

NREAD/DDS/jc
6280/1
8 May 1984

From: Commanding General
To: Commanding Officer, Naval Regional Medical Center
Subj: Water Quality Monitoring and Related Environmental Health Considerations

Ref: (a) CG MCB CLNC ltr NREAD/DDS/th 11330/2 of 19 May 1983

Encl: (1) Weekly Chemical Analysis of Drinking Water
(2) Weekly Bacteriological Analysis of Drinking Water
(3) Weekly NPIC Ice Samples Bacteriological Analysis
(4) Analysis of Complaint Samples
(5) Analysis of Triangle Outpost Well

1. In accordance with the reference, enclosures (1) through (5) are forwarded for information.
2. Questions regarding this matter should be forwarded to Mr. Danny Sharpe, Supervisory Ecologist, extensions 2083/5003/1690.

J. I. WOOTEN
By direction

Blind copy to:
SupvChemist

CLW
0000004274

CHEMICAL ANALYSIS — WATER TREATMENT PLANTS
 MCBCL 11330/3 (REV. 3-82)

File
 DATE COLLECTED
 3/17/84

| PARAMETER | HADNOT POINT | MONTFORD POINT | TARAWA TERRACE | ONSLow BEACH | COURTHOUSE BAY | RIFLE RANGE | HOLCOMB BLVD | NEW RIVER | |
|---------------------------------|-------------------------|----------------|-------------------------|--------------|----------------|-------------|-------------------------|-----------|--|
| PH | 8.8 | 7.4 | 8.7 | 7.7 | 8.3 | 8.3 | 8.3 | 8.5 | |
| PENOLTHALEIN ALKALINITY | 4 | 0 | 8 | 0 | 8 | 8 | 18 | 24 | |
| METHYL ORANGE ALKALINITY | 16 | 150 | 56 | 156 | 180 | 176 | 58 | 166 | |
| CARBONATES AS CaCO ₃ | 8 | 0 | 16 | 0 | 16 | 16 | 36 | 48 | |
| BICARBONATES CaCO ₃ | 8 | 150 | 40 | 156 | 164 | 160 | 22 | 118 | |
| CHLORIDES AS Cl | 14 | 36 | 14 | 20 | 20 | 20 | 20 | 104 | |
| HARDNESS AS CaCO ₃ | 6.2 | 76 | 66 | 58 | 64 | 54 | 66 | 78 | |
| IRON AS Fe | 0.04 | 0.55 | 0.04 | 0.32 | 0.04 | 0.08 | 0.04 | 0.08 | |
| FLUORIDE | 1.00 0.87 | 0.16 | 1.89 0.88 | 0.18 | 0.10 | 0.09 | 0.98 0.93 | 0.53 | |
| CHLORINE RESIDUAL | 1.1 | 1.3 | 1.0 | 1.1 | 1.3 | 1.0 | 0.9 | 1.3 | |
| TURBIDITY | 0.30 | 1.20 | 0.20 0.70 | 0.30 | 0.20 | 0.50 | 0.20 0.20 | 1.40 | |
| TOTAL PHOSPHATE | | 3.85 | | | 1.30 | | | | |
| ORTHO PHOSPHATE | | 1.54 | | | 0.52 | | | | |
| META PHOSPHATE | | 2.31 | | | 0.78 | | | | |
| STABILITY | 0.3 | 0.5 | 0.1 | 0.4 | 0.0 | 0.1 | 0.2 | | |

REMARKS
 CLW
 0000004275

NOTE: All results reported in parts per million unless otherwise noted except for pH, temperature, and specific conductance. One liter of potable water is assumed to weigh one kilogram.

LABORATORY ANALYSIS BY
[Signature]

DATE OF ANALYSIS
 3/16/84

Final (1)

White Deer

CHEMICAL ANALYSIS — WATER TREATMENT PLANTS

MCBCL 11330/3 (REV. 3-82)

DATE COLLECTED
10 April 1984

| PARAMETER | HADNOT POINT | MONTFORD POINT | TARAWA TERRACE | ONSLow BEACH | COURTHOUSE BAY | RIFLE RANGE | HOLCOMB BLVD | NEW RIVER |
|-----------------------------------|--------------------|----------------|----------------|--------------|----------------|-------------|--------------|-----------|
| PH | 9.1 | 7.3 | 8.9 | 7.4 | 8.2 | 8.2 | 8.7 | 9.0 |
| PENOLTHALEIN ALKALINITY | 8 | 0 | 4 | 0 | 2 | 4 | 6 | 16 |
| METHYL ORANGE ALKALINITY | 60 | 190 | 54 | 160 | 176 | 170 | 70 | 154 |
| CARBONATES AS CaCO ₃ | 16 | 0 | 8 | 0 | 4 | 8 | 12 | 32 |
| BICARBONATES AS CaCO ₃ | 44 | 190 | 46 | 160 | 172 | 162 | 58 | 122 |
| CHLORIDES AS Cl | 8 | 32 | 8 | 16 | 14 | 14 | 10 | 98 |
| HARDNESS AS CaCO ₃ | 62 | 84 | 64 | 58 | 62 | 64 | 70 | 48 |
| IRON AS Fe | 0.04 | 0.58 | 0.04 | 1.27 | 0.04 | 0.06 | 0.04 | 0.14 |
| FLUORIDE | AM 0.85 PM 0.99 | 0.14 | 1.05 0.98 | 0.17 | 0.10 | 0.09 | 0.76 0.76 | 0.64 |
| CHLORINE RESIDUAL | 1.1 | 1.3 | 1.0 | 1.4 | 1.5 | 1.0 | 1.1 | 1.2 |
| TURBIDITY | AM PM 1.40 | 0.76 | 0.29 0.38 | 1.2 | 0.30 | 0.30 | 0.18 0.20 | 1.30 |
| TOTAL PHOSPHATE | | 2.60 | | | 1.40 | | | |
| ORTHO PHOSPHATE | | 1.26 | | | 0.25 | | | |
| META PHOSPHATE | | 1.34 | | | 1.15 | | | |
| STABILITY | +0.5 | -0.6 | +0.3 | -0.8 | -0.1 | -0.1 | +0.3 | +0.1 |

REMARKS

CLW

0000004276

NOTE: All results reported in parts per million unless otherwise noted except for pH, temperature, and specific conductance. One liter of potable water is assumed to weigh one kilogram.

