

## FILE FOLDER

### DESCRIPTION ON TAB:

Waste Oil 1987

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**Outside/inside of actual folder did contain hand written information**

**\*Scanned as next image**

# Memorandum

DATE: 16 Nov 87

FROM: Supvy Chemist

TO: Supvy Ecologist

SUBJ: BASE MAINTENANCE LETTER 6280 DTD 6 NOV 87; COMMENT ON

1. Background: On 15 Sep 87, Tom Barbee and I sampled STT-64, STT-65 and STT-66. The full signs were on all three tanks. I told Pete Avant that I sampled those tanks. D. Gurganus on 19 Oct 87 admitted that they removed some water and added oil to STT-64 and STT-65 but they were now through with them. He added they were still using STT-66.

2. Discussion:

a. Reference (a) is a 19 Oct 87 memo from Dave Bullock (HMDO, BMD) to Sammy Gwynn (HMDC, MCB) requesting analysis of tanks STT-64 and STT-65.

b. Reference (b) is our letter of 19 Oct 87 that contained the first results of the 15 Sep 87 sampling of STT-64, STT-65, STT-66 and AS-419. These results were the TOX of all four tanks, and flashpoint, BTU, BS&W, percent water and viscosity of the three tanks at Tarawa Terrace. These results already showed the oil in STT-64, STT-65 and AS-419 as hazardous waste fuel based on TOX. Reference (b) further states that the "metals analysis of these three tanks (STT-64, STT-65, & STT-66) is still pending and will be forwarded when received." They were received 9 Nov 87.

c. Camp Lejeune is not an uauthorized treatment facility for hazardous waste, therefore, if at any point of accumulation of oil it is determined to be a HW it can get "no better." Resampling and analysis will not change the HW classification and only cost more money. Since STT-66 initially is not a HW fuel, then resampling would be necessary to make sure no HW was added.

d. Reference (c) is a 26 Oct 87 memo from BMO to Director, NREAD repeating the request in reference (a) for sampling of STT-64 and STT-65 because more oil was added to the tank after the analysis in reference (b).

(Personal Input: As a result of reference (c), I contacted Nadine Hipp (DRMO) on 27 Oct 87 and informed her the analysis of STT-64 and STT-65 showed it to be a hazardous waste and requested what more information did she need. Ms. Hipp stated she had not understood that the analysis showed it as a hazardous waste and she saw no need for further sampling.)

11/11/11  
11/11/11  
11/11/11

e. Reference (d) is a 30 Oct 87 letter from Dir, NREAD to BMO stating that per a phone conversation between Ms. Hipp and Ms. Betz it was determined no further sampling is necessary of STT-64 and ST-65. BMO then asks NREAD to sign the DD-1348-1 documents for the waste oil in STT-64 and STT-65 and to attach appropriate analysis.

f. Reference (b) states that the TOX for AS-419 was provided for information.

g. Reference (e) is a 16 Oct 87 letter from CG, MCB to DRMO. It recommended that AS-419 be disposed of as a HW fuel based on the VOC data contained within. It requested that DRMO advise of additional testing required.

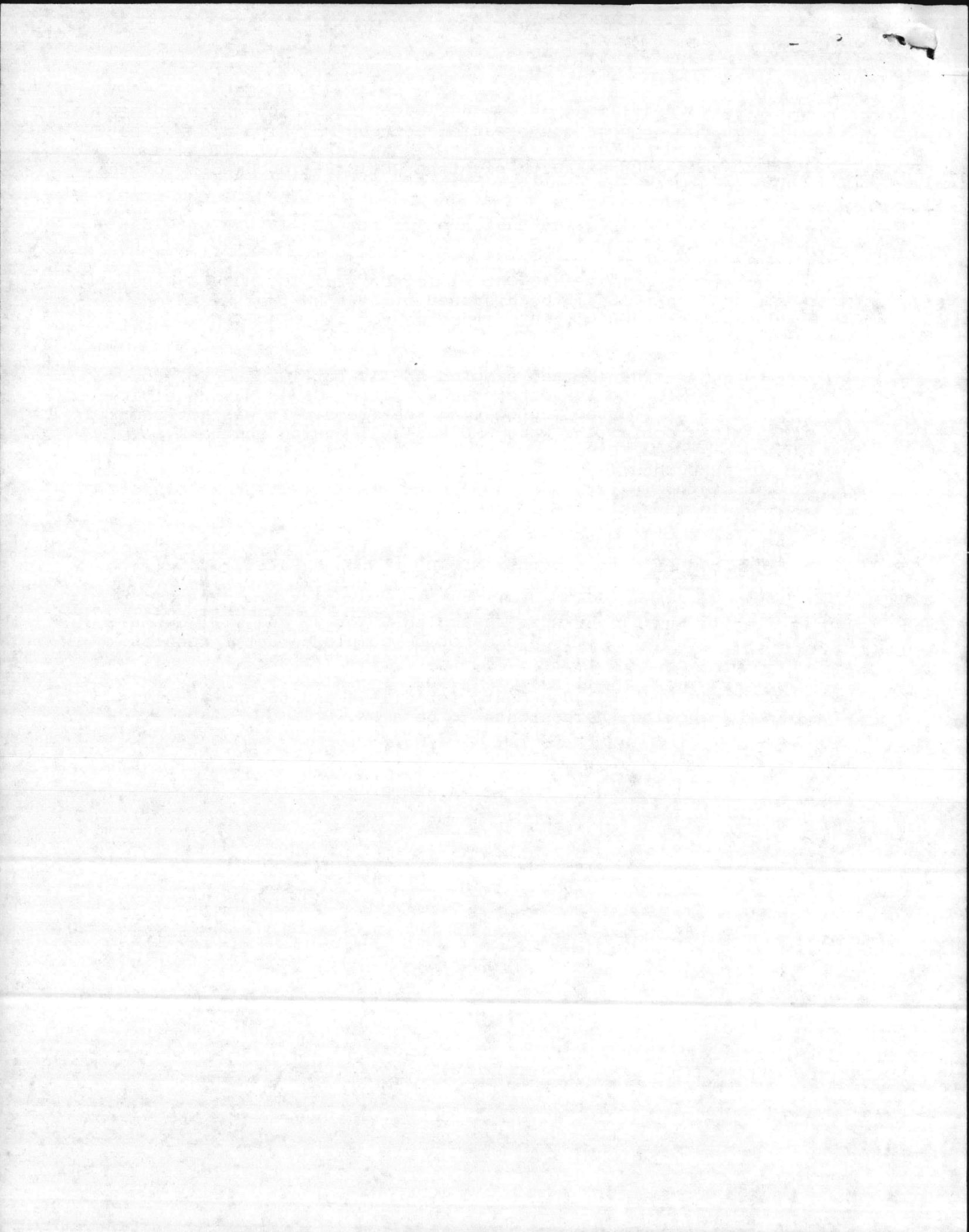
(Personal Input: The lab has sampled AS-419 for TOX and VOC to see how it compared to the other tanks, since AS-419 was receiving oil after MCAS-NR started segregating the freon. It was not sampled for disposal purposes. We knew BMD was still using the tank. But since it showed TOX and Freon high enough for HW classification, ultimately DRMO would have to dispose of it as a HW fuel. That is why it was stated in reference (e) that "[AS-419] tank be disposed of as a hazardous waste fuel." BMD request for analysis of AS-419 is dated 28 Oct 87.)

h. BMO requests that either NREAD or Ground Safety Office sign the DD 1348-1 for AS-419.

i. AS-419 and STT-66 were resampled 6 Nov 87 and will be mailed 16 Nov 87. Turn-in of STT-66 can not be completed until results are received.

j. I recommend that documents for STT-64 and 65 and AS-419 be submitted showing the contents to be a HW.

E. A. BETZ



# Memorandum

READ T-6245

DATE: 16 Nov 87

FROM: Supvy Chemist

TO: Supvy Ecologist

SUBJ: BASE MAINTENANCE LETTER 6280 DTD 6 NOV 87; COMMENT ON

1. Background: On 15 Sep 87, Tom Barbee and I sampled STT-64, STT-65 and STT-66. The full signs were on all three tanks. I told Pete Avant that I sampled those tanks. D. Gurganus on 19 Oct 87 admitted that they removed some water and added oil to STT-64 and STT-65 but they were now through with them. He added they were still using STT-66.

2. Discussion:

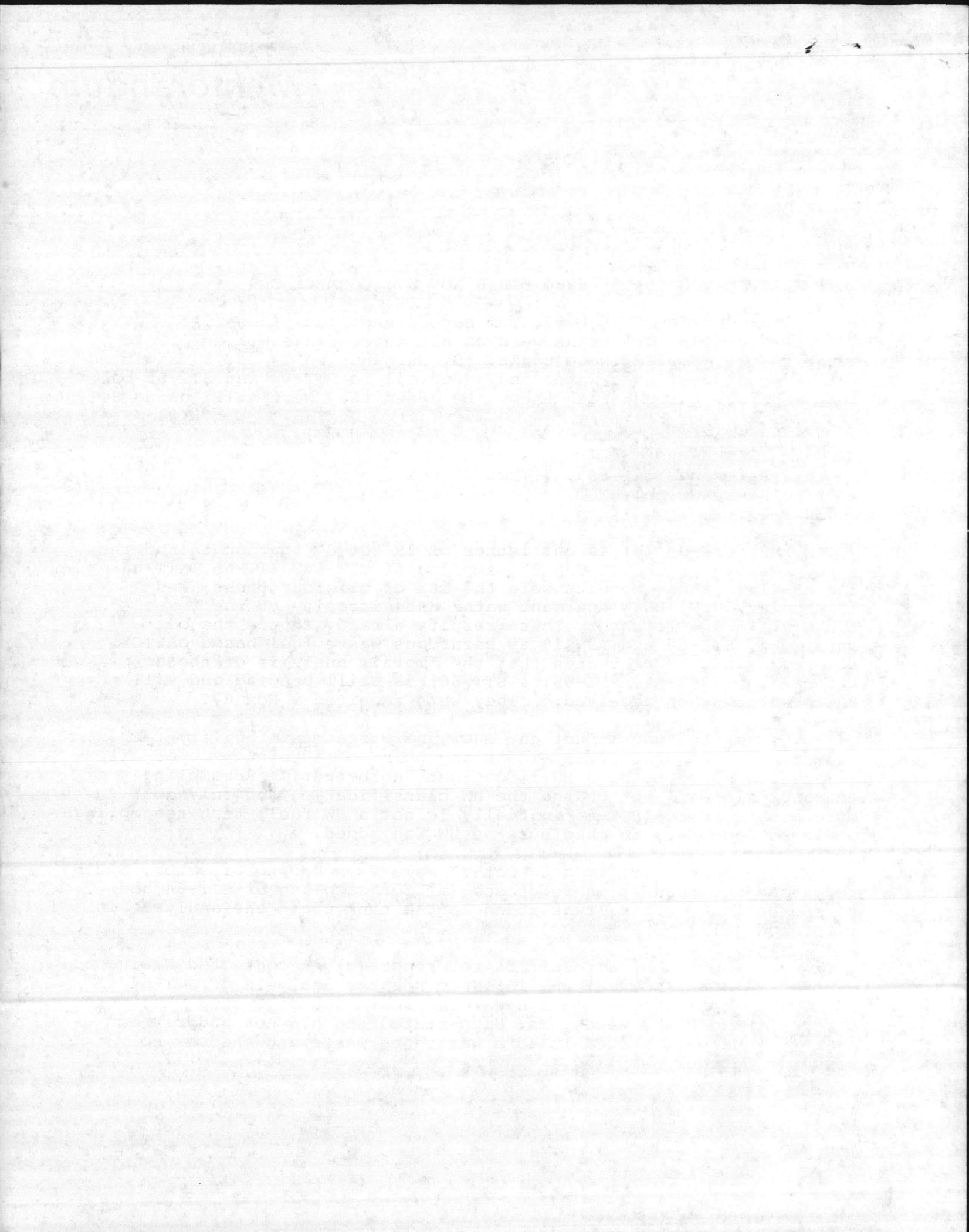
a. Reference (a) is a 19 Oct 87 memo from Dave Bullock (HMDO, BMD) to Sammy Gwynn (HMDC, MCB) requesting analysis of tanks STT-64 and STT-65.

b. Reference (b) is our letter of 19 Oct 87 that contained the first results of the 15 Sep 87 sampling of STT-64, STT-65, STT-66 and AS-419. These results were the TOX of all four tanks, and flashpoint, BTU, BS&W, percent water and viscosity of the three tanks at Tarawa Terrace. These results already showed the oil in STT-64, STT-65 and AS-419 as hazardous waste fuel based on TOX. Reference (b) further states that the "metals analysis of these three tanks (STT-64, STT-65, & STT-66) is still pending and will be forwarded when received." They were received 9 Nov 87.

c. Camp Lejeune is not an authorized treatment facility for hazardous waste, therefore, if at any point of accumulation of oil it is determined to be a HW it can get "no better." Resampling and analysis will not change the HW classification and only cost more money. Since STT-66 initially is not a HW fuel, then resampling would be necessary to make sure no HW was added.

d. Reference (c) is a 26 Oct 87 memo from BMO to Director, NREAD repeating the request in reference (a) for sampling of STT-64 and STT-65 because more oil was added to the tank after the analysis in reference (b).

(Personal Input: As a result of reference (c), I contacted Nadine Hipp (DRMO) on 27 Oct 87 and informed her the analysis of STT-64 and STT-65 showed it to be a hazardous waste and requested what more information did she need. Ms. Hipp stated she had not understood that the analysis showed it as a hazardous waste and she saw no need for further sampling.)



e. Reference (d) is a 30 Oct 87 letter from Dir, NREAD to BMO stating that per a phone conversation between Ms. Hipp and Ms. Betz it was determined no further sampling is necessary of STT-64 and ST-65. BMO then asks NREAD to sign the DD-1348-1 documents for the waste oil in STT-64 and STT-65 and to attach appropriate analysis.

f. Reference (b) states that the TOX for AS-419 was provided for information.

g. Reference (e) is a 16 Oct 87 letter from CG, MCB to DRMO. It recommended that AS-419 be disposed of as a HW fuel based on the VOC data contained within. It requested that DRMO advise of additional testing required.

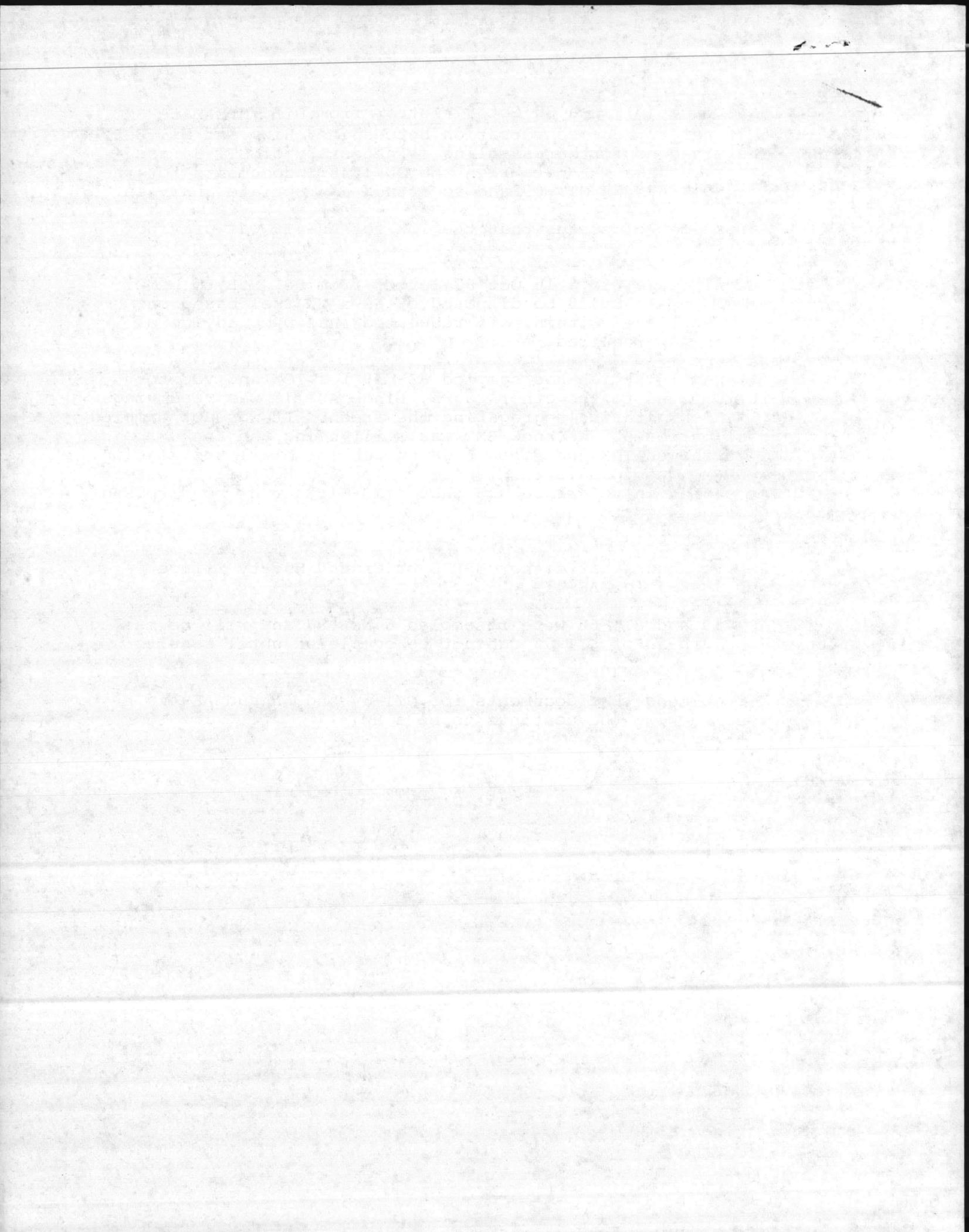
(Personal Input: The lab has sampled AS-419 for TOX and VOC to see how it compared to the other tanks, since AS-419 was receiving oil after MCAS-NR started segregating the freon. It was not sampled for disposal purposes. We knew BMD was still using the tank. But since it showed TOX and Freon high enough for HW classification, ultimately DRMO would have to dispose of it as a HW fuel. That is why it was stated in reference (e) that "[AS-419] tank be disposed of as a hazardous waste fuel." BMD request for analysis of AS-419 is dated 28 Oct 87.)

h. BMO requests that either NREAD or Ground Safety Office sign the DD 1348-1 for AS-419.

i. AS-419 and STT-66 were resampled 6 Nov 87 and will be mailed 16 Nov 87. Turn-in of STT-66 can not be completed until results are received.

j. I recommend that documents for STT-64 and 65 and AS-419 be submitted showing the contents to be a HW.

