# GROUNDWATER MONITORING REPORT

for

C6 FACILITY
Torrance, California

February 1992

Prepared For:

DOUGLAS AIRCRAFT COMPANY
1855 Lakewood Boulevard
Long Beach, California 90846

Prepared By:

JAMES M MONTGOMERY,
CONSULTING ENGINEERS, INC
301 North Lake Avenue, Suite 600
Pasadena, California 91101

Submitted To:

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
101 Centre Plaza Drive
Monterey Park, California 91754

SCANNED

# GROUNDWATER MONITORING REPORT

## 1.0 INTRODUCTION

This report presents the results of groundwater sampling and elevation measurements conducted on November 20, 1991 at the Douglas Aircraft Company (DAC) C6 Facility, Torrance, California. The activities and results described in this report are part of DAC's feasibility study and remedial design work at the site, which is being conducted under the direction of the Los Angeles office of the California Regional Quality Control Board.

## 2.0 GROUNDWATER SAMPLING PROCEDURES

Prior to sampling groundwater from the observation well network, the static water level was measured in each well with respect to the top-of-casing. Results are reported in feet relative to mean sea level.

Groundwater sampling consisted of bailing approximately four well-bore volumes of groundwater from each well. Subsequent to bailing, groundwater samples were collected using a clean teflon bailer. All sampling and purging equipment were decontaminated prior to and following each well by thoroughly scrubbing the equipment in an Alconox detergent and rinsing with tap and deionized water. Samples were examined to guarantee no free headspace remained in the vials and were transported on ice to Montgomery Laboratories for analysis using complete chain of custody procedures. In addition to water samples from the wells, a trip blank was obtained at the laboratory prior to fieldwork, transported and handled in a similar fashion to other samples, and submitted for similar analyses.

Effluent produced during purging of wells was contained in sealed 55-gallon steel drums meeting D.O.T. standards for hazardous material containment. The drums were subsequently stored onsite. DAC has made arrangements with a separate subcontractor for appropriate disposal of drummed effluent.

## 3.0 DATA

Table 3-1 presents the results of groundwater elevation survey conducted at the site. Table 3-2 presents the volatile organics (VOAs) results. Groundwater samples were analyzed for volatile organics including TCE, Methylene Chloride, and 1,1,1-TCA using EPA Method 624. All laboratory reports and chain-of-custody forms are included in Appendix A.

## 4.0 INTERPRETATION OF DATA

### Groundwater Elevation

Groundwater was encountered at approximately 70 feet below grade during most recent (November 1991) round of groundwater sampling. The local hydraulic gradient is approximately 0.002 feet/foot to the south.

### Groundwater Quality

Table 3-2 summarizes the VOAs results from all observation wells.

Table 3-1

| | McDONNEL DOUGLAS AIRCRAFT COMPANY | | | | | |
|---|---|---|---|---|---|---|
| | | TORRANCE FACILITY | | | | |
| DATE | WELL NO. | WATER LEVEL (ft) | PID (final) (ppm) | PID (well) (ppm) | EC (umhos) | pH |
| 11/13/91 | WCC-3D | 69 | ND | 5 to 10 | 590 | 7.6 |
| 11/14/91 | MCC-3S | 69.87 | ND | 8 to 13 | 1500 | 7 |
| 11/15/91 | MCC-11S | 68.26 | * | * | * | * |
| | MCC-11S | | ND | 2-Jan | 1050 | 7.2 |
| 11/15/91 | WCC-8S | 69.32 | ND | 30 to 100 | 1100 | 7 |
| 11/15/91 | WCC-1D | 69.64 | ND | 40 to 80 | 610 | 7.2 |
| 11/18/91 | WCC-1S | 69.63 | no remark | ND | 1000 | 7.6 |
| 11/18/91 | WCC-4S | 68.66 | ND | 0 to 2 | 950 | 7 |
| 11/18/91 | WCC-7S | 67.62 | no remark | 3 to 7 | 860 | 6.9 |
| 11/18/91 | WCC-12S | 63.2 | no remark | no remark | 980 | 6.9 |
| 11/19/91 | WCC-9S | 66.45 | no remark | no remark | 760 | 7 |
| 11/19/91 | WCC-5S | 67.38 | no remark | ND | 400 | 8.1 |
| 11/19/91 | WCC-6S | 70.2 | * | ND | * | * |
| 11/19/91 | WCC-2S | 69.5 | ND | 10 to 15 | no remark | no remark |
| 11/20/91 | WCC-10S | 69.68 | no remark | 1.5 | 1100 | 8.3 |

ND = NOT DETECTED

* = NO MEASUREMENT COULD BE DONE

BOE-C6-0015072

Table 3-2

ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES COLLECTED DURING NOVEMBER 1991

(all results in µg/l)

| WELL NO. | 1,1-DCE | 1,1-DCA | 1,1,1-TCA | TCE | MIBK | Toluene | Benzene | cis, trans - 1,2-DCE | Methylene Chloride | MEK | Chloroform |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WCC-1S | 1,300 | | | 3,700 | | | | | 9.2 B | | |
| WCC-2S | 30 | | 8 | 110 | | 75 | | | 15 B | | |
| WCC-3S | 12,000 | 400 J | 6,900 | 7,900 | 70,000 | 27,000 | | 550 J | 7.1 B | 12,000 | 250 J |
| WCC-4S | 1,000 | | 20 J | 2,200 | | | | | 10.7 B | | |
| WCC-5S | 20 | | | 8 | | 7 | | | 15 B | | |
| WCC-6S | 5,800 | | 5,000 | 3,000 | 17,000 | 35,000 | | | 8.6 B | 21,000 | |
| WCC-7S | 390 | | | 1,200 | | | | | | | |
| WCC-8S | 2,600 | | 400 | 3,000 | | 120 J | | 40 J | 13.4 B | | 25 J |
| WCC-9S | | | | 20 | | | | | 20 B | | |
| WCC-10S | | | | 87 | | | | | | | |
| WCC-11S | 10 | | | 80 | | | | | 40 B | | |
| WCC-12S | 300 | | 17 J | 900 | | | | | 13.6 B | | |
| WCC-1D | 90 | | 8 | 40 | | 20 | | | 15 B | | |
| WCC-3D | 20 | | 60 | | | | | | | | |
| Trip Blank 1 | | | | | | | | | 30 | | |
| Trip Blank 2 | | | | 3 | | | | | 34 | | |

Footnotes:

1. Only compounds which were detected under the recent sampling activity or were previously detected by WCC are shown in the table. For a complete list of compounds analyzed by JMM see Appendix A.
2. B = The presence of this compound is uncertain since it was detected in blank samples at similar or higher concentrations.
3. J = This value is an estimate only since the compound was present at a concentration lower than the lowest standard.
4. Blank cell indicates compound was analyzed but not detected.

BOE-C6-0015073

# APPENDIX A

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38830
Report#: R85078
Phone #: 6948

Date Sampled: 11/18/91
ate Analyzed: 11/26/91

Date Received: 11/18/91

ab Number: LB0351
ample I.D.: WCC-1S

| ompound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| OLATILE PRIORITY POLLUTANTS: | | |
| crolein | ND | 2500 |
| crylonitrile | ND | 1000 |
| Benzene | ND | 50 |
| Bromoform | ND | 250 |
| arbon Tetrachloride | ND | 250 |
| hlorobenzene | ND | 250 |
| Dibromochloromethane | ND | 250 |
| loroethane | ND | 500 |
| -Chloroethylvinylether | ND | 500 |
| Chloroform | ND | 250 |
| chlorobromomethane | ND | 250 |
| 1-Dichloroethane | ND | 250 |
| 1,2-Dichloroethane | ND | 250 |
| 1-Dichloroethene | 1300 | 250 |
| 2-Dichloropropane | ND | 250 |
| Ethylbenzene | ND | 250 |
| Methyl Bromide | ND | 500 |
| thyl Chloride | ND | 500 |
| thylene Chloride | ~~ND~~ 9.2 | 250 |
| 1,1,2,2-Tetrachloroethane | ND | 250 |
| trachloroethene | ND | 250 |

ND: Not Detected
NA: Not Analyzed

Approved by RE Olson

APPROVED
DEC 10 1991

~~DATE~~ NOTE: Methylene Chloride in Method Blank = 23 ug/L

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

ıb Number: LB0351
Sample I.D.: WCC-1S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| ʿ ıluene | ND | 250 |
| 1,1,1-Trichloroethane | ND | 250 |
| ʾ 1,2-Trichloroethane | ND | 250 |
| ʿ ʿichloroethene | 3700 | 250 |
| Vınyl Chloride | ND | 500 |
| trans-1,3-Dichloropropene | ND | 250 |
| c s-1,3-Dichloropropene | ND | 250 |
| t_ans-1,2-Dichloroethene | ND | 250 |
| cis-1,2-Dichloroethene | ND | 250 |
| T ichlorofluoromethane | ND | 250 |
| T tal Xylenes | ND | 250 |
| 1,2-Dichlorobenzene | ND | 250 |
| 1 3-Dichlorobenzene | ND | 250 |
| 1 4-Dichlorobenzene | ND | 250 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| A_ɜtone | ND | 500 |
| 2-Butanone | ND | 500 |
| C rbon disulfide | ND | 250 |
| 2 Hexanone | ND | 500 |
| 4-Methyl-2-Pentanone | ND | 500 |
| Sʷyrene | ND | 250 |
| V ıyl Acetate | ND | 500 |

NL. Not Detected
NA: Not Analyzed

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

| | |
|---|---|
| Lab Number: | LB0351 |
| Sample I.D.: | WCC-1S |

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| 4-Bromofluorobenzene | 108 | 92-113 |
| 1,2-Dichloroethane-d4 | 112 | 92-133 |
| Toluene-d8 | 105 | 89-114 |

Note: Reuslts for this sample were submitted to Montgomery Laboratories by Core Laboratories.

ND Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38864
Report#: R85294
Phone #: 6948

Date Sampled: 11/19/91
Date Analyzed: 11/27/91
Date Received: 11/19/91

Lab Number: LB0620
Sample I.D.: WCC-2S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| OLATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 50 |
| Acrylonitrile | ND | 20 |
| Benzene | ND | 1.0 |
| Bromoform | ND | 5.0 |
| Carbon Tetrachloride | ND | 5.0 |
| Chlorobenzene | ND | 5.0 |
| Dibromochloromethane | ND | 5.0 |
| Chloroethane | ND | 10 |
| 2-Chloroethylvinylether | ND | 10 |
| Chloroform | ND | 5.0 |
| Dichlorobromomethane | ND | 5.0 |
| 1,1-Dichloroethane | ND | 5.0 |
| 1,2-Dichloroethane | ND | 5.0 |
| 1,1-Dichloroethene | 30 | 5.0 |
| 1,2-Dichloropropane | ND | 5.0 |
| Ethylbenzene | ND | 5.0 |
| Methyl Bromide | ND | 10 |
| Methyl Chloride | ND | 10 |
| Methylene Chloride | 15 | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | 5.0 |
| Tetrachloroethene | ND | 5.0 |

ND: Not Detected
NA: Not Analyzed

Approved by KEC

APPROVED
DEC 10 1991

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

ab Number: LB0620
Sample I.D.: WCC-2S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| oluene | 75 | 5.0 |
| ı,1,1-Trichloroethane | 8.0 | 5.0 |
| 1,1,2-Trichloroethane | ND | 5.0 |
| richloroethene | 110 | 5.0 |
| inyl Chloride | ND | 10 |
| trans-1,3-Dichloropropene | ND | 5.0 |
| is-1,3-Dichloropropene | ND | 5.0 |
| rans-1,2-Dichloroethene | ND | 5.0 |
| cis-1,2-Dichloroethene | ND | 5.0 |
| Trichlorofluoromethane | ND | 5.0 |
| otal Xylenes | ND | 5.0 |
| ı,2-Dichlorobenzene | ND | 5.0 |
| 1,3-Dichlorobenzene | ND | 5.0 |
| ,4-Dichlorobenzene | ND | 5.0 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| cetone | ND | 10 |
| 2-Butanone | ND | 10 |
| Carbon disulfide | ND | 5.0 |
| -Hexanone | ND | 10 |
| 4-Methyl-2-Pentanone | ND | 10 |
| Styrene | ND | 5.0 |
| inyl Acetate | ND | 10 |

ND: Not Detected
NA: Not Analyzed

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

| | |
|---|---|
| ab Number: | LB0620 |
| Sample I.D.: | WCC-2S |

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| -Bromofluorobenzene | 102 | 92-113 |
| 1,2-Dichloroethane-d4 | 99 | 92-133 |
| Toluene-d8 | 101 | 89-114 |

ote: Reuslts for this sample were submitted to Montgomery Laboratories by Core Laboratories.