LABORATORY ANALYSIS BY

Lachapelle + Burns

DATE OF ANALYSIS

10 April 1984

CHEMICAL ANALYSIS — WATER TREATMENT PLANTS
 MCBCL 11330/3 (REV. 3-82)

DATE COLLECTED

17 April 1984

| PARAMETER | HADNOT POINT | MONTFORD POINT <i>OMP JOHNSON</i> | TARAWA TERRACE | ONSLow BEACH | COURTHOUSE BAY | RIFLE RANGE | HOLCOMB BLVD | NEW RIVER | CHB PLANT | TY 1539 |
|-----------------------------------|--------------------------|--------------------------------------|----------------|--------------|----------------|-------------|--------------|-----------|--------------|------------|
| PH | 9.0 | 7.3 | 8.5 | 7.4 | 8.2 | 8.2 | 8.9 | 8.6 | 8.3 | 8.6 |
| PENOLTHALEIN ALKALINITY | 6 | 0 | 2 | 0 | 4 | 4 | 8 | 10 | 4 | 4 |
| METHYL ORANGE ALKALINITY | 54 | 184 | 64 | 138 | 170 | 170 | 60 | 150 | 174 | 64 |
| CARBONATES AS CaCO ₃ | 12 | 0 | 4 | 0 | 8 | 8 | 16 | 20 | 8 | 8 |
| BICARBONATES AS CaCO ₃ | 42 | 184 | 60 | 138 | 162 | 162 | 44 | 130 | 166 | 56 |
| CHLORIDES AS Cl | 8 | 36 | 12 | 18 | 14 | 20 | 8 | 64 | 16 | 10 |
| HARDNESS AS CaCO ₃ | 58 | 78 | 74 | 68 | 60 | 56 | 58 | 50 | 60 | 76 |
| IRON AS Fe | 0.03 | 0.60 | 0.04 | 0.27 | 0.04 | 0.07 | 0.04 | 0.13 | 0.04 | 0.04 |
| FLUORIDE | AM PM 1.15 1.19 | 0.16 | 0.98 0.01 | 0.14 | 0.12 | 0.10 | 0.98 0.89 | 0.60 | 0.12 | 1.01 |
| CHLORINE RESIDUAL | 1.0 | 1.2 | 1.1 | 1.0 | 0.9 | 1.0 | 0.9 | 1.2 | 0.8 | 1.0 |
| TURBIDITY | AM PM 2.2 | 1.1 | 0.3 0.4 | 0.3 | 0.4 | 0.6 | 0.2 0.2 | 1.0 | 0.3 | 0.3 |
| TOTAL PHOSPHATE | | 4.20 | | | 1.54 | | | | | |
| ORTHO PHOSPHATE | | 1.54 | | | 0.23 | | | | | |
| META PHOSPHATE | | 2.66 | | | 1.29 | | | | | |
| STABILITY | +0.4 | -0.5 | +0.1 | -0.5 | +0.1 | +0.1 | +0.4 | +0.2 | | |

REMARKS

CLW

0000004277

NOTE: All results reported in parts per million unless otherwise noted except for pH, temperature, and specific conductance. One liter of potable water is assumed to weigh one kilogram.

LABORATORY ANALYSIS BY
L. Schmitt

DATE OF ANALYSIS
 17 April 1984

CHEMICAL ANALYSIS — WATER TREATMENT PLANTS
 MCBCL 11330/3 (REV. 3-82)

Dr Mill
 DATE COLLECTED
 24 APRIL 1984

| PARAMETER | HADNOT POINT | MONTFORD POINT | TARAWA TERRACE | ONSLOW BEACH | COURTHOUSE BAY | RIFLE RANGE | HOLCOMB BLVD | NEW RIVER | CR 115 |
|-----------------------------------|--------------------|----------------|----------------|--------------|----------------|-------------|--------------|-----------|--------|
| PH | 8.8 | 7.2 | 8.5 | 7.4 | 8.1 | 8.2 | 8.7 | 8.8 | 7.2 |
| PENOLTHALEIN ALKALINITY | 6 | 0 | 4 | 0 | 6 | 2 | 6 | 14 | 0 |
| METHYL ORANGE ALKALINITY | 56 | 190 | 56 | 174 | 176 | 160 | 60 | 124 | 140 |
| CARBONATES AS CaCO ₃ | 12 | 0 | 8 | 0 | 12 | 4 | 12 | 28 | 0 |
| BICARBONATES AS CaCO ₃ | 44 | 190 | 48 | 174 | 164 | 156 | 48 | 96 | 140 |
| CHLORIDES AS Cl | 8 | 36 | 10 | 14 | 22 | 20 | 16 | 134 | 8 |
| HARDNESS AS CaCO ₃ | 60 | 76 | 86 | 92 | 62 | 42 | 60 | 58 | 138 |
| IRON AS Fe | 0.04 | 0.54 | 0.04 | 0.24 | 0.06 | 0.07 | 0.04 | 0.31 | 0.51 |
| FLUORIDE | AM 1.30 PM 1.26 | 0.79 | 1.3 1.33 | 0.58 | 0.58 | 0.34 | 1.13 0.83 | 1.06 | 0.34 |
| CHLORINE RESIDUAL | 1.0 | 1.3 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.3 | — |
| TURBIDITY | AM 1.5 PM 0.5 | 0.7 | 0.4 0.5 | 0.3 | 0.4 | 0.4 | 0.3 0.3 | 1.4 | 3.3 |
| TOTAL PHOSPHATE | | 4.60 | | | 1.92 | | | | |
| ORTHO PHOSPHATE | | 1.54 | | | 0.32 | | | | |
| META PHOSPHATE | | 3.06 | | | 1.60 | | | | |
| STABILITY | +0.4 | -0.5 | +0.2 | -0.4 | 0.0 | -0.1 | +0.2 | +0.2 | — |

REMARKS

CLW

0000004278

NOTE: All results reported in parts per million unless otherwise noted except for pH, temperature, and specific conductance. One liter of potable water is assumed to weigh one kilogram.

