additional employment projected at Moffett Field is significantly less than that proposed by the Bayshore Precise Plan.

In addition, the traffic analyses of the Bayshore Precise Plan DEIR bases its traffic projections on counts conducted by DKS

Associates on April 21 and 22, 1993. Employment at Moffett Field at this time was above 11,000. In addition, none of the intersections analyzed in the Bayshore EIR would be impacted by Moffett Field development.

Traffic generated by the 3,000 employees of the Bayshore Precise Plan would have a significant impact. The need for housing for 3,000 employees would also likely significantly affect the housing shortage. The Comprehensive Use Plan Concept 1 would result in 610 new employees. Many of these additional employees would live in adjacent military housing, thus not causing traffic impacts or affecting the housing supply. These factors are discussed in the Environmental Assessment. In addition, the majority of the intersections analyzed in the Bayshore EIR would not be significantly affected by Moffett Field development.

Since air quality impact assessment is dependent largely upon traffic generation, these impacts are also considered to be insignificant. Housing impacts are not anticipated since there will be no substantial increase in population. Traffic generation and employment changes at Moffett Field are considered negligible as they represent no significant change.

17-9: Comment noted. Page 7 of this Environmental Assessment has been amended to address the commentor's concerns. The loss of approximately 6,800 jobs cited in this Environmental Assessment includes 3,359 military and 633 civilian personnel by September 1994 (a total of 3,992 as the commentor has noted). It was also estimated that at least 2,800 jobs would be lost in supporting industries, largely in Santa Clara County.

17-10: Please refer to Response 5-12. It should be noted that this is not a base-reuse. Moffett Field will continue to operate in its current capacity.

17-11: Flight operations at Moffett Field will be less under Future Concept 1 of the Comprehensive Use Plan than were previously allowed at the airfield. Annual flight operations at Moffett Field totalled more than 85,000 prior to 1991. The comment that NASA did not consider relocation to Crow's Landing is incorrect. NASA has taken custodial responsibility of Crow's Landing which will allow "touch-and-go" landings and research testing at that facility. However, NASA has had no reason to consider

relocation of all their aircraft operations to the Navy's Crows Alternate Landing Field or to NASA's Dryden Flight Research Facility.

17-12: Please refer to Response 11-6. NASA has no comment on the judgment of the Base Closure Commission.

17-13: Please refer to Responses 11-6 and 11-17.

17-14: Please refer to Responses 5-6 and 11-6. Hazardous waste generation will not change substantially as a result of the proposed action. NASA and the resident agencies will continue to implement hazardous waste minimization efforts. NEPA does not require a documentation of resources used for energy, water, or waste generation for a 5-year period prior to an Environmental Assessment being prepared. This information is more appropriately found in the Environmental Resources Document.

17-15: Please refer to Responses 11-6, 11-17 and 17-14.

17-16: Please refer to Responses 11-6 and 11-18. No wind tunnel is proposed at this time. If and when a new wind tunnel is proposed, it will require further project-specific environmental analysis. Specific approval of a new wind tunnel is not part of this proposed action. Please refer to Response 17-14.

17-17: Please refer to Responses 5-5, 11-6 and 17-14.

17-18: Please refer to Response 11-6 and 17-14. NASA is sensitive to the use of pesticides and the effects it may have on natural resources on-site. However, this issue is more appropriately addressed in the Environmental Resources Document.

17-19: Please refer to Response 17-8.

17-20: Please refer to Responses 11-6 and 17-8.

17-21: This is a comment on the Comprehensive Use Plan, not an environmental issue.

17-22: Please refer to Response 11-6.

17-23: The construction of Gate 17 was part of a larger project including improvements to Hunsaker and Parsons roads within the Ames site. The project was approved in 1992 and was included within the scope of the Environmental Resources Document. NASA coordinated construction activities with a local wildlife biologist to ensure that burrowing owls in the area were protected.

17-24: NASA has followed the procedures as specified in the Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (40 CFR, Part 1501.4(e)(2). Only projects of "national importance" require a notice in the Federal Register. NASA Headquarters determined that the Comprehensive Use Plan Environmental Assessment is of "local", not of national importance. Therefore, notice has been published in the Mercury News and La Oferta newspapers.

17-25: Please refer to Response 17-8.

17-26: Please refer to Responses 1-1, 5-4, 5-8, 10-2, 11-1, and 11-6. NASA has an existing Master Plan which was adopted in 1981. The Comprehensive Use Plan is a document intended to guide growth and development and will be used as a basis for the preparation of a revised Master Plan. Preparation of a new Master Plan is expected to commence at the end of 1994.

17-27: Development of the Stevens Creek bridge would require additional environmental review, as discussed in this Environmental Assessment.

17-28: Mitigation Measure CULT-2 provides for the protection of historic resources and NASA is currently sensitive to historic resource protection. As discussed in this Environmental Assessment, no remnants of the once documented Kitchen Midden or any other prehistoric cultural artifacts were found in November 1993 during a 60-acre investigation of the northwest portion of Ames Research Center. The State Historic Preservation Officer concurred with the findings of this report through the Section 106 process. Agricultural practices, the commercial use of mound sites for top soil and fill, and possibly the construction of current facilities appear to have destroyed any

previously documented sites. However, Mitigation Measure CULT-1 has been added to this Environmental Assessment to fully address archaeological resources.

17-29: This is a comment on waivers granted to the Navy, not an environmental issue of the Comprehensive Use Plan, therefore, a response is not provided. Many of the waivers granted by the Navy are no longer required for the use of Moffett Field.

17-30: This is a comment on the condition of existing handicapped access and on the Navy's fire protection equipment. It is not a comment on the Environmental Assessment, therefore a response is not required. Many buildings are in the process of being upgraded to meet ADA standards, or will be upgraded in the near future.

17-31: The Moffett Field Fire Department is working with the Navy to acquire many of the vehicles that are currently used at the field. In addition, the Fire Department will acquire additional needed vehicles from the Air Force. It is inaccurate to describe these vehicles and equipment as antiquated. In addition, new equipment will be purchased and upgraded in the future. An on-going inspection program will be implemented to ensure that Air Force standards and regulations are followed and the equipment is adequate to serve the site.

18

REQUEST FOR INFORMATION/COMMENTS SUBMITTAL ON THE ENVIRONMENTAL INVESTIGATIONS AT NASA AMES RESEARCH CENTER, MOFFETT FIELD, CA

Name Tom Rivell Date 5/10/94

Mailing Address Ames Research Center, MS 244-19

City/Zip _____ Phone Number ( ) _____
(in the event that inquiry clarification is required by Ames staff)

Affiliated Organization _____

In reference to Ames Project Documentation: Ames Draft Environmental Assessment, 4/94

Please specify the information being requested and/or comments being submitted.
Attach a separate sheet if necessary.

The EPA encouraged NASA to include proposed reuse actions for land coming under their jurisdiction in a comprehensive public review process. I don't believe that reuse actions have been included in the DEA. Why not? I don't believe that their has been a comprehensive review process. Why not? **18-1**

The EPA encouraged NASA to list in their NEPA documents the federal, state and local requirements that are applicable to the facility. (There is only a list of agencies with their area of jurisdiction.) Why has this not been done? **18-2**

The EPA encouraged NASA to list in their NEPA documents the environmental permits currently held and new permits or modifications required. Why has this not been done? **18-3**

(continued on reverse)

Received Date (Ames) _____ Received By _____

Please note that an information repository has been established at:

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Sunnyvale, Ca 94086
(408) 730-7300

SUBMIT TO: Sandra Olliges
NASA Ames Research Center
Safety, Health, and Medical Services
M/S 218-1
Moffett Field, CA 94035-1000

Thank you for your submittal.

A response can be expected no later than 30 days from submittal receipt.

(continued)

The environmental policy announced by the Ames Director in 1990 is excellent. Why has so little been implemented when many of the items cost nothing and/or reduce operating expenses? How does Ames determine if managers are encouraging implementation of environmental policy? Can Ames provide any quantitative evidence to demonstrate that they are making progress? **18-4**

NASA regulations require field installations to maintain a current Master Plan. There is no evidence of the existence of master plan in the DEA. Is the Moffett Field reuse plan compatible with the Navy's previous Master Plan for the Moffett Field Naval Air Station? When will NASA publish a master plan? Shouldn't reuse decisions be based on a master plan compatible with surrounding community plans or an existing master plan? If NASA does not have a master plan shouldn't the Navy plan be followed until a new one can be developed, reviewed and endorsed by NASA Headquarters? **18-5**

The DEA claims that the transfer of the Navy's Moffett property will not cost anything. Has the no-cost transfer decision been approved by Congress? What are the other costs to NASA and the taxpayers for administration, security, maintenance, facility upgrade, etc? **18-6**

How many days per year are the Magnetic Standards Laboratory and Test Facility (Buildings 217 and 217A) in use? **18-7**

Does NASA have a plan to reduce petroleum fuel consumption by using more efficient or alternatively fueled vehicles? **18-8**

The DEA says that an increase of less than 9% in impervious surface is not significant. What is the percentage decrease in permeable surfaces? **18-9**

There are burrowing owl sites south of Bldg. 255 and west of the Bldg. 258 Annex. **18-10**

LETTER 18: Tom Rivell, National Aeronautics and Space Administration

18-1: Please refer to Response 5-1. The Comprehensive Use Plan does not outline re-use actions since Moffett Field has not been designated for re-use. The federal government will continue to control Moffett Field. Uses at Moffett Field will not change, only the controlling federal agency.

18-2: The letter to NASA dated February 24, 1992 from EPA, stated that development should be coordinated with affected federal, State and local agencies and the public. The Environmental Assessment lists federal and state laws which apply to actions anticipated under the Comprehensive Use Plan. The Environmental Assessment does not include, nor does NEPA require a list of all existing state, federal and local permits that have already been granted to operate the facility. This information is more appropriately found in Ames Environmental Resources Document (ERD).

18-3: Please refer to Response 18-2.

18-4: This comment addresses a policy statement made by the "Ames Director" in 1990 which is unrelated to the Comprehensive Use Plan. NASA is working toward implementation of these policies. In addition, all on-going projects are monitored for environmental compliance.

18-5: The Comprehensive Use Plan will provide the basis for the preparation of a new Master Plan. Preparation of an updated Master Plan is expected to start this Fall.

18-6: This comment asks whether Congress has done a cost analysis of the transfer of the property and is thus unrelated to the Environmental Assessment.

18-7: This comment is not related to the Environmental Assessment. Information regarding existing facilities can be found in NASA's Environmental Resources Document.

18-8: NASA currently has five alternate vehicles in support of the California Methanol Fuel Program stationed at Moffett Field.

NASA plans to replace its older fleet with low-emission vehicles as they become available.

18-9: The percentage decrease in permeable surfaces within the study area boundaries is approximately 24 percent.

18-10: Figure 6 represents those sites documented from the Quarterly Burrowing Owl Update 4 completed June 21, 1993. NASA has recently contracted with Dr. Lynne Trullio to continue quarterly monitoring of the burrowing owl sites. Sites discovered after the June 21, 1993 date are not shown on this map. For updated data, interested persons should contact NASA directly.

BAY AREA ACTION
715 COLORADO AVE., #1, PALO ALTO, CA 94303 TEL (415) 321-1994

Earth Day 1994

Ms. Sandy Olliges
Environmental Program Manager
NASA Ames Research Center
Mail Stop 218-1
Moffett Field, CA 94035-1000

SUBJECT: Moffett Field Comprehensive Use Plan Draft Environmental Assessment

Dear Ms. Olliges,

Thank you for the opportunity to review the Moffett Field Comprehensive Use Plan (CUP) Draft (December 8, 1993) and the Draft Environmental Assessment (DEA, April 7, 1994). After a thorough review of these documents we offer the following comments. Our comments are in two categories, Process-Level Issues and Specific Environmental Concerns. Within each category we state our concerns and offer suggestions for improvements and alternatives. As concerned members of the local community we are committed to sound planning for the future and offer these suggestions in an effort to enhance the valuable National resource that Moffett Field represents. We are also committed to reducing the impact of our cumulative activities upon the environment, and to ensuring that future uses of Moffett Field comply with all federal, state and local environmental regulations.

When the closure of Moffett Field Naval Air Station was announced we recognized a variety of alternative uses which would enhance local communities. Later, we anticipated that the transition of stewardship to NASA would afford the opportunity to transform cultural values as they relate to environmental protection. Sadly, we realize that this valuable opportunity is being lost as the bottom line of NASAs' efforts seems to be to conduct business as usual instead of pursuing Total Quality Environmental Management (TQEM). Our ultimate goal in writing this letter is to ask you to reconsider your approach to environmental concerns and usher in a new era of TQEM in your daily operations.

