



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. 13-0765

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / October 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 10/3/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0765-01	Sample ID: R 94022 Sample Type: Seawater	Time Collected: 10/2/2013 09:45	Sampling Point: Effluent Canal	
K-40	EPA901.1	354 +/- 17.2	56.6	pCi/L

- (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 <i>10-3-13</i>	Lab No. (Leave Blank) <i>13-0765</i>
	Date & Time Sampled <i>10-2-13 0945</i>	Serial Number <i>R 94022</i>

Collector Information Name: <i>Dee Anderson</i> Dept./Branch: <i>HBPP/PGE (RP)</i> Address: <i>1000 KING SALMON EUREKA, CA 95503</i> Telephone No.: <i>707-444-0746</i>	Reporting Information Name: <i>Shiyamalik Ruberu</i> Dept./Branch: <i>CDPH/RHB</i> Address: <i>Roger Lupo</i> Telephone No.:
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Sample Information System Name / Facility: <i>HBPP</i> Sampling Point (s): <i>Effluent Canal</i> System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> EDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____
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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: _____
 Starting: _____ Milk Soil/Sediment
 Net (M³) _____ Wipes Biota (Type): _____
 Air Charcoal Cartridge Radon Canister Other: _____

COMMENTS: (Cautions, etc.): *2013-7193*
 Field Treatment: Preservatives added: *Nitric* 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 <i>[Signature]</i>	Date <i>10-2-13</i>	Date <i>1425</i>
	Time Custody Received _____	Organization _____		Time Custody Released _____	
2.	Date _____	Name (Print) _____	Signature _____	Date _____	Date _____
	Time Custody Received _____	Organization _____		Time Custody Released _____	
3.	Date <i>10-3-13</i>	Name (Print) <i>VA</i>	Signature <i>[Signature]</i>	Date _____	Date _____
	Time Custody Received <i>11:00</i>	Organization <i>DWR/RHB</i>		Time Custody Released _____	

LABORATORY REMARKS (Leave Blank) *50 DCMR/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



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. 13-0766

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / October 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 10/3/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0766-01	Sample ID: R 94017 Sample Type: Seawater	Time Collected: 10/2/2013 09:45	Sampling Point: Effluent Canal	
Tritium	EPA 906.0	46.3 +/- 165	281	pCi/L

- (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: 10-3-13
Lab No. (Leave Blank): 1013-0766
Date & Time Sampled: 10-2-13 0945
Serial Number: R 94017

Collector Information
Name: Dee Anderson
Dept/Branch: ABPP / PEE (RP)
Address: 1000 King Salmon, Eureka, CA 95503
Telephone No.: 707-444-0746

Reporting Information
Name: Shyamalika Ruben
Dept/Branch: CDPH / RHW
Address:
Telephone No.: Roger Lupo

Sample Information
System Name / Facility: ABPP
Sampling Point (s): Effluent Canal
System No.: 10-3

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
Groundwater, Water Treatment Plant (WTP), Surface Water, Distribution System, Wastewater, Point of Use (POU)
Air Filters, Finishing, Starting, Net (M³), Air Charcoal Cartridge, Seawater, Milk, Wipes, Radon Canister, Sludge (Semi-solid Samples), Soil/Sediment, Biota (Type), Other

COMMENTS: (Cautions, etc.): 2013-43-7193
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, 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 3 rows for Date, Time Custody Received, Name (Print), Organization, Signature, Date, Time Custody Released.

LABORATORY REMARKS (Leave Blank)
A. Condition at Time of Receipt:
B. Preservatives/Carriers:
≤ 0.01 mR/HR



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. 13-0662

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / September 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/5/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0662-01	Sample ID: R 96397 Sample Type: Seawater	Time Collected: 9/4/2013 08:35	Sampling Point: Effluent Canal	
K-40	EPA 901.1	301 +/- 22.1	84.6	pCi/L

- (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 9-5-13	Lab No. (Leave Blank) 13-0662
	Date & Time Sampled 9-4-13 / 0835	Serial Number R 96397

Collector Information Name: Dee Anderson Dept./Branch: RP/HBPP Address: 1000 King Salmon Road Eureka, CA 95501 Telephone No.: 707-444-0746	Reporting Information Name: Shiyamalie Ruberu Dept./Branch: CDPH/RHB Address: _____ Telephone No.: _____
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Sample Information System Name / Facility: HBPP Sampling Point (s): Effluent Canal System No.: _____	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" 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) _____
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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 checked="" 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): _____
Net (M ³): _____	_____	<input type="checkbox"/> Radon Canister	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Air Charcoal Cartridge			

