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MAILROOM

GETTY PETROTOMICS

Casper, Wyoming

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| <u>Sample I.D.</u>   | <u>Radionuclide</u> | <u>Concentration uCi/ml</u>       | <u>LLD uCi/ml</u>   | <u>% MPC</u> |
|----------------------|---------------------|-----------------------------------|---------------------|--------------|
| Site 1<br>Sept. 1980 | U(natural)          | $1.60 \times 10^{-15}$            | $7 \times 10^{-17}$ | < 1          |
|                      | Th-230              | $(0.87 \pm 0.11) \times 10^{-15}$ | $7 \times 10^{-17}$ | 1            |
|                      | Ra-226              | $(0.22 \pm 0.06) \times 10^{-15}$ | $8 \times 10^{-17}$ | < 1          |
|                      | Pb-210              | $(2.61 \pm 0.10) \times 10^{-14}$ | $9 \times 10^{-16}$ | 1            |
| Site 2<br>Sept. 1980 | U(natural)          | $3.14 \times 10^{-15}$            | $5 \times 10^{-17}$ | < 1          |
|                      | Th-230              | $(5.30 \pm 0.16) \times 10^{-15}$ | $3 \times 10^{-17}$ | 7            |
|                      | Ra-226              | $(2.59 \pm 0.16) \times 10^{-15}$ | $7 \times 10^{-17}$ | < 1          |
|                      | Pb-210              | $(3.24 \pm 0.10) \times 10^{-14}$ | $7 \times 10^{-16}$ | 1            |
| Site 3<br>Sept. 1980 | U(natural)          | $4.35 \times 10^{-15}$            | $5 \times 10^{-17}$ | < 1          |
|                      | Th-230              | $(3.64 \pm 0.13) \times 10^{-15}$ | $3 \times 10^{-17}$ | 5            |
|                      | Ra-226              | $(2.27 \pm 0.14) \times 10^{-15}$ | $7 \times 10^{-17}$ | < 1          |
|                      | Pb-210              | $(2.27 \pm 0.10) \times 10^{-14}$ | $7 \times 10^{-16}$ | 1            |
| Site 4<br>Sept. 1980 | U(natural)          | $3.15 \times 10^{-15}$            | $5 \times 10^{-17}$ | < 1          |
|                      | Th-230              | $(2.36 \pm 0.22) \times 10^{-15}$ | $8 \times 10^{-17}$ | 3            |
|                      | Ra-226              | $(0.94 \pm 0.16) \times 10^{-15}$ | $2 \times 10^{-16}$ | < 1          |
|                      | Pb-210              | $(2.21 \pm 0.18) \times 10^{-14}$ | $2 \times 10^{-16}$ | 1            |

| <u>Sample I.D.</u>          | <u>Radionuclide</u> | <u>Concentration uCi/ml</u>       | <u>LLD uCi/ml</u>   | <u>Z MPC</u> |
|-----------------------------|---------------------|-----------------------------------|---------------------|--------------|
| Site 5<br>Sept. 1980        | U(natural)          | $4.59 \times 10^{-15}$            | $5 \times 10^{-17}$ | < 1          |
|                             | Th-230              | $(3.68 \pm 0.17) \times 10^{-15}$ | $3 \times 10^{-17}$ | 5            |
|                             | Ra-226              | $(2.15 \pm 0.14) \times 10^{-15}$ | $7 \times 10^{-17}$ | < 1          |
|                             | Pb-210              | $(2.08 \pm 0.13) \times 10^{-14}$ | $1 \times 10^{-15}$ | 1            |
| Site 6<br>Sept. 1980        | U(natural)          | $1.55 \times 10^{-15}$            | $1 \times 10^{-16}$ | < 1          |
|                             | Th-230              | $(0.19 \pm 0.11) \times 10^{-15}$ | $3 \times 10^{-17}$ | < 1          |
|                             | Ra-226              | $(0.38 \pm 0.11) \times 10^{-15}$ | $2 \times 10^{-16}$ | < 1          |
|                             | Pb-210              | $(3.25 \pm 0.27) \times 10^{-14}$ | $3 \times 10^{-15}$ | 1            |
| Site 1<br>4th Quar.<br>1980 | U(natural)          | $0.86 \times 10^{-15}$            | $3 \times 10^{-17}$ | < 1          |
|                             | Th-230              | $(0.58 \pm 0.12) \times 10^{-15}$ | $1 \times 10^{-17}$ | 1            |
|                             | Ra-226              | $(0.26 \pm 0.03) \times 10^{-15}$ | $3 \times 10^{-17}$ | < 1          |
|                             | Pb-210              | $(3.64 \pm 0.15) \times 10^{-14}$ | $3 \times 10^{-16}$ | 1            |
| Site 2<br>4th Quar.<br>1980 | U(natural)          | $1.29 \times 10^{-15}$            | $3 \times 10^{-17}$ | < 1          |
|                             | Th-230              | $(5.11 \pm 0.39) \times 10^{-15}$ | $2 \times 10^{-17}$ | 6            |
|                             | Ra-226              | $(2.89 \pm 0.10) \times 10^{-15}$ | $3 \times 10^{-17}$ | < 1          |
|                             | Pb-210              | $(3.35 \pm 0.14) \times 10^{-14}$ | $3 \times 10^{-16}$ | 1            |

