DEPARTMENT OF THE NAVY
NAVAL AIR STATION
ALAMEDA, CALIFORNIA 94501 - 5000

IN REPLY REFER TO:
5090
Ser 52/X476
29 March 1990

From: Commanding Officer, Naval Air Station, Alameda
To: Distribution

Subj: HAZARD COMMUNICATION INFORMATION FOR INSTALLATION RESTORATION SITES AT NAVAL AIR STATION, ALAMEDA

Ref: (a) DOHS ltr of 11 Dec 1989
(b) NAS Alameda ltr 5090 Ser 52/8 of 9 Jan 1990

Encl: (1) Hazard Communication Information For NAS Alameda Installation Restoration Sites

1. This is in regard to our requirement to provide hazard communication information on Installation Restoration (IR) sites at Naval Air Station (NAS) Alameda, as discussed in references (a) and (b). In 1980, under its IR program, the Navy began to identify, assess, and control contamination resulting from past practices at NAS Alameda. During the first phase of this program, the Navy investigated 12 sites believed to be potential areas of contamination, and recommended seven of these sites for further study. In May 1985, the Navy completed the second phase of the program for these seven sites. During this investigation, sampling and analysis of soils and groundwater at each of the seven sites was conducted. This study found that four of the seven sites had contaminant concentrations high enough to warrant additional investigation. These four sites include the 1943-1956 Disposal Area, the West Beach Landfill, Area 97, and Building 360. Sixteen other sites within the Facility were identified during this investigation. Studies to determine the extent of contamination and develop cleanup solutions for the 20 identified sites will start in April 1990. Enclosure (1) identifies the 20 sites at NAS Alameda which are known to be contaminated with hazardous waste or have a potential for contamination.

2. None of the 20 sites were identified as being an immediate threat to the health of personnel. Some remedial action has already been taken at certain sites such as the area under the Cleaning Shop in Building 360 and an area at Building 338 (CANS C-2 Area). Naval Aviation Depot, Alameda had contaminated soil removed from those sites in 1982 and in 1987 in advance of the IR Program decontamination efforts. At this time, there is no data that can be used to quantify potential human health risks that may be posed by contaminants at NAS Alameda. However, it is known that the primary risks would be due to direct contact with contaminated soil during excavation or other similar work while not wearing Personal Protective Equipment (PPE).

3. Until such time as all sites are decontaminated, the Navy has a responsibility to ensure that all civilian employees, Military

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personnel and contractors to the Navy working near or at any of these sites are aware of the potential hazards that might be encountered. Personnel performing industrial operations where exposure to hazardous materials exist are provided material safety data sheets, PPE and training to allow them to perform the operations safely. Industrial hygienists should be consulted for controls (including PPE) for specific operations when necessary.

4. Hazard Communication Information for each NAS Alameda IR site is being provided as enclosure (1). This information should be distributed to all civilian and Military personnel and contractors to the Navy working near or at any of these 20 sites by the appropriate Safety Office/Safety Officer or Contract Office. The Hazard Communication Information contains the following key information:

a. Offices at NAS Alameda to contract for additional information.

b. A list identifying the 20 IR sites.

c. A map identifying the location of each IR site with a key for recommended Personal Protective Equipment, if any.

d. A list of known human carcinogens and probable human carcinogens that may be encountered at the 20 sites .

e. A list of potential chemicals of concern for the 20 sites.

5. Navy Offices issuing contracts at NAS Alameda which include work at or near any of the 20 IR sites should include the hazard communication information as part of the section on safety in the contract.

6. The Public Health and Environmental Evaluation Plan for the IR Program at NAS Alameda provides an assessment of the current potential human and environmental hazards posed by the 20 IR sites at NAS Alameda. A copy of this document will be kept on file at the NAS Alameda Industrial Hygiene Office in Building 16, the Naval Aviation Depot, Alameda Occupational Safety and Health (OSH) Office in Building 5, the NAS Alameda Safety Office in Building 77 and the NAS Alameda Environmental Protection Office in Building 114. An additional copy is available for public viewing in the reference section of the main branch of the Alameda Public Library at the corner of Oak Street and Santa Clara Avenue. Copies of the hazard communication information can

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be obtained at the NAS Alameda Safety Office or NAS Alameda Environmental Protection Office.