COMMENTS: (Cautions, etc.): 2013-6370

Field Treatment: Preservatives added: HNO₃ 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
	_____	_____	<u>[Signature]</u>	<u>9-4-13</u>
	Time Custody Received	Organization		Time Custody Released
	_____	_____		<u>0940</u>
2.	Date	Name (Print)	Signature	Date
	_____	_____	_____	_____
	Time Custody Received	Organization		Time Custody Released
	_____	_____		_____
3.	Date	Name (Print)	Signature	Date
	<u>9-5-13</u>	<u>VIA</u>	<u>[Signature]</u>	_____
	Time Custody Received	Organization		Time Custody Released
	<u>14:00</u>	<u>DWR/CP</u>	<u>[Signature]</u>	_____

LABORATORY REMARKS (Leave Blank) ≤ 0.01 MR/HR

A. Condition at Time of Receipt:

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

B. Preservatives/Carriers:

<input type="checkbox"/> Added While Sampling	<input type="checkbox"/> Added in Laboratory	<input type="checkbox"/> Not Added	<input type="checkbox"/> Not Applicable
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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. 13-0663

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / September 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/5/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0663-01	Sample ID: R 96396 Sample Type: Seawater	Time Collected: 9/4/2013 08:35	Sampling Point: Effluent Canal	
Tritium	EPA 906.0	81.5 +/- 166	281	pCi/L

- (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 9-5-13	Lab No. (Leave Blank) 13-0663
	Date & Time Sampled 9-4-13 / 0835	Serial Number R 96396

Collector Information Name: Dee Anderson Dept./Branch: RP/HBPP Address: 1000 King Salmon Road Eureka, CA 95503 Telephone No.: 707-444-0746	Reporting Information Name: Shiyamalie Rubaru Dept./Branch: CDPH/RHB Address: Telephone No.:
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Sample Information System Name / Facility: HBPP Sampling Point (s): Effluent Canal System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWB <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____
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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: _____ Starting: _____
 Milk Soil/Sediment
 Wipes Biota (Type): _____
 Radon Canister Other: _____

Air Charcoal Cartridge

COMMENTS: (Cautions, etc.): 2013-6370

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 Released
			<i>[Signature]</i>	<u>9-4-13</u>	<u>0940</u>
2.	Time Custody Received	Organization	Signature	Date	Time Custody Released
3.	Date	Name (Print)	Signature	Date	Time Custody Released
	<u>9-5-13</u>	<u>VA</u>	<i>[Signature]</i>		
	Time Custody Received	Organization	Signature	Date	Time Custody Released
	<u>14:00</u>	<u>DWR/RHB</u>	<i>[Signature]</i>		

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

C 0.01 MR/HR



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. 13-0584

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / August 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 8/8/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0584-01	Sample ID: R 95988 Sample Type: Seawater	Time Collected: 8/7/2013 10:05	Sampling Point: Effluent Canal	
K-40	EPA 901.1	262 +/- 18.5	72.2	pCi/L

- (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: 8-8-13
Lab No. (Leave Blank): 13-0580
Date & Time Sampled: 8-7-13/1005
Serial Number: R 95988

Collector Information
Name: Dee Anderson
Dept./Branch: HBPP/PG&E
Address: 1000 King Salmon Rd
Eureka, CA 95503
Telephone No.: (707) 444-0746

Reporting Information
Name: Shiyamalie Rubaru
Dept./Branch: CDPH/RHB
Address:
Telephone No.:

Sample Information
System Name / Facility: HBPP
Sampling Point (s): Effluent Canal
System No.:

Billing Agency
DWFOB ()
DWTWPB
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, Seawater, Sludge (Semi-solid Samples), Soil/Sediment, Biota (Type), Other

COMMENTS: (Cautions, etc.): 2013-5586

- Field Treatment: Preservatives added: HNO3
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 3 rows for Chain of Custody, columns for Date, Name (Print), Organization, Signature, and Time Custody Released. Includes handwritten entries for dates (8-8-13, 8-7-13), names (VA, DWRLB), and signatures.