LABORATORY ANALYSIS BY *Lachelle Burns*

DATE OF ANALYSIS 24 APRIL 1984

REPORTABLE POINTS FOR SDWA

| WATER SAMPLES | MARKED | COLIFORM MF/100 ML | RESIDUAL CHLORINE | TIME | WATER SAMPLES | MARKED | COLIFORM MF/100 ML | RESIDUAL CHLORINE | TIME | LABORATORY DATA |
|---------------|--------|--------------------|-------------------|------|---------------------|--------|--------------------|-------------------|------|--|
| RR - 2 | 1 | ∅ | 0.9 | 0935 | MCAS - 3502 | 24 | ∅ | 0.2 | 0920 | TIME RECEIVED 1235-1355 |
| RR - 15 | 2 | | 0.9 | 0920 | MCAS - 2002 | 25 | | 0.5 | 0940 | DATE RECEIVED 4/3/84 |
| RR - 10 | 3 | | 0.9 | 0930 | MCAS - 2037 | 26 | | 0.6 | 0930 | ACCEPTED BY Lachapelle |
| | 4 | | | | MCAS - 1184 | 27 | | 0.9 | 1005 | DATE ANALYZED 4/3/84 |
| A-1 | 5 | | 1.0 | 0850 | | 28 | | | | ANALYSIS STARTED 1300-1355 |
| BB - 7 | 6 | | 1.2 | 0815 | NRMC - food Service | 29 | | 0.6 | 1050 | ANALYSIS FINISHED 1320-1420 |
| BB - 49 | 7 | | 1.0 | 0830 | PP - 2615 | 30 | | 0.6 | 1015 | INCUBATOR TEMP 35.0° C |
| BB - 245 | 8 | | 1.0 | 0820 | PP - 2600 | 31 | | 0.5 | 1020 | PROCESSED BY Lachapelle |
| | 9 | | | | BM - 5400 | 32 | | 0.7 | 1035 | |
| BA - 103 | 10 | | 1.0 | 1045 | BM - 1985 | 33 | | 0.6 | 1030 | CUSTODY DATA |
| BA - 101 | 11 | | 1.0 | 1050 | LCH - 4022 | 34 | | 0.6 | 1100 | DATE |
| | 12 | | | | LCH - 4002 | 35 | | 0.5 | 1105 | TIME |
| TT - 38 | 13 | | 1.0 | 0900 | | 36 | | | | SIGNATURE |
| TT - 43 | 14 | | 0.9 | 0915 | H - 1 | 37 | | 1.0 | 1000 | DATE |
| TT - 2888 | 15 | | 0.9 | 0930 | H - 16 | 38 | | 0.8 | 1005 | TIME |
| | 16 | | | | FC - 303 | 39 | | 1.0 | 0850 | SIGNATURE |
| 1407 | 17 | | 0.8 | 1000 | FC - 420 | 40 | | 1.0 | 0900 | |
| M - 139 | 18 | | 1.0 | 1115 | FC - 540 | 41 | | 1.0 | 0910 | COPY TO: |
| M - 422 | 19 | | 1.1 | 1030 | HP - 236 | 42 | | 0.8 | 0950 | <input checked="" type="checkbox"/> UTIL DIR |
| | 20 | | | | HP - 540 | 43 | | 0.7 | 0840 | <input type="checkbox"/> WATER TREATMENT |
| CG - 1 | 21 | | 0.3 | 0830 | HP - 1300 | 44 | | 0.5 | 0830 | <input type="checkbox"/> PMU <input type="checkbox"/> MCAS PMO |
| TC - 830 | 22 | | 0.6 | 0910 | HP - 15 | 45 | | 1.0 | 1145 | <input type="checkbox"/> NREAD <input type="checkbox"/> FILE |
| TC - 501 | 23 | ∅ | 0.8 | 0900 | | 146 | | | | <input type="checkbox"/> |

CLW

REMARKS
 Resample from MCAS 1277 Negative

000004279

SIGNATURE
Robert Lachapelle

Encl (2)

BACTERIOLOGICAL ANALYSIS OF WATER

NON-REPORTABLE

| WATER SAMPLES | MARKED | COLIFORM COUNT M-ENDO MEDIUM | RESIDUAL CHLORINE | pH | TIME |
|----------------------|--------|---------------------------------|----------------------|-----|------|
| BB-97 | | ∅ | 0.5 | | 0845 |
| FC-19 | | ∅ | trace | | 0935 |
| SH-8 | | ∅ | 2.0+ | | 0920 |
| M.P. POOL | | ∅ | 1.0 | 7.0 | 1115 |
| #2 POOL | | ∅ | 0.9 | 7.6 | 0950 |
| #5 POOL | | ∅ | 0.8 | 7.6 | 0840 |
| P. P. POOL | | | | | |
| P. P. BABY POOL | | | | | |
| MCAS E-POOL | | | | | |
| MCAS O-POOL | | | | | |
| MCAS BABY POOL | | | | | |
| Ice Sample bldg 1300 | | ∅ | | | 0830 |
| | | | | | |
| | | | | | |

