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DSS  
8 Aug 90

Hazardous Waste & Pollution Control Division  
Marine Corps Base  
Camp Lejeune, North Carolina 28542-5001

00354-3.04-

6287 08/08/90  
BEMD  
7 Aug 90

From: Supervisory Chemist, Environmental quality Monitoring Branch, Hazardous Waste & Pollution Control Division  
To: Director, Environmental Planning Division  
→Via: Director, Hazardous Waste & Pollution Control Division

Subj: DRINKING WATER WELL MONITORING

Encl: (1) GP ENV SERVICES Work Order # 90-06-105  
(2) GP ENV SERVICES Work Order # 90-07-028

1. On 26 Jun 90, seven wells, believed to be down gradient from the Stone Street MCX Gas Station were sampled. Also sampled on 26 Jun 90, were the raw and treated water from the Holcomb Blvd (Bldg 670) and Hadnot Point (HP) water treatment plants serviced by the seven wells. Enclosure (1) contains the volatile organic chemical (VOC) results of these 26 Jun 90 samples. The seven well samples did not show any detectable levels of VOCs. The only VOCs found in the plant samples were trihalomethanes.

2. On 5 Jul 90, three wells, believed to be down gradient for the Camp Geiger MCX Gas Station were sampled. Also sampled on 5 Jul 90, were the raw and treated water from the Marine Corps Air Station (AS 110) water treatment plant which is serviced by the three wells. Enclosure (2) contains the VOC results and the only VOCs detected were trihalomethanes in the plant samples.

E. A. BETZ

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GP ENV SERVICES REPORT  
07/17/90 14:42:27

Work Order # 90-06-105

REPORT COMMANDER ATLANTIC DIVISION  
NAVAL FAC.ENG.COM./CODE 181A  
NORFOLK, VA 23511-6287

PREPARED GP ENVIRONMENTAL SERVICES  
BY 202 Perry Parkway  
Gaithersburg, MD 20877

*Andrew T. Ellis*

CERTIFIED BY

ATTEN WAYNE MILLER

ATTEN Client Services

PHONE (301) 926-6802

CONTACT ELLIS

CLIENT NAVY SAMPLES 11  
COMPANY COMMANDER ATLANTIC DIVISION  
FACILITY NAVAL FAC.ENG.COM./CODE 181A  
NORFOLK, VA 23511-6287

WORK ID CAMP LEJEUNE-ROUTINE  
TAKEN \_\_\_\_\_  
TRANS FEDERAL EXPRESS 7961745046  
TYPE ORGANIC  
P.O. # \_\_\_\_\_  
INVOICE under separate cover

SAMPLE IDENTIFICATION

TEST CODES and NAMES used on this workorder

HP TREATED  
HP RAW  
603  
607  
622  
623  
5186  
670 TREATED  
671  
701  
707

624 VOA 40CFR136 624

e 2  
eived: 06/27/90GP ENV SERVICES REPORT  
Results by Sample

Work Order # 90-06-105

PLE ID HP TREATED      FRACTION 01A    TEST CODE 624    NAME VOA 40CFR136 624  
Date & Time Collected 06/26/90      Category VOA WATER

RESULTS OF VOLATILE ANALYSES  
TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	BQL	10
Benzene	BQL	5.0
Bromodichloromethane	BQL	5.0
Bromoform	BQL	5.0
Bromomethane	BQL	10
2-Butanone	BQL	10
Carbon Disulfide	BQL	5.0
Carbon Tetrachloride	BQL	5.0
Chlorobenzene	BQL	5.0
Chloroethane	BQL	10
Chloroform	8.0	5.0
Chloromethane	BQL	10
Dibromochloromethane	BQL	5.0
1,1-Dichloroethane	BQL	5.0
1,2-Dichloroethane	BQL	5.0
1,1-Dichloroethene	BQL	5.0
1,2-Dichloroethene(total)	BQL	5.0
1,2-Dichloropropane	BQL	5.0
cis-1,3-Dichloropropene	BQL	5.0
trans-1,3-Dichloropropene	BQL	5.0
Ethyl Benzene	BQL	5.0
2-Hexanone	BQL	10
4-Methyl-2-pentanone	BQL	10
Methylene Chloride	BQL	5.0
Styrene	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	5.0
Tetrachloroethene	BQL	5.0
Toluene	BQL	5.0
1,1,1-Trichloroethane	BQL	5.0
1,1,2-Trichloroethane	BQL	5.0
Trichloroethene	BQL	5.0
Vinyl Acetate	BQL	10
Vinyl Chloride	BQL	10
Xylenes (total)	BQL	5.0

Notes and Definitions for this Report:

DATE RUN 06/28/90UNITS ug/L

BQL = BELOW QUANTITATION LIMIT

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 GP ENV SERVICES REPORT  
 Results by Sample

Work Order # 90-06-105

Received: 06/27/90

FILE ID: HP RAW FRACTION 02A TEST CODE 624 NAME VOA 40CFR136 624  
 Date & Time Collected 06/26/90 Category VOA WATER

RESULTS OF VOLATILE ANALYSES  
 TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	BQL	10
Benzene	BQL	5.0
Bromodichloromethane	5.0	5.0
Bromoform	BQL	5.0
Bromomethane	BQL	10
2-Butanone	BQL	10
Carbon Disulfide	BQL	5.0
Carbon Tetrachloride	BQL	5.0
Chlorobenzene	BQL	5.0
Chloroethane	BQL	10
Chloroform	BQL	5.0
Chloromethane	BQL	10
Dibromochloromethane	BQL	5.0
1,1-Dichloroethane	BQL	5.0
1,2-Dichloroethane	BQL	5.0
1,1-Dichloroethene	BQL	5.0
1,2-Dichloroethene(total)	BQL	5.0
1,2-Dichloropropane	BQL	5.0
cis-1,3-Dichloropropene	BQL	5.0
trans-1,3-Dichloropropene	BQL	5.0
Ethyl Benzene	BQL	5.0
2-Hexanone	BQL	10
4-Methyl-2-pentanone	BQL	10
Methylene Chloride	BQL	5.0
Styrene	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	5.0
Tetrachloroethene	BQL	5.0
Toluene	BQL	5.0
1,1,1-Trichloroethane	BQL	5.0
1,1,2-Trichloroethane	BQL	5.0
Trichloroethene	BQL	5.0
Vinyl Acetate	BQL	10
Vinyl Chloride	BQL	10
Xylenes (total)	BQL	5.0

## Notes and Definitions for this Report:

DATE RUN 06/28/90

UNITS ug/L

BQL = BELOW QUANTITATION LIMIT

Received: 06/27/90

Results by Sample

SAMPLE ID 603

FRACTION 03A

TEST CODE 624

NAME VOA 40CFR136 624

Date &amp; Time Collected 06/26/90

Category VOA WATER

## RESULTS OF VOLATILE ANALYSES

## TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	BQL	10
Benzene	BQL	5.0
Bromodichloromethane	BQL	5.0
Bromoform	BQL	5.0
Bromomethane	BQL	10
2-Butanone	BQL	10
Carbon Disulfide	BQL	5.0
Carbon Tetrachloride	BQL	5.0
Chlorobenzene	BQL	5.0
Chloroethane	BQL	10
Chloroform	BQL	5.0
Chloromethane	BQL	10
Dibromochloromethane	BQL	5.0
1,1-Dichloroethane	BQL	5.0
1,2-Dichloroethane	BQL	5.0
1,1-Dichloroethene	BQL	5.0
1,2-Dichloroethene(total)	BQL	5.0
1,2-Dichloropropane	BQL	5.0
cis-1,3-Dichloropropene	BQL	5.0
trans-1,3-Dichloropropene	BQL	5.0
Ethyl Benzene	BQL	5.0
2-Hexanone	BQL	10
4-Methyl-2-pentanone	BQL	10
Methylene Chloride	BQL	5.0
Styrene	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	5.0
Tetrachloroethene	BQL	5.0
Toluene	BQL	5.0
1,1,1-Trichloroethane	BQL	5.0
1,1,2-Trichloroethane	BQL	5.0
Trichloroethene	BQL	5.0
Vinyl Acetate	BQL	10
Vinyl Chloride	BQL	10
Xylenes (total)	BQL	5.0

Notes and Definitions for this Report:

DATE RUN 06/29/90

UNITS ug/L

BQL = BELOW QUANTITATION LIMIT

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Results by Sample

Work Order # 90-06-105

FILE ID: 607 FRACTION D4A TEST CODE 624 NAME VOA 40CFR136 624  
 Date & Time Collected 06/26/90 Category VOA WATER