I. Process Level Issues:

A. Decision for NASA to retain Moffett Field:

We find that the decision making process which culminated in NASA assuming custodial control was significantly flawed and may have been illegal. This decision was reached in a series of closed meetings which failed to include many interested parties. The lack of community involvement in this decision stands in stark contrast to the partnerships developed in numerous other base closures in the San Francisco Bay Area. We believe that NASAs' failure to seriously consider community input undermines your credibility and demonstrates a lack of concern for the impacts of your activities (both economic and environmental) on the surrounding communities. These closed meetings, and thus the decisions arising from them, may be illegal and are certainly not in keeping with the intent of either the National Environmental Policy Act (NEPA) or the base closure process. According to the Presidential Base Closure Commission report (1991): 19-1

"The Secretary of Defense should do everything in his power to ensure a timely transfer of these valuable assets to the local communities."

furthermore, the Commission

"recommended closing Naval Air Station Moffett Field"

We find this in direct conflict with the statement in the CUP Preface that "The Commission recommended Moffett Field remain a Federal facility for use by NASA and other Federal entities". In fact, what the Commission report stated was a **suggestion** that the base remain a federal facility and that "the Secretary (of Defense) should **consult** with NASA". We find that misconstruing the intent of the Commission to ensure retention of the facility for NASA and other federal agencies is a disservice to the surrounding communities and represents an attempt to circumvent the participatory democratic process. Furthermore, the "enthusiastic support" mentioned in the CUP was from a few select business leaders and city council members, and not from the general community. **19-1** **19-2**

We also note that NASA's lack of consideration of public input is evident in the DEA process. The filing of a signed and dated Finding of No Significant Impact (FONSI) **prior to** release of the DEA is clearly outside the letter and intent of NEPA. There seems to be little intent to seriously consider these, or other, public comments concerning the environmental impact of NASAs' actions. If there were, those concerns would first be incorporated into your final EA, and **then** conclusions regarding a FONSI, or the need for an environmental impact statement (EIS) would be made. This attitude was also in evidence during the May 18th public open forum in which comments made by concerned citizens were not even recorded. While we appreciate this opportunity to express our views in writing we must wonder whether it constitutes a true opportunity to be heard or merely an exercise in futility. **19-3** **19-4**

Finally, and most significantly, we find the theoretical foundation of the CUP and DEA to be flawed. You are required by NEPA to assess the environmental impact of your action(s). Although the action which you are taking is never clearly defined, it is clear that the action is the takeover of the facilities and property of Moffett Field. You wrongfully assume that baseline figures for your environmental impacts includes the prior activities of the Navy. However, you are acquiring new facilities and properties after the Navy departs, thus your baseline scenario must be for NASA activities **prior to** acquiring the new property. All of your baseline figures (especially employment) are inappropriately elevated which leads to unwarranted conclusions. Therefore, we must insist that you recast the CUP and DEA based on figures for NASA-Ames activities only, and then base your analyses on the **re-opening** of the former Navy facilities. The environmental impacts of doubling employment are obviously much greater than the slight increases you project in your Future Concept One. **19-5** **19-6**

B. Examination of Alternative Uses:

The CUP and DEA offer no examination of a transfer of the facility out of federal control, nor any shared use of the facility by non-governmental entities or other civilian uses. We find that there is essentially no difference between the two "alternatives" examined in the CUP and in fact believe that Future Concept Two is an unrealistically large growth option offered only to enhance the appeal of Future Concept One. **19-7**

In the DEA the no action option (page 12) is poorly conceived and does not satisfy the requirements of NEPA for a no action alternative. The action being undertaken by NASA is the acquisition of Moffett Field, not implementation of the CUP, therefore the no action alternative must be the case in which NASA does not acquire Moffett Field. To suggest that no action is merely the absence of not developing the CUP is a thinly disguised attempt to ignore this crucial aspect of a DEA. Again, we must emphasize that your baseline analysis (no action) must not include former Navy uses of the facility, including both employment figures and airfield uses. **19-8**

C. Specific Process-Level Concerns:

We find that there are many assumptions which are inadequately explained or justified, including:

1. Airfield Issues:

Is it essential for NASA to acquire the airfield, and is it within NASAs' mission to maintain an airfield for the use of non-civilian agencies? What are the long-term costs to NASA associated with maintaining **19-9**

the airfield and how do these increased costs cut affect other budgets at Ames, and the budgets of other NASA centers? Are continued airfield operations essential to Ames mission, or can flight needs be met by other facilities (*e.g.* San Jose International)? How influential was Lockheed Corporation in maintaining control of the airfield to subsidize their infrequent flight requirements? How does NASA plan to acquire safety waivers which expire when the Navy departs? 19-9 cont.

2. Closed Federal Facility:
What justification is there for a civilian agency to maintain a facility closed to the public? Why are military benefits such as the golf course, commissary and other recreational facilities being maintained by NASA or other federal agencies? Can security concerns for NASA uses be met with concurrent use of parts of the facility for non-governmental purposes? 19-10

3. Housing Issues:
The Air Force is not filing any documents for their acquisition of housing, as lead agency NASA should include this in their DEA. In addition, the jobs to housing imbalance in the South Bay is not addressed, which is important because employment is projected to increase which further widens this gap. 19-11

4. Economic Analysis and Employment:
We find that your estimation of job losses (6,800) is significantly exaggerated (CUP p. 7). In addition, you offer conflicting estimates of employment at Moffett, estimating 7,175 (CUP p. 7) at NASA but using 10,000 (DEA p. 10) as your baseline operations in 1993. These conflicting statements need to be addressed because employment number is a major factor in assessing environmental impacts. Alternative uses of the facility to increase sustainable business opportunities in the area are not discussed. The economic analysis done for the two Future Concepts is limited. 19-12 19-13

II. Specific Environmental Concerns:

In addition to the above process-level concerns we offer the following specific suggestions concerning environmental and community issues which are not adequately addressed. We believe that a thorough consideration of these concerns will almost certainly preclude a FONSI.

A. Land Use Issues:

1. Bay Trail Issue:
Long-term community efforts to link the Bay Trail around the South Bay are thwarted by safety considerations for munitions storage. As a civilian agency we find no justification for NASA to retain Moffett Field as a munitions storage area. The proposed alternative trail route significantly diminishes the aesthetic appeal of a shoreside trail and increases trail length. It also raises further safety concerns as trail users would be exposed to traffic hazards. Considering that NASA has usurped land which was supposed to be available for community purposes, we strongly suggest that NASA remove all barriers to development of the Bay Trail. While we recognize that Cargill Salt is also an impediment to progress on this section of the trail, we believe support by NASA will provide the impetus to finally complete this section of the Bay Trail system. 19-14

2. Biodiversity:
The presence of endangered and threatened species requires NASA to protect both the species and the habitat upon which these species depend. We strongly recommend that NASA immediately halt all pesticide and herbicide application to wetlands areas and undeveloped lands. In addition, discing of undeveloped lands should be discontinued as this poses a threat to burrowing owl populations. Feral cats and red foxes present a hazard to existing species. Proper management plans for these animals need to be addressed, especially as they relate to maintaining a barrier to further migration of red fox individuals. 19-15

3. Wetlands Preservation and Restoration:

Mowing and drainage of wetlands areas must be discontinued. Although these wetlands are seriously degraded their potential to be restored must not be compromised by further degradatory actions. We believe that continued degradation of this land will ultimately be used to justify further development. We find little discussion of these issues in the DEA and are assured that they will be dealt with in a comprehensive wetlands management document to be undertaken at a later date. We formally ask to be kept appraised of progress in this area. The current study by the Department of Fish and Game should be continued. We are unclear as to what constitutes a 'potential wetland' (CUP, p.10), the entire area now encompassed by Moffett Field was once wetlands and we find this type of language obfuscates the real issue which is to preserve and protect the tiny fraction which remains. 19-16

4. Ecosystem Research functions:

The potential to use the wetlands and undeveloped lands for ecosystem research should be explored. This should include, but not be limited to, a wetlands recovery project and verification of remote sensing technologies. Research gardens using native plants could be developed in conjunction with remote sensing technology. 19-17

B. Compliance with environmental laws and regulations:

1. Previous history:

NEPA requires that an environmental assessment includes baseline figures so that potential impacts and mitigation can be compared to projected actions. Information should include, but is not limited to, the following items: 19-18

a. Hazardous materials generated and recycled
b. Solid waste generated and recycled
c. Recycled materials purchased
d. Energy use and conservation efforts
e. Water use and conservation efforts
f. Transportation/traffic issues
g. Noise, both airfield and wind tunnels.
h. Air emissions (e.g. ozone-depleting chemicals)

2. Future projections:

Assessment of the impact of actions must include how NASA will mitigate, reduce and improve environmental stewardship of the lands acquired. Nowhere in these documents are the impacts of programmatic level changes discussed. These are essential to assess how increased activities, as related to a doubling of personnel, will be incorporated into daily operations. 19-19

3. Safety Issues:

a. Why ordnance and munitions are necessary to a civilian agency is never addressed. Are nuclear weapons also stored at Moffett Field, and if so, why? What munitions will be added as new residents use the facility? Clearly the presence of munitions is incompatible with environmental health and safety and community safety. As previously mentioned it also complicates the Bay Trail right of way. 19-20

b. Retention of the Defense Fuel Support Center. The same safety issues apply to this facility. No justification is offered for retaining this function. If it is retained all single walled tanks should be replaced with double walled, above-ground, monitored tanks. 19-21

c. The Navy has obtained safety waivers concerning the proximity of hangars to the runway and runway clearance issues. There is no discussion of how NASA can justify continuation or renewal of these safety exemptions. 19-22

4. City of Mountain View Draft Environmental Impact Report:

We find a serious discrepancy with NASAs' conclusions and those of the City of Mountain Views North Bayshore Development Project. How is it possible that increases in traffic congestion and air pollution by the North Bayshore project were found to produce significant impacts which could not be mitigated but that no significant impacts were found for larger increases in traffic congestion by the CUP Future Concept One? We suggest that such conflicting conclusions for the same air basin and transportation corridor warrant further analysis by NASA. **19-23**

In summary we find that the DEA is significantly flawed in that it offers a very limited range of options for re-use of the facility and, it contains a very limited consideration of environmental impacts of the replacement of Navy personnel and assets. The basic assumptions of the CUP and DEA are incorrect and need to be changed before environmental impacts can be adequately addressed. We believe that NASA should withdraw the FONSI until a conceptually well formulated and technically accurate environmental assessment is done.

While we appreciate the effort that has gone into the preparation of the CUP and the DEA, we truly believe that NASA interests, and the interests of the local communities, are best served by a comprehensive environmental assessment based on accurate baseline information and the subsequent large increases in employment and facility use at Moffett Field. In this fashion NASA can begin to achieve the goal of minimizing the impact of daily operations on the environment.

Sincerely,

David T. Smernoff
Council Member

James A. Steinmetz
Director

cc
Dr. Ken K. Munechika, MS 200-1, NASA Ames Research Center
Mr. Billie J. McGarvey, Code JX, NASA Headquarters
Ms. Jacqueline Wyland, Office of Federal Activities, US EPA Region IX
Honorable Anna Eshoo, US House of Representatives
Honorable Barbara Boxer, US Senate
Honorable Dianne Feinstein, US Senate

LETTER 19: David T. Smernoff & James A. Steinmetz, Bay Area Action

19-1: Please refer to Response 5-12. The "Naval Air Station" at Moffett Field will be realigned with the departure of the Navy. However, Moffett Field will remain a federal facility under NASA's control. This was the recommendation of the Base Closure and Realignment Commission on April 15, 1991. Furthermore, the Department of the Navy and the National Aeronautics and Space Administration entered into a Memorandum of Understanding regarding Moffett Field on December 22, 1992, describing the proposed transfer of Moffett Field to NASA.

19-2: During the period from January to June 1992, the cities of Mountain View and Sunnyvale conducted a number of public informational meeting during which public testimony was taken regarding Moffett Field. This public testimony is documented in the *Assessment of Aviation and Community Impacts of Moffett Field Transfer* prepared by P&D Aviation for the cities of Mountain View and Sunnyvale. A wide range of interest have been expressed by local citizens concerning Moffett Field. In general there seemed to be overall support for the transfer of Moffett Field to NASA. Concerns were expressed with regard to both the noise and safety aspects of NASA operation.

In general, the cities of Mountain View and Sunnyvale view Moffett Field as important in providing jobs and economic benefits for the community. Industry groups strongly support NASA operations and control of Moffett Field as a federal airfield to ensure viability of security and operational needs. Many of these groups felt that Moffett must be retained as a secure facility to protect national interests and interests of local manufacturers who respond to the nation's needs. In addition, modern, high-tech, and sensitive manufacturing facilities in proximity to Moffett Field could be compromised as a result of joint use. The Sunnyvale and Mountain View Chambers of Commerce also believe that Moffett Field must be retained as a federal secure facility in the interest of long-term employment and economic stability. Civil use of the facility could compromise security, operations, and safety.

The Comprehensive Use Plan is a conceptual plan for the future development at Moffett Field. The environmental impacts of

implementing the plan are discussed in the Environmental Assessment. Project specific impacts will be assessed in project environmental analysis.

19-3: Please refer to Response 11-4.

19-4: Please refer to Response 5-11.

19-5: Comment noted. Page 1 of this Environmental Assessment has been amended to address the commentor's concerns. Adoption of Future Concept 1 of the Comprehensive use Plan is the proposed action assessed by this Environmental Assessment.

As described on page 9 of this Environmental Assessment, this Environmental Assessment does not analyze the impacts of the closure or transfer of Moffett Field. These actions are exempt from NEPA.