REMARKS

FC-19-9 Non-coliform

CLW

0000004280

BACTERIOLOGICAL ANALYSIS OF WATER
 MCBCL 11330/4 (REV. 7-83)

DATE COLLECTED

10 APR 84

REPORTABLE POINTS FOR SDWA

| WATER SAMPLES | MARKED | COLIFORM MF/100 ML | RESIDUAL CHLORINE | TIME | WATER SAMPLES | MARKED | COLIFORM MF/100 ML | RESIDUAL CHLORINE | TIME | LABORATORY DATA |
|---------------|--------|--------------------|-------------------|------|------------------------------|--------|--------------------|-------------------|------|--|
| RR - 3 | 1 | ∅ | 1.0 | 0925 | MCAS - 3502 | 24 | ∅ | 0.2 | 0925 | TIME RECEIVED |
| RR - 15 | 2 | I | 1.0 | 0920 | MCAS - 2002 | 25 | I | 0.9 | 0935 | DATE RECEIVED 10 APR 84 |
| RR - 6 | 3 | I | 1.0 | 0930 | MCAS - 4157 | 26 | I | 0.7 | 0915 | ACCEPTED BY |
| | 4 | | | | MCAS - 1191 | 27 | I | 0.7 | 0945 | DATE ANALYZED 10 APR 84 |
| A-1 | 5 | ∅ | 1.0 | 0900 | | 28 | | | | ANALYSIS STARTED |
| E | 6 | I | 1.2 | 0825 | NRMC - Food Service | 29 | ∅ | 0.7 | 1222 | ANALYSIS FINISHED |
| BB - 49 | 7 | I | 1.2 | 0850 | PP - 2615 | 30 | I | 0.6 | 1210 | INCUBATOR TEMP 35.0°C |
| BB - 45 | 8 | I | 1.2 | 0820 | PP - 2602 | 31 | I | 0.6 | 1200 | PROCESSED BY Huneycutt |
| | 9 | | | | BM - 5400 | 32 | I | 0.5 | 1240 | |
| BA - 103 | 10 | ∅ | 1.3 | 1030 | BM - 5670 | 33 | I | 0.5 | 1252 | CUSTODY DATA |
| BA - 101 | 11 | I | 1.3 | 1040 | LCH - 4022 | 34 | I | 0.7 | 1303 | DATE |
| | 12 | | | | LCH - 4023 | 35 | I | 0.6 | 1317 | TIME |
| TT - 38 | 13 | ∅ | 1.0 | 0830 | | 36 | | | | SIGNATURE |
| TT - 43 | 14 | I | 1.0 | 0845 | H - 1 ST Fl. Head | 37 | ∅ | 0.5 | 1142 | DATE |
| TT - 1373 | 15 | I | 0.9 | 0915 | H - 16 | 38 | I | 0.5 | 1134 | TIME |
| | 16 | | | | FC - 303 | 39 | I | 0.7 | 1037 | SIGNATURE |
| CK - 1502 | 17 | ∅ | 0.7 | 1015 | FC - 420 | 40 | I | 0.6 | 1028 | |
| M - 139 | 18 | I | 1.2 | 1100 | FC New Snack Bar | 41 | I | 0.6 | 1022 | COPY TO: |
| M - 324 | 19 | I | 1.1 | 0945 | HP - 236 | 42 | I | 0.5 | 1149 | <input checked="" type="checkbox"/> UTIL DIR |
| | 20 | | | | HP - 540 | 43 | I | 0.6 | 1122 | <input type="checkbox"/> WATER TREATMENT |
| CG - 1 | 21 | ∅ | 0.2 | 0905 | HP - 1300 | 44 | I | 0.4 | 1005 | <input type="checkbox"/> PMU <input type="checkbox"/> MCAS PMO |
| TC - 830 | 22 | I | 1.0 | 0850 | HP - 1301 | 45 | I | 0.5 | 1016 | <input type="checkbox"/> NREAD <input type="checkbox"/> FILE |
| TC - 650 | 23 | I | 1.0 | 0840 | | 46 | I | | | <input type="checkbox"/> |

REMARKS

#2 had 137 non-coliform colonies
 #22 had 3 non-coliform colonies

CLW

SIGNATURE

0000004281

Huneycutt 4/11/84

ACTERIOLOGICAL ANALYSIS OF WATER

NON-REPORTABLE

| WATER SAMPLES | MARKED | COLIFORM COUNT M-ENDO MEDIUM | RESIDUAL CHLORINE | pH | TIME |
|-----------------|--------|---------------------------------|----------------------|-----|------|
| BB-97 | | Ø | 0.6 | | 0840 |
| FC-19 | | I | 2.0 | | 1103 |
| SH-8 | | I | 1.5 | | 1047 |
| I.P. L | | Ø | 1.5 | 7.4 | 1115 |
| 12 POOL | | I | 0.7 | 7.4 | 1156 |
| 15 POOL | | I | 1.3 | 7.2 | 1115 |
| P. P. POOL | | | | | |
| P. P. BABY POOL | | | | | |
| MCAS E-POOL | | | | | |
| MCAS O-POOL | | | | | |
| MCAS BABY POOL | | | | | |
| CE 8/d 1300 | | Ø | | | 1040 |

REMARKS

CLW

0000004282

BACTERIOLOGICAL ANALYSIS OF WATER

MCBCL 11330/4 (REV. 7-83)