E. A. BETZ





UNITED STATES MARINE CORPS  
BASE MAINTENANCE DIVISION  
MARINE CORPS BASE  
CAMP LEJEUNE, NORTH CAROLINA 28542-5000

IN REPLY REFER TO:  
6280  
MAIN

06 NOV 1987

From: Base Maintenance Officer  
To: Director, Natural Resources and Environmental Affairs  
Division

Subj: DISPOSAL OF HAZARDOUS WASTE/WASTE OIL

Ref: (a) BMain HMDO memo of 19 Oct 87  
(b) Dir NREAD ltr 6241/2 NREAD of 19 Oct 87  
(c) BMO ltr 6280 MAIN of 26 Oct 87  
(d) Dir NREAD ltr 6241/2 NREAD of 30 Oct 87  
(e) CG MCB ltr 6241/2 NREAD of 16 Oct 87

Encl: (1) DD Form 1348-1, Contents of Tank STT-64  
(2) DD Form 1348-1, Contents of Tank STT-65  
(3) DD Form 1348-1, Contents of Tank AS-419

1. Reference (a) requested that oil in tanks STT-64 and STT-65 be sampled and analyzed so that turn-in documents could be prepared. Reference (b) provided only partial analysis required by RCRA and recommended by ENSAFE for disposal of used oil. Analysis for total halogens and flashpoint was provided but ppm for arsenic, cadmium, chromium and lead were not included. Moreover, reference (b) states that oil was added to both tanks after samples were taken. That fact alone would make the analysis provided to be suspect.

2. Reference (c), after discussing these analyses with DRMO, requested another analysis after the tank had been secured. We believe that request is still valid and the analysis still required.

3. Reference (d) advises that further analysis is not needed and states that BMO should submit disposal documents as soon as possible. In order to resolve this dilemma, we have prepared disposal documents for your signature for STT-64 and STT-65. If it is your belief that sufficient analysis has been done on the oil in these two tanks, please sign the documents at enclosures (1) and (2). You may attach whatever analysis you consider appropriate from your files, or we will provide to you the analyses that were forwarded to us. You may have the documents delivered to DRMO, in which case you should provide us a copy; or, you may return them to us and we will deliver them.

4. The same dilemma exists with the "third waste oil tank" at MCAS New River. Reference (b) provided only TOX for the oil in this tank and stated that JCT Environmental Consultants, Inc. Report #87-444, attached to reference (e), contained the volatile organic chemical analysis. Again, ppm for flashpoint, arsenic, cadmium, chromium and lead have been ignored. Additionally, reference (e) recommended disposal while the tank was still being



8280

10/17

08 NOV 1957

From: [Illegible] Director, National Research and Development Administration

Subject: DISPOSAL OF HAZARDOUS WASTE OIL

- Re: (1) BULK OIL DISPOSAL REPORT OF 18 OCT 57
- (2) DIR MEMO OF 18 OCT 57
- (3) DIR MEMO OF 18 OCT 57
- (4) DIR MEMO OF 18 OCT 57
- (5) DIR MEMO OF 18 OCT 57
- (6) DIR MEMO OF 18 OCT 57
- (7) DIR MEMO OF 18 OCT 57
- (8) DIR MEMO OF 18 OCT 57
- (9) DIR MEMO OF 18 OCT 57
- (10) DIR MEMO OF 18 OCT 57

The Bureau (A) requested that the Bureau (B) be assigned and analyzed to that time in connection with the Bureau (C) provided only partial analysis. Analytical and recommended by BUREAU for disposal of used oil. Analytical for local disposal and BUREAU use provided for local disposal, including disposal and land were not included. Moreover, reference (D) states that oil was added to both bulk and sample were taken. That fact alone would make the analysis provided to be suspect.

Reference (E) after discussing these matters with Bureau (F) requested further analysis for the tank had been analyzed. Bureau (G) that request is still valid and the analysis still required.

Reference (H) advised that further analysis is not needed and states that BMO should submit disposal documents as soon as possible. In order to receive this disposal, we have prepared disposal forms for your signature for 11-17-57 and 11-17-57. If your belief that analytical analysis has been done on the oil in these two tanks, please sign the documents at enclos (I) and (J). You may attach whatever analysis you consider appropriate from your files, or we will provide to you the analysis forms forwarded to us. You may have the documents delivered to BMO, in which case you should specify as a copy or you may

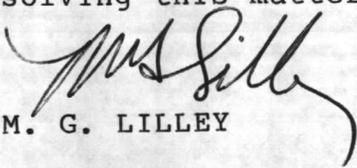
The same thing exists with the "land waste oil tank" at BMO's New River. Reference (K) provided only 10% for the oil. This tank was started under the Bureau's (L) Bureau's (M) report (N) attached to reference (O), contained by you in your analytical analysis. Again, you are responsible for the analysis. There has been a record. Additionally, reference (P) requested disposal while the tank was still being

Subj: DISPOSAL OF HAZARDOUS WASTE/USED OIL

filled. Again, I believe the analysis to be suspect, in addition to being incomplete. They provide parameters for only one of six properties for which RCRA requires analysis.

5. We are, however, interested in resolving this problem. To this end, we have prepared enclosure (3) without indicating who should sign it. You may sign it or you may request your counterpart at the Air Station to sign it. Please follow the same guidelines mentioned in paragraph 3 pertaining to attaching analysis, providing copies to us, and delivery to DRMO.

6. Your cooperation in resolving this matter is appreciated.

  
M. G. LILLEY

Copy to:  
DRMO

STATE DEPARTMENT OF HEALTH AND HUMAN SERVICES

1. In the event, however, it is necessary to resolve the problem, the  
2. The following information is provided for your information and to assist you  
3. in the event you are unable to resolve the problem on your own.

4. The following information is provided for your information and to assist you  
5. in the event you are unable to resolve the problem on your own.

6. Your cooperation in resolving this matter is appreciated.

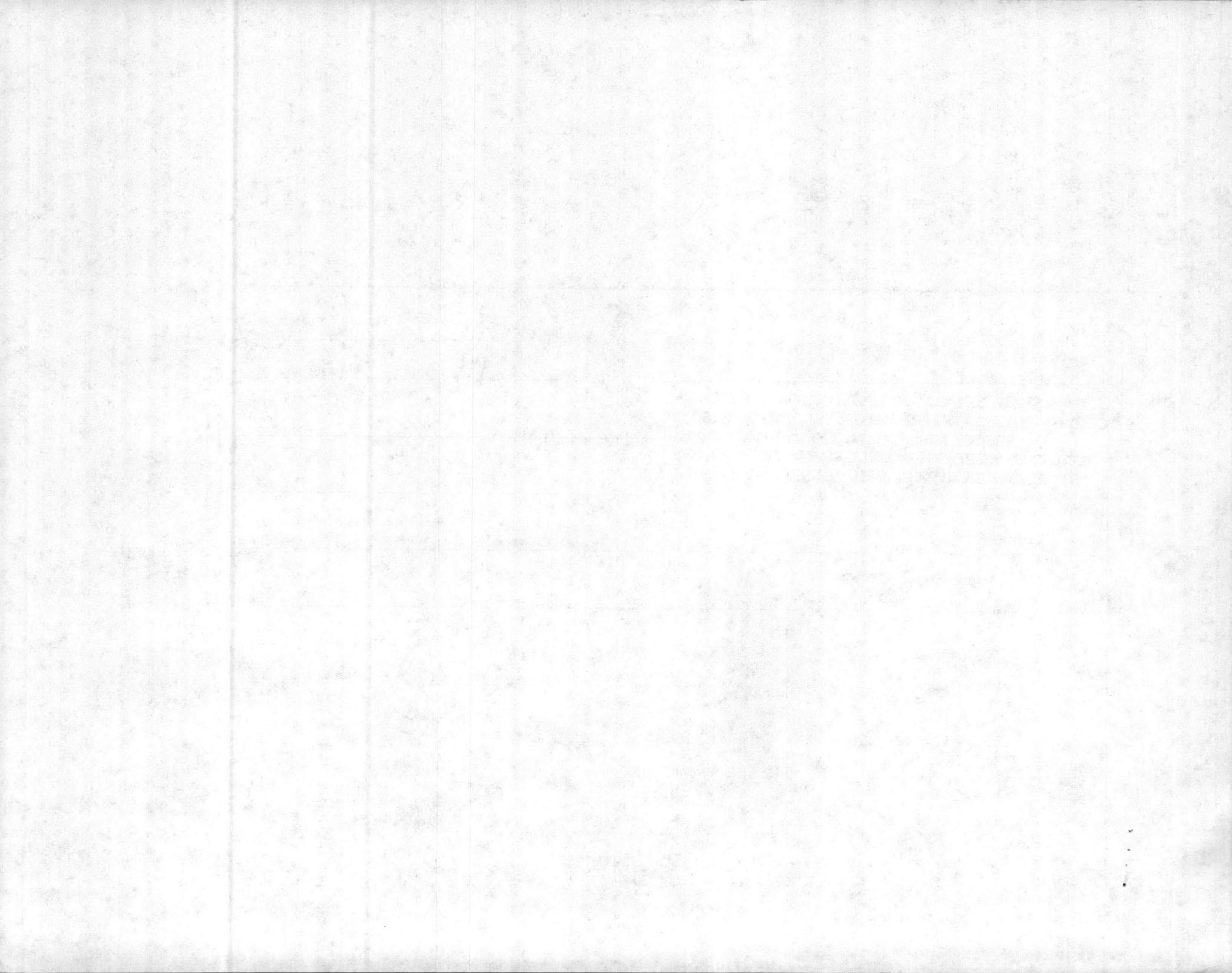
M. G. WILLY

Very truly  
yours,

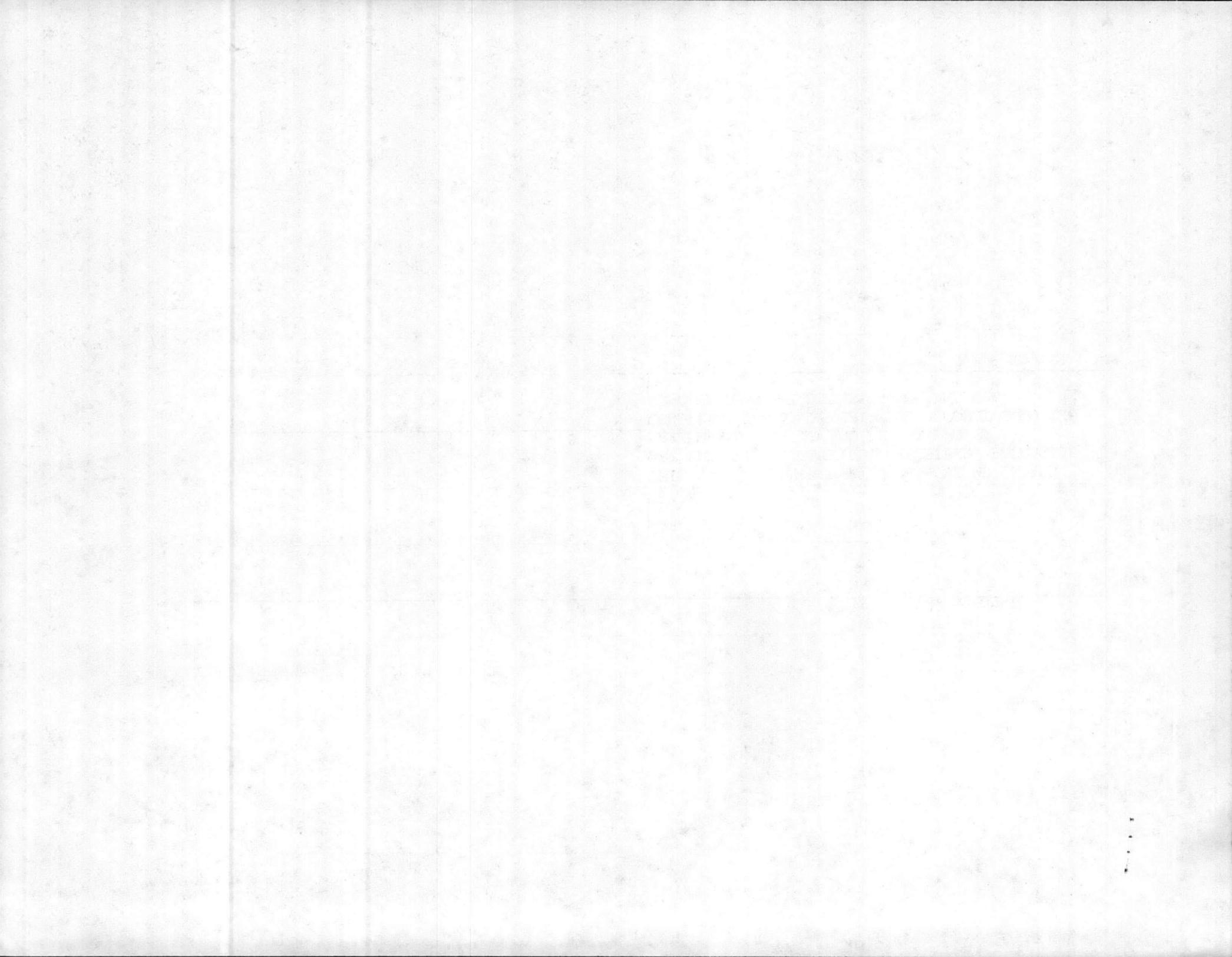
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\* U.S. GOVERNMENT PRINTING OFFICE: 1966-491-647 (20093)

Encl(1)







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DD FORM 1348-1  
S/N 0102-LF-013-1040

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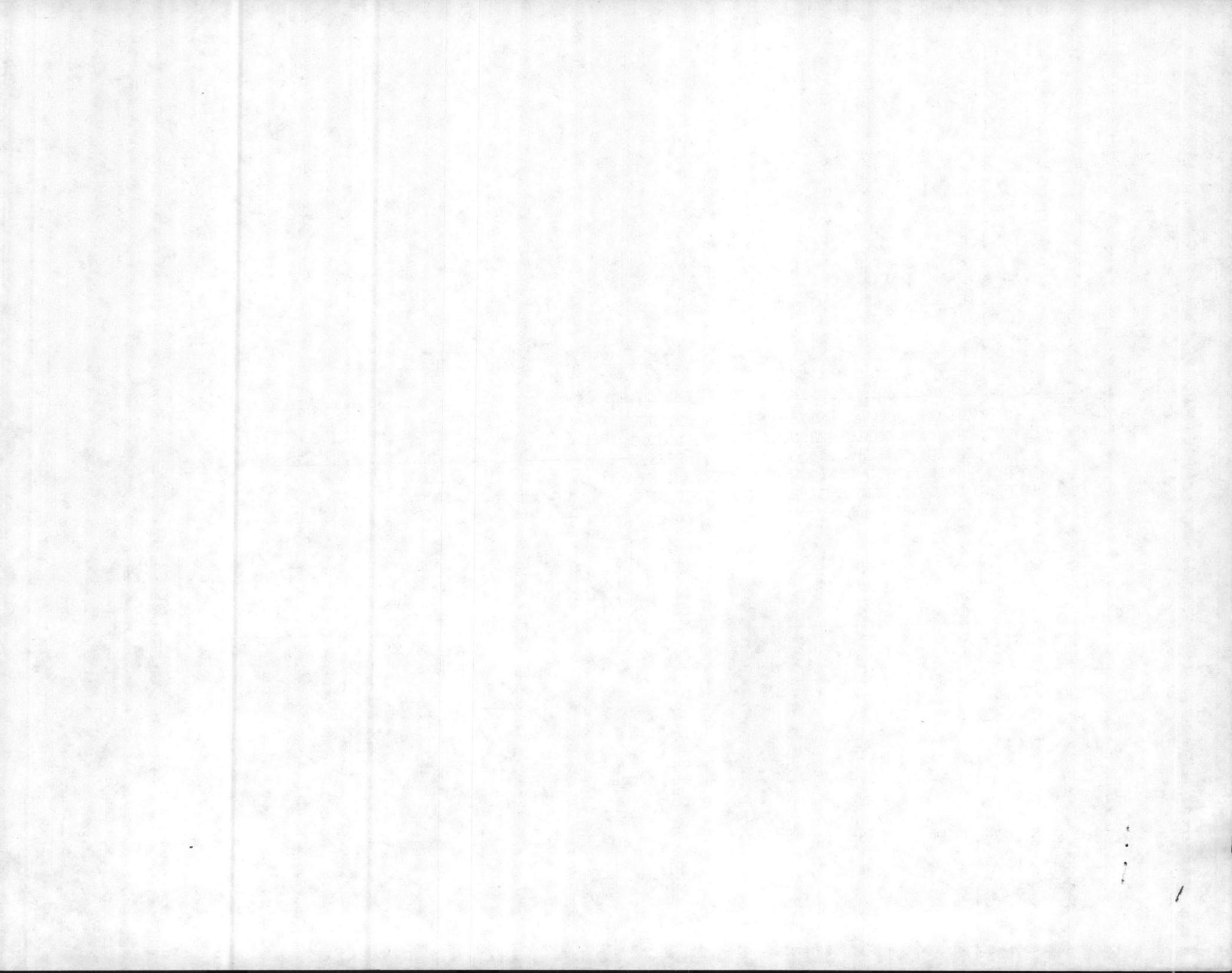
EDITION OF 1 JAN 64 MAY BE USED  
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DOD SINGLE LINE ITEM RELEASE/RECEIPT DOCUMENT