19-6: Since Moffett Field is not closing, an analysis of a "re-opening" would be inappropriate. The Comprehensive Use Plan is intended to facilitate the continued use of the facility by NASA and various resident agencies.

19-7: Please refer to Response 5-1.

19-8: Please refer to Responses 17-4 and 17-7.

19-9: Please refer to Responses 3-1, 5-1, and 11-6.

19-10: Please refer to Response 5-1.

19-11: Please refer to Responses 17-2 and 17-5.

19-12: Please refer to Response 17-4 and 17-9.

19-13: Please refer to Response 5-1.

19-14: Please refer to Responses 5-8 and 10-2.

19-15: Please refer to Responses 1-1, 5-4, 11-1, 11-13 and 17-27.

19-16: Please refer to Responses 1-1, 5-4, 11-1, 11-13 and 17-27.

19-17: This comment suggests NASA utilize a portion of the site for ecological research and does not relate to the Environmental Assessment.

19-18: Under NEPA each federal agency has its own NEPA Guidelines. NASA's are set forth in NASA Management Handbook 8800.11 *Implementing the Provisions of the National Environmental Policy Act* and 14 CFR. As stated in NASA's guidelines. "The description of the affected environment has, in the past, been given attention far beyond its value to the discussion of environmental impacts. To the extent that description of the environment is required, descriptive material already available should be used as much as possible. The use of references is encouraged." The Environmental Assessment fully discusses all topics listed in this comment. Existing conditions information is found in NASA's Environmental Resource Document.

19-19: Potential impacts of the proposed action are discussed fully in Chapter V of this Environmental Assessment. This Environmental Assessment includes mitigation measures that will be adopted by NASA to seek to ensure that adoption of Future Concept 1 of the Comprehensive Use Plan does not significantly impact the environment. These measures are summarized in Chapter VI.

19-20: Please refer to Responses 5-8 and 10-2. Nuclear weapons are not stored at Moffett Field.

19-21: Please refer to Responses 5-6 and 5-7.

19-22: Operations at Moffett Field under NASA's control will be similar to the operations that took place under the control of the Department of Defense. The majority of federal tenants at Moffett Field will remain unchanged. Therefore, existing safety exemptions are required.

19-23: Please refer to Response 16-8.

Citizens' Advisory Board
for the
The Moffett Naval Air Station Superfund Site
and the
MEW Companies Superfund Site

May 4, 1994

Sandra Olliges
NASA Ames Research Center
Safety, Health, and Environmental Services Office
M/S 218-1
Moffett Field, CA 94035-1000

Dear Ms Olliges,

As a member of the Citizens' Advisory Board for the Moffett Superfund Sites and a resident of and property owner in Mountain View, I have a concern about the April 7 Draft Environmental Assessment prepared for NASA as a part of its Moffett Field Comprehensive Use Plan. A number of the members of our committee met on April 14 to review the above document and attended the public hearing on April 18 to express some of our concerns. The Environental Program Manager, Sandy Olliges, asked those who spoke at the hearing to submit their concerns in writing no later than May 10. The following are my comments and concerns, attached to the NASA form.

My first comment is that the time allowed for public consideration of this environmental assessment document was far too little for any serious consideration of its conclusion that "no significant impact" would result from the Moffett Field use plan proposed by NASA. As a result, my most basic proposal is that an addition opportunity for public input on the document be designated by NASA, with suffient lead time for the citizens of this area to be notified and to review the document thoughtfully. 20-1

As an attender of the first hearing, I feel that such an additional hearing is absoluted crucial, since attenders raised many questions and were not satisfied with the answers. I, and others with concerns, need the additional time to further investigate assertions in the document and issues raised, both in the report and issues not addressed in the report. I agree with several of our CAB members who said at the hearing that "it made a mockery of the process of seriously seeking public input" on such a far-ranging use plan and its environmental implications for this sensitive Bay Area site and the nearby communities.

Specific concerns which I raise on my behalf and on behalf of people living in

(continued)

c/o Silicon Valley Toxics Coalition • 760 North First Street • San Jose, CA 95112 • 408-287-6707

Mountain View and Sunnyvale are outlined below.

• The impact of relocating air reserve units from Alameda Naval Air Station and the former Hamilton Air Force Base to Moffett Field, with helicopters being a significant dimension of the aircraft to be flown, has not been considered by the residents of either community. I see this as essentially a new issue, particularly in view of plans to increase the number of flights per year to as high as 80,000. And the response at the April 18 hearing that the helicopters would be flown out of the end of the runways nearest to the Bay said nothing about how much noise that would generate for residents with homes near to the field and what the flight pattern would be over the two communities, which have experienced years of noise from P-3's flying over their homes, parks, and schools. In addition, the NASA response took no consideration of the impact of the aircraft noise on wildlife living in (or trying to live in) the wetlands all around the runways. And the report's comment on air pollution from the additional flights acknowledged significant additional air pollution in the area of the Field, but observed that the total air pollution in the total Bay Area would not rise. This is small consolation for those who like my wife and me, live in Mountain View and Sunnyvale, particularly when local NASA officials had the authority to decline the request of the Hamilton Field air reserve units to relocate to Moffett. **20-2**

• In relation to the long sought and planned Bay Trail for hikers and wildlife viewers, the plan says nothing about the noise for hikers and wildlife, nor about the need to remove a large munitions depot near the proposed trail, nor the need to remove hugh fuel tanks underground in the area of the trail, which tanks are single walled. No opportunity has been given for the Sierra Club or other environmental organizations to specifically comment on these issues affecting the Bay Trail, so long in the planning by members of their organizations. **20-3**

• The intent of the National Environmental Protection Act (NEPA) is that serious consideration be given to various options for use of the land, particularly in a case such as this where a military base is being closed and being turned over to an essentially non-military arm of the government, namely, the National Aeronautical and Space Administration. No such options are presented in the draft environmental assessment, merely slight variations of the same basic plan. Nor was the public given any serious opportunity to propose such options. I feel that neither the spirit nor the letter of NEPA are reflected in the document presented and that the implications for environmental restoration of the crucial salt-marsh habitat surrounding the runways was in no way addressed. **20-4**

• Questions were also raised at the hearing about a proposed bridge, which construction would facilitate the flow of traffic anticipated when a planned Air and Space Museum is built on land just to the northeast of Moffett Field. This further raised the question of an alternative use of the huge hangar, which is now designated as a National Historical Site. Why could it not be used for the home of **20-5**

(continued)

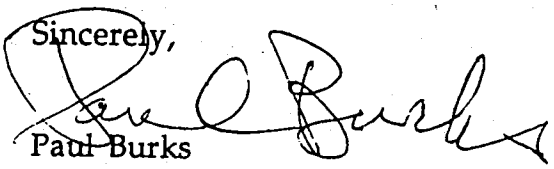
the Air and Space Museum. How appropriate a usage that would be, in my opinion. It would also remove the necessity of developing land nearby to the Field, in a time when environmental concerns suggest that such unnecessary development is undesireable.

20-5 cont.

In conclusion, I see the Draft Environmental Assessment as inadequate, flawed in many of its conclusions, and failing to present options to NASA's proposed useage. The implications of the plans for nearby residents and communities have not been seriously considered, nor has any serious input been sought from citizens of the area. Issues related to noise, munitions, leaking tanks, wildlife, and trail useage must be addressed before any serious environmental assessment will have been completed, as required by NEPA on behalf of the land, the wildlife, the air, the water, and residents living in the area.

I hope that this letter will produce a serious response to these concerns, shared by many on the CAB, in the near future, and will result in revisions to the assessment process and a future hearing for public input. Thank you for considering my concerns. I look forward to hearing from you and together sharing in a process which will contribute to sound decision-making and to NASA being a good neighbor to all area residents, both humans and widelife. Only such a process and outcome will assure that our children and their children will inherit a liveable Bay area and healthy, sustainable communities in which to live.

Sincerely,



Paul Burks
Mountain View Resident and
Homeowner
Member of the Citizens Advisory
Board for the Moffett Superfund Sites

cc: Ken K. Munechika, Director
NASA Ames Research Center
Mail Stop MS 200-1
Moffett Field, CA 94035-1000

REQUEST FOR INFORMATION/COMMENTS SUBMITTAL FORM
FOR THE MOFFETT FIELD COMPREHENSIVE USE PLAN
NASA AMES RESEARCH CENTER, MOFFETT FIELD, CA

Name PAUL BURKS Date 5-9-94

Mailing Address 1558 Mercy St

City/Zip Mtn View, 94041 Phone Number (415) 962-8342 h 968-1767
(in the event that inquiry clarification is required by Ames staff)

Affiliated Organization CAB - Moffet Superfund Sites, joint see business card

In reference to Ames Project Documentation: Draft Environmental Assessment

Please specify the information being requested and/or comments being submitted.
Attach a separate sheet if necessary.

See attached letter dated May 4

EarthLight
Magazine of Spirituality and Ecology
Paul Burks
Editor
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COUNCIL of CHURCHES SANTA CLARA COUNTY

REV. PAUL D. BURKS
INTERPRETATION & DEVELOPMENT

1229 Naglee Ave.
San Jose, CA 95126

Received Date (Ames) _____ Received By _____

Please note that an information repository has been established at:

CITY OF SUNNYVALE LIBRARY
Reference Desk
665 West Olive Avenue
Sunnyvale, Ca 94086
(408) 730-7300

SUBMIT FORM TO: Sandra Olliges
NASA Ames Research Center
Safety, Health, and Environmental Services Office
M/S 218-1
Moffett Field, CA 94035-1000

Thank you for your submittal.

Comments are due no later than May 10,1994

LETTER 20: Paul Burks, Citizens' Advisory Board for the Moffett NAS Superfund Site and the MEW Companies Superfund Site

20-1: Please refer to Responses 5-11 and 5-12. Though a specific public review period is not required for an Environmental Assessment, NASA circulated the Draft Environmental Assessment for 30-days. This is the typical review period recommended for an Environmental Assessment.

20-2: Please refer to Responses 1-1, 5-2, 5-3, 5-4, and 5-5. This Environmental Analysis considers the relocation of air reserve units from Alameda Naval Air Station and the former Hamilton Air Force Base, including helicopters. These aircraft are included in the noise and air quality analyses included in this document.

20-3: Please refer to Responses 5-8 and 10-2.

20-4: Please refer to Responses 1-1, 5-1, and 5-4.

20-5: This is a comment on the Air and Space Museum, not on the Environmental Assessment. Moffett Field is a closed federal facility and access is restricted. Therefore, location of the Air and Space Museum within the middle of the facility would not be appropriate.

Pacific Studies Center

222B View Street, Mountain View, CA 94041 USA 415/969-1545; Fax 415/968-1126

May 5, 1994

Sandy Olliges
Environmental Program Manager
Ames Research Center, MS 218-1
Moffett Field, CA 94035-1000

Dear Sandy:

Though I appreciate the effort that your staff has put into the development of the draft NEPA (National Environmental Policy Act) documents for Moffett Naval Air Station, I believe that the process is fatally flawed. The draft Finding of No Significant Impact should be rejected and the Environment Assessment should be redrafted or incorporated into a wholly new draft Environmental Impact Statement. 21-1

I have a number of specific concerns, some of which I addressed in my earlier comments on the Draft Comprehensive Use Plan, regarding wetlands access and restoration, underground fuel storage, and munitions storage. But my primary reasons for challenging the draft Environmental Assessment are the following:

1. The Environmental Assessment compares all proposed options to an arbitrary past level of operations. They should be compared against the current level operations, especially since NASA is actively soliciting additional tenants, and the operations of those tenants may directly affect the environmental impact of facility operations. This is not merely a theoretical issue. The NASA take-over was sold to area residents as a way to prevent a high level of air traffic. Now, it appears, NASA wants to "grandfather" in a high level of air traffic, with no further environmental studies.

   That high level of air traffic will present significant negative noise impacts. The draft Environmental Assessment does not adequately represent the historical flight paths of large, fixed wing aircraft. Typically, planes headed south or west traveled directly, at a low altititude, over my neighborhood—old Mountain View—after take-off. It was impossible to carry out a conversation while these planes were directly overhead.

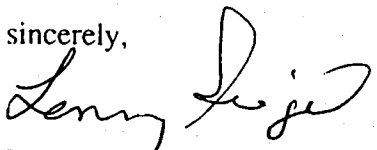
   Furthermore, the historic use of the airfield required safety waivers, which should not be grandfathered in for new missions or agencies. One of the reasons the Naval Air Station closed was that the airfield is too close to two major, international airports. Clearly the unsafe past use of the airfield cannot be used to justify 80,000 flight operations a year. The Environmental Assessment should include a current, independent assessment of flight safety, based on the anticipated increase in use.

