Howard Backer, M.D., M.P.H.
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
Phone: (510) 620-2911 Fax: (510) 620-2940

EDMUND G. BROWN, JR.
Governor

PRELIMINARY Analysis Results Report for Task ID. N11-0279

Analyst: **Analysis Approved By:** **Analysis Approval Date:**

Requestor

Nam[redacted] **Organization:** Radiologic Health Branch

[redacted]

City: Sacramento **State:** CA **Zip Code:** 95814-5006 **Phone:**

Site and Sample Information

Collector's Name: **Date/Time Collected:** 03/16/2011 10:25 **Date/Time Received:** 03/17/2011 09:25

Site Name: Eureka / Air **Source Name:**

R Number: R 93992 **Sample Type:** Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ^{3}	End Date/Time	Net Air Volume (M) ^{3}
15122.0	03/15/2011 13:55	15277.4	03/16/2011 10:25	155.4

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA_{95}	Units
N11-0279-001	Eureka	HASL Ga-01-R	Ba-140	-0.136 ± 0.113	0.252	pCi/m3
N11-0279-001	Eureka	HASL Ga-01-R	Ce-141	-0.0655 ± 0.0311	0.0599	pCi/m3
N11-0279-001	Eureka	HASL Ga-01-R	Ce-144	0.00213 ± 0.115	0.298	pCi/m3
N11-0279-001	Eureka	HASL Ga-01-R	Cs-134	0.00966 ± 0.0201	0.0664	pCi/m3
N11-0279-001	Eureka	HASL Ga-01-R	Cs-137	0.00436 ± 0.0249	0.0778	pCi/m3
N11-0279-001	Eureka	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0279-001	Eureka	DOE RP 710	Gross Beta	±		pCi/m3
N11-0279-001	Eureka	HASL Ga-01-R	Ru-103	0.00582 ± 0.0223	0.0690	pCi/m3
N11-0279-001	Eureka	HASL Ga-01-R	Ru-106	-0.0519 ± 0.228	0.575	pCi/m3
N11-0279-001	Eureka	HASL Ga-01-R	Zr-95	0.0393 ± 0.0466	0.124	pCi/m3
N11-0279-002	Eureka	HASL Ga-01-R	Iodine-131	-0.00947 ± 0.0358	0.0917	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. N11-0286

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: 03/16/2011 15:28 Date/Time Received: 03/18/2011 11:27

Site Name: ~~Humboldt Bay / Air~~ Source Name:

R Number: Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) [3]	End Date/Time	Net Air Volume (M) [3]
72811.6	03/11/2011 13:43	73715.1	03/16/2011 15:28	903.5

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA95	Units
N11-0286-001	Humboldt Bay NPP	HASL Ga-01-R	Ba-140	-0.0149 ± 0.0223	0.0533	pCi/m3
N11-0286-001	Humboldt Bay NPP	HASL Ga-01-R	Ce-141	0.00198 ± 0.00465	0.0150	pCi/m3
N11-0286-001	Humboldt Bay NPP	HASL Ga-01-R	Ce-144	0.0109 ± 0.0203	0.0696	pCi/m3
N11-0286-001	Humboldt Bay NPP	HASL Ga-01-R	Cs-134	-0.00251 ± 0.00625	0.0156	pCi/m3
N11-0286-001	Humboldt Bay NPP	HASL Ga-01-R	Cs-137	0.00916 ± 0.00229	0.0166	pCi/m3
N11-0286-001	Humboldt Bay NPP	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0286-001	Humboldt Bay NPP	DOE RP 710	Gross Beta	±		pCi/m3
N11-0286-001	Humboldt Bay NPP	HASL Ga-01-R	Ru-103	-0.00103 ± 0.00400	0.0112	pCi/m3
N11-0286-001	Humboldt Bay NPP	HASL Ga-01-R	Ru-106	0.0521 ± 0.0159	0.116	pCi/m3
N11-0286-001	Humboldt Bay NPP	HASL Ga-01-R	Zr-95	-0.00304 ± 0.00973	0.0259	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.
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PRELIMINARY Analysis Results Report for Task ID. N11-0267

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 Nam **Date/Time Collected:** 03/16/2011 09:38 **Date/Time Received:** 03/16/2011 10:00

Site Name: Richmond / Air **Source Name:**

R Number: R 91566 **Sample Type:** Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) [3]	End Date/Time	Net Air Volume (M) [3]
3330.3	03/15/2011 09:00	3505.3	03/16/2011 09:38	175.0