U.S. GOVERNMENT PRINTING OFFICE: 1986-491-647 (20093)

Enc(3)

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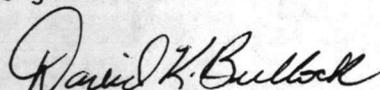
# Memorandum

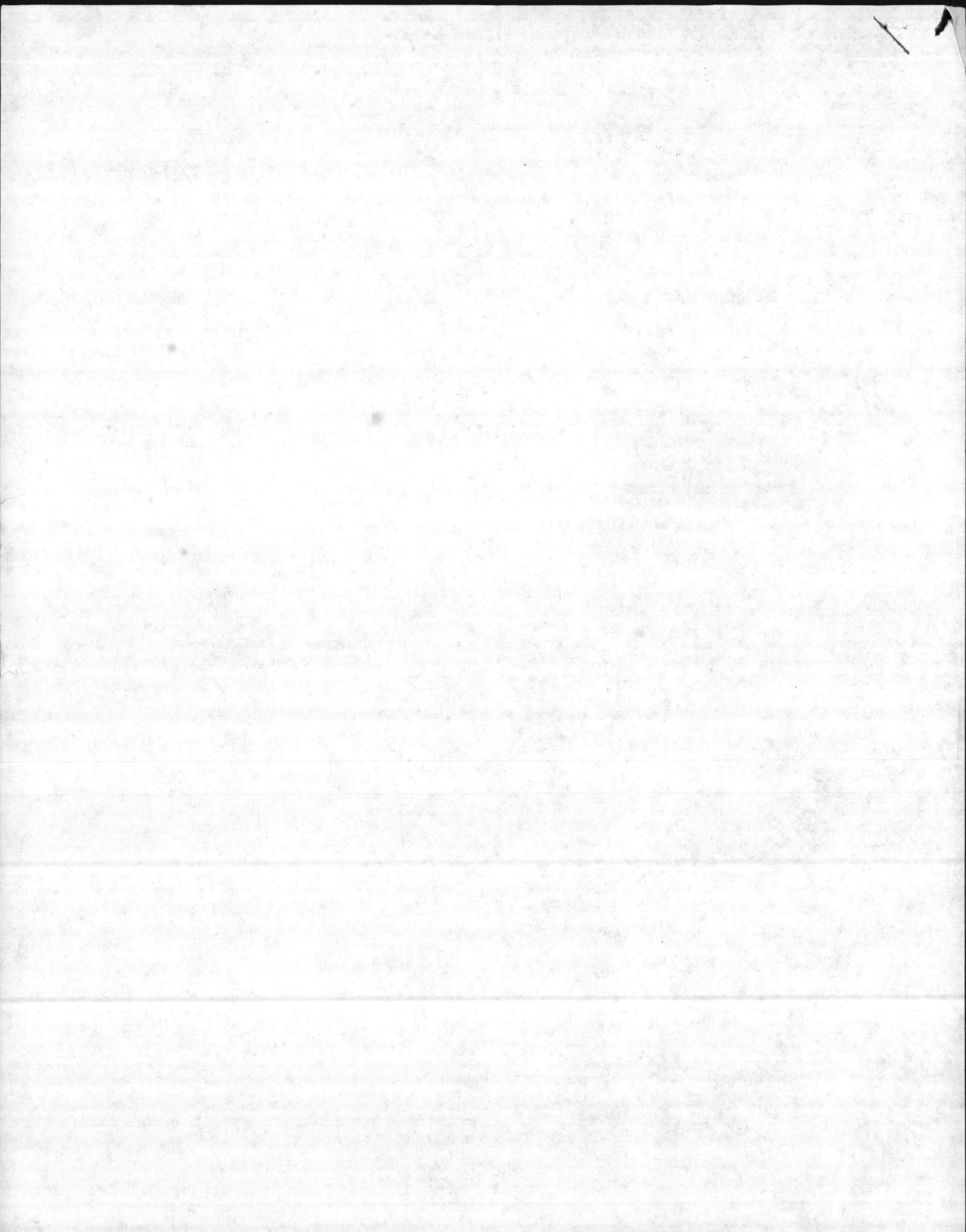
**DATE:** 6 Nov 87  
**FROM:** HMDO, Base Maintenance Division  
**TO:** Head, Natural Resources  
**SUBJ:** Funding Document for Sampling of Waster Oil Storage Tanks

Ref: (a) Your handwritten memo dated 4 Nov 87

1. Your memo implied that Col. Lilley wanted to review all request for analysis of oil and other hazardous waste. Discussion with Col. Lilley reveal that he does not desire to review the request for analysis, however, he does want to review all analysis results.

2. The funding Job Order Number to be charge is the standing job order number AM823K8112392T as appears in the Base Maintenance job order number booklet.

  
DAVID K. BULLOCK





6241/2  
NREAD  
19 Oct 87

From: Director, Natural Resources and Environmental Affairs,  
Marine Corps Base, Camp Lejeune  
To: Base Maintenance Officer, Marine Corps Base, Camp Lejeune  
Subj: WASTE OIL TANKS; ANALYSIS OF

Ref: (a) CG MCB CLNC ltr 6241/2 of 16 Oct 87

Encl: (1) JTC Environmental Consultants, Inc. Rept. No. 87-444  
Addendum  
(2) BMAIND, HMDO memo of 19 Oct 87  
(3) JTC Environmental Consultants, Inc. Rept. No. 87-441  
(4) JTC Environmental Consultants, Inc. Rept. No. 87-441  
Addendum

1. The following data is forwarded for your information. Enclosure (1) contains the Total Organic Halogen analysis of the third waste oil tank at the Marine Corps Air Station, New River (AS-419). Reference (a) contained the volatile organic chemical analysis on AS-419.

2. In regard to enclosure (2), enclosures (3) and (4) contain analysis of the last three tanks at Tarawa Terrace (STT-64, STT-65 and STT-66). It is recommended that STT-64 and STT-65 tanks be managed as a hazardous waste. Tank STT-66 is currently being filled. Based on the enclosed data, the contents of STT-66 can be managed as off-specification used oil. The volatile organic chemical and metals analysis of these three tanks is still pending and will be forwarded when received. Tank STT-66 will require resampling and testing prior to initiating disposal. Please advise Director, NREAD, when STT-66 is filled.

3. By copy of this memorandum, the Defense Reutilization and Marketing Officer (DRMO) is advised that oil was added to both STT-64 and STT-65 after the samples were taken. Please advise if DRMO requires retesting of these two tanks. POC is Mr. Danny Sharpe, extension 5003.

PETER E. BLACK  
Acting

Copy to:  
DRMO  
AC/S FAC

BCC:

→ Lab (2)

\_\_\_\_\_



11

15 OCT 1987

Addendum

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 12, 1987

*Ann E Rosecrance*

Ann E. Rosecrance  
Laboratory Director

14 OCT 1981



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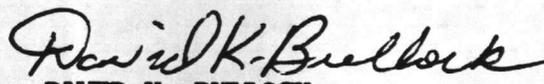
DATE: 19 OCT 87

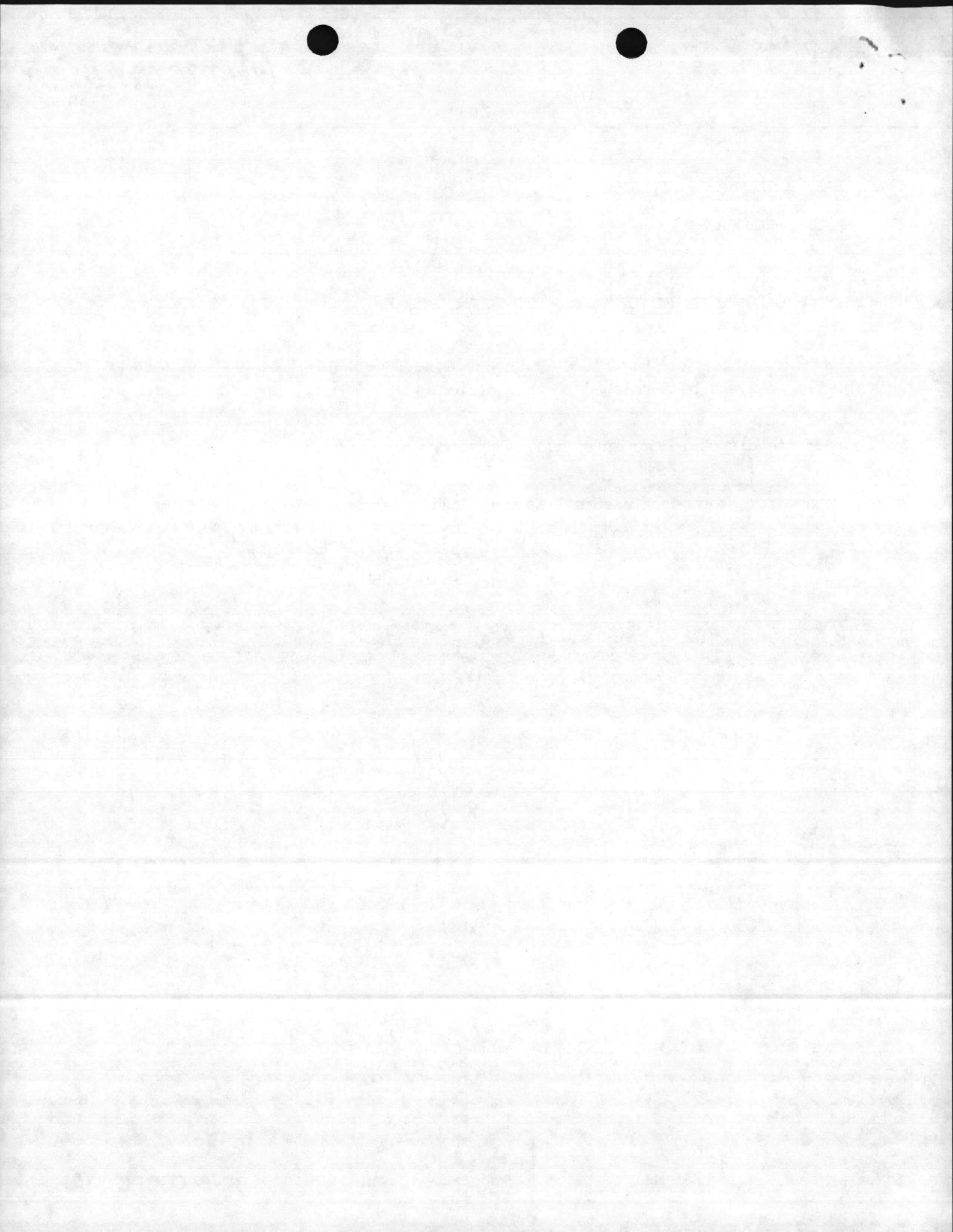
FROM: HMDO, BASE MAINTENANCE DIVISION

TO: HMC, NATURAL RESOURCES

SUBJ: ANALYSIS OF OILS CONTAINED IN TANKS STT-64 AND STT-65

1. It is requested that these two tanks be sampled, analysis conducted, and two copies of the completed analysis be furnished to this office.
2. The appropriate disposal documents will be prepared upon receipt of the completed analysis.
3. Storage space for storage of used oil is very limited at this time, therefore it is requested that this request be expedited.

  
DAVID K. BULLOCK





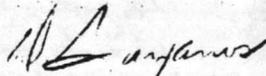
19 October, 1987

Transportation General Foreman

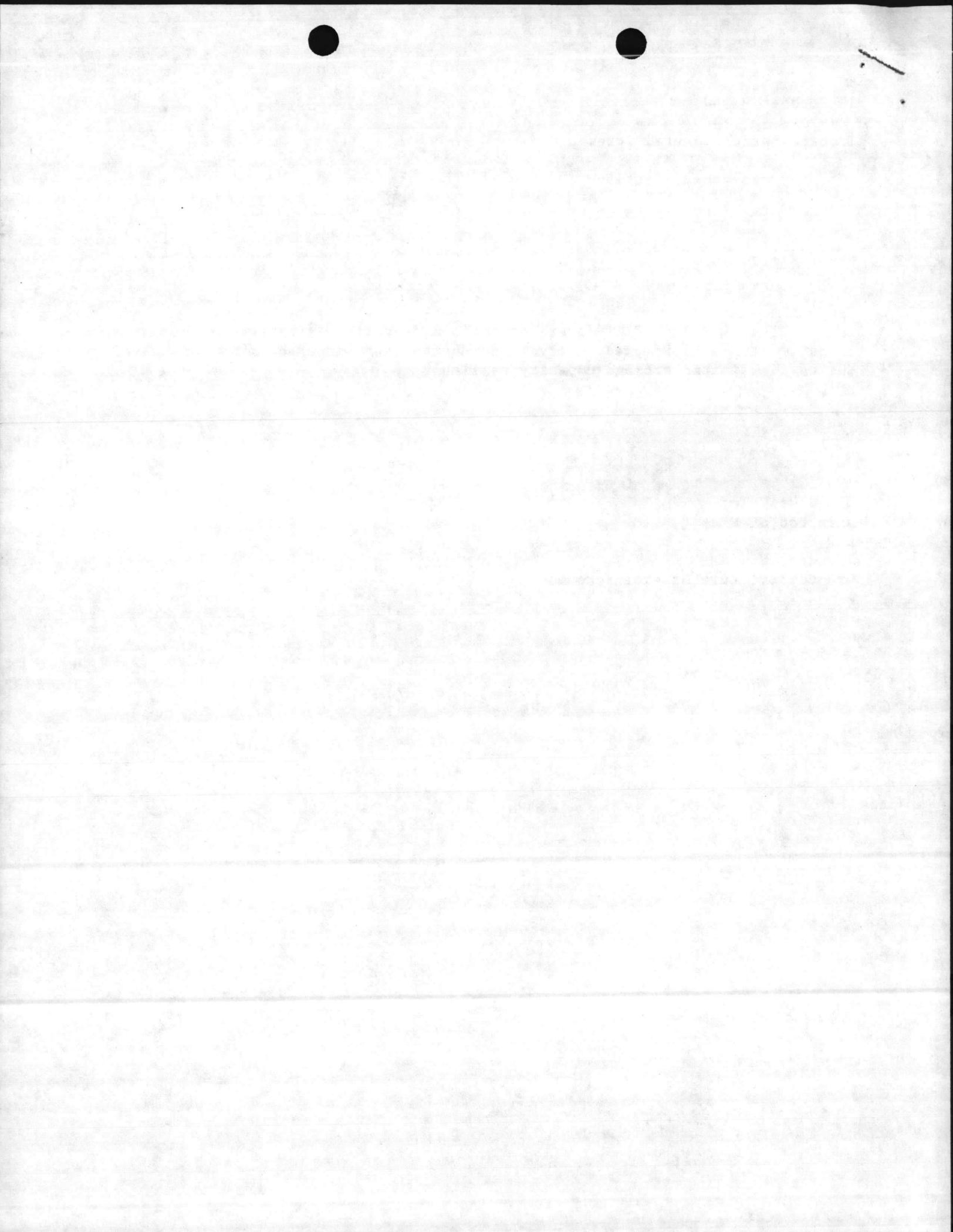
Property Management Section

Waste Oil

Tank #STT-64 and Tank #STT-65 are at maximum capacity. It is requested that these two tanks be Sampled, Analysis conducted, and Disposed of immediately due to the limited storage capacity available.