D: Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38776
Report#: R84578
Phone #: 6948

Date Sampled: 11/14/91
Date Analyzed: 11/27/91
Date Received: 11/14/91

Lab Number: LB0014
Sample I.D.: WCC-3S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 12500 |
| Acrylonitrile | ND | 5000 |
| Benzene | ND | 250 |
| Bromoform | ND | 1250 |
| Carbon Tetrachloride | ND | 1250 |
| Chlorobenzene | ND | 1250 |
| Dibromochloromethane | ND | 1250 |
| Chloroethane | ND | 2500 |
| 2 Chloroethylvinylether | ND | 2500 |
| Chloroform | ~~ND~~ 250 (EST) | 1250 |
| Dichlorobromomethane | ND | 1250 |
| 1,1-Dichloroethane | ~~ND~~ 400 (EST) | 1250 |
| 1,2-Dichloroethane | ND | 1250 |
| 1,1-Dichloroethene | 12000 | 1250 |
| 1,2-Dichloropropane | ND | 1250 |
| Ethylbenzene | ND | 1250 |
| Methyl Bromide | ND | 2500 |
| Methyl Chloride | ND | 2500 |
| Methylene Chloride | ~~ND~~ 7.1 (EST) | 1250 |
| 1,1,2,2-Tetrachloroethane | ND | 1250 |
| Tetrachloroethene | ND | 1250 |

ND: Not Detected
NA: Not Analyzed

Approved by R E Wilson

APPROVED
DEC 10 1991

Method Blank has 23 ug/L Methylene Chloride

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

Lab Number: LB0014
Sample I.D.: WCC-3S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| **VOLATILE PRIORITY POLLUTANTS (continued):** | | |
| Toluene | 27000 | 1250 |
| 1,1,1-Trichloroethane | 6900 | 1250 |
| 1,1,2-Trichloroethane | ND | 1250 |
| Trichloroethene | 7900 | 1250 |
| Vinyl Chloride | ND | 2500 |
| trans-1,3-Dichloropropene | ND | 1250 |
| cis-1,3-Dichloropropene | ND | 1250 |
| trans-1,2-Dichloroethene > total 1,2-DCE | ND > 550 (EST) | 1250 |
| cis-1,2-Dichloroethene | ND | 1250 |
| Trichlorofluoromethane | ND | 1250 |
| Total Xylenes | ND | 1250 |
| 1,2-Dichlorobenzene | ND | 1250 |
| 1,3-Dichlorobenzene | ND | 1250 |
| 1,4-Dichlorobenzene | ND | 1250 |
| **HAZARDOUS SUBSTANCES COMPOUNDS:** | | |
| Acetone | ND | 2500 |
| 2-Butanone | 12000 | 2500 |
| Carbon disulfide | ND | 1250 |
| 2-Hexanone | ND | 2500 |
| 4-Methyl-2-Pentanone | 70000 | 2500 |
| Styrene | ND | 1250 |
| Vinyl Acetate | ND | 12500 |

ND: Not Detected
NA: Not Analyzed

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

| | |
|---|---|
| ıb Number: | LB0014 |
| Sample I.D.: | WCC-3S |

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| 4 Bromofluorobenzene | 76 | 92-113 |
| 1,2-Dichloroethane-d4 | 103 | 92-133 |
| Toluene-d8 | 81 | 89-114 |

Note: Results for this sample were submitted to Montgomery Laboratories by Core Laboratories.

ND Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38830
Report#: R85077
Phone #: 6948

Date Sampled: 11/18/91
Date Analyzed: 11/26/91
Date Received: 11/18/91

Lab Number: LB0350
Sample I.D.: WCC-4S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 1000 |
| Acrylonitrile | ND | 400 |
| Benzene | ND | 20 |
| Bromoform | ND | 100 |
| Carbon Tetrachloride | ND | 100 |
| Chlorobenzene | ND | 100 |
| Dibromochloromethane | ND | 100 |
| Chloroethane | ND | 200 |
| 2-Chloroethylvinylether | ND | 200 |
| Chloroform | ND | 100 |
| Dichlorobromomethane | ND | 100 |
| 1,1-Dichloroethane | ND | 100 |
| 1,2-Dichloroethane | ND | 100 |
| 1,1-Dichloroethene | 1000 | 100 |
| 1,2-Dichloropropane | ND | 100 |
| Ethylbenzene | ND | 100 |
| Methyl Bromide | ND | 200 |
| Methyl Chloride | ND | 200 |
| Methylene Chloride | ~~ND~~ 10.7 | 100 |
| 1,1,2,2-Tetrachloroethane | ND | 100 |
| Tetrachloroethene | ND | 100 |

ND: Not Detected
NA: Not Analyzed

Approved by R E Olson

APPROVED
DEC 10 1991

Methylene Chloride in Method Blank = 23 ug/L

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

| | |
|---|---|
| Lab Number: | LB0350 |
| Sample I.D.: | WCC-4S |

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| Toluene | ND | 100 |
| 1,1-Trichloroethane | ~~ND~~ 20 (EST) | 100 |
| 1,2-Trichloroethane | ND | 100 |
| Trichloroethene | 2200 | 100 |
| Vinyl Chloride | ND | 200 |
| trans-1,3-Dichloropropene | ND | 100 |
| cis-1,3-Dichloropropene | ND | 100 |
| trans-1,2-Dichloroethene | ND | 100 |
| cis-1,2-Dichloroethene | ND | 100 |
| Trichlorofluoromethane | ND | 100 |
| Total Xylenes | ND | 100 |
| 1,2-Dichlorobenzene | ND | 100 |
| 1,3-Dichlorobenzene | ND | 100 |
| 1,4-Dichlorobenzene | ND | 100 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| Acetone | ND | 200 |
| 2 Butanone | ND | 200 |
| Carbon disulfide | ND | 100 |
| 2-Hexanone | ND | 200 |
| 4-Methyl-2-Pentanone | ND | 200 |
| Styrene | ND | 100 |
| Vinyl Acetate | ND | 200 |

ND: Not Detected
NA: Not Analyzed

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

| | |
|---|---|
| Lab Number: | LB0350 |
| Sample I.D.: | WCC-4S |

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| 4-Bromofluorobenzene | 107 | 92-113 |
| 1,2-Dichloroethane-d4 | 113 | 92-133 |
| Toluene-d8 | 104 | 89-114 |

Note: Reuslts for this sample were submitted to Montgomery Laboratories by Core Laboratories.

ND: Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38864
Report#: R85292
Phone #: 6948

Date Sampled: 11/19/91
Date Analyzed: 11/27/91
Date Received: 11/19/91

Lab Number: LB0618
ample I.D.: WCC-5S

| ompound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| OLATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 50 |
| crylonitrile | ND | 20 |
| enzene | ND | 1.0 |
| Bromoform | ND | 5.0 |
| arbon Tetrachloride | ND | 5.0 |
| hlorobenzene | ND | 5.0 |
| ibromochloromethane | ND | 5.0 |
| Chloroethane | ND | 10 |
| -Chloroethylvinylether | ND | 10 |
| hloroform | ND | 5.0 |
| Dichlorobromomethane | ND | 5.0 |
| ,1-Dichloroethane | ND | 5.0 |
| 2-Dichloroethane | ND | 5.0 |
| 1,1-Dichloroethene | 20 | 5.0 |
| 2-Dichloropropane | ND | 5.0 |
| hylbenzene | ND | 5.0 |
| Methyl Bromide | ND | 10 |
| Methyl Chloride | ND | 10 |
| ethylene Chloride | 15 | 5.0 |
| ,1,2,2-Tetrachloroethane | ND | 5.0 |
| Tetrachloroethene | ND | 5.0 |

D: Not Detected
NA: Not Analyzed

pproved by

APPROVED
DEC 10 1991

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

ab Number: LB0618
Sample I.D.: WCC-5S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| oluene | 7.0 | 5.0 |
| 1,1,1-Trichloroethane | ND | 5.0 |
| 1,1,2-Trichloroethane | ND | 5.0 |
| richloroethene | 8.0 | 5.0 |
| inyl Chloride | ND | 10 |
| trans-1,3-Dichloropropene | ND | 5.0 |
| is-1,3-Dichloropropene | ND | 5.0 |
| ans-1,2-Dichloroethene | ND | 5.0 |
| cis-1,2-Dichloroethene | ND | 5.0 |
| richlorofluoromethane | ND | 5.0 |
| otal Xylenes | ND | 5.0 |
| 1,2-Dichlorobenzene | ND | 5.0 |
| 1,3-Dichlorobenzene | ND | 5.0 |
| 4-Dichlorobenzene | ND | 5.0 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| etone | ND | 10 |
| 2-Butanone | ND | 10 |
| arbon disulfide | ND | 5.0 |
| -Hexanone | ND | 10 |
| 4-Methyl-2-Pentanone | ND | 10 |
| Styrene | ND | 5.0 |
| nyl Acetate | ND | 10 |

N : Not Detected
NA: Not Analyzed

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

ab Number: LB0618
Sample I.D.: WCC-5S

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| -Bromofluorobenzene | 100 | 92-113 |
| 1,2-Dichloroethane-d4 | 98 | 92-133 |
| Toluene-d8 | 102 | 89-114 |

Note: Results for this sample were submitted to Montgomery Laboratories by Core Laboratories.

ND: Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38864
Report#: R85293
Phone #: 6948

Date Sampled: 11/19/91
Date Analyzed: 11/27/91
Date Received: 11/19/91

Lab Number: LB0619
Sample I.D.: WCC-6S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 10000 |
| Acrylonitrile | ND | 4000 |
| Benzene | ND | 200 |
| Bromoform | ND | 1000 |
| Carbon Tetrachloride | ND | 1000 |
| Chlorobenzene | ND | 1000 |
| Dibromochloromethane | ND | 1000 |
| Chloroethane | ND | 2000 |
| 2-Chloroethylvinylether | ND | 2000 |
| Chloroform | ND | 1000 |
| Dichlorobromomethane | ND | 1000 |
| 1,1-Dichloroethane | ND | 1000 |
| 1,2-Dichloroethane | ND | 1000 |
| 1,1-Dichloroethene | 5800 | 1000 |
| 1,2-Dichloropropane | ND | 1000 |
| Ethylbenzene | ND | 1000 |
| Methyl Bromide | ND | 2000 |
| Methyl Chloride | ND | 2000 |
| Methylene Chloride | ~~ND~~ 8.6 | 1000 |
| 1,1,2,2-Tetrachloroethane | ND | 1000 |
| Tetrachloroethene | ND | 1000 |

ND: Not Detected
NA: Not Analyzed

Approved by RE Olson

APPROVED
DEC 10 1991

Methylene Chloride in Method Blank = 23 µg/L

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

ab Number: LB0619
ample I.D.: WCC-6S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| oluene | 35000 | 1000 |
,1,1-Trichloroethane | 5000 | 1000
1,1,2-Trichloroethane | ND | 1000
richloroethene | 3000 | 1000
nyl Chloride | ND | 2000
trans-1,3-Dichloropropene | ND | 1000
cis-1,3-Dichloropropene | ND | 1000
ans-1,2-Dichloroethene | ND | 1000
cis-1,2-Dichloroethene | ND | 1000
Trichlorofluoromethane | ND | 1000
tal Xylenes | ND | 1000
1,2-Dichlorobenzene | ND | 1000
1,3-Dichlorobenzene | ND | 1000
4-Dichlorobenzene | ND | 1000
| AZARDOUS SUBSTANCES COMPOUNDS: | | |
etone | ND | 2000
2-Butanone | 21000 | 2000
Carbon disulfide | ND | 1000
2 Hexanone | ND | 2000
4 Methyl-2-Pentanone | 17000 | 2000
Styrene | ND | 1000
Vinyl Acetate | ND | 2000

ND : Not Detected
NA: Not Analyzed

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

| | |
|---|---|
| L b Number: | LB0619 |
| Sample I.D.: | WCC-6S |

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| 4 Bromofluorobenzene | 97 | 92-113 |
| 1,2-Dichloroethane-d4 | 98 | 92-133 |
| T^luene-d8 | 103 | 89-114 |

Nc_e: Results for this sample were submitted to Montgomery Laboratories by Core Laboratories.

