



Howard Backer, MD, MPH  
Interim Director

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

Drinking Water and Radiation Laboratory Branch  
850 Marina Bay Parkway, Richmond, CA 94804



EDMUND G. BROWN JR.  
Governor

**PRELIMINARY Analysis Results Report for Task ID. N11-0391**

Analyst: \_\_\_\_\_

Analysis Approved By: \_\_\_\_\_

Analysis Approval Date: \_\_\_\_\_

**Requestor**

Name: \_\_\_\_\_ Organization: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: Sacramento State: CA Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_

**Site and Sample Information**

Collector's Name: \_\_\_\_\_ Date/Time Collected: 04/07/2011 09:45 Date/Time Received: 04/08/2011 10:16  
Site Name: Eureka / Air Source Name: \_\_\_\_\_  
R Number: R 91201 Sample Type: Air Filter

**Air Filter Information**

Start Volume	Start Date/Time	End Volume (M ) <sup>3</sup>	End Date/Time	Net Air Volume (M ) <sup>3</sup>
18923.7	04/05/2011 16:32	19228.4	04/07/2011 09:45	304.7

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA <sub>95</sub>	Units
N11-0391-001	Eureka	HASL Ga-01-R	Ba-140	0.00648 ± 0.0442	0.138	pCi/m <sup>3</sup>
N11-0391-001	Eureka	HASL Ga-01-R	Ce-141	0.0243 ± 0.00978	0.0391	pCi/m <sup>3</sup>
N11-0391-001	Eureka	HASL Ga-01-R	Ce-144	0.0146 ± 0.0630	0.168	pCi/m <sup>3</sup>
N11-0391-001	Eureka	HASL Ga-01-R	Cs-134	-0.0640 ± 0.0281	0.0445	pCi/m <sup>3</sup>
N11-0391-001	Eureka	HASL Ga-01-R	Cs-137	-0.0179 ± 0.0190	0.0448	pCi/m <sup>3</sup>
N11-0391-001	Eureka	DOE RP 710	Gross Alpha	±		pCi/m <sup>3</sup>
N11-0391-001	Eureka	DOE RP 710	Gross Beta	±		pCi/m <sup>3</sup>
N11-0391-001	Eureka	HASL Ga-01-R	I-131	0.00972 ± 0.0112	0.0421	pCi/m <sup>3</sup>
N11-0391-001	Eureka	HASL Ga-01-R	I-132	-0.00772 ± 0.0201	0.0544	pCi/m <sup>3</sup>
N11-0391-001	Eureka	HASL Ga-01-R	Ru-103	-0.0104 ± 0.0139	0.0366	pCi/m <sup>3</sup>
N11-0391-001	Eureka	HASL Ga-01-R	Ru-106	0.112 ± 0.0870	0.367	pCi/m <sup>3</sup>
N11-0391-001	Eureka	HASL Ga-01-R	Te-132	0.00407 ± 0.00955	0.0340	pCi/m <sup>3</sup>
N11-0391-001	Eureka	HASL Ga-01-R	Zr-95	0.00174 ± 0.0214	0.0612	pCi/m <sup>3</sup>

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

# PRELIMINARY Analysis Results Report for Task ID. N11-0391

N11-0391-002

Eureka

HASL Ga-01-R

Iodine-131

0.0311 ± 0.0171

0.0659

pCi/m3

- 
1. Precision criteria for these methods were determined to be acceptable.
  2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
  3. MDA95 is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD95 divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD95 is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where  $S_b$  is the square root of the instrument background count rate.



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EDMUND G. BROWN JR.  
Governor

PRELIMINARY Analysis Results Report for Task ID. N11-0392

Analyst: \_\_\_\_\_

Analysis Approved By: \_\_\_\_\_

Analysis Approval Date: \_\_\_\_\_

**Requestor**

Name: \_\_\_\_\_ Organization: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: CA Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_

**Site and Sample Information**

Collector's Name: \_\_\_\_\_ Date/Time Collected: 04/08/2011 09:24 Date/Time Received: 04/08/2011 14:34  
Site Name: Livermore / Air Source Name: \_\_\_\_\_  
R Number: R 91250 Sample Type: Air Filter

