



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. N11-0353

Analyst: _____

Analysis Approved By: _____

Analysis Approval Date: _____

Requestor

Name: _____ Organization: Radiologic Health Branch

Address: _____

City: _____ State: CA Zip Code: 95814-5006 Phone: _____

Site and Sample Information

Collector's Name: _____ Date/Time Collected: 04/03/2011 14:01 Date/Time Received: 04/03/2011 14:01

Site Name: Richmond / Air Source Name: _____

R Number: R 91073 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
6166.8	04/01/2011 10:48	6516.0	04/03/2011 14:01	349.2

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0353-001	Richmond	HASL Ga-01-R	Ba-140	0.0226 ± 0.0486	0.154	pCi/m3
N11-0353-001	Richmond	HASL Ga-01-R	Ce-141	-0.0102 ± 0.0175	0.0405	pCi/m3
N11-0353-001	Richmond	HASL Ga-01-R	Ce-144	0.0954 ± 0.0481	0.165	pCi/m3
N11-0353-001	Richmond	HASL Ga-01-R	Cs-134	-0.0103 ± 0.0142	0.0653	pCi/m3
N11-0353-001	Richmond	HASL Ga-01-R	Cs-137	-0.0348 ± 0.0228	0.0476	pCi/m3
N11-0353-001	Richmond	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0353-001	Richmond	DOE RP 710	Gross Beta	±		pCi/m3
N11-0353-001	Richmond	HASL Ga-01-R	I-131	-0.00260 ± 0.0137	0.0378	pCi/m3
N11-0353-001	Richmond	HASL Ga-01-R	I-132	0.00798 ± 0.0120	0.0417	pCi/m3
N11-0353-001	Richmond	HASL Ga-01-R	Ru-103	-0.00175 ± 0.0129	0.0387	pCi/m3
N11-0353-001	Richmond	HASL Ga-01-R	Ru-106	0.0986 ± 0.118	0.405	pCi/m3
N11-0353-001	Richmond	HASL Ga-01-R	Te-132	-0.00104 ± 0.00754	0.0247	pCi/m3
N11-0353-001	Richmond	HASL Ga-01-R	Zr-95	-0.0131 ± 0.0248	0.0616	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 Sb is the square root of the instrument background count rate.

PRELIMINARY Analysis Results Report for Task ID. N11-0353

N11-0353-002

Richmond

HASL Ga-01-R

Iodine-131

0.0574 ± 0.00815

0.0467

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 Sb 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. N11-0354

Analyst: _____

Analysis Approved By: _____

Analysis Approval Date: _____

Requestor

Name: _____ Organization: Radiologic Health Branch

Address: _____

City: _____ State: CA Zip Code: 95814-5006 Phone: _____

Site and Sample Information

Collector's Name: _____ Date/Time Collected: 04/01/2011 09:00 Date/Time Received: 04/04/2011 11:08

Site Name: Eureka / Air Source Name: _____

R Number: R 94000 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
17849.0	03/30/2011 16:40	18154.7	04/01/2011 09:00	305.7

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0354-001	Eureka	HASL Ga-01-R	Ba-140	-0.0700 ± 0.0631	0.136	pCi/m ³
N11-0354-001	Eureka	HASL Ga-01-R	Ce-141	0.00950 ± 0.0136	0.0391	pCi/m ³
N11-0354-001	Eureka	HASL Ga-01-R	Ce-144	0.0403 ± 0.0533	0.156	pCi/m ³
N11-0354-001	Eureka	HASL Ga-01-R	Cs-134	-0.0102 ± 0.0166	0.0434	pCi/m ³
N11-0354-001	Eureka	HASL Ga-01-R	Cs-137	-0.0203 ± 0.0210	0.0398	pCi/m ³
N11-0354-001	Eureka	DOE RP 710	Gross Alpha	±		pCi/m ³
N11-0354-001	Eureka	DOE RP 710	Gross Beta	±		pCi/m ³
N11-0354-001	Eureka	HASL Ga-01-R	I-131	-0.00805 ± 0.0145	0.0429	pCi/m ³
N11-0354-001	Eureka	HASL Ga-01-R	I-132	0.0147 ± 0.0171	0.0673	pCi/m ³
N11-0354-001	Eureka	HASL Ga-01-R	Ru-103	0.00443 ± 0.00910	0.0323	pCi/m ³
N11-0354-001	Eureka	HASL Ga-01-R	Ru-106	0.153 ± 0.0468	0.340	pCi/m ³
N11-0354-001	Eureka	HASL Ga-01-R	Te-132	0.00649 ± 0.0128	0.0473	pCi/m ³
N11-0354-001	Eureka	HASL Ga-01-R	Zr-95	-0.00774 ± 0.0223	0.0622	pCi/m ³