ND. Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38830
Report#: R85070
Phone #: 6948

Date Sampled: 11/18/91
Date Analyzed: 11/26/91
Date Received: 11/18/91

Lab Number: LB0348
Sample I.D.: WCC-7S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 500 |
| Acrylonitrile | ND | 200 |
| Benzene | ND | 10 |
| Bromoform | ND | 50 |
| Carbon Tetrachloride | ND | 50 |
| Chlorobenzene | ND | 50 |
| Dibromochloromethane | ND | 50 |
| Chloroethane | ND | 100 |
| 2-Chloroethylvinylether | ND | 100 |
| Chloroform | ND | 50 |
| Dichlorobromomethane | ND | 50 |
| 1,1-Dichloroethane | ND | 50 |
| 1,2-Dichloroethane | ND | 50 |
| 1,1-Dichloroethene | 390 | 50 |
| 1,2-Dichloropropane | ND | 50 |
| Ethylbenzene | ND | 50 |
| Methyl Bromide | ND | 100 |
| Methyl Chloride | ND | 100 |
| Methylene Chloride | ND | 50 |
| 1,1,2,2-Tetrachloroethane | ND | 50 |
| Tetrachloroethene | ND | 50 |

ND: Not Detected
NA: Not Analyzed

Approved by REUSC

APPROVED
DEC 10 1991

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

ab Number: LB0348
Sample I.D.: WCC-7S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| oluene | ND | 50 |
| 1,1,1-Trichloroethane | ND | 50 |
| 1,1,2-Trichloroethane | ND | 50 |
| richloroethene | 1200 | 50 |
| vinyl Chloride | ND | 100 |
| trans-1,3-Dichloropropene | ND | 50 |
| is-1,3-Dichloropropene | ND | 50 |
| rans-1,2-Dichloroethene | ND | 50 |
| cis-1,2-Dichloroethene | ND | 50 |
| richlorofluoromethane | ND | 50 |
| otal Xylenes | ND | 50 |
| 1,2-Dichlorobenzene | ND | 50 |
| 1,3-Dichlorobenzene | ND | 50 |
| ,4-Dichlorobenzene | ND | 50 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| cetone | ND | 100 |
| 2-Butanone | ND | 100 |
| arbon disulfide | ND | 50 |
| -Hexanone | ND | 100 |
| 4-Methyl-2-Pentanone | ND | 100 |
| Styrene | ND | 50 |
| inyl Acetate | ND | 100 |

ND: Not Detected
NA: Not Analyzed

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

ab Number: LB0348
Sample I.D.: WCC-7S

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| -Bromofluorobenzene | 104 | 92-113 |
| 1,2-Dichloroethane-d4 | 109 | 92-133 |
| Toluene-d8 | 103 | 89-114 |

Note: Reuslts for this sample were submitted to Montgomery Laboratories by Core Laboratories.

ND: Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

Revised Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38807
Report#: R84821
Phone #: 6948

Date Sampled: 11/15/91
Date Analyzed: 11/27/91
Date Received: 11/15/91

Lab Number: LB0177
Sample I.D.: WCC-8S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 1250 |
| Acrylonitrile | ND | 500 |
| Benzene | ND | 25 |
| Bromoform | ND | 125 |
| Carbon Tetrachloride | ND | 125 |
| Chlorobenzene | ND | 125 |
| Dibromochloromethane | ND | 125 |
| Chloroethane | ND | 250 |
| 2-Chloroethylvinylether | ND | 250 |
| Chloroform | ~~ND~~ 25 (EST) | 125 |
| Dichlorobromomethane | ND | 125 |
| 1,1-Dichloroethane | ND | 125 |
| 1,2-Dichloroethane | ND | 125 |
| 1,1-Dichloroethene | 2600 | 125 |
| 1,2-Dichloropropane | ND | 125 |
| Ethylbenzene | ND | 125 |
| Methyl Bromide | ND | 250 |
| Methyl Chloride | ND | 250 |
| Methylene Chloride | ~~ND~~ 13.4 | 125 |
| 1,1,2,2-Tetrachloroethane | ND | 125 |
| Tetrachloroethene | ND | 125 |

ND: Not Detected
NA: Not Analyzed

Approved by Deelanne Bryant

APPROVED
JAN 31 1992

NOTE. Methylene Chloride in Method BLK = 23 ug/L

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

| | |
|---|---|
| Lab Number: | LB0177 |
| Sample I.D.: | WCC-8S |

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| Toluene | ~~ND~~ 120 (EST) | 125 |
| 1,1,1-Trichloroethane | 400 | 125 |
| 1,1,2-Trichloroethane | ND | 125 |
| Trichloroethene | 3000 | 125 |
| Vinyl Chloride | ND | 250 |
| trans-1,3-Dichloropropene | ND | 125 |
| cis-1,3-Dichloropropene | ND | 125 |
| trans-1,2-Dichloroethene | ND > 40 (EST) | 125 |
| cis-1,2-Dichloroethene | ND | 125 |
| Trichlorofluoromethane | ND | 250 |
| m,p-Xylenes | ND | 125 |
| 1,2-Dichlorobenzene | ND | 125 |
| 1,3-Dichlorobenzene | ND | 125 |
| 1,4-Dichlorobenzene | ND | 125 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| Acetone | ND | 250 |
| 2-Butanone | ND | 250 |
| Carbon disulfide | ND | 125 |
| 2-Hexanone | ND | 250 |
| 4-Methyl-2-Pentanone | ND | 250 |
| Styrene | ND | 125 |
| Tetrahydrofuran | NA | |
| Vinyl Acetate | ND | 250 |
| o-Xylene | ND | 125 |

ND: Not Detected
NA: Not Analyzed

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

| | |
|---|---|
| Lab Number: | LB0177 |
| Sample I.D.: | WCC-8S |

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| 4-Bromofluorobenzene | 105 | 92-113 |
| 1,2-Dichloroethane-d4 | 110 | 92-133 |
| Toluene-d8 | 105 | 89-114 |

Note: Results for this sample were submitted to Montgomery Laboratories by Core Laboratories.

ND: Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

| | | | |
|---|---|---|---|
| Douglas Aircraft Co. | | Job#: | 1220.0090 |
| ** | | PO#: | |
| ** | | Workorder#: | W38864 |
| **, ** ** | | Report#: | R85290 |
| Attn: Majid Rasouli | | Phone #: | 6948 |

Date Sampled: 11/19/91 Date Received: 11/19/91
Date Analyzed: 11/27/91

Lab Number: LB0617
Sample I.D.: WCC-9S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 50 |
| Acrylonitrile | ND | 20 |
| Benzene | ND | 1.0 |
| Bromoform | ND | 5.0 |
| Carbon Tetrachloride | ND | 5.0 |
| Chlorobenzene | ND | 5.0 |
| Dibromochloromethane | ND | 5.0 |
| Chloroethane | ND | 10 |
| 2-Chloroethylvinylether | ND | 10 |
| Chloroform | ND | 5.0 |
| Dichlorobromomethane | ND | 5.0 |
| 1,1-Dichloroethane | ND | 5.0 |
| 1,2-Dichloroethane | ND | 5.0 |
| 1,1-Dichloroethene | ND | 5.0 |
| 1,2-Dichloropropane | ND | 5.0 |
| Ethylbenzene | ND | 5.0 |
| Methyl Bromide | ND | 10 |
| Methyl Chloride | ND | 10 |
| Methylene Chloride | 20 | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | 5.0 |
| Tetrachloroethene | ND | 5.0 |

ND: Not Detected
NA: Not Analyzed

Approved by RECkx

APPROVED
DEC 10 1991

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

ab Number: LB0617
Sample I.D.: WCC-9S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| oluene | ND | 5.0 |
| ,1,1-Trichloroethane | ND | 5.0 |
| 1,1,2-Trichloroethane | ND | 5.0 |
| richloroethene | 20 | 5.0 |
| inyl Chloride | ND | 10 |
| trans-1,3-Dichloropropene | ND | 5.0 |
| is-1,3-Dichloropropene | ND | 5.0 |
| rans-1,2-Dichloroethene | ND | 5.0 |
| cis-1,2-Dichloroethene | ND | 5.0 |
| Trichlorofluoromethane | ND | 5.0 |
| otal Xylenes | ND | 5.0 |
| ,2-Dichlorobenzene | ND | 5.0 |
| 1,3-Dichlorobenzene | ND | 5.0 |
| ,4-Dichlorobenzene | ND | 5.0 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| cetone | ND | 10 |
| 2-Butanone | ND | 10 |
| Carbon disulfide | ND | 5.0 |
| -Hexanone | ND | 10 |
| -Methyl-2-Pentanone | ND | 10 |
| Styrene | ND | 5.0 |
| inyl Acetate | ND | 10 |

ND: Not Detected
NA: Not Analyzed

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

| | |
|---|---|
| ab Number: | LB0617 |
| Sample I.D.: | WCC-9S |

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| -Bromofluorobenzene | 98 | 92-113 |
| 1,2-Dichloroethane-d4 | 102 | 92-133 |
| Toluene-d8 | 101 | 89-114 |

Note: Results for this sample were submitted to Montgomery Laboratories by Core Laboratories.

N : Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38883
Report#: R85356
Phone #: 6948

Date Sampled: 11/20/91
Date Analyzed: 11/27/91

Date Received: 11/20/91

Lab Number: LB0712
Sample I.D.: WCC-10-S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 25 |
| Acrylonitrile | ND | 25 |
| Benzene | ND | 12.5 |
| Bromoform | ND | 12.5 |
| Carbon Tetrachloride | ND | 12.5 |
| Chlorobenzene | ND | 12.5 |
| Dibromochloromethane | ND | 12.5 |
| Chloroethane | ND | 12.5 |
| 2-Chloroethylvinylether | ND | 25 |
| Chloroform | ND | 25 |
| Dichlorobromomethane | ND | 12.5 |
| 1,1-Dichloroethane | ND | 12.5 |
| 1,2-Dichloroethane | ND | 12.5 |
| 1,1-Dichloroethene | ND | 12.5 |
| 1,2-Dichloropropane | ND | 12.5 |
| Ethylbenzene | ND | 12.5 |
| Methyl Bromide | ND | 25 |
| Methyl Chloride | ND | 25 |
| Methylene Chloride | ND | 75 |
| 1,1,2,2-Tetrachloroethane | ND | 12.5 |
| Tetrachloroethene | ND | 12.5 |

ND: Not Detected
NA: Not Analyzed

Approved by RE Allen

APPROVED
DEC 04 1991

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

ab Number: LB0712
Sample I.D.: WCC-10-S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| oluene | ND | 12.5 |
| 1,1,1-Trichloroethane | ND | 12.5 |
| ',1,2-Trichloroethane | ND | 12.5 |
| richloroethene | 87 | 12.5 |
| vinyl Chloride | ND | 25 |
| trans-1,3-Dichloropropene | ND | 12.5 |
| is-1,3-Dichloropropene | ND | 12.5 |
| rans-1,2-Dichloroethene | ND | 12.5 |
| cis-1,2-Dichloroethene | ND | 12.5 |
| richlorofluoromethane | ND | 25 |
| ,p-Xylenes | ND | 12.5 |
| 1,2-Dichlorobenzene | ND | 12.5 |
| ',3-Dichlorobenzene | ND | 12.5 |
| ,4-Dichlorobenzene | ND | 12.5 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| cetone | ND | 250 |
| 2-Butanone | ND | 25 |
| arbon disulfide | ND | 12.5 |
| -Hexanone | ND | 25 |
| 4-Methyl-2-Pentanone | ND | 25 |
| Styrene | ND | 12.5 |
| etrahydrofuran | ND | 250 |
| vinyl Acetate | ND | 125 |
| o-Xylene | ND | 12.5 |

ND: Not Detected
A: Not Analyzed

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

| | |
|---|---|
| ab Number: | LB0712 |
| Sample I.D.: | WCC-10-S |

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| -Bromofluorobenzene | 102 | 86-115 |
| 1,2-Dichloroethane-d4 | 96 | 76-114 |
| Toluene-d8 | 100 | 88-110 |

l ): Not Detected
l .: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

| | | | |
|---|---|---|---|
| Douglas Aircraft Co. | | Job#: | 1220.0090 |
| ** | | PO#: | |
| ** | | Workorder#: | W38807 |
| **, ** ** | | Report#: | R84820 |
| Attn: Majid Rasouli | | Phone #: | 6948 |

Date Sampled: 11/15/91 Date Received: 11/15/91
Date Analyzed: 11/27/91

Lab Number: LB0176
ample I.D.: WCC-11S

| ompound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| OLATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 50 |
| crylonitrile | ND | 20 |
| enzene | ND | 1.0 |
| Bromoform | ND | 5.0 |
| Carbon Tetrachloride | ND | 5.0 |
| lorobenzene | ND | 5.0 |
| ibromochloromethane | ND | 5.0 |
| Chloroethane | ND | 10 |
| -Chloroethylvinylether | ND | 10 |
| loroform | ND | 5.0 |
| Dichlorobromomethane | ND | 5.0 |
| 1-Dichloroethane | ND | 5.0 |
| ,2-Dichloroethane | ND | 5.0 |
| 1,1-Dichloroethene | 10 | 5.0 |
| 2-Dichloropropane | ND | 5.0 |
| hylbenzene | ND | 5.0 |
| ethyl Bromide | ND | 10 |
| Methyl Chloride | ND | 10 |
| ethylene Chloride | 40 | 5.0 |
| 1,2,2-Tetrachloroethane | ND | 5.0 |
| Tetrachloroethene | ND | 5.0 |