7. The NAS Alameda point of contact is R. Cate (Code 52) at (415) 263-3716.

R. P. BOENNIGHAUSEN

Distribution:
NAVAVNDEPOT Alameda (Codes 00, 600, 001)
NAS Alameda Industrial Hygiene Office
NAS Alameda Safety Office (Code 80)
WESTNAVFACENGCOM Code (1813BD)
Mark Malinowski, California Department of Health Services
Roberta Hough, Citizens Advisory Committee

HAZARD COMMUNICATION INFORMATION

FOR NAVAL AIR STATION, ALAMEDA

INSTALLATION RESTORATION SITES

Naval Air Station (NAS) Alameda has 20 sites identified in an ongoing Installation Restoration (IR) Program to characterize and remediate hazardous waste contamination. IR sites are sites under study which either have been confirmed to be contaminated with hazardous waste or may potentially be contaminated. An investigation of all sites will be done to characterize and remediate any contamination conditions. Contamination at none of the sites poses a serious hazard to human health.

The purpose of this information release is to identify sites on the IR Program with existing hazards due to the presence of chemicals of potential concern, particularly chemicals with known carcinogenic activity. There is a possibility of human exposure at 10 sites if certain activities are performed or direct contact with soil is allowed. Personal Protective Equipment (PPE) may be recommended for some of these sites when certain work operations are performed. This information is based on the Public Health and Environmental Evaluation Plan (PHEEP), June 1989, of the NAS Alameda IR Program. A copy of the PHEEP is at the corner of Oak Street and Santa Clara Avenue. PPE requirements are identified and have been required for all work areas of NAS Alameda. Normally, PPE is only required during soil excavation or similar operations at these IR sites.

Civilian employees, Military personnel and contractors to the Navy working near or at any of these sites are to be made aware of the potential hazards that might be encountered. Industrial Hygienist controls (including PPE) for specific operations must be followed. The base Industrial Hygiene Office can be consulted for jobs to be performed by Navy personnel, and the NAVAVNDEPOT Alameda Occupational Safety and Health (OSH) Office can be consulted for jobs at NAVAVNDEPOT Alameda buildings. An outside industrial hygienist should be consulted for jobs to be performed by private contractor personnel. In addition, the NAS Alameda Environmental Officer (Code 52) should be notified regarding any planned construction, excavation or repair projects near or on any of the IR sites.

The base Industrial Hygiene Office, the NAVAVNDEPOT Alameda OSH Office, and the NAS Alameda Environmental Officer may be reached at the following numbers:

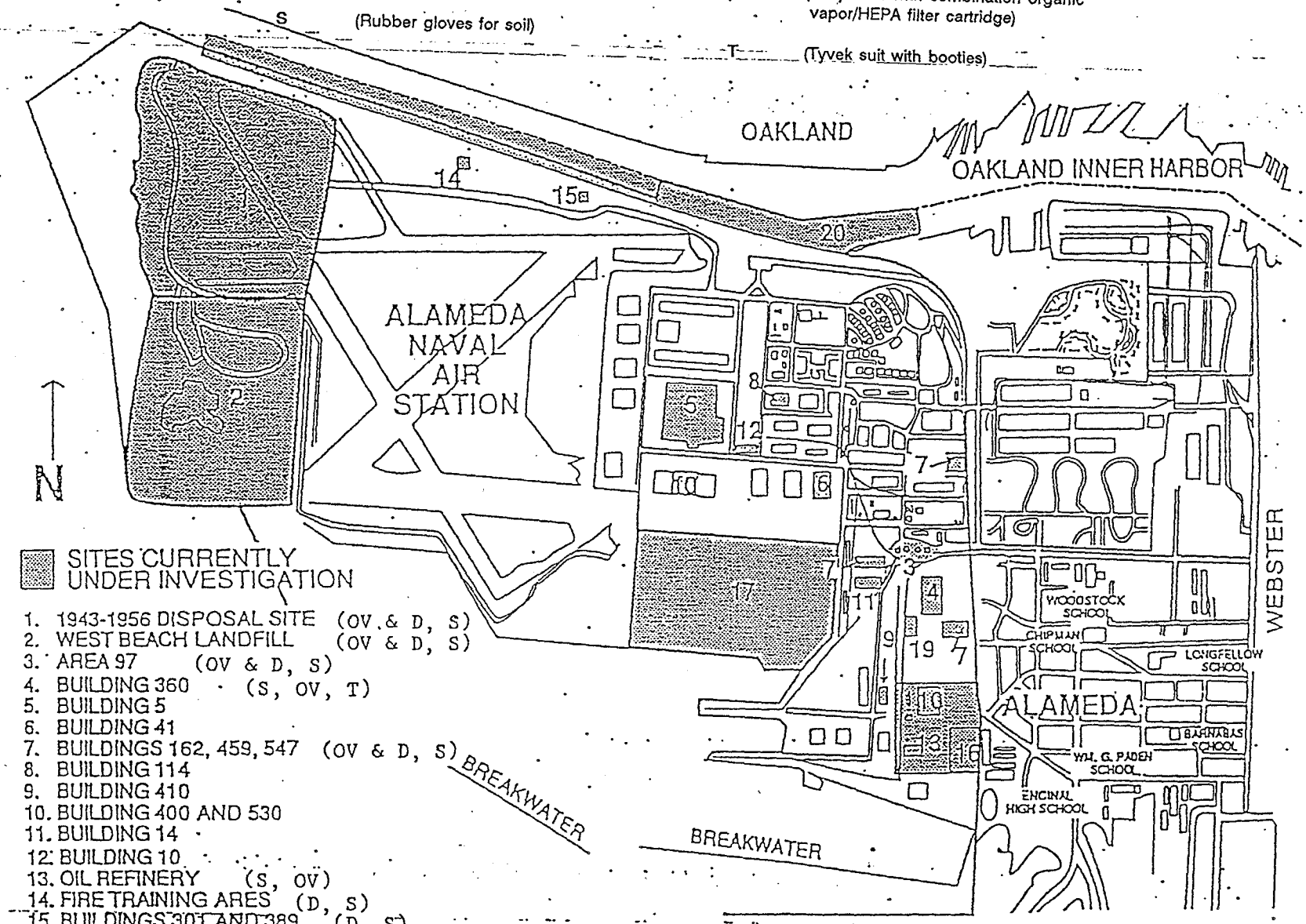
Industrial Hygiene Office	3-4471	263-4471
NAVAVNDEPOT Alameda OSH Office	3-7296	263-7296
Environmental Officer	3-3716	263-3716