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

PRELIMINARY Analysis Results Report for Task ID. N11-0354

N11-0354-002

Eureka

HASL Ga-01-R

Iodine-131

0.0282 ± 0.0133

0.0515

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. N11-0355

Analyst: _____

Analysis Approved By: _____

Analysis Approval Date: _____

Requestor

Name: _____ Organization: Radiologic Health Branch

Address: _____

City: _____ State: CA Zip Code: 95814-5006 Phone: _____

Site and Sample Information

Collector's Name: _____ Date/Time Collected: 03/30/2011 10:15 Date/Time Received: 04/04/2011 11:16

Site Name: Los Angeles / Air Source Name: _____

R Number: R 93620 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
87028.0	03/28/2011 12:00	87341.6	03/30/2011 10:15	313.6

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0355-001	Los Angeles	HASL Ga-01-R	Ba-140	0.0453 ± 0.0498	0.180	pCi/m ³
N11-0355-001	Los Angeles	HASL Ga-01-R	Ce-141	0.0196 ± 0.0161	0.0479	pCi/m ³
N11-0355-001	Los Angeles	HASL Ga-01-R	Ce-144	0.0295 ± 0.0550	0.151	pCi/m ³
N11-0355-001	Los Angeles	HASL Ga-01-R	Cs-134	-0.0371 ± 0.0231	0.0452	pCi/m ³
N11-0355-001	Los Angeles	HASL Ga-01-R	Cs-137	-0.0187 ± 0.0199	0.0465	pCi/m ³
N11-0355-001	Los Angeles	DOE RP 710	Gross Alpha	±		pCi/m ³
N11-0355-001	Los Angeles	DOE RP 710	Gross Beta	±		pCi/m ³
N11-0355-001	Los Angeles	HASL Ga-01-R	I-131	0.0208 ± 0.0204	0.0741	pCi/m ³
N11-0355-001	Los Angeles	HASL Ga-01-R	I-132	-0.0346 ± 0.0518	0.113	pCi/m ³
N11-0355-001	Los Angeles	HASL Ga-01-R	Ru-103	0.00459 ± 0.0114	0.0381	pCi/m ³
N11-0355-001	Los Angeles	HASL Ga-01-R	Ru-106	-0.0165 ± 0.133	0.371	pCi/m ³
N11-0355-001	Los Angeles	HASL Ga-01-R	Te-132	0.0152 ± 0.0152	0.0620	pCi/m ³
N11-0355-001	Los Angeles	HASL Ga-01-R	Zr-95	-0.00482 ± 0.0336	0.0786	pCi/m ³

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

PRELIMINARY Analysis Results Report for Task ID. N11-0355

N11-0355-002

Los Angeles

HASL Ga-01-R

Iodine-131

0.159 ± 0.0188

0.0588

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. N11-0356

Analyst: _____

Analysis Approved By: _____

Analysis Approval Date: _____

Requestor

Name: _____ Organization: Radiologic Health Branch
Address: _____
City: _____ State: CA Zip Code: 95814-5006 Phone: _____

Site and Sample Information

Collector's Name: _____ Date/Time Collected: 04/04/2011 08:03 Date/Time Received: 04/04/2011 11:20
Site Name: Livermore / Air Source Name: _____
R Number: R 91052 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
33855.1	04/01/2011 09:29	34381.2	04/04/2011 08:03	526.1