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. 13-0585

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / August 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 8/8/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0585-01	Sample ID: R 95997 Sample Type: Seawater	Time Collected: 8/7/2013	10:05	Sampling Point: Effluent Canal
Tritium	EPA 906.0	-80.2 +/- 168	292	pCi/L

- (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 8-8-13	Lab No. (Leave Blank) 13-0585
	Date & Time Sampled 8-7-13/1005	Serial Number R 95997
Collector Information Name: <u>Doe Anderson</u> Dept./Branch: <u>HBPP / PGE</u> Address: <u>1000 King Salmon Rd</u> <u>Eureka, CA 95503</u> Telephone No.: <u>(707) 444-0746</u>	Reporting Information Name: <u>Shiyamalie Rubaru</u> Dept./Branch: <u>CDPH / RHB</u> Address: Telephone No.:	
Sample Information System Name / Facility: <u>HBPP</u> Sampling Point (s): <u>Effluent Canal</u> System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" 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 checked="" 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): _____
Net (M ³) _____		<input type="checkbox"/> Radon Canister	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Air Charcoal Cartridge			

COMMENTS: (Cautions, etc.): 2013-5586

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 checked="" 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 <u>[Signature]</u>	Date <u>8-7-13</u>
	Time Custody Received _____	Organization _____		Time Custody Released <u>1100</u>
2.	Date _____	Name (Print) _____	Signature _____	Date _____
	Time Custody Received _____	Organization _____		Time Custody Released _____
3.	Date <u>8-8-13</u>	Name (Print) <u>UA</u>	Signature _____	Date _____
	Time Custody Received <u>13:15</u>	Organization <u>DWRCB</u>	Signature <u>[Signature]</u>	Time Custody Released _____

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

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

B. Preservatives/Carriers:

<input type="checkbox"/> Added While Sampling	<input type="checkbox"/> Added in Laboratory	<input type="checkbox"/> Not Added	<input type="checkbox"/> Not Applicable
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Drinking Water and Radiation Laboratory Branch

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

FINAL Analysis Results Report for Task ID. 13-0512

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / July 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 7/8/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0512-01	Sample ID: R 95911 Sample Type: Seawater	Time Collected: 7/3/2013 09:05	Sampling Point: Effluent Canal	
K-40	EPA 901.1	317 +/- 17.0	58.9	pCi/L

- Precision criteria for these method were determined to be acceptable.
- 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.
- 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 Manna Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 7/8/13	Lab No. (Leave Blank) 13-0512-01
	Date & Time Sampled 7-3-13 / 0905	Serial Number R 95911

Collector Information Name: Dee Anderson Dept./Branch: RP/Count Room Address: 1000 King Salmon Road Eureka, CA 95503 Telephone No.: 707-444-0746	Reporting Information Name: Shiyamalie Rubaru Dept./Branch: CDPH/RHB Address: Telephone No.:
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Sample Information System Name / Facility: PG&E / HBPP Sampling Point (s): Effluent Canal System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" 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): _____ <input type="checkbox"/> Air Charcoal Cartridge	Date/Time	<input checked="" 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): _____ <input type="checkbox"/> Other: _____
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COMMENTS: (Cautions, etc.): Sample # 2013-4519

Field Treatment: Preservatives added: HNO₃ 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 Released
			<i>Ron Swell</i>	7-3-13	1130
2.	Date	Name (Print)	Signature	Date	Time Custody Released
3.	Date	Name (Print)	Signature	Date	Time Custody Released
	7/8/13	A. Tan	<i>Angela Tan</i>		
	09:10	DWR/LB			

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. 13-0513

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / July 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 7/8/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0513-01	Sample ID: R 95913 Sample Type: Seawater	Time Collected: 7/3/2013 09:05	Sampling Point: Effluent Canal	
Tritium	EPA 906.0	-46.7 +/- 153	265	pCi/L

- (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 S_b 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 7/8/13	Lab No. (Leave Blank) 13-0513-01
	Date & Time Sampled 7-3-13/0905	Serial Number R 95913

Collector Information Name: Dee Anderson Dept./Branch: HBPPRP / Count Room Address: 1000 King Salmon Road Eureka, CA 95503 Telephone No.: (707) 444-0746	Reporting Information Name: Shiyamalie Rubaru Dept./Branch: CDPH / RHB Address: Telephone No.:
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Sample Information System Name / Facility: PGE / HBPP Sampling Point (s): Effluent Canal System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" 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) _____
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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: _____
 Air Charcoal Cartridge

