6246 HYGIENE AND SANITATION

JAN 1 1989

DEC 31 1989

(PERMANENT) SECNAVINST 5212.5B
PART II, CHAP. 6, PAR 6240(1) 2 YRS

BLDG 45 SAMPLE HISTORY

TOTAL CAPACITY: 273,370 GALLONS

DATE SAMPLE	COMMENTS
28 JUL 81	
18 MAY 82	
8 DEC 83	
30 OCT 84	
18 FEB 87	# 87-31 → 87-34
~~SEP 87~~	~~VOC ONLY~~
23 JUN 87	AUBURN UN TOOK SAMPLES
SEP 87	VOC ONLY

6241/2
NREAD
OCT 16 1987

From: Commanding General, Marine Corps Base, Camp Lejeune
To: Defense Reutilization and Marketing Officer, Defense Logistics Agency, Lejeune, Camp Lejeune, NC 28542-5000

Subj: WASTE OIL STORAGE TANKS; ANALYSIS OF

Ref: (a) BO 6240.5
(b) Dir NREAD ltr 6241/2 of 4 Jun 87

Encl: (1) JTC Environmental Consultants, Inc. Rept No. 87-444

1. The following data is forwarded for your information. Navy Sample ID No. 87-31 through 87-34 are additional data provided on the large waste oil tank at Bldg 65. The other parameters were provided in reference (b).

2. Navy Sample ID No. 87-89 and 87-80 are the volatile organic chemical analysis on the third waste oil tank at the Marine Corps Air Station, New River (the one furthest from the crash crew). It is recommended that this tank be disposed of as a hazardous waste fuel. DRMO is requested to advise if additional testing is required of this tank for disposal per the existing contract.

T. J. DALZELL
By direction

Copy to:
BMO
CO MCAS NR

BCC:
Lab

14 OCT 1987

Partial Results

JTC DATA REPORT # 87-444

LABORATORY ANALYSIS ON NAVAL SAMPLES

CONTRACT #N62470-86-C-8754

CASE # 138

PREPARED FOR:

DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511-6287

PREPARED BY:

JTC ENVIRONMENTAL CONSULTANTS, INC.
4 RESEARCH PLACE, SUITE L-10
ROCKVILLE, MARYLAND 20850

OCTOBER 7, 1987

Ann E. Rosecrance

Ann E. Rosecrance
Laboratory Director

JTC Environmental Consultants, Inc.

Location: Camp Lejeune Date of Receipt: 9-23-87 Turnaround: 10 days

Date: 10-7-87 Case No. 138 to Naval Facilities Engineering Command, Norfolk, Virginia

JTC Data Report No. 87-444 Table 1 of 1

NAVY SAMPLE ID	JTC SAMPLE ID	ANALYSIS PARAMETER							
		VOA + Freon							
87-31	61-0986	see attached sheet							
87-32	61-0987	"							
87-33	61-0988	"							
87-34	61-0989	"							
87-79 oil layer composite	61-0990	"							
87-80	61-0991	"							

J
T
C Environmental Consultants, Inc.

PRIORITY POLLUTANT ANALYSIS DATA SHEET

VOLATILE FRACTION

JTC SAMPLE # 61-0986 PROJECT NO. NF-61 #138

CLIENT SAMPLE # 87-31 DATE RECEIVED 9-23-87

METHOD NO. 624 DETECTION LIMIT 250 mg/L

PARAMETER	RESULT mg/L	PARAMETER	RESULT mg/L
acrolein	ND	1,2-dichloropropane	ND
acrylonitrile	ND	1,3-dichloropropylene	ND
benzene	50 * ~~ND~~	ethylbenzene	100 * ~~ND~~
carbon tetrachloride	ND	methylene chloride	ND
chlorobenzene	ND	methyl chloride	ND
1,2-dichloroethane	ND	methyl bromide	ND
1,1,1-trichloroethane	100 * ~~ND~~	bromoform	ND
1,1-dichloroethane	ND	dichlorobromomethane	ND
1,1,2-trichloroethane	ND	trichlorofluoromethane	200 * ~~ND~~
1,1,2,2-tetrachloroethane	ND	dichlorodifluoromethane	ND
chloroethane	ND	chlorodibromomethane	ND
2-chloroethylvinylether	ND	tetrachloroethylene	ND
chloroform	ND	toluene	390 ~~ND~~
1,1-dichloroethylene	ND	trichloroethylene	70 * ~~ND~~
1,2-trans-dichloroethylene	ND	vinyl chloride	ND
2-HEXANONE	430	xylenes	580 ~~ND~~
		FREON	2900

ND = NOT DETECTED

* = BELOW DETECTION LIMIT

J
T
C Environmental Consultants, Inc.

PRIORITY POLLUTANT ANALYSIS DATA SHEET

VOLATILE FRACTION

JTC SAMPLE # 61-0987 PROJECT NO. NF-61 #138

CLIENT SAMPLE # 87-32 DATE RECEIVED 9-23-87

METHOD NO. 624 DETECTION LIMIT 250 mg/L

PARAMETER	RESULT mg/L	PARAMETER	RESULT mg/L
acrolein	ND	1,2-dichloropropane	ND
acrylonitrile	ND	1,3-dichloropropylene	ND
benzene	200 * ~~ND~~	ethylbenzene	410 ~~ND~~
carbon tetrachloride	ND	methylene chloride	ND
chlorobenzene	ND	methyl chloride	ND
1,2-dichloroethane	ND	methyl bromide	ND
1,1,1-trichloroethane	410 ~~ND~~	bromoform	ND
1,1-dichloroethane	ND	dichlorobromomethane	ND
1,1,2-trichloroethane	ND	trichlorofluoromethane	640 ~~ND~~
1,1,2,2-tetrachloroethane	ND	dichlorodifluoromethane	ND
chloroethane	ND	chlorodibromomethane	ND
2-chloroethylvinylether	ND	tetrachloroethylene	ND
chloroform	ND	toluene	1300 ~~ND~~
1,1-dichloroethylene	ND	trichloroethylene	100 * ~~ND~~
1,2-trans-dichloroethylene	ND	vinyl chloride	ND
Acetone	1900	xylenes	1900 ~~ND~~
2-Hexanone	1700	Freon	9300
4-Methyl-2-Pentanone (MIBK)	380		

ND = NOT DETECTED

* = BELOW DETECTION LIMIT

J
T
C Environmental Consultants, Inc.

PRIORITY POLLUTANT ANALYSIS DATA SHEET

VOLATILE FRACTION

JTC SAMPLE # 61-0988 PROJECT NO. NF-61 #138

CLIENT SAMPLE # 87-33 DATE RECEIVED 9-23-87

METHOD NO. 624 DETECTION LIMIT 250 mg/L

PARAMETER	RESULT mg/L	PARAMETER	RESULT mg/L
acrolein	ND	1,2-dichloropropane	ND
acrylonitrile	ND	1,3-dichloropropylene	ND
benzene	200 * ~~ND~~	ethylbenzene	390 ~~ND~~
carbon tetrachloride	ND	methylene chloride	ND
chlorobenzene	ND	methyl chloride	ND
1,2-dichloroethane	ND	methyl bromide	ND
1,1,1-trichloroethane	380 ~~ND~~	bromoform	ND
1,1-dichloroethane	ND	dichlorobromomethane	ND
1,1,2-trichloroethane	ND	trichlorofluoromethane	560 ND
1,1,2,2-tetrachloroethane	ND	dichlorodifluoromethane	ND
chloroethane	ND	chlorodibromomethane	ND
2-chloroethylvinylether	ND	tetrachloroethylene	ND
chloroform	ND	toluene	1300 ~~ND~~
1,1-dichloroethylene	ND	trichloroethylene	100 * ~~ND~~
1,2-trans-dichloroethylene	ND	vinyl chloride	ND
ACETONE	1800	xylenes	2000 ~~ND~~
4-METHYL-2-PENTANONE (MIBK)	380	FREON	8200
2-HEXANONE	1600		

ND = NOT DETECTED

* = BELOW DETECTION LIMIT

J
T
C Environmental Consultants, Inc.

PRIORITY POLLUTANT ANALYSIS DATA SHEET

VOLATILE FRACTION

JTC SAMPLE # 61-0989 PROJECT NO. NF-61 #138

CLIENT SAMPLE # 87-34 DATE RECEIVED 9-23-87

METHOD NO. 624 DETECTION LIMIT 250 mg/L

PARAMETER	RESULT mg/L	PARAMETER	RESULT mg/L
acrolein	ND	1,2-dichloropropane	ND
acrylonitrile	ND	1,3-dichloropropylene	ND
benzene	100 * ~~ND~~	ethylbenzene	620 ~~ND~~
carbon tetrachloride	ND	methylene chloride	ND
chlorobenzene	ND	methyl chloride	ND
1,2-dichloroethane	ND	methyl bromide	ND
1,1,1-trichloroethane	310 ~~ND~~	bromoform	ND
1,1-dichloroethane	ND	dichlorobromomethane	ND
1,1,2-trichloroethane	ND	trichlorofluoromethane	310 ~~ND~~
1,1,2,2-tetrachloroethane	ND	dichlorodifluoromethane	ND
chloroethane	ND	chlorodibromomethane	ND
2-chloroethylvinylether	ND	tetrachloroethylene	ND
chloroform	ND	toluene	1200 ~~ND~~
1,1-dichloroethylene	ND	trichloroethylene	100 * ~~ND~~
1,2-trans-dichloroethylene	ND	vinyl chloride	ND
ACETONE	1400	xylenes	2000 ~~ND~~
4-METHYL-2-PENTANONE (MIBK)	350	FREON	5200
2-HEXANONE	3300		

ND = NOT DETECTED

* = BELOW DETECTION LIMIT

J T C Environmental Consultants, Inc.

PRIORITY POLLUTANT ANALYSIS DATA SHEET

VOLATILE FRACTION

JTC SAMPLE # 61-0990 COMPOSITE PROJECT NO. NF-61 #138

CLIENT SAMPLE # 87-79 DATE RECEIVED 9-23-87

METHOD NO. 624 DETECTION LIMIT 250 mg/L

PARAMETER	RESULT mg/L	PARAMETER	RESULT mg/L
acrolein	ND	1,2-dichloropropane	ND
acrylonitrile	ND	1,3-dichloropropylene	ND
benzene	200* ~~ND~~	ethylbenzene	720 ~~ND~~
carbon tetrachloride	ND	methylene chloride	ND
chlorobenzene	ND	methyl chloride	ND
1,2-dichloroethane	ND	methyl bromide	ND
1,1,1-trichloroethane	100 * ~~ND~~	bromoform	ND
1,1-dichloroethane	ND	dichlorobromomethane	ND
1,1,2-trichloroethane	ND	trichlorofluoromethane	ND
1,1,2,2-tetrachloroethane	ND	dichlorodifluoromethane	ND
chloroethane	ND	chlorodibromomethane	ND
2-chloroethylvinylether	ND	tetrachloroethylene	ND
chloroform	ND	toluene	970 ~~ND~~
1,1-dichloroethylene	ND	trichloroethylene	50 * ~~ND~~
1,2-trans-dichloroethylene	ND	vinyl chloride	ND
ACETONE	1400	xylenes	1500 ~~ND~~
4-METHYL-2-PENTANONE (MIBK)	330	FREON	1600
2-HEXANONE	1100		

ND = NOT DETECTED

* = BELOW DETECTION LIMIT

J
T
C Environmental Consultants, Inc.

PRIORITY POLLUTANT ANALYSIS DATA SHEET

VOLATILE FRACTION

JTC SAMPLE # 61-0991 PROJECT NO. NF-61 #138

CLIENT SAMPLE # 87-80 DATE RECEIVED 9-23-87

METHOD NO. 624 DETECTION LIMIT 250 mg/L

PARAMETER	RESULT mg/L	PARAMETER	RESULT mg/L
acrolein	ND	1,2-dichloropropane	ND
acrylonitrile	ND	1,3-dichloropropylene	ND
benzene 200 *	~~ND~~	ethylbenzene 460	~~ND~~
carbon tetrachloride	ND	methylene chloride	ND
chlorobenzene	ND	methyl chloride	ND
1,2-dichloroethane	ND	methyl bromide	ND
1,1,1-trichloroethane	ND	bromoform	ND
1,1-dichloroethane	ND	dichlorobromomethane	ND
1,1,2-trichloroethane	ND	trichlorofluoromethane	ND
1,1,2,2-tetrachloroethane	ND	dichlorodifluoromethane	ND
chloroethane	ND	chlorodibromomethane	ND
2-chloroethylvinylether	ND	tetrachloroethylene	ND
chloroform	ND	toluene 1300	~~ND~~
1,1-dichloroethylene	ND	trichloroethylene	ND
1,2-trans-dichloroethylene	ND	vinyl chloride	ND
ACETONE	2300	xylenes 2100	~~ND~~
4-METHYL-2-PENTANONE (MIBK)	500	FREON	600
2-HEXANONE	1500		

ND = NOT DETECTED

* = BELOW DETECTION LIMIT

6241/2
~~6240/2~~
NREAD
4 Jun 87

From: Director, Natural Resources and Environmental Affairs Division, Marine Corps Base, Camp Lejeune
To: Base Maintenance Officer, Marine Corps Base, Camp Lejeune

Subj: WASTE OIL STORAGE TANK AT BUILDING 45; ANALYSIS OF

Ref: (a) Dir M & R memo 6240 MAIN dtd 9 Jan 87
(b) BO 6240.5A

Encl: (1) JTC Environmental Consultants, Inc., Report #559
(2) JTC Environmental Consultants, Inc., Report #559 addendum Table #1

1. As requested in reference (a), four samples were taken by NREAD of the large waste oil storage tank located next to Building 45. The samples were numbered 87-31 through 87-34. Sample #87-31 was taken from the bottom layers of oil in the tank. Sample #87-34 was taken just below the surface of the oil in the tank. Samples #87-32 and #87-33 were taken from middle layers of oil in the tank.

2. Based on data contained in enclosures (1) and (2), the contents of the tank are regulated as a hazardous waste fuel by regulations outlined in reference (b). The majority of the subject waste oil appears to be suitable for burning for recovery of energy based on information provided by Oldover Corporation, Aquadale, North Carolina. Oldover is currently highly regarded by the State Hazardous Waste regulatory establishment as a mechanism for disposal of this type of waste. Based on information provided by Mr. Paul Hubbell, CMC (Code LFL), DRMO's cost of disposal will be reimbursed by higher headquarters. Cost in excess of $250,000 is likely.

3. It is recommended that the subject oil be turned in to DRMO for disposal, and that DRMO be requested to remove the entire contents of the subject tank. It is likely that the bottom layer will require separate disposition due to Chromium and water content.

4. The tank should also be evaluated/tested for suitability for storage of waste oil prior to reuse. Point of contact is Danny Sharpe, extension 5003.

D. D. SHARPE
Acting

Copy to:
DRMO
AC/S, FAC
Blind copy to: Supply Chem

Partial Report

CASE # 559

LABORATORY ANALYSIS ON

NAVAL SAMPLES

(A/E CONTRACT N62470-84-B-6932)

JTC REPORT # 87-126

PREPARED FOR:

DEPARTMENT OF THE NAVY

ATLANTIC DIVISION

NAVAL FACILITIES ENGINEERING COMMAND

NORFOLK, VA 23511

PREPARED BY:

JTC ENVIRONMENTAL CONSULTANTS, INC.

4 RESEARCH PLACE, SUITE L-10

ROCKVILLE, MARYLAND 20850

APRIL 17, 1987

Regina B. Smith for

Ann E. Rosecrance
Laboratory Director

ENCLOSURE (1)

JTC Environmental Consultants, Inc.

Location: Camp Lejeune Date of Receipt: 3-18-87 Turnaround: routine

Date: 4-17-87 Report No. 559 to Naval Facilities Engineering Command, Norfolk, Virginia

JTC Data Report No. 87-126 Table 1

NAVY SAMPLE ID	JTC SAMPLE ID	ANALYSIS PARAMETER							
		Flashpoint °C	TOX	Corrosivity pH	PCB ug/g				
87-30 oil layer	12-4514	55	0.07%	**	<5				
87-30 water layer	12-4514	+	572 ug/L	7.32	+				
87-31	12-4515	57	0.25%						
87-32	12-4516	50	0.25%						
87-33	12-4517	50	0.24%						
87-34	12-4518	57	0.17%						

** unable to do analysis due to oil matrix

Location: Camp Lejeune Date of Receipt: 3-18-87 Turnaround: routine

Date: 4-17-87 Report No. 559 to Naval Facilities Engineering Command, Norfolk, Virginia

JTC Data Report No. 87-126 Table 2

NAVY SAMPLE ID	JTC SAMPLE ID	ANALYSIS PARAMETER							
		Water %	Sediment %	Sp. Gravity g/ml	Viscosity @70°F, cSt.	BTU per lb.			
87-31	12-4515	11.0	0.38	0.81	28.6	17,000			
87-32	12-4516	10.7	0.40	0.81	27.9	17,100			
87-33	12-4517	10.5	0.37	0.83	26.0	17,100			
87-34	12-4518	6.40	0.20	0.76	21.0	18,000			

REPORT # 559 Addendum

LABORATORY ANALYSIS ON

NAVAL SAMPLES

(A/E CONTRACT N62470-84-B-6932)

JTC REPORT # 87-126

PREPARED FOR:

DEPARTMENT OF THE NAVY

ATLANTIC DIVISION

NAVAL FACILITIES ENGINEERING COMMAND

NORFOLK, VA 23511

PREPARED BY:

JTC ENVIRONMENTAL CONSULTANTS, INC.