2. NASA's options, as developed in the Comprehensive Use Plan, are not really options at all. They are merely slight variations of the same basic plan. This flies directly in the face of NEPA, the purpose of which [40 CFR §1500.2(e)] is to "Use the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions upon the quality of the human environment." 21-2

3. The Air Force use of portions of Moffett Naval Air Station has not been assessed. Either the Air Force should participate in the NASA-lead NEPA effort or it should comply separately. It is impossible, however, to understand fully the environmental impact of NASA expansion unless real data about the Air Force's plans are simultaneously made available to the public. 21-3

Once again, I value NASA Ames Research Center's contribution to the nation and to our community. But frankly, I am fed up with NASA's arrogant attitude toward its neighbors. NASA continues to claim public support for its plans, but the City Council resolutions supporting NASA takeover were based upon secret meetings and agreements, and by no means did they endorse many of the controversial elements of NASA's current plans. The only real public input on the future of Moffett Field that can be used to justify any of NASA's plans and options are the advisory votes in Mountain View and Sunnyvale, in which a majority of voters expressed opposition to a commercial or general aviation airport operation at Moffett Field.

sincerely,



Lenny Siegel
Director

LETTER 21: Lenny Siegel, Pacific Studies Center

21-1: Please refer to Responses 5-9, 17-4, 18-5, 18-6, and 18-22. This Environmental Assessment does not analyze the impacts of existing conditions. It only analyzes the impacts of the "proposed action", as required by NEPA.

21-2: Please refer to Response 5-1.

21-3: Please refer to Responses 17-4 and 18-18.

Peninsula Conservation Center Foundation
3921 East Bayshore Road
Palo Alto, CA 94303
(415) 962-9876 Fax (415) 962-8234

May 6, 1994

Attn: Sandy Olliges, MS 218-1
NASA Ames Research Center
Moffett Field, CA 94035-1000

Dear Ms. Olliges:

The Peninsula Conservation Center appreciates the opportunity to comment on the NASA Ames Research Center's Draft Comprehensive Use Plan and Draft Environmental Assessment. The PCC represents 1500 members in Santa Clara and San Mateo counties. We hope that NASA will continue to seek public comments in the future, since this is an area where a General Accounting Office report noted a need for improvement.

We disagree with NASA's Finding of No Significant Impact. NASA has not adequately assessed the environmental impact of their action, and sufficient evidence has not been presented to support the Finding. The alternatives considered do not appear to be well thought out or consistent with regional needs. The No Action Alternative does not receive serious consideration and is dismissed without any justification. The arguments that environmental impact can be mitigated are not very convincing. The most serious discrepancy is that the documents do not assess the impact of the reuse of the Moffett Field Naval Air Station as the EPA claims NASA agreed to do (letter from J. Wyland, USEPA, Region 9 to S. Brisbin, NASA Ames Research Center, dated June 25, 1993).

Our major concerns can be summarized as follows:

Bay Trail Restrictions - We see no need to continue storage of explosives in such a manner as to endanger activities outside the NASA/Moffett boundaries or within the boundaries of a National Wildlife Refuge (Jaegel Slough area). Safety waivers were granted by the Chief of Naval Operations. There is no reason for a civilian agency to expect similar waivers. | 22-1

Protection of Wetlands - NASA does not offer a plan to protect wetlands areas. A major facility upgrade is planned along the wetlands boundary. Future Concept 1 shows proposed wind tunnels would be located adjacent to wetlands. We think NASA needs to develop a plan for wetlands enhancement. | 22-2

Pesticide Use - We are concerned about the excessive and unnecessary use of pesticides at Moffett Field. Unfortunately, this use has extended to the wetlands boundaries where it should not be permitted to continue. Has this been reported to and approved by the Army Corps of Engineers? Does NASA plan to continue use of harmful pesticides? What quantities? Why has the environmental impact of pesticides and herbicides not been assessed and reported? | 22-3

Wildlife - NASA reports that birds are routinely poisoned (NASA Ames Environmental Resources Document, June 1992). This practice is prohibited in California and should be discontinued immediately. We are also concerned about proposals to trap and kill feral cats. Currently feral cats are being fed, immunized, cared for and sterilized by volunteers, and we feel that this is the most humane way to deal with this situation. | 22-4

Archaeological Sites - There are numerous archaeological sites on the Moffett property. In the 1970's the Department of the Interior advised NASA to have an archaeologist present during excavation. NASA has ignored the DOI recommendation and/or denied that there | 22-5

has been any excavation. Anyone walking along Stevens Creek can observe excavation in progress most days of the week.

Many other areas have not been addressed. There is no discussion of how NASA and the new resident agencies intend to comply with government mandates on energy and water conservation, solid and hazardous waste reduction, air emission reduction, etc. If NASA cannot demonstrate that they will be able to comply with these laws, should the Agency be granted stewardship of this large area of land ? 22-6

Another serious discrepancy is that NASA's findings do not appear to agree with those of the City of Mountain View. In a recent Draft Environmental Impact Report, the City of Mountain View concluded that for their North Bayshore Development Project there were significant environmental impacts that could not be mitigated. These were primarily concerned with traffic congestion and air pollution. Is it plausible that NASA can mitigate impacts on one side of Stevens Creek but the City of Mountain View cannot mitigate similar impacts on the other side of the creek? 22-7

NASA's Finding of No Significant Impact should be withdrawn. The NASA Ames Research Center's Draft Comprehensive Use Plan and Draft Environmental Assessment should be withdrawn, and redone with public input. The changes resulting from NASA's reuse of the facility should be assessed, not just the impact of possible NASA expansion.

Sincerely,

Debbie Mytels
Executive Director

cc: Dr. Ken K. Munechika, Director, Ames Research Center
Billie J. Mc Garvey, Director, Facilities Engineering Division, Code JX,
NASA Headquarters, Washington, DC 20546-0001

LETTER 22: Debbie Mytels, Peninsula Conservation Center Foundation

22-1: Please refer to Responses 5-8, 10-2, and 18-22.

22-2: Please refer to Responses 1-1, 5-4, and 11-1.

22-3: Please refer to Response 11-6. This is a comment on the alleged existing pesticide use at Moffett Field not on the Environmental Assessment.

22-4: Please refer to Responses 1-1, 5-4, 11-1, and 11-13.

22-5: Please refer to Response 17-28.

22-6: Please refer to Responses 11-6, 11-17, and 11-18.

22-7: Please refer to Response 17-8.

SAN FRANCISCO BAY TRAIL

May 10, 1994

Sandy Olliges
NASA Ames Research Center
Safety, Health, and Medical Services
M/S 218-1
Moffett Field, CA 94035-1000

Dear Sandy:

This letter is in response to NASA's Draft Environmental Assessment of the Moffett Field Comprehensive Use Plan (CUP).

The South Bay Trail Ad Hoc Committee is a group representing private interests, and local, regional and state agencies dedicated to the implementation of the south bay portion of the San Francisco Bay Trail. The Bay Trail is a 400-mile regional network of trails for walkers, runners, bicyclists, and hikers to enjoy and to use as a commute route. We are currently working toward the implementation of the 3.4-mile link between Mountain View Shoreline Park and Sunnyvale Baylands Park. 23-1

We, the South Bay Trail Ad Hoc Committee, are aware of the recently revised Comprehensive Use Plan and appreciate NASA including both the southern and northern Bay Trail alignments for consideration. We are pleased NASA-Ames continues to be committed to working with the South Bay Ad Hoc Committee to implement a Bay Trail route. We are concerned, however, that the Environmental Assessment will not be similarly revised to adequately study the route alternatives recently identified in the CUP. We request that the Environmental Assessment be revised to identify and discuss the potential issues of each Bay Trail alignment and list possible mitigation measures. At this time we also wish to clarify our position on our preferred northern alignment.

On page 53 the Environmental Assessment states: *the earlier version of the Bay Trail alignment was out on Cargill's main levee* . It is unclear whether that statement implies that an alignment on Cargill's levee was included in an earlier version of the Comprehensive Use Plan or that it was an earlier version of the proposed Bay Trail route. The Bay Trail, however, has never identified a trail on Cargill's levee as a preferred alternative.

In researching the connection between Shoreline At Mountain View and Sunnyvale Baylands Park the South Bay Trail Ad Hoc Committee studied four alternative routes, one of which was on portions of the Cargill levee. After several years of research, three of the four alternatives were deemed not feasible and not desirable to the Bay Trail Project. An alignment along Cargill's levee trails would be plagued with problems associated with dredging spoils and a maintenance program that could ultimately close the Bay Trail for years. The Cargill levees are also home to several endangered species, further preventing the option of public use. The fourth route, which is the proposed northern alignment, was identified as the preferred route because:

1) it provides the most direct link between two parks of regional significance;
2) it provides NASA, Lockheed, and Moffett Field employees an opportunity to bicycle or walk to work;

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3) NASA stated in its own documentation that the magnetic testing does not pose a public safety hazard; and
4) the other "safety hazards" mentioned in the Environmental Assessment such as the ordnance magazines, handling pads, firing range, and the end of the runway were previously resolved through discussions with the Navy.

23-1 cont.

The Committee found the southern alignment to be undesirable because it would not physically relate to the bay or wetlands and force Bay Trail users into heavily congested traffic and through industrial, commercial and residential areas. The alignment includes eight intersections with high volumes of traffic. Three of the proposed streets along the southern route are also not wide enough to accommodate bicycle lanes.

To assure protection from 100-year floods, Page 31 make reference to NASA's plans to construct a new levee along its northern boundary. Should it be constructed, this new engineered levee may provide another opportunity for the Bay Trail to connect Sunnyvale Baylands Park and Shoreline At Mountain View.

Based on the above, we strongly urge that the Environmental Assessment be revised to include analysis of both the northern and southern trail alignments. Inclusion of this alignment in both of these documents will be mutually beneficial to the Bay Trail, local jurisdictions and NASA since construction funding can be more easily pursued from outside sources if adequately assessed in appropriate environmental documentation.

Thank you for the opportunity to comment on the Environmental Assessment. If you have any questions or would like to discuss our concerns further, please let us know and we will be happy to meet with you. The South Bay Ad Hoc Committee looks forward to continuing to work cooperatively to link Shoreline at Mountain View and Sunnyvale Baylands Park.

Sincerely,

Jill Keimach
on behalf of the South Bay Ad Hoc Committee

cc: South Bay Ad Hoc Committee

LETTER 23: Jill Keimach, South Bay Ad Hoc Committee

23-1: Please refer to Responses 5-8 and 10-2. The South Bay Ad Hoc Committee's proposed trail route is shown on Figure 9 of this Final Environmental Assessment.

Environmental Assessment
Comprehensive Use Plan
Open Forum
April 18, 1994

Questions:

1. What is the definition of a "major Federal Action" that required this EA? | 24-1

2. Disappointed that there is not a wider range of alternatives. Why was there no consideration of increased residential use? With interest in the technical aspects of the cleanup-the condition of the wetlands suggests that the wetland areas are severely degraded. No options were looked at. What would the future impacts on the landfill be if drainage was changed for instance? | 24-2

3. Will documents such as this be placed in Federal repositories? What about local repositories such as Universities? or the Library of Congress? | 24-3

4. How can you state that there will be no impact if the document is only conceptual in nature? How can predictions be made about the future? Will notice be given for specific projects for public input? | 24-4

5. As a Sunnyvale resident I have noticed more commercial flights circling over the area. Can you explain this? | 24-5

6. As a resident of Mt. View, I thought that with the Navy leaving it would end the constant flights overhead. I don't understand if this is a base closure, why military flights will continue. The concern is that awareness of these issues has not been brought to the public. | 24-6

7. What are C-130's and at what altitude will they be flying? | 24-7

8. If the safety arc is increased will there be additional environmental review? | 24-8

9. Ted Smith-Silicon Valley Although there has been an improvement in environmental review at Ames lately, I feel this is a flawed process. I thought with NASA taking over the land of Moffett | 24-9

Field there would not be other DOD activities. What do these operations have to do with NASA? | 24-9 cont.

10. The Bay Trail may be stopped due to munitions storage. Why will ordnance storage continue? Who has approved the ordnance storage and its continued use? | 24-10

11. Have surrounding areas been notified that air operations will total 80,000? Residents are not aware of the forecasted aircraft. | 24-11

12. The change in the same air basin answer is outrageous. People around here are not going to care if air pollution in the air basin will be the same, they will only care that you are increasing pollution locally. | 24-12

13. There is no reason why the underground tanks should not be yanked out immediately. NASA should commit to their removal as part of the CUP. | 24-13

14. Why hasn't this document been integrated with the previously done West Regional Base Closure EIS/EIR for Moffett Field? | 24-14

15. Will there be an EIS for this Project? Why not? Will mitigation follow NEPA guidelines? | 24-15

16. Are there any provisions for the public to require an EIS? How can we interrupt the NEPA process? | 24-16

17. Will there be another public meeting? There has been a lack of opportunity for public participation. | 24-17

18. Will every project require its own environmental document? | 24-18

19. Have all flights been taken into consideration such as those by Lockheed? | 24-19

20. I think its good that you are having this meeting and hope that these comments are taken into consideration. | 24-20
One of the main reasons for the Navy closure was because this area has congested air operations. There seems to be a contradiction if NASA will use 80,000 operations since it is congested in this area. The public is going to perceive this as a significant impact when you

reach this level again. The public thought NASA meant no planes. Public input is needed in the future.