COMMENTS: (Cautions, etc.): 2013-4519

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 checked="" 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 7-3-13
	Time Custody Received _____	Organization _____	Signature _____	Time Custody Released 1130
2.	Date _____	Name (Print) _____	Signature _____	Date _____
	Time Custody Received _____	Organization _____	Signature _____	Time Custody Released _____
3.	Date 7/8/13	Name (Print) A. Tan	Signature _____	Date _____
	Time Custody Received 09:10	Organization DWRLB	Signature Angela Tan	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. 13-0454

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / June 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 6/6/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0454-01	Sample ID: R 96063 Sample Type: Seawater	Time Collected: 6/5/2013 10:30	Sampling Point: Effluent Canal	
K-40	EPA 901.1	331 +/- 17.3	59.8	pCi/L

- Precision criteria for these method were determined to be acceptable.
- 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.
- 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>6-6-13</u>	Lab No. (Leave Blank) <u>13-045A</u>
	Date & Time Sampled <u>6-5-13 10:30</u>	Serial Number <u>R 96063</u>

Collector Information Name: <u>Dee Anderson</u> Dept./Branch: <u>H B P P G & E</u> Address: <u>1000 King Salmon Rd.</u> <u>Emeryville CA 94503</u> Telephone No.: <u>707-444-0746</u>	Reporting Information Name: <u>SHIYAMALIE RUBERU</u> Dept./Branch: <u>CDPH/RHB</u> Address: Telephone No.:
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Sample Information System Name / Facility: <u>H B P P</u> Sampling Point (s): <u>Effluent Canal</u> System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" 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): _____ <input type="checkbox"/> Air Charcoal Cartridge	Date/Time _____ <input checked="" 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): _____ <input type="checkbox"/> Other: _____
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COMMENTS: (Cautions, etc.): 2013-3812

Field Treatment: Preservatives added: HNO₃ 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: <u>[Signature]</u>	Date: <u>6-5-13</u>	Time Custody Released: <u>1030</u>
2.	Time Custody Received: _____	Organization: _____	Signature: _____	Date: _____	Time Custody Released: _____
3.	Date: <u>6-6-13</u>	Name (Print): <u>VA</u>	Signature: <u>[Signature]</u>	Date: _____	Time Custody Released: _____
	Time Custody Received: <u>10:30</u>	Organization: <u>DWR/RHB</u>	Signature: <u>[Signature]</u>	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. 13-0455

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / June 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 6/6/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0455-01 Sample ID: R 96052 Sample Type: Seawater		Time Collected: 6/5/2013 10:30		Sampling Point: Effluent Canal
Tritium	EPA 906.0	-52.0 +/- 148	257	pCi/L

- (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: 6-6-13
Lab No. (Leave Blank): 13-0455
Date & Time Sampled: 6-5-13 10:30
Serial Number: R 96052

Collector Information
Name: Dee Anderson
Dept./Branch: HBPP PGdE
Address: 1000 King Salmon Rd
Eureka CA 95503
Telephone No.: 707-444-0746

Reporting Information
Name: Sriyamalie Ruberu
Dept./Branch: CDPH/RHB
Address:
Telephone No.:

Sample Information
System Name / Facility: HBPP
Sampling Point (s): Effluent Canal
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
Groundwater
Water Treatment Plant (WTP)
Surface Water
Distribution System
Wastewater
Point of Use (POU)

- Air Filters
Air Charcoal Cartridge
Seawater
Milk
Wipes
Radon Canister
Sludge (Semi-solid Samples)
Soil/Sediment
Biota (Type):
Other:

COMMENTS: (Cautions, etc.): 2013-3812
Field Treatment: Preservatives added:
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 4 columns: Date, Name (Print), Organization, Signature. Contains entries for 1. and 3. with handwritten dates and signatures.

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



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. 13-0339

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP			
System No:	Billing Agency: RHB	Samples Received by Lab: 5/3/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0339-01	Sample ID: R 96037 Sample Type: Seawater	Time Collected: 5/1/2013 13:00	Sampling Point: Humboldt Bay Power Plant	
K-40	EPA 901.1	403 +/- 18.7	60.6	pCi/L

- (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: 5-3-13
Lab No. (Leave Blank): 13-0339
Date & Time Sampled: 5-1-13 @ 13:00
Serial Number: R 960371

Collector Information
Name: DEE ANDERSON
Dept./Branch: HBPP PG4E
Address:
Telephone No.: 707-444-0746

Reporting Information
Name: SHYAMALIE RUBERO
Dept./Branch: CDEH/RHB
Address: Roger Lupo
Telephone No.:

Sample Information
System Name / Facility: HBPP
Sampling Point (s): EFFLUENT CANAL
System No.:

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

TYPE OF SAMPLE (Check all applicable boxes)

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

COMMENTS: (Cautions, etc.) 2013-3048

- Field Treatment: Preservatives added: HNO3
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 3 rows for custody tracking, including Date, Name (Print), Organization, Signature, and Time Custody Released. Includes handwritten signatures and dates.