  
D. Gurganus

Blind Copy To:  
✓ Director of NREA  
BMO  
Director M & R  
Ground Structure General Foreman



Partial Results

JTC DATA REPORT # 87-441

LABORATORY ANALYSIS ON NAVAL SAMPLES

CONTRACT #N62470-86-C-8754

CASE # 136

PREPARED FOR:

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

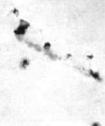
PREPARED BY:

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

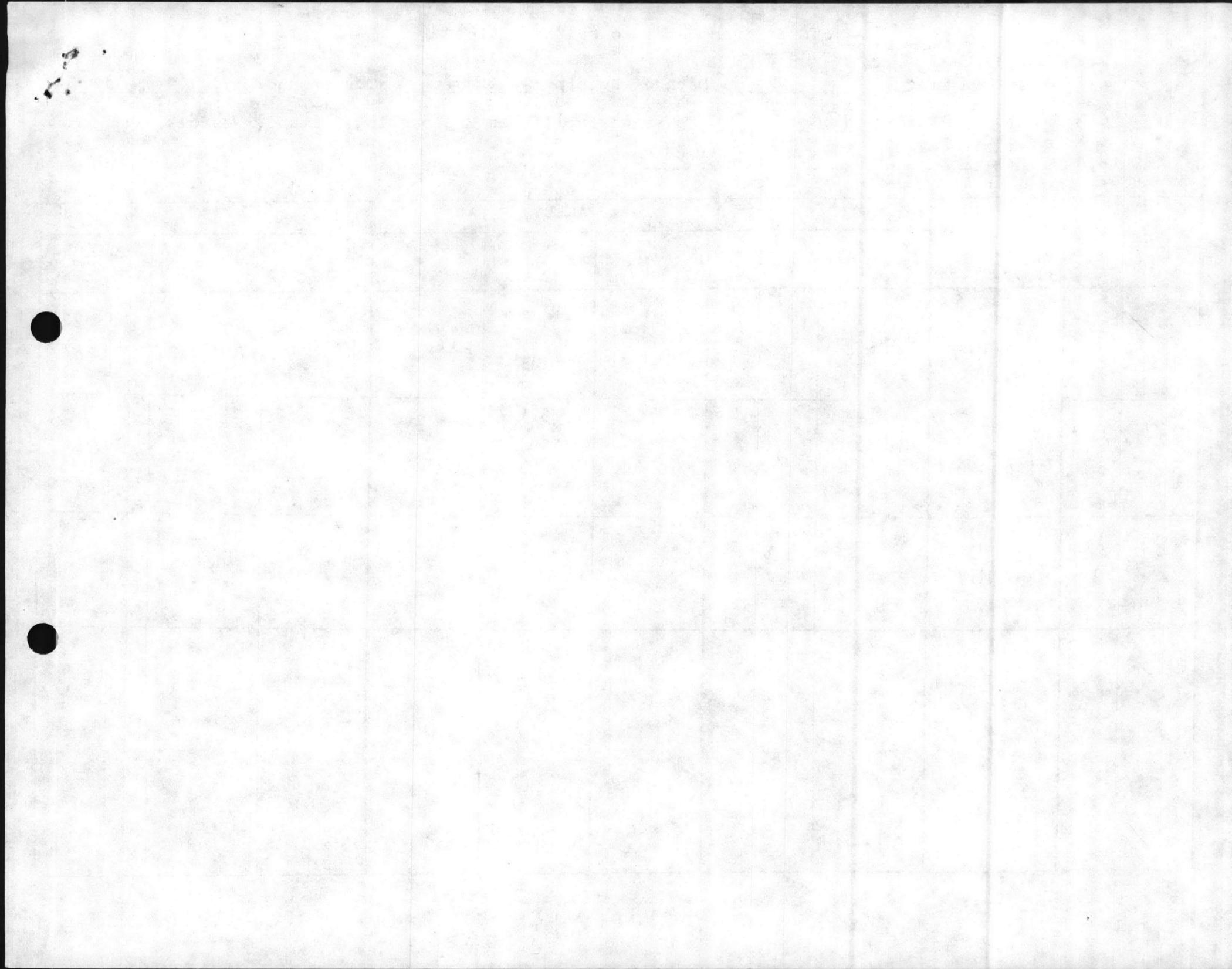
OCTOBER 5, 1987

*Ann E. Rosecrance*

Ann E. Rosecrance  
Laboratory Director







15 OCT 1987

Addendum

JTC DATA REPORT # 87-441

LABORATORY ANALYSIS ON NAVAL SAMPLES

CONTRACT #N62470-86-C-8754

CASE # 136

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

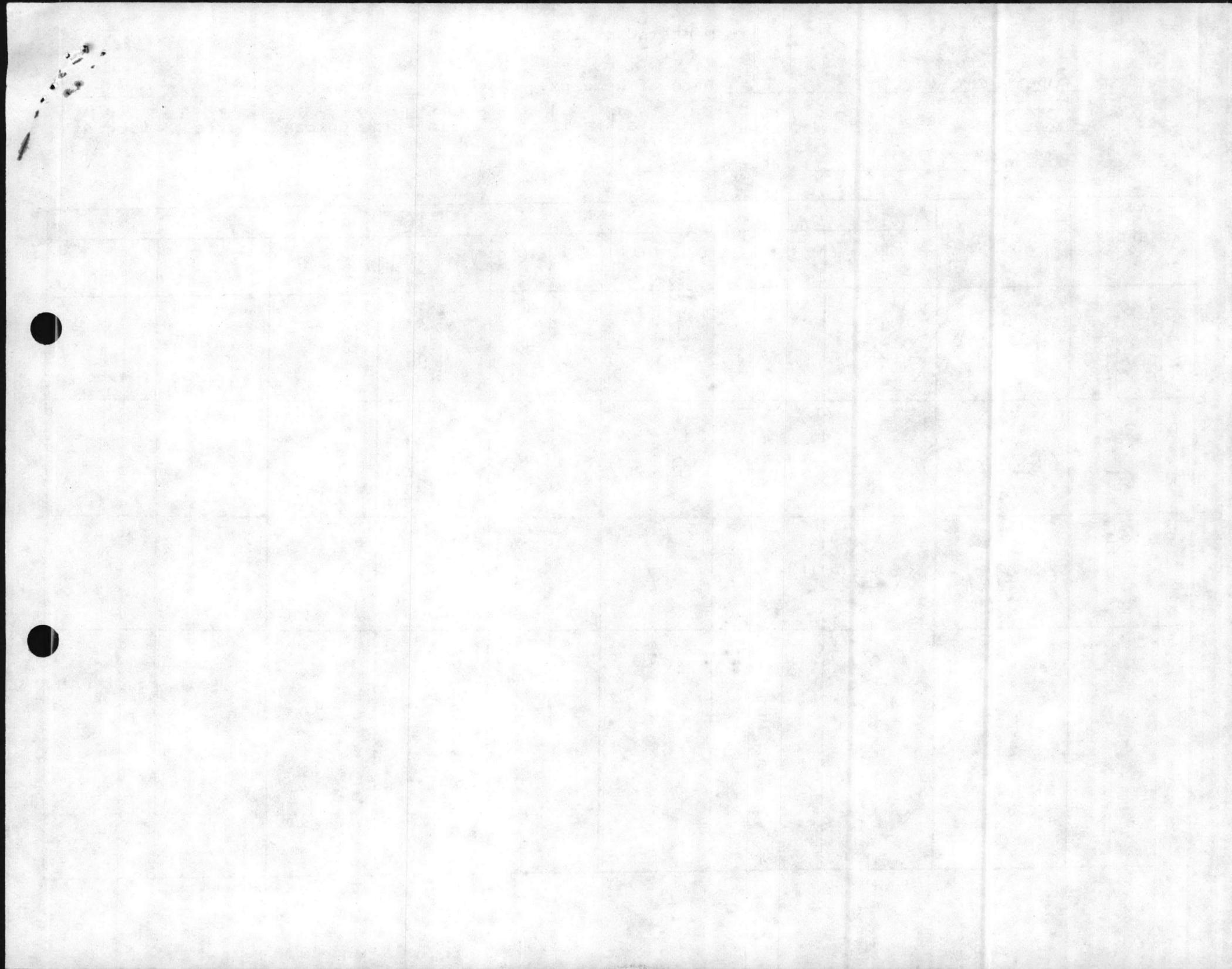
OCTOBER 12, 1987

*Ann E. Rosecrance*

Ann E. Rosecrance  
Laboratory Director

1801 100 21





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 45. 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

OCT 1 9 1987

1

Partial Results

JTC DATA REPORT # 87-444

LABORATORY ANALYSIS ON NAVAL SAMPLES

CONTRACT #N62470-86-C-8754

CASE # 138

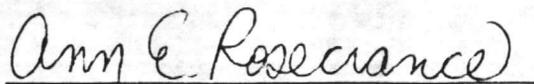
PREPARED FOR:

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  
Laboratory Director



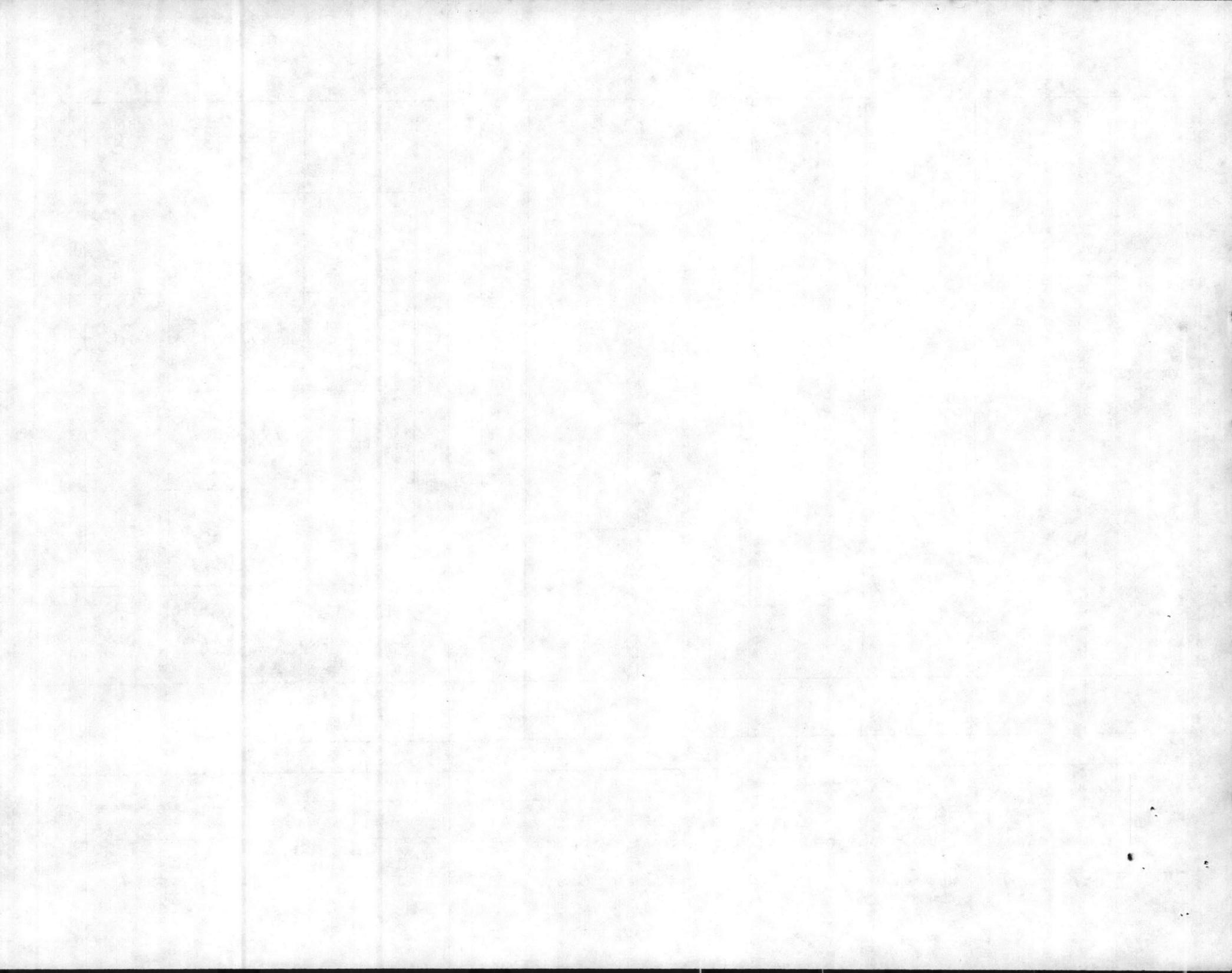
JTC Environmental Consultants, Inc.

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							





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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 * <del>ND</del>	ethylbenzene	100 * <del>ND</del>
carbon tetrachloride	ND	methylene chloride	ND
chlorobenzene	ND	methyl chloride	ND
1,2-dichloroethane	ND	methyl bromide	ND
1,1,1-trichloroethane	100 * <del>ND</del>	bromoform	ND
1,1-dichloroethane	ND	dichlorobromomethane	ND
1,1,2-trichloroethane	ND	trichlorofluoromethane	200 * <del>ND</del>
1,1,2,2-tetrachloroethane	ND	dichlorodifluoromethane	ND
chloroethane	ND	chlorodibromomethane	ND
2-chloroethylvinylether	ND	tetrachloroethylene	ND
chloroform	ND	toluene	390 <del>ND</del>
1,1-dichloroethylene	ND	trichloroethylene	70 * <del>ND</del>
1,2-trans-dichloroethylene	ND	vinyl chloride	ND
2-HEXANONE	430	xylene	580 <del>ND</del>
		FREON	2900

ND = NOT DETECTED

\* = BELOW DETECTION LIMIT





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PRIORITY POLLUTANT ANALYSIS DATA SHEET

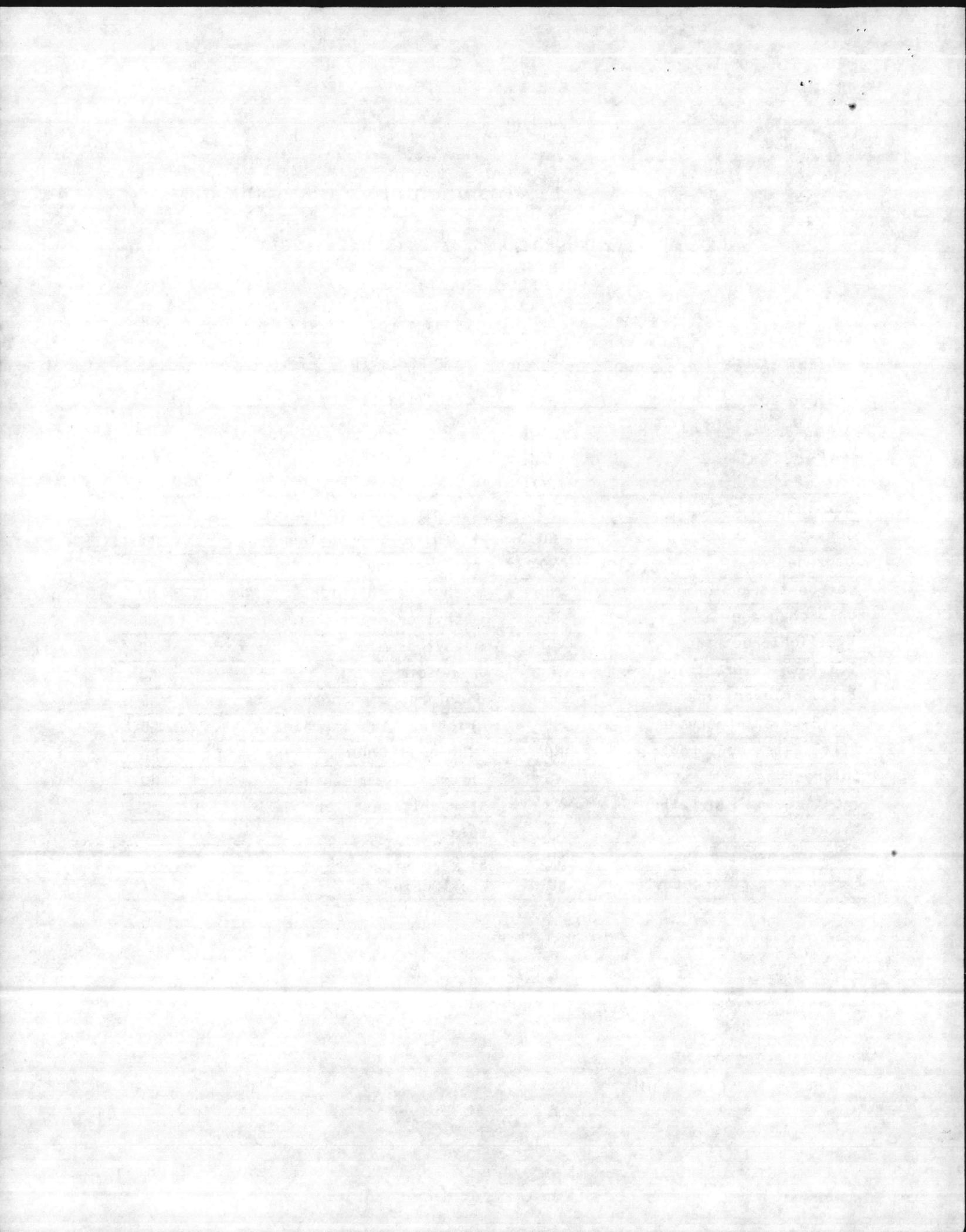
VOLATILE FRACTION

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	PARAMETER	RESULT
	mg/L		mg/L
acrolein	ND	1,2-dichloropropane	ND
acrylonitrile	ND	1,3-dichloropropylene	ND
benzene	200 * <del>ND</del>	ethylbenzene	410 <del>ND</del>
carbon tetrachloride	ND	methylene chloride	ND
chlorobenzene	ND	methyl chloride	ND
1,2-dichloroethane	ND	methyl bromide	ND
1,1,1-trichloroethane	410 <del>ND</del>	bromoform	ND
1,1-dichloroethane	ND	dichlorobromomethane	ND
1,1,2-trichloroethane	ND	trichlorofluoromethane	640 <del>ND</del>
1,1,2,2-tetrachloroethane	ND	dichlorodifluoromethane	ND
chloroethane	ND	chlorodibromomethane	ND
2-chloroethylvinylether	ND	tetrachloroethylene	ND
chloroform	ND	toluene	1300 <del>ND</del>
1,1-dichloroethylene	ND	trichloroethylene	100 * <del>ND</del>
1,2-trans-dichloroethylene	ND	vinyl chloride	ND
ACETONE	1900	xylene	1900 <del>ND</del>
2-HEXANONE	1700	FREON	9300
4-METHYL-2-PENTANONE (MIBK)	380		

ND = NOT DETECTED

\* = BELOW DETECTION LIMIT





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C Environmental Consultants, Inc.