| <u>Sample I.D.</u>           | <u>Radionuclide</u> | <u>Concentration uCi/ml</u>       | <u>LLD uCi/ml</u>   | <u>% MPC</u> |
|------------------------------|---------------------|-----------------------------------|---------------------|--------------|
| Site 3<br>4th Quart.<br>1980 | U(natural)          | $1.19 \times 10^{-15}$            | $3 \times 10^{-17}$ | < 1          |
|                              | Th-230              | $(1.05 \pm 0.15) \times 10^{-15}$ | $1 \times 10^{-17}$ | 1            |
|                              | Ra-226              | $(0.83 \pm 0.05) \times 10^{-15}$ | $2 \times 10^{-17}$ | < 1          |
|                              | Pb-210              | $(2.89 \pm 0.12) \times 10^{-14}$ | $3 \times 10^{-16}$ | 1            |
| Site 4<br>4th Quar.<br>1980  | U(natural)          | $1.79 \times 10^{-15}$            | $3 \times 10^{-17}$ | < 1          |
|                              | Th-230              | $(0.87 \pm 0.15) \times 10^{-15}$ | $1 \times 10^{-17}$ | 1            |
|                              | Ra-226              | $(0.83 \pm 0.05) \times 10^{-15}$ | $2 \times 10^{-17}$ | < 1          |
|                              | Pb-210              | $(1.56 \pm 0.06) \times 10^{-14}$ | $1 \times 10^{-16}$ | < 1          |
| Site 5<br>4th Quar.<br>1980  | U(natural)          | $0.58 \times 10^{-15}$            | $3 \times 10^{-17}$ | < 1          |
|                              | Th-230              | $(8.83 \pm 0.39) \times 10^{-15}$ | $1 \times 10^{-16}$ | 11           |
|                              | Ra-226              | $(2.96 \pm 0.09) \times 10^{-15}$ | $1 \times 10^{-17}$ | < 1          |
|                              | Pb-210              | $(3.37 \pm 0.14) \times 10^{-14}$ | $3 \times 10^{-16}$ | 1            |
| Site 6<br>4th Quar.<br>1980  | U(natural)          | $0.36 \times 10^{-15}$            | $2 \times 10^{-17}$ | < 1          |
|                              | Th-230              | $(0.27 \pm 0.04) \times 10^{-15}$ | $3 \times 10^{-17}$ | < 1          |
|                              | Ra-226              | $(0.12 \pm 0.02) \times 10^{-15}$ | $1 \times 10^{-17}$ | < 1          |
|                              | Pb-210              | $(2.74 \pm 0.11) \times 10^{-14}$ | $3 \times 10^{-16}$ | 1            |