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. 13-0341

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / May 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 5/3/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0341-01 Sample ID: R 96043 Sample Type: Seawater		Time Collected: 5/1/2013 13:00	Sampling Point: Effluent Canal	
Tritium	EPA 906.0	-83.6 +/- 151	264	pCi/L

- (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 <u>5-3-13</u>	Lab No. (Leave Blank) <u>13-0341</u>
	Date & Time Sampled <u>5-1-13 @ 1300</u>	Serial Number <u>R 96043</u>
Collector Information Name: <u>DEE ANDERSON</u> Dept./Branch: <u>HBPP PG&E</u> Address: Telephone No.: <u>707-444-0746</u>	Reporting Information Name: <u>SHYAMALIE RUBERU</u> Dept./Branch: Address: <u>CDPH/RHB</u> Telephone No.:	
Sample Information System Name / Facility: Sampling Point (s): <u>EFFluent</u> 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 checked="" 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 checked="" type="checkbox"/> Seawater	<input type="checkbox"/> Sludge (Semi-solid Samples)
Finishing: _____	_____	<input checked="" type="checkbox"/> Milk	<input type="checkbox"/> Soil/Sediment
Starting: _____	_____	<input type="checkbox"/> Wipes	<input type="checkbox"/> Biota (Type): _____
Net (M ³): _____	_____	<input type="checkbox"/> Radon Canister	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Air Charcoal Cartridge			

COMMENTS: (Cautions, etc.): 2013-3048

Field Treatment: Preservatives added: _____ (ced/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 checked="" 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 <u>5-2-13</u> Time Custody Released <u>0930</u>
2.	Date _____	Name (Print) _____	Signature _____	Date _____ Time Custody Released _____
3.	Date <u>5-3-13</u>	Name (Print) <u>VA</u>	Signature _____	Date _____ Time Custody Released _____
	Time Custody Received <u>16:30</u>	Organization <u>DWRLB</u>	Signature <u>Victoria M. Ole</u>	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. 13-0238

Investigator: Dee Anderson HBPP 1000 King Salmon Eureka CA 95503 Phone Number: 707 4440746	RHB	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955	RHB
Site/Project Name: Humboldt Bay NPP / April 2013		Samples Received by Lab: 4/4/2013	
System No:	Billing Agency: RHB		

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0238-01	Sample ID: R 96033 Sample Type: Seawater	Time Collected: 4/3/2013 08:30	Sampling Point: Effluent Canal	
K-40	EPA 901.1	339 +/- 17.2	58.3	pCi/L

- (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 <u>4-4-13</u>	Lab No. (Leave Blank) <u>13-0238</u>
	Date & Time Sampled <u>4-3-13 / 0830</u>	Serial Number R 96033

Collector Information Name: <u>Dee Anderson</u> Dept./Branch: <u>HBPP / PG&E</u> Address: <u>1000 King Salmon Road</u> <u>Eureka, CA 95503</u> Telephone No.: <u>(707)-444-0746</u>	Reporting Information Name: <u>Shiyamalie Ruberu</u> Dept./Branch: <u>CDPH / RHB</u> Address: <u>850 Marina Bay Parkway, G164</u> <u>Richmond, CA 94804</u> Telephone No.: <u>510-620-2911</u>
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Sample Information System Name / Facility: <u>HBPP</u> Sampling Point (s): <u>Effluent Canal</u> System No.: _____	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" 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) _____
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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 Date/Time _____ Finishing: _____ Starting: _____ Net (M ³) _____ <input type="checkbox"/> Air Charcoal Cartridge	<input checked="" 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): _____ <input type="checkbox"/> Other: _____
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COMMENTS: (Cautions, etc.): 2013-2303

