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NTC SAN DIEGO
SSIC # 5090.3

INTERNATIONAL TECHNOLOGY CORPORATION

March 4, 1997

Jim Kozakowski
Bechtel National, Inc.
401 West "A" Street, Suite 1000
San Diego, California 92101

Subject: **Navy Clean II CTO-122 (Naval Training Center)**
IDW Soil Disposal Options (IT J/N 770220, D.O. 40)

Dear Jim:

IT Corporation (IT) has sampled the Investigation Derived Waste (IDW) soil drums at the Naval Training Center for disposal characterization. One composite soil sample was collected from four drums containing contaminated soil from monitoring well installation. The soil sample was analyzed by the following analytical test methods:

- EPA method 8260 — Volatile organic compounds
- EPA method 8270 — Semi-volatile organic compounds
- EPA method 8080 — Organochlorine pesticides and PCBs
- EPA method 418.1 — Recoverable petroleum hydrocarbons
- STLC/CAM Metals — Soluble threshold limit concentration metals
- TTLC/CAM metals — Total threshold limit concentration metals
- 96-Hour Bioassay — Aquatic toxicity test

The analytical results indicate that the composite soil sample did not appear to contain any compounds above levels that are regulated under Code of Federal Regulations (CFR) 40 or California Code of Regulations (CCR) Title 22, hazardous waste regulations. Specifically, the sample did not contain any metals exceeding the soluble threshold limit concentration (STLC) regulatory levels and the sample passed the 96-hour aquatic toxicity test. There are several options available to the Navy for disposal of the IDW soil drums. The following table is a comparison of the different disposal options and the estimated costs associated with each option:

Regional Office
336 West Anaheim Street • Wilmington, California 90744-4462 • 310-830-1781 • FAX: 310-518-7933

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Jim Kozakowski
Bechtel National, Inc.
March 4, 1997
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Disposal options for the soil:

Disposal Facilities	Treatment Technologies	Disposal Costs	Transportation Costs	Total Costs**
Ensco West Inc.	Landfill	$120/drum	$100/drum	$1880
Rollins OPC	Landfill	$193/drum	$120/drum	$2252
Chemical Waste Management	Landfill	$127/drum	$142/drum	$2076
US Ecology	Landfill	$127/drum	$142/drum	$2584

** The total cost includes an IT handling fee of $1,000.

The lowest cost option for the Navy would be to profile the waste for disposal at Ensco West Inc. (EWI) in Wilmington. EWI has the most competitive pricing as well as a good regulatory compliance history.

IT appreciates the opportunity to provide hazardous waste management services for Bechtel National, Inc. If you have any questions regarding the analytical results for soil at Navy Clean II, CTO-122, at the Naval Training Center, or would like to discuss the disposal options, please call me at 310/830-1781, extension 341.

Sincerely,

IT CORPORATION

Anton Bolliger
Field Chemist

:ab

WI/3-97/h:/prop/cbp/bolliger/cto122-

ANALYTICAL REPORT

Our Quality Control Is Your Quality Assurance

LOG NO: G97-02-574

Received: 21 FEB 97

Mailed:

Mr. Tony Bolliger
IT Corporation
336 W. Anaheim Street
Wilmington, CA 90744

Project: 770220-005

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, NON-AQUEOUS SAMPLES	DATE SAMPLED
02-574-1	CT0122-2S	21 FEB 97

PARAMETER	02-574-1
Digestion (3050), Date	02/25/97
Furnace Digestion (3050), Date	02/25/97

BCA — Division of V.O.C. Analytical Laboratories, Inc.
801 Western Avenue, Glendale, CA 91201 • Phone: (818) 247-5737 • Fax: (818) 247-9797

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, NON-AQUEOUS SAMPLES	DATE SAMPLED
02-574-1	CTO122-2S	21 FEB 97

PARAMETER	02-574-1
Pesticides (8080)	
Date Analyzed	02/25/97
Date Extracted	02/24/95
Dilution Factor, Times	1
Aldrin, mg/kg	<0.0007
Chlordane, mg/kg	<0.03
p,p'-DDD, mg/kg	<0.001
p,p'-DDE, mg/kg	<0.0007
p,p'-DDT, mg/kg	<0.001
Dieldrin, mg/kg	<0.0007
Endosulfan I, mg/kg	<0.002
Endosulfan II, mg/kg	<0.0007
Endosulfan sulfate, mg/kg	<0.001
Endrin, mg/kg	<0.0007
Endrin aldehyde, mg/kg	<0.001
Heptachlor epoxide, mg/kg	<0.0007
Heptachlor, mg/kg	<0.001
Methoxychlor, mg/kg	<0.001
Toxaphene, mg/kg	<0.1
BHC, alpha isomer, mg/kg	<0.002
BHC, beta isomer, mg/kg	<0.002
BHC, delta isomer, mg/kg	<0.0007
BHC, gamma isomer (Lindane), mg/kg	<0.0007
Surrogates **	
Decachlorobiphenyl Reported, mg/kg	0.0112
Decachlorobiphenyl Theoretical, mg/kg	0.0083
Tetrachloro-meta-xylene Rpt., mg/kg	0.0119

