



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. N11-0404

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 10:50 Date/Time Received: 04/12/2011 09:54
Site Name: Eureka / Air Source Name: _____
R Number: R 91203 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
19599.5	04/09/2011 11:45	19951.5	04/11/2011 10:50	352.0

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0404-001	Eureka	HASL Ga-01-R	Ba-140	0.0507 ± 0.0314	0.115	pCi/m ³
N11-0404-001	Eureka	HASL Ga-01-R	Ce-141	0.00971 ± 0.0125	0.0390	pCi/m ³
N11-0404-001	Eureka	HASL Ga-01-R	Ce-144	-0.0250 ± 0.0580	0.157	pCi/m ³
N11-0404-001	Eureka	HASL Ga-01-R	Cs-134	-0.000519 ± 0.00983	0.0304	pCi/m ³
N11-0404-001	Eureka	HASL Ga-01-R	Cs-137	-0.0134 ± 0.0137	0.0358	pCi/m ³
N11-0404-001	Eureka	DOE RP 710	Gross Alpha	±		pCi/m ³
N11-0404-001	Eureka	DOE RP 710	Gross Beta	±		pCi/m ³
N11-0404-001	Eureka	HASL Ga-01-R	I-131	-0.0178 ± 0.0141	0.0313	pCi/m ³
N11-0404-001	Eureka	HASL Ga-01-R	I-132	-0.00481 ± 0.0144	0.0423	pCi/m ³
N11-0404-001	Eureka	HASL Ga-01-R	Ru-103	0.00780 ± 0.0109	0.0333	pCi/m ³
N11-0404-001	Eureka	HASL Ga-01-R	Ru-106	0.0816 ± 0.0783	0.300	pCi/m ³
N11-0404-001	Eureka	HASL Ga-01-R	Te-132	0.0115 ± 0.0103	0.0330	pCi/m ³
N11-0404-001	Eureka	HASL Ga-01-R	Zr-95	-0.0224 ± 0.0215	0.0539	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. N11-0404

N11-0404-002

Eureka

HASL Ga-01-R

Iodine-131

0.0137 ± 0.0156

0.0525

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.
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PRELIMINARY Analysis Results Report for Task ID. N11-0405

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 11:30 Date/Time Received: 04/12/2011 10:02
Site Name: Los Angeles / Air Source Name: _____
R Number: R 91123 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
88808.8	04/08/2011 11:30	89305.2	04/11/2011 11:30	496.4

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0405-001	Los Angeles	HASL Ga-01-R	Ba-140	0.00868 ± 0.0254	0.0772	pCi/m ³
N11-0405-001	Los Angeles	HASL Ga-01-R	Ce-141	-0.00339 ± 0.00706	0.0193	pCi/m ³
N11-0405-001	Los Angeles	HASL Ga-01-R	Ce-144	-0.00294 ± 0.0322	0.0928	pCi/m ³
N11-0405-001	Los Angeles	HASL Ga-01-R	Cs-134	0.00690 ± 0.00836	0.0251	pCi/m ³
N11-0405-001	Los Angeles	HASL Ga-01-R	Cs-137	0.0108 ± 0.00464	0.0230	pCi/m ³
N11-0405-001	Los Angeles	DOE RP 710	Gross Alpha	±		pCi/m ³
N11-0405-001	Los Angeles	DOE RP 710	Gross Beta	±		pCi/m ³
N11-0405-001	Los Angeles	HASL Ga-01-R	I-131	0.00320 ± 0.00643	0.0205	pCi/m ³
N11-0405-001	Los Angeles	HASL Ga-01-R	I-132	-0.0238 ± 0.0123	0.0186	pCi/m ³
N11-0405-001	Los Angeles	HASL Ga-01-R	Ru-103	-0.00538 ± 0.00784	0.0183	pCi/m ³
N11-0405-001	Los Angeles	HASL Ga-01-R	Ru-106	0.0932 ± 0.0586	0.222	pCi/m ³
N11-0405-001	Los Angeles	HASL Ga-01-R	Te-132	-0.000943 ± 0.00671	0.0191	pCi/m ³
N11-0405-001	Los Angeles	HASL Ga-01-R	Zr-95	-0.00315 ± 0.0141	0.0365	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. N11-0405

