



**Drinking Water and Radiation Laboratory Branch**

850 Marina Bay Parkway, Richmond, CA 94804  
 Phone: (510) 620-2911 Fax: (510) 620-2940

**FINAL Analysis Results Report for Task ID. 12-0568**

|   |                     |  |     |
|---|---------------------|--|-----|
| Collector: Tom Hook<br>P O Box 56<br>Avila Beach CA 93424<br>Phone Number: 805-545-4409 | RHB                 | Requestor: Roger Lupo<br>CDPH - RHB, 1500 Capitol Av., MS 7610<br>Sacramento CA 95814-5006<br>Phone Number: 916-440-7955 | RHB |
| Site/Project Name: Diablo Canyon NPP / Biota / 4th Qtr 2012                             |                     |  |     |
| System No:  | Billing Agency: RHB | Samples Received by Lab: 10/23/2012  |     |

| Parameter          | Method  | Result +/- CE                    | MDA 95               | Units |
|--------------------|---|----------------------------------|----------------------|-------|
| Lab No: 12-0568-01 | Sample ID: R 92335<br>Sample Type: Vegetation | Time Collected: 10/18/2012 09:38 | Sampling Point: Kelp |       |
| K-40               | EPA 901.1                                     | 4.98 +/- 0.295                   | 1.07                 | pCi/L |

*Dry wt / wet wt*

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

**REQUEST FOR SAMPLE ANALYSIS (Radiochemical)**

|   |  |   |
|---|--|---|
| <b>Sanitation and Radiation Laboratories Branch</b><br>850 Marina Bay Parkway, G164<br>Richmond, CA 94804<br>510-620-2911 | Date Received<br><b>10-23-12</b>   | Lab No. (Leave Blank)<br><b>12-0568</b> |
|   | Date & Time Sampled<br><b>10-18-12 9:38</b>  | Serial Number<br><b>R 92335</b>         |
| <b>Collector Information</b><br>Name:<br>Dept./Branch:<br>Address:<br><br>Telephone No.:                                  | <b>Reporting Information</b><br>Name:<br>Dept./Branch:<br>Address:<br><br>Telephone No.:   |   |
| <b>Sample Information</b><br>System Name / Facility:<br>Sampling Point (s):<br><br>System No.:                            | <b>Billing Agency</b><br><input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC<br><input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG<br><input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____ |   |

**TYPE OF SAMPLE (Check all applicable boxes)**

Drinking Water     Groundwater     Surface Water     Wastewater  
 Raw     Water Treatment Plant (WTP)     Distribution System     Point of Use (POU)  
 Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

Air Filters    Date/Time     Seawater     Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_     Milk     Soil/Sediment  
 Starting: \_\_\_\_\_     Wipes     Biota (Type): Kelp  
 Net (M<sup>3</sup>): \_\_\_\_\_     Radon Canister     Other: \_\_\_\_\_  
 Air Charcoal Cartridge

**COMMENTS: (Cautions, etc.):** \_\_\_\_\_

Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
 Field Measurement: \_\_\_\_\_ mR/hr     Radionuclide(s), if known: \_\_\_\_\_  
 Rush/Priority (should be prearranged and have supervisory approval)

**ANALYSIS REQUESTED (For questions, please call 510-620-2911)**

Gross Alpha     Gross Beta     Gamma Scan  
 Total Uranium     Total Beta (LSC)     NORM (Gamma)  
 Total Radium     Tritium (<sup>3</sup>H)     Isotopic Americium / Curium  
 Radium-226     Carbon-14     Isotopic Plutonium  
 Radium-228     Iodine-131     Isotopic Thorium  
 Radon-222     Strontium-89, 90     Isotopic Uranium  
 Other (Specify): \_\_\_\_\_     Nickel-63     Iron-55