4 RESEARCH PLACE, SUITE L-10

ROCKVILLE, MARYLAND 20850

APRIL 29, 1987

Regina B Smith for

Ann E. Rosecrance
Laboratory Director

ENCLOSURE (2)

JTC Environmental Consultants, Inc.

Location: Camp Lejeune Date of Receipt: 3-18-87 Turnaround: routine

Date: 4-29-87 Report No. 559 to Naval Facilities Engineering Command, Norfolk, Virginia

JTC Data Report No. 87-126 Table 1

NAVY SAMPLE ID	JTC SAMPLE ID	ANALYSIS PARAMETER							
		As ug/L	Ba ug/L	Cd ug/L	Cr ug/L	Pb ug/L	Hg mg/kg	Se ug/L	Ag ug/L
87-30 oil layer	12-4514	<2700	3530	<1500	710	19,500	<0.1	<860	<8920
87-30 water layer	12-4514	<500	180	<25	150	<250	<2.0 ug/L	<570	<50
87-31	12-4515	<2700	—	<1500	21,000	63,800	—	—	—
87-32	12-4516	<2700	—	<1500	1850	62,100	—	—	—
87-33	12-4517	<2700	—	<1500	1690	60,200	—	—	—
87-34	12-4518	<2700	—	<1500	1350	67,500	—	—	—

Location: Camp Lejeune Date of Receipt: 3-18-87 Turnaround: routine

Date: 4-29-87 Report No. 559 Add to Naval Facilities Engineering Command, Norfolk, Virginia

JTC Data Report No. 87-126 Table 2

NAVY SAMPLE ID	JTC SAMPLE ID	ANALYSIS PARAMETER							
		Reactivity							
		Cyanide	Sulfide						
87-30 oil layer	12-4514	<0.5 mg/kg	NA						
87-30 water layer	12-4514	<10 ug/L	850 ug/L						

NA = not available, result will be reported in separate addendum

	Bottom			Top
PARAMETER	87-31	87-32	87-33	87-34
ARSENIC (5ppm)	<2.7 ppm	<2.7 ppm	<2.7 ppm	<2.7 ppm
CADMIUM (2ppm)	<1.5 ppm	<1.5 ppm	<1.5 ppm	<1.5 ppm
CHROMIUM (10ppm)	21.0 ppm OFF-SPEC	1.85 ppm	1.69 ppm	1.35 ppm
LEAD (100 ppm)	63.8 ppm	62.1 ppm	60.2 ppm	67.5 ppm
FLASH POINT (>100°F ~~or~~ 37.8°C)	57°C or 134.6°F	50°C / 122°F	50°C / 122°F	57°C / 134.6°F
TOX (1,000 ppm or 0.1%)	0.25% HWF	0.25% HWF	0.24% HWF	0.17% HWF

CONCLUSION: BLDG 45 USED OIL TANK IS FULL OF HAZARDOUS WASTE FUEL, AS SHOWN BY PRESENT ANALYSIS

ACCOMENDATIONS: ~~A~~ EITHER (1) ~~SA SE DIPS~~ DISPOSE OF AS A HAZARDOUS WASTE OR (2) SEND SOME MORE SAMPLE OFF AND HAVE THE SPECIFIC CONCENTRATIONS OF THE HALOGENATED SOLVENTS ANALYZED. AT BEST ~~CAN~~ IT CAN BE SOLD AS OFF-SPECIFICATION USED OIL FUEL

Newt Masters

.81¢

Sara Hall
683-6012

40 day adverse
30 day removal

60

30

130

73

National Oil
Recyclers Association

Dan DDS

OPNAV 5216/144A (Rev. 8-81)
S/N 0107-LF-052-2320

DEPARTMENT OF THE NAVY

Memorandum

6240
MAIN

DATE: 9 January 1987

FROM: Director, Maintenance and Repair Branch, Base Maintenance Division, Marine Corps Base, Camp Lejeune

TO: Director, Natural Resources and Environmental Affairs Division, Marine Corps Base, Camp Lejeune

SUBJ: WASTE OIL ANALYSIS

1. It is requested that an analysis be conducted on waste oil located in the storage tank near Building 45. The tank has been filled with waste oil and requires removal by DRMO Contract.

R. E. Avant

R. E. AVANT

Isn't this a
Second request
DDS

☆U.S. GOVERNMENT PRINTING OFFICE: 1985 — 505-012/18049

OPNAV 5216/144A (Rev. 8-81)
S/N 0107-LF-052-2320

DEPARTMENT OF THE NAVY

Memorandum

6240
MAIN

DATE: 9 January 1987

FROM: Director, Maintenance and Repair Branch, Base Maintenance Division, Marine Corps Base, Camp Lejeune

TO: Director, Natural Resources and Environmental Affairs Division, Marine Corps Base, Camp Lejeune

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R. E. Avant

R. E. AVANT

☆U.S. GOVERNMENT PRINTING OFFICE: 1985 — 505-012/18049

OPNAV 5216/144A (Rev. 8-81)
S/N 0107-LF-052-2320

DEPARTMENT OF THE NAVY

Memorandum

DATE: 4 November 1986

FROM: Director, Maintenance and Repair Branch, Base Maintenance Division, Marine Corps Base, Camp Lejeune

TO: Director, Natural Resources and Environmental Affairs, Marine Corps Base, Camp Lejeune

SUBJ: TESTING OF WASTE OIL

1. The waste oil tank at Building 45 is full and requires testing as soon as possible. Point of contact will be Mr. Don Gurganus, x5909.

R. E. Avant

R. E. AVANT

Scotch® 7664 "Post-it" Routing-Request Pad

ROUTING - REQUEST

Please

- [ ] READ
- [ ] HANDLE
- [ ] APPROVE

and

- [ ] FORWARD
- [ ] RETURN
- [ ] KEEP OR DISCARD
- [ ] REVIEW WITH ME

Date _____

Recommendation

To Betz: Set up an Appt. Confirm in memo to BMD advising that NO wastes may be added to the tank after samples drawn.

From D Shange

OPNAV 5216/144A (Rev. 8-81)
S/N 0107-LF-052-2320

DEPARTMENT OF THE NAVY

Memorandum

DATE: 4 November 1986

FROM: Director, Maintenance and Repair Branch, Base Maintenance Division, Marine Corps Base, Camp Lejeune

TO: Director, Natural Resources and Environmental Affairs, Marine Corps Base, Camp Lejeune

SUBJ: TESTING OF WASTE OIL

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R. E. Avant

R. E. AVANT

Date: 8 September 1982

Memorandum for the Record

From: Ms. Betz, Quality Control Lab., Environmental Section, NREAB, BMaintDiv

Subj: PCB Sampling on 25 March 1982; Results of

1. LantDiv received sample MCBCL #902 on 28 April 1982, and stated it was primarily water. Another sample would have to be taken.

2. On 18 May 1982, Bob Lachapelle and Hoy Burns resampled the small tank by Bldg. 45. The sample was #5, 1-4 being the Used Oil Tank at the same lot. Sample #5 was sent to LantDiv for PCB analysis.

3. The results of the PCB analysis showed the trandformer oil in the small tank at the back of the Heavy Equipment Lot to have no detectable level of PCB. The analysis detection limit os 0.01ppm, any PCB level lower than 0.01ppm is not measureable.

Elizabeth A. Betz
Supervisory Chemist

11090/2
NREAD
12 Dec 84

From: Director, Natural Resources and Environmental Affairs Division, Marine Corps Base, Camp Lejeune
To: Base Maintenance Officer, Marine Corps Base, Camp Lejeune

Subj: ANALYSIS OF WASTE OIL AT BUILDING 45

Encl: (1) Report No. 1, Laboratory Analysis on Naval Samples (A&E Contract No. N6270-84-B-6932) of 30 Nov 84

1. The enclosure is provided for your information. The information contained in the enclosure addresses the suitability of the subject oil for burning for recovery of energy. Point of contact with this matter is Mr. Danny Sharpe, extension 2083.

JULIAN I. WOOTEN

Copy to:
Supvy Chemist (NREAD)

REPORT # 1

LABORATORY ANALYSIS ON NAVAL SAMPLES

(A/E Contract N6270-84-B-6932)

PREPARED FOR:

DEPARTMENT OF NAVY

ATLANTIC DIVISION

NAVAL FACILITIES ENGINEERING COMMAND

NORFOLK, VA 23511

PREPARED BY:

JTC ENVIRONMENTAL CONSULTANTS, INC.

4 RESEARCH PLACE, SUITE L-10

ROCKVILLE, MARYLAND 20850

NOVEMBER 30, 1984

JTC Environmental Consultants, Inc.

Date 11/30/84 Report No. 1 to Naval Facilities Engineering Command, Norfolk, Virginia

JTC Data Report No. 84-120 Table 2 Date of Sample Receipt 11-1-84

NAVY SAMPLE ID	JTC SAMPLE ID	ANALYSIS PARAMETER							
		Heat of Combustion BTU per lb	% water	% sediment	% oil	% ash	Viscosity CST at 50°C	% Sulfur	Specific Gravity
MCB waste oil 1 ft from surface (18 ft down)	12-0009	18,280	0.30	4.7	95.0	0.24	6.11	0.42	0.873
MCB waste oil 4 ft from surface (18 ft down)	12-0010	11,600	9.0	35.0	56.0	0.41	25.3	0.30	0.922
MCB waste oil - Bottom 10 ft below surface	12-0011	15,620	40.0	20.0	40.0	0.43	169.9	0.16	0.966

REPORT # 1

LABORATORY ANALYSIS ON NAVAL SAMPLES

(A/E Contract N6270-84-B-6932)

PREPARED FOR:

DEPARTMENT OF NAVY

ATLANTIC DIVISION

NAVAL FACILITIES ENGINEERING COMMAND

NORFOLK, VA 23511

PREPARED BY:

JTC ENVIRONMENTAL CONSULTANTS, INC.

4 RESEARCH PLACE, SUITE L-10

ROCKVILLE, MARYLAND 20850

NOVEMBER 30, 1984

JTC Environmental Consultants, Inc.

Date 11/30/84 Report No. 1 to Naval Facilities Engineering Command, Norfolk, Virginia

JTC Data Report No. 84-120 Table 2 Date of Sample Receipt 11-1-84

NAVY SAMPLE ID	JTC SAMPLE ID	ANALYSIS PARAMETER							
		Heat of Combustion BTU per lb.	% water	% sediment	% oil	% ash	Viscosity CST at 50°C	% Sulfur	Specific Gravity
MCB waste oil - 1 ft. from surface 18 ft down	12-0009	18,280	0.30	4.7	95.0	0.24	6.11	0.42	0.873
MCB waste oil - 4 ft from surface 18 ft. down	12-0010	11,600	9.0	35.0	56.0	0.41	25.3	0.30	0.922
MCB waste oil - bottom surface 10 ft.	12-0011	15,620	40.0	20.0	40.0	0.43	169.9	0.16	0.966

DATE: 7 AUGUST 1984

FROM: SUPVY CHEMIST, WATER QUALITY CONTROL LAB, ENVIR BR, NREAD

TO: SUPVY ECOLOGIST, ENVIR BR, NREAD

SUBJ: USED OIL TANKS S-888, S-889, S-890 AND S-891

ENCL: (1) GUILFORD LABORATORIES LTR OF 21 JUN 1984 (REC'D 7 AUG 1984)

(2) GRAINGER LABORATORIES LTR OF 15 JUN 1984

(3) GRAINER LABORATORIES LTR OF 25 JAN 1984

(4) GRAINER LABORATORIES LTR OF 9 FEB 1984

1. ENCLOSURES (1) AND (2) ARE THE ANALYSIS OF THE USED OIL PRESENTLY STORED IN TANKS S-888, S-889, S-890 AND S-891. THIS OIL DOES NOT SHOW THE HIGH LEVELS OF SOLVENTS THAT HAVE BEEN FOUND IN THE PAST

2. ENCLOSURES (3) AND (4) ARE THE ANALYSIS OF THE USED OIL PRESENTLY BEING REMOVED FROM THE TANK AT BLDG 45. COMPARING ENCLOSURE (1) TO ENCLOSURE (3) SHOWS THAT ~~ADDING THE OIL~~ MOVING THE OIL FROM THE LP TANKS TO THE LARGE TANK @ BLDG 45 SHOW NOT POSE ANY PROBLEMS. THE ONLY DIFFERENCES IN THE OIL IS THE ~~TOW~~ VERY LOW LEVELS OF ORGANICS ~~IN IT~~ AND THE PRESENCE OF SOME LEACHABLE LEAD IN THE LP TANKS WHEREAS THE TANK @ BLDG 45 HAS HIGH LEVELS OF 1,1-DICHLOROETHANE, ~~TETRACHLOROETHYLENE~~ TOLUENE AND PHENOLS BUT NO TRACE OF LEACHABLE LEAD.

Elizabeth A Beck

PIEDMONT RESEARCH LABORATORIES

Division Of

GUILFORD LABORATORIES, INC.

21 JUNE 1984

REPORT OF ANALYSIS

JOB#: DON40510
CUSTOMER: DEPT OF NAVY ATTN: ELIZABETH BETZ
SAMPLES: #1878 - TANK #5-888 (SAMPLES 1-4)
#1879 - TANK #5-889 (SAMPLES 5-8)
#1880 - TANK #5-890 (SAMPLES 9-12)
#1881 - TANK #5-891 (SAMPLES 13-16)

RESULTS

	#1878	#1879	#1880	#1881
% WATER	2.1	2.6	4.8	4.0
FLASH PT. (PMCC,deg F)	124 F	132 F	156 F	144 F
CORROSIVITY (pH)	7.59	7.10	6.50	7.63
BTU/gal	124,461	83,462	77,711	106,365
% SEDIMENT	< 0.001	< 0.001	1.60	0.71
VISCOSITY @ 100 ssu	62.2	42.0	80.5	73.5
@ 212 ssu	31.0	52.8	57.6	51.0
API GRAVITY @ 60	37.56	22.98	32.46	35.56
Cu STRIP CORROSIVITY	1	1	1	2
% SULFUR	0.40	0.19	0.24	0.30
ARSENIC (ppm)	4.37	7.69	5.20	5.68
BARIUM (ppm)	160.0	200.0	184.0	152.0
CADMIUM (ppm)	21.0	21.0	18.6	19.4
CHROMIUM (ppm)	7.0	7.66	7.06	9.29
LEAD (ppm)	229.0	222.0	225.0	218.0
MERCURY (ppm)	0.433	0.189	0.398	0.346
SELENIUM (ppm)	5.75	10.99	6.35	5.04
SILVER (ppm)	7.61	5.30	34.3	4.32
PHENOLS (ppm)	< 0.1	< 0.1	< 0.1	< 0.1
1,1,2-TCE (ppm)	3.7	< 0.1	< 0.1	< 0.1
1,1 DICHLOROETHANE (ppm)	< 0.1	< 0.1	< 0.1	< 0.1
TOLUENE (ppm)	143.5	129.0	83	66

2748 Patterson Street • Greensboro, North Carolina • 27407 • Telephone (919) 854-2320

PIEDMONT RESEARCH LABORATORIES

Division Of

GUILFORD LABORATORIES, INC.

	#1878	#1879	#1880	#1881
LEACHABLE METALS - EP TOXICITY				
ARSENIC (ppm)	<0.001	<0.001	<0.001	<0.001
BARIUM (ppm)	0.153	<0.01	<0.001	0.153
CADMIUM (ppm)	0.085	0.068	0.068	0.08
CHROMIUM (ppm)	0.058	0.058	0.235	0.176
LEAD (ppm)	2.59	1.58	1.39	2.14
MERCURY (ppm)	0.001	0.001	0.001	<0.001
SELENIUM (ppm)	<0.001	<0.001	<0.001	<0.001
SILVER (ppm)	0.025	0.012	0.012	0.025

GUILFORD LABORATORIES, INC.