N11-0405-002

Los Angeles

HASL Ga-01-R

Iodine-131

0.0133 ± 0.00899

0.0346

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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PRELIMINARY Analysis Results Report for Task ID. N11-0406

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: 04/01/2011 09:00

Date/Time Received: 04/12/2011 10:07

Site Name: Los Angeles / Air

Source Name:

R Number: R 93601

Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
87341.6	03/30/2011 10:15	87658.3	04/01/2011 09:00	316.7

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0406-001	Los Angeles	HASL Ga-01-R	Ba-140	-0.146 ± 0.110	0.211	pCi/m ³
N11-0406-001	Los Angeles	HASL Ga-01-R	Ce-141	0.00546 ± 0.0191	0.0475	pCi/m ³
N11-0406-001	Los Angeles	HASL Ga-01-R	Ce-144	0.0324 ± 0.0626	0.174	pCi/m ³
N11-0406-001	Los Angeles	HASL Ga-01-R	Cs-134	-0.0177 ± 0.0167	0.0370	pCi/m ³
N11-0406-001	Los Angeles	HASL Ga-01-R	Cs-137	-0.0104 ± 0.0175	0.0432	pCi/m ³
N11-0406-001	Los Angeles	DOE RP 710	Gross Alpha	±		pCi/m ³
N11-0406-001	Los Angeles	DOE RP 710	Gross Beta	±		pCi/m ³
N11-0406-001	Los Angeles	HASL Ga-01-R	I-131	0.0395 ± 0.0225	0.0947	pCi/m ³
N11-0406-001	Los Angeles	HASL Ga-01-R	I-132	-0.171 ± 0.168	0.385	pCi/m ³
N11-0406-001	Los Angeles	HASL Ga-01-R	Ru-103	-0.0237 ± 0.0166	0.0358	pCi/m ³
N11-0406-001	Los Angeles	HASL Ga-01-R	Ru-106	0.0612 ± 0.106	0.372	pCi/m ³
N11-0406-001	Los Angeles	HASL Ga-01-R	Te-132	0.0562 ± 0.0585	0.232	pCi/m ³
N11-0406-001	Los Angeles	HASL Ga-01-R	Zr-95	-0.00105 ± 0.0299	0.0889	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. N11-0406

N11-0406-002

Los Angeles

HASL Ga-01-R

Iodine-131

-0.0298 ± 0.0574

0.151

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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PRELIMINARY Analysis Results Report for Task ID. N11-0407

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 11:44 Date/Time Received: 04/12/2011 10:13
Site Name: Livermore / Air Source Name: _____
R Number: R 91053 Sample Type: Air Filter

Air Filter Information

<u>Start Volume</u>	<u>Start Date/Time</u>	<u>End Volume (M)³</u>	<u>End Date/Time</u>	<u>Net Air Volume (M)³</u>
34381.2	04/04/2011 08:05	34768.3	04/06/2011 11:44	387.1