D: Not Detected
NA: Not Analyzed

pproved by RE Cox

APPROVED
DEC 10 1991

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

| | |
|---|---|
| ab Number: | LB0176 |
| Sample I.D.: | WCC-11S |

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| oluene | ND | 5.0 |
| 1,1,1-Trichloroethane | ND | 5.0 |
| 1,1,2-Trichloroethane | ND | 5.0 |
| richloroethene | 80 | 5.0 |
| inyl Chloride | ND | 10 |
| trans-1,3-Dichloropropene | ND | 5.0 |
| is-1,3-Dichloropropene | ND | 5.0 |
| rans-1,2-Dichloroethene | ND | 5.0 |
| cis-1,2-Dichloroethene | ND | 5.0 |
| richlorofluoromethane | ND | 5.0 |
| otal Xylenes | ND | 5.0 |
| 1,2-Dichlorobenzene | ND | 5.0 |
| 1,3-Dichlorobenzene | ND | 5.0 |
| ,4-Dichlorobenzene | ND | 5.0 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| cetone | ND | 10 |
| 2-Butanone | ND | 10 |
| arbon disulfide | ND | 5.0 |
| -Hexanone | ND | 10 |
| -Methyl-2-Pentanone | ND | 10 |
| Styrene | ND | 5.0 |
| inyl Acetate | ND | 10 |

D: Not Detected
NA: Not Analyzed

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

ab Number: LB0176
Sample I.D.: WCC-11S

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| -Bromofluorobenzene | 98 | 92-113 |
| 1,2-Dichloroethane-d4 | 98 | 92-133 |
| Toluene-d8 | 104 | 89-114 |

l ›te: Reuslts of this sample were submitted to Montgomery Laboratories by Core Laboratories.

l ›: Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Revised Report of GC/MS Analysis for VOLATILE ORGANICS in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38830
Report#: R85076
Phone #: 6948

Date Sampled: 11/18/91
Date Analyzed: 11/26/91

Date Received: 11/18/91

Lab Number: LB0349
Sample I.D.: WCC-12S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 500 |
| Acrylonitrile | ND | 200 |
| Benzene | ND | 10 |
| Bromoform | ND | 50 |
| Carbon Tetrachloride | ND | 50 |
| Chlorobenzene | ND | 50 |
| Dibromochloromethane | ND | 50 |
| Chloroethane | ND | 100 |
| 2-Chloroethylvinylether | ND | 100 |
| Chloroform | ND | 50 |
| Dichlorobromomethane | ND | 50 |
| 1,1-Dichloroethane | ND | 50 |
| 1,2-Dichloroethane | ND | 50 |
| 1,1-Dichloroethene | 300 | 50 |
| 1,2-Dichloropropane | ND | 50 |
| Ethylbenzene | ND | 50 |
| Methyl Bromide | ND | 100 |
| Methyl Chloride | ND | 100 |
| Methylene Chloride | ~~ND~~ 13.6 | 50 |
| 1,1,2,2-Tetrachloroethane | ND | 50 |
| Tetrachloroethene | ND | 50 |

ND: Not Detected
NA: Not Analyzed

Approved by Dee Anne Bryant

APPROVED
JAN 31 1992

NOTE. Methylene Chloride in Method Blk = 23 ug/L

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

Lab Number: LB0349
Sample I.D.: WCC-12S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| Toluene | ND | 50 |
| 1,1,1-Trichloroethane | ~~ND~~ 17 (EST) | 50 |
| 1,1,2-Trichloroethane | ND | 50 |
| Trichloroethene | 900 | 50 |
| Vinyl Chloride | ND | 100 |
| trans-1,3-Dichloropropene | ND | 50 |
| cis-1,3-Dichloropropene | ND | 50 |
| trans-1,2-Dichloroethene | ND | 50 |
| cis-1,2-Dichloroethene | ND | 50 |
| Trichlorofluoromethane | ND | 50 |
| Total Xylenes | ND | 50 |
| 1,2-Dichlorobenzene | ND | 50 |
| 1,3-Dichlorobenzene | ND | 50 |
| 1,4-Dichlorobenzene | ND | 50 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| Acetone | ND | 100 |
| 2-Butanone | ND | 100 |
| Carbon disulfide | ND | 50 |
| 2-Hexanone | ND | 100 |
| 4-Methyl-2-Pentanone | ND | 100 |
| Styrene | ND | 50 |
| Vinyl Acetate | ND | 100 |

ND: Not Detected
NA: Not Analyzed

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

| | |
|---|---|
| Lab Number: | LB0349 |
| Sample I.D.: | WCC-12S |

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| 4-Bromofluorobenzene | 107 | 92-113 |
| 1,2-Dichloroethane-d4 | 111 | 92-133 |
| Toluene-d8 | 106 | 89-114 |

Note: Reuslts for this sample were submitted to Montgomery Laboratories by Core Laboratories.

ND: Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38807
Report#: R84817
Phone #: 6948

Date Sampled: 11/15/91
Date Analyzed: 11/27/91
Date Received: 11/15/91

Lab Number: LB0175
ample I.D.: WCC-1-D

| ompound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| OLATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 50 |
| crylonitrile | ND | 20 |
| enzene | ND | 1.0 |
| Bromoform | ND | 5.0 |
| arbon Tetrachloride | ND | 5.0 |
| lorobenzene | ND | 5.0 |
| Dibromochloromethane | ND | 5.0 |
| Chloroethane | ND | 10 |
| -Chloroethylvinylether | ND | 10 |
| hloroform | ND | 5.0 |
| Dichlorobromomethane | ND | 5.0 |
| ,1-Dichloroethane | ND | 5.0 |
| ,2-Dichloroethane | ND | 5.0 |
| 1,1-Dichloroethene | 90 | 5.0 |
| 2-Dichloropropane | ND | 5.0 |
| hylbenzene | ND | 5.0 |
| Methyl Bromide | ND | 10 |
| Methyl Chloride | ND | 10 |
| ethylene Chloride | 15 | 5.0 |
| ,1,2,2-Tetrachloroethane | ND | 5.0 |
| Tetrachloroethene | ND | 5.0 |

D: Not Detected
NA: Not Analyzed

pproved by RE Clos

APPROVED
DEC 10 1991

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

ab Number: LB0175
Sample I.D.: WCC-1-D

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| oluene | 20 | 5.0 |
| 1,1,1-Trichloroethane | 8.0 | 5.0 |
| 1,1,2-Trichloroethane | ND | 5.0 |
| richloroethene | 40 | 5.0 |
| vinyl Chloride | ND | 10 |
| trans-1,3-Dichloropropene | ND | 5.0 |
| is-1,3-Dichloropropene | ND | 5.0 |
| rans-1,2-Dichloroethene | ND | 5.0 |
| cis-1,2-Dichloroethene | ND | 5.0 |
| richlorofluoromethane | ND | 5.0 |
| otal Xylenes | ND | 5.0 |
| 1,2-Dichlorobenzene | ND | 5.0 |
| 1,3-Dichlorobenzene | ND | 5.0 |
| ,4-Dichlorobenzene | ND | 5.0 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| cetone | ND | 10 |
| 2-Butanone | ND | 10 |
| arbon disulfide | ND | 5.0 |
| -Hexanone | ND | 10 |
| 4-Methyl-2-Pentanone | ND | 10 |
| Styrene | ND | 5.0 |
| inyl Acetate | ND | 10 |

ND: Not Detected
NA: Not Analyzed

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

| | |
|---|---|
| ab Number: | LB0175 |
| Sample I.D.: | WCC-1-D |

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| -Bromofluorobenzene | 104 | 92-113 |
| 1,2-Dichloroethane-d4 | 99 | 92-133 |
| Toluene-d8 | 105 | 89-114 |

Note: Results of this sample were submitted to Montgomery Laboratories by Core Laboratories.

D: Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38776
Report#: R84583
Phone #: 6948

Date Sampled: 11/14/91
Date Analyzed: 11/27/91
Date Received: 11/14/91

Lab Number: LB0015
ample I.D.: WCC-3D

| ompound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| )LATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 50 |
| crylonitrile | ND | 20 |
| enzene | ND | 1.0 |
| Bromoform | ND | 5.0 |
| Carbon Tetrachloride | ND | 5.0 |
| hlorobenzene | ND | 5.0 |
| Dibromochloromethane | ND | 5.0 |
| Chloroethane | ND | 10 |
| -Chloroethylvinylether | ND | 10 |
| hloroform | ND | 5.0 |
| Dichlorobromomethane | ND | 5.0 |
| ,1-Dichloroethane | ND | 5.0 |
| ,2-Dichloroethane | ND | 5.0 |
| 1,1-Dichloroethene | 20 | 5.0 |
| 1,2-Dichloropropane | ND | 5.0 |
| thylbenzene | ND | 5.0 |
| Methyl Bromide | ND | 10 |
| Methyl Chloride | ND | 10 |
| ethylene Chloride | ND | 5.0 |
| ,1,2,2-Tetrachloroethane | ND | 5.0 |
| Tetrachloroethene | ND | 5.0 |

D: Not Detected
NA: Not Analyzed

pproved by KEllow

APPROVED
DEC 10 1991

# Report of GC/MS Analysis for BASE/NEUTRAL/ACID EXTRACTABLE ORGANICS in Water

ab Number: LB0014
Sample I.D.: WCC-3S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| BASE/NEUTRAL EXTRACTABLE- RIORITY POLLUTANTS (continued): | | |
| 1,3-Dichlorobenzene | ND | 12.5 |
| ',4-Dichlorobenzene | ND | 12.5 |
| ,3'-Dichlorobenzidine | ND | 125 |
| Diethylphthalate | ND | 12.5 |
| Dimethylphthalate | ND | 12.5 |
| i-n-butylphthalate | ND | 25 |
| ,4-Dinitrotoluene | ND | 12.5 |
| 2,6-Dinitrotoluene | ND | 12.5 |
| i-n-octylphthalate | ND | 25 |
| ,2-Diphenylhydrazine | ND | 25 |
| Fluoranthene | ND | 12.5 |
| Fluorene | ND | 12.5 |
| exachlorobenzene | ND | 12.5 |
| exachlorobutadiene | ND | 25 |
| Hexachlorocyclopentadiene | ND | 25 |
| exachloroethane | ND | 12.5 |
| ideno(1,2,3-c,d)pyrene | ND | 25 |
| Isophorone | ND | 12.5 |
| aphthalene | ND | 12.5 |
| itrobenzene | ND | 12.5 |
| N-Nitrosodimethylamine | ND | 12.5 |
| N-Nitrosodi-N-propylamine | ND | 12.5 |
| -Nitrosodiphenylamine | ND | 12.5 |
| henanthrene | ND | 12.5 |
| Pyrene | ND | 12.5 |
| ,2,4-Trichlorobenzene | ND | 12.5 |
| ACID EXTRACTABLE PRIORITY POLLUTANTS: | | |
| -Chlorophenol | ND | 12.5 |
| 2,4-Dichlorophenol | ND | 12.5 |
| 2,4-Dimethylphenol | ND | 12.5 |
| ,6-Dinitro-o-cresol | ND | 125 |
| ,4-Dinitrophenol | ND | 125 |
| 2-Nitrophenol | ND | 12.5 |
| -Nitrophenol | ND | 25 |

ND: Not Detected
NA: Not Analyzed

# Report of GC/MS Analysis for BASE/NEUTRAL/ACID EXTRACTABLE ORGANICS in Water

ab Number: LB0014
Sample I.D.: WCC-3S

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| ACID EXTRACTABLE PRIORITY POLLUTANTS (continued): | | |
| -Chloro-m-cresol | ND | 12.5 |
| Pentachlorophenol | ND | 25 |
| Phenol | ND | 12.5 |
| ,4,6-Trichlorophenol | ND | 12.5 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| niline | ND | 12.5 |
| Benzyl Alcohol | ND | 12.5 |
| -Methylphenol | ND | 12.5 |
| -Methylphenol | ND | 12.5 |
| Benzoic Acid | 300 | 125 |
| 4-Chloroaniline | ND | 12.5 |
| -Methylnaphthalene | ND | 12.5 |
| ibenzofuran | ND | 12.5 |
| 2-Nitroaniline | ND | 25 |
| -Nitroaniline | ND | 50 |
| -Nitroaniline | ND | 50 |
| 2,4,5-Trichlorophenol | ND | 12.5 |

ND: Not Detected
NA: Not Analyzed

# Report of GC/MS Analysis for BASE/NEUTRAL/ACID EXTRACTABLE ORGANICS in Water

| | |
|---|---|
| Lab Number: | LB0014 |
| Sample I.D.: | WCC-3S |

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| Nitrobenzene-d5 | 96 | 35-114 |
| 2-Fluorobiphenyl | 85 | 43-116 |
| Terphenyl-d14 | 48 | 33-141 |
| -Fluorophenol | 7.6 | 21-100 |
| Phenol-d5 | 18 | 10-94 |
| 2,4,6-Tribromophenol | 13 | 10-123 |

ND: Not Detected
A: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

Report of GC/MS Analysis for
BASE/NEUTRAL/ACID EXTRACTABLE ORGANICS
in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38830
Report#: R85074
Phone #: 6948

