



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. N11-1076

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: ACH Date/Time Collected: 11/03/2011 11:00 Date/Time Received: 11/16/2011 09:30
Site Name: Diablo Canyon NPP Source Name: DCNPP / 4th Qtr 2011
R Number: 92641 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>
N11-1076-001	Perch	HASL Ga-01-R	Dry Wt./Wet Wt.	0.293 ±		
N11-1076-001	Perch	HASL Ga-01-R	K-40	15.8 ± 0.362	0.398	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 <u>11-16-11</u>	Lab No. (Leave Blank) <u>NU-1076</u>
	Date & Time Sampled <u>11-3-11 11:00</u>	Serial Number <u>R 92641</u>
Collector Information Name: Dept./Branch: <u>ACH GRC SRP</u> Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: <u>DCPP / DCM</u> 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): Arch
- 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 <u>11/16/11</u>	Name (Print) <u>UA</u>	_____	Date _____
	Time Custody Received <u>9:30</u>	Organization <u>DWRLB</u>	Signature <u>[Signature]</u>	Time Custody Released _____

LABORATORY REMARKS (Leave Blank)

- ≤ 0.01 MR/HR
- 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



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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N11-1075

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: ACH Date/Time Collected: 11/03/2011 11:00 Date/Time Received: 11/16/2011 09:30
Site Name: Diablo Canyon NPP Source Name: DCNPP / 4th tr 2011
R Number: 92640 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>
N11-1075-001	Rockfish	HASL Ga-01-R	Dry Wt./Wet Wt.	0.245 ±		
N11-1075-001	Rockfish	HASL Ga-01-R	K-40	13.8 ± 0.359	0.555	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 11-16-11	Lab No. (Leave Blank) N11-1075
	Date & Time Sampled 11-3-11 11:00	Serial Number R 92640
Collector Information Name: Dept./Branch: ACH GRC SRP Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name/ Facility: Sampling Point (s): DCPP-RE MP/ 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 checked="" type="checkbox"/> Wipes | <input checked="" type="checkbox"/> Biota (Type): <u>Rockfish</u> |
| 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) _____	_____	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>11-16-11</u>	Name (Print) <u>VIA</u>	_____	Date _____
	Time Custody Received <u>9:30</u>	Organization <u>DWRLB</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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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N11-0864

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 09/28/2011

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: Martin Wright

Date/Time Collected: 08/12/2011 13:00 Date/Time Received: 08/23/2011 11:50

Site Name: Diablo Canyon NPP

Source Name: Biota / DCM / 3rd Qtr 2011

R Number: R 92504

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>
N11-0864-001	Rock Fish	HASL Ga-01-R	Dry Wt./Wet Wt.	0.257 ±		
N11-0864-001	Rock Fish	HASL Ga-01-R	K-40	13.9 ± 0.355	0.606	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 8/23/11	Lab No. (Leave Blank) N11-0864
	Date & Time Sampled 8/12/11 13:00	Serial Number R 92504
Collector Information Name: Martin Wright SRP Dept./Branch: PG 8E Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: Sampling Point (s): SLD, 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)

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): Fish
 Net (M³) _____ Radon Canister Other: Rockfish

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 checked="" 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>8/23/11</u>	Name (Print) <u>UA</u>	_____	Date _____
	Time Custody Received <u>11:50</u>	Organization <u>DWRLB</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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State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N11-0828

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 09/22/2011

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: Martin Wright

Date/Time Collected: 08/12/2011 13:00 Date/Time Received: 08/23/2011 11:50

Site Name: Diablo Canyon NPP

Source Name: Biota/ DCM / 3rd Qtr 2011

R Number: R 92500

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>
N11-0828-001	Perch	HASL Ga-01-R	Dry Wt./Wet Wt.	0.255 ±		
N11-0828-001	Perch	HASL Ga-01-R	K-40	14.6 ± 0.359	0.469	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.

3rd quarter, 2011 SLO
California Department of Public Health

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 8/23/11	Lab No. (Leave Blank) 11-0828
	Date & Time Sampled 8/12/11 13:00	Serial Number R 92500
Collector Information Name: Martin Wright SRP Dept./Branch: PG and E Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: Sampling Point (s): SLO, 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)

- 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): _____
- Net (M³) _____ Radon Canister Other: Fish - embriocidae
- Air Charcoal Cartridge

COMMENTS: (Cautions, etc.): _____ (perch)

- Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
- Field Measurement: _____ mR/hr Radioisotope(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 8/23/11	Name (Print) VA	_____	Date _____
	Time Custody Received 11:50	Organization DWRLB	Signature <u>[Signature]</u>	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



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California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N11-0580