The twenty IR sites under investigation are listed below, followed by a site location map which identifies general recommendations for PPE at each site with a complete human exposure pathway:

1. 1943-1956 Disposal Area
2. West Beach Landfill
3. Area 97 (Former Aviation Gasoline Storage Site)
4. Building 360 (Soil Contamination Below Plating Shop Floor)
5. Building 5 (Electroplating, Painting, and Paint Stripping Areas)
6. Building 41 (Aircraft Maintenance Hangar)
7. Buildings 162, 459, and 547 (Service Stations)
8. Building 114 (Pest Control Area and Separator Pit)
9. Building 410 (Paint Stripping Hangar)
10. Buildings 400 and 530 (Missile Rework Operations)
11. Building 14 (Aircraft Engine Test Cells)
12. Building 10 (Power Plant)
13. Oil Refinery
14. Fire Training Area
15. Buildings 301 and 389 (Former Transformer Storage Areas)
16. CANS C-2 Area (Former Storage Area for Hazardous Materials)
17. Seaplane Lagoon
18. Station Sewer System
19. Yard D-13 (Current Hazardous Waste Storage Area)
20. Estuary

Recommended Personal Protective Equip

D	(Respirator with HEPA filters for dust)	OV	(Respirator with organic vapor cartridge)
HEPA	(High Efficiency Particulate Aerosol)	OV & D	(Respirator with combination organic vapor/HEPA filter cartridge)
S	(Rubber gloves for soil)	T	(Tyvek suit with booties)



SITES CURRENTLY UNDER INVESTIGATION

1. 1943-1956 DISPOSAL SITE (OV & D, S)
2. WEST BEACH LANDFILL (OV & D, S)
3. AREA 97 (OV & D, S)
4. BUILDING 360 (S, OV, T)
5. BUILDING 5
6. BUILDING 41
7. BUILDINGS 162, 459, 547 (OV & D, S)
8. BUILDING 114
9. BUILDING 410
10. BUILDING 400 AND 530
11. BUILDING 14
12. BUILDING 10
13. OIL REFINERY (S, OV)
14. FIRE TRAINING ARES (D, S)
15. BUILDINGS 301 AND 389 (D, S)
16. CANS C-2 AREA (OV & D, S)
17. SEAPLANE LAGOON
18. STATION SEWER SYSTEM (NOT ON SITE) (OV, S)
19. YARD D-13
20. ESTUARY

For More Information Call:

Base Industrial Hygiene Office	263-4471
NAVAVNDEPOT Alameda Safety Office	263-7296
NAS Alameda Environmental Officer	263-3716

CHEMICALS WITH CARCINOGENIC ACTIVITY:

1. Known Human Carcinogens:

   a. Vinyl Chloride
   b. Benzene
   c. Arsenic
   d. Asbestos
   e. Chromium VI
   f. Radioactive Nuclides

2. Probable Human Carcinogens:

   a. Carbon Tetrachloride
   b. Methylene Chloride
   c. Tetrachloroethylene
   d. Trichloroethylene
   e. Aldrin
   f. Chlordane
   g. DDT
   h. Heptachlor
   i. Lindane
   j. Lead
   k. Bis(2-Ethylhexyl) Phthalate
   l. Polychlorinated Biphenyls (PCBs)
   m. Polynuclear Aromatic Hydrocarbons (PAHs)
   n. Beryllium
   o. Cadmium
   p. 1,2-Dichloroethylene

List Of Potential Chemicals Of Concern For All 20 IR Sites:

1. 1943-1956 Disposal Area

   Metals (e.g., arsenic, barium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, vanadium and zinc) from paint stripping and electroplating wastes.

   Organic solvents (e.g., acetone, 1,1,1-trichloroethane, 1,2-dichloroethylene, and benzene) from paints and paint stripping wastes.

   PAHs, PCBs, phthalates and ketones (e.g., bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, 2-cyclohexene-1- one and 2.5-diethyltetrahydrofuran, acenaphthene, naphthalene, benzo(g,h,i) perylene, acenaphthylene, pyrene, and dibenzofuran, benzo(a) pyrene, indeno(1,2,3-c,d) pyrene, chrysene, fluorene, phenanthrene, dibenzofuran and 2-methylnaphthalene) from oil and solvent wastes.

Pesticides from pesticide wastes.

Gross alpha and gross beta radiation from radiological wastes.

Asbestos from insulation wastes.

2. West Beach Landfill

Metals (e.g., antimony, arsenic, beryllium, magnesium, selenium, thallium, cadmium, chromium, copper, lead, mercury, nickel, and zinc) from paint stripping and electroplating wastes.

Organic solvents (e.g., benzene, chlorobenzene, ethylbenzene, toluene, acetone, o-xylene, phenol, 2,4-demethylphenol) from paints and painting wastes.

PAHs, PCBs, phthalates and ketones (e.g., 2-methylnaphthalene, naphthalene, and bis(2-ethylhexyl)phthalate) from oil, creosote, and solvent wastes.

Pesticides (e.g., d-BHC, endrin aldehyde, endosulfan sulfate, a-BHC, Heptachlor, g-BHC (lindane), Aldrin) from pesticide wastes.

Cyanide, acids and bases from electroplating wastes.

Asbestos from insulation wastes.

Gross alpha and gross beta radiation from radiological wastes.

3. Area 97

Gasoline hydrocarbons, lead, xylene, benzene, and toluene.

4. Building 360

Cyanide and 1,1,1-trichloroethane.

Phenol, and other organic solvents (e.g., 1,1,1-trichloroethane, and carbon tetrachloride) in wstewaters from engine cleaning, paint stripping and painting operations.

Petroleum hydrocarbons, PAHs, and PCBs in waste oil from the engine rework shop.

Acids and bases from electroplating and engine cleaning operations.

Metals (e.g., cadmium, chromium, copper, tin, lead and zinc)

and cyanide from electroplating operations.

5. Building 5

Metals (e.g., chromium, nickel, silver, lead, cadmium, zinc, and copper) and cyanide from electroplating bath liquids and sludges.
Acids and bases from electroplating operations.

Aluminum, iron, and chromium in wastewater from the conversion coating process.

Phenol, and other organic solvents (e.g., methylene chloride) chromium, PCBs, and petroleum hydrocarbons in wastewaters generated from the paint stripping process.

Chlorinated hydrocarbon solvents (e.g., 1,1,1-trichloroethane, carbon tetrachloride), and petroleum hydrocarbons from cleaning solvents.

Oil and grease, PAHs and PCBs from oil wastes and cleaning rags.

Beryllium in wastewater from cleaning aircraft parts (e.g. brakes)

Asbestos from aircraft installation.

Mercury from contaminated rags or equipment.

6. Building 41

Chlorinated organic solvents from PD-680 dry cleaning solvent.