PRIORITY POLLUTANT ANALYSIS DATA SHEET

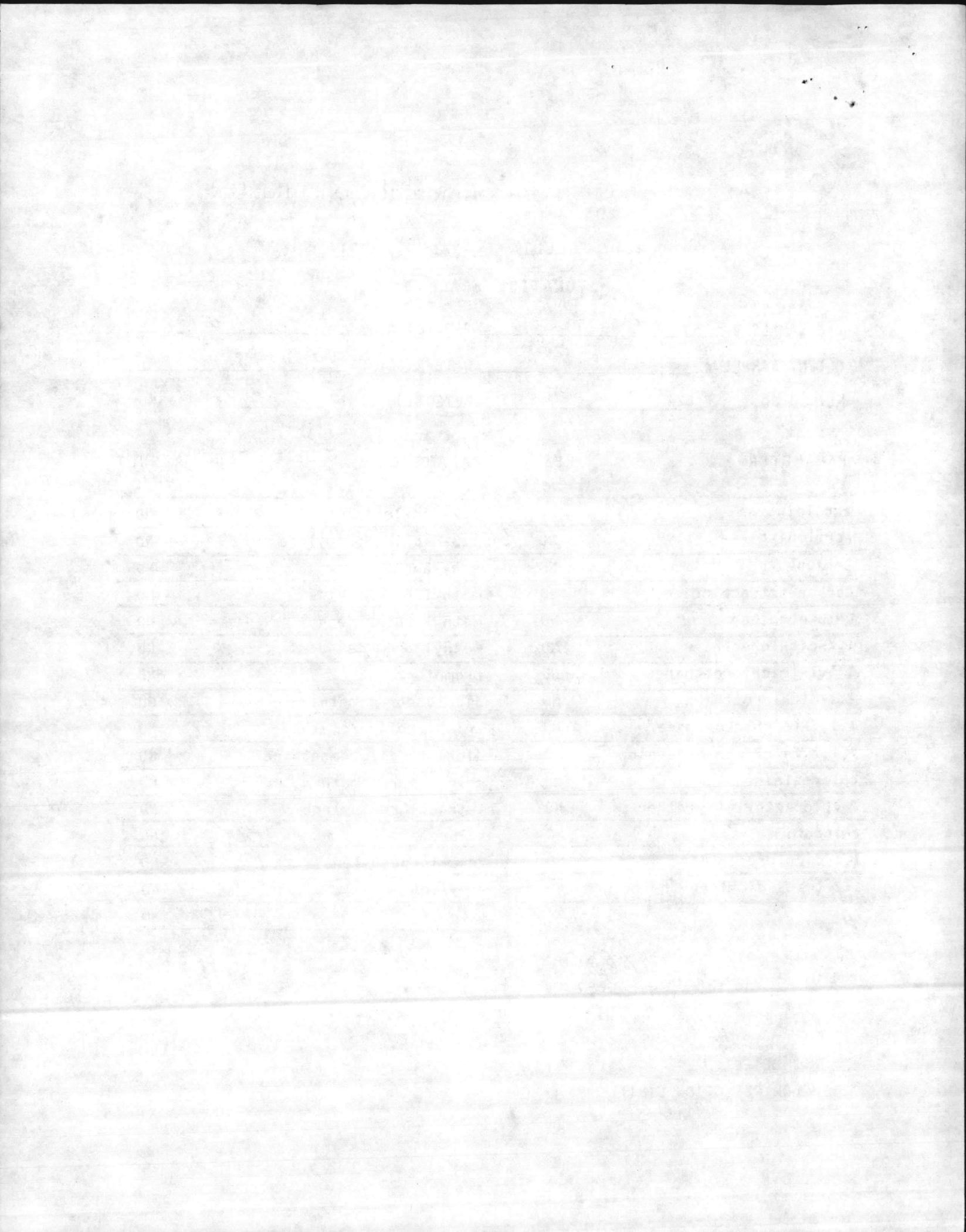
VOLATILE FRACTION

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 * <del>ND</del>	ethylbenzene	390 <del>ND</del>
carbon tetrachloride	ND	methylene chloride	ND
chlorobenzene	ND	methyl chloride	ND
1,2-dichloroethane	ND	methyl bromide	ND
1,1,1-trichloroethane	380 <del>ND</del>	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 <del>ND</del>
1,1-dichloroethylene	ND	trichloroethylene	100 * <del>ND</del>
1,2-trans-dichloroethylene	ND	vinyl chloride	ND
ACETONE	1800	xylene	2000 <del>ND</del>
4-METHYL-2-PENTANONE (MIBK)	380	FREON	8200
2-HEXANONE	1600		

ND = NOT DETECTED

\* = BELOW DETECTION LIMIT





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C Environmental Consultants, Inc.

PRIORITY POLLUTANT ANALYSIS DATA SHEET

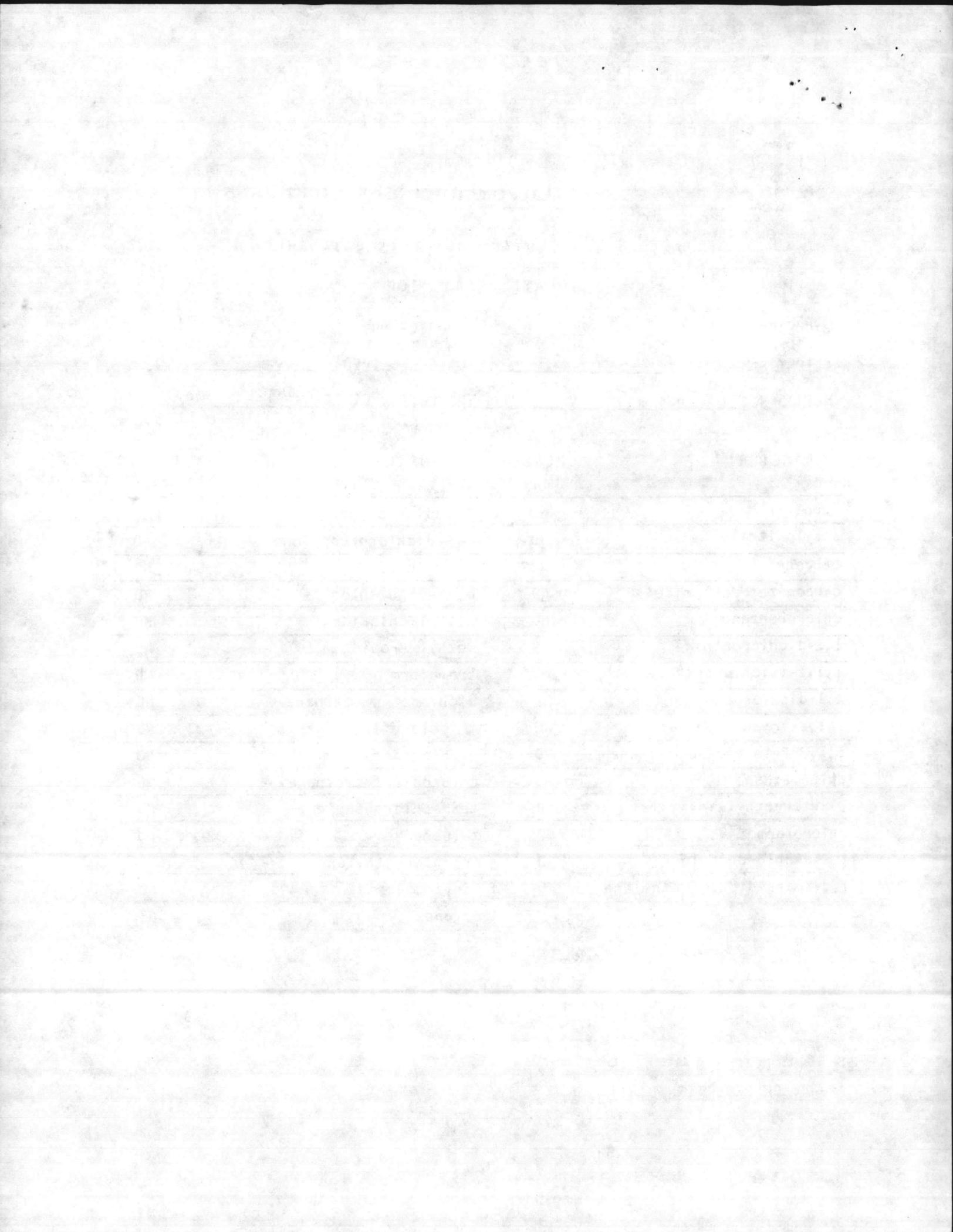
VOLATILE FRACTION

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 * <del>ND</del>	ethylbenzene	620 <del>ND</del>
carbon tetrachloride	ND	methylene chloride	ND
chlorobenzene	ND	methyl chloride	ND
1,2-dichloroethane	ND	methyl bromide	ND
1,1,1-trichloroethane	310 <del>ND</del>	bromoform	ND
1,1-dichloroethane	ND	dichlorobromomethane	ND
1,1,2-trichloroethane	ND	trichlorofluoromethane	310 <del>ND</del>
1,1,2,2-tetrachloroethane	ND	dichlorodifluoromethane	ND
chloroethane	ND	chlorodibromomethane	ND
2-chloroethylvinylether	ND	tetrachloroethylene	ND
chloroform	ND	toluene	1200 <del>ND</del>
1,1-dichloroethylene	ND	trichloroethylene	100 * <del>ND</del>
1,2-trans-dichloroethylene	ND	vinyl chloride	ND
ACETONE	1400	xylenes	2000 <del>ND</del>
4-METHYL-2-PENTANONE (MIBK)	350	FREON	5200
2-HEXANONE	3300		

ND = NOT DETECTED

\* = BELOW DETECTION LIMIT





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# C Environmental Consultants, Inc.

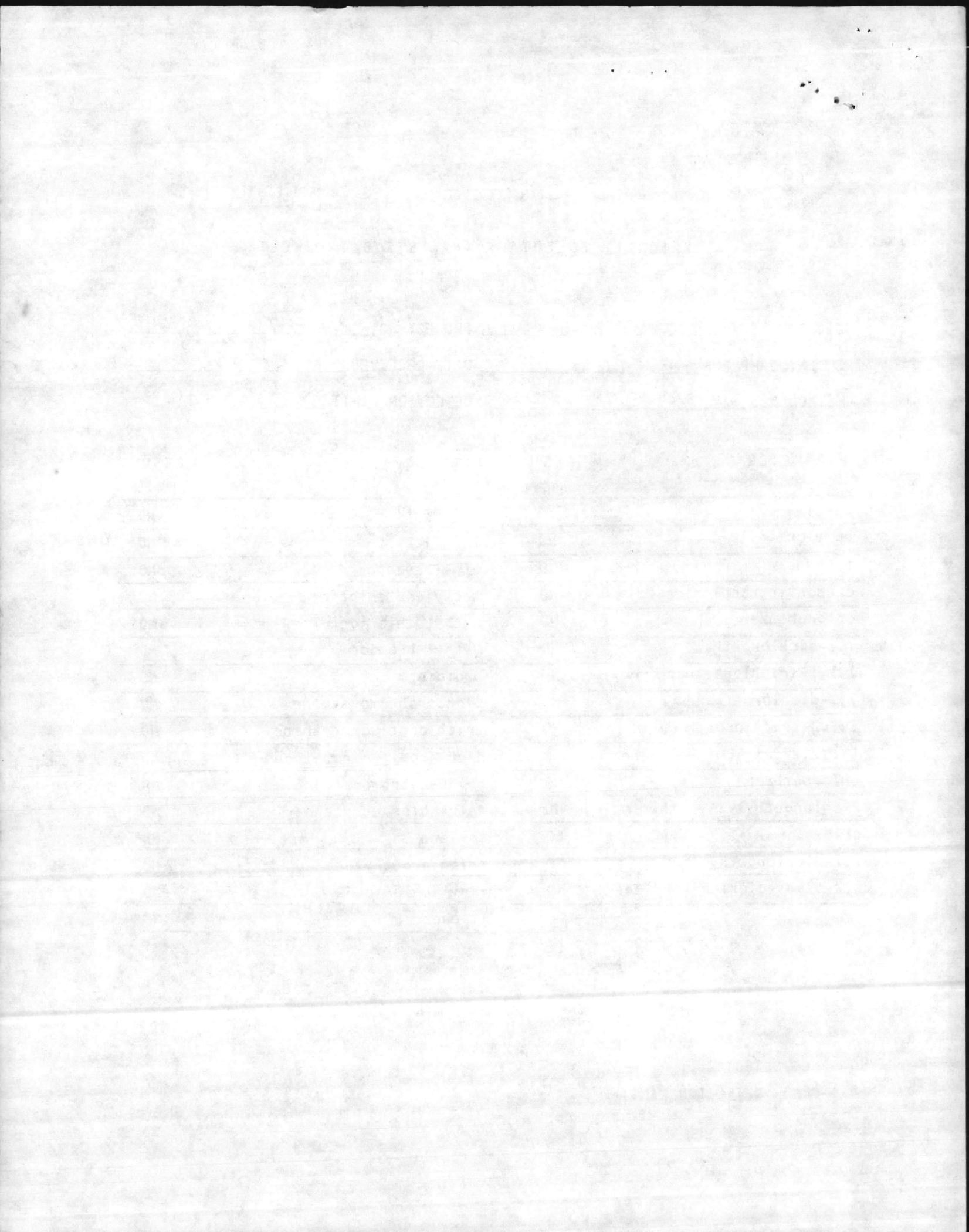
## PRIORITY POLLUTANT ANALYSIS DATA SHEET

### 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	PARAMETER	RESULT
	mq/L		mq/L
acrolein	ND	1,2-dichloropropane	ND
acrylonitrile	ND	1,3-dichloropropylene	ND
benzene	200* <del>ND</del>	ethylbenzene	720 <del>ND</del>
carbon tetrachloride	ND	methylene chloride	ND
chlorobenzene	ND	methyl chloride	ND
1,2-dichloroethane	ND	methyl bromide	ND
1,1,1-trichloroethane	100* <del>ND</del>	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 <del>ND</del>
1,1-dichloroethylene	ND	trichloroethylene	50* <del>ND</del>
1,2-trans-dichloroethylene	ND	vinyl chloride	ND
ACETONE	1400	xylene	1500 <del>ND</del>
4-METHYL-2-PENTANONE (MIBK)	330	FREON	1600
2-HEXANONE	1100		

ND = NOT DETECTED  
\* = BELOW DETECTION LIMIT



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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	PARAMETER	RESULT
	mq/L		mq/L
acrolein	ND	1,2-dichloropropane	ND
acrylonitrile	ND	1,3-dichloropropylene	ND
benzene	200 * <del>ND</del>	ethylbenzene	460 <del>ND</del>
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 <del>ND</del>
1,1-dichloroethylene	ND	trichloroethylene	ND
1,2-trans-dichloroethylene	ND	vinyl chloride	ND
ACETONE	2300	xylenes	2100 <del>ND</del>
4-METHYL-2-PENTANONE (MIBK)	500	FREON	600
2-HEXANONE	1500		

ND = NOT DETECTED

\* = BELOW DETECTION LIMIT





UNITED STATES MARINE CORPS  
NATURAL RESOURCES AND ENVIRONMENTAL AFFAIRS DIVISION  
MARINE CORPS BASE  
CAMP LEJEUNE, NORTH CAROLINA 28542-5001

IN REPLY REFER TO:

6241/2

NREAD

14 Jul 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 TANKS; ANALYSIS OF

Ref: (a) BO 6240.5

Encl: (1) JTC Environmental Consultants, Inc., Report #87-247  
(2) JTC Environmental Consultants, Inc., Report #87-247  
Addendum

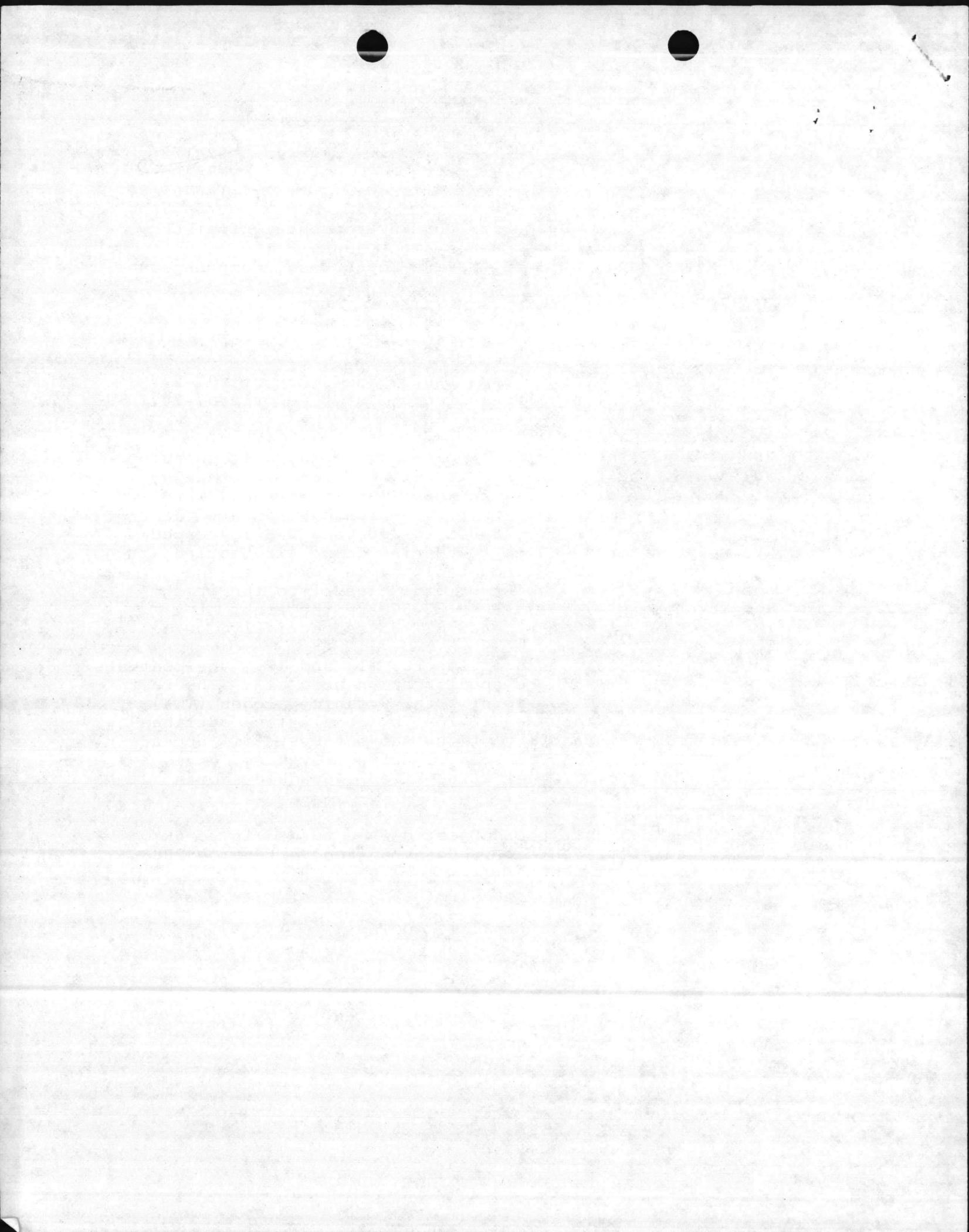
1. On 28 May 1987, the four waste oil storage tanks at Holcomb Boulevard, two of the three tanks at Marine Corps Air Station, New River, and three of the six tanks at Tarawa Terrace, were sampled by NREAD. Sample numbers 87-49 through 87-52 are the Holcomb Boulevard tanks S-888, S-889, S-890, and S-891, respectively. Sample number 87-53 is the Marine Corps Air Station, New River tank in the middle and sample number 87-54 is the Marine Corps Air Station, New River tank closest to the crash crew. Sample numbers 87-55 through 87-57 are the tanks at Tarawa Terrace, STT-61, STT-62, and STT-63 respectively.