Field Treatment: Preservatives added: HNO3 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: <u>4-3-13</u>
Time Custody Received: _____	Organization: _____	Signature: _____	Date: _____
2. Date: _____	Name (Print): _____	Signature: _____	Date: _____
Time Custody Received: _____	Organization: _____	Signature: _____	Date: _____
3. Date: <u>4-4-13</u>	Name (Print): <u>VA</u>	Signature: _____	Date: _____
Date: <u>11:45</u>	Name (Print): <u>DWR/CB</u>	Signature: <u>Victoria M. Ali</u>	Date: _____
Time Custody Received: _____	Organization: _____	Signature: _____	Date: _____

LABORATORY REMARKS (Leave Blank)

≤ 0.01 MR/HR

A. Condition at Time of Receipt:

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

B. Preservatives/Carriers:

<input type="checkbox"/> Added While Sampling	<input type="checkbox"/> Added in Laboratory	<input type="checkbox"/> Not Added	<input type="checkbox"/> Not Applicable
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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. 13-0239

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / April 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/4/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0239-01	Sample ID: R 96022 Sample Type: Seawater	Time Collected: 4/3/2013 08:30	Sampling Point: Effluent Canal	
Tritium	EPA 906.0	-131 +/- 150	264	pCi/L

- Precision criteria for these method were determined to be acceptable.
- 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.
- 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 4-4-13	Lab No. (Leave Blank) 13-0239
	Date & Time Sampled 4-3-13 / 0830	Serial Number R 96022
Collector Information Name: Dee Anderson Dept./Branch: HBPP/PG&E Address: 1000 King Salmon Road, Eureka, CA 95503 Telephone No.: (707) - 444-0746	Reporting Information Name: Shiyamalie Rubern Dept./Branch: CDPH/RHB Address: 850 Marina Bay PKWY G-164, Richmond, CA 94804 Telephone No.: 510-620-2911	
Sample Information System Name / Facility: HBPP Sampling Point (s): Effluent Canal System No.: _____	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" 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 checked="" type="checkbox"/> Seawater	<input type="checkbox"/> Sludge (Semi-solid Samples)
Finishing: _____	_____	<input type="checkbox"/> Milk	<input type="checkbox"/> Soil/Sediment
Starting: _____	HBPP / L	<input type="checkbox"/> Wipes	<input type="checkbox"/> Biota (Type): _____
Net (M ³) _____	_____	<input type="checkbox"/> Radon Canister	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Air Charcoal Cartridge			

COMMENTS: (Cautions, etc.): 2013-2303

<input type="checkbox"/> Field Treatment: Preservatives added: _____	Iced/Frozen: _____	Other: _____
<input type="checkbox"/> Field Measurement: _____ mR/hr	<input type="checkbox"/> Radionuclide(s), if known: _____	
<input type="checkbox"/> 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 checked="" 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 <i>[Signature]</i>	Date <u>4-3-13</u>
	Time Custody Received _____	Organization _____	Signature _____	Time Custody Released <u>8:30</u>
2.	Date _____	Name (Print) _____	Signature _____	Date _____
	Time Custody Received _____	Organization _____	Signature _____	Time Custody Released _____
3.	Date <u>4-4-13</u>	Name (Print) <u>VA</u>	Signature _____	Date _____
	Time Custody Received <u>11:45</u>	Organization <u>DWRLB</u>	Signature <i>[Signature]</i>	Time Custody Released _____

LABORATORY REMARKS (Leave Blank)

≤ 0.01 MR/HR

A. Condition at Time of Receipt:		
<input type="checkbox"/> Acceptable	<input type="checkbox"/> Broken Container	<input type="checkbox"/> Leaked in Transit
<input type="checkbox"/> Holding Time Exceeded	<input type="checkbox"/> Sample Not Cooled	<input type="checkbox"/> Insufficient Sample
<input type="checkbox"/> Improper Container		
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. 13-0177

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / March 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 3/7/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0177-01	Sample ID: R 96016 Sample Type: Seawater	Time Collected: 3/6/2013 10:35	Sampling Point: Effluent Canal	
K-40	EPA 901.1	314 +/- 17.2	60.4	pCi/L

- (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 3-7-13	Lab No. (Leave Blank) 13 0177
	Date & Time Sampled 3-6-13 10:35	Serial Number R 96016