**Air Filter Information**

Start Volume	Start Date/Time	End Volume (M ) <sup>3</sup>	End Date/Time	Net Air Volume (M ) <sup>3</sup>
34768.3	04/06/2011 11:50	35111.4	04/08/2011 09:24	343.1

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA <sub>95</sub>	Units
N11-0392-001	Livermore	HASL Ga-01-R	Ba-140	-0.0190 ± 0.0527	0.143	pCi/m <sup>3</sup>
N11-0392-001	Livermore	HASL Ga-01-R	Ce-141	0.0108 ± 0.0154	0.0526	pCi/m <sup>3</sup>
N11-0392-001	Livermore	HASL Ga-01-R	Ce-144	0.0440 ± 0.0603	0.206	pCi/m <sup>3</sup>
N11-0392-001	Livermore	HASL Ga-01-R	Cs-134	-0.0587 ± 0.0246	0.0418	pCi/m <sup>3</sup>
N11-0392-001	Livermore	HASL Ga-01-R	Cs-137	-0.0248 ± 0.0198	0.0437	pCi/m <sup>3</sup>
N11-0392-001	Livermore	DOE RP 710	Gross Alpha	±		pCi/m <sup>3</sup>
N11-0392-001	Livermore	DOE RP 710	Gross Beta	±		pCi/m <sup>3</sup>
N11-0392-001	Livermore	HASL Ga-01-R	I-131	0.0165 ± 0.0108	0.0406	pCi/m <sup>3</sup>
N11-0392-001	Livermore	HASL Ga-01-R	I-132	-0.0108 ± 0.0162	0.0392	pCi/m <sup>3</sup>
N11-0392-001	Livermore	HASL Ga-01-R	Ru-103	0.0152 ± 0.00943	0.0387	pCi/m <sup>3</sup>
N11-0392-001	Livermore	HASL Ga-01-R	Ru-106	0.148 ± 0.0847	0.381	pCi/m <sup>3</sup>
N11-0392-001	Livermore	HASL Ga-01-R	Te-132	0.00671 ± 0.0106	0.0358	pCi/m <sup>3</sup>
N11-0392-001	Livermore	HASL Ga-01-R	Zr-95	-0.0180 ± 0.0256	0.0586	pCi/m <sup>3</sup>

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

# PRELIMINARY Analysis Results Report for Task ID. N11-0392

N11-0392-002

Livermore

HASL Ga-01-R

Iodine-131

0.0218 ± 0.0169

0.0590

pCi/m3

- 
1. Precision criteria for these methods were determined to be acceptable.
  2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
  3. MDA95 is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD95 divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD95 is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where  $S_b$  is the square root of the instrument background count rate.



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Governor

**PRELIMINARY Analysis Results Report for Task ID. N11-0393**

Analyst: \_\_\_\_\_

Analysis Approved By: \_\_\_\_\_

Analysis Approval Date: \_\_\_\_\_

**Requestor**

Name: \_\_\_\_\_ Organization: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: CA Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_

**Site and Sample Information**

Collector's Name: \_\_\_\_\_ Date/Time Collected: 04/07/2011 13:38 Date/Time Received: 04/08/2011 14:39  
Site Name: Avila Beach / Air Source Name: \_\_\_\_\_  
R Number: R 90448 Sample Type: Air Filter

**Air Filter Information**

Start Volume	Start Date/Time	End Volume (M ) <sup>3</sup>	End Date/Time	Net Air Volume (M ) <sup>3</sup>
27821.3	04/05/2011 09:27	28200.0	04/07/2011 13:38	378.7

