



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. 13-0870

Investigator: 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: San Onofre NPP / SONGS I / 4th Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 10/17/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0870-01	Sample ID: R 94048	Time Collected: 10/15/2013 09:35	Sampling Point: Kelp	
	Sample Type: Vegetation			
Dry Wt/Wet Wt		0.1687		
K-40	HASL Ga-01-R	89.7 +/- 3.46	1.14	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)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 10-17-13	Lab No. (Leave Blank) 13-0870
	Date & Time Sampled 10-15-13 9:35	Serial Number R 94048
Collector Information Name: Dept./Branch: Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: Sampling Point (s): Soups 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 checked="" type="checkbox"/> Soil/Sediment
Starting: _____	_____	<input type="checkbox"/> Wipes	<input checked="" type="checkbox"/> Biota (Type): Kelp
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 10-17-13	Name (Print) VA	Signature Nutona M...	Date _____
	Date 10:00	Name (Print) DWRIB	Signature _____	Time Custody Released _____
	Time Custody Received _____	Organization _____		

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. 13-0871

Investigator: 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: San Onofre NPP / SONGS E / 4th Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 10/17/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0871-01	Sample ID: R 94049 Sample Type: Vegetation	Time Collected: 10/15/2013 08:35	Sampling Point: Kelp	
Dry Wt/Wet Wt		1.753		
K-40	HASL Ga-01-R	66.2 +/- 1.52	1.28	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 aquare root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch
850 Marina Bay Parkway, G164
Richmond, CA 94804
510-620-2911

Date Received: 10-17-13
Lab No. (Leave Blank): 13-0871
Date & Time Sampled: 10-15-13 8:35
Serial Number: R 94049

Collector Information

Name:
Dept./Branch: JUS
Address:
Telephone No.:

Reporting Information

Name:
Dept./Branch:
Address:
Telephone No.:

Sample Information

System Name / Facility: SONAR E
Sampling Point (s):
System No.:

Billing Agency

- Checkboxes for DWFOB, DWTPB, EMB, RHB, FDB, Other, RWQCB, DTSC, DWR, CDFG.

TYPE OF SAMPLE (Check all applicable boxes)

- Checkboxes for Drinking Water, Raw, Treated, Groundwater, WTP, Surface Water, Distribution System, Wastewater, Point of Use (POU).

- Checkboxes for Air Filters, Air Charcoal Cartridge, Seawater, Milk, Wipes, Radon Canister, Sludge, Soil/Sediment, Biota (Type: Kelp), Other: Kelp.

COMMENTS: (Cautions, etc.):

- Checkboxes for Field Treatment, Field Measurement, Rush/Priority.

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

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

CHAIN OF CUSTODY

Table with 4 columns: Date, Name (Print), Organization, Signature, Date, Time Custody Released. Includes handwritten entries for three individuals.

LABORATORY REMARKS (Leave Blank)

- Section A: Condition at Time of Receipt (Acceptable, Holding Time Exceeded, Broken Container, Sample Not Cooled, Leaked in Transit, Insufficient Sample, Improper Container).
Section 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. 13-0872

Investigator: 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: San Onofre NPP / SONGS F / 4th Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 10/17/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0872-01	Sample ID: R 94050 Sample Type: Vegetation	Time Collected: 10/15/2013 08:52	Sampling Point: Kelp	
Dry Wt/Wet Wt		0.1341		
K-40	HASL Ga-01-R	85.5 +/- 1.94	1.70	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)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received <u>10-17-13</u>	Lab No. (Leave Blank) <u>13-0872</u>
	Date & Time Sampled <u>10-15-13 8:52</u>	Serial Number <u>R 94050</u>
Collector Information Name: Dept./Branch: <u>JNS</u> Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: <u>Soups F</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)

<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 checked="" type="checkbox"/> Soil/Sediment
Starting: _____	_____	<input type="checkbox"/> Wipes	<input checked="" type="checkbox"/> Biota (Type): <u>Kelp</u>
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) _____	Signature _____	Date _____
	Time Custody Received _____	Organization _____		Time Custody Released _____
2.	Date _____	Name (Print) _____	Signature _____	Date _____
	Time Custody Received _____	Organization _____		Time Custody Released _____
3.	Date <u>10-17-13</u>	Name (Print) <u>VA</u>	Signature <u>[Signature]</u>	Date _____
	Date <u>10:00</u>	Name (Print) <u>DWR/LB</u>	Signature _____	Date _____
	Time Custody Received _____	Organization _____		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. 13-0873