J.A. RAYBURN

2748 Patterson Street • Greensboro, North Carolina • 27407 • Telephone (919) 854-2320

GLI

Grainger
Laboratories
Incorporated

Analytical and
Consulting Chemists

5500 Commercial Avenue
Raleigh, NC 27612
(919) 787-3061

1040 Greenfield Street
Wilmington, NC 28402
(919) 763-9793

June 15, 1984
84-11142

United States Marine Corps
Natural Resources and Environmental Affairs Div.
QC Lab NREAD, Bldg. 1103
Camp Lejeune, NC 28542

Attention: Ms. Elizabeth Betz

Subject: Analyses of Samples Received 6-12-84

Sample Identification: Purchase Order No. M3100041590130

1.	1201 – S-888		5.	1205 – S-888	
2.	1202 S-890		6.	1206 S-890	
3.	1203	S-889	7.	1207	S-891
4.	1204		8.	1208	

RESULTS

Sample Number	Total Aroclors, µg/g
1	<1.0
2	<1.0
3	<1.0
4	<1.0
5	<1.0
6	<1.0
7	<1.0
8	<1.0

Bruce A. Babson (WPB)

Bruce A. Babson
Staff Chemist

BAB:pph

Customer #92400

GLI

Grainger Laboratories Incorporated
Analytical and Consulting Chemists

5500 Commercial Avenue
Raleigh, NC 27612
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1040 Greenfield Street
Wilmington, NC 28402
(919) 763-9793

January 25, 1984
83-9295

Quality Control Lab, NREAD
Facilities, MCB
Camp Lejeune, NC 28542

Attention: Ms. Elizabeth Betz

Subject: Analysis of Sample Received 12/9/83

Sample Identification: Purchase Order M67001-83-M-9775

1. Used Oil

RESULTS

Arsenic, leachable as As, µg/g	<0.01
Barium, leachable as Ba, µg/g	0.11
Cadmium, leachable as Cd, µg/g	<0.001
Chromium, leachable as Cr, µg/g	<0.001
Lead, leachable as Pb, µg/g	<0.004
Mercury, leachable as Hg, µg/g	<0.8
Selenium, leachable as Se, µg/g	<0.01
Silver, leachable as Ag, µg/g	<0.004
Ignitability, °F	>70
Reactivity	"Reactive"
Phenolic Compounds, as C_6H_5OH, µg/g	24
Corrosivity, mmpy	<0.0003
BTU/lb	16,224
Karl Fischer Moisture, wt%	9.5
Sediment, vol%	15.4
Viscosity, Saybolt Secs., 101.3F	67.7

ATTACHMENT A

RESULTS
(Continued)

API Gravity, at 60°F	0.88
Total Sulfur, as S, wt%	0.32
Toluene, µg/g	1,170
1, 1-Dichloroethane, µg/g	12,200
Trichloroethylene, µg/g	110
Phenol, µg/g	<20
Pentachlorophenol, µg/g	<50
2-Chlorophenol, µg/g	<20
2, 4-Dichlorophenol, µg/g	<20
2, 4, 6-Trichlorophenol, µg/g	<40
Total Phenols, µg/g	13,480

W. Paul Brafford

W. Paul Brafford
General Laboratory Manager

WPB/at
Customer #92400

Grainger Laboratories Incorporated
Analytical and Consulting Chemists

00 Commercial Avenue
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(919) 787-3061

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Wilmington NC 28402
(919) 763-9793

February 9, 1984
84-9758

Quality Control Lab, NREAD
Facilities, MCB
Camp Lejeune, NC 28542

Attention: Ms. Elizabeth Betz

Subject: Analysis of Sample Received 2/1/84

Sample Identification: Purchase Order MC6700184M5149

1. GLI #83-9295, Waste Oil Composite

RESULTS

Total Aroclors, µg/g	<1.0

Bruce A. Babson
Staff Chemist

BAB/at
Customer #92400

Encl (1)

OPNAV 5216/144A (Rev. 8-81)
S/N 0107-LF-052-2320

DEPARTMENT OF THE NAVY

Memorandum

DDS 21 Feb 84.

DATE: 21 February 1984

FROM: Supervisory Chemist, Water Quality Control Laboratory, Environmental Br, NREAD

TO: Supervisory Ecologist, Environmental Br, NREAD

SUBJ: Used Oil Sampling and Analysis on 8 December 1983

ENCL: Grainger's Analysis

1. On 8 December 1983, Gaines Huneycutt and Elizabeth Betz sampled the used oil tank at the Heavy Equipment Lot. The bacon bomb sampler was used to pull samples from different depths. We were placed on the top of the tank by a cherry picker. Base Safety stated that the ladder was unsafe since it had no safety cage.

2. Preliminary samples were pulled every 3 ft to get a look at possible layering. There didn't show much difference in the layers. The water had apparently been pumped out. In the past, samples from 15 ft below surface and down showed alot of water. This sampling did not show much water at all. Samples were taken as shown below:

Sample #	Feet Below Surface
1	0 (5 ft from top of tank)
2	6
3	12
4	18

3. Analysis was run by Grainger Laboratories. The four samples were composited for analysis. No PCBs were found. No leachable metals were found except for barium. The alarming part was the high levels of Toluene, 1,1-Dichloroethane and total Phenols.

Elizabeth A. Betz
Supervisory Chemist

21 February 1984

Supervisory Chemist, Water Quality Control Laboratory, Environmental Health, USNAD

Supervisory Biologist, Environmental Ph, USNAD

Used-Oil Sampling and Analysis on 3 December 1983

ENCL: Geologist's Analysis

1. On 3 December 1983, Patrick Hunyvarne and Elizabeth Jones sampled the used oil sump at the Heavy Equipment Area. The basin both sampler was used to pull samples from different depths. We were placed on the top of the sump by a forklift. Since Darcy noted that the ladder was unsafe since it had no guard rail.

2. Preliminary samples were pulled every 1 ft to see if there was possible layering. It didn't show much difference in the layers. The water had apparently been pumped out. In the pure sample from 15 ft below surface and down showed also no water. This sampling did not show much water as 1:11. Samples were taken as shown below:

Sample #	Feet below surface
1	0 (3 ft from top of sump)
2	6
3	11
4	15

3. Analysis was run by Cranger Laboratories. The four samples were composited for analysis. No PCBs were found. The lowable metals were found except for barium. The chlorine pure was the high level of volume, 1,1-dichloroethane and phenols.

Elizabeth A. Jones
Supervisory Chemist

OPNAV 5216/144A (Rev. 8-81)
S/N 0107-LF-052-2320

DEPARTMENT OF THE NAVY

Memorandum

DATE: 21 February 1984

FROM: Supervisory Chemist, Water Quality Control Laboratory, Environmental Br, NREAD

TO: Supervisory Ecologist, Environmental Br, NREAD

SUBJ: Used Oil Sampling and Analysis on 8 December 1983

ENCL: Grainger'A Analysis

1. On 8 December 1983, Gaines Huneycutt and Elizabeth Betz sampled the used oil tank at the Heavy Equipment Lot. The bacon bomb sampler was used to pull samples from different depths. We were placed on the top of the tank by a cherry picker. Base Safety stated that the ladder was unsafe since it had no safety cage.

2. Preliminary samples were pulled every 3 ft to get a look at possible layering. There didn't show much difference on the layers. The water had apparently been pumped out. In the past, samples from 15 ft below surface and down showed alot of water. This sampling did not show much water at all. Samples were taken as shown below:

Sample #	Feet Below Surface
1	0 (5 ft from top of tank)
2	6
3	12
4	18

3. Analysis was run by Grainger Laboratories. The four samples were composited for analysis. No PCBs were found. No leachable metals were found except for barium. The alarming part was the high levels of Toluene, 1,1-Dichloroethane anddtoal Phenols.

Elizabeth A. Betz
Supervisory Chemist

Grainger Laboratories Incorporated

Analytical and Consulting Chemists

5500 Commercial Avenue
Raleigh, NC 27612
(919) 787-3061

1040 Greenfield Street
Wilmington, NC 28402
(919) 763-9793

February 9, 1984
84-9758

Quality Control Lab, NREAD
Facilities, MCB
Camp Lejeune, NC 28542

Attention: Ms. Elizabeth Betz

Subject: Analysis of Sample Received 2/1/84

Sample Identification: Purchase Order MC6700184M5149

1. GLI #83-9295, Waste Oil Composite

RESULTS

Total Aroclors, µg/g	<1.0

Bruce A. Babson
Staff Chemist

BAB/at
Customer #92400

GLI

Grainger Laboratories Incorporated

Analytical and Consulting Chemists

5500 Commercial Avenue
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Wilmington, NC 28402
(919) 763-9793

January 25, 1984
83-9295

Quality Control Lab, NREAD
Facilities, MCB
Camp Lejeune, NC 28542

Attention: Ms. Elizabeth Betz

Subject: Analysis of Sample Received 12/9/83

Sample Identification: Purchase Order M67001-83-M-9775

1. Used Oil

RESULTS

Arsenic, leachable as As, µg/g	<0.01
Barium, leachable as Ba, µg/g	0.11
Cadmium, leachable as Cd, µg/g	<0.001
Chromium, leachable as Cr, µg/g	<0.001
Lead, leachable as Pb, µg/g	<0.004
Mercury, leachable as Hg, µg/g	<0.8
Selenium, leachable as Se, µg/g	<0.01
Silver, leachable as Ag, µg/g	<0.004
Ignitability, °F	>70 168°F Kerosene
Reactivity	"Reactive"
Phenolic Compounds, as C_6H_5OH, µg/g	24
Corrosivity, mmpy	<0.0003
BTU/lb	16,224
Karl Fischer Moisture, wt%	9.5
Sediment, vol%	15.4
Viscosity, Saybolt Secs., 101.3F	67.7

RESULTS
(Continued)

API Gravity, at 60°F	0.88
Total Sulfur, as S, wt%	0.32
Toluene, µg/g	1,170
1, 1-Dichloroethane, µg/g	12,200
Trichloroethylene, µg/g	110
Phenol, µg/g	<20
Pentachlorophenol, µg/g	<50
2-Chlorophenol, µg/g	<20
2, 4-Dichlorophenol, µg/g	<20
2, 4, 6-Trichlorophenol, µg/g	<40
Total Phenols, µg/g	13,480

W. Paul Brafford
General Laboratory Manager

WPB/at
Customer #92400

T-6240/2

NREAD/DDS/jc
6240/1
22 Feb 1984

From: Director
To: Base Maintenance Officer

Subj: Analysis of Used Oil in S-781 at Building 45

Ref: (a) BO 6240.5

Encl: (1) Grainger Laboratories, Inc. Memo 84-9758 of 9 Feb 1984
(2) " " " Memo 83-9295 of 25 Jan 1984

1. Enclosure (1) provides analysis for PCB content of the subject tank. Enclosure (2) provides hazardous waste analysis of the subject tank. This information is required for turn in of the subject oil to the Defense Property Disposal Office (DPDO). Please note that significant levels of Toluene, 1 1-Dichloroethane and total phenols were present. Turn in of subject oil to DPDO should be coordinated with Lieutenant TORRES, Assistant Chief of Staff, Logistics, telephone 451-2535, who is the Base Hazardous Materiel Disposal Coordinator per the reference.

J. I. WOOTEN

Copy to:
SupvChem
EnvEng

Grainger Laboratories Incorporated

Analytical and Consulting Chemists

5500 Commercial Avenue
Raleigh, NC 27612
(919) 787-3061

1040 Greenfield Street
Wilmington, NC 28402
(919) 763-9793

February 9, 1984
84-9758

Quality Control Lab, NREAD
Facilities, MCB
Camp Lejeune, NC 28542

Attention: Ms. Elizabeth Betz

Subject: Analysis of Sample Received 2/1/84

Sample Identification: Purchase Order MC6700184M5149

1. GLI #83-9295, Waste Oil Composite

RESULTS

Total Aroclors, µg/g	<1.0

Bruce A. Babson
Staff Chemist

BAB/at
Customer #92400

Encl (1)

GLI

Grainger Laboratories Incorporated

Analytical and Consulting Chemists

5500 Commercial Avenue
Raleigh, NC 27612
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1040 Greenfield Street
Wilmington, NC 28402
(919) 763-9793

January 25, 1984
83-9295

Quality Control Lab, NREAD
Facilities, MCB
Camp Lejeune, NC 28542

Attention: Ms. Elizabeth Betz

Subject: Analysis of Sample Received 12/9/83

Sample Identification: Purchase Order M67001-83-M-9775

1. Used Oil

RESULTS

Arsenic, leachable as As, µg/g	<0.01
Barium, leachable as Ba, µg/g	0.11
Cadmium, leachable as Cd, µg/g	<0.001
Chromium, leachable as Cr, µg/g	<0.001
Lead, leachable as Pb, µg/g	<0.004
Mercury, leachable as Hg, µg/g	<0.8
Selenium, leachable as Se, µg/g	<0.01
Silver, leachable as Ag, µg/g	<0.004
Ignitability, °F	>70
Reactivity	"Reactive"
Phenolic Compounds, as C_6H_5OH, µg/g	24
Corrosivity, mmpy	<0.0003
BTU/lb	16,224
Karl Fischer Moisture, wt%	9.5
Sediment, vol%	15.4
Viscosity, Saybolt Secs., 101.3F	67.7

ATTACHMENT A

RESULTS
(Continued)

API Gravity, at 60°F	0.88
Total Sulfur, as S, wt%	0.32
Toluene, µg/g	1,170
1, 1-Dichloroethane, µg/g	12,200
Trichloroethylene, µg/g	110
Phenol, µg/g	<20
Pentachlorophenol, µg/g	<50
2-Chlorophenol, µg/g	<20
2, 4-Dichlorophenol, µg/g	<20
2, 4, 6-Trichlorophenol, µg/g	<40
Total Phenols, µg/g	13,480

W. Paul Brafford

W. Paul Brafford
General Laboratory Manager

WPB/at
Customer #92400

USED OIL HISTORY

UNIT= µg/g

	28 JULY 81	18 MAY 82	83
ARSENIC, LEACHABLE	<0.002 mg/l	<0.01	<0.01
BARIUM, LEACHABLE	1.08 mg/l	7.98	0.11
CADMIUM, LEACHABLE	1.88 mg/l	0.75	<0.001
CHROMIUM, LEACHABLE	0.16 mg/l	0.50	<0.001
LEAD, LEACHABLE	376.00 mg/l	109.75	<0.004
MERCURY, LEACHABLE	<0.002 mg/l	<0.002	<0.8
SELENIUM, LEACHABLE	<0.002 mg/l	<0.005	<0.01
SILVER, LEACHABLE	0.16 mg/l	0.08	<0.004
IGNITABILITY, °F	181°F >70°F	75°C >70°F	~168°F >70°F
REACTIVITY	NON-REACTIVE	NON-REACTIVE	REACTIVE
PHENOLIC COMPOUNDS			24
CORROSIVITY, MMPY	<0.01	<0.01	<0.0003
BTU/lb		19,268.5	16,224
KARL FISCHER MOISTURE, WT%	5.8	14.0	9.5
SEDIMENT, VOL %		0.05	15.4
VISCOSITY, SAYBOLT		42.4 ~~sec @ 100°F~~	67.7
API GRAVITY, @ 60°F	0.8815	32.6	0.88
TOTAL SULFUR, WT%		0.33	0.32
TOLUENE	12 ppb		1,170
1,1-DICHLOROETHANE	4 ppb		12,200
TRICHLOROETHYLENE	1 ppb		110
PHENOL	16 ppm		<20
PENTACHLOROPHENOL	0.09 ppm		<50
2-CHLOROPHENOL	0.04 ppm		<20
2,4-DICHLOROPHENOL	0.01 ppm		<20
2,4,6-TRICHLOROPHENOL	0.3 ppm		<40
TOTAL PHENOLS	20 ppm		13,480
TSS BEFORE ETHER	680.0 mg/l		
TSS AFTER ETHER	246.66 mg/l		

8 Dec 1983

1	1408 #1	SURFACE -	5 ft DOWN
	2		3 ft
E	1413		3 ft
2	4	14	3
3	6		3
	7		3
4	8	23	3
	9	BOTTOM	

12

CHECKED BOX APPLIES

[X] ORDER FOR SUPPLIES OR SERVICES

[ ] REQUEST FOR QUOTATIONS NO.
RETURN COPY(IES) OF THIS QUOTE BY
(THIS IS NOT AN ORDER. See DD Form 1155r)

5. CERTIFIED FOR NATIONAL DEFENSE UNDER DMS REG 1
DO

1. CONTRACT/PURCH ORDER NO.: M67001-83-M-9775

2. DELIVERY ORDER NO.:

3. DATE OF ORDER: 83 SEP 06

4. REQUISITION/PURCH REQUEST NO.: M93170-3199-1916

6. ISSUED BY: CODE M67001
CONTRACTING DIVISION
P. O. Box 8368, Marine Corps Base
Camp Lejeune, North Carolina 28542
83-M-9775

7. ADMINISTERED BY: *(If other than 6)* CODE

8. DELIVERY FOB
[X] DEST
[ ] OTHER
(See Schedule if other)

9. CONTRACTOR/QUOTER CODE FACILITY CODE
NAME AND ADDRESS
GRAINGER LABORATORIES
709 W. JOHNSON ST.
RALEIGH, NC 27603
1D/3V

10. DELIVER TO FOB POINT BY:
83 OCT 12

11. CHECK IF
[X] SMALL BUSINESS
[ ] MINORITY BUSINESS

12. DISCOUNT TERMS
NET 30

13. MAIL INVOICES TO: (In Quadruplicate)
SAME AS BLOCK 6

14. SHIP TO: CODE
SEE SCHEDULE
83-M-9775

15. PAYMENT WILL BE MADE BY: CODE M67001
Base Disbursing Officer
MCB, Camp Lejeune, North Carolina 28542

MARK ALL PACKAGES AND PAPERS WITH CONTRACT OR ORDER NUMBER

16. TYPE OF ORDER
DELIVERY [ ]
PURCHASE [X]

This delivery order is subject to instructions contained on this side of form only and is issued on another Government agency or in accordance with and subject to terms and conditions of above numbered contract. NC

Reference your TELEQUOTE 83 AUG 15, furnish the following on terms specified herein, including, for U.S. purchases, General Provisions of Purchase Order on DD Form 1155r *(EXCEPT CLAUSE NO. 13 APPLIES ONLY IF THIS BOX [ ] IS CHECKED, AND NO. 15 IF THIS BOX [ ] IS CHECKED)*; special provisions ; and delivery as indicated. This purchase is negotiated under authority of 10 USC 2304 (a)(3) or as specified in the schedule if within the U. S., its possessions or Puerto Rico; if otherwise, under 2304(a) (6).

[ ] *If checked, Additional General Provisions apply; Supplier shall sign "Acceptance" on DD Form 1155r and return* copies.

17. ACCOUNTING AND APPROPRIATION DATA/LOCAL USE

1. 1731106.2720 000 67001 0 067001 2D 000000 323K3112392T $890.00

18. ITEM NO.	19. PRIORITY: 14 SCHEDULE OF SUPPLIES/SERVICES	20. QUANTITY ORDERED/* ACCEPTED	21. UNIT	22. UNIT PRICE	23. AMOUNT
	IMPORTANT READ AND UNDERSTAND DAR CLAUSE 7-104.103 BEFORE PROCESSING THIS ORDER. FULL TEXT OF CLAUSE IS FOUND ON ATTACHMENT TO THIS ORDER. INQUIRIES REGARDING THIS ORDER SHOULD BE MADE TO: ORDER CONTROL DESK /919-451-5861 SEE PAGE #2 (PLUS ANY ADDITIONAL PAGES), for listing of items.				

