N00236.000586
ALAMEDA POINT
SSIC NO. 5090.3

5090
Ser 1811WW/L2166

25 FEB 1992

Ms. Virginia Lasky
Department of Toxic Substances Control
700 Heinz Ave., Suite 200
Berkeley, CA 94710

Subj: REVISED WORK PLAN FOR BACKGROUND SAMPLING, NAS ALAMEDA

Dear Ms. Lasky:

We are providing as enclosure (1), a revised work plan for the background sampling program at the Naval Air Station (NAS), Alameda. We believe that the revised work plan adequately addresses the comments contained in your January 29 letter.

It is requested that you advise this office as to whether you concur with the proposed revision to the background sampling program. If you have any further questions regarding this matter, the point of contact is Mr. Wing Wong, Code 1811WW, (415) 244-2537.

Sincerely,

Original signed by:

LOUISE T. LEW
Head, Installation Restoration Section

Encl:
(1) Revised Work Plan for Background Sampling

Copy to:
California Regional Water Quality Control Board (Attn: Barbara Smith)
U.S. Environmental Protection Agency (Attn: Julie Anderson)
NAS Alameda (Attn: Randy Cate)
Planning Research Corporation (Attn: Duane Balch)
James M. Montgomery Consulting Engineers (Attn: Steve Newton)

Blind copy to:
1811, 1811WW, Admin Record (3 copies)
WRITER: W. Wong/1181WW/X2537
TYPIST; M. Marshall, 24 Feb 92, ltr dtsc revised bg wells/L2166
FILE: Alameda/NAS

PROPOSED RELOCATION OF BACKGROUND BORINGS/WELLS FOR THE RI/FS, NAS ALAMEDA

The February 1990 work plan prepared by Canonie Environmental Services, Inc. (Canonie) proposed background soil and groundwater sampling at four locations at NAS Alameda. The locations proposed by Canonie are illustrated on Figure 1. From each boring, four samples were to be retained and analyzed for a variety of organic and inorganic constituents. Three of Canonie's proposed background locations are in areas of the base known to have housed Navy industrial activities. As such, samples collected from these areas may not accurately reflect background concentrations in soils and groundwater. The following discussion presents revised locations for three of the background borings.

Proposed Background Sampling

In the following discussions, the term boring should be interpreted to mean a boring and a monitoring well. A total of four background borings (BG1 through BG4) were to be drilled as indicated in Figure 1. Borings BG1, BG2, and BG4 are proposed to be relocated. BG1 and BG2 will be relocated to the housing area. Boring BG4 will be relocated to the parade ground. These revised locations are designated New BG1, New BG2, and New BG4 on Figure 1. Relocating BG1 is recommended because there was a new pair of monitoring wells (designated as M101 and M102) installed near the originally proposed BG1 location during a previous phase of work. Background borings BG2 and BG4 are proposed for relocation because of their proximity to industrial areas. Samples collected from the borings relocated to the housing area and the parade ground should be more representative of background conditions because industrial activities have not been conducted in these areas. Both the housing area and the parade ground appear in historic aerial photos from 1947, and do not appear to have been used for other purposes since construction of NAS Alameda. Background boring BG3 will be drilled at the location originally proposed by Canonie.