21. NEPA requires a range of alternatives. The possibility of no fuel storage or munitions storage and other like issues have not been explored in the CUP. NASA can not assume that these levels will just go back up. | 24-21

22. It is not adequate to use weighted noise levels. They do not take everything into account. There is a problem with noise along the border with Lockheed. You should place a length of K-rail (similar to walls along Hwy. 101) along the fence and the Perimeter Road. This would reduce sound radiation and static significantly. | 24-22

23. The 40 x 80 wind tunnel should be modified to reduce the low frequency rumbling. By upgrading the exoskeleton you can filter the low frequency rumblings. The levels can cause human health effects. | 24-23

24. All the tanks should be replaced with double wall tanks on a one to one basis. | 24-24

25. Why is the bridge planned? | 24-25

26. How can you say traffic will only increase 6%? NASA can not assume that levels will go up or down due to trip reduction programs and the addition of light rail. | 24-26

27. Where would the proposed Air and Space Center be located? | 24-27

28. Why can't it be located on NASA grounds? What about Hangar 1? | 24-28

29. As landlord will NASA be responsible for noise complaints, day to day operations, etc.? | 24-29

30. What involvement does NASA have with the Navy's cleanup? Is there any way to speed the up completion of the cleanup. | 24-30

31. Has all funding been approved to accomplish the clean up? | 24-31

32. Do you count an operation as both a helicopter taking off and landing? | 24-32

33. It does not seem appropriate for NASA to deal with DOD since it is a civilian agency. It should be open and accessible to at least 50% of the civilian population. It seems like a conflict of interest. Let the Air Force deal with the DOD. | 24-33

34. What is your personal/professional opinion of the quality of wetlands on base? How can we keep the species intact? | 24-34

35. I am very concerned that the CUP does not deal with wetlands management. There are well maintained wetlands adjacent to these. | 24-35

36. The Navy is doing an ecological assessment that shows the wetlands are truly degraded. I feel you are limiting yourself by not looking at other alternatives and continuing the present use. These problems need to be addressed. | 24-36

37. There was no discussion at previous meetings that operations such as this would continue. I think you have mislead the public. | 24-37

38. The scope of the project was not presented accurately to the public. The narrow range of options did not come out until recently. | 24-38

39. Housing is part of the action of this project, as is the transfer or closure and you are not adequately addressing these areas. | 24-39

40. You can not do a FONSI if you do not analyze anything. | 24-40

41. Tom Rivell- How can there be no significant impact? Actions identified are not clearly defined. Impacts analyzed have nothing to do with what is presently going on at the site. The Navy EIS was never completed-why has there been no reference included in the EA. What will the new personnel be doing on the site? The document does not answer this question. I propose you withdraw the EA and analyze all impacts. Cumulative impacts are not addressed in the CUP nor the EA. | 24-41

42. Is the Air Force doing an EA for their area? What area is this? They should be looking at mitigation measures for current problems rather than future projections. | 24-42

43. Why are there no solutions or mitigations for existing impacts? | 24-43

44. Who made the decision to locate helicopters here? What recourse do citizens have regarding the impacts caused by helicopters? | 24-44

45. Where local communities consulted about the helicopters? This should address an alternative without the helicopters. | 24-45

46. Can you make the decision locally to not allow the helicopters to come here? | 24-46

47. Have sonic booms or helicopter "wash" been analyzed? These create public nuisances. There is a code that states "that which annoys the public may be destroyed"? (or something to that effect) | 24-47

48. Have impacts that could be created by the NWTC been addressed? How can projections be made about this without knowing the effects on the environment for sure? | 24-48

49. What commitments do RAs have with NASA? Can NASA make the decision on the approval of leases? How long are the leases? | 24-49

50. I feel dismayed that the public has not had input into this process. This is supposed to be a base closure. Does the City Council endorse the Plan. I am shocked to see the citizens are not involved in the decision process. | 24-50

51. The spirit of NEPA has not been followed here. There is no analysis of cumulative impacts. The EA does not assess what is going on the site presently. The wind tunnels are already a problem now, how can NASA even consider additional tunnels. You can hear the wind tunnels clear across town. | 24-51

52. Can you clarify what is the purpose of ordnance storage at NASA? | 24-52

53. Who will sign off on this process. How can we get involved in the projects that have and impact? At other places we get to talk to the decision makers. Personal appeal is very important. Please pass on our concerns. | 24-53

LETTER 24: Public Meeting; April 18, 1994

24-1: "Major federal action" includes actions with effects that may be major and which are potentially subject to federal control and responsibility. Major federal actions include adoption of formal plans, such as official documents prepared or approved by federal agencies which guide or prescribe alternative uses of federal resources, upon which future agency actions will be based. Adoption of Future Concept 1 of the Comprehensive Plan is the proposed federal action assessed by this Environmental Assessment.

24-2: Please refer to Response 5-1.

24-3: Copies of all NASA Ames Research Center environmental documents are placed in the Ames Library, the City of Sunnyvale public library and San Jose State University. Copies are not placed in the Library of Congress.

24-4: Please refer to Response 15-8.

24-5: This comment asks about use of airspace by commercial airlines. It is not a comment on the Comprehensive Use Plan or the Environmental Assessment, therefore a response is not provided.

24-6: Please refer to Responses 5-1, 5-12 and 15-4. Moffett Field is not a base closure; it is a realignment.

24-7: They are similar to P-3s in size and will fly at similar altitudes.

24-8: There are no plans to increase the safety arc. If a proposal is made, additional environmental review would be required.

24-9: Please refer to Responses to Letters 5 and 6.

24-10: Please refer to Responses 5-8 and 10-2.

24-11: Please refer to Response 5-12.

24-12: Please refer to Response 5-5.

24-13: Please refer to Responses 5-6 and 9-9.

24-14: Adoption of Future Concept 1 of the Comprehensive Plan is the proposed federal action assessed by this Environmental Assessment.

24-15: It is not expected that an EIS will be required for this project. Adoption of the mitigation measures outlined in this Environmental Assessment are expected to prevent any significant environmental impacts potentially associated with the project.

24-16: An EIS is required if the proposed federal action has the potential to "significantly affect the quality of the human environment". With adoption and implementation of the outlined mitigation measures, no significant impacts are anticipated.

24-17: Please refer to Response 5-12.

24-18: Please refer to Response 15-8 and 16-3.

24-19: All flights occurring at Moffett Field have been taken into consideration.

24-20: Please refer to Responses 5-1, 5-12 and 17-4. Moffett Field is not a base closure.

24-21: Please refer to Response 5-1.

24-22: Weighted noise measurements are professionally accepted measurement of environmental noise. This comment also requests a noise barrier be installed to mitigate alleged existing noise but does not address the Environmental Assessment.

24-23: This comment requests changes in existing operating procedures and is not a comment on the Comprehensive Use Plan or the Environmental Assessment.

24-24: Please refer to Response 5-6.

24-25: The bridge across Stevens Creek is planned to provide access to Ames Research Center from Mountain View through a connection with Charleston Road.

24-26: The increase in traffic is based upon the increase in employment. and trips generated by new uses. Since employment is only expected to increase by 6 percent from existing levels, traffic is only expected to increase by a maximum of 6 percent which is not expected to create a significant impact.

24-27: It is currently unknown where the Air and Space Center will be located or if it will ultimately be developed. There is discussion to locate it off the Moffett Field site in the City of Mountain View.

24-28: This comment is related to NASA's operating procedures. It is not a comment on environmental issues associated with the Comprehensive Use Plan or the Environmental Assessment.

24-29: Yes; as "landlord" NASA will be responsible for noise complaints and day-to-day operations.

24-30: Please refer to Response 9-9.

24-31: This is a comment on NASA's existing operations, not on the Comprehensive Use Plan or the Environmental Assessment.

24-32: An operation consists of one landing or one takeoff. For example 60,000 annual operations would presumably consist of 30,000 landings and 30,000 takeoffs.

24-33: Please refer to Response 5-1.

24-34: Please refer to Responses 1-1, 5-4, and 11-1.

24-35: Please refer to Responses 1-1, 5-4, and 11-1.

24-36: Please refer to Responses 1-1, 5-1, 5-4, and 11-1.

24-37: Please refer to Response 5-12.

24-38: Please refer to Response 5-1 and 5-12.

24-39: Please refer to Responses 17-1, 17-2, and 17-5.

24-40: Please refer to Response 17-1.

24-41: Please refer to Responses 15-8, 17-1, 17-4, 17-5, 19-18, 19-19, and 24-1. This Environmental Assessment does not analyze the impacts of existing conditions. It only analyzes the impacts of the "proposed action", as required by NEPA.

All impact assessments in the Environmental Assessment take into consideration the cumulative impacts of growth under the proposed Future Concept 1 of the Comprehensive Use Plan. Existing conditions are used as the baseline development scenario.

24-42: Please refer to Response 19-18. This Environmental Assessment does not analyze the impacts of existing conditions. It only analyzes the impacts of the "proposed action", as required by NEPA.

24-43: Please refer to Response 19-18. This Environmental Assessment does not analyze the impacts of existing conditions. It only analyzes the impacts of the "proposed action", as required by NEPA.

24-44: The noise and air quality analyses contained in this Environmental Assessment included the projected operations of the 24 new helicopters.

24-45: Please refer to Responses 5-1 and 5-12.

24-46: This is a comment on the federal decision-making process, not on the Comprehensive Use Plan or the Environmental Assessment.

24-47: The noise analyses contained in this Environmental Assessment includes the projected operations of the 24 new helicopters.

24-48: The National Wind Tunnel Complex is not part of this proposal. Environmental review for any new or altered wind tunnel facilities will occur, as required in Mitigation Measures SERV-1, RISK-4, and NOISE-4 at the time a specific development is proposed.

24-49: This is a comment on the federal leasing process, not on the Comprehensive Use Plan or the Environmental Assessment. However, resident agencies and NASA enter into Inter-Agency Agreements.

24-50: Please refer to Response 5-12. This is not a base closure.

24-51: Please refer to Responses 24-43 and 24-48. All impact assessments in the Environmental Assessment take into consideration the cumulative impacts of growth under the proposed Future Concept 1 of the Comprehensive Plan Update. In addition, specific cumulative impact analyses have been added to the traffic and air quality assessments in this Environmental Assessment.

24-52: This is a question about the purpose of the existing ordnance storage at Moffett Field, not on the Comprehensive Use Plan or Environmental Assessment. Although NASA will have custodial responsibilities for the site, Moffett Field will continue to be utilized by military agencies. Several agencies were already at Moffett before the Naval Air Station departure, including the California Air National Guard. Other reserve units are relocating to Moffett as a result of other local base closures (Navy Reserve, Army Reserve among others). For this reason, operation of the ordinance bunkers will continue to be needed on-site so that these agencies can carry out their missions. Relocating the bunker elsewhere is not feasible.

24-53: All comments are taken into consideration by NASA management. Written comments have been incorporated into this Final Environmental Assessment. The Finding of No Significant Impact and Environmental Assessment are reviewed and approved by the Director of NASA-Ames Research Center and by the Director of the Environmental Management Division of NASA Headquarters in Washington D.C. The FONSI, if issued, will be reflected in the response to comments. Please refer to Response 5-12.

Chapter VIII
REFERENCES AND CONTACTS

■ ■ ■

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Lynne Trulio, Ph.D. Quarterly Update 4 - Study of the Ecology of the Burrowing Owl at Moffett Naval Air Station. Department of

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B. Individuals and Agencies Consulted

Carol Allen. Bay Area Air Quality Management District (BAAQMD).

Rose Ashford. NASA Ames Research Center.

Associate of Bay Area Governments (ABAG).

Dan Belik, Bay Area Air Quality Management District (BAAQMD).

Vicki Booth, Environmental Protection Agency (EPA).

California Air Resources Board.

John D. Gordon. Airfield Operations, Bentley.

Roxanne Johnson. Environmental Protection Agency (EPA).

Bruce Jordan. Environmental Protection Agency (EPA).

Kathleen Kovar. Natural Resources Department. Ames Research Center.

Tush Mangot. Bay Area Air Quality Control Management District (BAAQMD).

Brice McQueen. City of Sunnyvale Planning Department.

Elaine Mercier. Environmental Protection Agency (EPA).

Michael Percy. City of Mountain View Planning Department.

Pat S. Samson. Bay Area Air Quality Management District (BAAQMD).

Omid Shakeri. City of Sunnyvale Planning Department.

David Thompson. Environmental Protection Agency (EPA).