Collector Information Name: G DEE ANDERSON Dept./Branch: HBPP PG&E Address: Telephone No.: 707-444-0746	Reporting Information Name: SHYAMALIE RUBERU Dept./Branch: CDPH/R4B Address: Telephone No.:
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Sample Information System Name / Facility: HBPP Sampling Point (s): EFFLUENT CANAL System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" 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 checked="" 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): _____
Net (M ³) _____		<input type="checkbox"/> Radon Canister	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Air Charcoal Cartridge			

COMMENTS: (Cautions, etc.): 2013-1654

Field Treatment: Preservatives added: HNO3 Iced/Frozen: _____ Other: _____

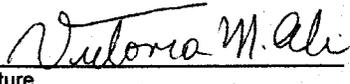
Field Measurement: _____ mR/hr Radionuclide(s), if known: _____

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 (3H)	<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		Date
2.	Date	Name (Print)	_____ Signature	Date
	Time Custody Received	Organization		Date
3.	Date	Name (Print)	 Signature	Date
	Time Custody Received	Organization		Date

Handwritten notes: 3-6-13, 11:30, UA, DWRLB

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 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. 13-0178

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / March 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 3/7/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0178-01	Sample ID: R 96007 Sample Type: Seawater	Time Collected: 3/6/2013 10:35	Sampling Point: Effluent Canal	
Tritium	EPA 906.0	-177 +/- 149	264	pCi/L

- Precision criteria for these method were determined to be acceptable.
- 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.
- 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 13-7-13	Lab No. (Leave Blank) 13-0178
	Date & Time Sampled 3-6-13 10:35	Serial Number R 96007

Collector Information Name: Dee Anderson Dept./Branch: HBPP PGE Address: Telephone No.: (707) - 444-0746	Reporting Information Name: Shiyamalie Ruben Dept./Branch: RHB Address: Telephone No.:
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Sample Information System Name / Facility: HBPP Sampling Point (s): Effluent Canal System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" 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 checked="" 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): _____
Net (M ³): _____	_____	<input type="checkbox"/> Radon Canister	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Air Charcoal Cartridge			

COMMENTS: (Cautions, etc.): 2013-1654

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 checked="" 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
	_____	_____	<i>[Signature]</i>	3-6-13
	Time Custody Received	Organization	Signature	Time Custody Released
	_____	_____	<i>[Signature]</i>	1130
2.	Date	Name (Print)	Signature	Date
	_____	_____	_____	_____
	Time Custody Received	Organization	Signature	Time Custody Released
	3-7-13	VA	_____	_____
3.	Date	Name (Print)	Signature	Date
	13:30	DWR/CLB	<i>[Signature]</i>	_____
	Time Custody Received	Organization	Signature	Time Custody Released
	_____	_____	_____	_____

LABORATORY REMARKS (Leave Blank)

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

<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. 13-0104

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / February 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 2/7/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0104-01	Sample ID: R 96134 Sample Type: Seawater	Time Collected: 2/6/2013 08:35	Sampling Point: Effluent Canal	
K-40	EPA 901.1	419 +/- 19.0	61.1	pCi/L

- (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 2-7-13	Lab No. (Leave Blank) 13-0104
	Date & Time Sampled 2-6-13 0835	Serial Number R 96134

Collector Information Name: Dee Anderson Dept./Branch: HBPP Address: PG&E Telephone No.: (707) 444-0746	Reporting Information Name: Steve Hsu Dept./Branch: RHB Address: RHB Telephone No.:
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Sample Information System Name / Facility: HBPP Sampling Point (s): Effluent Canal System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" 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 checked="" 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 type="checkbox"/> Biota (Type): _____
Net (M ³): _____	_____	<input checked="" type="checkbox"/> Radon Canister	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Air Charcoal Cartridge			

COMMENTS: (Cautions, etc.): **2013-0920**

Field Treatment: Preservatives added: **HNO₃** Cooled/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 Released
	_____	_____	A. Daniell	2-6-13	11:00
2.	Time Custody Received	Organization	Signature	Date	Time Custody Released
	_____	_____	_____	_____	_____
3.	Date	Name (Print)	Signature	Date	Time Custody Released
	2-7-13	VA	_____	_____	_____
	Time Custody Received	Organization	Signature	Date	Time Custody Released
	14:20	DWRLB	Vulona Melli	_____	_____

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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≤ 0.01 mR / hr



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. 13-0105

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / February 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 2/7/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0105-01	Sample ID: R 96120 Sample Type: Seawater	Time Collected: 2/6/2013 08:35	Sampling Point: Effluent Canal	
Tritium	EPA 906.0	-76.28 +/- 148.05	257.65	pCi/L