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA <sub>95</sub>	Units
N11-0393-001	Diablo Canyon NPP	HASL Ga-01-R	Ba-140	-0.0338 ± 0.0474	0.109	pCi/m3
N11-0393-001	Diablo Canyon NPP	HASL Ga-01-R	Ce-141	-0.00619 ± 0.0142	0.0388	pCi/m3
N11-0393-001	Diablo Canyon NPP	HASL Ga-01-R	Ce-144	0.0386 ± 0.0469	0.148	pCi/m3
N11-0393-001	Diablo Canyon NPP	HASL Ga-01-R	Cs-134	0.00887 ± 0.00910	0.0336	pCi/m3
N11-0393-001	Diablo Canyon NPP	HASL Ga-01-R	Cs-137	0.0184 ± 0.00787	0.0357	pCi/m3
N11-0393-001	Diablo Canyon NPP	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0393-001	Diablo Canyon NPP	DOE RP 710	Gross Beta	±		pCi/m3
N11-0393-001	Diablo Canyon NPP	HASL Ga-01-R	I-131	0.00734 ± 0.0109	0.0328	pCi/m3
N11-0393-001	Diablo Canyon NPP	HASL Ga-01-R	I-132	0.00279 ± 0.0126	0.0392	pCi/m3
N11-0393-001	Diablo Canyon NPP	HASL Ga-01-R	Ru-103	-0.0189 ± 0.0136	0.0242	pCi/m3
N11-0393-001	Diablo Canyon NPP	HASL Ga-01-R	Ru-106	-0.0956 ± 0.0870	0.221	pCi/m3
N11-0393-001	Diablo Canyon NPP	HASL Ga-01-R	Te-132	-0.00201 ± 0.0103	0.0288	pCi/m3
N11-0393-001	Diablo Canyon NPP	HASL Ga-01-R	Zr-95	0.00379 ± 0.0248	0.0587	pCi/m3

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

# PRELIMINARY Analysis Results Report for Task ID. N11-0393

N11-0393-002

Diablo Canyon NPP

HASL Ga-01-R

Iodine-131

0.0102 ± 0.0196

0.0600

pCi/m3

- 
1. Precision criteria for these methods were determined to be acceptable.
  2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
  3. MDA95 is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD95 divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD95 is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where  $S_b$  is the square root of the instrument background count rate.



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Governor

**PRELIMINARY Analysis Results Report for Task ID. N11-0394**

Analyst: \_\_\_\_\_

Analysis Approved By: \_\_\_\_\_

Analysis Approval Date: \_\_\_\_\_

**Requestor**

Name: \_\_\_\_\_ Organization: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: CA Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_

**Site and Sample Information**

Collector's Name: \_\_\_\_\_ Date/Time Collected: 04/07/2011 13:10 Date/Time Received: 04/08/2011 14:43  
Site Name: San Luis Obispo / Air Source Name: \_\_\_\_\_  
R Number: R 90447 Sample Type: Air Filter

**Air Filter Information**

Start Volume	Start Date/Time	End Volume (M ) <sup>3</sup>	End Date/Time	Net Air Volume (M ) <sup>3</sup>
66813.6	04/05/2011 09:59	67191.9	04/07/2011 13:10	378.3

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA <sub>95</sub>	Units
N11-0394-001	San Luis Obispo	HASL Ga-01-R	Ba-140	-0.0115 ± 0.0324	0.0854	pCi/m <sup>3</sup>
N11-0394-001	San Luis Obispo	HASL Ga-01-R	Ce-141	0.00924 ± 0.00795	0.0278	pCi/m <sup>3</sup>
N11-0394-001	San Luis Obispo	HASL Ga-01-R	Ce-144	0.0212 ± 0.0409	0.129	pCi/m <sup>3</sup>
N11-0394-001	San Luis Obispo	HASL Ga-01-R	Cs-134	-0.000991 ± 0.0110	0.0289	pCi/m <sup>3</sup>
N11-0394-001	San Luis Obispo	HASL Ga-01-R	Cs-137	0.0124 ± 0.00657	0.0294	pCi/m <sup>3</sup>
N11-0394-001	San Luis Obispo	DOE RP 710	Gross Alpha	±		pCi/m <sup>3</sup>
N11-0394-001	San Luis Obispo	DOE RP 710	Gross Beta	±		pCi/m <sup>3</sup>
N11-0394-001	San Luis Obispo	HASL Ga-01-R	I-131	0.0212 ± 0.00844	0.0338	pCi/m <sup>3</sup>
N11-0394-001	San Luis Obispo	HASL Ga-01-R	I-132	-0.0244 ± 0.0156	0.0260	pCi/m <sup>3</sup>
N11-0394-001	San Luis Obispo	HASL Ga-01-R	Ru-103	-0.00910 ± 0.0104	0.0241	pCi/m <sup>3</sup>
N11-0394-001	San Luis Obispo	HASL Ga-01-R	Ru-106	-0.123 ± 0.133	0.296	pCi/m <sup>3</sup>
N11-0394-001	San Luis Obispo	HASL Ga-01-R	Te-132	-0.00747 ± 0.00909	0.0232	pCi/m <sup>3</sup>
N11-0394-001	San Luis Obispo	HASL Ga-01-R	Zr-95	-0.000373 ± 0.0178	0.0494	pCi/m <sup>3</sup>