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02-574-1	CT0122-2S	21 FEB 97

PARAMETER	02-574-1
Tetrachloro-meta-xylene Theor., mg/kg	0.0083
PCBs (8080)	
Date Analyzed	02/25/97
Date Extracted	02/24/97
Dilution Factor, Times	1
Aroclor 1016, mg/kg	<0.03
Aroclor 1221, mg/kg	<0.03
Aroclor 1232, mg/kg	<0.03
Aroclor 1242, mg/kg	<0.03
Aroclor 1248, mg/kg	<0.03
Aroclor 1254, mg/kg	<0.03
Aroclor 1260, mg/kg	<0.03
Surrogates **	
Decachlorobiphenyl Reported, mg/kg	0.0112
Decachlorobiphenyl Theoretical, mg/kg	0.0083
Tetrachloro-meta-xylene Rpt., mg/kg	0.0119
Tetrachloro-meta-xylene Theor., mg/kg	0.0083
Arsenic (7060), mg/kg	1.7
Antimony (6010), mg/kg	<10
Barium (6010), mg/kg	37
Beryllium (6010), mg/kg	0.23
Cadmium (6010), mg/kg	<0.5
Chromium (6010), mg/kg	10
Cobalt (6010), mg/kg	<4
Copper (6010), mg/kg	5.3
Lead (6010), mg/kg	<5
Mercury (7471), mg/kg	<0.1

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LOG NO	SAMPLE DESCRIPTION, NON-AQUEOUS SAMPLES	DATE SAMPLED
02-574-1	CTO122-2S	21 FEB 97

PARAMETER	02-574-1
Molybdenum (6010), mg/kg	<2
Nickel (6010), mg/kg	4.6
Selenium (7740), mg/kg	<0.4
Silver (6010), mg/kg	<1
Thallium (6010), mg/kg	<7
Vanadium (6010), mg/kg	26
Zinc (6010), mg/kg	18
CA Haz Waste Bioassay, Screen , mg/L	Pass >750
TRPH (418.1), mg/kg	48

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LOG NO	SAMPLE DESCRIPTION, NON-AQUEOUS SAMPLES	DATE SAMPLED
02-574-1	CT0122-2S	21 FEB 97

PARAMETER	02-574-1
Semi-volatiles (8270)	
Date Analyzed	02/24/97
Date Extracted	02/17/97
Dilution Factor, Times	1
1,2,4-Trichlorobenzene, mg/kg	<0.2
1,2-Dichlorobenzene, mg/kg	<0.2
1,2-Diphenylhydrazine, mg/kg	<0.2
1,3-Dichlorobenzene, mg/kg	<0.2
1,4-Dichlorobenzene, mg/kg	<0.2
2,4,5-Trichlorophenol, mg/kg	<0.2
2,4,6-Trichlorophenol, mg/kg	<0.2
2,4-Dichlorophenol, mg/kg	<0.2
2,4-Dimethylphenol, mg/kg	<0.2
2,4-Dinitrophenol, mg/kg	<0.4
2,4-Dinitrotoluene, mg/kg	<0.2
2,6-Dinitrotoluene, mg/kg	<0.2
2-Chloronaphthalene, mg/kg	<0.2
2-Chlorophenol, mg/kg	<0.2
2-Methyl-4,6-dinitrophenol, mg/kg	<0.4
2-Methylnaphthalene, mg/kg	<0.2
2-Methylphenol (o-Cresol), mg/kg	<0.2
2-Nitroaniline, mg/kg	<0.2
2-Nitrophenol, mg/kg	<0.2
3,3'-Dichlorobenzidine, mg/kg	<0.4
3-Nitroaniline, mg/kg	<0.2
4-Bromophenylphenylether, mg/kg	<0.2
4-Chloro-3-methylphenol, mg/kg	<0.2

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LOG NO	SAMPLE DESCRIPTION, NON-AQUEOUS SAMPLES	DATE SAMPLED
02-574-1	CT0122-2S	21 FEB 97