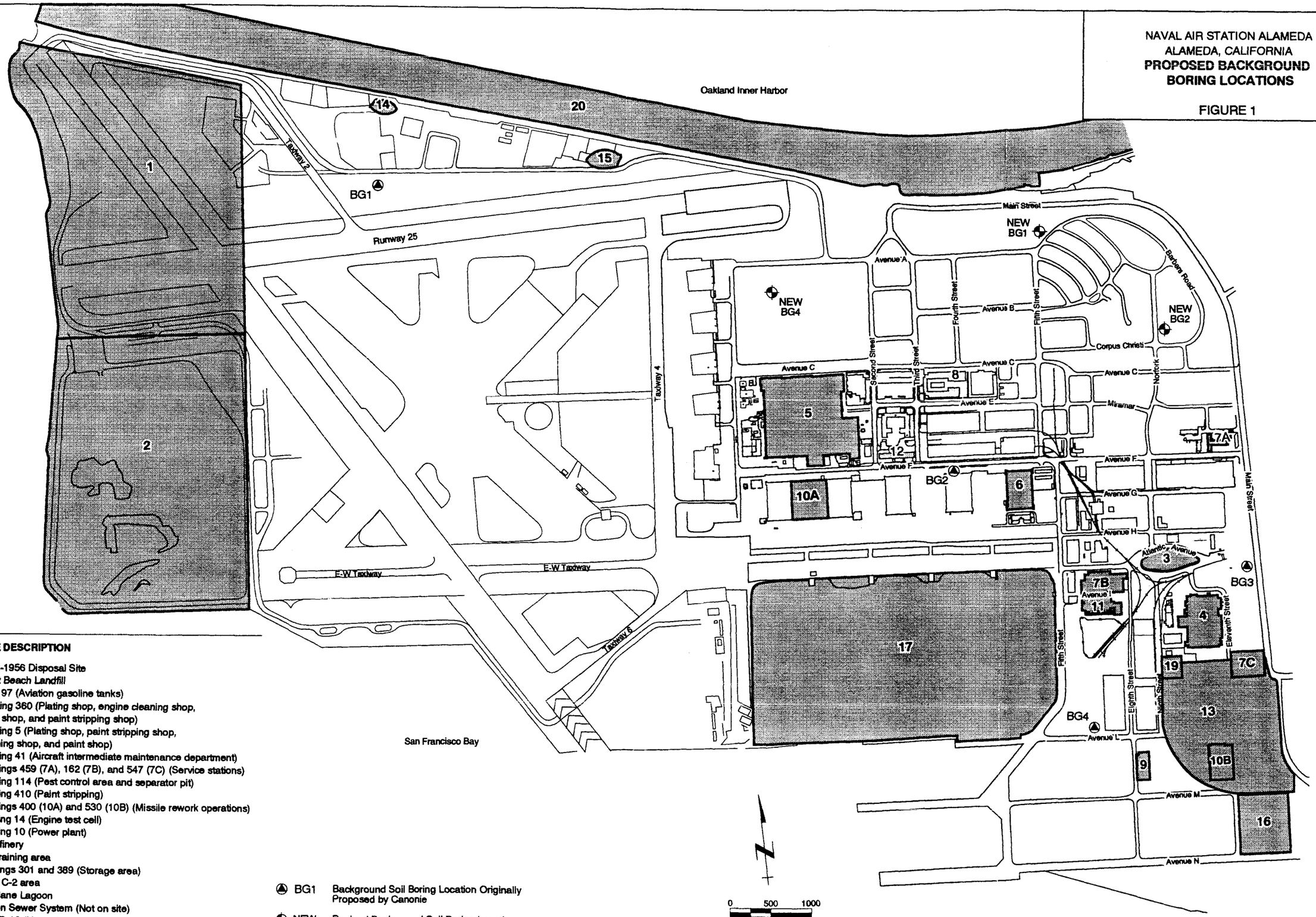
Soil samples will be collected at the ground surface, at a depth of two feet, at a depth equal to the interface between fill material and native sediments, and at two feet below the fill/native sediment interface. All drilling and sampling will be conducted in accordance with the existing work plan and health and safety plan.

All wells will be constructed of 2-inch diameter polyvinyl chloride casing and screen, using methods detailed in the existing work plan. The wells will be screened across the first water table. Two

NAVAL AIR STATION ALAMEDA
ALAMEDA, CALIFORNIA
PROPOSED BACKGROUND BORING LOCATIONS

FIGURE 1

A-6



LEGEND:

SITE NO.	SITE DESCRIPTION
1	1943-1956 Disposal Site
2	West Beach Landfill
3	Area 97 (Aviation gasoline tanks)
4	Building 360 (Plating shop, engine cleaning shop, paint shop, and paint stripping shop)
5	Building 5 (Plating shop, paint stripping shop, cleaning shop, and paint shop)
6	Building 41 (Aircraft intermediate maintenance department)
7	Buildings 459 (7A), 162 (7B), and 547 (7C) (Service stations)
8	Building 114 (Pest control area and separator pit)
9	Building 410 (Paint stripping)
10	Buildings 400 (10A) and 530 (10B) (Missile rework operations)
11	Building 14 (Engine test cell)
12	Building 10 (Power plant)
13	Oil refinery
14	Fire training area
15	Buildings 301 and 389 (Storage area)
16	Cans C-2 area
17	Seaplane Lagoon
18	Station Sewer System (Not on site)
19	Yard D-13 (Hazardous waste solvents)
20	Estuary (Oakland Inner Harbor)

BG1 — Background Soil Boring Location Originally Proposed by Canonie

NEW BG4 — Revised Background Soil Boring Location

rounds of groundwater samples will be collected from the wells and analyzed for the constituents described below.

Chemical Analyses

The analytes previously proposed by Canonie for each background boring are presented in Table 1. The analytes in Table 1 reflect the analyses for soil and groundwater presented in Tables 3.25.1 through 3.25.4 in the original Volume 1 Sampling Plan prepared by Canonie. The currently proposed analytes for soil and groundwater in the four background borings are presented in Table 2. If the presence of total petroleum hydrocarbons (TPH) is identified in the background soil samples, the three samples with the highest TPH concentrations will be submitted for hydrocarbon characterization. Characterization will identify the molecular chain length of hydrocarbons present and will aid in determining the source of the compounds (i.e., type of fuel or oil). All analytical methods will be consistent with ongoing RI activities at NAS Alameda.

In addition to data collected from the housing area, data collected as part of the CTO No. 0107 field effort will be used in assessing background conditions. Metals results for soil samples collected from borings upgradient of the West Beach Landfill and the 1943-1956 Disposal Area (underneath the runway areas) will be considered as possible indications of background concentrations in fill material used throughout the base.

Quality assurance/quality control samples and procedures will be in accordance with established protocols in the approved work plans. All drill holes will be surveyed, and slug tests will be conducted in the wells. Soil cuttings and well development and purge water will be temporarily stored near the decontamination pad area.