Appendix A
NOISE ANALYSIS INPUT DATA

■ ■ ■

MOFFETT FIELD
NOISE MODELING ASSUMPTIONS

RUNWAY USE

	14L	14R	32L	32R
VFR (Touch & Gos)	4.0%	5.8%	46.8%	43.4%
IFR	8.6%	4.5%	35.0%	51.9%

TIME OF DAY DISTRIBUTION

	DAY 7AM-7PM	EVE. 7PM-10PM	NIGHT 10PM-7AM
VFR (Touch & Gos)	80.0%	20.0%	0.0%
IFR	70.0%	20.0%	10.0%

IFR FLIGHT TRACK UTILIZATION

1992/93 BASE YEAR:

	STRAIGHT	SOUTHLAND-7	TO/FROM BAY
ARRIVALS:			
AIRCRAFT	100%		
HELICOPTERS	100%		
DEPARTURES:			
AIRCRAFT	50%	50%	
HELICOPTERS	50%	50%	

YEAR 2010 FORECAST CONDITIONS:

	STRAIGHT	SOUTHLAND-7	TO/FROM BAY
ARRIVALS:			
AIRCRAFT	100%		
HELICOPTERS			100%
DEPARTURES:			
AIRCRAFT	50%	50%	
HELICOPTERS			100%

Appendix B
AIRCRAFT EMISSIONS ANALYSIS

■ ■ ■

— AIRCRAFT —

POLLUTANT EMISSIONS

NASA Fleet
FLEET DESIGNATION:

Moffett Field
AIRPORT NAME:

BaseYear – 1992/93
FLEET OPERATION & DURATION

Aircraft-Mfg. / Engine-Manufacturer	**Aircraft Model** / Engine Model	No. Of Engines	**LTO Cycles**	**Operating Times By Mode (min.)** T/I-OUT	TO	CO	AP	T/I-IN	**Emissions By Pollutant (lbs.)** Hydrocarbons	Carbon Monoxide	Nitrogen Oxides
VULTEE W	**A-35/B** R-1820	1	1,187	6.5	0.6	5.0	4.6	6.5	9,046.34	66,569.79	392.90
LOCKHEED GE	**C-5A** TF34-GE-400	4	73	19.0	0.5	2.5	4.5	7.0	939.78	4,995.22	600.28
MCDONNELL DOUG P&W	**C-9A** JT8D-9	2	37	19.0	0.5	2.5	4.5	7.0	365.77	1,305.81	549.33
LOCKHEED ALL	**C-130H** T56-A-15	4	1,132	19.0	0.5	2.5	4.5	7.0	14,683.67	19,108.55	10,158.20
LASC-GEORGIA P&W	**C-141B** TF33-P-7	4	165	19.0	0.5	2.5	4.5	7.0	22,991.04	23,468.40	4,203.71
CESSNA AVC LYC	**C-152** O-320	1	2,355	6.5	0.6	5.0	4.6	6.5	528.63	30,755.05	67.07
MCDONNELL DOUG P&W	**DC-8-50** JT3D-7	4	128	19.0	0.5	2.5	4.5	7.0	27,867.26	33,778.84	3,325.39
GRUMMAN GE	**F/A-18** F404-GE-400	2	1,004	6.5	0.4	0.5	1.6	6.5	16,004.19	46,578.85	12,406.55
SIKORSKY AVC LYC	**HH-60A** T53-L-11D	2	2,446	3.5	0.0	6.5	6.5	3.5	5,346.85	4,559.45	5,413.14
GATES GE	**LEAR25D** J85-GE-2	2	128	19.0	0.5	2.5	4.5	7.0	798.68	9,011.07	477.06
SIKORSKY GE	**MH-53E** T64-GE-415	3	73	3.5	0.0	6.5	6.5	3.5	184.72	644.23	755.21

— AIRCRAFT —

POLLUTANT EMISSIONS

NASA Fleet
FLEET DESIGNATION:

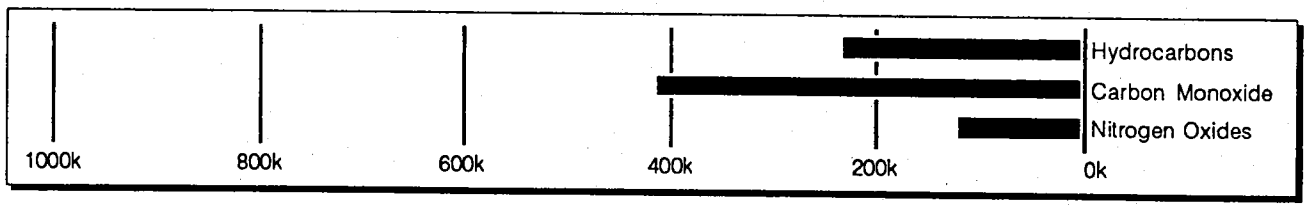
Moffett Field
AIRPORT NAME:

BaseYear - 1992/93
FLEET OPERATION & DURATION

Aircraft-Mfg. / Engine-Manufacturer	**Aircraft Model** / Engine Model	No. Of Engines	**LTO Cycles**	**Operating Times By Mode** (min.) T/I-OUT	TO	CO	AP	T/I-IN	**Emissions By Pollutant** (lbs.) Hydrocarbons	Carbon Monoxide	Nitrogen Oxides
LOCKHEED / ALL	**P-3B** / T56-A-15	4	9,290	19.0	0.5	2.5	4.5	7.0	120,551.46	156,879.25	83,397.75
LOCKHEED / P&W	**U-2** / J57-P-420	1	128	6.5	0.4	0.5	1.6	6.5	2,936.30	3,623.48	324.54
BEECH / P&W	**UC-12B** / PT6A-41	2	785	19.0	0.5	2.5	4.5	7.0	10,956.75	12,871.64	633.80
BELL / AVC LYC	**UH-1** / T53-L-11D	1	347	3.5	0.0	6.5	6.5	3.5	379.34	323.48	384.05
Totals:			**19,273** — LTOs —						**233,580.75** — LBS —	**414,473.07** — LBS —	**123,088.95** — LBS —
Fleet Average: (lbs/Lto)									**12.12** — AVG —	**21.50** — AVG —	**6.39** — AVG —

OPERATING MODES

- T/I-OUT: ..... Taxi/Idle Out
- TO: ..... Takeoff
- CO: ..... Climbout
- AP: ..... Approach
- T/I- IN: ..... Taxi/Idle In
- LTO: ..... Landing & Takeoff



COMMENTS...

IDENTIFIER: Brady & Associates (Moffett)
DATE: 01/07/94
TIME: 4:25 PM
Moffett base operational fleet using default times in mode.

— AIRCRAFT —

POLLUTANT EMISSIONS

NASA Fleet
FLEET DESIGNATION:

Moffett Field
AIRPORT NAME:

Forecast Year – 2010
FLEET OPERATION & DURATION

Aircraft-Mfg. / Engine-Manufacturer	**Aircraft Model** / Engine Model	No. Of Engines	**LTO Cycles**	**Operating Times By Mode** (min.) T/I-OUT	TO	CO	AP	T/I-IN	**Emissions By Pollutant** (lbs.) Hydrocarbons	Carbon Monoxide	Nitrogen Oxides
LOCKHEED GE	**C-5B** TF34-GE-400	4	274	19.0	0.5	2.5	4.5	7.0	3,527.40	18,749.17	2,253.10
MCDONNELL DOUG P&W	**C-9A** JT8D-9	2	73	19.0	0.5	2.5	4.5	7.0	731.53	2,611.62	1,098.66
LOCKHEED ALL	**C-130H** T56-A-15	4	7,702	19.0	0.5	2.5	4.5	7.0	99,943.71	130,061.41	69,141.26
LASC-GEORGIA P&W	**C-141B** TF33-P-7	4	256	19.0	0.5	2.5	4.5	7.0	35,709.49	36,450.92	6,529.16
MCDONNELL DOUG P&W	**DC-8-50** JT3D-7	4	128	19.0	0.5	2.5	4.5	7.0	27,867.26	33,778.84	3,325.39
GRUMMAN GE	**F/A-18** F404-GE-400	2	2,099	6.5	0.4	0.5	1.6	6.5	33,458.95	97,379.50	25,937.59
GULFSTREAM AERO RR	**GULFSTREAM III** SPEY MK511-8	2	55	19.0	0.5	2.5	4.5	7.0	184.32	1,593.49	908.05
GULFSTREAM AERO RR	**GULFSTREAM IV** TAY MK611-8	2	55	19.0	0.5	2.5	4.5	7.0	166.34	1,083.85	691.55
SIKORSKY AVC LYC	**HH-60A** T53-L-11D	2	9,180	3.5	0	6.5	6.5	3.5	20,071.17	17,115.42	20,320.03
GATES GE	**LEAR25D** J85-GE-2	2	128	19.0	0.5	2.5	4.5	7.0	798.68	9,011.07	477.06
SIKORSKY GE	**MH-53E** T64-GE-415	3	1,223	3.5	0	6.5	6.5	3.5	3,094.05	10,790.78	12,649.68

— AIRCRAFT —

POLLUTANT EMISSIONS

NASA Fleet
FLEET DESIGNATION:

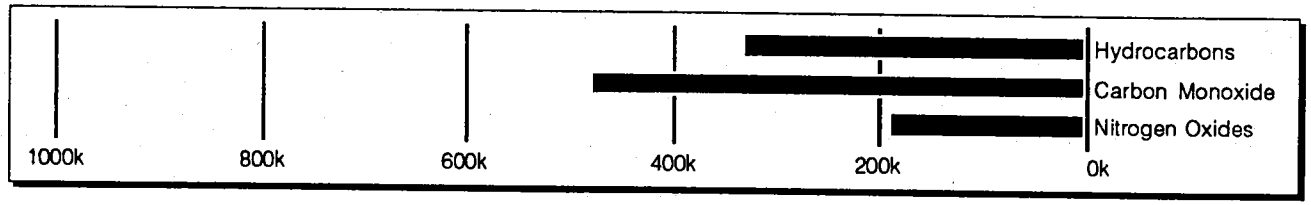
Moffett Field
AIRPORT NAME:

Forecast Year – 2010
FLEET OPERATION & DURATION

Aircraft-Mfg. Engine-Manufacturer	**Aircraft Model** Engine Model	No. Of Engines	**LTO Cycles**	**Operating Times By Mode** (min.) T/I-OUT	TO	CO	AP	T/I-IN	**Emissions By Pollutant** (lbs.) Hydrocarbons	Carbon Monoxide	Nitrogen Oxides
LOCKHEED ALL	**P-3B** T56-A-15	4	4,818	19.0	0.5	2.5	4.5	7.0	62,532.68	81,376.69	43,260.24
LOCKHEED P&W	**U-2** J57-P-420	1	128	6.5	0.4	0.5	1.6	6.5	2,936.30	3,623.48	324.54
BEECH P&W	**UC-12B** PT6A-41	2	2,884	19.0	0.5	2.5	4.5	7.0	40,246.84	47,280.74	2,328.11
BELL AVC LYC	**UH-1** T53-L-11D	1	986	3.5	0	6.5	6.5	3.5	1,077.35	918.70	1,090.70
Totals:			**29,988** — LTOs —						**332,346.05** — LBS —	**481,034.87** — LBS —	**190,335.11** — LBS —
Fleet Average: (lbs/Lto)									**11.08** — AVG —	**16.04** — AVG —	**6.35** — AVG —

OPERATING MODES

- T/I-OUT: ..... Taxi/Idle Out
- TO: ..... Takeoff
- CO: ..... Climbout
- AP: ..... Approach
- T/I- IN: ..... Taxi/Idle In
- LTO: ..... Landing & Takeoff



COMMENTS...

IDENTIFIER: Brady & Associates (Moffett)
DATE: 01/18/94
TIME: 2:32 PM

Moffett forecast operational fleet using default times in mode. Total emissions for Moffett.

Appendix C
LIST OF AGENCIES, ORGANIZATIONS, AND INDIVIDUALS RECEIVING THE ENVIRONMENTAL ASSESSMENT

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Kathleen Kovar, Technical Contract Monitor

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Sandy Olliges, Environmental Program Manager

MOFFETT FIELD
COMPREHENSIVE USE PLAN
ENVIRONMENTAL ASSESSMENT

FIGURE 2

Comprehensive Use Plan Concept 1

LEGEND

- New Buildings
- Change of Use
- New Aircraft Ramp
- Fuel Farms
- New Wind Tunnel Facilities
- New Gate
- Proposed Bridge

SCALE IN FEET
0 250 500 1000 2000

NASA

MOFFETT FIELD
COMPREHENSIVE USE PLAN
ENVIRONMENTAL ASSESSMENT

FIGURE 3

Future Concept 2 Alternative

LEGEND

- New Buildings
- Change of Use
- New Aircraft Ramp
- Fuel Farms
- New Wind Tunnel Facilities
- New Gate
- Proposed Bridge