Date Sampled: 11/18/91
Date Extracted: 11/20/91
Date Received: 11/18/91
Date Analyzed: 12/9/91

Lab Number: LB0348
ample I.D.: WCC-7S

| ompound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| ASE/NEUTRAL EXTRACTABLE-RIORITY POLLUTANTS: | | |
| cenaphthene | ND | 5.0 |
| cenaphthylene | ND | 5.0 |
| Anthracene | ND | 5.0 |
| Benzidine | ND | 50 |
| enzo(a)anthracene | ND | 5.0 |
| enzo(a)pyrene | ND | 5.0 |
| Benzo(g,h,i)perylene | ND | 10 |
| enzo(b)fluoranthene | ND | 5.0 |
| enzo(k)fluoranthene | ND | 5.0 |
| bis(2-Chloroethoxy)methane | ND | 10 |
| is(2-Choroethyl)ether | ND | 10 |
| is(2-Chloroisopropyl)ether | ND | 10 |
| bis(2-Ethylhexyl)phthalate | ND | 20 |
| 4-Bromophenylphenylether | ND | 5.0 |
| utylbenzylphthalate | ND | 5.0 |
| -Chloronaphthalene | ND | 5.0 |
| 4-Chlorophenylphenylether | ND | 5.0 |
| rysene | ND | 5.0 |
| ibenzo(a,h)anthracene | ND | 10 |
| 1,2-Dichlorobenzene | ND | 5.0 |

): Not Detected
NA: Not Analyzed

pproved by [signature]

APPROVED
DEC 10 1991

# Report of GC/MS Analysis for BASE/NEUTRAL/ACID EXTRACTABLE ORGANICS in Water

| | |
|---|---|
| ab Number: | LB0348 |
| Sample I.D.: | WCC-7S |

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| BASE/NEUTRAL EXTRACTABLE-RIORITY POLLUTANTS (continued): | | |
| 1,3-Dichlorobenzene | ND | 5.0 |
| 1,4-Dichlorobenzene | ND | 5.0 |
| ,3'-Dichlorobenzidine | ND | 50 |
| iethylphthalate | ND | 5.0 |
| Dimethylphthalate | ND | 5.0 |
| i-n-butylphthalate | ND | 10 |
| ,4-Dinitrotoluene | ND | 5.0 |
| 2,6-Dinitrotoluene | ND | 5.0 |
| i-n-octylphthalate | ND | 10 |
| ,2-Diphenylhydrazine | ND | 10 |
| luoranthene | ND | 5.0 |
| Fluorene | ND | 5.0 |
| exachlorobenzene | ND | 5.0 |
| exachlorobutadiene | ND | 10 |
| Hexachlorocyclopentadiene | ND | 10 |
| exachloroethane | ND | 5.0 |
| ndeno(1,2,3-c,d)pyrene | ND | 10 |
| Isophorone | ND | 5.0 |
| aphthalene | ND | 5.0 |
| itrobenzene | ND | 5.0 |
| -Nitrosodimethylamine | ND | 5.0 |
| N-Nitrosodi-N-propylamine | ND | 5.0 |
| -Nitrosodiphenylamine | ND | 5.0 |
| henanthrene | ND | 5.0 |
| Pyrene | ND | 5.0 |
| ,2,4-Trichlorobenzene | ND | 5.0 |
| ACID EXTRACTABLE PRIORITY POLLUTANTS: | | |
| -Chlorophenol | ND | 5.0 |
| 2,4-Dichlorophenol | ND | 5.0 |
| 2,4-Dimethylphenol | ND | 5.0 |
| ,6-Dinitro-o-cresol | ND | 50 |
| ,4-Dinitrophenol | ND | 50 |
| 2-Nitrophenol | ND | 5.0 |
| -Nitrophenol | ND | 10 |

ND: Not Detected
NA: Not Analyzed

# Report of GC/MS Analysis for BASE/NEUTRAL/ACID EXTRACTABLE ORGANICS in Water

| | |
|---|---|
| ab Number: | LB0348 |
| Sample I.D.: | WCC-7S |

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| ACID EXTRACTABLE PRIORITY POLLUTANTS (continued): | | |
| -Chloro-m-cresol | ND | 5.0 |
| Pentachlorophenol | ND | 10 |
| Phenol | ND | 5.0 |
| ,4,6-Trichlorophenol | ND | 5.0 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| iiline | ND | 5.0 |
| Benzyl Alcohol | ND | 5.0 |
| -Methylphenol | ND | 5.0 |
| -Methylphenol | ND | 5.0 |
| Benzoic Acid | ND | 50 |
| 4-Chloroaniline | ND | 5.0 |
| -Methylnaphthalene | ND | 5.0 |
| ibenzofuran | ND | 5.0 |
| 2-Nitroaniline | ND | 10 |
| -Nitroaniline | ND | 20 |
| -Nitroaniline | ND | 20 |
| 2,4,5-Trichlorophenol | ND | 5.0 |

ND: Not Detected
.: Not Analyzed

# Report of GC/MS Analysis for
## BASE/NEUTRAL/ACID EXTRACTABLE ORGANICS
## in Water

| | |
|---|---|
| ab Number: | LB0348 |
| Sample I.D.: | WCC-7S |

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| itrobenzene-d5 | 42 | 35-114 |
| 2-Fluorobiphenyl | 36 | 43-116 |
| Terphenyl-d14 | 52 | 33-141 |
| -Fluorophenol | 51 | 21-100 |
| henol-d5 | 50 | 10-94 |
| 2,4,6-Tribromophenol | 60 | 10-123 |

ND: Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of CAM Metals in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38776
Report#: R84581
Phone #: 6948

Date Sampled: 11/14/91
Date Completed: 1/16/92
Date Received: 11/14/91

| Lab# | Sample I.D. | Pb mg/l | Cr VI mg/l | Co mg/l | Cr mg/l | Cd mg/l | Be mg/l |
|---|---|---|---|---|---|---|---|
| LB0014 | WCC-3S | 0.001 | <0.010 | <0.050 | <0.010 | <0.005 | <0.005 |

| Lab# | Sample I.D. | Ba mg/l | As mg/l | Sb mg/l | Hg mg/l | Mo mg/l | Ni mg/l |
|---|---|---|---|---|---|---|---|
| LB0014 | WCC-3S | 0.24 | 0.016 | <0.050 | <0.0002 | <0.050 | <0.040 |

| Lab# | Sample I.D. | Se mg/l | Ag mg/l | Tl mg/l | V mg/l |
|---|---|---|---|---|---|
| LB0014 | WCC-3S | <0.005 | <0.010 | <0.010 | <0.050 |

NA: Not Analyzed

Approved by A. Eaton

APPROVED
JAN 16 1992

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of CAM Metals in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38830
Report#: R85073
Phone #: 6948

Date Sampled: 11/18/91
Date Completed: 1/16/92

Date Received: 11/18/91

| Lab# | Sample I.D. | Pb mg/l | Cr VI mg/l | Co mg/l | Cr mg/l | Cd mg/l | Be mg/l |
|---|---|---|---|---|---|---|---|
| LB0348 | WCC-7S | 0.003 | 0.010 | <0.050 | 0.018 | <0.005 | <0.005 |

| Lab# | Sample I.D. | Ba mg/l | As mg/l | Sb mg/l | Hg mg/l | Mo mg/l | Ni mg/l |
|---|---|---|---|---|---|---|---|
| LB0348 | WCC-7S | 0.11 | <0.005 | <0.050 | <0.0002 | <0.050 | <0.040 |

| Lab# | Sample I.D. | Se mg/l | Ag mg/l | Tl mg/l | V mg/l |
|---|---|---|---|---|---|
| LB0348 | WCC-7S | <0.005 | <0.010 | <0.010 | <0.050 |

NA: Not Analyzed

Approved by A Eaton

APPROVED
JAN 16 1992

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of Analysis for TOTAL ORGANIC CARBON

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38830
Report#: R85071
Phone #: 6948

Date Sampled: 11/18/91
Date Analyzed: 11/19/91
Date Received: 11/18/91

| Lab# | Sample Description | Total Organic Carbon (milligrams/liter) |
|---|---|---|
| LB0348 | WCC-7S | 0.7 |

NA: Not analyzed
ND: Not detected
Minimum detection limit = 0.5 milligrams/liter

Approved by RE Olson

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of Analysis for TOTAL ORGANIC CARBON

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38864
Report#: R85291
Phone #: 6948

ate Sampled: 11/19/91
Date Analyzed: 11/22/91

Date Received: 11/19/91

| Lab# | Sample Description | Total Organic Carbon (milligrams/liter) |
|---|---|---|
| 30617 | WCC-9S | 0.9 |

NA: Not analyzed
ND: Not detected
Minimum detection limit = 0.5 milligrams/liter

Approved by RE Ubon

APPROVED
NOV 26 1991

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of Analysis for
# TOTAL ORGANIC CARBON

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38807
Report#: R84818
Phone #: 6948

Date Sampled: 11/15/91
Date Analyzed: 11/19/91

Date Received: 11/15/91

| Lab# | Sample Description | Total Organic Carbon (milligrams/liter) |
|---|---|---|
| LB0175 | WCC-1-D | 0.7 |

NA: Not analyzed
ND: Not detected
Minimum detection limit = 0.5 milligrams/liter

Approved by RE Olson

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of Inorganic Analyses

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38776
Report#: R84577
Phone #: 6948

Date Sampled: 11/14/91
Date Completed: 12/9/91

Date Received: 11/14/91

| Lab# | Sample I.D. | COD mg/l |
|---|---|---|
| 30014 | WCC-3S | 290 |

NA: Not Analyzed

Approved by RE Olson

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of Inorganic Analyses

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38830
Report#: R85069
Phone #: 6948

ate Sampled: 11/18/91
ate Completed: 12/9/91

Date Received: 11/18/91

| Lab# | Sample I.D. | COD mg/l |
|---|---|---|
| B0348 | WCC-7S | 56 |

NA: Not Analyzed

pproved by RE Olson

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of Inorganic Analyses

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38864
Report#: R85289
Phone #: 6948

Date Sampled: 11/19/91
Date Completed: 12/9/91

Date Received: 11/19/91

| Lab# | Sample I.D. | COD mg/l |
|---|---|---|
| 30617 | WCC-9S | 20 |

RECEIVED
DEC 19 1991
HAZ. WASTE
JAMES M. MONTGOMERY
CONSULTING ENGINEERS, INC.
PASADENA

NA: Not Analyzed

Approved by RE Olson

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of Inorganic Analyses

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38807
Report#: R84816
Phone #: 6948

Date Sampled: 11/15/91
Date Completed: 12/9/91

Date Received: 11/15/91

| Lab# | Sample I.D. | COD mg/l |
|---|---|---|
| 30175 | WCC-1-D | 10 |

NA: Not Analyzed

Approved by REOlson

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of General Mineral Analysis

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38776
Report#: R84580
Phone #: 6948

Date Sampled: 11/14/91
Date Completed: 12/11/91
Date Received: 11/14/91

Sample Lab Number: LB0014 Sample ID: WCC-3S

| CATIONS: | (mg/l) | (meq/l) |
|---|---|---|
| Sodium | 90 | 3.91 |
| Potassium | 5.2 | 0.13 |
| Calcium | 115 | 5.75 |
| Magnesium | 38 | 3.17 |

CATION SUM = 13.0 meq/l

| ANIONS: | (mg/l) | (meq/l) |
|---|---|---|
| Bicarbonate | 396 | 6.48 |
| Carbonate | 0.48 | 0.02 |
| Chloride | 300 | 8.45 |
| Sulfate | 42 | 0.88 |
| Nitrate-N | <0.3 | ND |
| Fluoride | 0.19 | 0.01 |
| Hydroxide | 0.00 | 0.00 |

ANION SUM = 15.8 meq/l

OTHER WATER QUALITY PARAMETERS DETERMINED (mg/l):

| | |
|---|---|
| pH (unitless) | 7.2 |
| Conductance (umho/cm) | 1460 |
| Alkalinity | 325 |
| TDS | 820 |
| Hardness | 446 |
| Langelier Index | 0.2 |
| pH of CaCO3 saturation (25C) | 7.0 |
| pH of CaCO3 saturation (60C) | 6.5 |
| Free CO2 (25C) | 50. |

| | |
|---|---|
| Copper | 0.018 |
| Iron | 5.3 |
| Manganese | 1.9 |
| Surfactants | <0.05 |
| Zinc | 0.095 |
| Aluminum | 2.8 |

NA: Not Analyzed ND: Not Detected

Approved by RE Olson

APPROVED
DEC 27 1991

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of General Mineral Analysis

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38830
Report#: R85072
Phone #: 6948

Date Sampled: 11/18/91
Date Completed: 12/26/91
Date Received: 11/18/91

Sample Lab Number: LB0348 Sample ID: WCC-7S

| CATIONS: | (mg/l) | (meq/l) |
|---|---|---|
| Sodium | 78 | 3.39 |
| Potassium | 6.9 | 0.18 |
| Calcium | 81 | 4.05 |
| Magnesium | 24 | 2.00 |

CATION SUM = 9.62 meq/l

| ANIONS: | (mg/l) | (meq/l) |
|---|---|---|
| Bicarbonate | 146 | 2.39 |
| Carbonate | 0.42 | 0.01 |
| Chloride | 215 | 6.06 |
| Sulfate | 20 | 0.42 |
| Nitrate-N | 1.9 | 0.14 |
| Fluoride | 0.24 | 0.01 |
| Hydroxide | 0.00 | 0.00 |

ANION SUM = 9.03 meq/l

OTHER WATER QUALITY PARAMETERS DETERMINED (mg/l):

| | | | |
|---|---|---|---|
| pH (unitless) | 7.6 | Copper | 0.019 |
| Conductance (umho/cm) | 1120 | Iron | 1.7 |
| Alkalinity | 120 | Manganese | 0.041 |
| TDS | 650 | Surfactants | <0.05 |
| Hardness | 303 | Zinc | 0.021 |
| Langelier Index | 0.1 | Aluminum | 2.1 |
| pH of CaCO3 saturation (25C) | 7.5 | | |
| pH of CaCO3 saturation (60C) | 7.0 | | |
| Free CO2 (25C) | 7.3 | | |

RECEIVED
DEC 31 1991
HAZ. WASTE
PASADENA
JAMES M. MONTGOMERY
CONSULTING ENGINEERS, INC.