- (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 <u>2-7-13</u>	Lab No. (Leave Blank) <u>13-0105</u>
	Date & Time Sampled <u>2-6-13 0835</u>	Serial Number <u>R 96120</u>

Collector Information Name: <u>Dee Anderson</u> Dept./Branch: <u>HBPP</u> Address: <u>HBPP PG: E</u> Telephone No. (TDD) <u>444-0746</u>	Reporting Information Name: <u>Steve Hsu</u> Dept./Branch: <u>RHB</u> Address: <u>RHB</u> Telephone No.: _____
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Sample Information System Name / Facility: <u>HBPP</u> Sampling Point (s): <u>Effluent Canal</u> System No.: _____	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" 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) _____
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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"/> Air Charcoal Cartridge	<input checked="" 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): _____ <input type="checkbox"/> Other: _____
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COMMENTS: (Cautions, etc.): 2013-0920

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 checked="" 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: <u>A. Daniell</u>	Date: <u>2-6-13</u>	Time Custody Released: <u>11:00</u>
2.	Time Custody Received: _____	Organization: _____	Signature: _____	Date: _____	Time Custody Released: _____
3.	Date: <u>2-7-13</u>	Name (Print): <u>WA</u>	Signature: _____	Date: _____	Time Custody Released: _____
	Time Custody Received: <u>14:20</u>	Organization: <u>DWR/LB</u>	Signature: <u>Victoria M. Ah</u>	Date: _____	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 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. 13-0007

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / January 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 1/3/2012	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0007-01	Sample ID: R 96108 Sample Type: Seawater	Time Collected: 1/2/2013 10:05	Sampling Point: Elluent Canal	
K-40	EPA 901.1	271 +/- 20.0	78.8	pCi/L

- (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 01/31/13	Lab No. (Leave Blank) 13-0007-001
	Date & Time Sampled 1-2-13 / 10:05	Serial Number R 96108

Collector Information Name: Dee Anderson Dept./Branch: WBPP Address: PGK Telephone No.: 707 444-0746	Reporting Information Name: Steve Hsu Dept./Branch: RHB Address: Telephone No.:
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Sample Information System Name / Facility: WBPP Sampling Point (s): Effluent canal System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" 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 checked="" 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): _____
Net (M ³): _____		<input type="checkbox"/> Radon Canister	<input type="checkbox"/> Other: _____

Air Charcoal Cartridge

COMMENTS: (Cautions, etc.): 2013-0005

Field Treatment: Preservatives added: H₂O₂ Iced/Frozen: _____ Other: _____

Field Measurement: _____ mR/hr Radionuclide(s), unknown / Effluent canal

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 checked="" 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
			<i>W. Seill</i>	1-2-13	1300
2.	Date	Name (Print)	Signature	Date	Time Custody Released
3.	Date	Name (Print)	Signature	Date	Time Custody Released
	01/31/13	A. TAN	<i>Angela Tan</i>		
	14:00	DWRIB			

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. 13-0006

Investigator: Dee Anderson	RHB	Requestor: Roger Lupo	RHB
HBPP 1000 King Salmon		CDPH - RHB, 1500 Capitol Av., MS 7610	
Eureka CA 95503		Sacramento CA 95814-5006	
Phone Number: 707 4440746		Phone Number: 916-440-7955	
Site/Project Name: Humboldt Bay NPP / January 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 1/3/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0006-01	Sample ID: R 96111 Sample Type: Seawater	Time Collected: 1/2/2013 10:05	Sampling Point: Effluent Canal	
Tritium	EPA 906.0	-148 +/- 146	256	pCi/L

- (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 1/03/13	Lab No. (Leave Blank) 13-0006
	Date & Time Sampled 1-2-13 10:05	Serial Number R 96111

Collector Information Name: Dee Anderson Dept./Branch: HBPP Address: PG: E Telephone No.: 707 444-0746	Reporting Information Name: Steve Hsu Dept./Branch: RHB Address: Telephone No.:
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Sample Information System Name / Facility: HBPP Sampling Point (s): Elbevent Canal System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" 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 checked="" 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 checked="" 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): _____
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 checked="" 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.	1/03/13	A TAN	Angela Tan	1-2-13
	13:00	DWRIB		1300

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

<input type="checkbox"/> Acceptable	<input type="checkbox"/> Broken Container	<input checked="" 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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