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0356-001	Livermore	HASL Ga-01-R	Ba-140	-0.0100 ± 0.0320	0.0816	pCi/m ³
N11-0356-001	Livermore	HASL Ga-01-R	Ce-141	-0.0151 ± 0.0121	0.0308	pCi/m ³
N11-0356-001	Livermore	HASL Ga-01-R	Ce-144	0.0291 ± 0.0486	0.144	pCi/m ³
N11-0356-001	Livermore	HASL Ga-01-R	Cs-134	0.00779 ± 0.00800	0.0281	pCi/m ³
N11-0356-001	Livermore	HASL Ga-01-R	Cs-137	-0.00699 ± 0.0107	0.0289	pCi/m ³
N11-0356-001	Livermore	DOE RP 710	Gross Alpha	±		pCi/m ³
N11-0356-001	Livermore	DOE RP 710	Gross Beta	±		pCi/m ³
N11-0356-001	Livermore	HASL Ga-01-R	I-131	0.00582 ± 0.0115	0.0329	pCi/m ³
N11-0356-001	Livermore	HASL Ga-01-R	I-132	0.0175 ± 0.00666	0.0290	pCi/m ³
N11-0356-001	Livermore	HASL Ga-01-R	Ru-103	-0.00859 ± 0.00983	0.0225	pCi/m ³
N11-0356-001	Livermore	HASL Ga-01-R	Ru-106	-0.0409 ± 0.0852	0.241	pCi/m ³
N11-0356-001	Livermore	HASL Ga-01-R	Te-132	-0.00684 ± 0.00790	0.0205	pCi/m ³
N11-0356-001	Livermore	HASL Ga-01-R	Zr-95	-0.0332 ± 0.0183	0.0357	pCi/m ³

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

PRELIMINARY Analysis Results Report for Task ID. N11-0356

N11-0356-002

Livermore

HASL Ga-01-R

Iodine-131

0.0300 ± 0.00622

0.0294

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. N11-0357

Analyst: _____

Analysis Approved By: _____

Analysis Approval Date: _____

Requestor

Name: _____ Organization: Radiologic Health Branch

Address: _____

City: Sacramento

State: CA Zip Code: 95814-5006

Phone: _____

Site and Sample Information

Collector's Name: _____ Date/Time Collected: 04/01/2011 15:07 Date/Time Received: 04/04/2011 11:33

Site Name: San Diego / Air

Source Name: _____

R Number: R 90613

Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
80831.1	03/30/2011 13:06	81170.6	04/01/2011 15:07	339.5

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0357-001	San Diego	HASL Ga-01-R	Ba-140	0.0235 ± 0.0506	0.147	pCi/m3
N11-0357-001	San Diego	HASL Ga-01-R	Ce-141	-0.0196 ± 0.0180	0.0461	pCi/m3
N11-0357-001	San Diego	HASL Ga-01-R	Ce-144	0.0811 ± 0.0607	0.196	pCi/m3
N11-0357-001	San Diego	HASL Ga-01-R	Cs-134	-0.00112 ± 0.00809	0.0661	pCi/m3
N11-0357-001	San Diego	HASL Ga-01-R	Cs-137	0.00872 ± 0.0121	0.0411	pCi/m3
N11-0357-001	San Diego	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0357-001	San Diego	DOE RP 710	Gross Beta	±		pCi/m3
N11-0357-001	San Diego	HASL Ga-01-R	I-131	0.0203 ± 0.0132	0.0451	pCi/m3
N11-0357-001	San Diego	HASL Ga-01-R	I-132	0.0188 ± 0.0226	0.0725	pCi/m3
N11-0357-001	San Diego	HASL Ga-01-R	Ru-103	0.00356 ± 0.0144	0.0401	pCi/m3
N11-0357-001	San Diego	HASL Ga-01-R	Ru-106	0.0750 ± 0.0899	0.329	pCi/m3
N11-0357-001	San Diego	HASL Ga-01-R	Te-132	-0.00863 ± 0.0190	0.0517	pCi/m3
N11-0357-001	San Diego	HASL Ga-01-R	Zr-95	0.0186 ± 0.0288	0.0706	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 Sb is the square root of the instrument background count rate.

