



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. 12-0643

Collector: Tom Hook P O Box 56 Avila Beach CA 93424 Phone Number: 805-545-4409	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 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: 11/27/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0643-01	Sample ID: R 92364	Time Collected: 11/15/2012 13:00	Sampling Point: Perch	
	Sample Type: Fish/Shellfish			
Dry Wt/Wet Wt		0.2486		
K-40	HASL Ga-01-R	16.3 +/- 0.391	0.479	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)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 11-27-12	Lab No. (Leave Blank) 12-0643
	Date & Time Sampled 11-15-12 13:00	Serial Number R 92364
Collector Information Name: Dept./Branch: SRP Address: Telephone No.: JCC	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: Sampling Point (s): PCM System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <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): Perch |
| Net (M ³) _____ | _____ | <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 (³ 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) _____	Signature _____	Date _____
	Time Custody Received _____	Organization _____		Time Custody Released _____
2.	Date _____	Name (Print) _____	Signature _____	Date _____
	Time Custody Received _____	Organization _____		Time Custody Released _____
3.	Date 11-27-12	Name (Print) UA	Signature [Signature]	Date _____
	Time Custody Received 13:30	Organization DWRLB		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. 12-0644

Collector: Tom Hook P O Box 56 Avila Beach CA 93424 Phone Number: 805-545-4409	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: Diablo Canyon NPP / Biota / 4th Qtr 2012		Samples Received by Lab: 11/27/2012	
System No:	Billing Agency: RHB		

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0644-01	Sample ID: R 92365	Time Collected: 11/15/2012 13:00	Sampling Point: Rockfish	
	Sample Type: Fish/Shellfish			
Dry Wt/Wet Wt		0.2645		
K-40	HASL Ga-01-R	13.8 +/- 0.362	0.615	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)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 11-27-12	Lab No. (Leave Blank) 12-0644
	Date & Time Sampled 11-15-12 1300	Serial Number R 92365
Collector Information Name: SRP Dept./Branch: JCC Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: Sampling Point (s): DCPP REMP System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <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): **Rockfish**
 Net (M³) _____ 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 (³H) 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 11-27-12	Name (Print) VA	Signature [Signature]	Date _____
	Time Custody Received 13:30	Organization DWR/LB	Signature [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. 12-0423

Collector: J M S	DC REM	Requestor: Roger Lupo	RHB
San Louis Obisp CA		CDPH - RHB, 1500 Capitol Av., MS 7610	
Phone Number:		Sacramento CA 95814-5006	
		Phone Number: 916-440-7955	
Site/Project Name: Diablo Canyon NPP / Biota / 3rd Qtr 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 8/29/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0423-01	Sample ID: R 92086	Time Collected: 8/22/2012 13:00	Sampling Point: Embiotoxicide	
	Sample Type: Fish/Shellfish			
Dry Wt/Wet Wt		0.2462		
K-40	HASL Ga-01-R	15.8 +/- 0.371	0.399	pCi/g dry wt

RECEIVED
 2012 OCT 18 PM 1:31
 RADIOLOGIC HEALTH BRANCH
 RICHMOND

- (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)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received <i>8-29-12</i>	Lab No. (Leave Blank) <i>12-0423</i>
	Date & Time Sampled <i>8-22-12</i>	Serial Number <i>R 92086</i>
Collector Information Name: Dept./Branch: Address: <i>JMS</i> Telephone No.:	Reporting Information Name: Dept./Branch: Address: <i>Roger Lupo</i> Telephone No.:	
Sample Information System Name / Facility: Sampling Point (s): <i>DCM / REMP</i> System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <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): *antibiotics*
 Net (M³) _____ 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 (³H) 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 <i>8-29-12</i>	Name (Print) <i>UA</i>	Signature <i>Natona M. Ali</i>	Date _____
	Date <i>14:00</i>	Name (Print) <i>DWR/LB</i>	Signature _____	Date _____
	Time Custody Received _____	Organization _____		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. 12-0422