DATE COLLECTED

4/17/84

File

REPORTABLE POINTS FOR SDWA

| WATER SAMPLES | MARKED | COLIFORM MF/100 ML | RESIDUAL CHLORINE | TIME | WATER SAMPLES | MARKED | COLIFORM MF/100 ML | RESIDUAL CHLORINE | TIME | LABORATORY DATA |
|---------------|--------|--------------------|-------------------|------|-------------------|--------|--------------------|-------------------|------|--|
| RR - 3 | 1 | φ | 0.8 | 0910 | MCAS - 3502 | 24 | φ | 0.3 | 0940 | TIME RECEIVED 12 35 - 1345 |
| RR - 15 | 2 | ↓ | 0.4 | 0900 | MCAS - 2002 | 25 | ↓ | 0.6 | 0949 | DATE RECEIVED 4/17/84 |
| RR - 6 | 3 | φ | 0.8 | 0915 | MCAS - 4157 | 26 | ↓ | 0.5 | 0932 | ACCEPTED BY 13 vents |
| | 4 | | | | MCAS - E-1012 | 27 | φ | 0.6 | 0958 | DATE ANALYZED 4/17/84 |
| A-1 | 5 | φ | 0.6 | 0935 | | 28 | | | | ANALYSIS STARTED 1245 |
| BB - 49 | 6 | ↓ | 0.8 | 1105 | NRMC Food SERVICE | 29 | φ | 0.6 | 1130 | ANALYSIS FINISHED 1420 |
| BB - 9 | 7 | ↓ | 0.5 | 1050 | PP - 2615 | 30 | ↓ | 0.6 | 1050 | INCUBATOR TEMP 35° |
| | 8 | φ | 0.8 | 1115 | PP - 2600 | 31 | ↓ | 0.7 | 1100 | PROCESSED BY 13 vents |
| | 9 | | | | BM - 5400 | 32 | | 0.6 | 1120 | |
| BA - 103 | 10 | φ | 0.8 | 1025 | BM - 1985 | 33 | | 0.5 | 1110 | CUSTODY DATA |
| BA - 101 | 11 | φ | 0.9 | 1035 | LCH - 4022 | 34 | ↓ | 0.6 | 1140 | DATE |
| | 12 | | | | LCH - 4002 | 35 | φ | 0.5 | 1145 | TIME |
| TT - 38 | 13 | φ | 1.1 | 0845 | | 36 | | | | SIGNATURE |
| TT - 43 | 14 | ↓ | 1.0 | 0900 | H-1 12A WARD | 37 | φ | 0.6 | 1040 | DATE |
| TT - 1545 | 15 | φ | 0.9 | 0915 | H - 16 | 38 | | 0.5 | 1030 | TIME |
| | 16 | | | | FC - 303 | 39 | | 0.8 | 0920 | SIGNATURE |
| 1005 | 17 | φ | 0.8 | 0945 | FC - 420 | 40 | | 0.7 | 0925 | |
| M - 139 | 18 | ↓ | 1.2 | 1100 | FC - 540 | 41 | | 0.8 | 0935 | COPY TO: |
| M - 424 | 19 | φ | 1.2 | 1130 | HP - 236 | 42 | | 0.7 | 1070 | <input type="checkbox"/> UTIL DIR |
| | 20 | | | | HP - 540 | 43 | | 0.9 | 0910 | <input type="checkbox"/> WATER TREATMENT |
| CG - 1 | 21 | φ | 0.3 | 0921 | HP - 1300 | 44 | ↓ | 0.2 | 0845 | <input type="checkbox"/> PMU <input type="checkbox"/> MCAS PMO |
| TC - 830 | 22 | ↓ | 1.3 | 0908 | HP - 15 | 45 | φ | 0.8 | 1020 | <input type="checkbox"/> NREAD <input type="checkbox"/> FILE |
| TC - 640 | 23 | φ | 0.5 | 0858 | | 46 | | | | <input type="checkbox"/> |

REMARKS

EXTRA SAMPLE: R.R. 15 = φ

COMPLAINT: TT 1539 Cl 1.0 = φ

CLW

000004283

SIGNATURE

16 J. Burns

4/18/84

BACTERIOLOGICAL ANALYSIS OF WATER

NON-REPORTABLE

| WATER SAMPLES | MARKED | COLIFORM COUNT M-ENDO MEDIUM | RESIDUAL CHLORINE | pH | TIME |
|-----------------|--------|---------------------------------|----------------------|-----|------|
| BB-97 | | ϕ | 0.2 | | 1120 |
| FC-19 | | ϕ | TRACE | | 0955 |
| SH-8 | | ϕ | 2.0 ⁺ | | 0945 |
| M.P. POOL | | ϕ | 0.5 | 7.4 | 1115 |
| #2 POOL | | ϕ | 0.5 | 7.6 | 1010 |
| #5 POOL | | ϕ | 1.5 | 8.0 | 0910 |
| P. P. POOL | | | | | |
| P. P. BABY POOL | | | | | |
| MCAS E-POOL | | | | | |
| MCAS O-POOL | | | | | |
| MCAS BABY POOL | | | | | |
| BLDG 1300 | | ϕ | | | 0850 |
| ICE | | | | | |
| | | | | | |
| | | | | | |

REMARKS

FC-19 : NON-COLIFORM TNTC
CLW

000004284

BACTERIOLOGICAL ANALYSIS OF WATER
MCBCL 11330/4 (REV. 7-83)