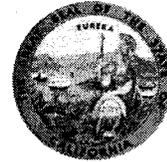
**CHAIN OF CUSTODY**

|    |                                   |                           |                              |                             |
|----|-----------------------------------|---------------------------|------------------------------|-----------------------------|
| 1. | Date _____                        | Name (Print) _____        | Signature _____              | Date _____                  |
|    | Time Custody Received _____       | Organization _____        | Signature _____              | Time Custody Released _____ |
| 2. | Date _____                        | Name (Print) _____        | Signature _____              | Date _____                  |
|    | Time Custody Received _____       | Organization _____        | Signature _____              | Time Custody Released _____ |
| 3. | Date <u>10-23-12</u>              | Name (Print) <u>UA</u>    | Signature <u>[Signature]</u> | Date _____                  |
|    | Time Custody Received <u>2:40</u> | Organization <u>DWRLB</u> | Signature _____              | Time Custody Released _____ |

**LABORATORY REMARKS (Leave Blank)**

**A. Condition at Time of Receipt:**  
 Acceptable     Broken Container     Leaked in Transit     Improper Container  
 Holding Time Exceeded     Sample Not Cooled     Insufficient Sample

**B. Preservatives/Carriers:**  
 Added While Sampling     Added in Laboratory     Not Added     Not Applicable



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940

FINAL Analysis Results Report for Task ID. 12-0509

|   |                     |  |     |
|---|---------------------|--|-----|
| Collector: Tom Hook<br>P O Box 56<br>Avila Beach CA 93424<br>Phone Number: 805-545-4409 | RHB                 | Requestor: Roger Lupo<br>CDPH - RHB, 1500 Capitol Av., MS 7610<br>Sacramento CA 95814-5006<br>Phone Number: 916-440-7955 | RHB |
| Site/Project Name: Diablo Canyon NPP / Biota / 4th Qtr 2012                             |                     |  |     |
| System No:  | Billing Agency: RHB | Samples Received by Lab: 10/10/2012  |     |

| Parameter          | Method                  | Result +/- CE                   | MDA 95                     | Units        |
|--------------------|-------------------------|---------------------------------|----------------------------|--------------|
| Lab No: 12-0509-01 | Sample ID: R 92319      | Time Collected: 10/9/2012 08:20 | Sampling Point: Vegetation |              |
|                    | Sample Type: Vegetation |                                 |                            |              |
| Dry Wt/Wet Wt      |                         | 0.05968                         |                            |              |
| K-40               | HASL Ga-01-R            | 67.9 +/- 1.55                   | 1.64                       | pCi/g dry wt |

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

**REQUEST FOR SAMPLE ANALYSIS (Radiochemical)**

|   |  |   |
|---|--|---|
| <b>Sanitation and Radiation Laboratories Branch</b><br>850 Marina Bay Parkway, G164<br>Richmond, CA 94804<br>510-620-2911 | Date Received<br><b>10-10-12</b>   | Lab No. (Leave Blank)<br><b>12-0509</b> |
|   | Date & Time Sampled<br><b>10-9-12 8:20</b>   | Serial Number<br><b>R 92319</b>         |
| <b>Collector Information</b><br>Name:<br>Dept./Branch: <b>TH</b><br>Address:<br>Telephone No.:                            | <b>Reporting Information</b><br>Name:<br>Dept./Branch:<br>Address:<br>Telephone No.:   |   |
| <b>Sample Information</b><br>System Name / Facility: <b>DCCP REMP/</b><br>Sampling Point (s): <b>7G1</b><br>System No.:   | <b>Billing Agency</b><br><input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC<br><input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG<br><input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____ |   |

**TYPE OF SAMPLE (Check all applicable boxes)**

- Drinking Water                       Groundwater                       Surface Water                       Wastewater
  - Raw     Water Treatment Plant (WTP)     Distribution System               Point of Use (POU)
  - Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
- 
- Air Filters                                      Date/Time                               Seawater                                       Sludge (Semi-solid Samples)
  - Finishing: \_\_\_\_\_                      \_\_\_\_\_                               Milk     Soil/Sediment
  - Starting: \_\_\_\_\_                      \_\_\_\_\_                               Wipes     Biota (Type): **vegetation**
  - Net (M<sup>3</sup>) \_\_\_\_\_                      \_\_\_\_\_                               Radon Canister                               Other: \_\_\_\_\_
  - Air Charcoal Cartridge

**COMMENTS: (Cautions, etc.):** \_\_\_\_\_

- Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- Field Measurement: \_\_\_\_\_ mR/hr                       Radionuclide(s), if known: \_\_\_\_\_
- Rush/Priority (should be prearranged and have supervisory approval)