Collector: J M S	DC REM	Requestor: Roger Lupo	RHB
San Louis Obisp CA		CDPH - RHB, 1500 Capitol Av., MS 7610	
Phone Number:		Sacramento CA 95814-5006	
		Phone Number: 916-440-7955	
Site/Project Name: Diablo Canyon NPP / Biota / 3rd Qtr 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 8/29/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0422-01	Sample ID: R 92085	Time Collected: 8/22/2012 13:00	Sampling Point: Seabastes	
	Sample Type: Fish/Shellfish			
Dry Wt/Wet Wt		0.2389		
K-40	HASL Ga-01-R	13.4 +/- 0.341	0.515	pCi/g dry wt

RECEIVED
2012 OCT 18 PM 1:40
RADIOLOGICAL HEALTH BRANCH
RICHMOND

- (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)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 9-29-12	Lab No. (Leave Blank) 12-0422
	Date & Time Sampled 8-22-12 13:00	Serial Number R 92085
Collector Information Name: Dept./Branch: Address: JMS Telephone No.:	Reporting Information Name: Dept./Branch: Address: Roger Lupo Telephone No.:	
Sample Information System Name / Facility: Sampling Point (s): DCM / REM-P System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input type="checkbox"/> RHB <input type="checkbox"/> RWQCBY <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <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

<input type="checkbox"/> Air Filters Finishing: _____ Starting: _____ Net (M ³): _____	Date/Time _____	<input type="checkbox"/> Seawater <input type="checkbox"/> Milk <input type="checkbox"/> Wipes <input type="checkbox"/> Radon Canister	<input type="checkbox"/> Sludge (Semi-solid Samples) <input type="checkbox"/> Soil/Sediment <input checked="" type="checkbox"/> Biota (Type): <u>fungi, seba</u> <input type="checkbox"/> 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 (³ 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 <u>8-29-12</u>	Name (Print) <u>UA</u>	_____	Date _____
	Time Custody Received <u>14:00</u>	Organization <u>DWR/LB</u>	Signature <u>[Signature]</u>	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
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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. 12-0183

Collector: Diablo Canyon NPP	RHB	Requestor: Steve Hsu	RHB
	CA	CDPH - RHB, 1500 Capitol Avenue, MS 7	
Phone Number:		Sacramento CA 95814-5006	Phone Number: 916-440-7940
Site/Project Name: Diablo Canyon NPP / Biota / 2nd Qtr 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 6/6/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0183-01	Sample ID: R 91996 Sample Type: Biota	Time Collected: 5/31/2012 11:00	Sampling Point: Embiotocidae	
Dry Wt/Wet Wt		0.246		
K-40	HASL Ga-01-R	14.9 +/- 0.355	0.428	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)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received <i>6/6/12</i>	Lab No. (Leave Blank) <i>12-0183</i>
	Date & Time Sampled <i>5/31/12 11:00</i>	Serial Number R 91996
Collector Information Name: Dept./Branch: <i>TEMERA</i> Address: <i>CBP DCAP</i> Telephone No.:	Reporting Information Name: Dept./Branch: <i>Steve Hsu</i> Address: Telephone No.:	
Sample Information System Name / Facility: <i>2nd Qtr 2012</i> Sampling Point (s): <i>DCM</i> System No.: <i>PEMP Sample</i>	Billing Agency <input type="checkbox"/> DWFOB () <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <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): *Embriatocidae*
 - Net (M³) _____ _____ 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)

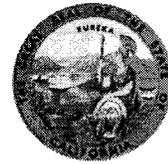
- Gross Alpha Gross Beta Gamma Scan
- Total Uranium Total Beta (LSC) NORM (Gamma)
- Total Radium Tritium (³H) Isotopic Americium / Curium
- Radium-226 Carbon-14 Isotopic Plutonium
- Radium-228 Iodine-131 Isotopic Thorium
- Radon-222 Strontium-89, 90 Isotopic Uranium
- Other (Specify): _____ Nickel-63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

CHAIN OF CUSTODY

1.	Date _____	Name (Print) _____	_____	Date _____
	Time Custody Received _____	Organization _____	Signature _____	Time Custody Released _____
2.	Date _____	Name (Print) _____	_____	Date _____
	Time Custody Received _____	Organization _____	Signature _____	Time Custody Released _____
3.	Date <i>6/6/12</i>	Name (Print) <i>S. Ruben</i>	_____	Date _____
	Time Custody Received <i>10:00</i>	Organization <i>DMALB</i>	Signature <i>S. Ruben</i>	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. 12-0182