DATE COLLECTED
24 APR 84

REPORTABLE POINTS FOR SDWA

| WATER SAMPLES | MARKED | COLIFORM MF/100 ML | RESIDUAL CHLORINE | TIME | WATER SAMPLES | MARKED | COLIFORM MF/100 ML | RESIDUAL CHLORINE | TIME | LABORATORY DATA |
|---------------|--------|--------------------|-------------------|------|------------------------------|--------|--------------------|-------------------|------|--|
| RR - 3 | 1 | 0 | 0.8 | 0845 | MCAS - 3502 | 24 | 0 | 0.7 | 1000 | TIME RECEIVED |
| RR - 15 | 2 | 1 | 0.6 | 0855 | MCAS - 2002 | 25 | 1 | 0.7 | 1030 | DATE RECEIVED |
| RR - 10 | 3 | 1 | 0.7 | 0900 | MCAS - 4157 | 26 | 1 | 0.7 | 0950 | ACCEPTED BY |
| | 4 | | | | MCAS - E-1142 | 27 | 1 | 0.8 | 1020 | DATE ANALYZED 4/24/84 |
| A-1 | 5 | 0 | 0.6 | 0915 | | 28 | | | | ANALYSIS STARTED |
| B-7 | 6 | 1 | 1.0 | 1055 | NRMC - Food Service | 29 | 0 | 0.8 | 1130 | ANALYSIS FINISHED |
| BB - 49 | 7 | 1 | 0.6 | 1020 | PP - 2615 | 30 | 1 | 0.5 | 1107 | INCUBATOR TEMP 35.0 |
| BB - 255 | 8 | 1 | 0.8 | 1105 | PP - 2604 | 31 | 1 | 0.5 | 1116 | PROCESSED BY Hurreycutt |
| | 9 | | | | BM - 5400 | 32 | 1 | 0.5 | 1143 | |
| BA - 103 | 10 | 0 | 0.9 | 0955 | BM - 5662 | 33 | 1 | 0.5 | 1150 | CUSTODY DATA |
| BA - 113 | 11 | 1 | 0.8 | 0945 | LCH - 4022 | 34 | 1 | 0.4 | 1230 | DATE |
| | 12 | | | | LCH - 4000 | 35 | 1 | 0.5 | 1241 | TIME |
| TT - 38 | 13 | 0 | 1.0 | 1100 | | 36 | | | | SIGNATURE |
| TT - 43 | 14 | 1 | 0.9 | 1045 | H - 1 st Fl. Head | 37 | 0 | 0.5 | 1050 | DATE |
| TT - 1538 | 15 | 1 | 1.0 | 1030 | H - 23 | 38 | 1 | 0.5 | 1056 | TIME |
| | 16 | | | | FC - 303 | 39 | 1 | 0.7 | 0947 | SIGNATURE |
| 1509 | 17 | 0 | 0.9 | 1000 | FC - 420 | 40 | 1 | 0.7 | 0941 | |
| M - 139 | 18 | 1 | 1.2 | 0945 | FC - E-Club | 41 | 1 | 0.7 | 0936 | COPY TO: |
| M - 522 | 19 | 1 | 1.1 | 0930 | HP - 236 | 42 | 1 | 0.5 | 1043 | <input checked="" type="checkbox"/> UTIL DIR |
| | 20 | | | | HP - 540 | 43 | 1 | 0.6 | 1032 | <input type="checkbox"/> WATER TREATMENT |
| CG - 1 | 21 | 0 | 0.5 | 1100 | HP - 1300 | 44 | 1 | 0.4 | 0905 | <input type="checkbox"/> PMU <input type="checkbox"/> MCAS PMO |
| TC - 830 | 22 | 1 | 0.7 | 0915 | HP - 1504 | 45 | 1 | 0.7 | 0913 | <input type="checkbox"/> NREAD <input type="checkbox"/> FILE |
| TC - G - 640 | 23 | 1 | 0.7 | 0900 | | | | | | <input type="checkbox"/> |

CLW

REMARKS

0000004285

SIGNATURE

Hurreycutt, S. 4/29/84

BACTERIOLOGICAL ANALYSIS OF WATER

NON-REPORTABLE

| WATER SAMPLES | MARKED | COLIFORM COUNT M-ENDO MEDIUM | RESIDUAL CHLORINE | pH | TIME |
|-----------------|--------|---------------------------------|----------------------|-----|------|
| BB-97 | | Ø | 1.2 | | 1035 |
| FC-19 | | I | 2.0 ⁺ | | 1016 |
| SH-8 | | I | 2.0 | | 1000 |
| M.P. POOL | | Ø | 1.0 | 7.3 | 0945 |
| #2 POOL | | Secured | | | |
| #5 POOL | | Ø | 0.9 | 7.2 | 1027 |
| P. P. POOL | | | | | |
| P. P. BABY POOL | | | | | |
| MCAS E-POOL | | | | | |
| MCAS O-POOL | | | | | |
| MCAS BABY POOL | | | | | |
| ICE Plant | | Ø | | | 0910 |

REMARKS

CLW

0000004286

QUALITY CONTROL LABORATORY REPORT
 MISCELLANEOUS BACTERIOLOGICAL ANALYSIS OF WATER

MCBCL 11390/8 (REV. 4/78)

Infection Control Naval Hospital

| WATER TYPE | SAMPLE COLLECTED BY | DATE COLLECTED | |
|------------|---------------------|----------------|-------|
| | | TOTAL | FECAL |
| ICE | Am 2 Bue + | 24 Apr 84 | |
| LOCATION | MARKED | TOTAL | FECAL |
| E.P. | | | |
| ICU | | | |
| LFO | | | |
| R.P. | | | |
| 4A | | | |
| 4W | | | |
| 3W | | | |
| 3E | | | |
| CCU | | | |
| 2E | | | |
| 2W | | | |

REMARKS

Resd. 1220 4/24/84 H

CLW

0000004287

SIGNATURE

[Handwritten Signature]

DATE

4/25/84

COPY TO

- NREAD
- UTILITIES DIRECTOR
- WATER TREATMENT PLANT (GENERAL FOREMAN)

- BASE PREVENTIVE MEDICINE
- MCAS PREVENTIVE MEDICINE
- File

[Handwritten initials]

CHEMICAL ANALYSIS — WATER TREATMENT PLANTS
 MCBCL 11330/3 (REV. 3-82)