NA: Not Analyzed ND: Not Detected

Approved by RE Ober

APPROVED
DEC 27 1991

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of General Mineral Analysis

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38807
Report#: R84819
Phone #: 6948

Date Sampled: 11/15/91
Date Completed: 12/20/91
Date Received: 11/15/91

Sample Lab Number: LB0175 Sample ID: WCC-1-D

| CATIONS: | (mg/l) | (meq/l) |
|---|---|---|
| Sodium | 55 | 2.39 |
| Potassium | 4.0 | 0.10 |
| Calcium | 53 | 2.65 |
| Magnesium | 15 | 1.25 |

| ANIONS: | (mg/l) | (meq/l) |
|---|---|---|
| Bicarbonate | 230 | 3.78 |
| Carbonate | 0.77 | 0.03 |
| Chloride | 92 | 2.59 |
| Sulfate | 33 | 0.69 |
| Nitrate-N | <0.2 | ND |
| Fluoride | 0.33 | 0.02 |
| Hydroxide | 0.00 | 0.00 |

CATION SUM = 6.39 meq/l

ANION SUM = 7.1 meq/l

OTHER WATER QUALITY PARAMETERS DETERMINED (mg/l):

| | | | |
|---|---|---|---|
| pH (unitless) | 7.7 | Copper | 0.014 |
| Conductance (umho/cm) | 705 | Iron | 0.57 |
| Alkalinity | 190 | Manganese | 0.077 |
| TDS | 400 | Surfactants | <0.05 |
| Hardness | 195 | Zinc | 0.039 |
| Langelier Index | 0.2 | Aluminum | 1.5 |
| pH of CaCO3 saturation (25C) | 7.5 | | |
| pH of CaCO3 saturation (60C) | 7.0 | | |
| Free CO2 (25C) | 9.2 | | |

NA: Not Analyzed ND: Not Detected

Approved by RE Olson

APPROVED
DEC 24 1991

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

| | |
|---|---|
| Lab Number: | LB0713 |
| Sample I.D.: | DAC-P1 |

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| 4-Bromofluorobenzene | 101 | 86-115 |
| 1,2-Dichloroethane-d4 | 99 | 76-114 |
| Toluene-d8 | 99 | 88-110 |

Note: Results of this sample were given in milligrams/liter instead of micrograms/liter due to high concentration of trichloroethene in the sample.

ND: Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38883
Report#: R85358
Phone #: 6948

Date Sampled: 11/20/91
Date Analyzed: 11/27/91
Date Received: 11/20/91

Lab Number: LB0714
Sample I.D.: DAC-TB-2

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 5.0 |
| Acrylonitrile | ND | 5.0 |
| Benzene | ND | 2.5 |
| Bromoform | ND | 2.5 |
| Carbon Tetrachloride | ND | 2.5 |
| Chlorobenzene | ND | 2.5 |
| Dibromochloromethane | ND | 2.5 |
| Chloroethane | ND | 5.0 |
| 2-Chloroethylvinylether | ND | 5.0 |
| Chloroform | ND | 2.5 |
| Dichlorobromomethane | ND | 2.5 |
| 1,1-Dichloroethane | ND | 2.5 |
| 1,2-Dichloroethane | ND | 2.5 |
| 1,1-Dichloroethene | ND | 2.5 |
| 1,2-Dichloropropane | ND | 2.5 |
| Ethylbenzene | ND | 2.5 |
| Methyl Bromide | ND | 5.0 |
| Methyl Chloride | ND | 5.0 |
| Methylene Chloride | 34 | 15 |
| 1,1,2,2-Tetrachloroethane | ND | 2.5 |
| Tetrachloroethene | ND | 2.5 |

ND: Not Detected
NA: Not Analyzed

Approved by K E C Lo

APPROVED
DEC 0 5 1991

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

Lab Number: LB0714
Sample I.D.: DAC-TB-2

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| oluene | ND | 2.5 |
| 1,1,1-Trichloroethane | ND | 2.5 |
| ,1,2-Trichloroethane | ND | 2.5 |
| richloroethene | 2.5 | 2.5 |
| Vinyl Chloride | ND | 5.0 |
| trans-1,3-Dichloropropene | ND | 2.5 |
| is-1,3-Dichloropropene | ND | 2.5 |
| rans-1,2-Dichloroethene | ND | 2.5 |
| cis-1,2-Dichloroethene | ND | 2.5 |
| richlorofluoromethane | ND | 5.0 |
| ,p-Xylenes | ND | 2.5 |
| 1,2-Dichlorobenzene | ND | 2.5 |
| ,3-Dichlorobenzene | ND | 2.5 |
| ,4-Dichlorobenzene | ND | 2.5 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| cetone | ND | 50 |
| 2-Butanone | ND | 5.0 |
| arbon disulfide | ND | 2.5 |
| -Hexanone | ND | 5.0 |
| 4-Methyl-2-Pentanone | ND | 5.0 |
| tyrene | ND | 2.5 |
| etrahydrofuran | ND | 50 |
| vinyl Acetate | ND | 25 |
| o-Xylene | ND | 2.5 |

D: Not Detected
A: Not Analyzed

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

ab Number: LB0714
Sample I.D.: DAC-TB-2

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| -Bromofluorobenzene | 101 | 86-115 |
| 1,2-Dichloroethane-d4 | 99 | 76-114 |
| Toluene-d8 | 100 | 88-110 |

Note: Methylene chloride and trichloroethene were not detected in the associated stationary blank.
None of the target analytes was detected in the method blank analyzed immediately before this travel blank.

ND: Not Detected
: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Job#: 1220.0090
PO#:
Workorder#: W38864
Report#: R85295
Phone #: 6948

Date Sampled: 11/19/91
Date Analyzed: 11/27/91
Date Received: 11/19/91

Lab Number: LB0621
Sample I.D.: TB-1 11/19/91

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 50 |
| Acrylonitrile | ND | 20 |
| Benzene | ND | 1.0 |
| Bromoform | ND | 5.0 |
| Carbon Tetrachloride | ND | 5.0 |
| Chlorobenzene | ND | 5.0 |
| Dibromochloromethane | ND | 5.0 |
| Chloroethane | ND | 10 |
| 2-Chloroethylvinylether | ND | 10 |
| Chloroform | ND | 5.0 |
| Dichlorobromomethane | ND | 5.0 |
| 1,1-Dichloroethane | ND | 5.0 |
| 1,2-Dichloroethane | ND | 5.0 |
| 1,1-Dichloroethene | ND | 5.0 |
| 1,2-Dichloropropane | ND | 5.0 |
| Ethylbenzene | ND | 5.0 |
| Methyl Bromide | ND | 10 |
| Methyl Chloride | ND | 10 |
| Methylene Chloride | 30 | 5.0 |
| 1,1,2,2-Tetrachloroethane | ND | 5.0 |
| Tetrachloroethene | ND | 5.0 |

ND: Not Detected
NA: Not Analyzed

Approved by R E Olson

APPROVED
DEC 10 1991

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

Lab Number: LB0621
Sample I.D.: TB-1 11/19/91

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| oluene | ND | 5.0 |
| 1,1,1-Trichloroethane | ND | 5.0 |
| ,1,2-Trichloroethane | ND | 5.0 |
| richloroethene | ND | 5.0 |
| Vinyl Chloride | ND | 10 |
| trans-1,3-Dichloropropene | ND | 5.0 |
| is-1,3-Dichloropropene | ND | 5.0 |
| rans-1,2-Dichloroethene | ND | 5.0 |
| cis-1,2-Dichloroethene | ND | 5.0 |
| richlorofluoromethane | ND | 5.0 |
| otal Xylenes | ND | 5.0 |
| 1,2-Dichlorobenzene | ND | 5.0 |
| ,3-Dichlorobenzene | ND | 5.0 |
| ,4-Dichlorobenzene | ND | 5.0 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| cetone | ND | 10 |
| 2-Butanone | ND | 10 |
| arbon disulfide | ND | 5.0 |
| -Hexanone | ND | 10 |
| 4-Methyl-2-Pentanone | ND | 10 |
| tyrene | ND | 5.0 |
| inyl Acetate | ND | 10 |

D: Not Detected
NA: Not Analyzed

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

| | |
|---|---|
| Lab Number: | LB0621 |
| Sample I.D.: | TB-1 11/19/91 |

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| -Bromofluorobenzene | 95 | 92-113 |
| 1,2-Dichloroethane-d4 | 101 | 92-133 |
| Toluene-d8 | 102 | 89-114 |

Note: Results for this sample were submitted to Montgomery Laboratories by Core Laboratories.

ND: Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of GC/MS Analysis for BASE/NEUTRAL/ACID EXTRACTABLE ORGANICS in Water

| | | | |
|---|---|---|---|
| Douglas Aircraft Co. | | Job#: | 1220.0090 |
| ** | | PO#: | |
| ** | | Workorder#: | W38776 |
| **, ** ** | | Report#: | R84579 |
| Attn: Majid Rasouli | | Phone #: | 6948 |

| | | | |
|---|---|---|---|
| Date Sampled: | 11/14/91 | Date Received: | 11/14/91 |
| Date Extracted: | 11/18/91 | Date Analyzed: | 11/29/91 |

| | |
|---|---|
| Lab Number: | LB0014 |
| Sample I.D.: | WCC-3S |

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| BASE/NEUTRAL EXTRACTABLE-PRIORITY POLLUTANTS: | | |
| Acenaphthene | ND | 12.5 |
| Acenaphthylene | ND | 12.5 |
| Anthracene | ND | 12.5 |
| Benzidine | ND | 125 |
| Benzo(a)anthracene | ND | 12.5 |
| Benzo(a)pyrene | ND | 12.5 |
| Benzo(g,h,i)perylene | ND | 25 |
| Benzo(b)fluoranthene | ND | 12.5 |
| Benzo(k)fluoranthene | ND | 12.5 |
| bis(2-Chloroethoxy)methane | ND | 25 |
| bis(2-Choroethyl)ether | ND | 25 |
| bis(2-Chloroisopropyl)ether | ND | 25 |
| bis(2-Ethylhexyl)phthalate | ND | 50 |
| 4-Bromophenylphenylether | ND | 12.5 |
| Butylbenzylphthalate | ND | 12.5 |
| 2-Chloronaphthalene | ND | 12.5 |
| 4-Chlorophenylphenylether | ND | 12.5 |
| Chrysene | ND | 12.5 |
| Dibenzo(a,h)anthracene | ND | 25 |
| 1,2-Dichlorobenzene | ND | 12.5 |

ND: Not Detected
NA: Not Analyzed

Approved by R E Olson

RECEIVED
HAZ. WASTE
DEC 1 0 1991
PASADENA
JAMES M. MONTGOMERY
CONSULTING ENGINEERS, INC.

