

NAS Moffett Field (189A)  
COMNAVFACENGCOM (1121B)  
NEESA (112E)

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N00236.000350  
MOFFETT FIELD  
SSIC NO. 5090.3

Martin Marietta Energy Systems, Inc (Ms. Paula Pritz)  
International Technology Corp. (Mr. Keith Bradley)

22 APR 1988

Agency for Toxic Substances and Disease Registry  
Attn: Mr. Don Hawkins, Health Advisor (Code T-6)  
215 Fremont Street  
San Francisco, CA 94105

Subj: AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY HEALTH ASSESSMENT FOR  
NAVAL AIR STATION MOFFETT FIELD, CA

Section 104 (1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), states that a health assessment must be performed by the Agency for Toxic Substances and Disease Registry (ATSDR) for each facility on the National Priority List (NPL). To assist your agency to perform a health assessment for Naval Air Station, Moffett Field, California, we have provided Mr. Don Hawkins of your agency in person on April 19, 1988 the necessary information required to complete such an assessment. The information consisted of the following:

- (1) ATSDR Site Summary form
- (2) Cease and Desist Order #87-125 (RMQCB, 22 Sept 1987)
- (3) Initial Assessment Study of NAS Moffett Field (NEESA, Apr 1984)
- (4) Confirmation Study (Earth Sciences Associates, Apr 1986)
- (5) Potential Conduits Investigation (Kennedy/Jenks/Chilton, Jan 1986)
- (6) Volume II: Sampling and Analysis Plan (IT Corporation, Mar 1988)

Should you need additional information to complete the health assessment, the point of contact is the Commander, Naval Facilities Engineering Command (Attn: Mr. Richard Seraydarian, Code 1146RS or Ms. Kathy Nakazawa, Code 1146KN, (415) 877-7502).

Sincerely,

Original signed by:

Alex E. Dong  
Head, Environmental Restoration Section

Copy to:  
 Environmental Protection Agency (Attn: Mr. Lewis Mitani)  
 National Oceanic and Atmospheric Administration (Ms. Sharon Christopherson)  
 U.S. Fish and Wildlife Service (Mr. Don Palawski)  
 California Department of Fish and Game (Mr. Mike Rugg)  
 San Francisco Bay National Wildlife Refuge (Ms. Jean Takekawa)  
 California Regional Water Quality Control Board (Mr. Tom Berkins)  
 California Water Resources Control Board (Mr. Gil Torres)  
 California Department of Health Services, San Francisco (Mr. Chien Kao)  
 Santa Clara Valley Water District (Mr. Tom Iwamura)  
 Santa Clara County Health Department (Mr. Charles Nicholson)  
 City of Mountain View (Mr. Russ Frazier)  
 City of Sunnyvale (Mr. Dan Firth)  
 Project Coordinator, MEW Study Area (Mr. George Gullage)

2) 1146KN 4/22  
1) 1146KN M

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CERCLIS NO.  
Date Prepared APRIL 14, 1988  
Preparer KATHY NAKAZAWA

ATSDR SITE SUMMARY

I. GENERAL INFORMATION

Site Name: NAVAL AIR STATION, MOFFETT FIELD, CA  
(Include other names by which site is known.)

Region: IX City: SUNNYVALE County: SANTA CLARA State: CA

Site Management Responsibility

[ ] Fund Lead [ ] Enforcement Lead (PRP) [ ] State Lead [  ] Federal Facility

Remedial Schedule Status

[ ] PA/SI

[  ] Workplan Development

[  ] RI (scheduled) underway but not scheduled for completion by 10/1/88

[ ] Other \_\_\_\_\_

II. DATA/INFORMATION REVIEW

(Review of EPA Site File(s) and, where appropriate, include state monitoring information)

A. Bibliography of Data/Information Sources:

Document	Date of Document
1 <u>INITIAL ASSESSMENT STUDY OF NAS MOFFETT FIELD</u>	<u>APRIL 1984</u>
2 <u>CALIFORNIA RWCCB, CEASE &amp; DESIST ORDER 87-125</u>	<u>22 SEPT 1987</u>
3 <u>CONFIRMATION STUDY ; EARTH SCIENCES ASSOCIATES</u>	<u>APRIL 1986</u>
4 <u>POTENTIAL CONDUITS INVESTIGATION; KENNEDY/JENKS/CHILDON</u>	<u>JAN 1988</u>
5 <u>SAMPLING AND ANALYSIS PLAN ; IT CORPORATION</u>	<u>MAR 1988</u>
6 _____	_____