RESULTS OF VOLATILE ANALYSES  
 TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	BQL	10
Benzene	BQL	5.0
Bromodichloromethane	BQL	5.0
Bromoform	BQL	5.0
Bromomethane	BQL	10
2-Butanone	BQL	10
Carbon Disulfide	BQL	5.0
Carbon Tetrachloride	BQL	5.0
Chlorobenzene	BQL	5.0
Chloroethane	BQL	10
Chloroform	BQL	5.0
Chloromethane	BQL	10
Dibromochloromethane	BQL	5.0
1,1-Dichloroethane	BQL	5.0
1,2-Dichloroethane	BQL	5.0
1,1-Dichloroethene	BQL	5.0
1,2-Dichloroethene(total)	BQL	5.0
1,2-Dichloropropane	BQL	5.0
cis-1,3-Dichloropropene	BQL	5.0
trans-1,3-Dichloropropene	BQL	5.0
Ethyl Benzene	BQL	5.0
2-Hexanone	BQL	10
4-Methyl-2-pentanone	BQL	10
Methylene Chloride	BQL	5.0
Styrene	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	5.0
Tetrachloroethene	BQL	5.0
Toluene	BQL	5.0
1,1,1-Trichloroethane	BQL	5.0
1,1,2-Trichloroethane	BQL	5.0
Trichloroethene	BQL	5.0
Vinyl Acetate	BQL	10
Vinyl Chloride	BQL	10
Xylenes (total)	BQL	5.0

Notes and Definitions for this Report:

DATE RUN 06/29/90UNITS ug/L

BQL = BELOW QUANTITATION LIMIT

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GP ENV SERVICES REPORT  
Results by Sample

Work Order # 90-06-105

SAMPLE ID 622 FRACTION 05A TEST CODE 624 NAME VOA 40CFR136 624  
Date & Time Collected 06/26/90 Category VOA WATER

RESULTS OF VOLATILE ANALYSES  
TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	BQL	10
Benzene	BQL	5.0
Bromodichloromethane	BQL	5.0
Bromoform	BQL	5.0
Bromomethane	BQL	10
2-Butanone	BQL	10
Carbon Disulfide	BQL	5.0
Carbon Tetrachloride	BQL	5.0
Chlorobenzene	BQL	5.0
Chloroethane	BQL	10
Chloroform	BQL	5.0
Chloromethane	BQL	10
Dibromochloromethane	BQL	5.0
1,1-Dichloroethane	BQL	5.0
1,2-Dichloroethane	BQL	5.0
1,1-Dichloroethene	BQL	5.0
1,2-Dichloroethene(total)	BQL	5.0
1,2-Dichloropropane	BQL	5.0
cis-1,3-Dichloropropene	BQL	5.0
trans-1,3-Dichloropropene	BQL	5.0
Ethyl Benzene	BQL	5.0
2-Hexanone	BQL	10
4-Methyl-2-pentanone	BQL	10
Methylene Chloride	BQL	5.0
Styrene	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	5.0
Tetrachloroethene	BQL	5.0
Toluene	BQL	5.0
1,1,1-Trichloroethane	BQL	5.0
1,1,2-Trichloroethane	BQL	5.0
Trichloroethene	BQL	5.0
Vinyl Acetate	BQL	10
Vinyl Chloride	BQL	10
Xylenes (total)	BQL	5.0

## Notes and Definitions for this Report:

DATE RUN 06/29/90UNITS ug/L

BQL = BELOW QUANTITATION LIMIT

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GP ENV SERVICES REPORT  
 Results by Sample

Work Order # 90-06-105

AMPLE ID 623 FRACTION 06A TEST CODE 624 NAME VOA 40CFR136 624  
 Date & Time Collected 06/26/90 Category VOA WATER

RESULTS OF VOLATILE ANALYSES  
 TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	BQL	10
Benzene	BQL	5.0
Bromodichloromethane	BQL	5.0
Bromoform	BQL	5.0
Bromomethane	BQL	10
2-Butanone	BQL	10
Carbon Disulfide	BQL	5.0
Carbon Tetrachloride	BQL	5.0
Chlorobenzene	BQL	5.0
Chloroethane	BQL	10
Chloroform	BQL	5.0
Chloromethane	BQL	10
Dibromochloromethane	BQL	5.0
1,1-Dichloroethane	BQL	5.0
1,2-Dichloroethane	BQL	5.0
1,1-Dichloroethene	BQL	5.0
1,2-Dichloroethene(total)	BQL	5.0
1,2-Dichloropropane	BQL	5.0
cis-1,3-Dichloropropene	BQL	5.0
trans-1,3-Dichloropropene	BQL	5.0
Ethyl Benzene	BQL	5.0
2-Hexanone	BQL	10
4-Methyl-2-pentanone	BQL	10
Methylene Chloride	BQL	5.0
Styrene	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	5.0
Tetrachloroethene	BQL	5.0
Toluene	BQL	5.0
1,1,1-Trichloroethane	BQL	5.0
1,1,2-Trichloroethane	BQL	5.0
Trichloroethene	BQL	5.0
Vinyl Acetate	BQL	10
Vinyl Chloride	BQL	10
Xylenes (total)	BQL	5.0

Notes and Definitions for this Report:

DATE RUN 06/29/90

UNITS ug/L

BQL = BELOW QUANTITATION LIMIT



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GP ENV SERVICES REPORT  
Results by Sample