SCALE IN FEET
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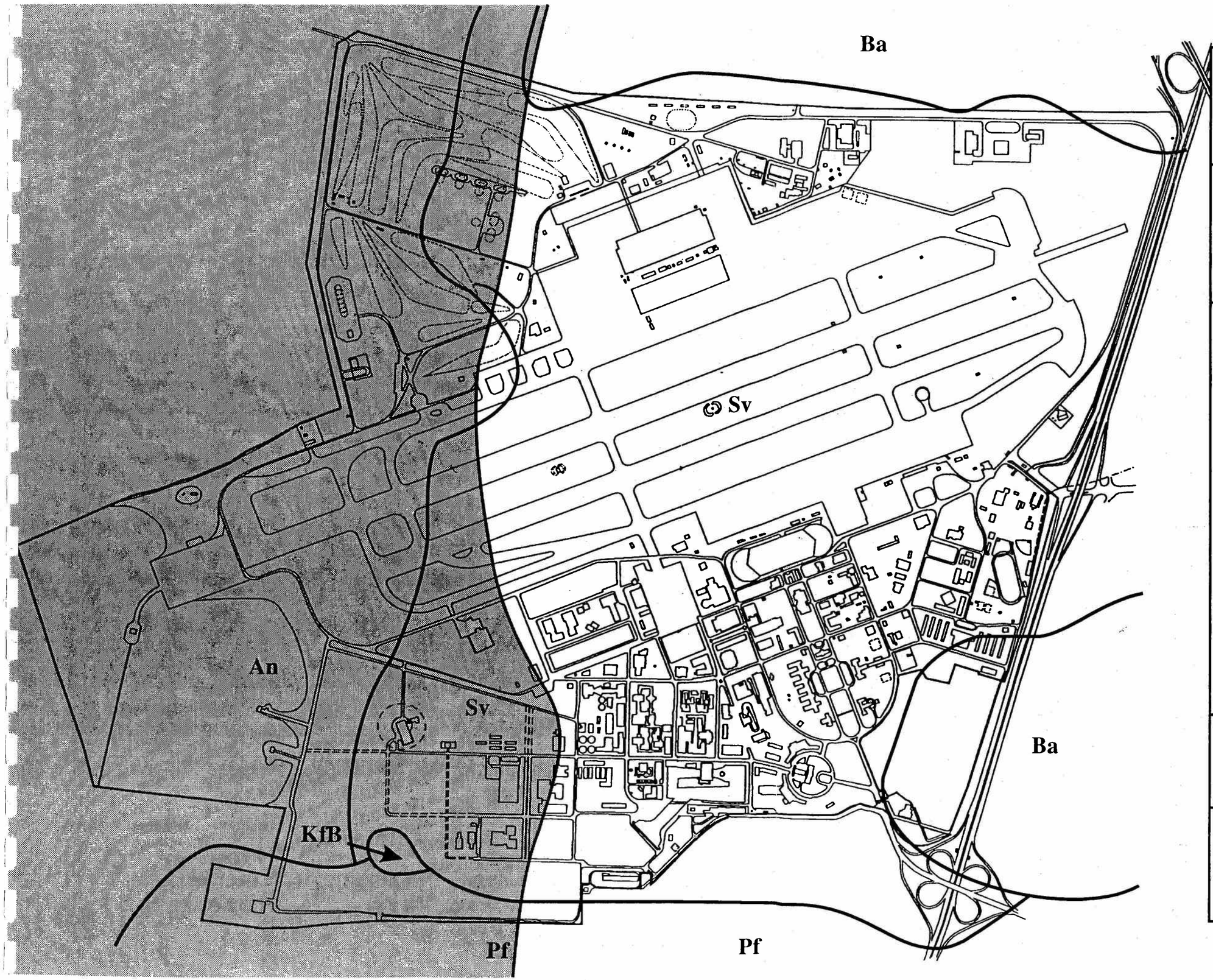
NASA



MOFFETT FIELD
COMPREHENSIVE USE PLAN
ENVIRONMENTAL ASSESSMENT

FIGURE 4

Soils and Flood Zone Map

LEGEND

Sv	Sunnyvale Silty Clay, Drained
Ba	Bayshore Clay Loam
An	Alviso Clay
Pf	Pacheco Loams, Clay Substratum
KfB	Kitchen Middens

100-Year Tidal Flood Plain

Note: Though Kitchen Middens are shown on this map, no indication of their existence was revealed in a archelogical survey of the site in 1993.

Source: Soil Conservation Service.
U.S. Geologic Survey Base Map. 1970

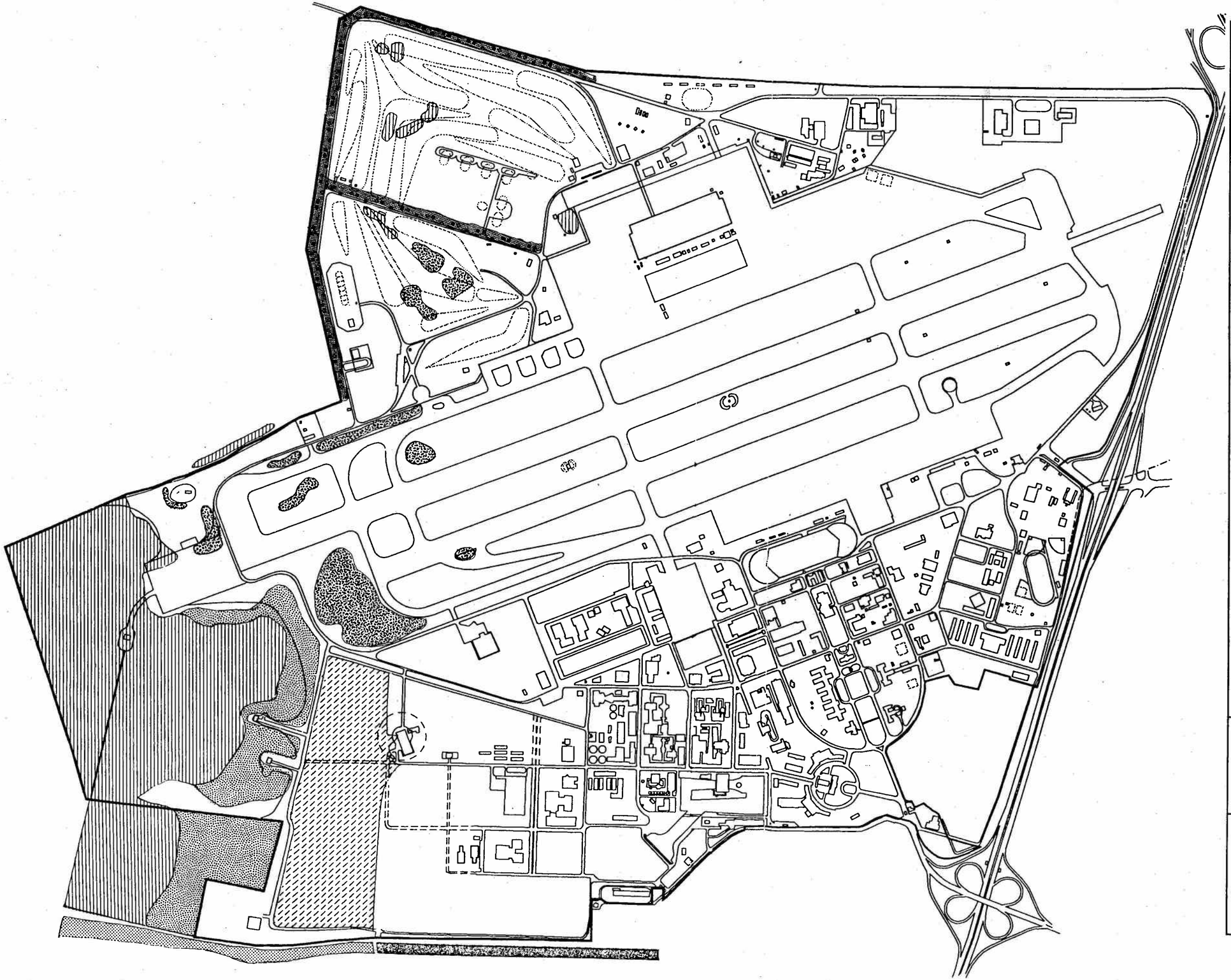
SCALE IN FEET
0 250 500 1000 2000

NASA

MOFFETT FIELD
COMPREHENSIVE USE PLAN
ENVIRONMENTAL ASSESSMENT

FIGURE 5

General Habitat Locations



LEGEND

- Diked Brackish Marsh
  - Potential Delta Tule Pea Habitat
  - Possible Salt Marsh Harvest Mouse Habitat
  - Salt Marsh Yellowthroat Habitat
- Diked Salt Marsh
  - Potential Delta Tule Pea Habitat
  - Potential Pt. Reyes Bird's Beak Habitat
  - Salt Marsh Harvest Mouse Habitat
  - Salt Marsh Yellowthroat Habitat
- Isolated Seasonal Marsh
- Constructed Ponds
- Tidal Salt Marsh
  - Potential Pt.Reyes Bird's Beak Habitat
  - Salt Marsh Yellowthroat Habitat
  - Clapper Rail Habitat
- Tidal Brackish Marsh
  - Potential Pt. Reyes Bird's Beak Habitat
  - Salt Marsh Yellowthroat Habitat
  - Clapper Rail Habitat
- Non-Tidal Intermittent Streams
  - San Francisco Forktail Damselfly Habitat
  - Salt Marsh Yellowthroat Habitat

Source: WESCO, Phase I Site-wide Qualitative Habitat and Receptor Characterization Study, NAS Moffett Field, October 1993

SCALE IN FEET
0 250 500 1000 2000

NASA

MOFFETT FIELD
COMPREHENSIVE USE PLAN
ENVIRONMENTAL ASSESSMENT

FIGURE 6

Burrowing Owl Habitat and Sightings

LEGEND

- Burrowing Owl Habitat
- Burrow or Burrowing Owl Sighting

Source: Quarterly Update 4 – Study of the Ecology of the Burrowing Owl at Moffett NAS. Dr. Lynne Trulio, San Jose State University, June 21, 1993

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FIGURE 9

Proposed Bay Trail and NASA's Safety Concerns

LEGEND

- Ordnance and Weapons Storage
- Outdoor Aeronautics Research Facility (OARF) Safety Clearance
- Magnetic Isolation Zone
- Potential Bay Trail (southern route under study)
- South Bay Ad Hoc Committee's Proposed Bay Trail (not approved by NASA)
- Runway Clear Zone

Source: NASA

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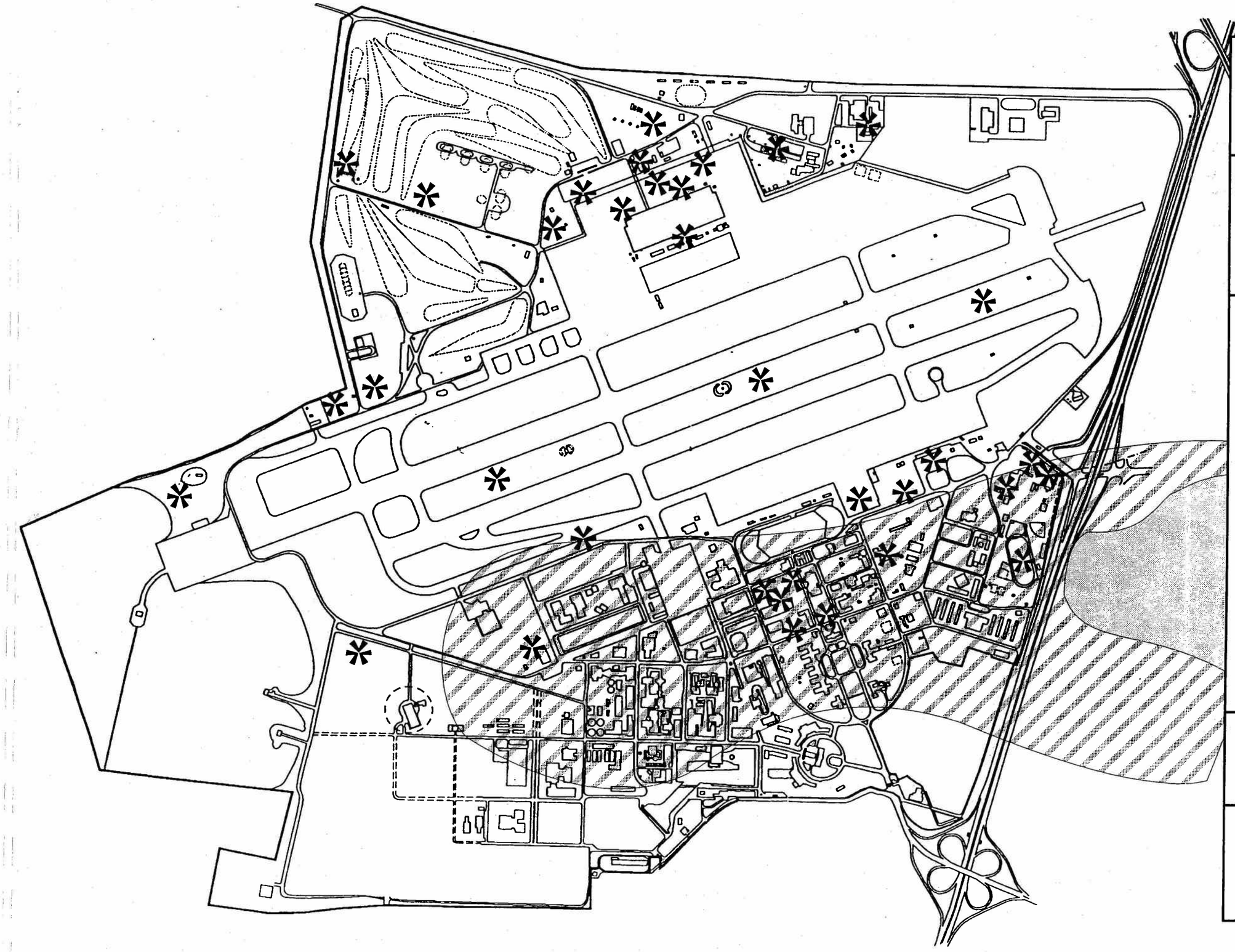
FIGURE 10

Hazardous Waste Sites



LEGEND

- PA/SI Contamination Site
- Plume of Contamination from MEW Superfund Site
- MEW Superfund Site

Note: Though the PA/SI identifies 19 different types of sites, the total number of waste sites exceeds 19. For more detail, please see the Preliminary Assessment itself.