B. Brief Description of Site (include waste containment status)

NAS MOFFETT FIELD SUPPORTS ANTI SUBMARINE WARFARE TRAINING AND PATROL SQUADRONS. THE BASE EMPLOYEES APPROXIMATELY 5000 MILITARY & CIVILIAN PERSONNEL WHO OPERATE (OR HAVE OPERATED) VARIOUS FACILITIES ON THE BASE. CONTAMINANTS HAVE RESULTED FROM YEARS OF OPERATION OF THESE FACILITIES. THEY INCLUDE: TCE, TCA, DCE, DCA, TOLUENE, MEK, PAINT, THINNERS, SOLVENTS, OILS, TRANSFORMER OILS, FUELS, DETERGENTS, DRY CLEANING SOLVENTS, BATTERY ACIDS, HYDRAULIC FLUIDS, WASTE WATER, HALON 1211, KHCO<sub>3</sub>, CHLORINATED HYDROCARBONS, ETC. OVER THE YEARS THE CONTAMINANTS WERE PLACED IN LANDFILLS, HOLDING PONDS, UNDERGROUND STORAGE TANKS, SUMPS, OIL/WATER SEPARATORS, BERMED PITS, OR A DRAINAGE DITCH.





E. Site Access Restrictions

- 1.  Unrestricted Access
- 2.  Restricted Access (Explain Below)

Comments: (eg. type of restrictions, restricting authority, etc.)

SITES ARE LOCATED WITHIN A NAVAL AIR STATION, THEREFORE  
ALL ACCESS TO THE SITES MUST BE COORDINATED WITH THE  
BASE SECURITY PERSONNEL

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F. Removal Actions

- 1. Have removal actions occurred?  Yes  No
- 2. Describe removal actions:

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G. Population:

- 1. Distance to closest residence APPK. 2000 FT ON BASE
- 2. Size of population within a \_\_\_\_\_ mile radius of the site APPK 5000 EMPLOYEES ON BASE
- 3. Special population concerns:  Yes  No  
(Are there schools, nursing homes, hospitals, parcs, playgrounds, etc., within the radius?)

Comments:  
THE CITY OF MOUNTAIN VIEW PROPOSES TO MAKE THE  
BOARDERING AQUATIC HABITAT INTO A NATURE TRAIL

H. Environmental/Exposure Pathways

(CHECK ALL APPLICABLE AREAS)

I. Groundwater

• Private Wells

- a. There are private wells in use within the vicinity of the site.  Yes  No  No Data/information available  
Within a radius of 3/4 miles.
- b. Private well water is used for:
  - 1.  Drinking
  - 2.  Cooking
  - 3.  Other domestic uses
  - 4.  Livestock
  - 5.  Irrigation of Crops
  - 6.  Other
- c. There is reason to believe that the private wells are \_\_\_\_\_  
are not  contaminated because of:
  - 1.  Private well data
  - 2.  Monitoring well data
  - 3.  Public system data (same aquifer)
  - 4.  Other \_\_\_\_\_
- d. The earliest documented date of private well contamination is:  
\_\_\_\_\_

Public Wells

- a. There are public/municipal wells in use within the vicinity of the site.  Yes  No  No data/information available. Within a radius of 3/4 miles.
- b. There is reason to believe that the public wells are \_\_\_\_\_  
are not  contaminated because of:
  - 1.  private well data
  - 2.  monitoring well data
  - 3.  public system data
  - 4.  other \_\_\_\_\_
- c. Public well water is used for:
  - 1.  drinking
  - 2.  cooking
  - 3.  other domestic uses
  - 4.  livestock
  - 5.  irrigation of crops
  - 6.  other
- d. The earliest documented date of well contamination is:  
\_\_\_\_\_  
\_\_\_\_\_

Comments on private/public/irrigation well contamination:

ALL ACTIVE, AS WELL AS INACTIVE AND COVERED, WELLS, ARE UNDER GOING A POTENTIAL CONDUITS INVESTIGATION TO DETERMINE IF THE WELLS ARE ACTING AS CONDUITS BETWEEN AQUIFERS.

Surface Water

a. Are any of the following categories of surface water located on site (or passing through the site):

- Drainage ditch (or intermittent stream)
- Stream or Creek
- River
- Wetlands, pond, or lake

Surface water is used for:

- Drinking       Cooking       Fishing
- Livestock       Swimming       Irrigation
- Other DRAINAGE

Surface water treated prior to use:  unknown  no  
 yes      Name of system owner \_\_\_\_\_

b. Are any of the following categories of surface water adjacent to (bordering) the site:

- Drainage ditch (or intermittent stream)
- Stream or Creek
- River
- Wetlands, pond or lake

Surface water is used for:

- Drinking       Cooking       Fishing
- Livestock       Swimming       Irrigation
- Other AQUATIC HABITAT FOR VARIOUS FLORA, FAUNA, FISH, BIRDS

Surface water treated prior to use?  unknown  no  
 yes      Name of system owner \_\_\_\_\_

c. Are any of the following categories of surface impacted by the site:

- Drainage ditch (or intermittent stream): Distance to 01 BASE
- Stream or Creek: Distance to boarders base
- River: Distance to \_\_\_\_\_
- Wetlands, pond or lake: Distance to Adjacent

Surface water is used for:

- Drinking     Cooking     Fishing  
 Livestock     Swimming     Irrigation  
 Other DRAINAGE / AQUATIC HABITAT

Surface water treated prior to use:  unknown  no  
 yes Name of system owner \_\_\_\_\_

- d. Summary of documentation of surface water contamination (include earliest date of contamination, discuss potential for contamination, discuss sampling that indicates surface waters may be contaminated):

FROM THE 1940S TO THE 1970S, APPROXIMATELY 150,000 TO 720,000 GALLONS OF MIXED HAZARDOUS WASTE CONTAINING WASTE OILS, SOLVENTS, FUELS, DETERGENTS, PAINTS, PAINT STRIPPERS, AND HYDRAULIC FLUIDS WERE DISPOSED OF IN STORM DRAINS THAT FLOWED TO MARRIAGE ROAD DITCH. WASTES MIGHT HAVE SEEPED INTO THE SOILS BELOW THE DITCH THEREBY MIGRATING INTO THE GROUNDWATER. POSSIBLE GROUND WATER CONTAMINATION POSES A ~~REAL~~ THREAT TO HUMAN HEALTH AND ALSO TO THE ENVIRONMENT. WATER IN THE DITCH WAS PUMPED INTO GUADALUPE SLOUGH, WHICH IS LOCATED WITHIN THE SALT ~~SPRINK~~ MARSH NORTH OF MOFFETT FIELD.

SOURCE(s) DOC 1

3. Soil

- a. Off-site soil contamination confirmed:  Yes  No  
 Confirmed by:  Sampling  visible evidence  
 b. On-site soil contamination confirmed:  Yes  No  
 Confirmed by:  Sampling  visible evidence  
 c. The public is likely to come in contact with contaminated soil:  Yes  No

If yes: Contact will occur  Off-site  On-site. Explain in Comment Section.

- d. On site employees are likely to come in contact with contaminated soil  Yes  No

- e. The earliest documented date of soil contamination is:  
 Off-site \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
 On-site APR / 1984 /

f. Comments

CONCLUSIONS AS TO TYPES AND AMOUNTS OF HAZARDOUS WASTE DISPOSED THE OF THROUGHOUT THE SITE ~~WAS~~ IS DOCUMENTED IN THE INITIAL ASSESSMENT STUDY CONDUCTED BY NESA.

SOURCE(s): DOCUMENT 1

4. Ambient Air

a. Release of volatiles or gases has been measured [ ] Yes  
[  ] No

Measurements were taken [ ] On site [ ] Off site

[ ] In Residences

SOURCE(s): \_\_\_\_\_

There is a history of odor complaints in the vicinity of the site: [ ] Yes [  ] No Explain: \_\_\_\_\_

SOURCE(s): \_\_\_\_\_

b. Airborne emissions (particulates)

A release of airborne particulates has occurred [ ] Yes [  ] No

Release confirmed by [ ] air sampling

[  ] physical evidence

SOURCE(s): DOC. 1

c. Comments on Ambient Air:

SOURCE(s): \_\_\_\_\_

5. Food Chain

a. Crops

1. Are grown in the vicinity of the site [  ] Yes [ ] No

Type [  ] Commercial Agriculture [ ] Residential Gardens

2. Crop likely to be contaminated [ ] Yes [  ] No

3. Verified by [ ] Sampling [  ] Observation (evidence of waste migration or stressed vegetation)

4. Crops (List) ASSORTED LEAFY VEGETABLES

Comments: NAS MOFFETT ~~FIELD~~ FIELD LEASED A PLOT OF LAND TO A PRIVATE CITIZEN FOR AGRICULTURE, BUT THE LEASE HAS SINCE EXPIRED. THE LOCATION OF THE PLOT IS UP GRADIENT OF THE NEW PLUME.