**ANALYSIS REQUESTED (For questions, please call 510-620-2911)**

- Gross Alpha                                       Gross Beta                                       Gamma Scan
- Total Uranium                                       Total Beta (LSC)                               NORM (Gamma)
- Total Radium                                       Tritium (<sup>3</sup>H)                                       Isotopic Americium / Curium
- Radium-226                                       Carbon-14                                       Isotopic Plutonium
- Radium-228                                       Iodine-131                                       Isotopic Thorium
- Radon-222                                       Strontium-89, 90                               Isotopic Uranium
- Other (Specify): \_\_\_\_\_                       Nickel-63                                       Iron-55

**CHAIN OF CUSTODY**

|    |                                    |                            |                              |                             |
|----|------------------------------------|----------------------------|------------------------------|-----------------------------|
| 1. | Date _____                         | Name (Print) _____         | Signature _____              | Date _____                  |
|    | Time Custody Received _____        | Organization _____         |                              | Time Custody Released _____ |
| 2. | Date _____                         | Name (Print) _____         | Signature _____              | Date _____                  |
|    | Time Custody Received _____        | Organization _____         |                              | Time Custody Released _____ |
| 3. | Date <b>10-10-12</b>               | Name (Print) <b>JA</b>     | Signature <b>[Signature]</b> | Date _____                  |
|    | Time Custody Received <b>10:30</b> | Organization <b>DWR/LB</b> |                              | Time Custody Released _____ |

**LABORATORY REMARKS (Leave Blank)**

- A. Condition at Time of Receipt:**
- Acceptable                                       Broken Container                       Leaked in Transit                       Improper Container
  - Holding Time Exceeded                       Sample Not Cooled                       Insufficient Sample
- B. Preservatives/Carriers:**
- Added While Sampling                       Added in Laboratory                       Not Added                                       Not Applicable



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 12-0301

|  |                     |                                       |               |
|--|---------------------|---------------------------------------|---------------|
| Collector: Tom Hook  | RHB                 | Requestor: Roger Lupo                 | RHB           |
| P O Box 56   |                     | CDPH - RHB, 1500 Capitol Av., MS 7610 |               |
| Avila Beach  | CA 93424            | Sacramento                            | CA 95814-5006 |
| Phone Number: 805-545-4409                                 |                     | Phone Number: 916-440-7955            |               |
| Site/Project Name: Diablo Canyon NPP / REMP / 3rd Qtr 2012 |                     |                                       |               |
| System No:   | Billing Agency: RHB | Samples Received by Lab:              |               |

| Parameter          | Method  | Result +/- CE                   | MDA 95                            | Units        |
|--------------------|---|---------------------------------|-----------------------------------|--------------|
| Lab No: 12-0301-01 | Sample ID: R 92069<br>Sample Type: Vegetation | Time Collected: 7/24/2012 07:40 | Sampling Point: Vegetation<br>7G1 |              |
| Dry Wt/Wet Wt      |   | 0.114                           |                                   |              |
| K-40               | HASL Ga-01-R                                  | 34.0 +/- 0.843                  | 1.20                              | pCi/g dry wt |

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

**REQUEST FOR SAMPLE ANALYSIS (Radiochemical)**

|   |  |   |
|---|--|---|
| <b>Sanitation and Radiation Laboratories Branch</b><br>850 Marina Bay Parkway, G164<br>Richmond, CA 94804<br>510-620-2911 | Date Received<br><b>7-25-12</b>  | Lab No. (Leave Blank)<br><b>12-0306</b> |
|   | Date & Time Sampled<br><b>7/24/12 07:40</b>  | Serial Number<br><b>R 92069</b>         |
| <b>Collector Information</b><br>Name:<br>Dept./Branch: <b>TH/c</b><br>Address:<br>Telephone No.:                          | <b>Reporting Information</b><br>Name:<br>Dept./Branch:<br>Address:<br>Telephone No.:   |   |
| <b>Sample Information</b><br>System Name / Facility: <b>DCPP REMP</b><br>Sampling Point (s): <b>761</b><br>System No.:    | <b>Billing Agency</b><br><input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC<br><input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG<br><input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____ |   |