Work Order # 90-06-105

Sample # 5186 FRACTION 07A TEST CODE 624 NAME VOA 40CFR136 624  
Date & Time Collected 06/26/90 Category VOA WATER

RESULTS OF VOLATILE ANALYSES  
TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	BQL	10
Benzene	BQL	5.0
Bromodichloromethane	BQL	5.0
Bromoform	BQL	5.0
Bromomethane	BQL	10
2-Butanone	BQL	10
Carbon Disulfide	BQL	5.0
Carbon Tetrachloride	BQL	5.0
Chlorobenzene	BQL	5.0
Chloroethane	BQL	10
Chloroform	BQL	5.0
Chloromethane	BQL	10
Dibromochloromethane	BQL	5.0
1,1-Dichloroethane	BQL	5.0
1,2-Dichloroethane	BQL	5.0
1,1-Dichloroethene	BQL	5.0
1,2-Dichloroethene(total)	BQL	5.0
1,2-Dichloropropane	BQL	5.0
cis-1,3-Dichloropropene	BQL	5.0
trans-1,3-Dichloropropene	BQL	5.0
Ethyl Benzene	BQL	5.0
2-Hexanone	BQL	10
4-Methyl-2-pentanone	BQL	10
Methylene Chloride	BQL	5.0
Styrene	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	5.0
Tetrachloroethene	BQL	5.0
Toluene	BQL	5.0
1,1,1-Trichloroethane	BQL	5.0
1,1,2-Trichloroethane	BQL	5.0
Trichloroethene	BQL	5.0
Vinyl Acetate	BQL	10
Vinyl Chloride	BQL	10
Xylenes (total)	BQL	5.0

Notes and Definitions for this Report:

DATE RUN 06/29/90  
UNITS ug/L  
BQL = BELOW QUANTITATION LIMIT

Received: 06/27/90

Results by Sample

SAMPLE ID 670 TREATEDFRACTION 08ATEST CODE 624NAME VOA 40CFR136 624Date & Time Collected 06/26/90Category VOA WATERRESULTS OF VOLATILE ANALYSES  
TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	<u>BQL</u>	<u>10</u>
Benzene	<u>BQL</u>	<u>5.0</u>
Bromodichloromethane	<u>9.0</u>	<u>5.0</u>
Bromoform	<u>BQL</u>	<u>5.0</u>
Bromomethane	<u>BQL</u>	<u>10</u>
2-Butanone	<u>BQL</u>	<u>10</u>
Carbon Disulfide	<u>BQL</u>	<u>5.0</u>
Carbon Tetrachloride	<u>BQL</u>	<u>5.0</u>
Chlorobenzene	<u>BQL</u>	<u>5.0</u>
Chloroethane	<u>BQL</u>	<u>10</u>
Chloroform	<u>20.0</u>	<u>5.0</u>
Chloromethane	<u>BQL</u>	<u>10</u>
Dibromochloromethane	<u>BQL</u>	<u>5.0</u>
1,1-Dichloroethane	<u>BQL</u>	<u>5.0</u>
1,2-Dichloroethane	<u>BQL</u>	<u>5.0</u>
1,1-Dichloroethene	<u>BQL</u>	<u>5.0</u>
1,2-Dichloroethene(total)	<u>BQL</u>	<u>5.0</u>
1,2-Dichloropropane	<u>BQL</u>	<u>5.0</u>
cis-1,3-Dichloropropene	<u>BQL</u>	<u>5.0</u>
trans-1,3-Dichloropropene	<u>BQL</u>	<u>5.0</u>
Ethyl Benzene	<u>BQL</u>	<u>5.0</u>
2-Hexanone	<u>BQL</u>	<u>10</u>
4-Methyl-2-pentanone	<u>BQL</u>	<u>10</u>
Methylene Chloride	<u>BQL</u>	<u>5.0</u>
Styrene	<u>BQL</u>	<u>5.0</u>
1,1,2,2-Tetrachloroethane	<u>BQL</u>	<u>5.0</u>
Tetrachloroethene	<u>BQL</u>	<u>5.0</u>
Toluene	<u>BQL</u>	<u>5.0</u>
1,1,1-Trichloroethane	<u>BQL</u>	<u>5.0</u>
1,1,2-Trichloroethane	<u>BQL</u>	<u>5.0</u>
Trichloroethene	<u>BQL</u>	<u>5.0</u>
Vinyl Acetate	<u>BQL</u>	<u>10</u>
Vinyl Chloride	<u>BQL</u>	<u>10</u>
Xylenes (total)	<u>BQL</u>	<u>5.0</u>

Notes and Definitions for this Report:

DATE RUN 06/29/90UNITS ug/L

BQL = BELOW QUANTITATION LIMIT

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GP ENV SERVICES REPORT  
Results by Sample

Work Order # 90-06-105

SAMPLE 670 RAW FRACTION 09A TEST CODE 624 NAME VOA 40CFR136 624  
Date & Time Collected 06/26/90 Category VOA WATER

RESULTS OF VOLATILE ANALYSES  
TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	BQL	10
Benzene	BQL	5.0
Bromodichloromethane	7.0	5.0
Bromoform	BQL	5.0
Bromomethane	BQL	10
2-Butanone	BQL	10
Carbon Disulfide	BQL	5.0
Carbon Tetrachloride	BQL	5.0
Chlorobenzene	BQL	5.0
Chloroethane	BQL	10
Chloroform	12.0	5.0
Chloromethane	BQL	10
Dibromochloromethane	BQL	5.0
1,1-Dichloroethane	BQL	5.0
1,2-Dichloroethane	BQL	5.0
1,1-Dichloroethene	BQL	5.0
1,2-Dichloroethene(total)	BQL	5.0
1,2-Dichloropropane	BQL	5.0
cis-1,3-Dichloropropene	BQL	5.0
trans-1,3-Dichloropropene	BQL	5.0
Ethyl Benzene	BQL	5.0
2-Hexanone	BQL	10
4-Methyl-2-pentanone	BQL	10
Methylene Chloride	BQL	5.0
Styrene	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	5.0
Tetrachloroethene	BQL	5.0
Toluene	BQL	5.0
1,1,1-Trichloroethane	BQL	5.0
1,1,2-Trichloroethane	BQL	5.0
Trichloroethene	BQL	5.0
Vinyl Acetate	BQL	10
Vinyl Chloride	BQL	10
Xylenes (total)	BQL	5.0

Notes and Definitions for this Report:

DATE RUN 06/29/90

UNITS ug/L

BQL = BELOW QUANTITATION LIMIT

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eived: 06/27/90GP ENV SERVICES REPORT  
Results by Sample

Work Order # 90-06-105

PLE 701 FRACTION 10A TEST CODE 624 NAME VOA 40CFR136 624  
Date & Time Collected 06/26/90 Category VOA WATERRESULTS OF VOLATILE ANALYSES  
TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	BQL	10
Benzene	BQL	5.0
Bromodichloromethane	BQL	5.0
Bromoform	BQL	5.0
Bromomethane	BQL	10
2-Butanone	BQL	10
Carbon Disulfide	BQL	5.0
Carbon Tetrachloride	BQL	5.0
Chlorobenzene	BQL	5.0
Chloroethane	BQL	10
Chloroform	BQL	5.0
Chloromethane	BQL	10
Dibromochloromethane	BQL	5.0
1,1-Dichloroethane	BQL	5.0
1,2-Dichloroethane	BQL	5.0
1,1-Dichloroethene	BQL	5.0
1,2-Dichloroethene(total)	BQL	5.0
1,2-Dichloropropane	BQL	5.0
cis-1,3-Dichloropropene	BQL	5.0
trans-1,3-Dichloropropene	BQL	5.0
Ethyl Benzene	BQL	5.0
2-Hexanone	BQL	10
4-Methyl-2-pentanone	BQL	10
Methylene Chloride	BQL	5.0
Styrene	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	5.0
Tetrachloroethene	BQL	5.0
Toluene	BQL	5.0
1,1,1-Trichloroethane	BQL	5.0
1,1,2-Trichloroethane	BQL	5.0
Trichloroethene	BQL	5.0
Vinyl Acetate	BQL	10
Vinyl Chloride	BQL	10
Xylenes (total)	BQL	5.0

## Notes and Definitions for this Report:

DATE RUN 06/29/90

UNITS ug/L

BQL = BELOW QUANTITATION LIMIT

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GP ENV SERVICES REPORT  
Results by Sample

Work Order # 90-06-105

Sample ID: 707 FRACTION 11A TEST CODE 624 NAME VOA 40CFR136 624  
Date & Time Collected 06/26/90 Category VOA WATER