Investigator: 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: San Onofre NPP / SONGS H / 4th Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 10/17/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0873-01	Sample ID: R 94051 Sample Type: Vegetation	Time Collected: 10/15/2013 09:23	Sampling Point: Kelp	
Dry Wt/Wet Wt		0.145		
K-40	HASL Ga-01-R	88.1 +/- 2.02	1.87	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)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 10-17-13	Lab No. (Leave Blank) 13-0973
	Date & Time Sampled 10-15-13 9:23	Serial Number R 94051
Collector Information Name: Dept./Branch: JNS Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: Souaps H 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)

- | | | | |
|---|--|--|---|
| <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 checked="" type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input checked="" type="checkbox"/> Biota (Type): Kelp |
| 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)

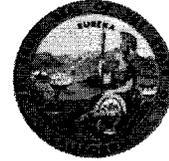
- | | | |
|---|--|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (LSC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <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 _____
2.	Date _____	Name (Print) _____	Date _____
	Time Custody Received _____	Organization _____	Signature _____
3.	Date 10-17-13	Name (Print) UA	Date _____
	Date 10:00	Name (Print) DWRUB	Date _____
	Time Custody Received _____	Organization _____	Signature [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 |
|---|--|------------------------------------|---|



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. 13-0867

Investigator: 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	
Site/Project Name: San Onofre NPP / 4th Qtr 2013		Phone Number: 916-440-7955	
System No:	Billing Agency: RHB	Samples Received by Lab: 10/17/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0867-01	Sample ID: R 94045	Time Collected: 10/15/2013 13:50	Sampling Point: Kelp	
	Sample Type: Vegetation			
Dry Wt/Wet Wt		0.1801		
K-40	HASL Ga-01-R	66.7 +/- 1.56	1.63	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 aquare root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 10-17-13	Lab No. (Leave Blank) 13-0867
	Date & Time Sampled 10-15-13 13:50	Serial Number R 94045

Collector Information Name: Dept./Branch: JNS Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:
---	--

Sample Information System Name / Facility: Sampling Point (s): SONQA G 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

<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): Kelp <input type="checkbox"/> Other: _____
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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 10-17-13	Name (Print) UA	Date _____
	Time Custody Received 10:00	Organization DWRLB	Signature Valerie M. Alt

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. 13-0869

Investigator: 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	
Site/Project Name: San Onofre NPP / 4th Qtr 2013		Phone Number: 916-440-7955	
System No:	Billing Agency: RHB	Samples Received by Lab: 10/17/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0869-01	Sample ID: R 94047 Sample Type: Vegetation	Time Collected: 10/15/2013 10:40	Sampling Point: Kelp	
Dry Wt/Wet Wt		0.2026		
K-40	HASL Ga-01-R	58.9 +/- 1.34	1.17	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)

Drinking Water and Radiation Laboratory Branch
850 Marina Bay Parkway, G164
Richmond, CA 94804
510-620-2911

Date Received: 10-17-13
Lab No. (Leave Blank): 13-0869
Date & Time Sampled: 10-15-13 10:40
Serial Number: R 94047

Collector Information

Name:
Dept./Branch: JNS
Address:
Telephone No.:

Reporting Information

Name:
Dept./Branch:
Address:
Telephone No.:

Sample Information

System Name / Facility: Songap e
Sampling Point (s):
System No.:

Billing Agency

- Checkboxes for DWFOB, RHB, RWQCB, DTSC, DWTPB, FDB, DWR, CDFG, EMB, and Other (Specify).

TYPE OF SAMPLE (Check all applicable boxes)

- Checkboxes for Drinking Water, Raw, Treated (Chlorinated, etc.), Air Filters, Air Charcoal Cartridge, Groundwater, Water Treatment Plant (WTP), Surface Water, Distribution System, Seawater, Milk, Wipes, Radon Canister, Wastewater, Point of Use (POU), Sludge (Semi-solid Samples), Soil/Sediment, Biota (Type: Kelp), and Other.

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)

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

CHAIN OF CUSTODY

Table with 4 columns: Date, Name (Print), Organization, Signature, Date, Time Custody Released. Contains 3 entries for custody chain.