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

# PRELIMINARY Analysis Results Report for Task ID. N11-0394

N11-0394-002

San Luis Obispo

HASL Ga-01-R

Iodine-131

0.0252 ± 0.0162

0.0587

pCi/m3

- 
1. Precision criteria for these methods were determined to be acceptable.
  2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
  3. MDA95 is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD95 divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD95 is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where  $S_b$  is the square root of the instrument background count rate.



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EDMUND G. BROWN JR.  
Governor

**PRELIMINARY Analysis Results Report for Task ID. N11-0395**

Analyst: \_\_\_\_\_

Analysis Approved By: \_\_\_\_\_

Analysis Approval Date: \_\_\_\_\_

**Requestor**

Name: \_\_\_\_\_ Organization: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: CA Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_

**Site and Sample Information**

Collector's Name: \_\_\_\_\_ Date/Time Collected: 04/07/2011 12:05 Date/Time Received: 04/08/2011 14:47  
Site Name: Humboldt Bay / Air Source Name: \_\_\_\_\_  
R Number: R 90470 Sample Type: Air Filter

**Air Filter Information**

Start Volume	Start Date/Time	End Volume (M ) <sup>3</sup>	End Date/Time	Net Air Volume (M ) <sup>3</sup>
77210.4	04/05/2011 13:00	77556.7	04/07/2011 12:05	346.3

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA <sub>95</sub>	Units
N11-0395-001	Humboldt Bay NPP	HASL Ga-01-R	Ba-140	0.0313 ± 0.0383	0.128	pCi/m <sup>3</sup>
N11-0395-001	Humboldt Bay NPP	HASL Ga-01-R	Ce-141	-0.0184 ± 0.0148	0.0330	pCi/m <sup>3</sup>
N11-0395-001	Humboldt Bay NPP	HASL Ga-01-R	Ce-144	-0.0503 ± 0.0583	0.138	pCi/m <sup>3</sup>
N11-0395-001	Humboldt Bay NPP	HASL Ga-01-R	Cs-134	0 ± 0.0136	0.0628	pCi/m <sup>3</sup>
N11-0395-001	Humboldt Bay NPP	HASL Ga-01-R	Cs-137	0.00349 ± 0.0137	0.0412	pCi/m <sup>3</sup>
N11-0395-001	Humboldt Bay NPP	DOE RP 710	Gross Alpha	±		pCi/m <sup>3</sup>
N11-0395-001	Humboldt Bay NPP	DOE RP 710	Gross Beta	±		pCi/m <sup>3</sup>
N11-0395-001	Humboldt Bay NPP	HASL Ga-01-R	I-131	0.0241 ± 0.0109	0.0420	pCi/m <sup>3</sup>
N11-0395-001	Humboldt Bay NPP	HASL Ga-01-R	I-132	-0.00629 ± 0.0155	0.0421	pCi/m <sup>3</sup>
N11-0395-001	Humboldt Bay NPP	HASL Ga-01-R	Ru-103	-0.00891 ± 0.0147	0.0368	pCi/m <sup>3</sup>
N11-0395-001	Humboldt Bay NPP	HASL Ga-01-R	Ru-106	-0.0782 ± 0.124	0.321	pCi/m <sup>3</sup>
N11-0395-001	Humboldt Bay NPP	HASL Ga-01-R	Te-132	0 ± 0.0104	0.0315	pCi/m <sup>3</sup>
N11-0395-001	Humboldt Bay NPP	HASL Ga-01-R	Zr-95	-0.00522 ± 0.0199	0.0557	pCi/m <sup>3</sup>

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

# PRELIMINARY Analysis Results Report for Task ID. N11-0395

N11-0395-002

Humboldt Bay NPP

HASL Ga-01-R

Iodine-131

0.0335 ± 0.0106

0.0520

pCi/m3

- 
1. Precision criteria for these methods were determined to be acceptable.
  2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
  3. MDA95 is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD95 divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD95 is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where  $S_b$  is the square root of the instrument background count rate.