** If quantity accepted by the Government is same as quantity ordered, indicate by ✓ mark. If different, enter actual quantity accepted below quantity ordered and encircle.*

24. UNITED STATES OF AMERICA
BY: Ken Silence
KEN SILENCE
PURCHASING OFFICER
CONTRACTING/ORDERING OFFICER

25. TOTAL $890.00

29. DIFFERENCES

26. QUANTITY IN COLUMN 20 HAS BEEN:
[ ] INSPECTED [ ] RECEIVED [ ] ACCEPTED, AND CONFORMS TO THE CONTRACT EXCEPT AS NOTED

DATE SIGNATURE OF AUTHORIZED GOVERNMENT REPRESENTATIVE

27. SHIP.NO.
[ ] PARTIAL
[ ] FINAL

28. D.O. VOUCHER NO.

30. INITIALS

32. PAID BY
67001-
SYM #.5190
MCB CLNC

33. AMOUNT VERIFIED CORRECT FOR

31. PAYMENT
[ ] COMPLETE
[ ] PARTIAL
[ ] FINAL

34. CHECK NUMBER

35. BILL OF LADING NO.

36. I certify this account is correct and proper for payment.
DATE T. R. DEDMOND Fiscal Acctg. Supv.
SIGNATURE AND TITLE OF CERTIFYING OFFICER

37. RECEIVED AT	38. RECEIVED BY	39. DATE RECEIVED	40. TOTAL CONTAINERS	41. S/R ACCOUNT NUMBER	42. S/R VOUCHER NO.

THIS PARAGRAPH APPLIES ONLY TO QUOTATIONS SUBMITTED:
Supplies are of domestic origin unless otherwise indicated by quoter. The Government reserves the right to consider quotations or modifications thereof received after the date indicated should such action be in the interest of the Government. This is a request for information and quotations furnished are not offers. When quoting, complete blocks 11, 12, 22, 23, 25. If you are unable to quote, please advise. This request does not commit the Government to pay any cost incurred in preparation or the submission of this quotation or to procure or contract for supplies or services.

GENERAL PROVISIONS

1. INSPECTION AND ACCEPTANCE—Inspection and acceptance will be at destination, unless otherwise provided. Until delivery and acceptance, and after any rejections, risk of loss will be on the Contractor unless loss results from negligence of the United States Government. Notwithstanding the requirements for any Government inspection and test contained in specifications applicable to this contract, except where specialized inspections or tests are specified for performance solely by the Government, the Contractor shall perform or have performed the inspections and tests required to substantiate that the supplies and services provided under the contract conform to the drawings, specifications and contract requirements listed herein, including if applicable the technical requirements for the manufactures' part numbers specified herein.

2. VARIATION IN QUANTITY—No variation in the quantity of any item called for by this contract will be accepted unless such variation has been caused by conditions of loading, shipping, or packing, or allowances in manufacturing processes, and then only to the extent, if any, specified elsewhere in this contract.

3. PAYMENTS—

AMENDMENT:

Note: Attached Invoices Clause cancels and supercedes this paragraph.

4. DISCOUNTS—In connection with any discount offered, time will be computed from date of delivery of the supplies to carrier when acceptance is at the point of origin, or from date of delivery at destination or port of embarkation when delivery and acceptance are at either of these points, or from the date the correct invoice or voucher is received in the office specified by the Government, if the latter is later than date of delivery. Payment is deemed to be made for the purpose of earning the discount on the date of mailing of the Government check.

5. DISPUTES—(a) Except as otherwise provided in this contract, any dispute concerning a question of fact arising under this contract which is not disposed of by agreement shall be decided by the Contracting

AMENDMENT

NOTE: Attached Disputes Clause, cancels and supersedes this paragraph.

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Disputes"
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above, provided, that nothing in this contract shall be construed as making final the decision of any administrative official, representative, or board on a question of law.

6. FOREIGN SUPPLIES—This contract is subject to the Buy American Act *(41 U.S.C. 10a-d)* as implemented by Executive Order 10582 of December 17, 1954, and any restrictions in appropriation acts on the procurement of foreign supplies.

7. CONVICT LABOR— In connection with the performance of work under this contract, the Contractor agrees not to employ any person undergoing sentence of imprisonment except as provided by Public Law 89-176, September 10, 1965 *(18 U.S.C. 4082(c)(2))* and Executive Order 11755, December 29, 1973.

8. OFFICIALS NOT TO BENEFIT—No member of or Delegate to Congress or resident commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

9. CONVENANT AGAINST CONTINGENT FEES—The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty the Government shall have the right to annul this contract without liability or in its discretion to deduct from the contract price or consideration or otherwise recover, the full amount of such commission, percentage, brokerage or contingent fee.

10. GRATUITIES—(a) The Government may, by written notice to the Contractor, terminate the right of the Contractor to proceed under this contract if it is found after notice and hearing, by the Secretary or his duly authorized representative, that gratuities *(in the form of entertainment, gifts or otherwise)* were offered or given by the Contractor, or any agent or representative of the Contractor, to any officer or employee of the Government with a view toward securing a contract or securing favorable treatment with respect to the awarding or amending, or the making of any determinations with respect to the performing of such contract, provided, that the existence of the facts upon which the Secretary or his duly authorized representative make such findings shall be in issue and may be reviewed in any competent court. (b) In the event this contract is terminated as provided in paragraph (a) hereof the Government shall be entitled (i) to pursue the same remedies against the Contractor as it could pursue in the event of a breach of the contract by the Contractor and (ii) as a penalty in addition to any other damages to which it may be entitled by law to exemplary damages in an amount *(as determined by the Secretary or his duly authorized representative)* which shall be not less than three nor more than ten times the costs incurred by the Contractor in providing any such gratuities to any such officer or employee. (c) The rights and remedies of the Government provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.

11. RENEGOTIATION—This contract, and any subcontract hereunder, is subject to the Renegotiation Act of 1951, as amended *(50 U.S.C. App. 1211 et seq.)* and shall be deemed to contain all the provisions required by Section 104 thereof, and is subject to any subsequent act of Congress providing for the renegotiation of contracts.

12. CONDITION FOR ASSIGNMENT—This Purchase Order may not be assigned pursuant to the Assignment of Claims Act of 1940, as amended *(31 U.S.C. 203, 41 U.S.C. 15)*, unless or until the supplier has been requested and has accepted this order by executing the Acceptance hereon

13. COMMERCIAL WARRANTY—The Contractor agrees that the supplies or services furnished under this contract shall be covered by the most favorable commercial warranties the Contractor gives to any customer for such supplies or services and that the rights and remedies provided herein are in addition to and do not limit any rights afforded to the Government by any other clause of this contract.

14. PRIORITIES, ALLOCATIONS, AND ALLOTMENTS—The Contractor shall follow the provisions of DMS Reg. 1 or DPS Reg. 1 and all other applicable regulations and orders of the Bureau of Domestic Commerce in obtaining controlled materials and other products and materials needed to fill this order.

15. FAST PAYMENT PROCEDURE—

(a) General. This is a fast payment order. Invoices will be paid on the basis of the Contractor's delivery to a post office, common carrier, or, in shipment by other means, to the point of first receipt by the Government.

(b) Responsibility for Supplies. Title to the supplies shall vest in the Government upon delivery to a post office or common carrier for shipment to the specified destination. If shipment is by means other than post office or common carrier, title to the supplies shall vest in the Government upon delivery to the point of first receipt by the Government. Notwithstanding any other provision of the purchase order, the Contractor shall assume all responsibility and risk of loss for supplies (i) not received at destination, (ii) damaged in transit, or (iii) not conforming to purchase requirements. The Contractor shall either replace, repair, or correct such supplies promptly at his expense, *provided* instructions to do so are furnished by the Contracting Officer within ninety (90) days from the date title to the supplies vests in the Government.

(c) Preparation of Invoice.

(1) Upon delivery of supplies to a post office, common carrier, or in shipments by other means, the point of first receipt by the Government, the Contractor shall prepare an invoice in accordance with Clause 3 of the General Provisions of Purchase Order, except that invoices under a blanket purchase agreement shall be prepared in accordance with the provisions of the agreement. In shipments by either post office or common carrier, the Contractor shall either (A) cite on this invoice the date of shipment, name and address of carrier, bill of lading number or other shipment document number; or (B) attach copies of such documents to his invoice as evidence of shipment. In addition the invoice shall be prominently marked "Fast Pay." In case of delivery by other than post office or common carrier, a receipted copy of the Contractor's delivery document shall be attached to the invoice as evidence of delivery.

(2) If the purchase price excludes the cost of transportation, the Contractor shall enter the prepaid shipping cost on the invoice as a separate item. The cost of parcel post insurance will not be paid by the Government. If transportation charges are separately stated on the invoice, the Contractor agrees to retain related paid freight bills or other transportation billings paid separately for a period of three years and to furnish such bills to the Government when requested for audit purposes.

(3) In the event this order requires the preparation of a Material Inspection and Receiving Report (DD Form 250), the contractor has the option of either preparing the DD Form 250 or including the following information on the invoice, in addition to that required in (c)(1) above: (A) a statement in prominent letters "NO DD 250 PREPARED"; (B) shipment number; (C) mode of shipment; and (D) at line item level, (i) National Stock Number and/or Manufacturer's part number, (ii) unit of measure, (iii) Ship-To-Point, (iv) Mark-For-Point if in contract, and (v) MILSTRIP document number if in contract.

(d) Certification of Invoice. The Contractor agrees that the submission of an invoice to the Government for payment is a certification that the supplies for which the Government is being billed have been shipped or delivered in accordance with shipping instructions issued by the ordering officer, in the quantities shown on the invoice, and that such supplies are in the quantity and of the quality designated by the cited pruchase order.

OUTER SHIPPING CONTAINERS SHALL BE MARKED "FAST PAY"

16. *(This clause applies if this contract is for services and is not exempted by applicable regulations of the Department of Labor.)*

SERVICE CONTRACT ACT OF 1965—Except to the extent that an exemption, variation or tolerance would apply pursuant to 29 CFR 4.6 if this were a contract in excess of $2,500, the Contractor and any subcontractor hereunder shall pay all of his employees engaged in performing work on the contract not less than the minimum wage specified under section 6 (a)(1) of the Fair Labor Standards Act of 1938, as amended (current minimum wage). However, in cases where section 6 (e)(2) of the Fair Labor Standards Act of 1938 is applicable, the rates specified therein will apply. All regulations and interpretations of the Service Contract Act of 1965 expressed in 29 CFR Part 4 are hereby incorporated by reference in this contract.

ADDITIONAL GENERAL PROVISIONS

17. CHANGES—The Contracting Officer may at any time, by a written order, and without notice to the sureties, make changes, within the general scope of this contract, in (i) drawings, designs, or specifications, where the supplies to be furnished are to be specially manufactured for the Government in accordance therewith; (ii) method of shipment or packing and (iii) place of delivery. If any such change causes an increase or decrease in the cost of, or the time required for performance of this contract, whether changed or not changed by any such order, an equitable adjustment shall be made by written modification of this contract. Any claim by the Contractor for adjustment under this clause must be asserted within 30 days from the date of receipt by the Contractor of the notification of change provided that the Contracting Officer, if he decides that the facts justify such action, may receive and act upon any such claim if asserted prior to final payment, under this contract. Failure to agree to any adjustment shall be a dispute concerning a question of fact within the meaning of the clause of this contract entitled "Disputes." However, nothing in this clause shall excuse the Contractor from proceeding with the contract as changed.

18. TERMINATION FOR DEFAULT—The Contracting Officer, by written notice, may terminate this contract, in whole or in part, for failure of the Contractor to perform any of the provisions hereof. In such event, the Contractor shall be liable for damages, including the excess cost of reprocuring similar supplies or services; provided that, if (i) it is determined for any reason that the Contractor was not in default or (ii) the Contractor's failure to perform is without his and his subcontractor's control, fault or negligence, the termination shall be deemed to be a termination for convenience under paragraph 19. As used in this provision the term "subcontractor" and "subcontractors" means subcontractors at any tier.

19. TERMINATION FOR CONVENIENCE—The Contracting Officer, by written notice, may terminate this contract, in whole or in part, when it is in the best interest of the Government. If this contract is for supplies and is so terminated, the Contractor shall be compensated in accordance with Section VIII of the Armed Services Procurement Regulation, in effect on this contract's date. To the extent that this contract is for services and is so terminated, the Government shall be liable only for payment in accordance with the payment provisions of this contract for services rendered prior to the effective date of termination.

20. ASSIGNMENT OF CLAIMS—Claims for monies due or to become due under this contract shall be assigned only pursuant to the Assignment of Claims Act of 1940, as amended *(31 U.S.C. 203, 41 U.S.C. 15)*. However, payments to an assignee of monies under this contract shall not, to the extent provided in said Act, as amended, be subject to reduction or set-off *(See Clause 12)*.

ACCEPTANCE

The Contractor hereby accepts the offer represented by the numbered purchase order as it may previously have been or is now modified, subject to all of the terms and conditions set forth, and agrees to perform the same.

NAME OF CONTRACTOR	SIGNATURE	TYPED NAME AND TITLE	DATE SIGNED

NAME OF OFFEROR OR CONTRACTOR
GRAINGER LABORATORIES

ITEM NO.	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
0001	M93170-3199-1916 SERVICES: USED OIL ANALYSIS FOR FULL RCRA ANALYSIS PLUS IGNITABILITY, CORROSIVITY, BTU, % WATER, % SEDIMENT, VISCOSITY, API GRAVITY @ 60°F, CORROSIVE INDEX - COPPER STRIP, % SULFUR, METALS - E.D. TOXICITY METALS: ARSENIC, BARIUM, CADMIUM, CHROMIUM, LEAD MERCURY, SELENIUM, SILVER. ORGANICS, TOLUENE; 1,1-DICHLOROETHANE; TRICHLOROETHYLENE; PHENOL; PENTACHLOROPAENOL, 2-CHLOROPHENOL; 2,4-DICHLOROPHENOL; 2,4,6 TRICHLOROPHENOL; TOTAL PHENOLS.	1	FEE	$890.00	$890.00

SHIP TO: QUALITY CONTROL LAB
NREAD FACILITIES
ATTN: ELIZABETH BETZ
MARINE CORPS BASE
CAMP LEJEUNE, NC 28542
83-M-9775

FOR DOD ADMINISTRATIVE USE ONLY.

REPORT OF PROPERTY RECEIVED. The Receiving Activity is required to send a REPORT OF PROERTY RECEIVED (RPR) utilizing a (DD-250 or /DD-1155 or /Memorandum) stating that the material has been received (or services have been rendered) and accepted, to: Contracting Division, Bldg. #1211, MCB, Camp Lejeune, N.C. 28542, within 24 hours after such acceptance.

NATURAL RESOURCES AND ENVIRONMENTAL AFFAIRS DIVISION
Marine Corps Base
Camp Lejeune, North Carolina 28542

NREAD/DDS/th
5000
8 Dec 1983

From: Director
To: Traffic Management Officer

Subj: Transportation of Laboratory Samples; request for

1. Request shipment of one carton containing four used oil samples to Grainer Laboratory, Raleigh, North Carolina, telephone number 787-3061. Grainger Laboratory will pick up carton at the Bus Station in Raleigh.

D. D. Sharpe
D. D. SHARPE
Acting

DEC 8 3 28 PM '83

SHIPMENT RECORD
FURTHER REFERENCE TO THIS SHIPMENT MUST QUOTE
THE TRANSPORTATION CONTROL NUMBER (TCN) WHICH
IS

TCN: M31000 3342 0286 XXX

GLI

Grainger Laboratories Incorporated

Analytical and Consulting Chemists

5500 Commercial Avenue
Raleigh, NC 27612
(919) 787-3061

1040 Greenfield Street
Wilmington, NC 28402
(919) 763-9793

February 9, 1984
84-9758

Quality Control Lab, NREAD
Facilities, MCB
Camp Lejeune, NC 28542

Attention: Ms. Elizabeth Betz

Subject: Analysis of Sample Received 2/1/84

Sample Identification: Purchase Order MC6700184M5149

1. GLI #83-9295, Waste Oil Composite

RESULTS

Total Aroclors, µg/g	<1.0

Bruce A. Babson
Bruce A. Babson
Staff Chemist

BAB/at
Customer #92400

Grainger Laboratories Incorporated

Analytical and Consulting Chemists

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Raleigh, NC 27612
(919) 787-3061

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Wilmington, NC 28402
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February 9, 1984
84-9758

Quality Control Lab, NREAD
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Bruce A. Babson
Staff Chemist

BAB/at
Customer #92400

NATURAL RESOURCES AND ENVIRONMENTAL AFFAIRS DIVISION
Marine Corps Base
Camp Lejeune, North Carolina 28542

NREAD/DDS/jc
6240/1
22 Feb 1984

From: Director
To: Base Maintenance Officer

Subj: Analysis of Used Oil in S-781 at Building 45

Ref: (a) BO 6240.5

Encl: (1) Grainger Laboratories, Inc. Memo 84-9758 of 9 Feb 1984
(2) " " " Memo 83-9295 of 25 Jan 1984

1. Enclosure (1) provides analysis for PCB content of the subject tank. Enclosure (2) provides hazardous waste analysis of the subject tank. This information is required for turn in of the subject oil to the Defense Property Disposal Office (DPDO). Please note that significant levels of Toluene, 1 1-Dichloroethane and total phenols were present. Turn in of subject oil to DPDO should be coordinated with Lieutenant TORRES, Assistant Chief of Staff, Logistics, telephone 451-2535, who is the Base Hazardous Materiel Disposal Coordinator per the reference.