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: Acceptable, Holding Time Exceeded, Broken Container, Sample Not Cooled, Leaked in Transit, Insufficient Sample, Improper Container.
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. 13-0866

Investigator: 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: San Onofre NPP / 4th Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 10/17/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0866-01	Sample ID: R 94044 Sample Type: Vegetation	Time Collected: 10/15/2013 10:09	Sampling Point: Kelp	
Dry Wt/Wet Wt		0.1705		
K-40	HASL Ga-01-R	63.7 +/- 1.45	1.09	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 aquare root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 10-17-13	Lab No. (Leave Blank) 13-0866
	Date & Time Sampled 10-15-13 10:09	Serial Number R 94044
Collector Information Name: Dept./Branch: Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: 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)

<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): <u>Kelp</u>
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) _____	Signature _____	Date _____
	Time Custody Received _____	Organization _____		Time Custody Released _____
2.	Date _____	Name (Print) _____	Signature _____	Date _____
	Time Custody Received _____	Organization _____		Time Custody Released _____
3.	Date <u>10-17-13</u>	Name (Print) <u>VA</u>	Signature <u>[Signature]</u>	Date _____
	Date <u>10:00</u>	Name (Print) <u>DWR2B</u>	Signature _____	Date _____
	Time Custody Received _____	Organization _____		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. 13-0868

Investigator: 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: San Onofre NPP / 4th Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 10/17/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0868-01	Sample ID: R 94046 Sample Type: Vegetation	Time Collected: 10/15/2013 09:51	Sampling Point: Kelp	
Dry Wt/Wet Wt		0.1505		
K-40	HASL Ga-01-R	88.9 +/- 1.91	1.03	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)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 10-17-13	Lab No. (Leave Blank) 13-0868
	Date & Time Sampled 10-15-13 9:51	Serial Number R 94046
Collector Information Name: Dept./Branch: JNS Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: Sampling Point (s): Source B 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 type="checkbox"/> Biota (Type): <u> </u>
Net (M ³): _____	_____	<input type="checkbox"/> Radon Canister	<input type="checkbox"/> Other: <u> </u>
<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 _____
2.	Date _____	Name (Print) _____	Date _____
	Time Custody Received _____	Organization _____	Signature _____
3.	Date 10-17-13	Name (Print) VA	Date _____
	Time Custody Received 10:00	Organization DWALB	Signature Victoria M. Ali

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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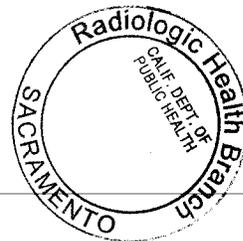
Drinking Water and Radiation Laboratory Branch

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

FINAL Analysis Results Report for Task ID. 13-0322

Investigator: 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: San Onofre NPP / Biota / 2nd Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/25/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0322-01	Sample ID: R 96271 Sample Type: Vegetation	Time Collected: 4/23/2013 10:48	Sampling Point: Kelp	
Dry Wt/Wet Wt		0.168		
K-40	HASL Ga-01-R	52.0 +/- 1.20	1.08	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)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4-25-13	Lab No. (Leave Blank) 13-0322
	Date & Time Sampled 4-23-13 10:48	Serial Number R 96271

Collector Information Name: Dept./Branch: JMS Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:
--	--

Sample Information System Name / Facility: San Onofre 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)

<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 type="checkbox"/> Biota (Type): <u>Kelp</u>
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)	Signature	Date
	Time Custody Received	Organization		Time Custody Released
2.	Date	Name (Print)	Signature	Date
	Time Custody Received	Organization		Time Custody Released
3.	Date: 4-25-13	Name (Print): VA	Signature: Victoria M. [unclear]	Date
	Time Custody Received: 10:30	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
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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. 13-0320

Investigator: 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: San Onofre NPP / Biota / 2nd Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/25/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0320-01	Sample ID: R 96269 Sample Type: Vegetation	Time Collected: 4/23/2013 10:20	Sampling Point: Kelp	
Dry Wt/Wet Wt		0.113		
K-40	HASL Ga-01-R	97.1 +/- 2.19	1.74	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.

A

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4-25-13	Lab No. (Leave Blank) 130320
	Date & Time Sampled 4-23-13 10:20	Serial Number R 96269

Collector Information Name: Dept./Branch: JMS Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:
---	--

Sample Information System Name / Facility: San Onofre A 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

<input type="checkbox"/> Air Filters Finishing: _____ Date/Time _____ Starting: _____ Net (M ³) _____	<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 type="checkbox"/> Biota (Type): Kelp <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) _____	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 4-23-13	Name (Print) VA	Signature Victoria M. Mc	Date _____
	Time Custody Received 10:30	Organization DWRLB	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
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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. 13-0321