**TYPE OF SAMPLE (Check all applicable boxes)**

Drinking Water     Groundwater     Surface Water     Wastewater  
 Raw     Water Treatment Plant (WTP)     Distribution System     Point of Use (POU)  
 Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

Air Filters    Date/Time \_\_\_\_\_     Seawater     Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_     Milk     Soil/Sediment  
 Starting: \_\_\_\_\_     Wipes     Biota (Type): **Vegetation**  
 Net (M<sup>3</sup>) \_\_\_\_\_     Radon Canister     Other: \_\_\_\_\_  
 Air Charcoal Cartridge

**COMMENTS: (Cautions, etc.):** \_\_\_\_\_

Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
 Field Measurement: \_\_\_\_\_ mR/hr     Radionuclide(s), if known: \_\_\_\_\_  
 Rush/Priority (should be prearranged and have supervisory approval)

**ANALYSIS REQUESTED (For questions, please call 510-620-2911)**

Gross Alpha     Gross Beta     Gamma Scan  
 Total Uranium     Total Beta (LSC)     NORM (Gamma)  
 Total Radium     Tritium (<sup>3</sup>H)     Isotopic Americium / Curium  
 Radium-226     Carbon-14     Isotopic Plutonium  
 Radium-228     Iodine-131     Isotopic Thorium  
 Radon-222     Strontium-89, 90     Isotopic Uranium  
 Other (Specify): \_\_\_\_\_     Nickel-63     Iron-55

**CHAIN OF CUSTODY**

|    |                                    |                            |                              |                             |
|----|------------------------------------|----------------------------|------------------------------|-----------------------------|
| 1. | Date _____                         | Name (Print) _____         | Signature _____              | Date _____                  |
|    | Time Custody Received _____        | Organization _____         | Signature _____              | Time Custody Released _____ |
| 2. | Date _____                         | Name (Print) _____         | Signature _____              | Date _____                  |
|    | Time Custody Received _____        | Organization _____         | Signature _____              | Time Custody Released _____ |
| 3. | Date <b>7-25-12</b>                | Name (Print) <b>UJA</b>    | Signature _____              | Date _____                  |
|    | Time Custody Received <b>14:00</b> | Organization <b>DWR/LB</b> | Signature <b>[Signature]</b> | Time Custody Released _____ |

**LABORATORY REMARKS (Leave Blank)**

**A. Condition at Time of Receipt:** **≤ 0.01 MR/HR**

Acceptable     Broken Container     Leaked in Transit     Improper Container  
 Holding Time Exceeded     Sample Not Cooled     Insufficient Sample

**B. Preservatives/Carriers:**  
 Added While Sampling     Added in Laboratory     Not Added     Not Applicable



**Drinking Water and Radiation Laboratory Branch**

850 Marina Bay Parkway, Richmond, CA 94804  
 Phone: (510) 620-2911 Fax: (510) 620-2940

**FINAL Analysis Results Report for Task ID. 12-0302**

|   |                     |  |     |
|---|---------------------|--|-----|
| Collector: Tom Hook<br>P O Box 56<br>Avila Beach CA 93424<br>Phone Number: 805-545-4409 | RHB                 | Requestor: Roger Lupo<br>CDPH - RHB, 1500 Capitol Av., MS 7610<br>Sacramento CA 95814-5006<br>Phone Number: 916-440-7955 | RHB |
| Site/Project Name: Diablo Canyon NPP / REMP DCM / 3rd Qtr 2012                          |                     |  |     |
| System No:  | Billing Agency: RHB | Samples Received by Lab: 7/25/2012   |     |

| Parameter          | Method  | Result +/- CE                   | MDA 95               | Units        |
|--------------------|---|---------------------------------|----------------------|--------------|
| Lab No: 12-0302-01 | Sample ID: R 92068<br>Sample Type: Vegetation | Time Collected: 7/12/2012 09:23 | Sampling Point: Kelp |              |
| Dry Wt/Wet Wt      |   | 0.149                           |                      |              |
| K-40               | HASL Ga-01-R                                  | 119 +/- 2.67                    | 1.23                 | pCi/g dry wt |