2. Based on data contained in enclosures (1) and (2), the contents of S-888, S-890 and STT-63 are specification used oil. The rest of the tanks, due to the levels of Total Organic Halogen (TOX), are regulated as a hazardous waste fuel by regulations outlined in the reference. 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.

3. It is recommended that the subject oil be turned in to DRMO for disposal. Point of contact is Danny Sharpe, extension 2083.

J. I. WOOTEN

Copy to:  
DRMO  
AC/S, FAC  
EC&MS (2)



Partial Results

JTC DATA REPORT # 87-247

LABORATORY ANALYSIS ON NAVAL SAMPLES

CONTRACT #N62470-86-C-8754

CASE # 42

PREPARED FOR:

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

PREPARED BY:

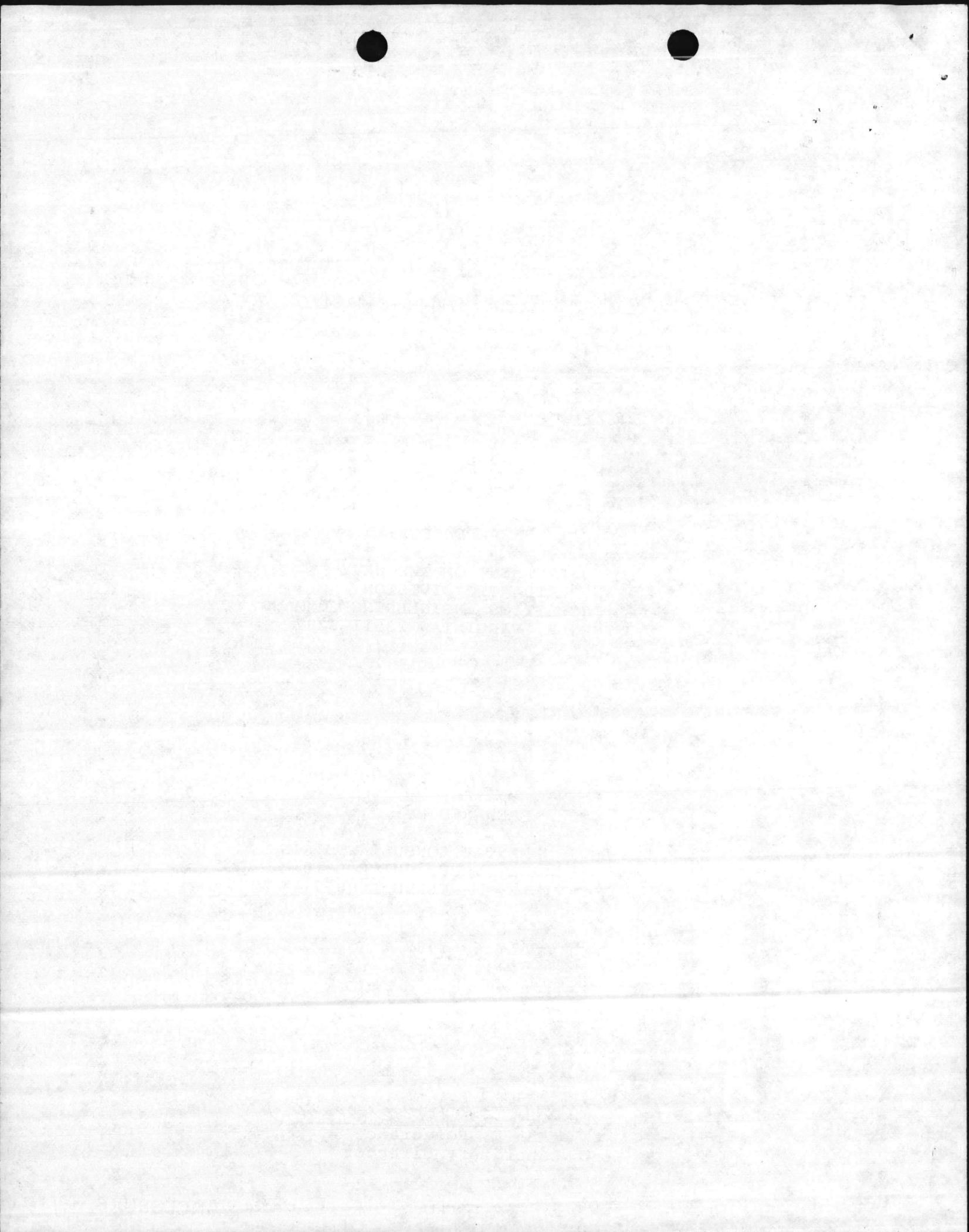
JTC ENVIRONMENTAL CONSULTANTS, INC.  
4 RESEARCH PLACE, SUITE L-10  
ROCKVILLE, MARYLAND 20850

JULY 6, 1987

*Ann E. Rosecrance*

Ann E. Rosecrance  
Laboratory Director

ENCLOSURE (1)



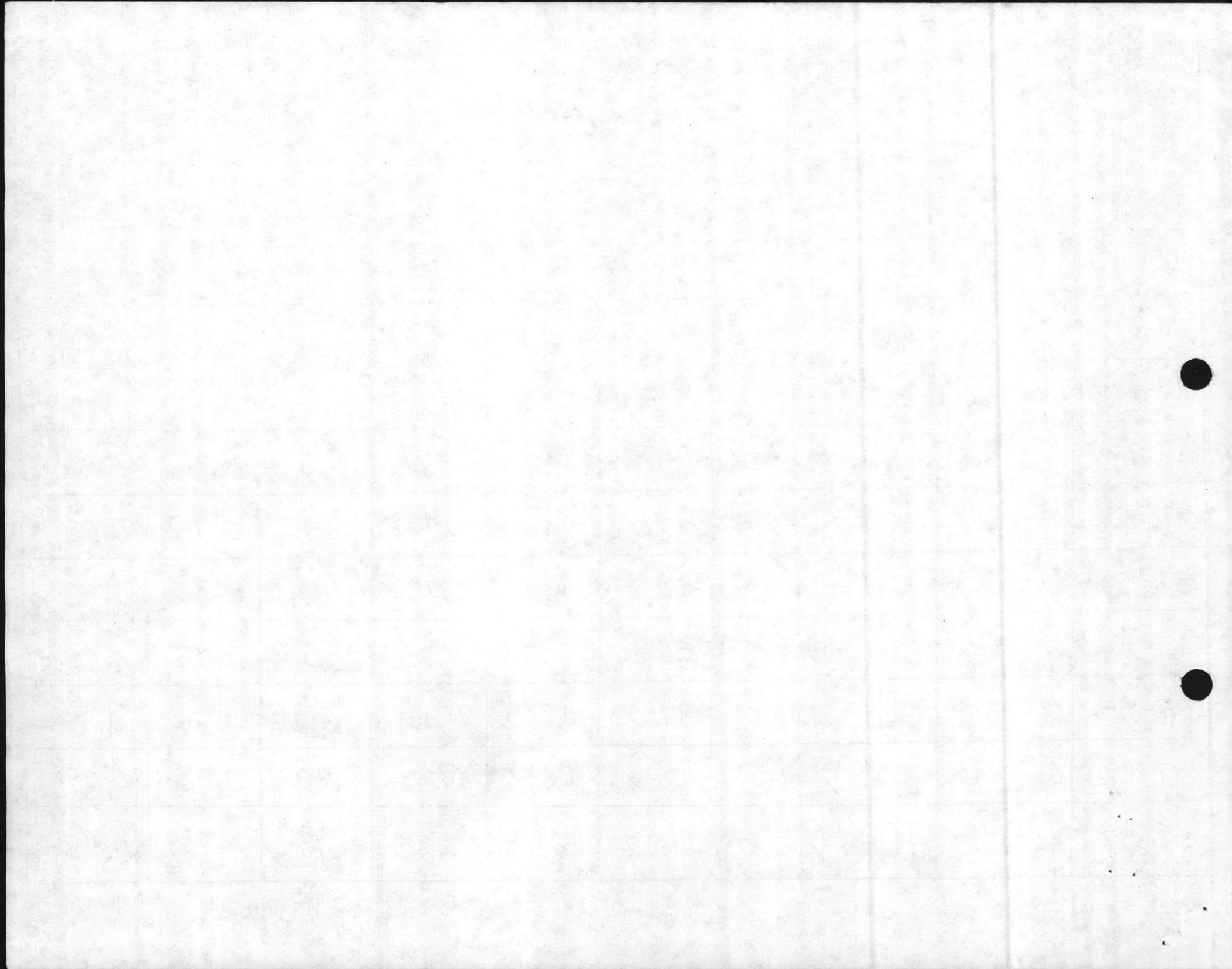
Location: Camp Lejeune Date of Receipt: 6-5-87 Turnaround: routine  
 Date: 7-6-87 Case No. 42 to Naval Facilities Engineering Command, Norfolk, Virginia  
 JTC Data Report No. 87-247 Table i

Oil Phase

NAVY SAMPLE ID	JTC SAMPLE ID	ANALYSIS PARAMETER							
		Water %	BS+W %	Viscosity @100°F, SUS	BTU per lb.	TOX %	Flashpoint °C	Sp. Gravity <sup>a</sup> g/ml	Sp. Gravity <sup>b</sup> g/ml
87-49	61-0305	19.5	19.5	93.6	15,550	<0.05	N.O. boiled at 70°	0.73	0.92
87-50	61-0306	13.5	20.0	100.8	16,500	0.20	N.O. boiled at 50°	0.77*	—
87-51	61-0307	17.6	24.0	103.8	15,500	<0.05	N.O. boiled at 45°	0.72	0.96
87-52	61-0308	0.76	0.80	53.0	19,300	0.12	35	0.73	0.88
87-53	61-0309	8.4	13.5	100.8	17,500	0.16	40	0.73	0.93
87-54	61-0310	8.1	13.0	56.1	17,500	0.25	35	0.75	0.88
87-55	61-0311	18.4	23.0	97.0	15,000	0.13	N.O. boiled at 45°	0.76	0.98
87-56	61-0312	12.0	17.5	104.6	16,650	0.22	40	0.73	0.89
87-57	61-0313	19.6	22.0	120.2	15,100	<0.05	N.O. boiled at 45°	0.76	0.98

- N.O. = not observed  
 a = top layer b = bottom layer

\* sample consisted of only one oil layer



JTC Environmental Consultants, Inc.

Location: Camp Lejeune Date of Receipt: 6-5-87 Turnaround: routine

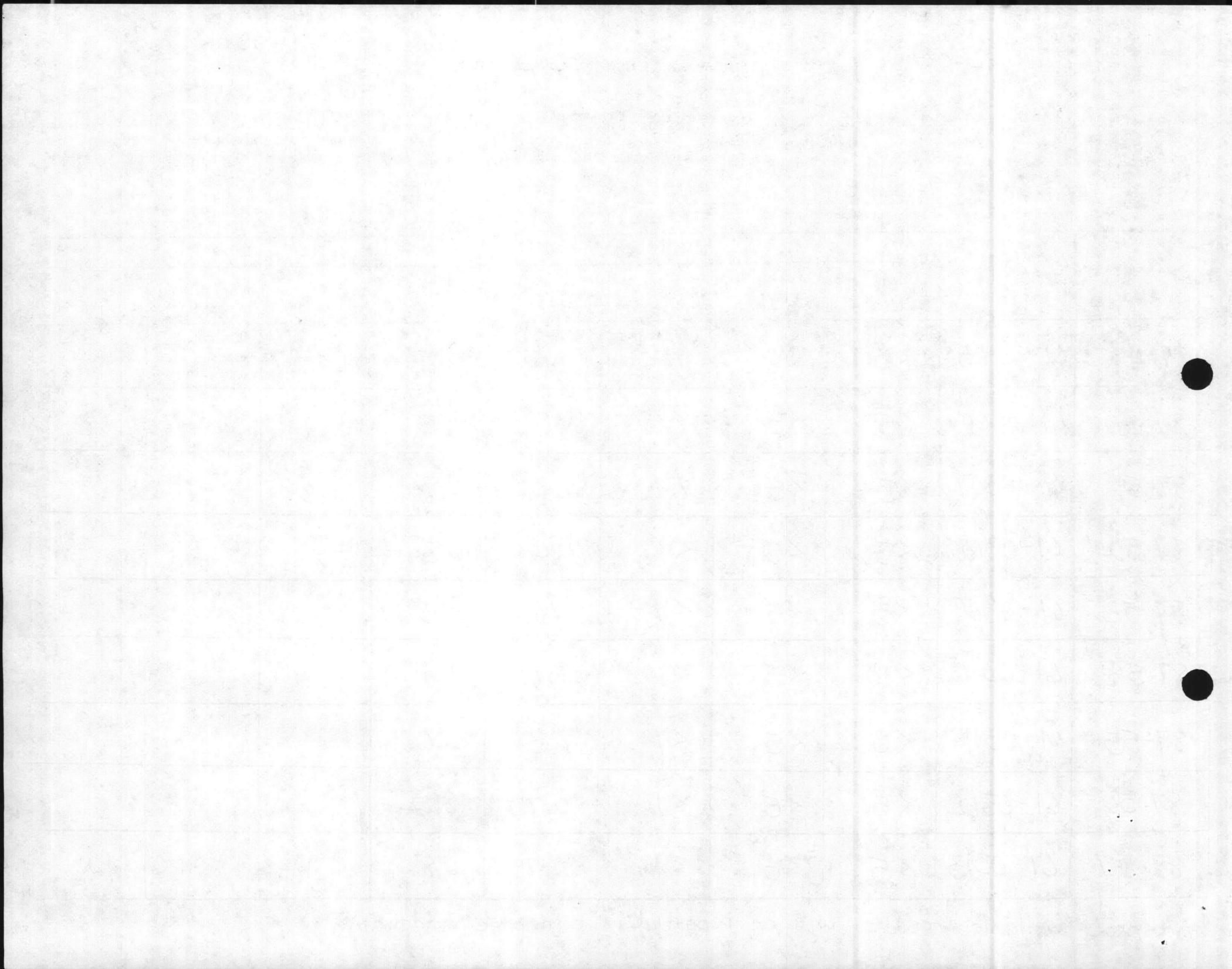
Date: 7-6-87 Case No. 42 to Naval Facilities Engineering Command, Norfolk, Virginia

JTC Data Report No. 87-247 Table 2

Oil Phase

NAVY SAMPLE ID	JTC SAMPLE ID	ANALYSIS PARAMETER						
		PCB ug/g	As mg/kg	Cd mg/kg	Cr mg/kg	Pb mg/kg		
87-49	61-0305	<5	NA	NA	NA	NA		
87-50	61-0306	<5	<5	<1	<0.75	30		
87-51	61-0307	<5	<5	1.1	2.2	59		
87-52	61-0308	<5	<5	<1	1.6	23		
87-53	61-0309	<5	<5	<1	1.6	35		
87-54	61-0310	<10	<5	<1	2.6	26		
87-55	61-0311	<5	<5	<1	1.3	26		
87-56	61-0312	<5	<5	<1	<0.75	8.2		
87-57	61-0313	<5	<5	<1	<0.75	28		

NA - not available, results will be reported in a report addendum



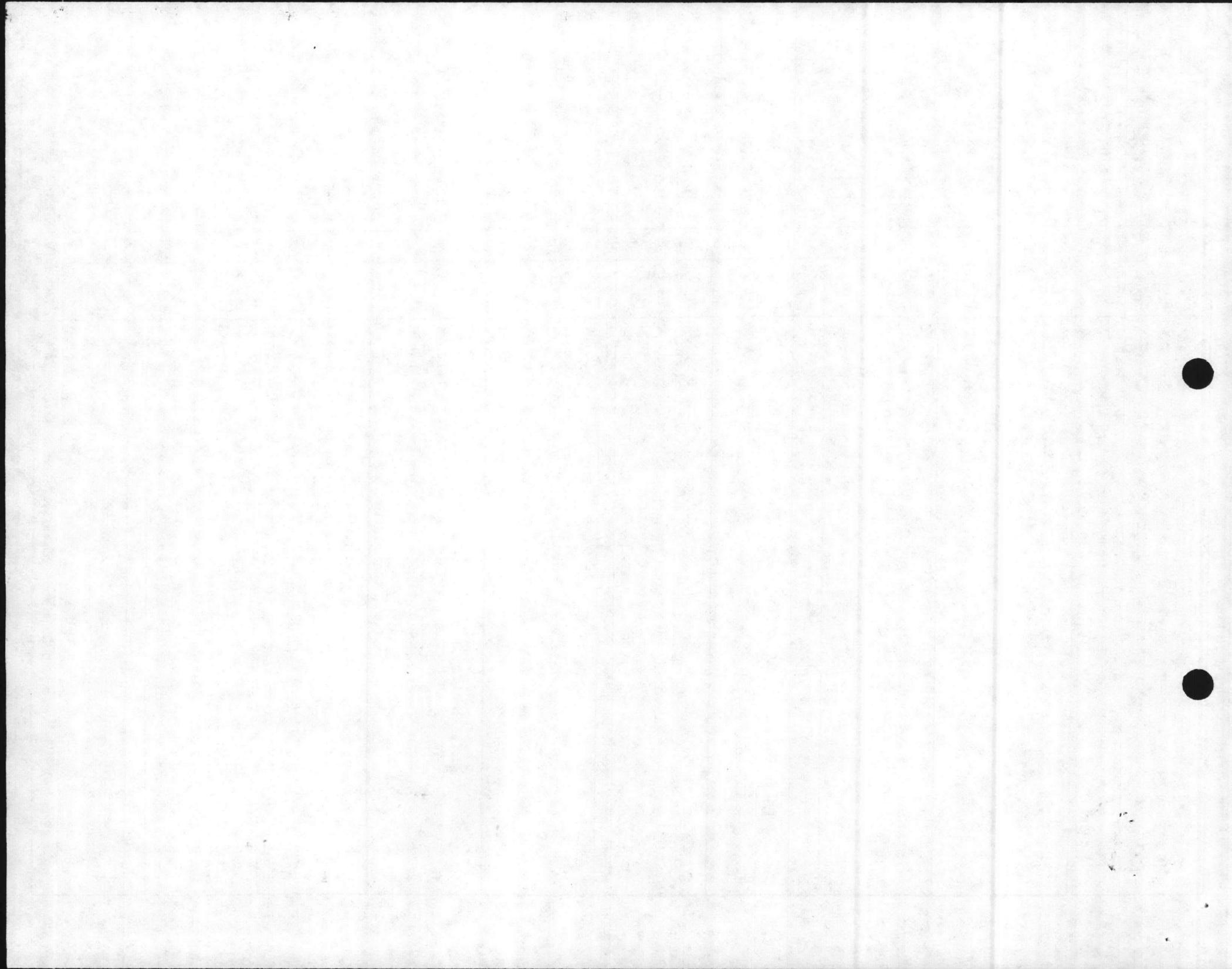
Location: Camp Lejeune Date of Receipt: 6-5-87 Turnaround: routine

Date: 7-6-87 Case No. 42 to Naval Facilities Engineering Command, Norfolk, Virginia

JTC Data Report No. 87-247 Table 3

Water Phase Composite

NAVY SAMPLE ID	JTC SAMPLE ID	ANALYSIS PARAMETER						
		TOX ug/L	Phenols mg/L	VOA	As ug/L	Cd ug/L	Cr ug/L	Pb ug/L
87-49/ 87-57 composite	61-0305/ 61-0313	814	6.8	See attached sheet	498	<20	72	155





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# Environmental Consultants, Inc.