J. I. WOOTEN

Copy to:
SupvChem
EnvEng

28542

Mr. Masters : A/V 683-4993

"told masters to get rid of "ASAP" even if donate to Brookhaven."

Southern Oil :
Allanta Oil Co.

Saybolt INC ;
R.E Hutto

Kenilworth, NJ
25 MAY 84

DPDS Form 73

FAust Oil 201-245-3100

Gene Wigley
775-6405
AV 683-6405

Lube# Compo
366

Southern Oil
Allanta Oil Co.

GRAV- 60 F API. 1 E
Flash point 124°
Sediment .42
Sulfur, ASTMD 1552 1.36%
VISC. 1 SFS G 122°F
11.8 sec
water distillate 24.7.0
BTU/lb 18,062
BTU/gallon 134,184

Copy To
(AC/S FAC)

Col. Luttrell

GLI

Grainger Laboratories Incorporated

Analytical and Consulting Chemists

5500 Commercial Avenue
Raleigh, NC 27612
(919) 787-3061

1040 Greenfield Street
Wilmington, NC 28402
(919) 763-9793

January 25, 1984
83-9295

Quality Control Lab, NREAD
Facilities, MCB
Camp Lejeune, NC 28542

Attention: Ms. Elizabeth Betz

Subject: Analysis of Sample Received 12/9/83

Sample Identification: Purchase Order M67001-83-M-9775

1. Used Oil

RESULTS

Arsenic, leachable as As, µg/g	<0.01
Barium, leachable as Ba, µg/g	0.11
Cadmium, leachable as Cd, µg/g	<0.001
Chromium, leachable as Cr, µg/g	<0.001
Lead, leachable as Pb, µg/g	<0.004
Mercury, leachable as Hg, µg/g	<0.8
Selenium, leachable as Se, µg/g	<0.01
Silver, leachable as Ag, µg/g	<0.004
Ignitability, °F	>70
Reactivity	"Reactive"
Phenolic Compounds, as C_6H_5OH, µg/g	24
Corrosivity, mmpy	<0.0003
BTU/lb	16,224
Karl Fischer Moisture, wt%	9.5
Sediment, vol%	15.4
Viscosity, Saybolt Secs., 101.3F	67.7

ATTACHMENT A

RESULTS
(Continued)

API Gravity, at 60°F	0.88
Total Sulfur, as S, wt%	0.32
Toluene, µg/g	1,170
1, 1-Dichloroethane, µg/g	12,200
Trichloroethylene, µg/g	110
Phenol, µg/g	<20
Pentachlorophenol, µg/g	<50
2-Chlorophenol, µg/g	<20
2, 4-Dichlorophenol, µg/g	<20
2, 4, 6-Trichlorophenol, µg/g	<40
Total Phenols, µg/g	13,480

W. Paul Brafford

W. Paul Brafford
General Laboratory Manager

WPB/at
Customer #92400

Grainger Laboratories Incorporated
Analytical and Consulting Chemists

5500 Commercial Avenue
Raleigh, NC 27612
(919) 787-3061

1040 Greenfield Street
Wilmington, NC 28402
(919) 763-9793

February 9, 1984
84-9758

Quality Control Lab, NREAD
Facilities, MCB
Camp Lejeune, NC 28542

Attention: Ms. Elizabeth Betz

Subject: Analysis of Sample Received 2/1/84

Sample Identification: Purchase Order MC6700184M5149

1. GLI #83-9295, Waste Oil Composite

RESULTS

Total Aroclors, µg/g	<1.0

Bruce A. Babson
Staff Chemist

BAB/at
Customer #92400

Encl (1)

Date: 8 September 1982

Memorandum for the Record

From: Ms. Betz, Quality Control Lab., Environmental Section, NREAB, BMaintDiv

Subj: PCB Sampling on 25 March 1982; Results of

1. LantDiv received sample MCBCL #902 on 28 April 1982, and stated it was primarily water. Another sample would have to be taken.

2. On 18 May 1982, Bob Lachapelle and Hoy Burns resampled the small tank by Bldg. 45. The sample was #5, 1-4 being the Used Oil Tank at the same lot. Sample #5 was sent to LantDiv for PCB analysis.

3. The results of the PCB analysis showed the transformer oil in the small tank at the back of the Heavy Equipment Lot to have no detectable level of PCB. The analysis detection limit os 0.01ppm, any PCB level lower than 0.01ppm is not measureable.

Elizabeth A. Betz
Supervisory Chemist

Date: 5 May 1982

Memorandum for the Record

From: Mr. Barry, Quality Control Lab., Environmental Section, MCRAP, Amalchiv

Subj: PCB Sampling on 25 March 1982 - Results of

1. Amalchiv received sample MCRCL 5902 on 2 April 1982, and stated it was visually water. Another sample would have to be taken.

2. On 18 May 1982, Mr. Le Angelis and Boy Tuma sampled the small tank by Bldg. 45. The sample was taken from the Used Oil Tank at the same lot. Sample #2 was sent to Laundry for PCB analysis.

3. The results of the PCB analysis showed that transformer oil in the small tank at the back of the Heavy Equipment Lot to have no detectable level of PCB. The analysis detection limits as 0.01 mg, and PCB level lower than 0.01 mg is not measurable.

Elizabeth A. Dean
Supervisory Chemist

Date: 26 April 1982

Memorandum for the Record

From: Ms. Betz, Quality Control Lab, Environmental Section, NREAB, BMaintDiv

Subj: PCB Sampling on 25 March 1982

1. On 25 March 1982, Tim Stamps, Ecologist, called stating that Base Maintenance had acquired a tank of waste transformer oil that might be contaminated with PCB. An analysis of the oil needed to be run before the oil could be, if uncontaminated, added to the Waste Oil Tank, or if contaminated, disposed of accordingly.

2. The tank containing the suspected oil was at the back of the Heavy Equipment Lot. At appromiately 1430 on the 25 March 1982, Gaines Huneycutt, of this lab, observed by Elizabeth Betz and Tim Stamps, took a sample of the oil from the top of the tank. The sample was labelled MCBCL #902. The oil looked very dirty.

3. On 23 April 1982, the sample, along with a DDT soil sample, other oil samples and some water samples was delivered to PP&P for packaging with proper paper work prepared by Rita Hise and Freight Traffic (Forms DD1348-1 and MCBCL 4030). They are to be shipped by Freight Traffic and received by Lant Div by 28 April 1982. Copies of the DD1348-1 and MCBCL 4030 can be found in the Chemical Dump @ Rifle Range 1982 file under subj: Rifle Range Water Treatment Plant Sampling on 19 April 1982.

Elizabeth A. Betz

Elizabeth A. Betz
Supervisory Chemist

Date: 26 April 1982

Memorandum for the Record

From: Ms. Betz, Quality Control Lab., Environmental Section, NREAB, BMaintDiv

Subj: PCB Sampling on 1 April 1982

1. On 1 April 1982, 25 culture tubes,,pipets and a chart were prepared and picked up by M & R. They were numbered from #911-935, labelled MCBCL # and Date.

2. On 1 April 1982, samples #911-918 were taken by M & R Branch and returned to the lab. There were no empty transformers. M & R kept the rest of the tubes(#919-935) for future use.

3. On 23 April 1982, they were delivered to PP&P, along with other samples, for packaging with proper paper work prepared by Rita Hise and Freight Traffic (Forms DD1348-1 and MCBCL 4030). They are to be shipped by Freight Traffic and received by Lant Div by 28 April 1982. Copies of the DD1348-1 and MCBCL4030 can be found in the Chemical Dump @ Rifle Range 1982 file under subj: Rifle Range Water Treatment Plant Sampling on 19 April 1982.

Elizabeth A. Betz
Supervisory Chemist

Date: 26 April 1982

Memorandum for the Record

From: Ma. Betz, Quality Control Lab., Environmental Section, NREAB, BMaintDiv

Subj: Rifle Range Water Treatment Plant Sampling on 19 April 1982

1. On 16 April 1982, Dave Goodwin of Lant Div called and requested another re-sampling of Rifle Range Water Treatment Plant and its three wells. He wanted two gallons of each so some could be sent to Jennings and some could be sent to NESO, to check Jennings.

2. On 19 April 1982, Bob Lachapelle and Elizabeth Betz, of this Lab, went out to The Rifle Range to collect the samples. Two 1 gallon jars (new) were filled at each sample point. Below is a list of sample locations and the time of collections:

Point	Time
RR-85 Water Treatment Plant - Finished Water Tap	1035
RR-47 Raw Water Well	1040
RR-45 Raw Water Well	1049
RR-97 Raw Water Well	1055

3. On 23 April 1982, the samples, along with oil samples and a soil sample, were delivered to PP&P for packaging with proper paper work prepared by Rita Hise and Freight Traffic (Forms DD1348-1 and MCBCL 4030). They are to be shipped by Freight Traffic and received by Lant Div by 28 April 1982.

Elizabeth A. Betz
Supervisory Chemist

Memorandum for the Record

From: Ms. Ann, Quality Control Lab., Environmental Section, MPD, Delphy

Subj: Rifle Range Water Treatment Plant Sampling on 19 April 1982

1. On 19 April 1982, Dave Goodwin of Plant Div called and requested another random sampling of Rifle Range Water Treatment Plant and its three wells. He wanted two gallons of each so some could be sent to laboratory and some could be sent to WESTON to check results.

2. On 19 April 1982, Bob Ladwig, Ann Rizzardi and Ann Ann, of this lab, went out to the Rifle Range to collect the samples. Two 1 gallon jars (dark) were filled at each sample point. Below is a list of sample locations and the time of collections:

Point	Time
RR-85 Water Treatment Plant - Finished Water Tap	1035
RR-4) Raw Water Well	1040
RR-5) Raw Water Well	1045
RR-7) Raw Water Well	1050

3. On 23 April 1982, the samples, along with oral samples and a soil sample, were delivered to TTAA for packaging with proper paperwork prepared by Rick Ries and Jeremy Wraffler (Corps PM/RR-1 and MCAS Miami). They are to be shipped by Freight Traffic and received by Lab. Div by 28 April 1982.

Elizabeth A. Tere
Supervisory Chemist

Date: 26 April 1982

Memorandum for the Record

From: Ms. Betz, Quality Control Lab., Environmental Section, NREAB, BMaintDiv

Subj: Lot #203 Soil Sampling on 25 March 1982

1. On 25 Maech 1980, Tim Stamps, Elizabeth Betz, and Gaines Huneycutt, of NREAB, met with Marvin King, of DPDO, at Lot #203, to take a soil sample of a small area back in the woods where two barrells of DDT had sat for a time. Three samples were taken about 4" deep and composited to make the sample. The composited sample was put in a new (never used) Mason Jarswithaa foil liner at the top. The area smelled bad.

2. On 23 April 1982, the sample, along with oil samples and water samples, was delivered to PP&P for packaging with proper paper work prepared by Rita Hise and Freight Traffic (Forms DD1348-1 and MCBCL 4030). They are to be shipped by Freight Traffic and received by LANT DIV by 28 April 1982. Copies of the DD1348-1 and MCBCL 4030 can be found in the Chemical Dump @ Rifle Range 1982 file under subj: Rifle Range Water Treatment Plant Sampling on 19 April 1082.

Elizabehh A. Betz
Supervisory Chemist

OIL SAMPLE, TRANSFORMER,

DATE: 25 MARCH 1982

TIME: 1430

SAMPLE # 902 HONEYCUTT, STAMPS - BETZ

COLLECTOR: HONEYCUTT

TAKEN FROM TOP OF TANK, BACK OF H. E. LO

DIRTY LOOKING,

ORIGIN - FILE - WASTE OIL
WHITE - SHARPE
PINK - TRANSFORMER SAMPLING
PINK - HW SAMPLING FILE
PINK - RR CHEM DUMP
YELLOW - CLIP BOARD

DATE: 26 MARCH 1982

MEMORANDUM FOR THE RECORD

FROM: MS. BETZ, QUALITY CONTROL LAB., ENVIRONMENTAL SECTION, NREAB, BMAINT DIV

SUBJ: PCB SAMPLING ON 25 MARCH 1982

1. ON 25 MARCH 1982, TIM STAMPS, ECOLOGIST, CALLED STATING THAT BASE MAINTENANCE HAD ACQUIRED A TANK OF WASTE TRANSFORMER OIL THAT MIGHT BE CONTAMINATED WITH PCB. AN ANALYSIS OF THE OIL NEEDED TO BE RUN BEFORE THE OIL COULD BE, ~~ADDED~~ IF UNCONTAMINATED, ADDED TO THE WASTE OIL TANK, OR IF CONTAMINATED, ~~THE~~ DISPOSED OF ACCORDINGLY.

2. THE TANK CONTAINING THE SUSPECTED OIL WAS AT THE BACK OF THE HEAVY EQUIPMENT LOT. AT APPROMIATELY 1430 ON THE 25 MARCH 1982, GAINES HUNEMCUIT, OF THIS LAB, OBSERVED BY ELIZABETH BETZ - TIM STAMPS, TOOK A SAMPLE OF THE OIL FROM THE TOP OF THE TANK. THE SAMPLE WAS LABELLED MCBCL # 902. THE OIL LOOKED VERY DIRTY.

3. ON 23 APRIL 1982 THE SAMPLE, ALONG WITH A DDT SOIL SAMPLE, AND OTHER OIL SAMPLES AND SOME WATER SAMPLES ~~WAS~~ WAS DELIVERED TO PP+P FOR PACKAGING WITH PROPER PAPER WORK PREPARED BY RITA HISE AND FREIGHT TRAFFIC (FORMS DD 1348-1 AND MCBCL 4030). THEY ARE TO BE SHIPPED BY FREIGHT TRAFFIC AND RECEIVED BY LANT DIV BY ~~28~~ 28 APRIL 1982

COPIES OF THE DD1348-1 AND MCBCL 4030 CAN BE FOUND ~~UNDER~~ IN THE CHEMICAL DUMP @ RIFLE RANGE 1982 FILE UNDER SUBJ: RR WTP SAMPLING ON 19 APR 1982

5-3-82 JdW
DDS

Date: 26 April 1982

Memorandum for the Record

From: Ms. Betz, Quality Control Lab, Environmental Section, NREAB, BMaintDiv

Subj: PCB Sampling on 25 March 1982

1. On 25 March 1982, Tim Stamps, Ecologist, called stating that Base Maintenance had acquired a tank of waste transformer oil that might be contaminated with PCB. An analysis of the oil needed to be run before the oil could be, if uncontaminated, added to the Waste Oil Tank, or if contaminated, disposed of accordingly.

2. The tank containing the suspected oil was at the back of the Heavy Equipment Lot. At appromiately 1430 on the 25 March 1982, Gaines Huneycutt, of this lab, observed by Elizabeth Betz and Tim Stamps, took a sample of the oil from the top of the tank. The sample was labelled MCBCL #902. The oil looked very dirty.

3. On 23 April 1982, the sample, along with a DDT soil sample, other oil samples and some water samples was delivered to PP&P for packaging with proper paper work prepared by Rita Hise and Freight Traffic (Forms DD1348-1 and MCBCL 4030). They are to be shipped by Freight Traffic and received by Lant Div by 28 April 1982. Copies of the DD1348-1 and MCBCL 4030 can be found in the Chemical Dump @ Rifle Range 1982 file under subj: RRfle Range Water Treatment Plant Sampling on 19 April 1982.

Elizabeth A. Betz
Elizabeth A. Betz
Supervisory Chemist

Date: 26 April 1982

Memorandum for the Record

From: Ms. Betz, Quality Control Lab, Environmental Section, NREAB, BMAinDiv

Subj: PCB Sampling on 25 March 1982

1. On 25 March 1982, Tim Stamps, Ecologist, called stating that Base Maintenance had acquired a tank of waste transformer oil that might be contaminated with PCB. An analysis of the oil needed to be run before the oil could be, if uncontaminated, added to the Waste Oil Tank, or if contaminated, disposed of accordingly.

2. The tank containing the suspected oil was at the back of the Heavy Equipment Lot. At approximately 1430 on the 25 March 1982, Gaines Lunsquist, of this lab, observed by Elizabeth Betz and Tim Stamps, took a sample of the oil from the top of the tank. The sample was labelled MCBCL #901. The oil looked very dirty.

3. On 23 April 1982, the sample, along with a DDT soil sample, other oil samples and some water sample was delivered to PPS for packaging with proper paper work prepared by Rita Hige and Freight Traffic (Form DD1348-1 and MCBCL 4030). They are to be shipped by Freight Traffic and received by Base Div by 28 April 1982. Copies of the DD1348-1 and MCBCL 4030 can be found in the Chemical Dump & Rifle Range 1982 file under subj: Rifle Range Water Treatment Plant Sampling on 19 April 1982.

Elizabeth A. Betz
Supervisory Chemist

Date: 23 August 1982

Memorandum

From: Ms. Betz, Quality Control Lab., Environmental Section, NREAB, BMaintDiv

To: Mr. Sharpe, Supervisory Ecologist, Environmental Section, NREAB, BMaintDiv

Subj: Missing Results

1. Below is a list of sampling for which I have not received any results.

Sample Date	Sample #'s	Sample Subjest
18 March 1882	1-6 RR-6,10,92,47,45,97 TW-15,16,17	Rifle Range and Chemical Landfill
5 April 1982	RR-85,47,45,97	Rifle Range-Believed to have leaked out.
19 April 1982	RR-85,47,45,97	Rifle Range
25 March 1982	902	Used Oil-PCB ?
25 March 1982	no number	Soil Sample @ Lot 203-No written report

The used oil sample on 25 March 1982, was shipped with the transformer oil, soil and 19 April 1982 Rifle Range samples. #902 was not on the transformer oil list of results.