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EDMUND G. BROWN JR.  
Governor

**PRELIMINARY Analysis Results Report for Task ID. N11-0396**

Analyst: \_\_\_\_\_

Analysis Approved By: \_\_\_\_\_

Analysis Approval Date: \_\_\_\_\_

**Requestor**

Name: \_\_\_\_\_ Organization: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: CA Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_

**Site and Sample Information**

Collector's Name: \_\_\_\_\_ Date/Time Collected: 04/06/2011 14:52 Date/Time Received: 04/08/2011 14:52  
Site Name: San Diego / Air Source Name: \_\_\_\_\_  
R Number: R 90615 Sample Type: Air Filter

**Air Filter Information**

Start Volume	Start Date/Time	End Volume (M ) <sup>3</sup>	End Date/Time	Net Air Volume (M ) <sup>3</sup>
81657.7	04/04/2011 14:03	81992.8	04/06/2011 14:52	335.1

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA <sub>95</sub>	Units
N11-0396-001	San Diego	HASL Ga-01-R	Ba-140	0.0890 ± 0.0348	0.167	pCi/m <sup>3</sup>
N11-0396-001	San Diego	HASL Ga-01-R	Ce-141	0.000978 ± 0.0169	0.0530	pCi/m <sup>3</sup>
N11-0396-001	San Diego	HASL Ga-01-R	Ce-144	-0.114 ± 0.0687	0.170	pCi/m <sup>3</sup>
N11-0396-001	San Diego	HASL Ga-01-R	Cs-134	-0.0370 ± 0.0220	0.0492	pCi/m <sup>3</sup>
N11-0396-001	San Diego	HASL Ga-01-R	Cs-137	0.0143 ± 0.00954	0.0422	pCi/m <sup>3</sup>
N11-0396-001	San Diego	DOE RP 710	Gross Alpha	±		pCi/m <sup>3</sup>
N11-0396-001	San Diego	DOE RP 710	Gross Beta	±		pCi/m <sup>3</sup>
N11-0396-001	San Diego	HASL Ga-01-R	I-131	0.0229 ± 0.0124	0.0497	pCi/m <sup>3</sup>
N11-0396-001	San Diego	HASL Ga-01-R	I-132	-0.00318 ± 0.0195	0.0561	pCi/m <sup>3</sup>
N11-0396-001	San Diego	HASL Ga-01-R	Ru-103	0.000207 ± 0.0137	0.0408	pCi/m <sup>3</sup>
N11-0396-001	San Diego	HASL Ga-01-R	Ru-106	0.0320 ± 0.0966	0.326	pCi/m <sup>3</sup>
N11-0396-001	San Diego	HASL Ga-01-R	Te-132	0.0106 ± 0.0126	0.0453	pCi/m <sup>3</sup>
N11-0396-001	San Diego	HASL Ga-01-R	Zr-95	0.00301 ± 0.0361	0.0581	pCi/m <sup>3</sup>

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

# PRELIMINARY Analysis Results Report for Task ID. N11-0396

N11-0396-002

San Diego

HASL Ga-01-R

Iodine-131

0.0187 ± 0.0204

0.0686

pCi/m3

- 
1. Precision criteria for these methods were determined to be acceptable.
  2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
  3. MDA95 is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD95 divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD95 is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where  $S_b$  is the square root of the instrument background count rate.