RESULTS OF VOLATILE ANALYSES  
TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	BQL	10
Benzene	BQL	5.0
Bromodichloromethane	BQL	5.0
Bromoform	BQL	5.0
Bromomethane	BQL	10
2-Butanone	BQL	10
Carbon Disulfide	BQL	5.0
Carbon Tetrachloride	BQL	5.0
Chlorobenzene	BQL	5.0
Chloroethane	BQL	10
Chloroform	BQL	5.0
Chloromethane	BQL	10
Dibromochloromethane	BQL	5.0
1,1-Dichloroethane	BQL	5.0
1,2-Dichloroethane	BQL	5.0
1,1-Dichloroethene	BQL	5.0
1,2-Dichloroethene(total)	BQL	5.0
1,2-Dichloropropane	BQL	5.0
cis-1,3-Dichloropropene	BQL	5.0
trans-1,3-Dichloropropene	BQL	5.0
Ethyl Benzene	BQL	5.0
2-Hexanone	BQL	10
4-Methyl-2-pentanone	BQL	10
Methylene Chloride	BQL	5.0
Styrene	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	5.0
Tetrachloroethene	BQL	5.0
Toluene	BQL	5.0
1,1,1-Trichloroethane	BQL	5.0
1,1,2-Trichloroethane	BQL	5.0
Trichloroethene	BQL	5.0
Vinyl Acetate	BQL	10
Vinyl Chloride	BQL	10
Xylenes (total)	BQL	5.0

Notes and Definitions for this Report:

DATE RUN 06/29/90

UNITS ug/L

BQL = BELOW QUANTITATION LIMIT

Doc No: CLEJ-00354-3.04-08/07/90

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Received: 07/06/90

GP ENV SERVICES REPORT  
07/19/90 17:12:46

Work Order # 90-07-028

REPORT COMMANDER ATLANTIC DIVISION  
NAVAL FAC.ENG.COM./CODE 181A  
NORFOLK, VA 23511-6287

PREPARED GP ENVIRONMENTAL SERVICES  
BY 202 Perry Parkway  
Gaithersburg, MD 20877

*Ellis*  
CERTIFIED BY

ATTEN WAYNE MILLER

ATTEN Client Services  
PHONE (301) 926-6802

CONTACT ELLIS

CLIENT NAVY SAMPLES 5  
COMPANY COMMANDER ATLANTIC DIVISION  
CITY NAVAL FAC.ENG.COM./CODE 181A  
NORFOLK, VA 23511-6287

WORK ID CAMP LEJEUNE-ROUTINE

TAKEN \_\_\_\_\_

TRANS FEDERAL EXPRESS 7961745470

TYPE ORGANIC

P.O. # \_\_\_\_\_

INVOICE under separate cover

SAMPLE IDENTIFICATION

TEST CODES and NAMES used on this workorder

AS 110 TREATED

624 VOA 40CFR136 624

AS 110 RAW

TC 600

TC 604

TC 1253

ENCL (2)

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 Received: 07/06/90

GP ENV SERVICES REPORT  
 Results by Sample

Work Order # 90-07-028

SAMPLE ID AS-110 TREATED FRACTION 01A TEST CODE 624 NAME VOA 40CFR136 624  
 Date & Time Collected 07/05/90 Category WATER VOA

RESULTS OF VOLATILE ANALYSES  
 TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	BQL	10
Benzene	BQL	5.0
Bromodichloromethane	BQL	5.0
Bromoform	BQL	5.0
Bromomethane	BQL	10
2-Butanone	BQL	10
Carbon Disulfide	BQL	5.0
Carbon Tetrachloride	BQL	5.0
Chlorobenzene	BQL	5.0
Chloroethane	BQL	10
Chloroform	BQL	5.0
Chloromethane	BQL	10
Dibromochloromethane	BQL	5.0
1,1-Dichloroethane	BQL	5.0
1,2-Dichloroethane	BQL	5.0
1,1-Dichloroethene	BQL	5.0
1,2-Dichloroethene(total)	BQL	5.0
1,2-Dichloropropane	BQL	5.0
cis-1,3-Dichloropropene	BQL	5.0
trans-1,3-Dichloropropene	BQL	5.0
Ethyl Benzene	BQL	5.0
2-Hexanone	BQL	10
4-Methyl-2-pentanone	BQL	10
Methylene Chloride	BQL	5.0
Styrene	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	5.0
Tetrachloroethene	BQL	5.0
Toluene	BQL	5.0
1,1,1-Trichloroethane	BQL	5.0
1,1,2-Trichloroethane	BQL	5.0
Trichloroethene	BQL	5.0
Vinyl Acetate	BQL	10
Vinyl Chloride	BQL	10
Xylenes (total)	BQL	5.0

Notes and Definitions for this Report:

DATE RUN 07/09/90

UNITS ug/L

BQL = BELOW QUANTITATION LIMIT

Received: 07/06/90

Results by Sample

SAMPLE ID AS 110 RAWFRACTION 02ATEST CODE 624NAME VOA 40CFR136 624Date & Time Collected 07/05/90Category WATER VOA