APPROVED
DEC 0 5 1991

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

## ACKNOWLEDGMENT OF SAMPLES RECEIVED

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Acct#: 1220.0090
PO#:

Sample date: 11/14/91
WO#: W38776

The following samples were received from you on 11/14/91. They have been scheduled for the tests listed beside each sample. If this information is not correct, please contact Client Services at 818-568-6500. Thank you for using Montgomery Laboratories.

| Lab# | Sample Identification | Tests Scheduled | | | |
|---|---|---|---|---|---|
| LB0014 | WCC-3S | COD | VOAPP | BNA | F |
| | | ALK | CA | CL | CU |
| | | FE | K | MG | MN |
| | | NA | PH | EC | SO4 |
| | | MBAS | TDS | ZN | NO3 |
| | | AL | PB | CU | CRVI |
| | | CO | CR | CD | BE |
| | | BA | AS | SB | HG |
| | | MO | NI | SE | AG |
| | | TL | V | ZN | |
| LB0015 | WCC-3D | VOAPP | | | |

## Test Acronymn Description

| Test Acronym | Description |
|---|---|
| COD | Chemical Oxygen Demand, Total-Water |
| VOAPP | Volatile Organics Analysis, in Water-Water |
| BNA | BNA Extractable Organics Analysis, in Water-Water |
| F | Fluoride Analysis-Water |
| ALK | Alkalinity Analysis-Water |
| CA | Calcium Analysis-Water |
| CL | Chloride Analysis-Water |

* Rush

| | | | | | | |
|---|---|---|---|---|---|---|
| | McDONNEL DOUGLAS AIRCRAFT COMPANY | | | | | |
| | | TORRANCE FACILITY | | | | |
| DATE | WELL NO. | WATER LEVEL (ft) | PID (final) (ppm) | PID (well) (ppm) | EC (umhos) | pH |
| 11/13/91 | WCC-3D | 69 | ND | 5 to 10 | 590 | 7.6 |
| 11/14/91 | MCC-3S | 69.87 | ND | 8 to 13 | 1500 | 7 |
| 11/15/91 | MCC-11S | 68.26 | * | * | * | * |
| | MCC-11S | | ND | 2-Jan | 1050 | 7.2 |
| 11/15/91 | WCC-8S | 69.32 | ND | 30 to 100 | 1100 | 7 |
| 11/15/91 | WCC-1D | 69.64 | ND | 40 to 80 | 610 | 7.2 |
| 11/18/91 | WCC-1S | 69.63 | no remark | ND | 1000 | 7.6 |
| 11/18/91 | WCC-4S | 68.66 | ND | 0 to 2 | 950 | 7 |
| 11/18/91 | WCC-7S | 67.62 | no remark | 3 to 7 | 860 | 6.9 |
| 11/18/91 | WCC-12S | 63.2 | no remark | no remark | 980 | 6.9 |
| 11/19/91 | WCC-9S | 66.45 | no remark | no remark | 760 | 7 |
| 11/19/91 | WCC-5S | 67.38 | no remark | ND | 400 | 8.1 |
| 11/19/91 | WCC-6S | 70.2 | * | ND | * | * |
| 11/19/91 | WCC-2S | 69.5 | ND | 10 to 15 | no remark | no remark |
| 11/20/91 | WCC-10S | 69.68 | no remark | 1.5 | 1100 | 8.3 |
| 11/20/91 | DAC-P1 | 69.86 | 0.2 | 9 | 1800 | 7.2 |
| ND = NOT DETECTED | | | | | | |
| * = NO MEASUREMENT COULD BE DONE | | | | | | |



BOE-C6-0015143

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

| | |
|---|---|
| ab Number: | LB0015 |
| Sample I.D.: | WCC-3D |

| Compound | Concentration (micrograms/liter) | Detection Limit (micrograms/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| oluene | ND | 5.0 |
| 1,1,1-Trichloroethane | 60 | 5.0 |
| ,1,2-Trichloroethane | ND | 5.0 |
| richloroethene | ND | 5.0 |
| vinyl Chloride | ND | 10 |
| trans-1,3-Dichloropropene | ND | 5.0 |
| is-1,3-Dichloropropene | ND | 5.0 |
| ans-1,2-Dichloroethene | ND | 5.0 |
| cis-1,2-Dichloroethene | ND | 5.0 |
| richlorofluoromethane | ND | 5.0 |
| otal Xylenes | ND | 5.0 |
| 1,2-Dichlorobenzene | ND | 5.0 |
| 3-Dichlorobenzene | ND | 5.0 |
| 4-Dichlorobenzene | ND | 5.0 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| etone | ND | 10 |
| 2-Butanone | ND | 10 |
| arbon disulfide | ND | 5.0 |
| -Hexanone | ND | 10 |
| 4-Methyl-2-Pentanone | ND | 10 |
| Styrene | ND | 5.0 |
| nyl Acetate | ND | 10 |

ND: Not Detected
NA: Not Analyzed

Report of GC/MS Analysis for
VOLATILE ORGANICS
in Water

| | |
|---|---|
| ab Number: | LB0015 |
| Sample I.D.: | WCC-3D |

| Compound | Recovery ( % ) | QC Limits ( % ) |
|---|---|---|
| SURROGATE: | | |
| -Bromofluorobenzene | 104 | 92-113 |
| 1,2-Dichloroethane-d4 | 99 | 92-133 |
| Toluene-d8 | 105 | 89-114 |

Note: Results for this sample were submitted to Montgomery Laboratories by Core Laboratories.

ND: Not Detected
NA: Not Analyzed

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

CONSULTING ENGINEERS, INC.

Job#: 1220.0090
PO#:
Workorder#: W38883
Report#: R85357
Phone #: 6948

Date Sampled: 11/20/91
Date Analyzed: 11/27/91
Date Received: 11/20/91

Lab Number: LB0713
ample I.D.: DAC-P1

| ompound | Concentration (milligrams/liter) | Detection Limit (milligrams/liter) |
|---|---|---|
| OLATILE PRIORITY POLLUTANTS: | | |
| Acrolein | ND | 10 |
| crylonitrile | ND | 10 |
| enzene | ND | 5.0 |
| Bromoform | ND | 5.0 |
| arbon Tetrachloride | ND | 5.0 |
| hlorobenzene | ND | 5.0 |
| ibromochloromethane | ND | 5.0 |
| Chloroethane | ND | 10 |
| -Chloroethylvinylether | ND | 10 |
| hloroform | ND | 5.0 |
| Dichlorobromomethane | ND | 5.0 |
| ,1-Dichloroethane | ND | 5.0 |
| ,2-Dichloroethane | ND | 5.0 |
| 1,1-Dichloroethene | ND | 5.0 |
| ,2-Dichloropropane | ND | 5.0 |
| thylbenzene | ND | 5.0 |
| ethyl Bromide | ND | 10 |
| Methyl Chloride | ND | 10 |
| ethylene Chloride | ND | 30 |
| ,1,2,2-Tetrachloroethane | ND | 5.0 |
| Tetrachloroethene | ND | 5.0 |

D: Not Detected
NA: Not Analyzed

pproved by K E Olson

APPROVED
DEC 0 4 1991

# Report of GC/MS Analysis for VOLATILE ORGANICS in Water

ab Number: LB0713
Sample I.D.: DAC-P1

| Compound | Concentration (milligrams/liter) | Detection Limit (milligrams/liter) |
|---|---|---|
| VOLATILE PRIORITY POLLUTANTS (continued): | | |
| oluene | ND | 5.0 |
| 1,1,1-Trichloroethane | ND | 5.0 |
| 1,1,2-Trichloroethane | ND | 5.0 |
| richloroethene | 43 | 5.0 |
| inyl Chloride | ND | 10 |
| trans-1,3-Dichloropropene | ND | 5.0 |
| is-1,3-Dichloropropene | ND | 5.0 |
| rans-1,2-Dichloroethene | ND | 5.0 |
| cis-1,2-Dichloroethene | ND | 5.0 |
| richlorofluoromethane | ND | 10 |
| ,p-Xylenes | ND | 5.0 |
| 1,2-Dichlorobenzene | ND | 5.0 |
| 1,3-Dichlorobenzene | ND | 5.0 |
| ,4-Dichlorobenzene | ND | 5.0 |
| HAZARDOUS SUBSTANCES COMPOUNDS: | | |
| etone | ND | 100 |
| 2-Butanone | ND | 10 |
| arbon disulfide | ND | 5.0 |
| -Hexanone | ND | 10 |
| 4-Methyl-2-Pentanone | ND | 10 |
| Styrene | ND | 5.0 |
| etrahydrofuran | ND | 100 |
| inyl Acetate | ND | 50 |
| o-Xylene | ND | 5.0 |

ND: Not Detected
A: Not Analyzed

## Test Acronymn Description

| Test Acronym | Description |
|---|---|
| CU | Copper Analysis-Water |
| FE | Iron Analysis-Water |
| K | Potassium Analysis-Water |
| MG | Magnesium Analysis-Water |
| MN | Manganese Analysis-Water |
| NA | Sodium Analysis-Water |
| PH | pH Analysis-Water |
| EC | Specific Conductance Analysis-Water |
| SO4 | Sulfate Analysis-Water |
| MBAS | Surfactant Analysis (MBAS)-Water |
| TDS | Total Dissolved Solids Analysis-Water |
| ZN | Zinc Analysis-Water |
| NO3 | Nitrate by I.C.-Water |
| AL | Aluminum Analysis-Water |
| PB | Lead Analysis-Water |
| CRVI | Chromium VI Analysis-Water |
| CO | Cobalt Analysis-Water |
| CR | Chromium Analysis, Total-Water |
| CD | Cadmium Analysis-Water |
| BE | Beryllium Analysis-Water |
| BA | Barium Analysis-Water |
| AS | Arsenic Analysis-Water |
| SB | Antimony Analysis-Water |
| HG | Mercury Analysis-Water |
| MO | Molybdenum Analysis-Water |
| NI | Nickel Analysis-Water |
| SE | Selenium Analysis, Total-Water |
| AG | Silver Analysis-Water |
| TL | Thallium Analysis-Water |
| V | Vanadium Analysis-Water |

* Rush

JMM James M. Montgomery
Consulting Engineers Inc.

# CHAIN OF CUSTODY RECORD

DESTINATION: MONTGOMERY LABORATORIES ☑
OTHER: _____ ☐

PROJECT NAME: P.N.C
PROJECT JOB #: 1220 0090
SAMPLER(S): PRINTED NAME AND SIGNATURE: PETER NIELSEN [signature]

| SAMPLE I.D. | DATE OF COLLECTION | TIME OF COLLECTION | GRAB | COMP | SAMPLE LOCATION | NUMBER/SIZE OF CONTAINERS | VOA | BNA | CAMMET | CR VI | ANIONS | COD | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WCC-3D | 11-14-91 | | | | | 3 40 mL | X | | | | | | |
| WCC-3S | 11-14-91 | 13:20 | X | | P.N.C Turning | 10 bottles | X | X | X | X | X | X | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

| | SIGNATURE | PRINT NAME | COMPANY/TITLE | DATE | TIME |
|---|---|---|---|---|---|
| RELINQUISHED BY: | | | | | |
| RECEIVED BY: | | | | | |
| RELINQUISHED BY: | | | | | |
| RECEIVED BY: | | | | | |
| RELINQUISHED BY: | [signature] | PETER NIELSEN | JMM Hydrogeologist | 11-14-91 | 11:45 |
| RECEIVED BY (LAB): | [signature] | Melissa Hudson | JMM Lab | 11-14-91 | 11:45 |

C-O-C No.

ORIGINAL COPY: SEND WITH SAMPLE YELLOW COPY: RETAINED BY SAMPLER

PAGE 1 OF 1

BOE-C6-0015149

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

## ACKNOWLEDGMENT OF SAMPLES RECEIVED

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Acct#: 1220.0090
PO#:

Sample date: 11/15/91
WO#: W38807

The following samples were received from you on 11/15/91. They have been scheduled for the tests listed beside each sample. If this information is not correct, please contact Client Services at 818-568-6500. Thank you for using Montgomery Laboratories.

| Lab# | Sample Identification | Tests Scheduled | | | |
|---|---|---|---|---|---|
| LB0175 | WCC-1-D | COD | VOAPP | TOC | F |
| | | ALK | CA | CL | CU |
| | | FE | K | MG | MN |
| | | NA | PH | EC | SO4 |
| | | MBAS | TDS | ZN | NO3 |
| | | AL | | | |
| LB0176 | WCC-11S | VOAPP | | | |
| LB0177 | WCC-8S | VOAPP | | | |

## Test Acronymn Description

| Test Acronym | Description |
|---|---|
| COD | Chemical Oxygen Demand, Total-Water |
| VOAPP | Volatile Organics Analysis, in Water-Water |
| TOC | Organic Carbon Analysis, Total (TOC) in water-Water |
| F | Fluoride Analysis-Water |
| ALK | Alkalinity Analysis-Water |
| CA | Calcium Analysis-Water |
| CL | Chloride Analysis-Water |
| CU | Copper Analysis-Water |
| FE | Iron Analysis-Water |

* Rush

Test Acronymn Description

| Test Acronym | Description |
|---|---|
| K | Potassium Analysis-Water |
| MG | Magnesium Analysis-Water |
| MN | Manganese Analysis-Water |
| NA | Sodium Analysis-Water |
| PH | pH Analysis-Water |
| EC | Specific Conductance Analysis-Water |
| SO4 | Sulfate Analysis-Water |
| MBAS | Surfactant Analysis (MBAS)-Water |
| TDS | Total Dissolved Solids Analysis-Water |
| ZN | Zinc Analysis-Water |
| NO3 | Nitrate by I.C.-Water |
| AL | Aluminum Analysis-Water |

* Rush

JMM James M. Montgomery Consulting Engineers Inc.