Elizabeth A. Betz
Supervisory Chemist

OPNAV 5216/144 (REV. 6-70)
S/N 0107-LF-778-8099

DEPARTMENT OF THE NAVY

Memorandum

MAIN/DDS/th
6280/5
DATE: 14 Sep 1982

FROM Director, Natural Resources and Environmental Affairs Branch

TO Director, Maintenance and Repair Branch

Via: Base Maintenance Officer

SUBJ Waste Oil Disposal

Encl: (1) CO LANTDIV ltr 114:JGW:acd 6280 of 20 Jul 1982

1. The enclosure provides PCB analysis of the tank of transformer oil stored at Building 45, as requested by Heavy Equipment Foreman.

JULIAN I. WOOTEN

Copy to:
Supvy Chemist

444-9566

114:JGW:aed
6280

2 0 JUL 1982

From: Commander, Atlantic Division, Naval Facilities Engineering Command
To: Commanding General, Marine Corps Base, Camp Lejeune

Subj: Analysis of Transformer Oil

Encl: (a) Jennings Laboratory Analysis No. 1472

1. Enclosure (1) is forwarded as record of analysis performed at request of MCB CAMP LEJEUNE.

2. LANTNAVFACENGCOM point of contact is Mr. Jerry Wallmeyer at (804) 444-9566 or AUTOVON 690-9566.

J. R. BAILEY, P.E.
By direction

Copy to:
CG MCB CAMP LEJEUNE (Attn: Mr. D. Sharpe
Natural Resources and Environmental Affairs)

Blind Copy to:
114
114S
09BS

WALLMEYER
Dickerson
7/19/82
nrs
Doc.#0110T

ENCLOSURE (1)

LABORATORY MULTIPLE PARAMETER WATER QUALITY ANALYSIS RECORD

NAVY ENVIRONMENTAL PROTECTION SUPPORT SERVICE
NAVFAC-CBC-3900/2 (REV. 10-74)
0900-LL-W90-0022

UIC

SAMPLE IDENTIFICATION				
SAMPLE COLLECTION DATE			SAMPLE COLLECTION TIME	SAMPLE STATION NUMBER
MONTH	DAY	YEAR	0-2400	

MCB

ACTIVITY NAME
SAMPLE #5 - "Used Transformer Oil"

LABORATORY NAME
JENNINGS LABORATORIES, INC.

	PARAMETER DESCRIPTION	UNITS	DATA ELEMENT NUMBER	VALUE	PARAMETER DESCRIPTION	UNITS	DATA ELEMENT NUMBER	VALUE	
SOLIDS	TOTAL SUSPENDED SOLIDS (NON FILTERABLE RESIDUE)	MG/L	00530		ALUMINUM, TOTAL	MG/L	01105		HEAVY METALS
	TOTAL SOLIDS (TOTAL RESIDUE 103-105°)	MG/L	00500		ARSENIC, TOTAL	MG/L	01002		
	SETTLEABLE SOLIDS (SETTLEABLE RESIDUE)	ML/L/HR	00545		CADMIUM, TOTAL	MG/L	01027		
	TOTAL DISSOLVED SOLIDS (FILTERABLE RESIDUE)	MG/L	70300		CHROMIUM, TOTAL	MG/L	01034		
NUTRIENTS	N-AMMONIA (AS N)	MG/L	00610		COPPER, TOTAL	MG/L	01042		
	N-NITRATE TOTAL (AS N)	MG/L	00620		IRON, TOTAL	MG/L	01045		
	N-NITRITE TOTAL (AS N)	MG/L	00615		LEAD, TOTAL	MG/L	01051		
	TOTAL N (KJELDAHL)	MG/L	00625		MAGNESIUM, TOTAL	MG/L	00927		
	ORTHOPHOSPHATE (AS PO_4)	MG/L	00660		MANGANESE, TOTAL	MG/L	01055		
	TOTAL PHOSPHORUS (AS P)	MG/L	00678		MERCURY, TOTAL	MG/L	71900		
	SULFATE	MG/L	00945		POTASSIUM, TOTAL	MG/L	00937		
NON-CATEGORIZED PARAMETER	PH LABORATORY		00403		SILVER, TOTAL	MG/L	01077		
	CHLORIDE	MG/L	00940		ZINC, TOTAL	MG/L	01092		
	TURBIDITY LAB	JTU/FTU	W0072		TOTAL COLIFORM	MFC/100ML	31503		COLIFORM
	BOD	MG/L	00310		FECAL COLIFORM	MFC/100ML	31616		
	COD	MG/L	00340		TOTAL COLIFORM	MPN/100ML	31506		
	TOC	MG/L	00680		FECAL COLIFORM	MPN/100ML	31620		
	OIL AND GREASE	MG/L	70350		PCB	X	PPM	None Detected (<0.01 ppm)	ADDITIONAL PARAMETERS
	PHENOLS	MG/L	32730						
	MBAS	MG/L	38260						
	CYANIDE	MG/L	00720						

REMARKS

SIGNATURE [illegible signature]

DATE June 16, 1982

#1472 6/11/82

$90.00

Date; 20 August 1982

Memorandum for the Record

From: Ms. Betz, Quality Control Lab., Environmental Section, NREAB, BMaintDiv

Subj: Used Oil Sampling on 18 May 1982

1. I called Don Gurganus of the Heavry Equipment section, on 20 April 1982, and stated that as soon as he arranged it with the Outside Plumbing Shop to get a pump, we would be available to take a sample of the large waste oil tank in the heavy equipment lot. On 21 April 1982, I called Don Gurganus again, to check on it. He said the pump that had been used the last time had been someone's private pump, which was now broken. He said that when he had arranged something to get the oil out he would call back.

2. On 18 May 1982, it was arranged to take an oil sample. Bob Lachapelle and Hoy Burns, of this lab, went out to collect the sample. Bob Lachapelle had to climb up to the top of the tank to fill the sample bottles. Five samples were taken at different depths in the tank. The depths are listed below.

Sample #	Feet Below the Surface
1	3
2	7
3	11
4	15-Contains alot of water
~~5~~	~~19-Mostly water~~

3. On 21 May 1982, the used oil samples were delivered to PP&P, by Gaines Huneycutt, for packaging with proper paper work prepared by Rita Hise and Freight Traffic (Forms DD1348-1 and MCBCL 4030). They were suppose to be shipped to and received by LANTDIV by 28 May 1982, but Rita Hise didnot type the dead line date in. PP&P had some trouble certifying oil in glass containers. They finally did when it was stressed that these were samples for analysis and any other container would be inappropiate. The samples finally reached Jennings Lab on 11 June 1982.

4. Jennings Lab composited the first four samples. Sample #5 was ~~not used~~ FROM THE TRANSFORMER ~~because it was mostly water~~ OIL TANK. Only the top layer of #4 was used, the bottom being water.

Elizabeth A. Betz
Supervisory Chemist

Date: 20 Aug 1982

Memorandum for the Record

From: Mr. Harry Walker, Chief (Ret.), Environmental Sciences, MTAG, Bramblby

Subj: Bone Oil Samples on 12 May 1982

1. I called the Department of the Navy Equipment Section, on 20 A. 11 1982, and stated that as soon as he arranged with the Portable Flushing Shop to send a pump, we would be available to run a sample of the large waste oil tank in the Heavy Equipment Lot. On 11 April 1982, I called Mr. Dunkins again, to ask if the tank had been used the last time and been emptied, so that it would now be empty. He said that he had arranged a portable pump, and that we would call us when the work was ready.

2. On 12 May 1982, it was arranged to take a oil sample. Mr. John Jones, Mike and Harry, of this lab, went out to Miami to take the sample. Mr. Dunkins had to find up the top of the tank, fill the sample bottle. Thereafter the were taken to different depths in the tank. The dry as are listed below.

Sample #	Meter below the Surface
1	3
2	7
3	11
4	15-Gumming also of water
5	19-Heavily water

3. On 21 May 1982, the used oil samples were delivered to [illegible], by Gainesville, for analysis when proper work requested by this Lab and Treasury Wildlife (Norma Bulkley-1 and Mason [illegible]). They were supposed to be shipped to and received by IA [illegible] on [illegible], but this lab called by the load line date [illegible]. They had some trouble [illegible] oil in glass containers. They finally did [illegible] it was shipped [illegible] was then sent to [illegible] and any other contaminant [illegible] the laboratories. The samples finally reached [illegible] lab on 11 June 1982.

4. Gainesville lab composited the first four samples. Sample #5 was not used because it was mostly water. Only the top layer of #4 was used, the bottom being water.

Alistair W. Brown
Chemistry Branch

DOC. IDENT.	RI FROM	M & S	STOCK NUMBER FSC	NIIN	ADD	UNIT OF ISSUE	QUANTITY	DOCUMENT NUMBER SERV	REQUISITIONER	DATE	SERIAL	SUFFIX	SUPPLEMENTARY ADDRESS SERV	SIGNAL	FUND	DISTRIBUTION	PROJECT	PRIORITY	REQ'D DEL DATE	ADVICE	RI	UNIT PRICE DOLLARS	CTS.

CN 00005 M93182 2140 0006

SHIPPED FROM	SHIP TO	MARK FOR	PROJECT	TOTAL PRICE DOLLARS	CTS.
Base Maintenance Dept MCB, CLNC 28542 A	Environmental Quality Branch LANTDIV Code 114, Gilbert St. Bldg. N23, Norfolk Naval Stat Norfolk, Va. Attn: Mr. Goodwin		D	E	

WAREHOUSE LOCATION	TYPE OF CARGO	UNIT PACK	UNIT WEIGHT	CUBE					DOCUMENT DATE	MAT. COND	QUANTITY		
F	G	H	I	J	K	L	M	N	O	P	Q	R	S

SUBSTITUTE DATA (ITEM ORIGINALLY REQUEST'D)	FREIGHT CLASSIFICATION NOMENCLATURE	
T	U	V

	ITEM NOMENCLATURE	
W	Used Oil SAmples	Y

SHIPPERS USE				RECEIVERS USE		
SELECTED BY AND DATE	TYPE OF CONTAINER(S)	TOTAL WEIGHT		RECEIVED BY AND DATE	INSPECTED BY AND DATE	
1	2				8	
PACKED BY AND DATE	NO. OF CONTAINER(S)	TOTAL CUBE		WAREHOUSED BY AND DATE	WAREHOUSE LOCATION	
4	5			9		

SHIPMENT RECORD

FURTHER REFERENCE TO THIS SHIPMENT MUST QUOTE THE TRANSPORTATION CONTROL NUMBER (TCN) WHICH IS:

TCN: M93182 2140 0006

RECEIVED MAY 21 1982 Rv/Use MaintProp Off

REMARKS:			
AA	BB	CC	DD

FIRST DESTINATION ADDRESS	DATE SHIPPED	
11	12	FF

13 TRANSPORTATION CHARGEABLE TO	14 B/LADING, AWB, OR RECEIVER'S SIGNATURE (AND DATE)	15 RECEIVER'S DOCUMENT NUMBER

DD FORM 1348-1 MC 1 MAR 74
SN: 0102-LF-013-1090 U/I:SE

EDITION OF 1 JAN 64 MAY BE USED UNTIL EXHAUSTED

DOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT
PRIORITY 3 SHIPMENTS

PACKAGING AND PRESERVATION WORK REQUEST
MCBCL 4030 (REV 3-70)

TO: PRESERVATION, PACKAGING AND PACKING BRANCH, MOWASP DIV., BMATBN, MCB, CLNC

FROM (UNIT)	DATE	UNIT PRIORITY DESIGNATOR
Base Maintenance Property Officer	20 May 1982	
PERSON FAMILIAR WITH WORK REQUESTED	**PHONE**	**BLDG NO.**
L. Betz	5977	65

FOLLOWING WORK IS REQUESTED

Pack and crate for shipment
5 oil samples to be packaged and certified for shipping. All samples are to be packaged in vermiculite and the package lined with plastic bags. Place all samples in upright positions and label packages with "TOP AND UP"

TYPE WORK REQUESTED (X)	
(*)PACKAGE AND PRESERVE ☐ LEVEL ☐ A ☐ B ☐ C	(*)PACK ☐ LEVEL ☐ A ☐ B ☒ C
CONSTRUCT BOXES ☐ CRATES ☐	PAINT AND MARK ☐ TACTICAL MARK ☐ YES ☐ NO

DETAILS (LIST INSIDE DIMENSIONS IF CONSTRUCTION IS DESIRED; COLOR OF PAINT, PATTERN AND NUMBER OF TACTICAL MARK, ANY SPECIAL INSTRUCTIONS)

DEAD LINE DELIVERY DATE	WR NO. 103-3110 0006	SIGNATURE L. Betz

Spaces On and Below This Line For P&P Use Only	JON CHARGEABLE	P&P CONTROL NO.

WORK MEASUREMENT INFO PROJ 12				WORK MEASUREMENT INFO PROJ 11 & 94 TOTALS (LESS PROJ 12)			
NO. OF ITEMS	TONS	NO. OF PKGS		CUBE	WEIGHT	VEHICLES	BOXES BUILT

RECEIVED MAY 21 1982

IF SPACES MARKED WITH AN ASTERISK (*) ARE FILLED IN, COMPLETE REVERSE SIDE

1 FILE
2 [illegible] FILE (PINK)
3 [illegible]RPE (WHITE)
4 CLIP BOARD (YELLOW)

DATE:

MEMO FOR THE RECORD

FROM: MS. BETZ

SUBJ: USED OIL SAMPLING ON 18 MAY 1982

1. I CALLED DON GURGANUS OF HEAVY EQUIPMENT, ON 20 APRIL 1982, AND TOLD HIM THAT AS SOON AS HE ARRANGED IT WITH THE OUTSIDE PLUMBING SHOP TO GET A PUMP WE WOULD BE AVAILABLE TO TAKE A SAMPLE OF THE LARGE WASTE OIL TANK IN THE HEAVY EQUIPMENT LOT. ON 21 APRIL 1982, I CALLED DON GURGANUS AGAIN TO CHECK ON IT. HE SAID THE PUMP ~~WE~~ THAT HAD ~~BEEN~~ BEEN USED THE LAST TIME HAD BEEN SOMEONE'S PERSONAL PUMP WHICH WAS NOW BROKEN. HE SAID WHEN HE HAD ~~AREA~~ ARRANGED SOMETHING TO GET THE OIL OUT HE WOULD CALL BACK.

2. ON 18 MAY 1982, ~~IT~~ IT WAS ARRANGED TO TAKE AN OIL SAMPLE. BOB LACHAPELLE AND HOY BURNS, OF THIS LAB, WENT OUT TO COLLECT THE SAMPLE. BOB LACHAPELLE HAD TO CLIMB UP TO THE TOP OF THE TANK TO ~~TAKE~~ FILL THE SAMPLE BOTTLES. ~~FOUR~~ FIVE SAMPLES WERE TAKEN A DIFFERENT DEPTHS IN THE TANK. THE DEPTHS ARE LISTED BELOW.

SAMPLE #	FT BELOW SURFACE	COMMENTS
1	3'	
2	7'	
3	11'	
4	15'	- CONTAINED ALOT OF WATER.
5	19'	MOSTLY WATER.

3. ON 21 MAY 1982, THE FOUR USED OIL SAMPLES WERE DELIVERED TO PP&P BY GAINES HUNEYCUTT FOR PACKAGING ~~BY GAINES HUNEYCUTT~~ WITH PROPER PAPER WORK PREPARED BY RITA HISE AND FREIGHT TRAFFIC (FORMS DD1348-1 AND MCBCL 4030). THEY WERE SUPPOSE TO BE SHIPPED TO AND RECEIVED BY LANTDIV BY 28 MAY 1982, BUT RITA HISE DID NOT TYPE THE DEAD LINE DATE IN. PP&P HAD SOME TROUBLE CERTIFYING

OIL ~~P~~ IN GLASS CONTAINERS. THEY FINALLY DID WHEN IT WAS EMPHATIZED THAT THESE WERE SAMPLES FOR ANALYSIS AND ANY OTHER CONTAINER WOULD BE INAPPROPIATE. THE SAMPLES ~~WERE~~ FINALLY REACHED JENNINGS LAB ON 11 JUNE 1982.

4. JENNINGS LAB COMPOSITED THE FIRST 4 SAMPLES. SAMPLE #5 WAS NOT USED ~~BOT~~ DO TO ITS WATER CONTENT. ONLY THE TOP LAYER OF #4 WAS USED, THE BOTOM BEING MOSTLY WATER.

PP+P REQUEST FORM 4030

~~FROM~~: FOR PACKAGING

PERSON FAMILIAR: E. BETZ PHONE: 5977 BLDG #: 65

FOLLOWING WORK IS REQUESTED:

5 USED OIL SAMPLES TO BE PACKAGED AND CERTIFIED FOR SHIPPING. ALL SAMPLES ARE TO BE PACKAGED IN VERMICULITE AND THE PACKAGE LINED WITH PLASTIC BAGS. PLACE ALL SAMPLES IN UPRIGHT POSITIONS AND LABEL PACKAGES WITH "THIS END UP".

DEAD LINE DATE: 28 MAY 1982

DD 1348-1 INFORMATION

QUANTITY: 5 USED OIL SAMPLES

SHIP TO: ENVIRONMENTAL QUALITY BRANCH
LANTDIV CODE 114, GILBERT ST.
BLDG. N23, NORFOLK NAVAL STATION
NORFOLK, VA. ATTN: MR. GOODWIN

LAST ONE WAS M93182 2113 0004

MONDAY !

CALL DON GURGANUS (5909)

CALL DAVE GOODWIN ABOUT $ (690-9561)

CALL ELMER PADGETT (5147)

SET UP SAMPLE DAY.