PARAMETER	02-574-1
4-Chloroaniline, mg/kg	<0.2
4-Chlorophenylphenylether, mg/kg	<0.2
4-Methylphenol (p-Cresol), mg/kg	<0.4
4-Nitroaniline, mg/kg	<0.2
4-Nitrophenol, mg/kg	<0.4
Acenaphthene, mg/kg	<0.2
Acenaphthylene, mg/kg	<0.2
Aniline, mg/kg	<0.2
Anthracene, mg/kg	<0.2
Benzidine, mg/kg	<4
Benzo(a)anthracene, mg/kg	<0.2
Benzo(a)pyrene, mg/kg	<0.2
Benzo(b)fluoranthene, mg/kg	<0.2
Benzo(g,h,i)perylene, mg/kg	<0.2
Benzo(k)fluoranthene, mg/kg	<0.2
Benzyl Alcohol, mg/kg	<0.4
Benzoic acid, mg/kg	<2
Butylbenzylphthalate, mg/kg	<0.2
Chrysene, mg/kg	<0.2
Di-n-octylphthalate, mg/kg	<0.2
Dibenzo(a,h)anthracene, mg/kg	<0.2
Dibenzofuran, mg/kg	<0.2
Dibutylphthalate, mg/kg	<0.2
Diethylphthalate, mg/kg	<0.2
Dimethylphthalate, mg/kg	<0.2
Fluoranthene, mg/kg	<0.2
Fluorene, mg/kg	<0.2

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Project: 770220-005

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, NON-AQUEOUS SAMPLES	DATE SAMPLED
02-574-1	CT0122-2S	21 FEB 97

PARAMETER	02-574-1
Hexachlorobenzene, mg/kg	<0.2
Hexachlorobutadiene, mg/kg	<0.2
Hexachlorocyclopentadiene, mg/kg	<0.4
Hexachloroethane, mg/kg	<0.2
Indeno(1,2,3-c,d)pyrene, mg/kg	<0.2
Isophorone, mg/kg	<0.2
N-Nitrosodimethylamine, mg/kg	<0.2
N-Nitrosodiphenylamine, mg/kg	<0.2
N-Nitrosodi-n-propylamine, mg/kg	<0.2
Nitrobenzene, mg/kg	<0.2
Naphthalene, mg/kg	<0.2
Phenanthrene, mg/kg	<0.2
Phenol, mg/kg	<0.2
Pentachlorophenol, mg/kg	<0.4
Pyrene, mg/kg	<0.2
Pyridine, mg/kg	<0.4
Bis(2-chloroethoxy)methane, mg/kg	<0.2
Bis(2-chloroethyl)ether, mg/kg	<0.2
Bis(2-chloroisopropyl)ether, mg/kg	<0.2
Bis(2-ethylhexyl)phthalate, mg/kg	<0.4
Surrogates **	
2-Fluorobiphenyl Reported, mg/kg	1.46
2-Fluorobiphenyl Theo., mg/kg	1.67
2-Fluorophenol Reported, mg/kg	1.99
2-Fluorophenol Theoretical, mg/kg	2.50
2,4,6-Tribromophenol Rep., mg/kg	1.81
2,4,6-Tribromophenol Theo., mg/kg	2.50

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LOG NO	SAMPLE DESCRIPTION, NON-AQUEOUS SAMPLES	DATE SAMPLED
02-574-1	CT0122-2S	21 FEB 97

PARAMETER	02-574-1
Nitrobenzene-d5 Reported, mg/kg	1.42
Nitrobenzene-d5 Theoretical, mg/kg	1.67
Phenol-d5 Reported, mg/kg	2.25
Phenol-d5 Theoretical, mg/kg	2.50
Terphenyl-d14 Reported, mg/kg	1.72
Terphenyl-d14 Theoretical, mg/kg	1.67

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LOG NO	SAMPLE DESCRIPTION, NON-AQUEOUS SAMPLES	DATE SAMPLED
02-574-1	CT0122-2S	21 FEB 97

PARAMETER	02-574-1
Vol.Pri.Poll. (8260)	
Date Analyzed	02/27/97
Dilution Factor, Times	1
1,1,1,2-Tetrachloroethane, mg/kg	<0.005
1,1,1-Trichloroethane, mg/kg	<0.005
1,1,2,2-Tetrachloroethane, mg/kg	<0.005
1,1,2-Trichloroethane, mg/kg	<0.005
1,1-Dichloroethane, mg/kg	<0.005
1,1-Dichloroethene, mg/kg	<0.005
1,1-Dichloropropene, mg/kg	<0.005
1,2,3-Trichlorobenzene, mg/kg	<0.005
1,2,3-Trichloropropane, mg/kg	<0.005
1,2,4-Trichlorobenzene, mg/kg	<0.005
1,2,4-Trimethylbenzene, mg/kg	<0.005
1,2-Dibromo-3-chloropropane, mg/kg	<0.005
1,2-Dibromoethane, mg/kg	<0.005
1,2-Dichloroethane, mg/kg	<0.005
1,2-Dichlorobenzene, mg/kg	<0.005
1,2-Dichloropropane, mg/kg	<0.005
1,3,5-Trimethylbenzene, mg/kg	<0.005
1,3-Dichlorobenzene, mg/kg	<0.005
1,3-Dichloropropane, mg/kg	<0.005
1,4-Dichlorobenzene, mg/kg	<0.005
2,2-Dichloropropane, mg/kg	<0.005
2-Chlorotoluene, mg/kg	<0.005
2-Hexanone, mg/kg	<0.05
4-Chlorotoluene, mg/kg	<0.005