Trichlorotrifluorethane and 1,1,1-trichloroethane solvents from cleaning solvents.

Metals, organic solvents (e.g., methyl ethyl ketone) from paint wastes.

Xylene, toluene, phenol, and other organic solvents from paint stripping.

Metals, PCBs, PAHs and petroleum hydrocarbons from oil and hydraulic fluid wastes.

7. Buildings 162, 459, and 547

Metals and petroleum hydrocarbons from past leaking underground gasoline and waste oil tanks.

Organic solvents, PCBs and PAHs from past leaking underground waste oil tanks.

Acetone, Freon, and chlorinated hydrocarbon solvents (e.g., 1,1,1-trichloroethane) from waste solvents generated from operations conducted in Building 162.

Metals, PCBs, organic solvents, and PAHs from waste lube and hydraulic oils generated from operations conducted in Building 162.

8. Building 114

Pesticides (e.g., Roundup, Princep, Krovar I, Malathion, Diazinon, Warfarin, chlordane, lindane, DDT, Telvar, Chlorvar, 2,4,D).

Metals, petroleum hydrocarbons, PCBs and PAHs from oil and grease tank separator.

Organic solvents (e.g., phenol) from paint strippers.

Metals and organic solvents from paint wastes.

9. Building 410

Phenol and other organic solvents (e.g., methylene chloride), and metals (e.g., chromium) in wastewaters from paint stripping operations.

Petroleum hydrocarbons, metals, PAHs, and PCBs from oil wastes.

10. Buildings 400 and 530

Phenol and other organic solvents (e.g., methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride), and metals in wastewater from paint stripping and painting operations.

Petroleum hydrocarbons, metals, PAHs, and PCBs from waste oil.

11. Building 14

Metals (e.g., mercury).

12. Building 10

Petroleum hydrocarbons and metals from diesel and Bunker C fuels formerly stored in underground storage tanks.

Morpholine, and caustics in boiler blowdown.

Petroleum hydrocarbons, metals, PCBs, and PAHs from waste oil.

13. Oil Refinery

Petroleum hydrocarbons (light, heavy, oil and grease), metals, PCBs, PAHs and organic solvents from asphaltic wastes and stillbottoms buried on site.

14. Fire Training Area

Petroleum hydrocarbons, metals, organic solvents, pesticides, PCBs, polychlorinated dibenzodioxins/dibenzofurans, and PAHs from fuel and oil wastes.

15. Buildings 301 and 389

PCBs, di- and trichlorobenzenes, and metals.

16. CANS C-2 Area

Metals (e.g., barium, vanadium, cadmium, chromium, cobalt, copper, lead, mercury, nickel and zinc) from electroplating and paint stripping baths.

Petroleum hydrocarbons, metals, PCBs, chlorobenzenes and PAHs from miscellaneous oil wastes and leakage from disused equipment (e.g., transformers).

Organic solvents (e.g., 1,2-dichloroethylene) and pesticides (e.g., endrin, lindane, and 2,4,D) from stored wastes (e.g., paint stripping chemicals and pesticide containers).

17. Seaplane Lagoon

Metals (e.g., arsenic, barium, selenium, thallium, cadmium, chromium, cobalt, copper, lead, mercury, nickel and zinc) in wastewaters from paint stripping and electroplating operations.

Petroleum hydrocarbons, metals, PAHs and PCBs from oily wastes.

Phenols and other organic solvents and metals in wastewater from paint stripping operations.

Pesticides from rinsing pesticide applicator equipment.

Tributyl tin from the paint on the bottom of boats reported to have dissolved in the past.

18. Station Sewer System

Petroleum hydrocarbons, metals, PAHs, and PCBs from oily wastes.

Phenols and other organic solvents and metals in wastewater from paint stripping operations.

Cyanide, acids, bases, and metals (e.g., chromium) in wastewater from metal plating operations.

Pesticides from rinsing pesticide applicator equipment.

19. Yard D-13

Metals, cyanide, organic solvents, pesticides, PCBs and PAHs from stored hazardous wastes.

20. Estuary

Metals (e.g., arsenic, cadmium, chromium, copper, lead, nickel, silver and zinc) in wastewaters from paint stripping and electroplating operations.

Petroleum hydrocarbons, metals, PAHs, and PCBs from oily wastes.

Phenols and other organic solvents in wastewater from paint stripping operations.

Cyanide, acids, and bases in wastewater from metal plating operations.

Pesticides from rinsing pesticide applicator equipment.