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

**REQUEST FOR SAMPLE ANALYSIS (Radiochemical)**

|   |  |   |
|---|--|---|
| <b>Sanitation and Radiation Laboratories Branch</b><br>850 Marina Bay Parkway, G164<br>Richmond, CA 94804<br>510-620-2911 | Date Received<br><b>7-25-12</b>  | Lab No. (Leave Blank)<br><b>12-0302</b> |
|   | Date & Time Sampled<br><b>7-12-12 9:23</b>   | Serial Number<br><b>R 92068</b>         |
| <b>Collector Information</b><br>Name:<br>Dept./Branch: <b>OS/TH</b><br>Address:<br><br>Telephone No.:                     | <b>Reporting Information</b><br>Name:<br>Dept./Branch:<br>Address:<br><br>Telephone No.:   |   |
| <b>Sample Information</b><br>System Name / Facility:<br>Sampling Point (s): <b>DCPP REMP/DCM</b><br><br>System No.:       | <b>Billing Agency</b><br><input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC<br><input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG<br><input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____ |   |

**TYPE OF SAMPLE (Check all applicable boxes)**

Drinking Water     Groundwater     Surface Water     Wastewater  
 Raw     Water Treatment Plant (WTP)     Distribution System     Point of Use (POU)  
 Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

Air Filters    Date/Time \_\_\_\_\_     Seawater     Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_     Milk     Soil/Sediment  
 Starting: \_\_\_\_\_     Wipes     Biota (Type): **Kelp**  
 Net (M<sup>3</sup>) \_\_\_\_\_     Radon Canister     Other: \_\_\_\_\_  
 Air Charcoal Cartridge

**COMMENTS: (Cautions, etc.):** \_\_\_\_\_

Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
 Field Measurement: \_\_\_\_\_ mR/hr     Radionuclide(s), if known: \_\_\_\_\_  
 Rush/Priority (should be prearranged and have supervisory approval)

**ANALYSIS REQUESTED (For questions, please call 510-620-2911)**

Gross Alpha     Gross Beta     Gamma Scan  
 Total Uranium     Total Beta (LSC)     NORM (Gamma)  
 Total Radium     Tritium (<sup>3</sup>H)     Isotopic Americium / Curium  
 Radium-226     Carbon-14     Isotopic Plutonium  
 Radium-228     Iodine-131     Isotopic Thorium  
 Radon-222     Strontium-89, 90     Isotopic Uranium  
 Other (Specify); \_\_\_\_\_     Nickel-63     Iron-55

**CHAIN OF CUSTODY**

|    |                             |                           |                              |                             |
|----|-----------------------------|---------------------------|------------------------------|-----------------------------|
| 1. | Date _____                  | Name (Print) _____        | Signature _____              | Date _____                  |
|    | Time Custody Received _____ | Organization _____        | Signature _____              | Time Custody Released _____ |
| 2. | Date _____                  | Name (Print) _____        | Signature _____              | Date _____                  |
|    | Time Custody Received _____ | Organization _____        | Signature _____              | Time Custody Released _____ |
| 3. | Date <b>7-25-12</b>         | Name (Print) <b>UA</b>    | Signature <b>[Signature]</b> | Date _____                  |
|    | Date <b>10:00</b>           | Name (Print) <b>DWRIB</b> | Signature <b>[Signature]</b> | Date _____                  |
|    | Time Custody Received _____ | Organization _____        | Signature _____              | Time Custody Released _____ |

**LABORATORY REMARKS (Leave Blank)**

**A. Condition at Time of Receipt:** **≤ 0.01 MR/HR**

Acceptable     Broken Container     Leaked in Transit     Improper Container  
 Holding Time Exceeded     Sample Not Cooled     Insufficient Sample

**B. Preservatives/Carriers:**

Added While Sampling     Added in Laboratory     Not Added     Not Applicable



Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
 Phone: (510) 620-2911 Fax: (510) 620-2940