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N11-0407-001	Livermore	HASL Ga-01-R	Ba-140	-0.0538 ± 0.0414	0.0759	pCi/m3
N11-0407-001	Livermore	HASL Ga-01-R	Ce-141	0.00770 ± 0.00976	0.0292	pCi/m3
N11-0407-001	Livermore	HASL Ga-01-R	Ce-144	-0.0229 ± 0.0446	0.110	pCi/m3
N11-0407-001	Livermore	HASL Ga-01-R	Cs-134	0.0139 ± 0.00732	0.0309	pCi/m3
N11-0407-001	Livermore	HASL Ga-01-R	Cs-137	-0.0212 ± 0.0144	0.0294	pCi/m3
N11-0407-001	Livermore	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0407-001	Livermore	DOE RP 710	Gross Beta	±		pCi/m3
N11-0407-001	Livermore	HASL Ga-01-R	I-131	-0.00760 ± 0.0135	0.0368	pCi/m3
N11-0407-001	Livermore	HASL Ga-01-R	I-132	0.0145 ± 0.0262	0.0917	pCi/m3
N11-0407-001	Livermore	HASL Ga-01-R	Ru-103	-0.00649 ± 0.00988	0.0245	pCi/m3
N11-0407-001	Livermore	HASL Ga-01-R	Ru-106	-0.0172 ± 0.0697	0.177	pCi/m3
N11-0407-001	Livermore	HASL Ga-01-R	Te-132	-0.0202 ± 0.0246	0.0611	pCi/m3
N11-0407-001	Livermore	HASL Ga-01-R	Zr-95	-0.0327 ± 0.0271	0.0493	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. N11-0407

N11-0407-002

Livermore

HASL Ga-01-R

Iodine-131

0.0426 ± 0.0203

0.0813

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. N11-0408

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 16:30 Date/Time Received: 04/12/2011 10:23
Site Name: San Onofre / Air Source Name: _____
R Number: R 87394 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
9240.8	04/08/2011 14:15	9741.8	04/11/2011 16:30	501.0

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0408-001	San Onofre	HASL Ga-01-R	Ba-140	-0.0269 ± 0.0335	0.0793	pCi/m ³
N11-0408-001	San Onofre	HASL Ga-01-R	Ce-141	0.00396 ± 0.00996	0.0259	pCi/m ³
N11-0408-001	San Onofre	HASL Ga-01-R	Ce-144	0.0465 ± 0.0335	0.108	pCi/m ³
N11-0408-001	San Onofre	HASL Ga-01-R	Cs-134	-0.0278 ± 0.0151	0.0282	pCi/m ³
N11-0408-001	San Onofre	HASL Ga-01-R	Cs-137	-0.00183 ± 0.0103	0.0273	pCi/m ³
N11-0408-001	San Onofre	DOE RP 710	Gross Alpha	±		pCi/m ³
N11-0408-001	San Onofre	DOE RP 710	Gross Beta	±		pCi/m ³
N11-0408-001	San Onofre	HASL Ga-01-R	I-131	-0.00311 ± 0.00751	0.0225	pCi/m ³
N11-0408-001	San Onofre	HASL Ga-01-R	I-132	-0.00325 ± 0.0112	0.0314	pCi/m ³
N11-0408-001	San Onofre	HASL Ga-01-R	Ru-103	-0.00739 ± 0.00786	0.0189	pCi/m ³
N11-0408-001	San Onofre	HASL Ga-01-R	Ru-106	-0.108 ± 0.104	0.238	pCi/m ³
N11-0408-001	San Onofre	HASL Ga-01-R	Te-132	0.00820 ± 0.00625	0.0241	pCi/m ³
N11-0408-001	San Onofre	HASL Ga-01-R	Zr-95	0.0354 ± 0.0228	0.0470	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. N11-0408

N11-0408-002

San Onofre

HASL Ga-01-R

Iodine-131

0.00317 ± 0.0104

0.0327

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. N11-0410

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 08:49 Date/Time Received: 04/12/2011 13:11
Site Name: San Diego / Air Source Name: _____
R Number: R 90617 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
82324.6	04/08/2011 14:54	82782.1	04/11/2011 08:49	457.5