PRELIMINARY Analysis Results Report for Task ID. N11-0357

N11-0357-002

San Diego

HASL Ga-01-R

Iodine-131

0.124 ± 0.0125

0.0299

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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Drinking Water and Radiation Laboratory Branch

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EDMUND G. BROWN JR.
Governor

PRELIMINARY Analysis Results Report for Task ID. N11-0358

Analyst: _____

Analysis Approved By: _____

Analysis Approval Date: _____

Requestor

Name: _____ Organization: Radiologic Health Branch

Address: _____

City: _____ State: CA Zip Code: 95814-5006 Phone: _____

Site and Sample Information

Collector's Name: _____ Date/Time Collected: 04/01/2011 08:45 Date/Time Received: 04/04/2011 11:37

Site Name: San Luis Obispo / Air Source Name: _____

R Number: R 90441 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
65750.8	03/30/2011 10:31	66097.0	04/01/2011 08:45	346.2

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0358-001	San Luis Obispo	HASL Ga-01-R	Ba-140	0.0562 ± 0.0364	0.148	pCi/m ³
N11-0358-001	San Luis Obispo	HASL Ga-01-R	Ce-141	0.00981 ± 0.0166	0.0452	pCi/m ³
N11-0358-001	San Luis Obispo	HASL Ga-01-R	Ce-144	-0.0531 ± 0.0746	0.158	pCi/m ³
N11-0358-001	San Luis Obispo	HASL Ga-01-R	Cs-134	0.00321 ± 0.0108	0.0455	pCi/m ³
N11-0358-001	San Luis Obispo	HASL Ga-01-R	Cs-137	0.00294 ± 0.0136	0.0434	pCi/m ³
N11-0358-001	San Luis Obispo	DOE RP 710	Gross Alpha	±		pCi/m ³
N11-0358-001	San Luis Obispo	DOE RP 710	Gross Beta	±		pCi/m ³
N11-0358-001	San Luis Obispo	HASL Ga-01-R	I-131	0.0169 ± 0.0125	0.0485	pCi/m ³
N11-0358-001	San Luis Obispo	HASL Ga-01-R	I-132	-0.0294 ± 0.0360	0.0761	pCi/m ³
N11-0358-001	San Luis Obispo	HASL Ga-01-R	Ru-103	0.00865 ± 0.0101	0.0368	pCi/m ³
N11-0358-001	San Luis Obispo	HASL Ga-01-R	Ru-106	0.0515 ± 0.108	0.346	pCi/m ³
N11-0358-001	San Luis Obispo	HASL Ga-01-R	Te-132	-0.0167 ± 0.0161	0.0475	pCi/m ³
N11-0358-001	San Luis Obispo	HASL Ga-01-R	Zr-95	-0.000298 ± 0.0408	0.0698	pCi/m ³

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

PRELIMINARY Analysis Results Report for Task ID. N11-0358

N11-0358-002

San Luis Obispo

HASL Ga-01-R

Iodine-131

0.0915 ± 0.0116

0.0320

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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Interim Director

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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. N11-0359

Analyst: _____

Analysis Approved By: _____

Analysis Approval Date: _____

Requestor

Name: _____ Organization: Radiologic Health Branch

Address: _____

City: Sacramento

State: CA Zip Code: 95814-5006

Phone: _____

Site and Sample Information

Collector's Name: _____ Date/Time Collected: 04/01/2011 09:33 Date/Time Received: 04/04/2011 11:42

Site Name: Avila Beach/ Air

Source Name: _____

R Number: R 90442

Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
26782.8	03/30/2011 11:04	27122.1	04/01/2011 09:33	339.3