Source: Preliminary Assessment Site Investigation PA/SI. Naval Energy and Environmental Support Activity (NEESA). 1983/1984., and Erier and Kalinowski, Inc. 1992

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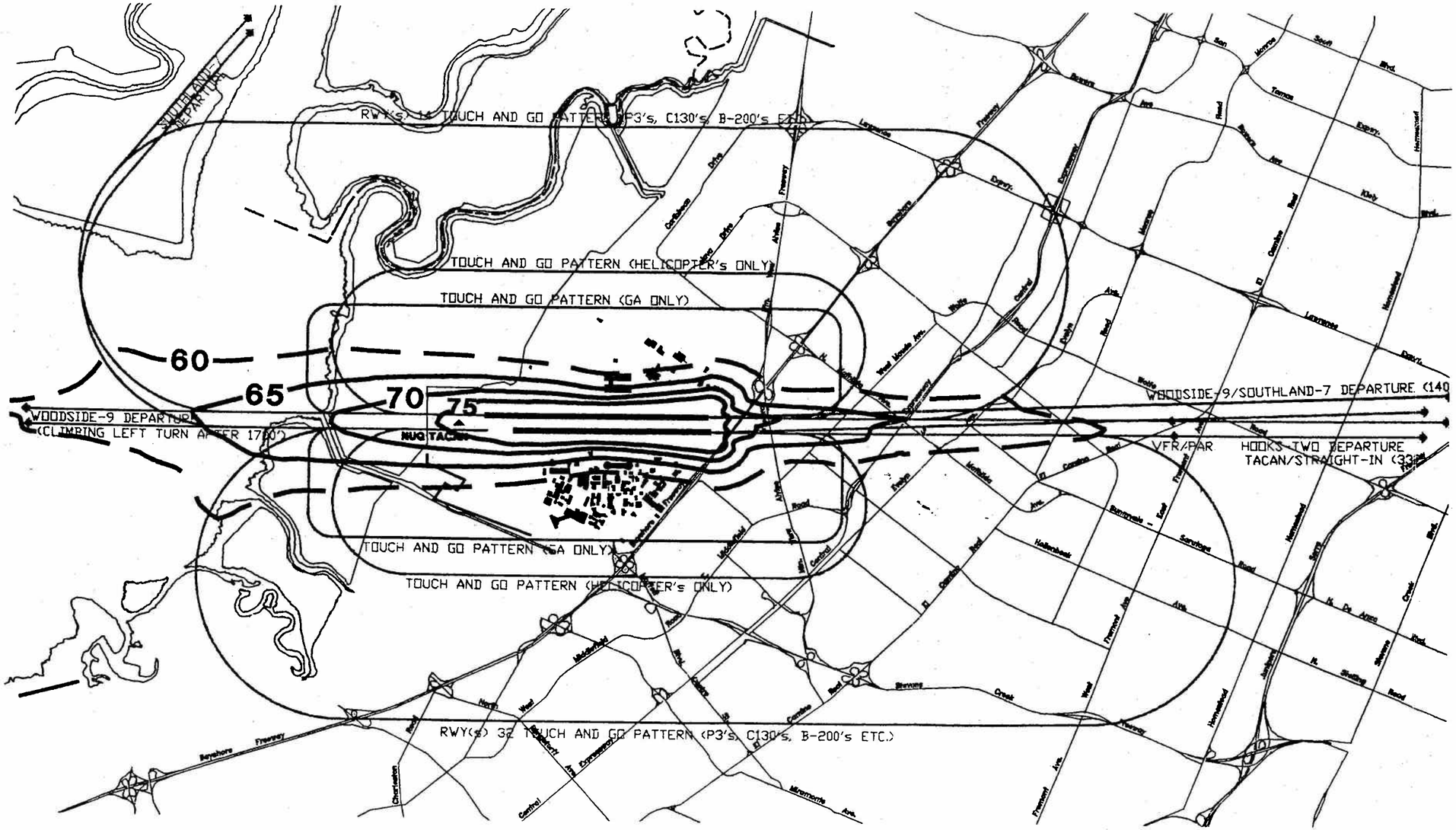

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FIGURE 14

1992/93 Base Year Noise Exposure Conditions (CNEL)

LEGEND

- Major IFR/VFR Flight Tracks
- CNEL Noise Contours (65-75 dB)
- CNEL Noise Contour (60 dB)

Source: P & D Aviation

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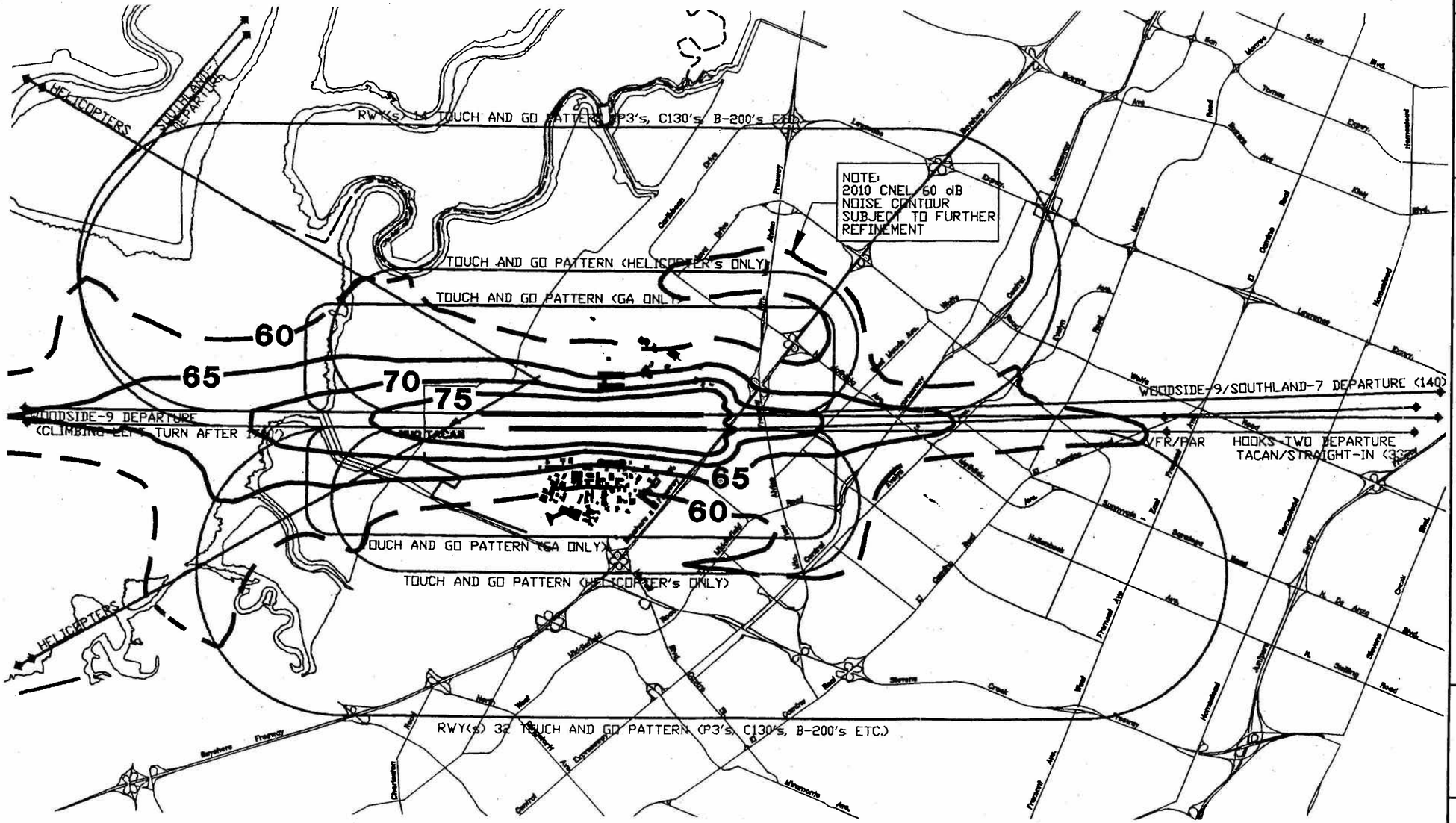
FIGURE 15

Unmitigated Year 2010 Forecast Noise Exposure Conditions (CNEL)



LEGEND

- Major IFR/VFR Flight Tracks
- CNEL Noise Contours (65-75 dB)
- CNEL Noise Contour (60 dB)

Source: P & D Aviation

SCALE IN FEET
0 1250 2500 5000 10000

NASA

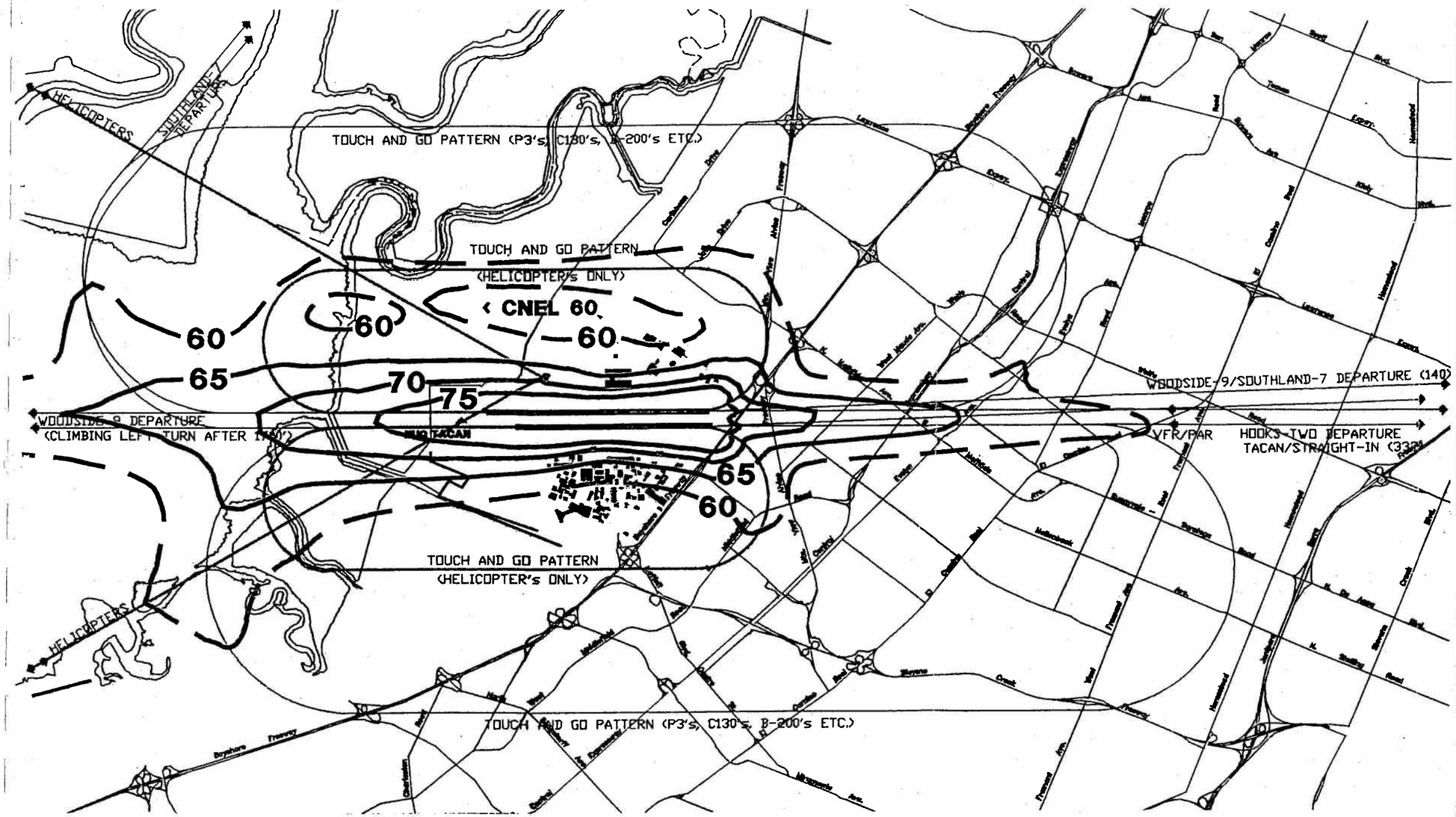


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FIGURE 16

Mitigated Year 2010 Forecast Noise Exposure Conditions (CNEL)

LEGEND

- **Major IFR/VFR Flight Tracks**
- **CNEL Noise Contours (65-75 dB)**
- **CNEL Noise Contour (60 dB)**

Source: P & D Aviation

SCALE IN FEET
0 1250 2500 5000 10000

NASA