**FINAL Analysis Results Report for Task ID. 12-0078**

|   |                     |  |     |
|---|---------------------|--|-----|
| Collector: Tom Hook<br>P O Box 56<br>Avila Beach CA 93424<br>Phone Number: 805-545-4409 | RHB                 | Requestor: Steve Hsu<br>1500 Capitol Avenue, MS 7610<br>Sacramento CA 95814-5006<br>Phone Number: 916-440-7940 | RHB |
| Site/Project Name: Diablo Canyon NPP / Biota / 2nd Qtr 2012                             |                     |  |     |
| System No:  | Billing Agency: RHB | Samples Received by Lab: 4/25/2012   |     |

| Parameter          | Method  | Result +/- CE                   | MDA 95               | Units        |
|--------------------|---|---------------------------------|----------------------|--------------|
| Lab No: 12-0078-01 | Sample ID: R 91970<br>Sample Type: Vegetation | Time Collected: 4/23/2012 09:30 | Sampling Point: Kelp |              |
| Dry Wt/Wet Wt      |   | 0.1239                          |                      |              |
| K-40               | HASL Ga-01-R                                  | 136 +/- 2.90                    | 1.72                 | pCi/g dry wt |

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

**REQUEST FOR SAMPLE ANALYSIS (Radiochemical)**

|   |  |   |
|---|--|---|
| <b>Sanitation and Radiation Laboratories Branch</b><br>850 Marina Bay Parkway, G164<br>Richmond, CA 94804<br>510-620-2911 | Date Received<br><b>4-25-12</b>  | Lab No. (Leave Blank)<br><b>12-0074</b> |
|   | Date & Time Sampled<br><b>4-23-12 9:30</b>   | Serial Number<br><b>R 91970</b>         |
| <b>Collector Information</b><br>Name:<br>Dept./Branch: <b>TH</b><br>Address:<br><br>Telephone No.:                        | <b>Reporting Information</b><br>Name:<br>Dept./Branch:<br>Address:<br><br>Telephone No.:   |   |
| <b>Sample Information</b><br>System Name / Facility:<br>Sampling Point (s): <b>DCPP' REMP / DCM</b><br><br>System No.:    | <b>Billing Agency</b><br><input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC<br><input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG<br><input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____ |   |

**TYPE OF SAMPLE (Check all applicable boxes)**

Drinking Water     Groundwater     Surface Water     Wastewater  
 Raw     Water Treatment Plant (WTP)     Distribution System     Point of Use (POU)  
 Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

Air Filters    Date/Time \_\_\_\_\_     Seawater     Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_     Milk     Soil/Sediment  
 Starting: \_\_\_\_\_     Wipes     Biota (Type): **Kelp**  
 Net (M<sup>3</sup>): \_\_\_\_\_     Radon Canister     Other: \_\_\_\_\_  
 Air Charcoal Cartridge

**COMMENTS: (Cautions, etc.):** \_\_\_\_\_

Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
 Field Measurement: \_\_\_\_\_ mR/hr     Radionuclide(s), if known: \_\_\_\_\_  
 Rush/Priority (should be prearranged and have supervisory approval)

**ANALYSIS REQUESTED (For questions, please call 510-620-2911)**

|   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify); _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

**CHAIN OF CUSTODY**

|    |                                    |                            |                              |                             |
|----|------------------------------------|----------------------------|------------------------------|-----------------------------|
| 1. | Date _____                         | Name (Print) _____         | _____                        | Date _____                  |
|    | Time Custody Received _____        | Organization _____         | Signature _____              | Time Custody Released _____ |
| 2. | Date _____                         | Name (Print) _____         | _____                        | Date _____                  |
|    | Time Custody Received _____        | Organization _____         | Signature _____              | Time Custody Released _____ |
| 3. | Date <b>4-25-12</b>                | Name (Print) <b>VA</b>     | _____                        | Date _____                  |
|    | Time Custody Received <b>11:00</b> | Organization <b>DWR/LB</b> | Signature <i>[Signature]</i> | Time Custody Released _____ |