## RESULTS OF VOLATILE ANALYSES

## TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	<u>BQL</u>	<u>10</u>
Benzene	<u>BQL</u>	<u>5.0</u>
Bromodichloromethane	<u>5</u>	<u>5.0</u>
Bromoform	<u>43</u>	<u>5.0</u>
Bromomethane	<u>BQL</u>	<u>10</u>
2-Butanone	<u>BQL</u>	<u>10</u>
Carbon Disulfide	<u>BQL</u>	<u>5.0</u>
Carbon Tetrachloride	<u>BQL</u>	<u>5.0</u>
Chlorobenzene	<u>BQL</u>	<u>5.0</u>
Chloroethane	<u>BQL</u>	<u>10</u>
Chloroform	<u>BQL</u>	<u>5.0</u>
Chloromethane	<u>BQL</u>	<u>10</u>
Dibromochloromethane	<u>22</u>	<u>5.0</u>
1,1-Dichloroethane	<u>BQL</u>	<u>5.0</u>
1,2-Dichloroethane	<u>BQL</u>	<u>5.0</u>
1,1-Dichloroethene	<u>BQL</u>	<u>5.0</u>
1,2-Dichloroethene(total)	<u>BQL</u>	<u>5.0</u>
1,2-Dichloropropane	<u>BQL</u>	<u>5.0</u>
cis-1,3-Dichloropropene	<u>BQL</u>	<u>5.0</u>
trans-1,3-Dichloropropene	<u>BQL</u>	<u>5.0</u>
Ethyl Benzene	<u>BQL</u>	<u>5.0</u>
2-Hexanone	<u>BQL</u>	<u>10</u>
4-Methyl-2-pentanone	<u>BQL</u>	<u>10</u>
Methylene Chloride	<u>BQL</u>	<u>5.0</u>
Styrene	<u>BQL</u>	<u>5.0</u>
1,1,2,2-Tetrachloroethane	<u>BQL</u>	<u>5.0</u>
Tetrachloroethene	<u>BQL</u>	<u>5.0</u>
Toluene	<u>BQL</u>	<u>5.0</u>
1,1,1-Trichloroethane	<u>BQL</u>	<u>5.0</u>
1,1,2-Trichloroethane	<u>BQL</u>	<u>5.0</u>
Trichloroethene	<u>BQL</u>	<u>5.0</u>
Vinyl Acetate	<u>BQL</u>	<u>10</u>
Vinyl Chloride	<u>BQL</u>	<u>10</u>
Xylenes (total)	<u>BQL</u>	<u>5.0</u>

## Notes and Definitions for this Report:

DATE RUN 07/09/90UNITS ug/L

BQL = BELOW QUANTITATION LIMIT



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GP ENV SERVICES REPORT  
 Results by Sample

Work Order # 90-07-028

SAMPLE ID TC 600 FRACTION 03A TEST CODE 624 NAME VOA 40CFR136 624  
 Date & Time Collected 07/05/90 Category WATER VOA

RESULTS OF VOLATILE ANALYSES  
 TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	BQL	10
Benzene	BQL	5.0
Bromodichloromethane	BQL	5.0
Bromoform	BQL	5.0
Bromomethane	BQL	10
2-Butanone	BQL	10
Carbon Disulfide	BQL	5.0
Carbon Tetrachloride	BQL	5.0
Chlorobenzene	BQL	5.0
Chloroethane	BQL	10
Chloroform	BQL	5.0
Chloromethane	BQL	10
Dibromochloromethane	BQL	5.0
1,1-Dichloroethane	BQL	5.0
1,2-Dichloroethane	BQL	5.0
1,1-Dichloroethene	BQL	5.0
1,2-Dichloroethene(total)	BQL	5.0
1,2-Dichloropropane	BQL	5.0
cis-1,3-Dichloropropene	BQL	5.0
trans-1,3-Dichloropropene	BQL	5.0
Ethyl Benzene	BQL	5.0
2-Hexanone	BQL	10
4-Methyl-2-pentanone	BQL	10
Methylene Chloride	BQL	5.0
Styrene	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	5.0
Tetrachloroethene	BQL	5.0
Toluene	BQL	5.0
1,1,1-Trichloroethane	BQL	5.0
1,1,2-Trichloroethane	BQL	5.0
Trichloroethene	BQL	5.0
Vinyl Acetate	BQL	10
Vinyl Chloride	BQL	10
Xylenes (total)	BQL	5.0

Notes and Definitions for this Report:

DATE RUN 07/09/90

UNITS ug/L

BQL = BELOW QUANTITATION LIMIT

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Results by Sample

Work Order # 90-07-028

SAMPLE ID TC 604 FRACTION Q4A TEST CODE 624 NAME VOA 40CFR136 624  
Date & Time Collected 07/05/90 Category WATER VOARESULTS OF VOLATILE ANALYSES  
TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	<u>BQL</u>	<u>10</u>
Benzene	<u>BQL</u>	<u>5.0</u>
Bromodichloromethane	<u>BQL</u>	<u>5.0</u>
Bromoform	<u>BQL</u>	<u>5.0</u>
Bromomethane	<u>BQL</u>	<u>10</u>
2-Butanone	<u>BQL</u>	<u>10</u>
Carbon Disulfide	<u>BQL</u>	<u>5.0</u>
Carbon Tetrachloride	<u>BQL</u>	<u>5.0</u>
Chlorobenzene	<u>BQL</u>	<u>5.0</u>
Chloroethane	<u>BQL</u>	<u>10</u>
Chloroform	<u>BQL</u>	<u>5.0</u>
Chloromethane	<u>BQL</u>	<u>10</u>
Dibromochloromethane	<u>BQL</u>	<u>5.0</u>
1,1-Dichloroethane	<u>BQL</u>	<u>5.0</u>
1,2-Dichloroethane	<u>BQL</u>	<u>5.0</u>
1,1-Dichloroethene	<u>BQL</u>	<u>5.0</u>
1,2-Dichloroethene(total)	<u>BQL</u>	<u>5.0</u>
1,2-Dichloropropane	<u>BQL</u>	<u>5.0</u>
cis-1,3-Dichloropropene	<u>BQL</u>	<u>5.0</u>
trans-1,3-Dichloropropene	<u>BQL</u>	<u>5.0</u>
Ethyl Benzene	<u>BQL</u>	<u>5.0</u>
2-Hexanone	<u>BQL</u>	<u>10</u>
4-Methyl-2-pentanone	<u>BQL</u>	<u>10</u>
Methylene Chloride	<u>BQL</u>	<u>5.0</u>
Styrene	<u>BQL</u>	<u>5.0</u>
1,1,2,2-Tetrachloroethane	<u>BQL</u>	<u>5.0</u>
Tetrachloroethene	<u>BQL</u>	<u>5.0</u>
Toluene	<u>BQL</u>	<u>5.0</u>
1,1,1-Trichloroethane	<u>BQL</u>	<u>5.0</u>
1,1,2-Trichloroethane	<u>BQL</u>	<u>5.0</u>
Trichloroethene	<u>BQL</u>	<u>5.0</u>
Vinyl Acetate	<u>BQL</u>	<u>10</u>
Vinyl Chloride	<u>BQL</u>	<u>10</u>
Xylenes (total)	<u>BQL</u>	<u>5.0</u>

Notes and Definitions for this Report:

DATE RUN 07/09/90UNITS ug/L

BQL = BELOW QUANTITATION LIMIT

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GP ENV SERVICES REPORT  
Results by Sample

Work Order # 90-07-028

SAMPLE ID TC 1253

FRACTION 05A

TEST CODE 624

NAME VOA 40CFR136 624

Date & Time Collected 07/05/90

Category WATER VOA

RESULTS OF VOLATILE ANALYSES  
TARGET COMPOUNDS

	CONCENTRATION	QUANTITATION LIMIT
Acetone	BQL	10
Benzene	BQL	5.0
Bromodichloromethane	BQL	5.0
Bromoform	BQL	5.0
Bromomethane	BQL	10
2-Butanone	BQL	10
Carbon Disulfide	BQL	5.0
Carbon Tetrachloride	BQL	5.0
Chlorobenzene	BQL	5.0
Chloroethane	BQL	10
Chloroform	BQL	5.0
Chloromethane	BQL	10
Dibromochloromethane	BQL	5.0
1,1-Dichloroethane	BQL	5.0
1,2-Dichloroethane	BQL	5.0
1,1-Dichloroethene	BQL	5.0
1,2-Dichloroethene(total)	BQL	5.0
1,2-Dichloropropane	BQL	5.0
cis-1,3-Dichloropropene	BQL	5.0
trans-1,3-Dichloropropene	BQL	5.0
Ethyl Benzene	BQL	5.0
2-Hexanone	BQL	10
4-Methyl-2-pentanone	BQL	10
Methylene Chloride	BQL	5.0
Styrene	BQL	5.0
1,1,2,2-Tetrachloroethane	BQL	5.0
Tetrachloroethene	BQL	5.0
Toluene	BQL	5.0
1,1,1-Trichloroethane	BQL	5.0
1,1,2-Trichloroethane	BQL	5.0
Trichloroethene	BQL	5.0
Vinyl Acetate	BQL	10
Vinyl Chloride	BQL	10
Xylenes (total)	BQL	5.0

Notes and Definitions for this Report:

DATE RUN 07/09/90

UNITS ug/L

BQL = BELOW QUANTITATION LIMIT