## PRIORITY POLLUTANT ANALYSIS DATA SHEET

### VOLATILE FRACTION

JTC SAMPLE # 61-0305/0313 Composite PROJECT NO. NF-61 #42  
 CLIENT SAMPLE # 87-49787-57 Composite DATE RECEIVED 6/5/87  
 METHOD NO. 624 DETECTION LIMIT 500 ug/L

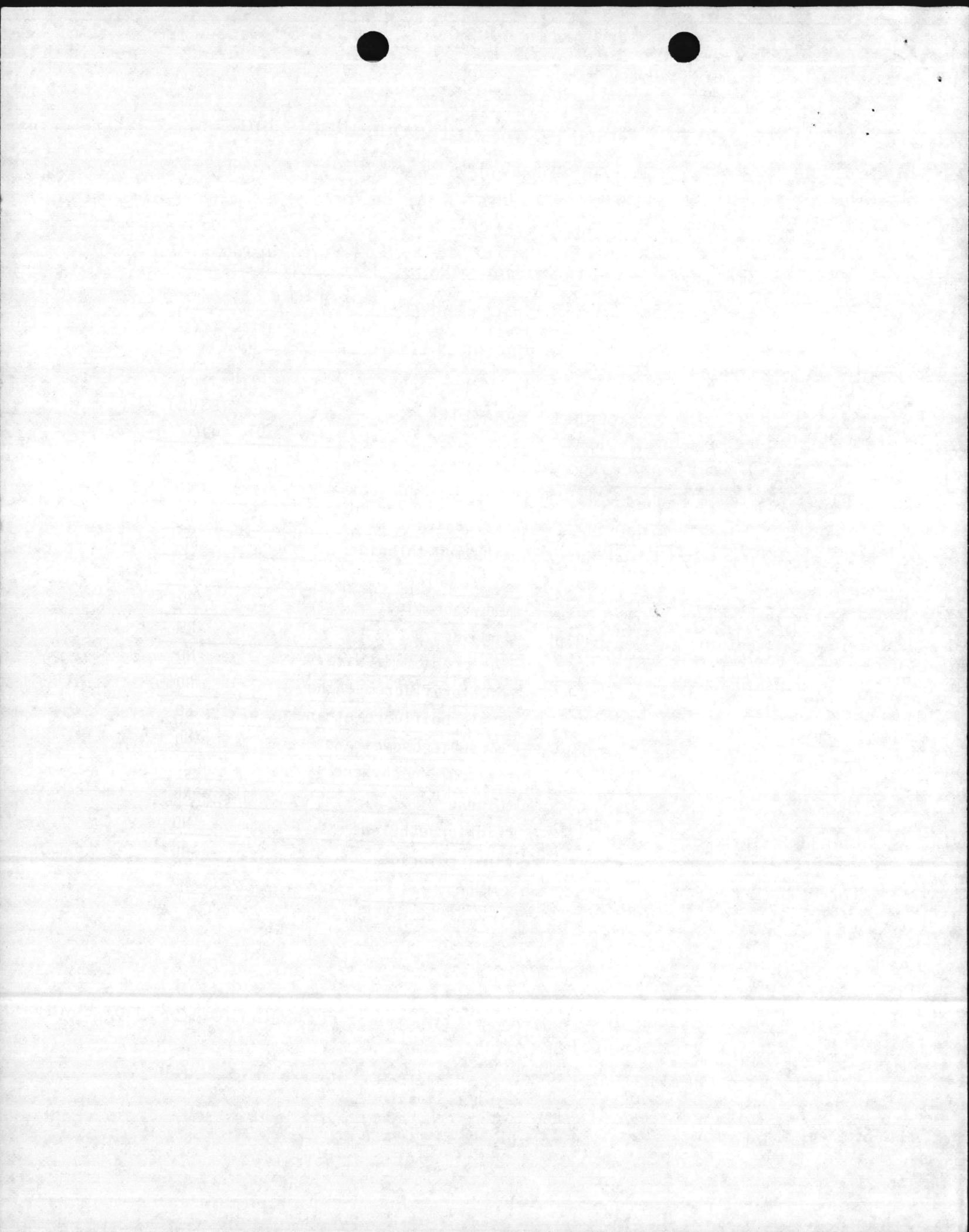
PARAMETER	RESULT ug/L	PARAMETER	RESULT ug/L
acrolein	ND	1,2-dichloropropane	ND
acrylonitrile	ND	1,3-dichloropropylene	ND
benzene	540 <del>ND</del>	ethylbenzene	110* <del>ND</del>
carbon tetrachloride	ND	methylene chloride	ND
chlorobenzene	ND	methyl chloride	ND
1,2-dichloroethane	ND	methyl bromide	ND
1,1,1-trichloroethane	230* <del>ND</del>	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	990 <del>ND</del>
1,1-dichloroethylene	ND	trichloroethylene	ND
1,2-trans-dichloroethylene	ND	vinyl chloride	ND
		xylenes	620 <del>ND</del>

Acetone 70,000  
 MEK (2-Butanone) 13,000  
 MIBK (4-methyl-2-pentanone) 1200  
 1,1,2-Trichlorotrifluoroethane (freon)

ND = NOT DETECTED

\* = BELOW DETECTION LIMIT

present, concentration not available



Addendum

JTC DATA REPORT # 87-247

LABORATORY ANALYSIS ON NAVAL SAMPLES

CONTRACT #N62470-86-C-8754

CASE # 42

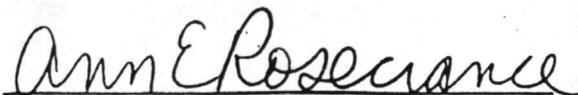
PREPARED FOR:

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

PREPARED BY:

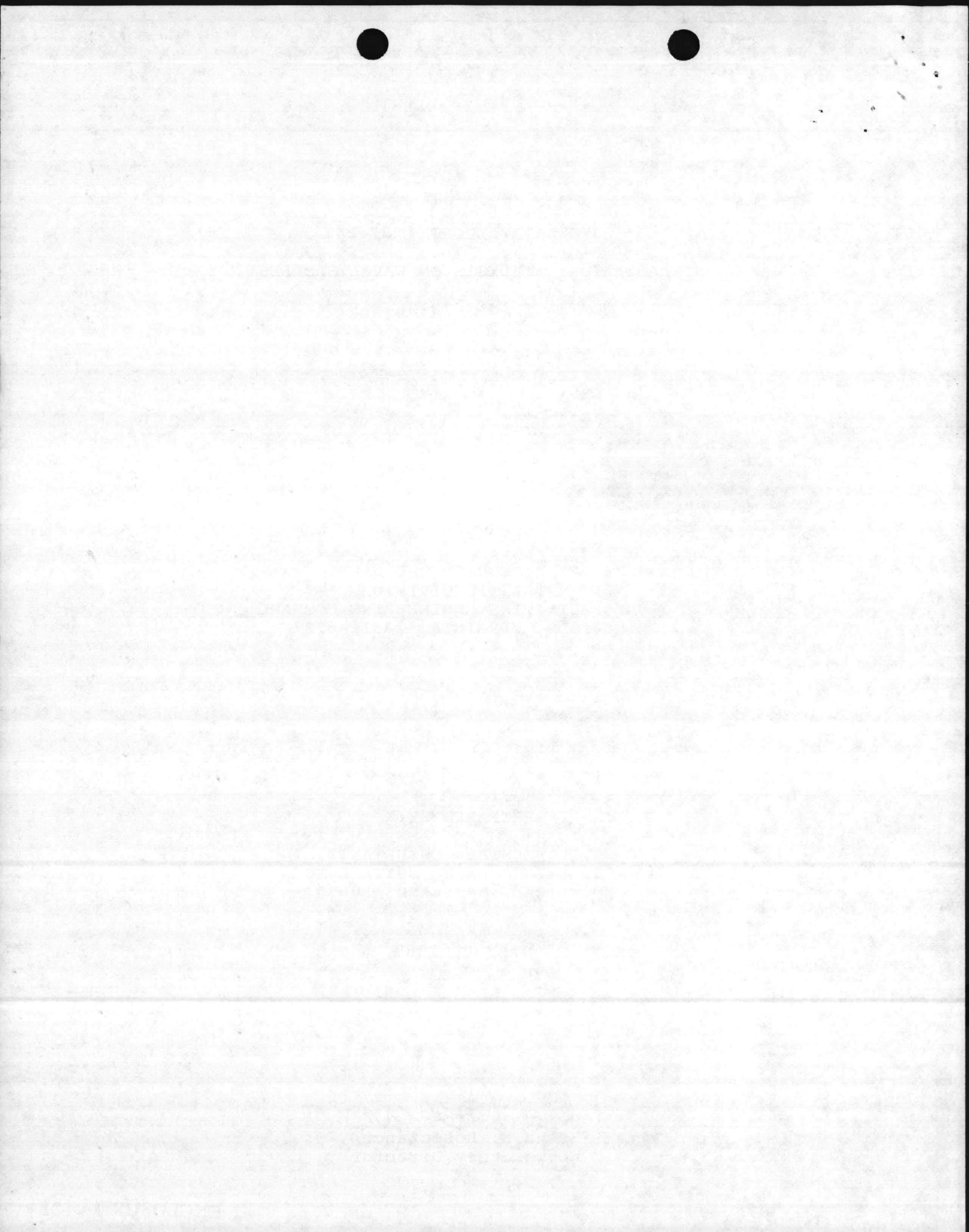
JTC ENVIRONMENTAL CONSULTANTS, INC.  
4 RESEARCH PLACE, SUITE L-10  
ROCKVILLE, MARYLAND 20850

JULY 8, 1987



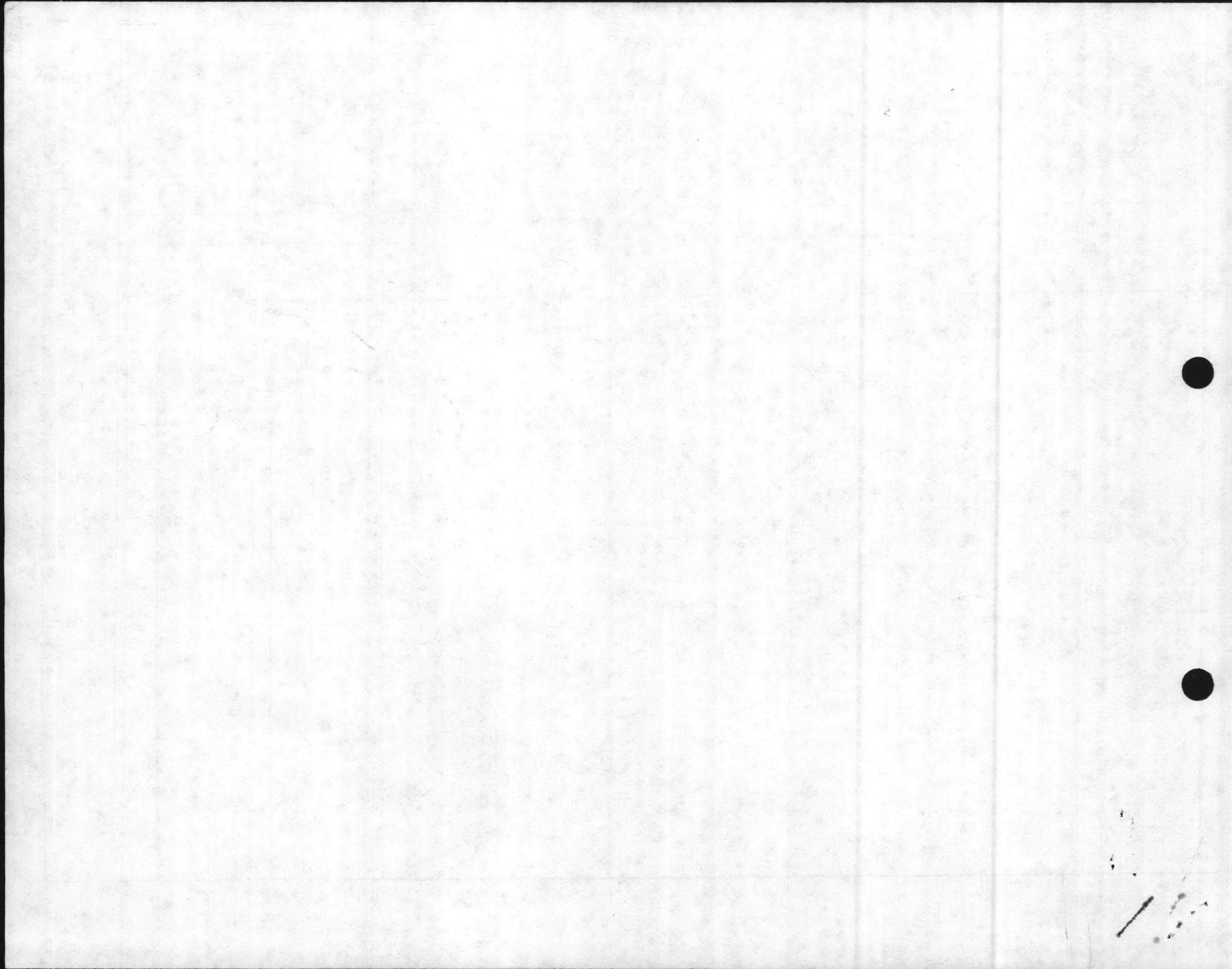
Ann E. Rosecrance  
Laboratory Director

ENCLOSURE (2)



Location: Camp Lejeune Date of Receipt: 6-5-87 Turnaround: routine  
 Date: 7-8-87 Case No. 42 Add to Naval Facilities Engineering Command, Norfolk, Virginia  
 JTC Data Report No. 87-247 Table 1

NAVY SAMPLE ID	JTC SAMPLE ID	ANALYSIS PARAMETER							
		As mg/kg	Cd mg/kg	Cr mg/kg	Pb mg/kg				
87-49	61-0305	<5	2.0	1.7	75				



Partial Results

JTC DATA REPORT # 87-247

LABORATORY ANALYSIS ON NAVAL SAMPLES

CONTRACT #N62470-86-C-8754

CASE # 42

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

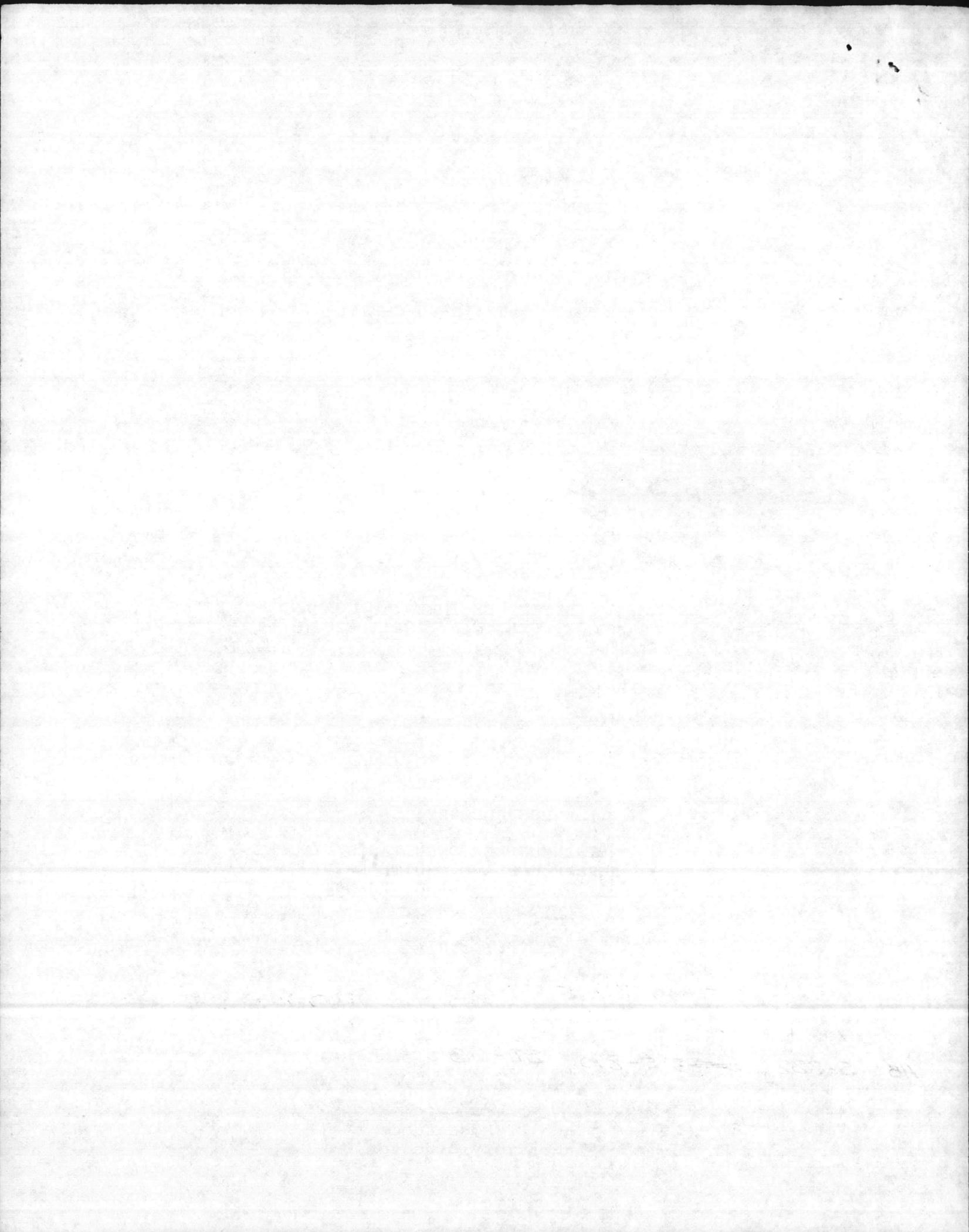
JULY 6, 1987

SAMPLES 87-49, 87-51 + 87-57 REFLECT SPECIFICATION  
FUEL OIL

HB: S-888, ~~S-888~~ S-890, STT-63

*Ann E Rosecrance*

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JTC Data Report No. 87-247 Table 1