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 09/01/2011

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: Diablo Canyon NPP Date/Time Collected: 05/11/2011 11:00 Date/Time Received: 05/18/2011 14:30
Site Name: Diablo Canyon NPP Source Name: DCNPP / 2nd Qtr 2011
R Number: R91156 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>
N11-0580-001	Embiotocidae	HASL Ga-01-R	Dry Wt./Wet Wt.	0.260 ±		
N11-0580-001	Embiotocidae	HASL Ga-01-R	K-40	16.2 ± 0.408	0.650	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 5/18/11	Lab No. (Leave Blank) N11-0580
	Date & Time Sampled 5/11/11 11:00	Serial Number R 91156
Collector Information Name: SRP Dept./Branch: D CPP Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: DCM - Sampling Point (s): D CPP 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): *Embriocidae*
 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 5/18/11	Name (Print) A TAN	Signature <i>Angela Tan</i>	Date _____
	Time Custody Received 14:30 PM	Organization DWRLB	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

CO-01 mR/hr



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. N11-0581

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 09/01/2011

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: Diablo Canyon NPP

Date/Time Collected: 05/11/2011 11:00 Date/Time Received: 05/18/2011 14:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / 2nd Qtr 2011

R Number: R91155

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>
N11-0581-001	Seabastes	HASL Ga-01-R	Dry Wt./Wet Wt.	0.237 ±		
N11-0581-001	Seabastes	HASL Ga-01-R	K-40	16.6 ± 0.429	0.741	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.

DCM - Data for
5/11/11 11:00

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 5/18/11	Lab No. (Leave Blank) N11-0581
	Date & Time Sampled 5/11/11 11:00	Serial Number R 91155
Collector Information Name: SRP Dept./Branch: DCPD Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: DCM Sampling Point (s): DCPD 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 / Peroxizone / 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): <u>Sebastes</u> |
| 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 checked="" 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 5/18/11	Name (Print) A. YAN	Signature Angela Yan	Date _____
	Time Custody Received 11:30 PM	Organization DWRLB		Time Custody Released _____

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: <0.01 mR/hr
- | | | | |
|--|--|--|--|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input checked="" 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 |
|---|--|------------------------------------|---|



Howard Backer, MD, MPH
Interim 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. N11-0209

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 05/25/2011

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: Diablo Canyon NPP

Date/Time Collected: 02/11/2011 11:00 Date/Time Received: 02/22/2011 11:44

Site Name: Diablo Canyon / Air

Source Name: Avila Beach

R Number: R91560

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>
N11-0209-001	Seabastes	HASL Ga-01-R	Dry Wt./Wet Wt.	0.256 ±		
N11-0209-001	Seabastes	HASL Ga-01-R	K-40	13.1 ± 0.325	0.308	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 <i>2/22/11</i>	Lab No. (Leave Blank) <i>N11-0209</i>
	Date & Time Sampled <i>2/11/11 11:07</i>	Serial Number R 91560
Collector Information Name: <i>Tenera DCM</i> Dept./Branch: <i>DCM</i> Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: <i>DCPP-1st Qrt. 2011</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)

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): *sea Benthos*
 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 <i>DCM</i>		Time Custody Released _____
2.	Date _____	Name (Print) _____	Signature _____	Date _____
	Time Custody Received _____	Organization _____		Time Custody Released _____
3.	Date <i>2/22/11</i>	Name (Print) <i>A. TANI</i>	Signature <i>Angela Tani</i>	Date _____
	Time Custody Received <i>13:30</i>	Organization <i>SRIB-N</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



Howard Backer, MD, MPH
Interim Director

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

Drinking Water and Radiation Laboratory Branch

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EDMUND G. BROWN JR.
Governor

FINAL Analysis Results Report for Task ID. N11-0208

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 05/25/2011

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: Diablo Canyon NPP

Date/Time Collected: 02/11/2011 11:00

Date/Time Received: 02/22/2011 11:41

Site Name: Diablo Canyon NPP

Source Name: DCNPP / Biota / 1st Qtr 2011

R Number: R91561

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>
N11-0208-001	Embiotocidae	HASL Ga-01-R	Dry Wt./Wet Wt.	0.245 ±		
N11-0208-001	Embiotocidae	HASL Ga-01-R	K-40	13.5 ± 0.345	0.595	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 2/2/11	Lab No. (Leave Blank) N11-0202
	Date & Time Sampled 2/11/11 11:00	Serial Number R 91561
Collector Information Name: KH, JMS Dept./Branch: Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: DCPD-1st Qtr 2011 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 checked="" type="checkbox"/> Biota (Type): <i>Embryonidae</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 <i>A TAN</i>		Time Custody Released _____
2.	Date <i>2/2/11</i>	Name (Print) <i>SRLB N</i>	Signature <i>Angela Soriano</i>	Date _____
	Time Custody Received _____	Organization _____		Time Custody Released _____
3.	Date <i>2/2/11</i>	Name (Print) <i>A TAN</i>	Signature <i>Angela Tan</i>	Date _____
	Time Custody Received <i>1330</i>	Organization <i>SRLB N</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 |
|---|--|------------------------------------|---|