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0359-001	Diablo Canyon NPP	HASL Ga-01-R	Ba-140	-0.0201 ± 0.0492	0.122	pCi/m3
N11-0359-001	Diablo Canyon NPP	HASL Ga-01-R	Ce-141	-0.0153 ± 0.0165	0.0424	pCi/m3
N11-0359-001	Diablo Canyon NPP	HASL Ga-01-R	Ce-144	-0.0306 ± 0.0648	0.176	pCi/m3
N11-0359-001	Diablo Canyon NPP	HASL Ga-01-R	Cs-134	0.0146 ± 0.0122	0.0453	pCi/m3
N11-0359-001	Diablo Canyon NPP	HASL Ga-01-R	Cs-137	0.0108 ± 0.0118	0.0418	pCi/m3
N11-0359-001	Diablo Canyon NPP	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0359-001	Diablo Canyon NPP	DOE RP 710	Gross Beta	±		pCi/m3
N11-0359-001	Diablo Canyon NPP	HASL Ga-01-R	I-131	0.0188 ± 0.0158	0.0507	pCi/m3
N11-0359-001	Diablo Canyon NPP	HASL Ga-01-R	I-132	0.0199 ± 0.0195	0.0692	pCi/m3
N11-0359-001	Diablo Canyon NPP	HASL Ga-01-R	Ru-103	-0.00374 ± 0.0131	0.0322	pCi/m3
N11-0359-001	Diablo Canyon NPP	HASL Ga-01-R	Ru-106	0.0255 ± 0.100	0.295	pCi/m3
N11-0359-001	Diablo Canyon NPP	HASL Ga-01-R	Te-132	0.0356 ± 0.0135	0.0520	pCi/m3
N11-0359-001	Diablo Canyon NPP	HASL Ga-01-R	Zr-95	0.0238 ± 0.0227	0.0572	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 Sb is the square root of the instrument background count rate.

PRELIMINARY Analysis Results Report for Task ID. N11-0359

N11-0359-002

Diablo Canyon NPP

HASL Ga-01-R

Iodine-131

0.108 ± 0.0127

0.0365

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. N11-0360

Analyst: _____

Analysis Approved By: _____

Analysis Approval Date: _____

Requestor

Name: _____ Organization: Radiologic Health Branch

Address: _____

City: Sacramento

State: CA Zip Code: 95814-5006

Phone: _____

Site and Sample Information

Collector's Name: _____ Date/Time Collected: 03/30/2011 13:03 Date/Time Received: 04/04/2011 11:47

Site Name: San Diego / Air

Source Name: _____

R Number: R 90646

Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
80471.7	03/28/2011 09:16	80831.1	03/30/2011 13:03	359.4

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0360-001	San Diego	HASL Ga-01-R	Ba-140	-0.0703 ± 0.0664	0.148	pCi/m ³
N11-0360-001	San Diego	HASL Ga-01-R	Ce-141	-0.000957 ± 0.0147	0.0355	pCi/m ³
N11-0360-001	San Diego	HASL Ga-01-R	Ce-144	0.0880 ± 0.0359	0.140	pCi/m ³
N11-0360-001	San Diego	HASL Ga-01-R	Cs-134	-0.0360 ± 0.0192	0.0353	pCi/m ³
N11-0360-001	San Diego	HASL Ga-01-R	Cs-137	0.0214 ± 0.0120	0.0503	pCi/m ³
N11-0360-001	San Diego	DOE RP 710	Gross Alpha	±		pCi/m ³
N11-0360-001	San Diego	DOE RP 710	Gross Beta	±		pCi/m ³
N11-0360-001	San Diego	HASL Ga-01-R	I-131	0.0141 ± 0.0146	0.0544	pCi/m ³
N11-0360-001	San Diego	HASL Ga-01-R	I-132	-0.0497 ± 0.0553	0.107	pCi/m ³
N11-0360-001	San Diego	HASL Ga-01-R	Ru-103	-0.0113 ± 0.0132	0.0304	pCi/m ³
N11-0360-001	San Diego	HASL Ga-01-R	Ru-106	-0.0226 ± 0.124	0.291	pCi/m ³
N11-0360-001	San Diego	HASL Ga-01-R	Te-132	0.00915 ± 0.0139	0.0532	pCi/m ³
N11-0360-001	San Diego	HASL Ga-01-R	Zr-95	-0.0192 ± 0.0273	0.0540	pCi/m ³

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

PRELIMINARY Analysis Results Report for Task ID. N11-0360

N11-0360-002

San Diego

HASL Ga-01-R

Iodine-131

0.199 ± 0.0176

0.0424

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.