PREPARE BOTTLES.

CALLED DON GURGANUS ~~16~~ 20 APRIL 1982 AND TOLD HIM TO ARRANGE WITH OUTSIDE PLUMBING

CALLED DON GURGANUS 21 APRIL 1982 TO CHECK ON IT. NO PUMP. HE SAID WHEN HE GOT IT SET HE WOULD CALL BACK

5230

Betsy -

Get with Don Douglas (5909) and arrange to sample Big Oil (waste) TANK at Bldg. 45.

Shirl

(call Dave Goodwin about # in account. If need transfer see Al Smith, in F+A and arrange)

(804) 444-9566

114:JGW:mbe
6280

1 JUL 1982

From: Commander, Atlantic Division, Naval Facilities Engineering Command
To: Commanding General, Marine Corps Base, Camp Lejeune

Subj: Waste Oil; analysis of

Ref: (a) 40 CFR 261 EPA Regulations for Identifying Hazardous Wastes

Encl: (1) Jennings Laboratories, Inc., Laboratory Analysis No. 1471

1. Enclosure (1) is forwarded in response to submittal of samples to this Command for hazardous waste and waste oil characterization analysis.

2. By comparison of enclosure (1) with reference (a) limits, the sample is classified as a hazardous waste if disposed other than burning as a source of useable energy because of lead content of 109.75 mg/l (versus 5.0 mg/l standard).

3. MCB CAMP LEJEUNE should investigate sources of lead (MOGAS, AVGAS, engine oil, waste battery acid, etc.) in order to reduce/eliminate contamination. Also, the cadmium level is approaching hazardous waste limit (0.75 mg/l versus 1.0 mg/l standard) and should likewise be reduced/eliminated. Readily identifiable cadmium sources include battery waste and electroplating operations.

4. LANTNAVFACENGCOM point of contact is Mr. Jerry Wallmeyer at telephone (804) 444-9566 or A/V 690-9566.

J. R. BAILEY, P.E.
By direction

Blind Copy to:
114
114S
09BS (w/o encl)
Doc. #0224S

WALLMEYER

Epees
6/30/82
nrs

JENNINGS LABORATORIES, INC.

ANALYTICAL AND CONSULTING CHEMISTS

1118 CYPRESS AVENUE • P. O. BOX 851 • VIRGINIA BEACH, VA. 23451 • PHONE (804) 425-1498

(EPA) CERTIFIED LABORATORY for Drinking Water Analysis - Microbiological, Inorganic and Organic

ASBESTOS ANALYSIS – NIOSH 582

Official Referee Chemists for:
AMERICAN OIL CHEMISTS SOCIETY
NATIONAL SOYBEAN PROCESSORS ASSOCIATION

Laboratory Approved by VA. STATE WATER CONTROL BOARD for Analysis of Effluents for NPDES PERMITS

CERTIFIED OFFICIAL U.S.D.A. LABORATORY FOR MEAT ANALYSIS

CERTIFICATE OF ANALYSIS

TO: Mr. Dave Goodwin
Building N-23 Atlantic Division
Naval Facilities Engineering Command
Norfolk, Virginia 23511

DATE: June 25, 1982

SAMPLE OF COMPOSITE OF 4 USED OIL SAMPLES

MARKED MCBCAMP LEJEUNE taken 5/18/82

Samples delivered to laboratory 6/11/82

OFFICIAL SAMPLE BY:

IDENTIFICATION OF COMPOSITED SAMPLES: Sample #1-Used Oil 3' below Surface; Sample #2-Used Oil 7' below surface; Sample #3-Used Oil 11' below surface; Sample #4-Used Oil 15' below surface (top floating layer only)

Ignitability - Flash Point 75°C. Does not exhibit any characteristics of ignitability as listed in Federal Register Vol.45,#99, May 19, 1980.

Corrosivity - Non Corrosive. Corrodes steel (SAE 1020) at a rate of<0.01 mmpy Does not exhibit the characteristics of corrosivity listed in Federal Register May 19, 1980

Reactivity - Non reactive. Does not exhibit any of the 8 characteristics listed in Federal Register May 19,1980 that indicates reactivity.

BTU	19,268.5 BTU/lb
Water	14.0 %
Sediment	0.05 %
Viscosity	42.4 sec @ 100°F SSU
API Gravity @ 60°F . . .	32.6

Corrosive Index - Copper Strip Classification"1A" (slight tarnish)

Sulfur . . . . . 0.33 %

Respectfully submitted,
JENNINGS LABORATORIES, INC.

Laboratory Analysis No. 1471

CHEMIST

OFFICIAL METHODS OF A.O.A.C., A.O.C.S., A.S.T.M., A.P.H.A., E.P.A. AND N.S.P.A. USED IN ALL ANALYSIS UNLESS OTHERWISE STATED

ENCLOSURE 1

JENNINGS LABORATORIES, INC.

ANALYTICAL AND CONSULTING CHEMISTS

1118 CYPRESS AVENUE • P. O. BOX 851 • VIRGINIA BEACH, VA. 23451 • PHONE (804) 425-1498

VA (EPA) CERTIFIED LABORATORY for Drinking Water Analysis - Microbiological, Inorganic and Organic

ASBESTOS ANALYSIS – NIOSH 582

Official Referee Chemists for:
AMERICAN OIL CHEMISTS SOCIETY
NATIONAL SOYBEAN PROCESSORS ASSOCIATION

Laboratory Approved by VA. STATE WATER CONTROL BOARD for Analysis of Effluents for NPDES PERMITS

CERTIFIED OFFICIAL U.S.D.A. LABORATORY FOR MEAT ANALYSIS

CERTIFICATE OF ANALYSIS

TO: Mr. Dave Goodwin

DATE: June 25,1982

SAMPLE OF COMPOSITE OF 4 OIL SAMPLES

MARKED

OFFICIAL SAMPLE BY:

(*) E.P.TOXICITY METALS	LEACHATE
Arsenic	<0.01 mg/l
Barium	7.98 mg/l
Cadmium	0.75 mg/l
Chromium	0.50 mg/l
Lead	109.75 mg/l
Mercury	<0.002 mg/l
Selenium	<0.005 mg/l
Silver	0.08 mg/l

E.P.TOXICITY ORGANICS		
Endrin	None Detected	(<0.001 mg/l)
Lindane	None Detected	(<0.002 mg/l)
Methoxychlor	None Detected	(<0.05 mg/l)
Toxaphene	None Detected	(<0.002 mg/l)
2,4,D	None Detected	(<0.002 mg/l)
2,4,5 TP Silvex	None Detected	(<0.002 mg/l)

(*) Note: Solids <.5% Sample treated as Leachate

Respectfully submitted,
JENNINGS LABORATORIES, INC.

Laboratory Analysis No. 1471

CHEMIST

Send a
COPY to Don Gurgunus

return original to
Sharpe

done
26 July 82

[illegible]
[illegible] 85

NATURAL RESOURCES AND ENVIRONMENTAL AFFAIRS BRANCH
Base Maintenance Division
Marine Corps Base
Camp Lejeune, North Carolina 28542

Date 7-21-82

From: Director, NREAB
To: Dan
Subj: Waste oil

I have sent copy of attached to M + R

Lets discuss P 3

John

ROUTING SLIP

JUL 20 1982

	ACTION	INFO	INITIAL
BMO		✓	
ABMO		✓	
ADMIN		✓	
ENVIOR AFF	✓		
F&A SEC			
MAINT NCO			
M&R			
OPNS			
PROP			
UMACS			
UTIL			
SECRETARY			

COMMENTS:

NREA,

Lets start the sales process. We want funds to come in FY83.

BDE

ORDER INT

1 05
2
3
4
5

ORIG INT

[redacted]

DEPARTMENT OF THE NAVY
ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511

TELEPHONE NO. (804) 444-9566

IN REPLY REFER TO:
114:JGW:mbe
6280

1 JUL 1982

From: Commander, Atlantic Division, Naval Facilities Engineering Command
To: Commanding General, Marine Corps Base, Camp Lejeune

Subj: Waste Oil; analysis of

Ref: (a) 40 CFR 261 EPA Regulations for Identifying Hazardous Wastes

Encl: (1) Jennings Laboratories, Inc., Laboratory Analysis No. 1471

1. Enclosure (1) is forwarded in response to submittal of samples to this Command for hazardous waste and waste oil characterization analysis.

2. By comparison of enclosure (1) with reference (a) limits, the sample is classified as a hazardous waste if disposed other than burning as a source of useable energy because of lead content of 109.75 mg/l (versus 5.0 mg/l standard).

✓ 3. MCB CAMP LEJEUNE should investigate sources of lead (MOGAS, AVGAS, engine oil, waste battery acid, etc.) in order to reduce/eliminate contamination. Also, the cadmium level is approaching hazardous waste limit (0.75 mg/l versus 1.0 mg/l standard) and should likewise be reduced/eliminated. Readily identifiable cadmium sources include battery waste and electroplating operations.

4. LANTNAVFACENGCOM point of contact is Mr. Jerry Wallmeyer at telephone (804) 444-9566 or A/V 690-9566.

J. R. Bailey
J. R. BAILEY, P.E.
By direction

JENNINGS LABORATORIES, INC.

ANALYTICAL AND CONSULTING CHEMISTS

1118 CYPRESS AVENUE • P. O. BOX 851 • VIRGINIA BEACH, VA. 23451 • PHONE (804) 425-1498

VA (EPA) CERTIFIED LABORATORY for Drinking Water Analysis - Microbiological, Inorganic and Organic

ASBESTOS ANALYSIS – NIOSH 582

Official Referee Chemists for:
AMERICAN OIL CHEMISTS SOCIETY
NATIONAL SOYBEAN PROCESSORS ASSOCIATION

Laboratory Approved by VA. STATE WATER CONTROL BOARD for Analysis of Effluents for NPDES PERMITS

CERTIFIED OFFICIAL U.S.D.A. LABORATORY FOR MEAT ANALYSIS

CERTIFICATE OF ANALYSIS

TO: Mr. Dave Goodwin
Building N-23 Atlantic Division
Naval Facilities Engineering Command
Norfolk, Virginia 23511

DATE: June 25, 1982

SAMPLE OF COMPOSITE OF 4 USED OIL SAMPLES

MARKED MCBCAMP LEJEUNE taken 5/18/82

Samples delivered to laboratory 6/11/82

OFFICIAL SAMPLE BY:

IDENTIFICATION OF COMPOSITED SAMPLES: Sample #1-Used Oil 3' below Surface; Sample #2-Used Oil 7' below surface; Sample #3-Used Oil 11' below surface; Sample #4-Used Oil 15' below surface (top floating layer only)

Ignitability - Flash Point 75°C. Does not exhibit any characteristics of ignitability as listed in Federal Register Vol.45,#99, May 19, 1980.

Corrosivity - Non Corrosive. Corrodes steel (SAE 1020) at a rate of<0.01 mmpy Does not exhibit the characteristics of corrosivity listed in Federal Register May 19, 1980

Reactivity - Non reactive. Does not exhibit any of the 8 characteristics listed in Federal Register May 19,1980 that indicates reactivity.

BTU	19,268.5 BTU/lb
Water	14.0 %
Sediment	0.05 %
Viscosity	42.4 sec @ 100°F SSU
API Gravity @ 60°F . . .	32.6

Corrosive Index - Copper Strip Classification"1A" (slight tarnish)

Sulfur	0.33 %

Respectfully submitted,
JENNINGS LABORATORIES, INC.

Laboratory Analysis No. 1471

CHEMIST

OFFICIAL METHODS OF A.O.A.C., A.O.C.S., A.S.T.M., A.P.H.A., E.P.A. AND N.S.P.A. USED IN ALL ANALYSIS UNLESS OTHERWISE STATED

ENCLOSURE 1 1 490.50

JENNINGS LABORATORIES, INC.

ANALYTICAL AND CONSULTING CHEMISTS

1118 CYPRESS AVENUE • P. O. BOX 851 • VIRGINIA BEACH, VA. 23451 • PHONE (804) 425-1498

CERTIFICATE OF ANALYSIS

TO: Mr. Dave Goodwin

DATE: June 25,1982

SAMPLE OF COMPOSITE OF 4 OIL SAMPLES

MARKED

OFFICIAL SAMPLE BY:

PAGE -2-

(*) E.P.TOXICITY METALS	LEACHATE
Arsenic	<0.01 mg/l
Barium	7.98 mg/l
Cadmium	0.75 mg/l
Chromium	0.50 mg/l
Lead	109.75 mg/l
Mercury	<0.002 mg/l
Selenium	<0.005 mg/l
Silver	0.08 mg/l

E.P.TOXICITY ORGANICS		
Endrin	None Detected	(<0.001 mg/l)
Lindane	None Detected	(<0.002 mg/l)
Methoxychlor	None Detected	(<0.05 mg/l)
Toxaphene	None Detected	(<0.002 mg/l)
2,4,D	None Detected	(<0.002 mg/l)
2,4,5 TP Silvex	None Detected	(<0.002 mg/l)

(*) Note: Solids <.5% Sample treated as Leachate

Respectfully submitted,

JENNINGS LABORATORIES, INC.

Laboratory Analysis No. 1471

CHEMIST

OFFICIAL METHODS OF A.O.A.C., A.O.C.S., A.S.T.M., A.P.H.A., E.P.A. AND N.S.P.A. USED IN ALL ANALYSIS UNLESS OTHERWISE STATED

Date: 27 August 1981

From: Quality Control Lab., Environmental Section, NREAB, BMaintDiv

Memorandum for the Record

Subj: Used Oil Tank Sample; Collection of

1. On 28 July 1981, Gaines Huneycutt and Elizabeth Betz, from NREAB, and some workers from the Outside Plumbing Shop, of the General Trades Section, of the M & R Branch, met at the Used Oil Tank to take a sample for analysis.

2. The Tank is approximately 28 ft high and was filled up about 20 ft. The base of the Tank was surrounded by a black liquid.

3. It was determined that a sample would be taken from about 3 ft down from the top of the oil in the Tank and s more samples would be taken at 4 ft intervals.

4. The samples bottles are old acid bottles. The bottles were washed with detergent, rinsed with distilled water, rinsed with 1:1 HNO_3, rinsed again with distilled water, rinsed with Hexane, rinsed for a third time with distilled water and allowed to air dry over night. The caps were lined with Aluminum foil.

5. The samples were collected on 28 July 1981. There was a distinct difference in some of the layers, in their viscosity, density and color. Below is a talbe of the samples and collection times:

	LOCATION	TIME	COMMENTS
Sample #1	3 ft below oil surface	12:55	Black, Fastest moving
Sample #2	7 ft below oil surface	12:57	Black, Fast moving
Sample #3	11 ft below oil surface	13:00	Grayish, Slow moving
Sample #4	15 ft below oil surface	13:05	Grayish, Slowest moving

6. At approximately 1500, on 28 July 1981, the samples were delivered to a Sgt. Friday(5224, Bldg. 915), of Preservation, Packaging & Packing under 2d Supply Bn., 2d FSSG, with the original completed Packaging and Preservation Work Request Form MCBCL 4030 (as per Sgt. Friday's Instructions) and 6 copies. The Lab received one stamped copy back as receipt for the samples.

7. The Form MCBCL 4030 required a JON(Job Order Number) before Sgt. Friday would accept the samples. The JON was obtained from Ms. Sue Milliken in Bldg. 1116.

8. On 30 July 1981, the samples were picked up from Sgt. Friday at PP & P. They were packed in a wooden crate filled with vermicullite. Certification was also obtained from Sgt. Friday that the samples were properly packed. Then the certification form and Form 1348-1 (obtained from Rita Hise) were taken to Ms. Linda Nethercutt (2541) of Traffic Management. Ms. Nethercutt was recommended by Mr. Ed Fountain of Traffic Management.(Bldg. 1011). Ms. Nethercutt was informed that the samples had to arrive by Monday in Norflk. She stated that they would and that they would be sent by Estes Express. She filled out an additional form and gave them all to me and told me to deliver the forms and crate to Mr. Bert Stanley in the other end of Bldg 915 from PP&P.

9. Upon delivery of the crate to Mr. Stanley he weighed it and changed the weight from 43 lbs. (determined by PP&P) to 83 lbs. (?). We received a copy of the 1348-1 back, which was returned to Rita Hise.

10. The crate went Estes Express, no. GBL S3065604, and was delivered to Mr. Paul Rakowski, LANTDIV, Bldg. N-23, Norflok Naval Station, Norfolk, Va. on Tuesday.

Elizabeth A. Betz

Elizabeth A. Betz
Supervisory Chemist

PACKAGING AND PRESERVATION WORK REQUEST
MCBCL 4031 (REV 3/70)

TO: PRESERVATION, PACKAGING AND PACKING BRANCH, MOWASP DIV., BMATBN, MCB, CLNC

FROM (UNIT)	DATE	UNIT PRIORITY DESIGNATOR
NREAB, Base Maintenance Div, MCBCLNC	28 Jul 1981	02
PERSON FAMILIAR WITH WORK REQUESTED	**PHONE**	**BLDG NO.**
Elizabeth A. Betz, Chemist	451-5977	65

FOLLOWING WORK IS REQUESTED
Used oil and petroleum solvents to package in vermiculite.

TYPE WORK REQUESTED (X)

(*)PACKAGE AND PRESERVE ☐ LEVEL ☒ A ☐ B ☐ C | (*)PACK ☐ LEVEL ☐ A ☐ B ☐ C

CONSTRUCT BOXES ☐ CRATES ☐ | PAINT AND MARK ☐ TACTICAL MARK ☐ YES ☐ NO

DETAILS (LIST INSIDE DIMENSIONS IF CONSTRUCTION IS DESIRED; COLOR OF PAINT, PATTERN AND NUMBER OF TACTICAL MARK, ANY SPECIAL INSTRUCTIONS)

RECEIVED JUL 28 1981

AA1 32 0601 3228 T/K

DEAD LINE DELIVERY DATE	WR NO.	SIGNATURE
3 Aug 1981	065	Elizabeth A. Betz

Spaces On and Below This Line For P&P Use Only	JON CHARGEABLE	P&P CONTROL NO.

