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

IN REPLY REFER TO:
5090
Ser 52/8
9 January 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

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 sites at Naval Air Station (NAS) Alameda, as discussed in reference (a). NAS Alameda has an ongoing Installation Restoration Program to characterize and remediate hazardous waste contamination at twenty sites under investigation. Installation Restoration sites are sites under study which either have been confirmed to be contaminated with hazardous waste or may potentially be contaminated. This information was originally requested by the Citizens Advisory Committee to the Installation Restoration Program.

2. Civilian and Military personnel and contractors to the Navy working near or at any of these sites should be aware of the potential hazards that might be encountered. An industrial hygienist should be consulted for specific controls (including Personal Protective Equipment) for specific operations.

3. Hazard Communication Information for NAS Alameda Installation Restoration Sites has been 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 twenty 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 contact for additional information

b. A list of the twenty Installation Restoration sites under investigation

c. A map identifying the location of each Installation Restoration site with a key for recommended Personal Protective Equipment

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 20 sites

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

5. The Public Health and Environmental Evaluation Plan for the Installation Restoration Program at NAS Alameda is a risk assessment study providing background information on the twenty Installation Restoration sites. 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 Safety 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 Library at the corner of Oak Street and Santa Clara Avenue.

6. Additional Copies of the hazard communication information will be available at the NAS Alameda Safety Office or the NAS Alameda Environmental Protection Office.

7. The NAS Alameda point of contact is R. Cate, Code 52, at (415) 869-4731.

R. B. STEIMER
By direction

Distribution:
Lists I, II, III: A
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HAZARD COMMUNICATION INFORMATION

FOR NAVAL AIR STATION, ALAMEDA

INSTALLATION RESTORATION SITES

Naval Air Station (NAS) Alameda has an ongoing Installation Restoration (IR) Program to characterize and remediate hazardous waste contamination at twenty sites under investigation. Installation Restoration sites are sites under study which either have been confirmed to be contaminated with hazardous waste or may potentially be contaminated.

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 sites where human exposure pathways are complete. Personal Protective Equipment (PPE) is recommended for each of these sites with a complete human exposure pathway, based on information from the Public Health and Environmental Evaulation Plan (PHEEP), June 1989, of the NAS Alameda IR Program. A copy of the PHEEP is located in the information repository in the Alameda main library at the corner of Oak Street and Santa Clara Avenue.

Civilian and Military personnel and contractors to the Navy working near or at any of these sites should be aware of the potential hazards that might be encountered. An industrial hygienist should be consulted for specific controls (including PPE) for specific operations. The base Industrial Hygiene Office can be consulted for jobs to be performed by Navy personnel, and the Naval Aviation Depot (NAVAVNDEPOT) Alameda Safety 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 Enviromental Officer (Code OLE) 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 Safety Office, and the NAS Alameda Environmental Officer may be reached at the following numbers:

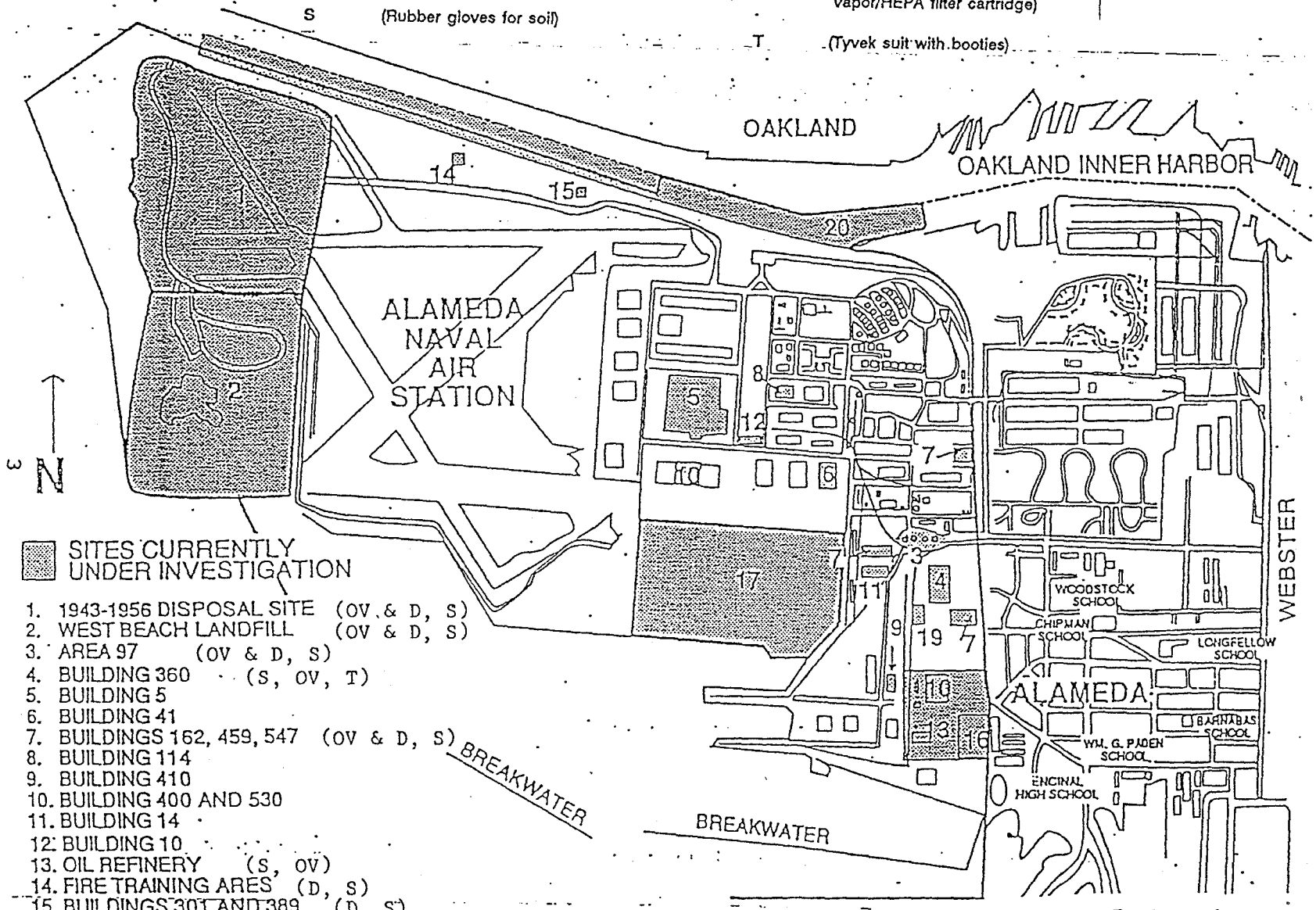
Title	On-Base Extension	Telephone Number
Industrial Hygiene Office	4682	869-4682
NAVAVNDEPOT Alameda Safety Office	4142	869-4142
Environmental Officer	4731	869-4731

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 Equipment:

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	869-4682
NAVAVNDEPOT Alameda Safety Office	869-4142
NAS Alameda Environmental Officer	869-4731

CHEMICALS WITH CARCINOGENIC ACTIVITY:

1. Known Human Carcinogens:

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

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.