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0410-001	San Diego	HASL Ga-01-R	Ba-140	0.0369 ± 0.0126	0.0822	pCi/m ³
N11-0410-001	San Diego	HASL Ga-01-R	Ce-141	0.0129 ± 0.00878	0.0284	pCi/m ³
N11-0410-001	San Diego	HASL Ga-01-R	Ce-144	0.0217 ± 0.0273	0.107	pCi/m ³
N11-0410-001	San Diego	HASL Ga-01-R	Cs-134	-0.00526 ± 0.0113	0.0296	pCi/m ³
N11-0410-001	San Diego	HASL Ga-01-R	Cs-137	-0.0184 ± 0.0129	0.0241	pCi/m ³
N11-0410-001	San Diego	DOE RP 710	Gross Alpha	±		pCi/m ³
N11-0410-001	San Diego	DOE RP 710	Gross Beta	±		pCi/m ³
N11-0410-001	San Diego	HASL Ga-01-R	I-131	-0.0182 ± 0.0106	0.0249	pCi/m ³
N11-0410-001	San Diego	HASL Ga-01-R	I-132	-0.00320 ± 0.0118	0.0273	pCi/m ³
N11-0410-001	San Diego	HASL Ga-01-R	Ru-103	0.00266 ± 0.00473	0.0174	pCi/m ³
N11-0410-001	San Diego	HASL Ga-01-R	Ru-106	0.00462 ± 0.0689	0.217	pCi/m ³
N11-0410-001	San Diego	HASL Ga-01-R	Te-132	0.00268 ± 0.00549	0.0205	pCi/m ³
N11-0410-001	San Diego	HASL Ga-01-R	Zr-95	0.00506 ± 0.0131	0.0432	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. N11-0410

N11-0410-002

San Diego

HASL Ga-01-R

Iodine-131

0.0281 ± 0.00536

0.0377

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. N11-0411

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 13:32 Date/Time Received: 04/12/2011 13:20
Site Name: Humboldt Bay / Air Source Name: _____
R Number: R 90472 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
77935.8	04/09/2011 16:44	78258.8	04/11/2011 13:32	323.0

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0411-001	Humboldt Bay NPP	HASL Ga-01-R	Ba-140	-0.0286 ± 0.0425	0.107	pCi/m ³
N11-0411-001	Humboldt Bay NPP	HASL Ga-01-R	Ce-141	-0.0134 ± 0.0126	0.0283	pCi/m ³
N11-0411-001	Humboldt Bay NPP	HASL Ga-01-R	Ce-144	-0.00796 ± 0.0534	0.139	pCi/m ³
N11-0411-001	Humboldt Bay NPP	HASL Ga-01-R	Cs-134	0.0129 ± 0.0114	0.0407	pCi/m ³
N11-0411-001	Humboldt Bay NPP	HASL Ga-01-R	Cs-137	0.0106 ± 0.0127	0.0442	pCi/m ³
N11-0411-001	Humboldt Bay NPP	DOE RP 710	Gross Alpha	±		pCi/m ³
N11-0411-001	Humboldt Bay NPP	DOE RP 710	Gross Beta	±		pCi/m ³
N11-0411-001	Humboldt Bay NPP	HASL Ga-01-R	I-131	0.00178 ± 0.00985	0.0312	pCi/m ³
N11-0411-001	Humboldt Bay NPP	HASL Ga-01-R	I-132	0.00824 ± 0.0140	0.0461	pCi/m ³
N11-0411-001	Humboldt Bay NPP	HASL Ga-01-R	Ru-103	0.0163 ± 0.00943	0.0365	pCi/m ³
N11-0411-001	Humboldt Bay NPP	HASL Ga-01-R	Ru-106	0.0349 ± 0.0825	0.277	pCi/m ³
N11-0411-001	Humboldt Bay NPP	HASL Ga-01-R	Te-132	-0.00147 ± 0.0102	0.0305	pCi/m ³
N11-0411-001	Humboldt Bay NPP	HASL Ga-01-R	Zr-95	0.00306 ± 0.0224	0.0618	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. N11-0411

N11-0411-002

Humboldt Bay NPP

HASL Ga-01-R

Iodine-131

0.0213 ± 0.0115

0.0490

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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California Department of Public Health

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850 Marina Bay Parkway, Richmond, CA 94804