WORK MEASUREMENT INFO PROJ 12				WORK MEASUREMENT INFO PROJ 11 & 94 TOTALS (LESS PROJ 12)			
NO. OF ITEMS	TONS	NO. OF PKGS		CUBE	WEIGHT	VEHICLES	BOXES BUILT

IF SPACES MARKED WITH AN ASTERISK (*) ARE FILLED IN, COMPLETE REVERSE SIDE

PACKAGING AND PRESERVATION WORK REQUEST
MCBCLI 4030 (REV 3-70)

TO: PRESERVATION, PACKAGING AND PACKING BRANCH, MOWASP DIV., BMATBN, MCB, CLNC

FROM (UNIT)	DATE	UNIT PRIORITY DESIGNATOR
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PACKAGING AND PRESERVATION WORK REQUEST
MCBCL 4030 (REV 3, 70)

TO: PRESERVATION, PACKAGING AND PACKING BRANCH, MOWASP DIV., BMATBN, MCB, CLNC

FROM (UNIT)	DATE	UNIT PRIORITY DESIGNATOR
NREAB, Base Maintenance Div, MCBCLNC	28 Jul 1981	02
PERSON FAMILIAR WITH WORK REQUESTED	**PHONE**	**BLDG NO.**
Elizabeth A. Betz, Chemist	451-5977	65

FOLLOWING WORK IS REQUESTED
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TYPE WORK REQUESTED (X)	
(*)PACKAGE AND PRESERVE ☐ LEVEL ☒ A ☐ B ☐ C	(*)PACK ☐ LEVEL ☐ A ☐ B ☐ C
CONSTRUCT BOXES ☐ CRATES ☐	PAINT AND MARK ☐ TACTICAL MARK ☐ YES ☐ NO

DETAILS (LIST INSIDE DIMENSIONS IF CONSTRUCTION IS DESIRED; COLOR OF PAINT, PATTERN AND NUMBER OF TACTICAL MARK, ANY SPECIAL INSTRUCTIONS)

AA1 32 0601 3228 T/U

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IF SPACES MARKED WITH AN ASTERISK (*) ARE FILLED IN, COMPLETE REVERSE SIDE

PACKAGING AND PRESERVATION WORK REQUEST
MCBCL 4030 (REV 3-70)

TO: PRESERVATION, PACKAGING AND PACKING BRANCH, MOWASP DIV., BMATBN, MCB, CLNC

FROM (UNIT)	DATE	UNIT PRIORITY DESIGNATOR
NREAB, Base Maintenance Div, MCBCLNC	28 Jul 1981	02
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Elizabeth A. Betz, Chemist	451-5977	65

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CONSTRUCT BOXES ☐ CRATES ☐ PAINT AND MARK ☐ TACTICAL MARK ☐ YES ☐ NO

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IF SPACES MARKED WITH AN ASTERISK (•) ARE FILLED IN, COMPLETE REVERSE SIDE

JENNINGS LABORATORIES, INC.

ANALYTICAL AND CONSULTING CHEMISTS

1688 CYPRESS AVENUE • P.O. BOX 661 • VIRGINIA BEACH, VA 23451 • PHONE (804) 425-1293

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ASBESTOS ANALYSIS – NIOSH 582

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Laboratory Certified by VA. STATE WATER CONTROL BOARD for Analysis of Effluents for NPDES PERMITS

CERTIFIED OFFICIAL U.S.D.A. LABORATORY FOR MEAT ANALYSIS

CERTIFICATE OF ANALYSIS

TO. Mr. Dave Goodwin
Building N-23 Atlantic Division
Naval Facilities Engineering Command
Norfolk, Virginia 23511

DATE August 12, 1981

SAMPLE OF WASTE OIL TANK SAMPLE FOR COMPOSITE FROM MCB CAMP LEJEUNE

MARKED Sample #1 - 3' from top; Sample #2 - 7' from top; Sample #3 - 11' from top and Sample #4 - 15' from Top. Samples picked up by JENNINGS LABORATORIES, INC August 5, 1981

OFFICIAL SAMPLE BY:

PRIORITY POLLUTANTS	PURGEABLE ORGANICS	DETECTION LIMITS µg/l
Acrolein	None Detected	2.0
Acrylonitrile	None Detected	2.0
Benzene	None Detected	10.0
Toluene	12 ppb	10.0
Ethylbenzene	None Detected	10.0
Carbon Tetrachloride	None Detected	.007
Chlorobenzene	None Detected	.03
1,2-Dichloroethane	None Detected	.006
1,1,1-Trichloroethane	None Detected	.005
1,1-Dichloroethane	4 ppb	.004
1,1-Dichloroethylene	None Detected	.006
1,1,2-Trichloroethane	None Detected	.006
1,1,2,2-Tetrachloroethane	None Detected	.006
Chloroethane	None Detected	.01
2-Chloroethyl vinyl ether	None Detected	.08

Respectfully submitted,
JENNINGS LABORATORIES, INC.

W. H. Jennings Jr.
CHEMIST

Laboratory Analysis No. 430

OFFICIAL METHODS OF A.O.A.C., A.O.C.S., A.S.T.M., A.P.H.A., E.P.A. AND N.S.P.A. USED IN ALL ANALYSIS UNLESS OTHERWISE STATED

PURGEABLE ORGANICS (continued)		DETECTION LIMITS µg/l
Chloroform	None Detected	.010
1,2-Dichloropropane	None Detected	.004
1,3-Dichloropropane	None Detected	.006
Methylene Chloride	None Detected	.010
Methyl Chloride	None Detected	.009
Methyl Bromide	None Detected	.03
Bromoform	None Detected	.02
Dichlorobromomethane	None Detected	.006
Trichlorofluoromethane	None Detected	.03
Dichlorodifluoromethane	None Detected	.01
Chlorodibromomethane	None Detected	.01
Tetrachloroethylene	None Detected	.007
Trichloroethylene	1 ppb	.005
Vinyl Chloride	None Detected	.01
1,2-trans-Dichloroethylene	None Detected	.006
bis(chloromethyl)ether	None Detected	.003

BASE/NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS		
1,2-Dichlorobenzene	None Detected	.04
1,3-Dichlorobenzene	None Detected	.04
1,4-Dichlorobenzene	None Detected	.04
Hexachloroethane	None Detected	.001
Hexachlorobutadiene	None Detected	.001
Hexachlorobenzene	None Detected	.002
1,2,4-Trichlorobenzene	None Detected	.006
Bis(2-Chloroethoxy)methane	None Detected	.40
Naphthalene	None Detected	.04
2-Chloronaphthalene	None Detected	.04
Isophorone	None Detected	5.0
Nitrobenzene	None Detected	5.0
2,4-Dinitrotoluene	None Detected	.06
2,6-Dinitrotoluene	None Detected	.06

LAB # 430

BY W. H. Jennings Jr.
CHEMIST

BASE NEUTRAL EXTRACTABLE ORGANIC COMPOUNDS		DETECTION LIMITS µg/l
4-Bromophenyl phenyl ether	None Detected	1.1
bis(2-Ethylhexyl)phthalate	None Detected	.02
Di-n-octyl phthalate	None Detected	.11
Dimethyl phthalate	None Detected	.11
Diethyl phthalate	None Detected	.13
Di-n-butyl phthalate	None Detected	.02
Fluorene	None Detected	.04
Fluoranthene	None Detected	.04
Crysene	None Detected	.04
Pyrene	None Detected	.04
Phenathrene	None Detected	.04
Anthracene	None Detected	.04
Benzo(a)anthracene	None Detected	.04
Benzo(b)fluoranthene	None Detected	.04
Benzo(k)fluoranthene	None Detected	.04
Benzo(a)pyrene	None Detected	.04
Ideno(1,2,3-c,d)pyrene	None Detected	.10
Dibenzo(a,h)anthracene	None Detected	.10
Benzo(g,h,i)perylene	None Detected	.10
4-Chlorophenyl phenyl ether	None Detected	2.2
3,3-Dichlorobenzidine	None Detected	.04
Benzidine	None Detected	.04
Bis(2-Chloroethyl)ether	None Detected	.04
1,2-Diphenylhydrazine	None Detected	.04
Hexachlorocyclopentadiene	None Detected	.04
N-Nitrosodiphenylamine	None Detected	1.0
Acenaphthylene	None Detected	.04
Acenaphthene	None Detected	.04
Butyl benzyl phthalate	None Detected	.04
N-Nitrosodimethylamine	None Detected	.2
N-Nitrosodi-n-propylamine	None Detected	.5
bis(2-Chlorisopropyl)ether	None Detected	.9

LABORATORY
ANALYSIS NO. 430

BY W. H. Jennings, Jr.
CHEMIST

ACID EXTRACTABLE ORGANIC COMPOUNDS		DETECTION LIMIT µg/l
Phenol	16 ppm	1.4
2-Nitrophenol	None Detected	2.5
4-Nitrophenol	None Detected	2.5
2,4-Dinitrophenol	None Detected	7.0
4,6-Dinitro-o-cresol	None Detected	2.0
Pentachlorophenol	.09 ppm	10.0
p-Chloro-m-cresol	None Detected	.01
2-Chlorophenol	.04 ppm	2.0
2,4-Dichlorophenol	.01 ppm	2.1
2,4,6-Trichlorophenol	.3 ppm	5.0
2,4-Dimethylphenol	None Detected	1.7

PESTICIDES/PCB'S		
α-Endosulfan	None Detected	.005
β-Endosulfan	None Detected	.01
Endosulfan Sulfate	None Detected	.03
α-BHC	None Detected	.002
β-BHC	None Detected	.004
δ-BHC	None Detected	.004
γ-BHC	None Detected	.002
Aldrin	None Detected	.003
Dieldrin	None Detected	.006
4,4'-DDE	None Detected	.006
4,4'-DDD	None Detected	.012
4,4'-DDT	None Detected	.016
× Endrin	None Detected	.009
Endrin Aldehyde	None Detected	.023
Heptachlor	None Detected	.002
Heptachlor Epoxide	None Detected	.004
Chlordane	None Detected	.04
× Toxaphene	None Detected	.40
× Aroclor 1016	None Detected	.04
× Aroclor 1221	None Detected	.10
× Aroclor 1232	None Detected	.10

LABORATORY ANALYSIS NO. 430

BY W. H. Jennings Jr.
CHEMIST

JENNINGS LABORATORIES, INC.

	PESTICIDES/PCB'S	DETECTION LIMITS µg/l
X Aroclor 1242	None Detected	.06
X Aroclor 1248	None Detected	.08
X Aroclor 1254	None Detected	.08
X Aroclor 1260	None Detected	.15
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	None Detected	.003

	METALS	DETECTION LIMITS mg/l
Antimony	<0.02	0.2
Arsenic	<0.002	0.002
Beryllium	<0.005	0.005
Cadmium	1.88	0.002
Chromium	0.16	0.02
Copper	4.44	0.01
Lead	376.00	0.005
Mercury	<0.002	0.002
Nickel	0.36	0.02
Selenium	<0.002	0.002
Silver	0.16	0.01
Thallium	<0.1	0.1
Zinc	475.0	0.005
Barium	1.08	
	** MISCELLANEOUS **	
Total Cyanides	<0.01	0.01
Asbestos (fibrous)	None	
Total Phenols	20.0	0.005

** SEE REPORT TYPED ON AUGUST 11, 1981 for Total Suspended Solids,% of Water, Specific Gravity, Ignitability, Corrosivity and Reactivity.

LABORATORY
ANALYSIS NO. 430

BY W.H. Jennings Jr.
CHEMIST

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CERTIFICATE OF ANALYSIS

TO: Mr. Dave Goodwin
Building N-23 Atlantic Division
Naval Facilities Engineering Command
Norfolk, Virginia 23511

DATE: August 11, 1981

SAMPLE OF WASTE OIL TANK SAMPLE

MARKED MCB CAMP LEJEUNE

Sample picked up by JENNINGS LABORATORIES, INC. 8/05/81

OFFICIAL SAMPLE BY: PAGE -1-

Antimony	<0.02	mg/l
Arsenic	<0.002	mg/l
Barium	1.08	mg/l
Beryllium	<0.005	mg/l
Cadmium	1.88	mg/l
Chromium	0.16	mg/l
Copper	4.44	mg/l
Lead	376.00	mg/l
Mercury	<0.002	mg/l
Nickel	0.36	mg/l
Selenium	<0.002	mg/l
Silver	0.16	mg/l
Thallium	<0.1	mg/l
Zinc	475.0	mg/l

Respectfully submitted,

JENNINGS LABORATORIES, INC.

Laboratory Analysis No. 430

CHEMIST

JENNINGS LABORATORIES, INC.

ANALYTICAL AND CONSULTING CHEMISTS

1118 CYPRESS AVENUE • P. O. BOX 851 • VIRGINIA BEACH, VA. 23451 • PHONE (804) 425-1498

VA (EPA) CERTIFIED LABORATORY for Drinking Water Analysis - Microbiological, Inorganic and Organic

ASBESTOS ANALYSIS – NIOSH 582

Official Referee Chemists for:

AMERICAN OIL CHEMISTS SOCIETY

NATIONAL SOYBEAN PROCESSORS ASSOCIATION

Laboratory Certified by VA. STATE WATER CONTROL BOARD for Analysis of Effluents for NPDES PERMITS

CERTIFIED OFFICIAL U.S.D.A. LABORATORY FOR MEAT ANALYSIS

CERTIFICATE OF ANALYSIS

TO: Mr. Dave Goodwin
Building N-23 Atlantic Division
Naval Facilities Engineering Command
Norfolk, Virginia 23511

DATE: August 11, 1981

SAMPLE OF WASTE OIL TANK SAMPLE

MARKED MCB CAMP LEJEUNE

OFFICIAL SAMPLE BY:

Total Cyanides	<0.01	mg/l
Asbestos (fibrous)	None	
Total Phenols	20.0	mg/l
Total Suspended Solids	246.66	mg/l (after ether wash)
	680.0	mg/l (before ether wash)
% of Water	5.8	%
Specific Gravity @ 60°F	.8815	

IGNITABILITY (Flash Point 181°F) Does not exhibit any characteristics of ignitability as listed in Federal Register Vol.45,No.98, May 19, 1980
CORROSIVITY - Non Corrosive - pH 6.72. Corrodes steel (SAE 1020) at a rate of <0.01 mmpy (millimeters per year). Does not exhibit the characteristics of corrosivity listed in Federal Register May 19, 1980.
REACTIVITY - Non Reactive. Does not exhibit any of the 8 characteristics listed in Federal Register May 19, 1980 that indicates reactivity.

Respectfully submitted,

JENNINGS LABORATORIES, INC.

Laboratory Analysis No. 430

W. A. Jennings Jr.
CHEMIST

PACKAGING AND PRESERVATION WORK REQU

MCBCL 4030 (REV 3-70)

TO: PRESERVATION, PACKAGING AND PACKING BRANCH, MOWASP DIV., BMATBN, MCB, CLNC

FROM (UNIT)	DATE	UNIT PRIORITY DESIGNATOR
NREAB, BASE MAINTENANCE ~~DET~~ DIV, MCB	28 JULY 1981	02
PERSON FAMILIAR WITH WORK REQUESTED	**PHONE**	**BLDG NO.**
ELIZABETH A. BETZ, CHEMIST	451-5977	65

FOLLOWING WORK IS REQUESTED

USED OIL AND PETROLEUM SOLVENTS TO PACKAGE IN VERMICULITE.

TYPE WORK REQUESTED (X)	
(*)PACKAGE AND PRESERVE ☐ LEVEL ☑ A ☐ B ☐ C	(*)PACK ☐ LEVEL ☐ A ☐ B ☐ C
CONSTRUCT BOXES ☐ CRATES ☐	PAINT AND MARK ☐ TACTICAL MARK ☐ YES ☐ NO

DETAILS (LIST INSIDE DIMENSIONS IF CONSTRUCTION IS DESIRED; COLOR OF PAINT, PATTERN AND NUMBER OF TACTICAL MARK, ANY SPECIAL INSTRUCTIONS)

~~USED OIL~~ AND ~~PETROLEUM SOLVENTS~~

DEAD LINE DELIVERY DATE	WR NO.	SIGNATURE
3 AUGUST 1981	065	Elizabeth A. Betz ELIZABETH A. BETZ

Spaces On and Below This Line For P&P Use Only	JON CHARGEABLE	P&P CONTROL NO.

WORK MEASUREMENT INFO PROJ 12				WORK MEASUREMENT INFO PROJ 11 & 94 TOTALS (LESS PROJ 12)			
NO. OF ITEMS	TONS	NO. OF PKGS		CUBE	WEIGHT	VEHICLES	BOXES BUILT

IF SPACES MARKED WITH AN ASTERISK (*) ARE FILLED IN, COMPLETE REVERSE SIDE

LINE ITEMS	NOMENCLATURE	FSN	QUANTITY	UNIT OF ISSUE	NO. PER INTERMEDIATE PACKAGE	NO. OF ITEMS PER PACK	ITEMS PER MULTIPLE PACK NO. OF PACK
1.							
2.							
3.							
4.							
5.							
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24.							
25.							
26.							
27.							

DATE RECORDED BY P&P BRANCH

PICKED UP BY

DATE COMPLETED BY P&P BRANCH

DATE

BLDG 45 TANK 6241/2A