Howard Backer, MD, MPH  
Interim Director

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

Drinking Water and Radiation Laboratory Branch  
850 Marina Bay Parkway, Richmond, CA 94804



EDMUND G. BROWN JR.  
Governor

**PRELIMINARY Analysis Results Report for Task ID. N11-0397**

Analyst: \_\_\_\_\_

Analysis Approved By: \_\_\_\_\_

Analysis Approval Date: \_\_\_\_\_

**Requestor**

Name: \_\_\_\_\_ Organization: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: CA Zip Code: \_\_\_\_\_ Phone: \_\_\_\_\_

**Site and Sample Information**

Collector's Name: \_\_\_\_\_ Date/Time Collected: 04/09/2011 10:05 Date/Time Received: 04/09/2011 10:05  
Site Name: Richmond / Air Source Name: \_\_\_\_\_  
R Number: R 91081 Sample Type: Air Filter

**Air Filter Information**

Start Volume	Start Date/Time	End Volume (M ) <sup>3</sup>	End Date/Time	Net Air Volume (M ) <sup>3</sup>
7139.8	04/07/2011 09:00	7448.2	04/09/2011 10:05	308.4

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA <sub>95</sub>	Units
N11-0397-001	Richmond	HASL Ga-01-R	Ba-140	0.0543 ± 0.0497	0.172	pCi/m <sup>3</sup>
N11-0397-001	Richmond	HASL Ga-01-R	Ce-141	0.0170 ± 0.0184	0.0519	pCi/m <sup>3</sup>
N11-0397-001	Richmond	HASL Ga-01-R	Ce-144	-0.0353 ± 0.0857	0.204	pCi/m <sup>3</sup>
N11-0397-001	Richmond	HASL Ga-01-R	Cs-134	0.0288 ± 0.0101	0.110	pCi/m <sup>3</sup>
N11-0397-001	Richmond	HASL Ga-01-R	Cs-137	0.0235 ± 0.0186	0.0679	pCi/m <sup>3</sup>
N11-0397-001	Richmond	DOE RP 710	Gross Alpha	±		pCi/m <sup>3</sup>
N11-0397-001	Richmond	DOE RP 710	Gross Beta	±		pCi/m <sup>3</sup>
N11-0397-001	Richmond	HASL Ga-01-R	I-131	-0.00923 ± 0.0150	0.0434	pCi/m <sup>3</sup>
N11-0397-001	Richmond	HASL Ga-01-R	I-132	-0.0142 ± 0.0219	0.0533	pCi/m <sup>3</sup>
N11-0397-001	Richmond	HASL Ga-01-R	Ru-103	0.000339 ± 0.0134	0.0390	pCi/m <sup>3</sup>
N11-0397-001	Richmond	HASL Ga-01-R	Ru-106	0.0179 ± 0.152	0.449	pCi/m <sup>3</sup>
N11-0397-001	Richmond	HASL Ga-01-R	Te-132	0.00519 ± 0.0107	0.0372	pCi/m <sup>3</sup>
N11-0397-001	Richmond	HASL Ga-01-R	Zr-95	-0.0132 ± 0.0378	0.104	pCi/m <sup>3</sup>

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

# PRELIMINARY Analysis Results Report for Task ID. N11-0397

N11-0397-002

Richmond

HASL Ga-01-R

Iodine-131

0.0130 ± 0.0107

0.0387

pCi/m3

- 
1. Precision criteria for these methods were determined to be acceptable.
  2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
  3. MDA95 is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD95 divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD95 is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where  $S_b$  is the square root of the instrument background count rate.



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EDMUND G. BROWN JR.  
Governor

**PRELIMINARY Analysis Results Report for Task ID. N11-0409**

Analyst: \_\_\_\_\_

Analysis Approved By: \_\_\_\_\_

Analysis Approval Date: \_\_\_\_\_

**Requestor**

Name:

Organization:

Address:

City:

State: CA

Zip Code:

Phone:

**Site and Sample Information**

Collector's Name:

Date/Time Collected: 04/11/2011 07:45

Date/Time Received: 04/12/2011 10:00

Site Name: Cal Poly Dairy Farm; San Luis Obispo

Source Name:

R Number: R91102

Sample Type: Milk

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0409-001	Cal Poly Dairy Farm	HASL Ga-01-R	I-131	0.376 ± 0.914	2.55	pCi/L
N11-0409-001	Cal Poly Dairy Farm	HASL Ga-01-R	K-40	1370 ± 32.1	37.6	pCi/L

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