# CHAIN OF CUSTODY RECORD

DESTINATION: MONTGOMERY LABORATORIES

OTHER: _____

PROJECT NAME: DAC. TORRANCE

PROJECT JOB #: 1220.0090

SAMPLER(S): PRINTED NAME AND SIGNATURE: MARK AUGUSTYN

ANALYSES REQUIRED

| SAMPLE I.D. | DATE OF COLLECTION | TIME OF COLLECTION | GRAB | COMP | SAMPLE LOCATION | NUMBER/SIZE OF CONTAINERS | VOA | TOC | [redacted] | COD | Anions/Cations | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WCC-1D | 11-15-91 | | X | | Douglas Torrance | 7 | X | X | | X | X | | |
| WCC-11S | " | | X | | Douglas Torr | 3-40ml | X | | | | | | |
| WCC-8S | " | | X | | Doug Torr | 3-40 ml | X | | | | | | |

| | SIGNATURE | PRINT NAME | COMPANY/TITLE | DATE | TIME |
|---|---|---|---|---|---|
| RELINQUISHED BY: | | | | | |
| RECEIVED BY: | | | | | |
| RELINQUISHED BY: | | | | | |
| RECEIVED BY | | | | | |
| RELINQUISHED BY | Peter J. Nielsen | PETER J. NIELSEN | JMM Hydrogeologist | 11-15-91 | 17:10 |
| RECEIVED BY (LAB) | [illegible] Hudson | [illegible] HUDSON | JMM LAB | 11/15/91 | 5:15 |

C-O-C No.

ORIGINAL COPY: SEND WITH SAMPLE YELLOW COPY: RETAINED BY SAMPLER

PAGE 1 OF 1

BOE-C6-0015152

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

## ACKNOWLEDGMENT OF SAMPLES RECEIVED

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Acct#: 1220.0090
PO#:
Sample date: 11/18/91
WO#: W38830

The following samples were received from you on 11/18/91. They have been scheduled for the tests listed beside each sample. If this information is not correct, please contact Client Services at 818-568-6500. Thank you for using Montgomery Laboratories.

| Lab# | Sample Identification | Tests Scheduled | | | |
|---|---|---|---|---|---|
| LB0348 | WCC-7S | COD | VOAPP | TOC | F |
| | | ALK | CA | CL | CU |
| | | FE | K | MG | MN |
| | | NA | PH | EC | SO4 |
| | | MBAS | TDS | ZN | NO3 |
| | | AL | PB | CU | CRVI |
| | | CO | CR | CD | BE |
| | | BA | AS | SB | HG |
| | | MO | NI | SE | AG |
| | | TL | V | ZN | BNA |
| LB0349 | WCC-12S | VOAPP | | | |
| LB0350 | WCC-4S | VOAPP | | | |
| LB0351 | WCC-1S | VOAPP | | | |

## Test Acronymn Description

| Test Acronym | Description |
|---|---|
| COD | Chemical Oxygen Demand, Total-Water |
| VOAPP | Volatile Organics Analysis, in Water-Water |
| TOC | Organic Carbon Analysis, Total (TOC) in water-Water |

* Rush

Test Acronymn Description

| Test Acronym | Description |
|---|---|
| F | Fluoride Analysis-Water |
| ALK | Alkalinity Analysis-Water |
| CA | Calcium Analysis-Water |
| CL | Chloride Analysis-Water |
| CU | Copper Analysis-Water |
| FE | Iron Analysis-Water |
| K | Potassium Analysis-Water |
| MG | Magnesium Analysis-Water |
| MN | Manganese Analysis-Water |
| NA | Sodium Analysis-Water |
| PH | pH Analysis-Water |
| EC | Specific Conductance Analysis-Water |
| SO4 | Sulfate Analysis-Water |
| MBAS | Surfactant Analysis (MBAS)-Water |
| TDS | Total Dissolved Solids Analysis-Water |
| ZN | Zinc Analysis-Water |
| NO3 | Nitrate by I.C.-Water |
| AL | Aluminum Analysis-Water |
| PB | Lead Analysis-Water |
| CRVI | Chromium VI Analysis-Water |
| CO | Cobalt Analysis-Water |
| CR | Chromium Analysis, Total-Water |
| CD | Cadmium Analysis-Water |
| BE | Beryllium Analysis-Water |
| BA | Barium Analysis-Water |
| AS | Arsenic Analysis-Water |
| SB | Antimony Analysis-Water |
| HG | Mercury Analysis-Water |
| MO | Molybdenum Analysis-Water |
| NI | Nickel Analysis-Water |
| SE | Selenium Analysis, Total-Water |
| AG | Silver Analysis-Water |
| TL | Thallium Analysis-Water |
| V | Vanadium Analysis-Water |
| BNA | BNA Extractable Organics Analysis, in Water-Water |

* Rush

JMM James M. Montgomery Consulting Engineers Inc.

# CHAIN OF CUSTODY RECORD

DESTINATION: MONTGOMERY LABORATORIES ☒
OTHER: _____ ☐

PROJECT NAME: D.A.C. Tour
PROJECT JOB #: 1220.0096
SAMPLER(S): PRINTED NAME AND SIGNATURE: PETER NIELSEN

ANALYSES REQUIRED

| SAMPLE I.D | DATE OF COLLECTION | TIME OF COLLECTION | GRAB | COMP | SAMPLE LOCATION | NUMBER/SIZE OF CONTAINERS | VOA | TOC | BNA | GEN MIN | CAMMET | CRVE | COD | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WCC-12S | 11-18-91 | 14:25 | X | | Torrance WCC-12S | 3-40ml | X | | | | | | | |
| WCC-7S | 11-18-91 | 13:40 | X | | Torrance WCC-7S | 11-bottle | X | X | X | X | X | X | X | |
| WCC-4S | 11-18-91 | 11:25 | X | | Torrance WCC-4S | 3-40ml | X | | | | | | | |
| WCC-1S | 11-18-91 | 10:15 | X | | Torrance WCC-1S | 3-40ml | X | | | | | | | |

| | SIGNATURE | PRINT NAME | COMPANY/TITLE | DATE | TIME |
|---|---|---|---|---|---|
| RELINQUISHED BY | | | | | |
| RECEIVED BY | | | | | |
| RELINQUISHED BY | | | | | |
| RECEIVED BY | | | | | |
| RELINQUISHED BY | Peter J Nielsen | PETER NIELSEN | JMM Hydrogeologist | 11-18-91 | 16:15 |
| RECEIVED BY (LAB) | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

C-O-C No.

ORIGINAL COPY SEND WITH SAMPLE YELLOW COPY: RETAINED BY SAMPLER

PAGE 1 OF 1

BOE-C6-0015155

MONTGOMERY LABORATORIES
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(818) 796-9141 / (213) 681-4255 Telex 67-5420

## ACKNOWLEDGMENT OF SAMPLES RECEIVED

Douglas Aircraft Co.
**
**
**, ** **
Attn: Majid Rasouli

Acct#: 1220.0090
PO#:
Sample date: 11/19/91
WO#: W38864

The following samples were received from you on 11/19/91. They have been scheduled for the tests listed beside each sample. If this information is not correct, please contact Client Services at 818-568-6500. Thank you for using Montgomery Laboratories.

| Lab# | Sample Identification | Tests Scheduled | | |
|---|---|---|---|---|
| LB0617 | WCC-9S | COD | VOAPP | TOC |
| LB0618 | WCC-5S | VOAPP | | |
| LB0619 | WCC-6S | VOAPP | | |
| LB0620 | WCC-2S | VOAPP | | |
| LB0621 | TB-1 11/19/91 | VOAPP | | |

## Test Acronymn Description

| Test Acronym | Description |
|---|---|
| COD | Chemical Oxygen Demand, Total-Water |
| VOAPP | Volatile Organics Analysis, in Water-Water |
| TOC | Organic Carbon Analysis, Total (TOC) in water-Water |

* Rush

203 North Golden Circle Drive
Santa Ana CA 92705
714) 835-6886
213) 581-7764
Telex 68-3421

**Woodward-Clyde Consultants**

January 18, 1988
Project No. 8741863C

Mr. Jeff Copeland
California Regional Water Quality Control Board
Los Angeles Region
107 South Broadway, Room 4027
Los Angeles, California 90012

**SUBJECT: REMEDIATION PROPOSAL FOR TANK 8T EXCAVATION AT DOUGLAS AIRCRAFT COMPANY'S TORRANCE (C6) FACILITY**

Dear Mr. Copeland:

I would like to confirm your approval of the remedial measures proposed for the Tank 8T excavation at Douglas Aircraft Company's Torrance (C6) facility. The plan approved by you was described in the letter of December 28, 1987 submitted to the Regional Water Quality Control Board. Your approval was given via a telephone call on December 31, 1987.

There exists some ambiguity as to what levels of petroleum hydrocarbon RWQCB may consider a threat to ground water. Regardless, Douglas Aircraft Company intends to proceed conservatively in the instance and tentatively plans on removing soil with hydrocarbon concentrations greater than 100 mg/kg.

Sincerely yours,

WOODWARD-CLYDE CONSULTANTS

Alistaire Callender

Alistaire Callender, Ph.D.
Project Manager

AC:lk
(ABC/ABC-002)

cc: Janet Bell, Douglas Aircraft Company
Melissa Henck, Douglas Aircraft Company
Bob Fassbender, McDonnell Douglas
Kent Adams, Douglas Aircraft Company

Consulting Engineers, Geologists
and Environmental Scientists

Offices in Other Principal Cities

Mr. Jeff Copeland

4 January 1988

that the required level of soil compaction had been achieved. With lean concrete, no compaction tests will be necessary except from the surface to a depth of two feet. No shoring is required in an excavation of this depth.

Soil put back into the excavation will have petroleum hydrocarbon concentrations less than 100 mg/kg. Most of the soil already excavated contains hydrocarbon concentrations of less than 10 mg/kg. Once the excavation has been filled and compacted, a low permeability asphalt cover will be put in place. This asphalt cover will incorporate a fabric liner, which will increase its strength and reduce its water permeability.

The bottom of the excavation will be sampled, and the samples analyzed for hydrocarbons, prior to backfilling. The results of the soil analyses and compaction tests will be submitted to the LARWQCB for review after the job has been completed. The Board will be kept verbally appraised of the remediation as it progresses.

Very truly yours,

WOODWARD-CLYDE CONSULTANTS

Alistaire Callender

Alistaire Callender, Ph.D.
Project Manager
(ABC/Copeland)

AC:lk

cc: Janet Bell, Douglas Aircraft Company
Ben Warren, Douglas Aircraft Company
Bob Fassbender, Douglas Aircraft Company

JMM James M. Montgomery
Consulting Engineers Inc.

# CHAIN OF CUSTODY RECORD

DESTINATION: MONTGOMERY LABORATORIES [X]
OTHER: _____ [ ]

PROJECT NAME: Douglas Torrance
PROJECT JOB #: 1220.0096
SAMPLER(S) PRINTED NAME AND SIGNATURE: PETER J. NIELSEN [signature]

ANALYSES REQUIRED

| SAMPLE I.D. | DATE OF COLLECTION | TIME OF COLLECTION | GRAB | COMP | SAMPLE LOCATION | NUMBER/SIZE OF CONTAINERS | VOA | TOC | COD | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WCC-5S | 11-19-91 | 11:25 | X | | Torrance | 5-40mL | X | X | X | PJN! | | | |
| WCC-9S | 11-19-91 | 10:30 | X | | Torrance | 3-40mL | X | X | X | | | | |
| WCC-6S | 11-19-91 | 13:20 | X | | Torr | 3-40mL | X | | | | | | |
| WCC-2S | 11-19-91 | 14:20 | X | | Torr | 3-40mL | X | | | | | | |
| TB-1 | 11-19-91 | | X | | Torr TB | 2-40mL | X | | | | | | Trip Blank |

| | SIGNATURE | PRINT NAME | COMPANY/TITLE | DATE | TIME |
|---|---|---|---|---|---|
| RELINQUISHED BY | | | | | |
| RECEIVED BY | | | | | |
| RELINQUISHED BY | | | | | |
| RECEIVED BY | | | | | |
| RELINQUISHED BY | [signature] | PETER J NIELSEN | JMM Hydrogeology | 11-18-91 | 15:45 |
| RECEIVED BY (LAB) | [signature] | M. DE MESA | JMM LOG IN | 11/19/91 | 3:46 |

C-O-C No.

ORIGINAL COPY SEND WITH SAMPLE YELLOW COPY RETAINED BY SAMPLER

PAGE 1 OF 1

BOE-C6-0015159