EDMUND G. BROWN JR.
Governor

PRELIMINARY Analysis Results Report for Task ID. N11-0412

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 16:44 Date/Time Received: 04/12/2011 13:27
Site Name: Humboldt Bay / Air Source Name: _____
R Number: R 90471 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
77556.7	04/07/2011 12:05	77935.8	04/09/2011 16:44	379.1

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0412-001	Humboldt Bay NPP	HASL Ga-01-R	Ba-140	0.0295 ± 0.0350	0.114	pCi/m ³
N11-0412-001	Humboldt Bay NPP	HASL Ga-01-R	Ce-141	0.0123 ± 0.0116	0.0375	pCi/m ³
N11-0412-001	Humboldt Bay NPP	HASL Ga-01-R	Ce-144	-0.0499 ± 0.0549	0.140	pCi/m ³
N11-0412-001	Humboldt Bay NPP	HASL Ga-01-R	Cs-134	-0.00582 ± 0.0107	0.0315	pCi/m ³
N11-0412-001	Humboldt Bay NPP	HASL Ga-01-R	Cs-137	-0.00671 ± 0.0129	0.0369	pCi/m ³
N11-0412-001	Humboldt Bay NPP	DOE RP 710	Gross Alpha	±		pCi/m ³
N11-0412-001	Humboldt Bay NPP	DOE RP 710	Gross Beta	±		pCi/m ³
N11-0412-001	Humboldt Bay NPP	HASL Ga-01-R	I-131	-0.00819 ± 0.0139	0.0353	pCi/m ³
N11-0412-001	Humboldt Bay NPP	HASL Ga-01-R	I-132	0.00284 ± 0.0205	0.0596	pCi/m ³
N11-0412-001	Humboldt Bay NPP	HASL Ga-01-R	Ru-103	-0.0364 ± 0.0175	0.0295	pCi/m ³
N11-0412-001	Humboldt Bay NPP	HASL Ga-01-R	Ru-106	0.0660 ± 0.0698	0.269	pCi/m ³
N11-0412-001	Humboldt Bay NPP	HASL Ga-01-R	Te-132	0.0261 ± 0.0117	0.0429	pCi/m ³
N11-0412-001	Humboldt Bay NPP	HASL Ga-01-R	Zr-95	-0.0440 ± 0.0249	0.0550	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. N11-0412

N11-0412-002

Humboldt Bay NPP

HASL Ga-01-R

Iodine-131

0.0158 ± 0.0155

0.0545

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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California Department of Public Health

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EDMUND G. BROWN JR.
Governor

PRELIMINARY Analysis Results Report for Task ID. N11-0413

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 10:05 Date/Time Received: 04/12/2011 13:32
Site Name: Avila Beach / Air Source Name: _____
R Number: R 85047 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
28544.3	04/09/2011 11:03	28888.5	04/11/2011 10:05	344.2

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0413-001	Diablo Canyon NPP	HASL Ga-01-R	Ba-140	-0.0395 ± 0.0437	0.0992	pCi/m ³
N11-0413-001	Diablo Canyon NPP	HASL Ga-01-R	Ce-141	0.00790 ± 0.00962	0.0317	pCi/m ³
N11-0413-001	Diablo Canyon NPP	HASL Ga-01-R	Ce-144	-0.00512 ± 0.0448	0.132	pCi/m ³
N11-0413-001	Diablo Canyon NPP	HASL Ga-01-R	Cs-134	0.00678 ± 0.0109	0.0333	pCi/m ³
N11-0413-001	Diablo Canyon NPP	HASL Ga-01-R	Cs-137	-0.00784 ± 0.0154	0.0331	pCi/m ³
N11-0413-001	Diablo Canyon NPP	DOE RP 710	Gross Alpha	±		pCi/m ³
N11-0413-001	Diablo Canyon NPP	DOE RP 710	Gross Beta	±		pCi/m ³
N11-0413-001	Diablo Canyon NPP	HASL Ga-01-R	I-131	0.00180 ± 0.00931	0.0283	pCi/m ³
N11-0413-001	Diablo Canyon NPP	HASL Ga-01-R	I-132	0.0233 ± 0.00976	0.0429	pCi/m ³
N11-0413-001	Diablo Canyon NPP	HASL Ga-01-R	Ru-103	-0.00353 ± 0.0109	0.0286	pCi/m ³
N11-0413-001	Diablo Canyon NPP	HASL Ga-01-R	Ru-106	0.0350 ± 0.120	0.346	pCi/m ³
N11-0413-001	Diablo Canyon NPP	HASL Ga-01-R	Te-132	-0.000818 ± 0.00961	0.0264	pCi/m ³
N11-0413-001	Diablo Canyon NPP	HASL Ga-01-R	Zr-95	0.0163 ± 0.0258	0.0512	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. N11-0413