Investigator: 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	
Site/Project Name: San Onofre NPP / Biota / 2nd Qtr 2013		Phone Number: 916-440-7955	
System No:	Billing Agency: RHB	Samples Received by Lab: 4/23/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0321-01	Sample ID: R 96270 Sample Type: Vegetation	Time Collected: 4/23/2013 09:59	Sampling Point: Kelp	
Dry Wt/Wet Wt		0.145		
K-40	HASL Ga-01-R	49.0 +/- 1.23	1.81	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)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4-25-13	Lab No. (Leave Blank) 13-0321
	Date & Time Sampled 4-23-13 9:59	Serial Number R 96270

Collector Information Name: Dept./Branch: JMS Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:
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Sample Information System Name / Facility: Sandridge B 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): Kelp
 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 4-25-13	Name (Print) [Signature]	Signature [Signature]	Date [Blank]	Time Custody Released [Blank]
2.	Date [Blank]	Name (Print) [Blank]	Signature [Blank]	Date [Blank]	Time Custody Released [Blank]
3.	Date 4-10-13	Name (Print) JA	Signature [Signature]	Date 4-10-13	Time Custody Released [Blank]

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. 13-0327

Investigator: 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: San Onofre NPP / Biota / 2nd Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/25/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0327-01	Sample ID: R 96276	Time Collected: 4/23/2013 09:40	Sampling Point: Kelp	
	Sample Type: Vegetation			
Dry Wt/Wet Wt		0.141		
K-40	HASL Ga-01-R	60.0 +/- 1.47	2.02	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)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4-25-13	Lab No. (Leave Blank) 13-0327
	Date & Time Sampled 4-23-13 9:40	Serial Number R 96276

Collector Information Name: Dept./Branch: Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:
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Sample Information System Name / Facility: Sampling Point (s): San Onofre 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 / Peroxizone / Fluoridated / Coagulated / pH Adjusted

Air Filters Date/Time Seawater Sludge (Semi-solid Samples)
 Finishing: _____ Milk Soil/Sediment
 Starting: _____ Wipes Biota (Type): **Kelp**
 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 4-25-13	Name (Print) VA	Signature Victoria M. Ullrich	Date _____
	Time Custody Received 11:30	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



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. 13-0326

Investigator: 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	
Site/Project Name: San Onofre NPP / Biota / 2nd Qtr 2013		Phone Number: 916-440-7955	
System No:	Billing Agency: RHB	Samples Received by Lab: 4/25/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0326-01	Sample ID: R 96275 Sample Type: Vegetation	Time Collected: 4/23/2013 09:30	Sampling Point: Kelp	
Dry Wt/Wet Wt		0.156		
K-40	HASL Ga-01-R	67.4 +/- 1.54	1.33	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 aquare root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4-25-13	Lab No. (Leave Blank) 13-0326
	Date & Time Sampled 4-23 9:30	Serial Number R 96275

Collector Information Name: Dept./Branch: JMS Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:
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Sample Information System Name / Facility: Sampling Point (s): Sandridge H 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 / Peroxizone / Fluoridated / Coagulated / pH Adjusted

- Air Filters Date/Time Seawater Sludge (Semi-solid Samples)
- Finishing: _____ _____ Milk Soil/Sediment
- Starting: _____ _____ Wipes Biota (Type): **Kelp**
- 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 4-23-13	Name (Print) VA	Signature [Signature]	Date _____
	Time Custody Received 10:30	Organization DWR/LB	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



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



FINAL Analysis Results Report for Task ID. 13-0325

Investigator: 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: San Onofre NPP / Biota / 2nd Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/25/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0325-01	Sample ID: R 96274	Time Collected: 4/23/2013 09:08	Sampling Point: Kelp	
	Sample Type: Vegetation			
Dry Wt/Wet Wt		0.139		
K-40	HASL Ga-01-R	73.6 +/- 1.71	1.60	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)

Drinking Water and Radiation Laboratory Branch
850 Marina Bay Parkway, G164
Richmond, CA 94804
510-620-2911

Date Received: 4-25-13
Lab No. (Leave Blank): 13-0325
Date & Time Sampled: 4-23-13 9:08
Serial Number: R 96274

Collector Information
Name:
Dept./Branch: JMS
Address:
Telephone No.:

Reporting Information
Name:
Dept./Branch:
Address:
Telephone No.:

Sample Information
System Name / Facility: San Onofre G
Sampling Point (s):
System No.:

Billing Agency
DWFOB ()
DWTPB
EMB
RHB
FDB
Other (Specify)