Collector: Diablo Canyon NPP	RHB	Requestor: Steve Hsu	RHB
	CA	CDPH - RHB, 1500 Capitol Avenue, MS 7	
Phone Number:		Sacramento CA 95814-5006	
		Phone Number: 916-440-7940	
Site/Project Name: Diablo Canyon NPP / Biota / 2nd Qtr 2012			
System No:	Billing Agency: RHB	Samples Received by Lab: 6/6/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 12-0182-01	Sample ID: R 91995	Time Collected: 5/3/2012	11:00	Sampling Point: Sebastes
	Sample Type: Fish/Shellfish			
Dry Wt/Wet Wt		0.240		
K-40	HASL Ga-01-R	12.9 +/- 0.335	0.534	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)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received <i>6/6/12</i>	Lab No. (Leave Blank) <i>12-0182</i>
	Date & Time Sampled <i>5/31/12 11:00</i>	Serial Number R 91995
Collector Information Name: _____ Dept./Branch: <i>Tenera</i> Address: <i>DCPP REMP Sampler</i> Telephone No.: _____	Reporting Information Name: _____ Dept./Branch: <i>Steve Hsu</i> Address: _____ Telephone No.: _____	
Sample Information System Name / Facility: <i>2nd Qtr 2012</i> Sampling Point (s): <i>DCM</i> System No.: _____	Billing Agency <input type="checkbox"/> DWFOB () <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <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 checked="" type="checkbox"/> Biota (Type): <i>Sebastes</i> |
| Net (M ³): _____ | _____ | <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 checked="" 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 (³ 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) _____	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 <i>6/6/12</i>	Name (Print) <i>S. Ruben</i>	Signature <i>S. Ruben</i>	Date _____
	Time Custody Received <i>10:00</i>	Organization <i>DWRPEG</i>	Signature _____	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
-----------------------------------------------	----------------------------------------------	------------------------------------	-----------------------------------------



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. N12-0190

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 04/03/2012

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: ACH

Date/Time Collected: 03/09/2012 12:00 Date/Time Received: 03/20/2012 10:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / REMP / 1st Qtr 2012

R Number: R 92662

Sample Type: Fish/Shellfish

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0190-001	Rockfish	HASL Ga-01-R	Dry Wt./Wet Wt.	0.257 ±		
N12-0190-001	Rockfish	HASL Ga-01-R	K-40	15.2 ± 0.353	0.452	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. 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, depending on the particular radionuclide. LLD₉₅ 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)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 3/20/12	Lab No. (Leave Blank) N12-0190
	Date & Time Sampled 3-9-12 12:00	Serial Number R 92662
Collector Information Name: ACH Dept./Branch: JMS. RBH Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: DCM Sampling Point (s): System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <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): Rockfish
 Net (M³): _____ 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 (³ 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) _____	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 _____	Name (Print) _____	Signature _____	Date _____
	Time Custody Received _____	Organization _____	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 LY



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. N12-0191

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 03/28/2012

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: ACH

Date/Time Collected: 03/09/2012 12:00 Date/Time Received: 03/20/2012 10:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / REMP / Biota

R Number: R 92663

Sample Type: Fish/Shellfish

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N12-0191-001	Perch	HASL Ga-01-R	Dry Wt./Wet Wt.	0.299 ±		
N12-0191-001	Perch	HASL Ga-01-R	K-40	14.5 ± 0.330	0.309	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. 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, depending on the particular radionuclide. LLD₉₅ 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)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 3-20-12	Lab No. (Leave Blank) N12-0191
	Date & Time Sampled 3-9-12 1200	Serial Number R 92663
Collector Information Name: Dept./Branch: Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: DCPP REMF Sampling Point (s): DCM System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <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): Perch |
| Net (M ³) _____ | | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> 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 (³ 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 _____	Name (Print) _____	Date _____
	Time Custody Received _____	Organization _____	Signature _____

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 |
|-----------------------------------------------|----------------------------------------------|------------------------------------|-----------------------------------------|