**LABORATORY REMARKS (Leave Blank)**

**A. Condition at Time of Receipt:**

|  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |

**B. Preservatives/Carriers:**

|   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



**Drinking Water and Radiation Laboratory Branch**

850 Marina Bay Parkway, Richmond, CA 94804  
 Phone: (510) 620-2911 Fax: (510) 620-2940

**FINAL Analysis Results Report for Task ID. 12-0011**

|   |                     |  |     |
|---|---------------------|--|-----|
| Collector: Tom Hook<br>P O Box 56<br>Avila Beach CA 93424<br>Phone Number: 805-545-4409 | RHB                 | Requestor: Steve Hsu<br>1500 Capitol Avenue, MS 7610<br>Sacramento CA 95814-5006<br>Phone Number: 916-440-7940 | RHB |
| Site/Project Name: Diablo Canyon NPP / Biota 2nd Qtr 2012                               |                     | Samples Received by Lab: 4/3/2012  |     |
| System No:  | Billing Agency: RHB |  |     |

| Parameter          | Method                                       | Result +/- CE                  | MDA 95                           | Units        |
|--------------------|--|--------------------------------|----------------------------------|--------------|
| Lab No: 12-0011-01 | Sample ID: R92668<br>Sample Type: Vegetation | Time Collected: 4/3/2012 09:15 | Sampling Point: Vegetation / 7G1 |              |
| Dry Wt/Wet Wt      |  | 0.07312                        |                                  |              |
| K-40               | HASL Ga-01-R                                 | 48.2 +/- 1.12                  | 1.16                             | pCi/g dry wt |

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

|   |  |                                   |
|---|--|-----------------------------------|
| <b>Sanitation and Radiation Laboratories Branch</b><br>850 Marina Bay Parkway, G164<br>Richmond, CA 94804<br>510-620-2911 | Date Received<br>4-4-12  | Lab No. (Leave Blank)<br>#12-0011 |
|   | Date & Time Sampled<br>4-3-12 9:15   | Serial Number<br>R 92668          |
| <b>Collector Information</b><br>Name:<br>Dept./Branch: RT/TH<br>Address:<br>Telephone No.:                                | <b>Reporting Information</b><br>Name:<br>Dept./Branch: 9-114<br>Address: US2<br>Telephone No.:   |                                   |
| <b>Sample Information</b><br>System Name / Facility:<br>Sampling Point (s): DOPP REMP/761<br>System No.:                  | <b>Billing Agency</b><br><input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC<br><input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG<br><input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____ |                                   |

TYPE OF SAMPLE (Check all applicable boxes)

- Drinking Water       Groundwater       Surface Water       Wastewater
- Raw       Water Treatment Plant (WTP)       Distribution System       Point of Use (POU)
- Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- Air Filters      Date/Time       Seawater       Sludge (Semi-solid Samples)
- Finishing: \_\_\_\_\_      \_\_\_\_\_       Milk       Soil/Sediment
- Starting: \_\_\_\_\_      \_\_\_\_\_       Wipes       Biota (Type): Vegetation
- Net (M<sup>3</sup>) \_\_\_\_\_      \_\_\_\_\_       Radon Canister       Other: \_\_\_\_\_
- Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- Field Measurement: \_\_\_\_\_ mR/hr       Radionuclide(s), if known: \_\_\_\_\_
- Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- Gross Alpha       Gross Beta       Gamma Scan
- Total Uranium       Total Beta (LSC)       NORM (Gamma)
- Total Radium       Tritium (<sup>3</sup>H)       Isotopic Americium / Curium
- Radium-226       Carbon-14       Isotopic Plutonium
- Radium-228       Iodine-131       Isotopic Thorium
- Radon-222       Strontium-89, 90       Isotopic Uranium
- Other (Specify): \_\_\_\_\_       Nickel-63       Iron-56

CHAIN OF CUSTODY

|    |                             |                           |                              |                             |
|----|-----------------------------|---------------------------|------------------------------|-----------------------------|
| 1. | Date _____                  | Name (Print) _____        | _____                        | Date _____                  |
|    | Time Custody Received _____ | Organization _____        | Signature _____              | Time Custody Released _____ |
| 2. | Date _____                  | Name (Print) _____        | _____                        | Date _____                  |
|    | Time Custody Received _____ | Organization _____        | Signature _____              | Time Custody Released _____ |
| 3. | Date <u>4-4-12</u>          | Name (Print) <u>UA</u>    | _____                        | Date _____                  |
|    | Date <u>12:10</u>           | Name (Print) <u>DURIB</u> | Signature <u>[Signature]</u> | Date _____                  |
|    | Time Custody Received _____ | Organization _____        | Signature _____              | Time Custody Released _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: ≤ 0.01 uR/hr
- Acceptable       Broken Container       Leaked in Transit       Improper Container
  - Holding Time Exceeded       Sample Not Cooled       Insufficient Sample
- B. Preservatives/Carriers:
- Added While Sampling       Added in Laboratory       Not Added       Not Applicable