- TYPE OF SAMPLE (Check all applicable boxes)
Drinking Water
Raw
Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
Air Filters
Air Charcoal Cartridge
Groundwater
Water Treatment Plant (WTP)
Surface Water
Distribution System
Seawater
Milk
Wipes
Radon Canister
Wastewater
Point of Use (POU)
Sludge (Semi-solid Samples)
Soil/Sediment
Biota (Type): Kelp
Other:

COMMENTS: (Cautions, etc.):
Field Treatment: Preservatives added: Iced/Frozen: Other:
Field Measurement: mR/hr
Rush/Priority (should be prearranged and have supervisory approval)

- ANALYSIS REQUESTED (For questions, please call 510-620-2911)
Gross Alpha
Total Uranium
Total Radium
Radium-226
Radium-228
Radon-222
Other (Specify):
Gross Beta
Total Beta (LSC)
Tritium (3H)
Carbon-14
Iodine-131
Strontium-89, 90
Nickel-63
Gamma Scan
NORM (Gamma)
Isotopic Americium / Curium
Isotopic Plutonium
Isotopic Thorium
Isotopic Uranium
Iron-55

CHAIN OF CUSTODY table with columns for Date, Name (Print), Organization, Signature, and Time Custody Released. Includes handwritten entries for 3rd party: Date 4-25-13, Name WA, Signature, Date 10:30, Name DURIB, Signature.

LABORATORY REMARKS (Leave Blank)
A. Condition at Time of Receipt:
B. Preservatives/Carriers:



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



FINAL Analysis Results Report for Task ID. 13-0324

Investigator: 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: San Onofre NPP / Biota / 2nd Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/25/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0324-01	Sample ID: R 96273 Sample Type: Vegetation	Time Collected: 4/23/2013 08:54	Sampling Point: Kelp	
Dry Wt/Wet Wt		0.1424		
K-40	HASL Ga-01-R	90.5 +/- 2.02	1.50	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)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4-25-13	Lab No. (Leave Blank) 13-03242
	Date & Time Sampled 4-23-13 8:54	Serial Number R 96273

Collector Information Name: Dept./Branch: JMS Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:
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Sample Information System Name / Facility: San Onofre F 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)

<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 type="checkbox"/> Biota (Type): Kelp
Net (M ³) _____		<input type="checkbox"/> Radon Canister	<input type="checkbox"/> Other: Kelp

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 4-25-13	Name (Print) U.A.	Signature [Signature]	Date _____
	Time Custody Received 11:03:30	Organization DWRLB	Signature [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
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Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

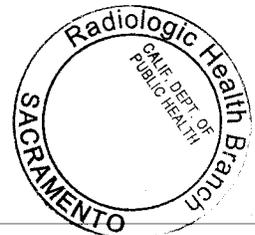
Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0323

Investigator: 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: San Onofre NPP / Biota / 2nd Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/25/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0323-01	Sample ID: R 96272	Time Collected: 4/23/2013 08:33	Sampling Point: Kelp	
	Sample Type: Vegetation			
Dry Wt/Wet Wt		0.140		
K-40	HASL Ga-01-R	94.3 +/- 2.22	2.60	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)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4-25-13	Lab No. (Leave Blank) 13-0323
	Date & Time Sampled 4-23-13 8:33	Serial Number R 96272

Collector Information Name: Dept./Branch: JMS Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:
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Sample Information System Name / Facility: Sampling Point (s): San Onofre E 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): Kelp
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 Released _____
2.	Date _____	Name (Print) _____	Signature _____	Date _____	Time Custody Released _____
3.	Date 4-25-13	Name (Print) V.R.	Signature _____	Date _____	Time Custody Released _____
	Date 10:30	Name (Print) DWRLB	Signature _____	Date _____	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. 13-0306

Investigator: 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 / 2nd Qtr 2013		Samples Received by Lab: 4/23/2013	
System No:	Billing Agency: RHB		

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0306-01	Sample ID: R 96268 Sample Type: Vegetation	Time Collected: 4/22/2013 09:05	Sampling Point: Vegetation	
Dry Wt/Wet Wt		0.1211		
K-40	HASL Ga-01-R	184 +/- 4.06	2.65	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)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4-24-13	Lab No. (Leave Blank) 13-0306
	Date & Time Sampled 4-22-13 9:05	Serial Number R 96268
Collector Information Name: Dept./Branch: Tom Hook Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: DCPP/REMP 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 / 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 type="checkbox"/> Biota (Type): Vegetation
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 _____
2.	Date _____	Name (Print) _____	Date _____
	Time Custody Received _____	Organization _____	Signature _____
3.	Date 4-24-13	Name (Print) VA	Date _____
	Time Custody Received 14:00	Organization DWR/LB	Signature [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
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