Reporting

Analytical results will be compiled to determine statistically valid concentrations of chemical constituents to be considered estimates of the levels of these constituents in the fill material. These levels will then be compared to analytical results for samples collected at sites currently under investigation. Results of the comparison may be used to determine further actions at the sites. Presentation of data and interpretations will be provided in a future addendum to the Phase 2B and 3 Data Summary Report.

TABLE 1

ORIGINALLY PROPOSED ANALYTES FOR BACKGROUND SAMPLES

Analyte	BG1	BG2	BG3	BG4
SOIL				
VOC	X	X	X	X
SVOC	X	X	X	X
Pesticides/PCB	X	X	X	X
Metals	X	X	X	X
Mercury	X	X	X	
Total Cyanides		X	X	X
Total Petroleum Hydrocarbons		X	X	X
Gross Alpha and Beta	X			
U226 and U228	X			
Asbestos	X			
Dioxin/Furan	X			
Ethylene Dibromide	X	X	X	X
TOC	X	X	X	X
pH	X	X	X	X
GROUNDWATER				
VOC	X	X	X	X
SVOC	X	X	X	X
Metals	X	X	X	X
General Minerals	X	X	X	X
Ethylene Dibromide		X	X	X
Pesticides/PCBs	X	X	X	X
Herbicides	X	X	X	X
Organophosphorus Pesticides	X	X	X	X
Oil and Grease	X	X	X	X
Total Petroleum Hydrocarbons			X	
Mercury	X	X	X	
Total Cyanide	X	X	X	X
Total Organic Carbon	X	X	X	X
Hardness	X	X	X	X
Alkalinity	X	X	X	X
Total Dissolved Solids	X	X	X	X
pH	X	X	X	X
Dissolved Oxygen	X	X	X	X
Acidity	X	X	X	X
Specific Conductance	X	X	X	X
Chemical Oxygen Demand	X			X
Biological Oxygen Demand				X
Salinity	X			X
Gross Alpha and Beta	X			
U226 and U228	X			
Asbestos	X			
Chloride	X			
Fluoride	X			
Nitrate	X			

From Tables 3.25.1 through 3.25.4, Volume 1, Sampling Plan, Remedial Investigation/Feasibility Study, NAS Alameda, Canonie Environmental, February 1990

TABLE 2

LABORATORY ANALYSES
CURRENTLY PROPOSED BACKGROUND SAMPLES

	Method	No. Field Samples	No. Duplicate Samples	No. Rinsates and Trip Blanks	Total Samples
SOIL					
VOC	CLP/RAS	16	1	0	17
SVOC	CLP/RAS	16	1	0	17
Pesticides/PCBs	CLP/RAS	16	1	0	17
HSL Metals	CLP/RAS	16	1	0	17
Mercury	EPA 7470	16	1	0	17
Total Cyanide	CLP/RAS	16	1	0	17
Total Organic Carbon	EPA 9060	16	1	0	17
Total Petroleum Hydrocarbons	EPA 418.1	16	1	0	17
Ethylene Dibromide	CLP/RAS	16	1	0	17
pH	EPA 9040	16	1	0	17
Total Solids	CLP/RAS	16	1	0	17
GROUNDWATER					
VOC	CLP/RAS	8	1	7	16
SVOC	CLP/RAS	8	1	3	12
HSL Metals	CLP/RAS	8	1	3	12
General Minerals	Various	8	1	3	12
Ethylene Dibromide	CLP/RAS	8	1	3	12
Pesticides/PCBs	CLP/RAS	8	1	3	12
Herbicides	CLP SAS/8150	8	1	3	12
Organophosphorus Pesticides	CLP SAS/8140	8	1	3	12
Oil and Grease	EPA 413.1	8	1	3	12
Total Petroleum Hydrocarbons	EPA 418.1	8	1	3	12
Mercury	EPA 245.1	8	1	3	12
Total Cyanide	CLP/RAS	8	1	3	12
Total Organic Carbon	SAS/415.1	8	1	3	12
Hardness	SAS/130.1	8	1	3	12
Alkalinity	SAS/SM403	8	1	3	12
Total Dissolved Solids	SAS/160.1	8	1	3	12
pH	EPA 150.1	8	1	3	12
Dissolved Oxygen	EPA 360.1	8	1	3	12
Acidity	SAS/305.1	8	1	3	12
Specific Conductance	EPA 120.1	8	1	3	12
Chemical Oxygen Demand	SAS 410	8	1	3	12
Biochemical Oxygen Demand	EPA 405.1	8	1	3	12
Salinity	ASTM 2520B	8	1	3	12

HSL Metals include Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mn, Mg, Hg, Ni, K, Se, Ag, Na, Tl, V, and Zn
VOA - volatile organic compounds
SVOC - semivolatile organic compounds
TOC - total organic carbon
TDS - total dissolved solids
CLP - contract laboratory procedure
RAS - routine analytical services
SAS - special analytical services
ASTM - American Society of Testing Materials

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PROPOSED RELOCATION OF BACKGROUND BORINGS/WELLS FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY

DATED 19 DECEMBER 1991

IS ENTERED IN THE DATABASE AND FILED AT ADMINISTRATIVE RECORD NO. **N00236.000577**