| <u>Sample I.D.</u>                    | <u>Radionuclide</u> | <u>Concentration uCi/ml</u>                          | <u>LLD uCi/ml</u>   | <u>% MPC</u> |
|---------------------------------------|---------------------|------------------------------------------------------|---------------------|--------------|
| 605-13<br>4253                        | Pb-210              | 0.33 $\pm$ 0.09 pCi/g (This is a vegetation sample.) |                     |              |
| 546<br>Site #1<br>1st Quarter<br>1981 | U(natural)          | 0.65 $\times 10^{-15}$                               | 1 $\times 10^{-17}$ | < 1          |
|                                       | Th-230              | (0.27 $\pm$ 0.03) $\times 10^{-15}$                  | 2 $\times 10^{-17}$ | < 1          |
|                                       | Ra-226              | (0.07 $\pm$ 0.01) $\times 10^{-15}$                  | 8 $\times 10^{-18}$ | < 1          |
|                                       | Pb-210              | (1.69 $\pm$ 0.07) $\times 10^{-14}$                  | 2 $\times 10^{-16}$ | 1            |
| Site #2<br>1st Quarter<br>1981        | U(natural)          | 1.00 $\times 10^{-15}$                               | 2 $\times 10^{-17}$ | < 1          |
|                                       | Th-230              | (3.13 $\pm$ 0.08) $\times 10^{-15}$                  | 1 $\times 10^{-14}$ | 4            |
|                                       | Ra-226              | (1.96 $\pm$ 0.05) $\times 10^{-15}$                  | 8 $\times 10^{-18}$ | < 1          |
|                                       | Pb-210              | (1.43 $\pm$ 0.06) $\times 10^{-14}$                  | 2 $\times 10^{-16}$ | < 1          |
| Site #3<br>1st Quarter<br>1981        | U(natural)          | 0.84 $\times 10^{-15}$                               | 1 $\times 10^{-17}$ | < 1          |
|                                       | Th-230              | (0.99 $\pm$ 0.05) $\times 10^{-15}$                  | 2 $\times 10^{-17}$ | 1            |
|                                       | Ra-226              | (0.64 $\pm$ 0.30) $\times 10^{-15}$                  | 9 $\times 10^{-18}$ | < 1          |
|                                       | Pb-210              | (1.40 $\pm$ 0.06) $\times 10^{-14}$                  | 1 $\times 10^{-16}$ | < 1          |

| <u>Sample I.D.</u>             | <u>Radionuclide</u> | <u>Concentration uCi/ml</u>       | <u>LLD uCi/ml</u>   | <u>% MPC</u> |
|--------------------------------|---------------------|-----------------------------------|---------------------|--------------|
| Site #4<br>1st Quarter<br>1981 | U(natural)          | $1.12 \times 10^{-15}$            | $2 \times 10^{-17}$ | < 1          |
|                                | Th-230              | $(0.56 \pm 0.03) \times 10^{-15}$ | $2 \times 10^{-14}$ | 1            |
|                                | Ra-226              | $(0.37 \pm 0.03) \times 10^{-15}$ | $1 \times 10^{-17}$ | < 1          |
|                                | Pb-210              | $(0.81 \pm 0.04) \times 10^{-14}$ | $3 \times 10^{-16}$ | < 1          |
| Site #5<br>1st Quarter<br>1981 | U(natural)          | $1.46 \times 10^{-15}$            | $2 \times 10^{-17}$ | < 1          |
|                                | Th-230              | $(7.85 \pm 0.13) \times 10^{-15}$ | $3 \times 10^{-17}$ | 10           |
|                                | Ra-226              | $(6.22 \pm 0.11) \times 10^{-15}$ | $1 \times 10^{-17}$ | < 1          |
|                                | Pb-210              | $(3.19 \pm 0.13) \times 10^{-14}$ | $3 \times 10^{-16}$ | 1            |
| Site #6<br>1st Quarter<br>1981 | U(natural)          | $0.61 \times 10^{-15}$            | $1 \times 10^{-17}$ | < 1          |
|                                | Th-230              | $(0.34 \pm 0.06) \times 10^{-15}$ | $7 \times 10^{-17}$ | < 1          |
|                                | Ra-226              | $(0.02 \pm 0.00) \times 10^{-15}$ | $2 \times 10^{-18}$ | < 1          |
|                                | Pb-210              | $(2.36 \pm 0.10) \times 10^{-14}$ | $2 \times 10^{-16}$ | 1            |

SAMPLE I.D.

Rn -222 pCi/l

Gamma MREM/week

4th Quarter, 1980

|        |      |      |
|--------|------|------|
| Site 1 | 2.71 | 2.54 |
| Site 2 | 2.98 | 3.94 |
| Site 3 | 1.87 | 3.42 |
| Site 4 | 1.69 | 2.89 |
| Site 5 | 2.81 | 3.05 |
| Site 6 | 1.21 | 2.36 |

1st Quarter, 1981

|        |      |      |
|--------|------|------|
| Site 1 | 2.08 | 2.69 |
| Site 2 | 3.57 | 4.36 |
| Site 3 | 2.16 | 3.71 |
| Site 4 | 1.91 | 2.82 |
| Site 5 | 2.96 | 3.42 |
| Site 5 | 1.12 | 2.54 |