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Project: 770220-005

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, NON-AQUEOUS SAMPLES	DATE SAMPLED
02-574-1	CT0122-2S	21 FEB 97

PARAMETER	02-574-1
Acetone, mg/kg	<0.1
Bromobenzene, mg/kg	<0.005
Bromochloromethane, mg/kg	<0.005
Bromodichloromethane, mg/kg	<0.005
Bromomethane, mg/kg	<0.005
Benzene, mg/kg	<0.005
Bromoform, mg/kg	<0.005
Chlorobenzene, mg/kg	<0.005
Carbon Tetrachloride, mg/kg	<0.005
Chloroethane, mg/kg	<0.005
Chloroform, mg/kg	<0.005
Chloromethane, mg/kg	<0.005
Carbon Disulfide, mg/kg	<0.01
Dibromochloromethane, mg/kg	<0.005
Dibromomethane, mg/kg	<0.005
Dichlorodifluoromethane, mg/kg	<0.005
Ethylbenzene, mg/kg	<0.005
Freon 113, mg/kg	<0.01
Hexachlorobutadiene, mg/kg	<0.005
Isopropylbenzene, mg/kg	<0.005
Methyl ethyl ketone, mg/kg	<0.03
Methyl isobutyl ketone, mg/kg	<0.03
Methylene chloride, mg/kg	<0.005
N-Butylbenzene, mg/kg	<0.005
N-Propylbenzene, mg/kg	<0.005
Naphthalene, mg/kg	<0.005
Styrene, mg/kg	<0.005

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Project: 770220-005

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, NON-AQUEOUS SAMPLES	DATE SAMPLED
02-574-1	CT0122-25	21 FEB 97

PARAMETER	02-574-1
Trichloroethene, mg/kg	<0.005
Trichlorofluoromethane, mg/kg	<0.005
Toluene, mg/kg	<0.005
Tetrachloroethene, mg/kg	<0.005
Vinyl acetate, mg/kg	<0.05
Vinyl chloride, mg/kg	<0.005
cis-1,2-Dichloroethene, mg/kg	<0.005
cis-1,3-Dichloropropene, mg/kg	<0.005
m- and p-Xylene Isomers, mg/kg	<0.005
o-Xylene, mg/kg	<0.005
p-Isopropyl toluene, mg/kg	<0.005
sec-Butylbenzene, mg/kg	<0.005
trans-1,2-Dichloroethene, mg/kg	<0.005
trans-1,3-Dichloropropene, mg/kg	<0.005
tert-Butylbenzene, mg/kg	<0.005
Other Vol.Pri.Poll. (8260)	---
Surrogates **	
4-Bromofluorobenzene Rep., mg/kg	0.0503
4-Bromofluorobenzene Theo., mg/kg	0.0500
Toluene-d8 Reported, mg/kg	0.0550
Toluene-d8 Theo., mg/kg	0.0500
Dibromofluoromethane Rep., mg/kg	0.0444
Dibromofluoromethane Theo., mg/kg	0.0500

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Project: 770220-005

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
02-574-2	CT0122-2S	21 FEB 97

PARAMETER	02-574-2
CAM WET Extraction (WET)	02/25/97
Digestion (3010), Date	02/27/97
Arsenic (6010), mg/L	<0.05
Antimony (6010), mg/L	<0.1
Barium (6010), mg/L	1.1
Beryllium (6010), mg/L	0.0049
Cadmium (6010), mg/L	0.0056
Chromium (6010), mg/L	0.015
Cobalt (6010), mg/L	<0.04
Copper (6010), mg/L	0.11
Lead (6010), mg/L	<0.05
Mercury (7470), mg/L	<0.004
Molybdenum (6010), mg/L	<0.02
Nickel (6010), mg/L	<0.04
Selenium (6010), mg/L	<0.1
Silver (6010), mg/L	<0.01
Thallium (6010), mg/L	<0.07
Vanadium (6010), mg/L	0.17
Zinc (6010), mg/L	0.18

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Project: 770220-005

REPORT OF ANALYTICAL RESULTS

Bioassay analysis was performed by Aquatic Testing Laboratories, their report is attached.
(L. Lem 3/97)

Greta Galoustian, Laboratory Director

The analytical results within this report relate only to the specific compounds and samples investigated and may not necessarily reflect other apparently similar material from the same or a similar location.

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