N11-0413-002

Diablo Canyon NPP

HASL Ga-01-R

Iodine-131

0.00984 ± 0.0160

0.0526

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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California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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EDMUND G. BROWN JR.
Governor

PRELIMINARY Analysis Results Report for Task ID. N11-0414

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 12:13 Date/Time Received: 04/12/2011 13:37
Site Name: San Luis Obispo / Air Source Name: _____
R Number: R 85048 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ³	End Date/Time	Net Air Volume (M) ³
67517.5	04/09/2011 08:48	67893.9	04/11/2011 12:13	376.4

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA ₉₅	Units
N11-0414-001	San Luis Obispo	HASL Ga-01-R	Ba-140	-0.0284 ± 0.0418	0.103	pCi/m ³
N11-0414-001	San Luis Obispo	HASL Ga-01-R	Ce-141	-0.0124 ± 0.0135	0.0280	pCi/m ³
N11-0414-001	San Luis Obispo	HASL Ga-01-R	Ce-144	0.0419 ± 0.0419	0.130	pCi/m ³
N11-0414-001	San Luis Obispo	HASL Ga-01-R	Cs-134	-0.0357 ± 0.0168	0.0279	pCi/m ³
N11-0414-001	San Luis Obispo	HASL Ga-01-R	Cs-137	0.0297 ± 0.00934	0.0498	pCi/m ³
N11-0414-001	San Luis Obispo	DOE RP 710	Gross Alpha	±		pCi/m ³
N11-0414-001	San Luis Obispo	DOE RP 710	Gross Beta	±		pCi/m ³
N11-0414-001	San Luis Obispo	HASL Ga-01-R	I-131	0.00894 ± 0.00759	0.0300	pCi/m ³
N11-0414-001	San Luis Obispo	HASL Ga-01-R	I-132	-0.0221 ± 0.0239	0.0388	pCi/m ³
N11-0414-001	San Luis Obispo	HASL Ga-01-R	Ru-103	-0.0159 ± 0.0130	0.0304	pCi/m ³
N11-0414-001	San Luis Obispo	HASL Ga-01-R	Ru-106	-0.215 ± 0.138	0.252	pCi/m ³
N11-0414-001	San Luis Obispo	HASL Ga-01-R	Te-132	-0.00532 ± 0.00811	0.0247	pCi/m ³
N11-0414-001	San Luis Obispo	HASL Ga-01-R	Zr-95	-0.0144 ± 0.0242	0.0495	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. N11-0414

N11-0414-002

San Luis Obispo

HASL Ga-01-R

Iodine-131

0.0220 ± 0.0127

0.0493

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. N11-0448

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: 04/18/2011 07:45

Date/Time Received: 04/19/2011 09:20

Site Name: Cal Poly Dairy Farm

Source Name: Sample Type: Milk

R Number: R91099

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA₉₅</u>	<u>Units</u>
N11-0448-001	Cal Poly Dairy Farm	HASL Ga-01-R	I-131	0.860 ± 0.892	2.53	pCi/L
N11-0448-001	Cal Poly Dairy Farm	HASL Ga-01-R	K-40	1400 ± 32.6	36.2	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. 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.