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N12-0055

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 02/08/2012

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 01/17/2012 09:28 Date/Time Received: 01/19/2012 11:20

Site Name: Diablo Canyon NPP

Source Name: DCNPP / 4th Qtr 2011

R Number: R 92651

Sample Type: Vegetation

| <u>Sample ID</u> | <u>Sampling Point</u> | <u>Method</u> | <u>Parameter</u> | <u>Result ± CE</u> | <u>MDA<sub>95</sub></u> | <u>Units</u> |
|------------------|-----------------------|---------------|------------------|--------------------|-------------------------|--------------|
| N12-0055-001     | Kelp                  | HASL Ga-01-R  | Dry Wt./Wet Wt.  | 0.112 ±            |                         |              |
| N12-0055-001     | Kelp                  | HASL Ga-01-R  | K-40             | 143 ± 3.05         | 2.09                    | pCi/g dry wt |

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

**REQUEST FOR SAMPLE ANALYSIS (Radiochemical)**

|   |  |                                   |
|---|--|-----------------------------------|
| <b>Sanitation and Radiation Laboratories Branch</b><br>850 Marina Bay Parkway, G164<br>Richmond, CA 94804<br>510-620-2911 | Date Received<br>11/19/12  | Lab No. (Leave Blank)<br>N12-0055 |
|   | Date & Time Sampled<br>11/17/12 9:58   | Serial Number<br>R 92651          |
| <b>Collector Information</b><br>Name:<br>Dept./Branch:<br>Address: RT/TH<br>Telephone No.:                                | <b>Reporting Information</b><br>Name: 11/13/12 14:53<br>Dept./Branch:<br>Address:<br>Telephone No.:  |                                   |
| <b>Sample Information</b><br>System Name / Facility:<br>Sampling Point (s): DCPP REMP<br>System No.: DCM                  | <b>Billing Agency</b><br><input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC<br><input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG<br><input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____ |                                   |

**TYPE OF SAMPLE (Check all applicable boxes)**

|   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                  |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)          |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater            | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment               |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): <u>Kelp</u>   |
| Net (M <sup>3</sup> ): _____  | _____  | <input type="checkbox"/> Radon Canister      | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

**COMMENTS: (Cautions, etc.):** \_\_\_\_\_

Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
 Field Measurement: \_\_\_\_\_ mR/hr     Radionuclide(s), if known: \_\_\_\_\_  
 Rush/Priority (should be prearranged and have supervisory approval)

**ANALYSIS REQUESTED (For questions, please call 510-620-2911)**

|   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

**CHAIN OF CUSTODY**

|    |                                       |                             |                                     |
|----|---------------------------------------|-----------------------------|-------------------------------------|
| 1. | Date _____                            | Name (Print) _____          | Date _____                          |
|    | Time Custody Received _____           | Organization _____          | Signature _____                     |
| 2. | Date _____                            | Name (Print) _____          | Date _____                          |
|    | Time Custody Received _____           | Organization _____          | Signature _____                     |
| 3. | Date <u>11/19/12</u>                  | Name (Print) <u>VA</u>      | Date _____                          |
|    | Time Custody Received <u>11/20/12</u> | Organization <u>DWR LCB</u> | Signature <u>N. Victoria M. ...</u> |
|    | Date _____                            | Name (Print) _____          | Date _____                          |
|    | Time Custody Received _____           | Organization _____          | Signature _____                     |

**LABORATORY REMARKS (Leave Blank)**

≤ 0.01 MR/HR

**A. Condition at Time of Receipt:**

|  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |

**B. Preservatives/Carriers:**

|   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|