DATE COLLECTED
 26 Apr 84

| PARAMETER | HADNOT POINT HP 135 | MONTFORD POINT | TARAWA TERRACE | ONSLow BEACH | COURTHOUSE BAY | RIFLE RANGE | HOLCOMB BLVD | NEW RIVER | |
|-----------------------------------|------------------------|----------------|----------------|--------------|----------------|-------------|--------------|-----------|--|
| PH | 8.6 | | | | | | | | |
| PENOLTHALEIN ALKALINITY | 6 | | | | | | | | |
| METHYL ORANGE ALKALINITY | 52 | | | | | | | | |
| CARBONATES AS CaCO ₃ | 72 | | | | | | | | |
| BICARBONATES AS CaCO ₃ | 40 | | | | | | | | |
| CHLORIDES AS Cl | 8 | | | | | | | | |
| HARDNESS AS CaCO ₃ | 58 | | | | | | | | |
| IRON AS Fe | 10.04 | | | | | | | | |
| FLUORIDE | | | | | | | | | |
| CHLORINE RESIDUAL | 0.4 | | | | | | | | |
| TURBIDITY | 1.4 | | | | | | | | |
| TOTAL PHOSPHATE | | | | | | | | | |
| PHO PHOSPHATE | | | | | | | | | |
| META PHOSPHATE | | | | | | | | | |
| STABILITY | | | | | | | | | |

REMARKS

CLW
 0000004288

NOTE: All results reported in parts per million unless otherwise noted except for pH, temperature, and specific conductance. One liter of potable water is assumed to weigh one kilogram.

LABORATORY ANALYSIS BY
L. S. ...

DATE OF ANALYSIS
 26 Apr 84

encl (4)

QUALITY CONTROL LABORATORY REPORT
MISCELLANEOUS BACTERIOLOGICAL ANALYSIS OF WATER

MCBCL 11330/8 (REV. 4/78)

| WATER TYPE | SAMPLE COLLECTED BY | DATE COLLECTED | |
|-----------------------------|-----------------------|----------------|-------|
| | | | |
| LOCATION | MARKED | TOTAL | FECAL |
| Potable (Resample) | Water Plant Personnel | 13 APR 84 | |
| BB-9 / time 1145 ch. 1.3 | | 0 * | |
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REMARKS
* TNTC Non-Coliform Colonies

CLW
000004289

SIGNATURE *[Signature]* DATE 14 APR 84

- COPY TO:
- NREAD
 - UTILITIES DIRECTOR
 - WATER TREATMENT PLANT (GENERAL FOREMAN)
 - BASE PREVENTIVE MEDICINE
 - MCAS PREVENTIVE MEDICINE
 -

QUALITY CONTROL LABORATORY REPORT
MISCELLANEOUS BACTERIOLOGICAL ANALYSIS OF WATER

MCBCL 11290/8 (REV. 4/78)

| WATER TYPE | SAMPLE COLLECTED BY | | DATE COLLECTED | |
|----------------------------------|------------------------------|----------|----------------|--|
| <i>Potable</i> | <i>Water Plant Personnel</i> | | <i>4/23/84</i> | |
| LOCATION | MARKED | COLIFORM | | |
| | | TOTAL | FECAL | |
| <i>EA-106 / 11th 1910 12</i> | | <i>4</i> | | |
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REMARKS

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SIGNATURE *[Signature]* DATE *4/25/84*

COPY TO

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|---|--|
| <input type="checkbox"/> NREAD | <input checked="" type="checkbox"/> BASE PREVENTIVE MEDICINE |
| <input type="checkbox"/> UTILITIES DIRECTOR | <input type="checkbox"/> MCAS PREVENTIVE MEDICINE |
| <input checked="" type="checkbox"/> WATER TREATMENT PLANT (GENERAL FOREMAN) | <input checked="" type="checkbox"/> <i>File</i> |

QUALITY CONTROL LABORATORY REPORT
 MISCELLANEOUS BACTERIOLOGICAL ANALYSIS OF WATER

F, h e

MCBCL 11830/8 (REV. 4/78)

| WATER TYPE | SAMPLE COLLECTED BY | | DATE COLLECTED | |
|-----------------|---------------------|----------|----------------|--|
| POTABLE - COLD | NM2 QUINN | | 26 APR 84 | |
| LOCATION | MARKED | COLIFORM | | |
| | | TOTAL | FECAL | |
| H.P. 135 Rm 329 | | Ø | | |
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REMARKS
 SAMPLE TAKEN 0900 26 APR 84
 Received 1130 26 APR 84
 Set up 1220 26 APR 84
 Read 1100 27 APR 84

CLW
 0000004291

SIGNATURE *H.J. Burns* DATE 27 APR 84

- COPY TO
- NREAD
 - UTILITIES DIRECTOR
 - WATER TREATMENT PLANT (GENERAL FOREMAN)
 - BASE PREVENTIVE MEDICINE
 - MCAS PREVENTIVE MEDICINE

3-82) **SIS — WATER TREATMENT PLANTS**

TT
5/1/1553

DATE COLLECTED

11/10/84

| PARAMETER | HADNOT POINT | MONTFORD POINT | TARAWA TERRAGE | ONSLow BEACH | COURTHOUSE BAY | RIFLE RANGE | HOLCOMB BLVD | NEW RIVER | |
|-----------------------------------|--------------|----------------|----------------|--------------|----------------|-------------|--------------|-----------|--|
| pH | | | 8.1 | | | | | | |
| PENOLTHALEIN ALKALINITY | | | 10 | | | | | | |
| METHYL ORANGE ALKALINITY | | | 64 | | | | | | |
| CARBONATES AS CaCO ₃ | | | 20 | | | | | | |
| BICARBONATES AS CaCO ₃ | | | 44 | | | | | | |
| CHLORIDES AS Cl | | | 10 | | | | | | |
| HARDNESS AS CaCO ₃ | | | 86 | | | | | | |
| IRON AS Fe | | | 0.05 | | | | | | |
| FLUORIDE | | | 1.04 | | | | | | |
| CHLORINE RESIDUAL | | | 1.2 | | | | | | |
| TURBIDITY | | | 7.1 | | | | | | |
| TOTAL PHOSPHATE | | | | | | | | | |
| ORTHO PHOSPHATE | | | | | | | | | |
| META PHOSPHATE | | | | | | | | | |
| STABILITY | | | | | | | | | |

REMARKS

CLW

NOTE: All results reported in parts per million unless otherwise noted except for pH, temperature, and specific conductance. One liter of potable water is assumed to weigh one kilogram.