SOURCE(s): BASE & PERSONNEL; ENS. JOHN HECKMANN (PND)

PUBLIC WORKS DEPT.

b. Livestock/Domestic Fowl

- 1. Are kept in the vicinity of the site  Yes  No
- 2. Type  Commercial  Residential
- 3. Animals likely to be contaminated.  Yes  No  
 Verified 1.  sampling 2.  observed waste migration  
 3.  reports of animal illness
- 4. Livestock/Fowl (specify):

HORSES ARE KEPT IN A STABLE ON THE BASE.  
THE HORSES EAT FEED WHICH IS BROUGHT ONTO THE BASE

SOURCE(S): BASE PERSONNEL PERSONNEL; ENS. JOHN HECKMANN, PWD

c. Fishing

- 1. Occurs in the vicinity of the site  Yes  No
- 2. Type  commercial  recreational  food staple for area
- 3. Verified by  sampling  observed contamination  
 fish kills ?
- 4. Fish likely to be contaminated  Yes  No UNK

d. Hunting

- 1. Is likely to occur in the vicinity of the site  Yes  No
- 2.  Game is sold commercially  Recreational  A Local Food Staple
- 3. Game is likely to be contaminated  Yes  No UNK
- 4. Contamination verified  by sampling  observed contamination  reports of animal illness
- 5. Type of Game: DUCK HUNTING ON PRIVATE RESERVES

SOURCE(S): \_\_\_\_\_

e. Comments on Food Chain Contamination:

Sources(s): Armand Gonzalez, Fish & Game

III. REPORTED HEALTH EFFECTS (N. of Moffett Field)

Reports of Illness: SALT Evaporation Ponds

THERE HAS BEEN NO ASSOCIATE

- ① Private Duck Hunting
- ② Commercial Fishing in SF Bay
- ③ Steelhead trout migrate thru Stevens Creek and Guadalupe Slough

{ High levels of Hg in fish in Coyote Creek (IBM)

{ Sunnyvale had birds die, but not from haz. waste.

{ Moffett had black birds die, but from pesticides

**IV. INTERVIEWS: PERSONS KNOWLEDGEABLE ABOUT SITE**

The interview objectives are: 1. to verify information found in the site file review and 2. to acquire essential information not found in the site file(s).

A. Name \_\_\_\_\_ Organization \_\_\_\_\_ Date \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

B. Name \_\_\_\_\_ Organization \_\_\_\_\_ Date \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

C. Name \_\_\_\_\_ Organization \_\_\_\_\_ Date \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

D. Name \_\_\_\_\_ Organization \_\_\_\_\_ Date \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

E. Name \_\_\_\_\_ Organization \_\_\_\_\_ Date \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

V. AISDR SITE VISIT

(The purpose of the site visit is to verify information collected during the site file review and the interviews with knowledgeable parties and to gather essential information not found during the previous two steps.)

Site Visits [ ]Yes [ ]No

By Whom	Date
_____	_____
_____	_____
_____	_____

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

VI. HUMAN EXPOSURE PATHWAYS

- A. Opportunity for human exposure to groundwater contamination:
  - 1. [ ] has occurred [ ] is occurring [ ] is not occurring  
[ ] is potentially occurring
  - 2. If exposure occurred: [ ] 10 years [ ] 1-10 years [ ] 1 yr ago  
[ ] unknown
  - 3. Route of exposure:
    - [ ] ingestion
    - [ ] inhalation
    - [ ] dermal contact
- B. Opportunity for human exposure to surface water contamination:
  - 1. [ ] has occurred [ ] is occurring [ ] is not occurring  
[ ] is potentially occurring
  - 2. If exposure occurred: [ ] 10 years [ ] 1-10 yrs ago  
[ ] 1 yr ago [ ] unknown
  - 3. Route of exposure:
    - [ ] ingestion
    - [ ] inhalation
    - [ ] dermal contact

C. Opportunity for human exposure to soil contamination:

- 1.  has occurred     is occurring     is not occurring  
    is potentially occurring
- 2. If exposure occurred:  > 10 yrs ago     1-10 yrs ago  
    < 1 yr ago     unknown
- 3. Route of exposure:  
    ingestion  
    inhalation  
    dermal contact

D. Opportunity for human exposure to airborne contamination:

- 1.  has occurred     is occurring     is not occurring  
    is potentially occurring
- 2. If exposure occurred:  > 10 yrs ago     1-10 yrs ago  
    < 1 yr ago     unknown
- 3. Route of exposure:  
    inhalation  
    dermal contact

E. Opportunity for human exposure to food that has been contaminated through the food chain or by exposure to the site:

- 1.  has occurred     is occurring     is not occurring  
    is potentially occurring
- 2. If exposure occurred:  > 10 yrs ago     1-10 yrs ago  
    < 1 yr ago     unknown
- 3. Route of exposure:  
    ingestion

F. Any other relevant human exposure information (historical exposure)?

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CERCLIS No. \_\_\_\_\_

General Comments (optional):

Lined area for general comments, consisting of approximately 35 horizontal lines.