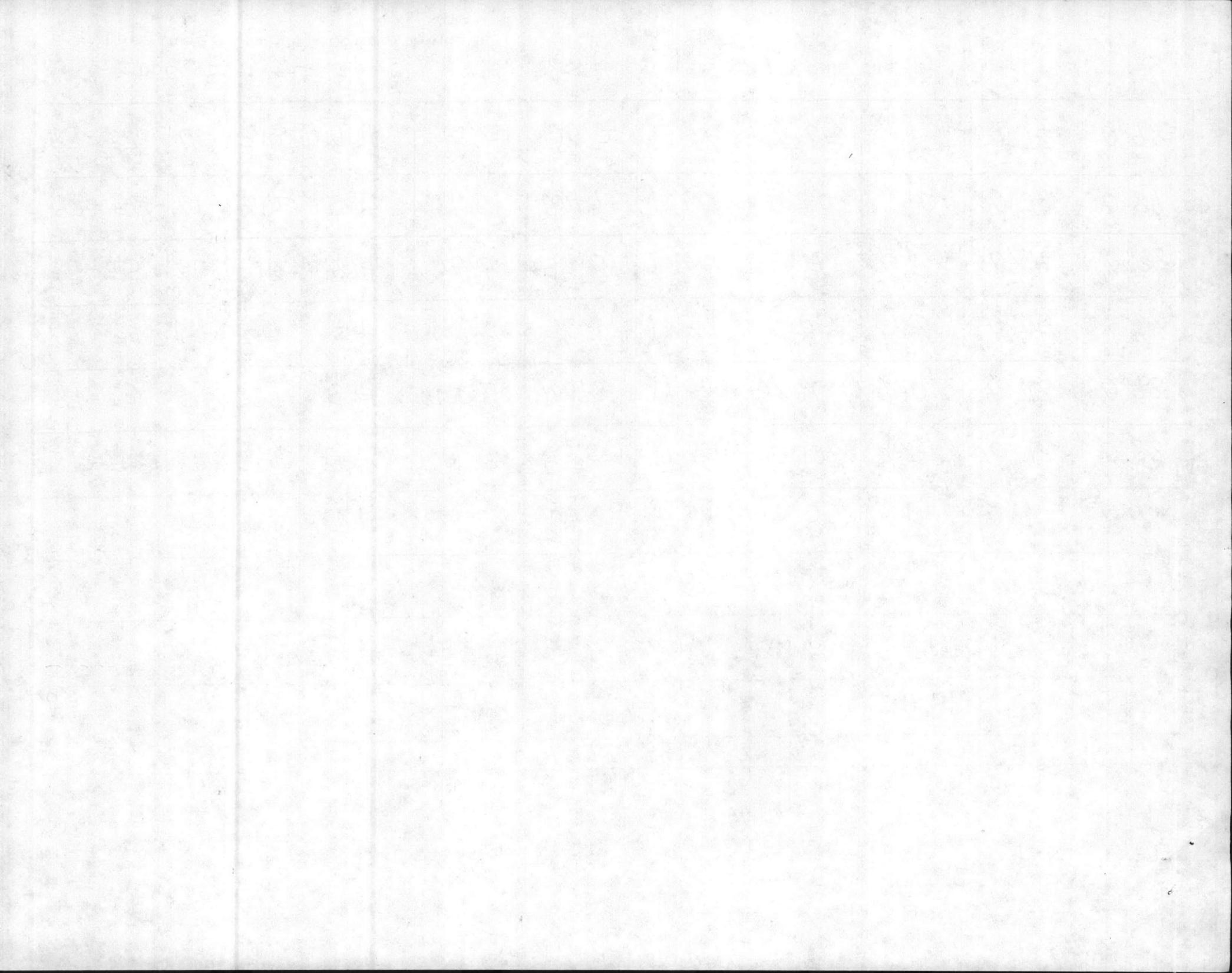
Oil Phase

NAVY SAMPLE ID	JTC SAMPLE ID	ANALYSIS PARAMETER							
		Water %	BS+W %	Viscosity @100°F, SUS	BTU per lb.	TOX %	Flashpoint °C	Sp. Gravity <sup>a</sup> g/ml	Sp. Gravity <sup>b</sup> g/ml
<i>Fuel oil</i> S-888 87-49	61-0305	19.5	19.5	93.6	15,550	<0.05	N.O. boiled at 70°	0.73	0.92
87-50	61-0306	13.5	20.0	100.8	16,500	0.20	N.O. boiled at 50°	0.77*	—
<i>F.O.</i> S-890 87-51	61-0307	17.6	24.0	103.8	15,500	<0.05	N.O. boiled at 45°	0.72	0.96
87-52	61-0308	0.76	0.80	53.0	19,300	0.12	35	0.73	0.88
87-53	61-0309	8.4	13.5	100.8	17,500	0.16	40	0.73	0.93
87-54	61-0310	8.1	13.0	56.1	17,500	0.25	35	0.75	0.88
87-55	61-0311	18.4	23.0	97.0	15,000	0.13	N.O. boiled at 45°	0.76	0.98
87-56	61-0312	12.0	17.5	104.6	16,650	0.22	40	0.73	0.89
<i>F.O.</i> STT-63 87-57	61-0313	19.6	22.0	120.2	15,100	<0.05	N.O. boiled at 45°	0.76	0.98

N.O. = not observed

a = top layer b = bottom layer

\* sample consisted of only one oil layer



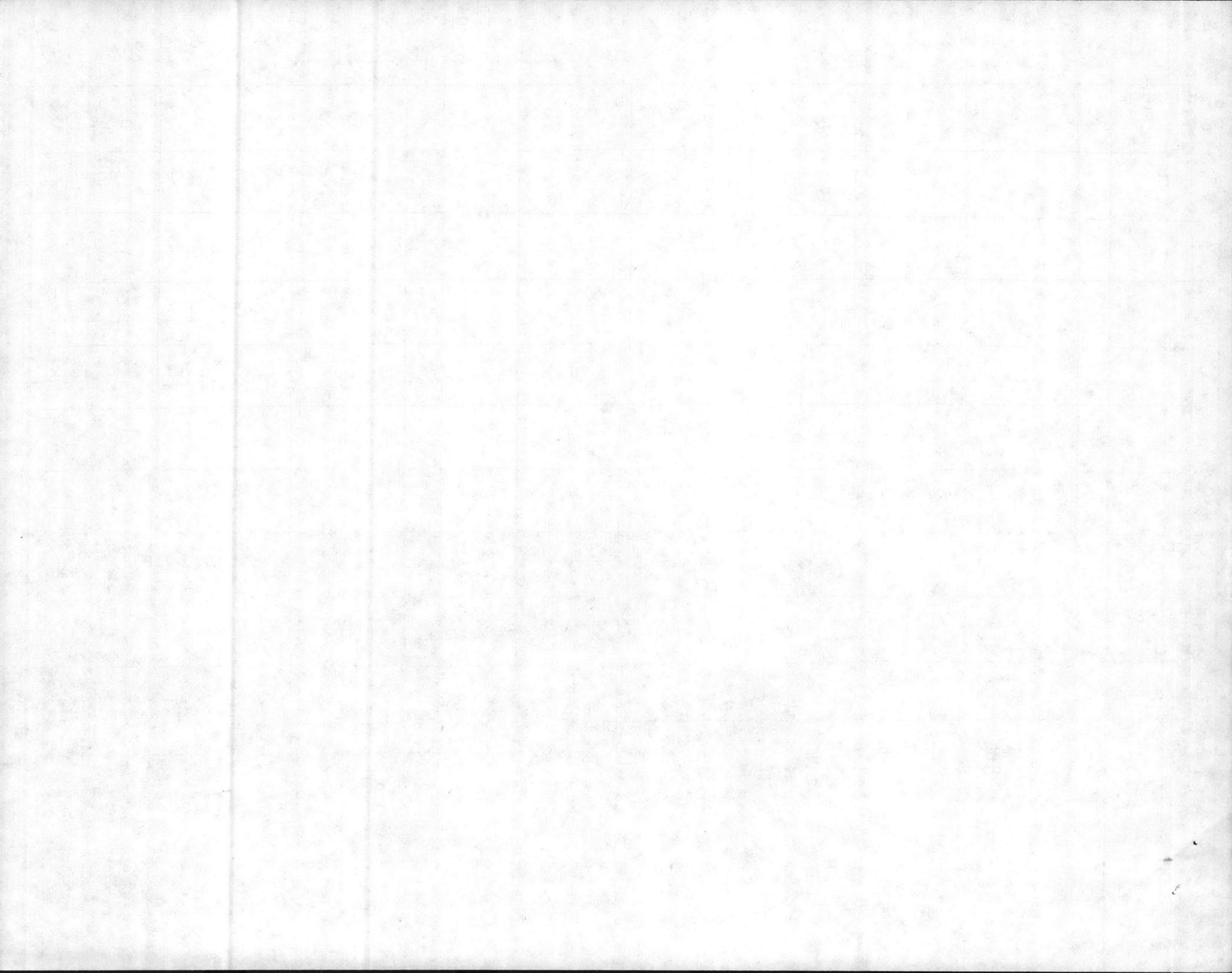
JTC Environmental Consultants, Inc.

Location: Camp Lejeune Date of Receipt: 6-5-87 Turnaround: routine  
 Date: 7-6-87 Case No. 42 to Naval Facilities Engineering Command, Norfolk, Virginia  
 JTC Data Report No. 87-247 Table 2

Oil Phase

NAVY SAMPLE ID	JTC SAMPLE ID	ANALYSIS PARAMETER						
		PCB ug/g	As mg/kg	Cd mg/kg	Cr mg/kg	Pb mg/kg		
87-49	61-0305	<5	NA	NA	NA	NA		
87-50	61-0306	<5	<5	<1	<0.75	30		
87-51	61-0307	<5	<5	1.1	2.2	59		
87-52	61-0308	<5	<5	<1	1.6	23		
87-53	61-0309	<5	<5	<1	1.6	35		
87-54	61-0310	<10	<5	<1	2.6	26		
87-55	61-0311	<5	<5	<1	1.3	26		
87-56	61-0312	<5	<5	<1	<0.75	8.2		
87-57	61-0313	<5	<5	<1	<0.75	28		

NA - not available, results will be reported in a report addendum



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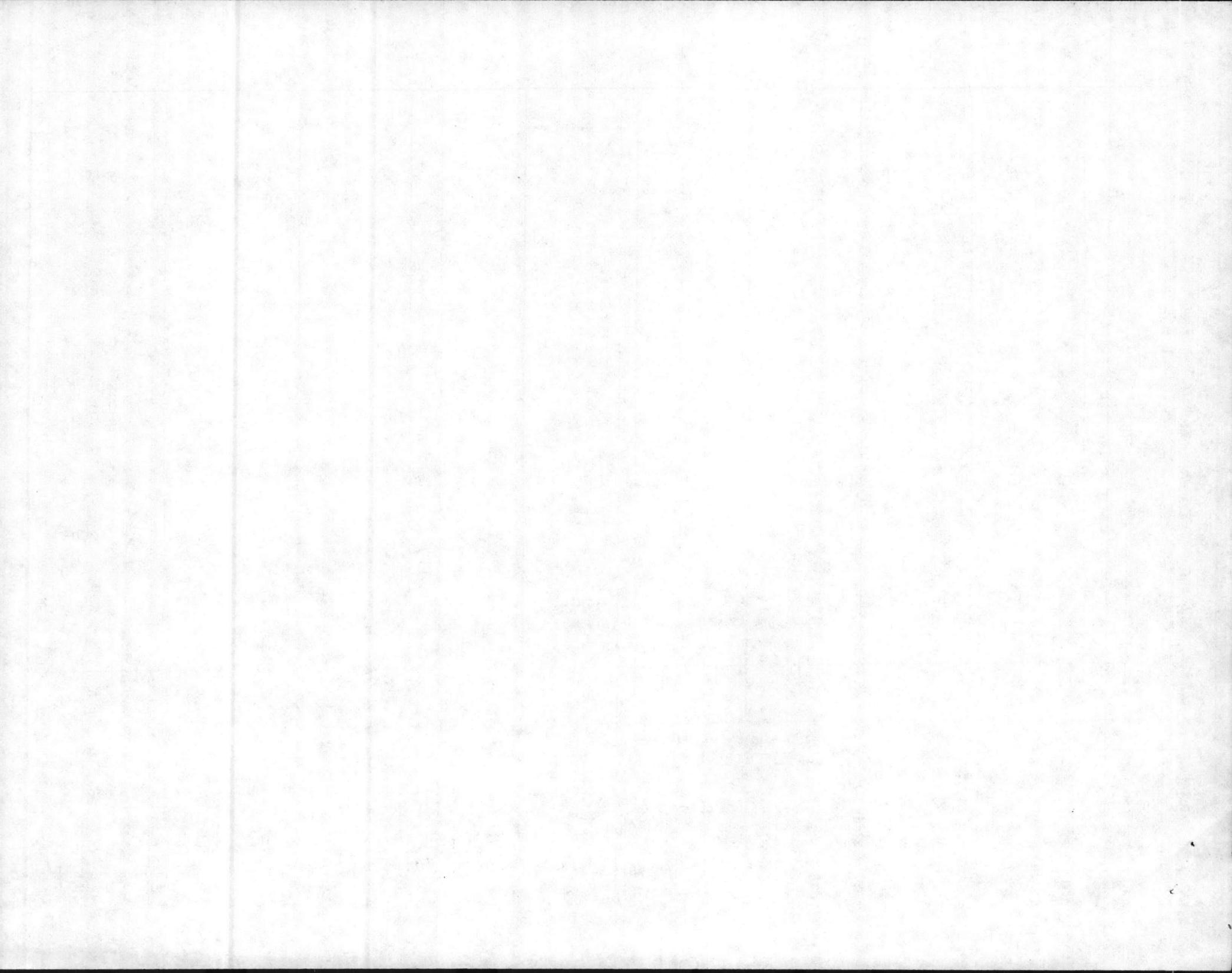
Location: Camp Lejeune Date of Receipt: 6-5-87 Turnaround: routine

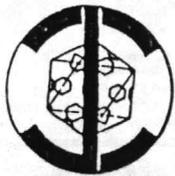
Date: 7-6-87 Case No. 42 to Naval Facilities Engineering Command, Norfolk, Virginia

JTC Data Report No. 87-247 Table 3

Water Phase Composite

NAVY SAMPLE ID	JTC SAMPLE ID	ANALYSIS PARAMETER							
		TOX ug/L	Phenols mg/L	VOA ✓	As ug/L	Cd ug/L	Cr ug/L	Pb ug/L	
87-49/ 87-57 composite	61-0305/ 61-0313	814	6.8	See attached sheet	498	<20	72	155	



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C Environmental Consultants, Inc.

## PRIORITY POLLUTANT ANALYSIS DATA SHEET

## VOLATILE FRACTION

JTC SAMPLE # 61-0305/0313 Composite PROJECT NO. NF-61 #42CLIENT SAMPLE # 87-49787-57 Composite DATE RECEIVED 6/5/87METHOD NO. 624 DETECTION LIMIT 500 ug/L

PARAMETER	RESULT	PARAMETER	RESULT
	ug/L		ug/L
acrolein	ND	1,2-dichloropropane	ND
acrylonitrile	ND	1,3-dichloropropylene	ND
benzene	540 <del>ND</del>	ethylbenzene	110* <del>ND</del>
carbon tetrachloride	ND	methylene chloride	ND
chlorobenzene	ND	methyl chloride	ND
1,2-dichloroethane	ND	methyl bromide	ND
1,1,1-trichloroethane	230* <del>ND</del>	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	990 <del>ND</del>
1,1-dichloroethylene	ND	trichloroethylene	ND
1,2-trans-dichloroethylene	ND	vinyl chloride	ND
Acetone	70,000	xylenes	620 <del>ND</del>

MEK (2-Butanone) 13,000  
MIBK (4-methyl-2-pentanone) 12001,1,2-Trichlorotrifluoroethane  
(freon)

present, concentration not available

ND = NOT DETECTED

\* = BELOW DETECTION LIMIT