LABORATORY ANALYSIS BY
Spencer

0000004292

DATE OF ANALYSIS

11/10/84

QUALITY CONTROL LABORATORY REPORT
MISCELLANEOUS BACTERIOLOGICAL ANALYSIS OF WATER

MCBCL 11390/8 (REV. 4/78)

| WATER TYPE <i>1-4 Wc</i> | SAMPLE COLLECTED BY <i>H 11</i> | DATE COLLECTED <i>11 APR 84</i> | | | |
|-----------------------------|------------------------------------|------------------------------------|--------|----------|-------|
| | | LOCATION | MARKED | TOTAL | FECAL |
| <i>Slid</i> | <i>1533</i> | | | <i>0</i> | |
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REMARKS

CLW
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SIGNATURE *H. H. Houghton* DATE *18 APR 84*

COPY TO

- NREAD
- UTILITIES DIRECTOR
- WATER TREATMENT PLANT (GENERAL FOREMAN)
- BASE PREVENTIVE MEDICINE
- MCAS PREVENTIVE MEDICINE
- File*

QUALITY CONTROL LABORATORY REPORT
MISCELLANEOUS BACTERIOLOGICAL ANALYSIS OF WATER
 MCBCL 11330/8 (REV. 4/78)

| WATER TYPE <i>P. 1. 110</i> | SAMPLE COLLECTED BY <i>W. R. 1. 113</i> | DATE COLLECTED <i>4/24/84</i> | | | |
|--------------------------------|--|----------------------------------|----------|----------------|-------|
| | | LOCATION | MARKED | TOTAL COLIFORM | FECAL |
| <i>CR 115</i> | | | <i>0</i> | | |
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REMARKS

Due to turbidity of sample MPN was performed with dilutions of 10ml, 0.1ml, 0.01ml/100ml and all tubes were negative.

CLW

000004294

SIGNATURE

[Signature]

DATE

4/25/84

COPY TO

- NREAD
- UTILITIES DIRECTOR
- WATER TREATMENT PLANT (GENERAL FOREMAN)

- BASE PREVENTIVE MEDICINE
- MCAS PREVENTIVE MEDICINE
- Safety*

Encl (5.)

CHEMICAL ANALYSIS — WATER TREATMENT PLANTS
 MCBCL 11330/3 (REV. 3-82)

DATE COLLECTED
 24 APRIL 1984

| PARAMETER | HADNOT POINT | MONTFORD POINT | TARAWA TERRACE | ONSLow BEACH | COURTHOUSE BAY | RIFLE RANGE | HOLCOMB BLVD | NEW RIVER | CR 115 |
|-----------------------------------|--------------|----------------|----------------|--------------|----------------|-------------|--------------|-----------|--------|
| PH | 8.8 | 7.2 | 8.5 | 7.4 | 8.1 | 8.2 | 8.7 | 8.8 | 7.2 |
| PENOLTHALEIN ALKALINITY | 6 | 0 | 4 | 0 | 6 | 2 | 6 | 14 | 0 |
| METHYL ORANGE ALKALINITY | 56 | 190 | 56 | 174 | 176 | 160 | 60 | 124 | 140 |
| CARBONATES AS CaCO ₃ | 12 | 0 | 8 | 0 | 12 | 4 | 12 | 28 | 0 |
| BICARBONATES AS CaCO ₃ | 44 | 190 | 48 | 174 | 164 | 156 | 48 | 96 | 140 |
| CHLORIDES AS Cl | 8 | 36 | 10 | 14 | 22 | 20 | 16 | 134 | 8 |
| HARDNESS AS CaCO ₃ | 60 | 76 | 86 | 92 | 62 | 42 | 60 | 58 | 138 |
| IRON AS Fe | 0.04 | 0.54 | 0.04 | 0.24 | 0.06 | 0.07 | 0.04 | 0.31 | 0.51 |
| FLUORIDE | AM | 1.30 | 1.3 | 0.58 | 0.58 | 1.13 | 1.06 | 0.34 | 0.34 |
| | PM | 1.26 | 0.79 | 1.33 | 0.58 | 0.83 | 1.06 | 0.34 | 0.34 |
| CHLORINE RESIDUAL | 1.0 | 1.3 | 1.0 | 1.2 | 1.2 | 1.0 | 1.0 | 1.3 | — |
| TURBIDITY | AM | 1.5 | 0.4 | 0.3 | 0.4 | 0.3 | 1.4 | 3.3 | 3.3 |
| | PM | 0.5 | 0.7 | 0.5 | 0.3 | 0.3 | 1.4 | 3.3 | 3.3 |
| TOTAL PHOSPHATE | | 4.60 | | | 1.92 | | | | |
| ORTHO PHOSPHATE | | 1.54 | | | 0.32 | | | | |
| META PHOSPHATE | | 3.06 | | | 1.60 | | | | |
| STABILITY | +0.4 | -0.5 | +0.2 | -0.4 | 0.0 | -0.1 | +0.2 | +0.2 | — |

REMARKS

CLW

0000004295

NOTE: All results reported in parts per million unless otherwise noted except for pH, temperature, and specific conductance. One liter of potable water is assumed to weigh one kilogram.

LABORATORY ANALYSIS BY
Schaeffer & Burns

DATE OF ANALYSIS
 24 APRIL 1984