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA95	Units
N11-0267-001	Richmond	HASL Ga-01-R	Ba-140	-0.0152 ± 0.0687	0.195	pCi/m3
N11-0267-001	Richmond	HASL Ga-01-R	Ce-141	-0.00107 ± 0.0232	0.0611	pCi/m3
N11-0267-001	Richmond	HASL Ga-01-R	Ce-144	0.0550 ± 0.0905	0.261	pCi/m3
N11-0267-001	Richmond	HASL Ga-01-R	Cs-134	-0.0616 ± 0.0303	0.0545	pCi/m3
N11-0267-001	Richmond	HASL Ga-01-R	Cs-137	0.0548 ± 0.0115	0.0815	pCi/m3
N11-0267-001	Richmond	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0267-001	Richmond	DOE RP 710	Gross Beta	±		pCi/m3
N11-0267-001	Richmond	HASL Ga-01-R	Ru-103	-0.000287 ± 0.0176	0.0514	pCi/m3
N11-0267-001	Richmond	HASL Ga-01-R	Ru-106	0.246 ± 0.118	0.576	pCi/m3
N11-0267-001	Richmond	HASL Ga-01-R	Zr-95	0.0136 ± 0.0551	0.105	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. N11-0288

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: I **Date/Time Collected:** 03/16/2011 11:44 **Date/Time Received:** 03/18/2011 12:13

Site Name: Livermore / Air **Source Name:**

R Number: R 91044 **Sample Type:** Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ^{3}	End Date/Time	Net Air Volume (M) ^{3}
29871.7	03/10/2011 15:07	30891.3	03/16/2011 11:44	1019.6

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA95	Units
N11-0288-001	Livermore	HASL Ga-01-R	Ba-140	0.00936 ± 0.0124	0.0448	pCi/m3
N11-0288-001	Livermore	HASL Ga-01-R	Ce-141	-0.00115 ± 0.00454	0.0137	pCi/m3
N11-0288-001	Livermore	HASL Ga-01-R	Ce-144	-0.00256 ± 0.0191	0.0603	pCi/m3
N11-0288-001	Livermore	HASL Ga-01-R	Cs-134	-0.00545 ± 0.00541	0.0112	pCi/m3
N11-0288-001	Livermore	HASL Ga-01-R	Cs-137	0.00139 ± 0.00402	0.0129	pCi/m3
N11-0288-001	Livermore	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0288-001	Livermore	DOE RP 710	Gross Beta	±		pCi/m3
N11-0288-001	Livermore	HASL Ga-01-R	Ru-103	0.000367 ± 0.00382	0.0114	pCi/m3
N11-0288-001	Livermore	HASL Ga-01-R	Ru-106	-0.0903 ± 0.0535	0.0845	pCi/m3
N11-0288-001	Livermore	HASL Ga-01-R	Zr-95	0.00903 ± 0.00837	0.0252	pCi/m3
N11-0288-002	Livermore	HASL Ga-01-R	Iodine-131	-0.00434 ± 0.00512	0.0136	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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PRELIMINARY Analysis Results Report for Task ID. N11-0285

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: 03/16/2011 16:05 Date/Time Received: 03/18/2011 11:27

Site Name: Diablo Canyon / Air Source Name:

R Number: R 90426 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ^{3}	End Date/Time	Net Air Volume (M) ^{3}
23521.1	03/11/2011 15:35	24379.7	03/16/2011 16:05	858.6

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA95	Units
N11-0285-001	Diablo Canyon NPP	HASL Ga-01-R	Ba-140	-0.0000566 ± 0.0193	0.0574	pCi/m3
N11-0285-001	Diablo Canyon NPP	HASL Ga-01-R	Ce-141	0.00604 ± 0.00545	0.0197	pCi/m3
N11-0285-001	Diablo Canyon NPP	HASL Ga-01-R	Ce-144	-0.0114 ± 0.0235	0.0707	pCi/m3
N11-0285-001	Diablo Canyon NPP	HASL Ga-01-R	Cs-134	0.000934 ± 0.00504	0.0146	pCi/m3
N11-0285-001	Diablo Canyon NPP	HASL Ga-01-R	Cs-137	-0.000736 ± 0.00503	0.0135	pCi/m3
N11-0285-001	Diablo Canyon NPP	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0285-001	Diablo Canyon NPP	DOE RP 710	Gross Beta	±		pCi/m3
N11-0285-001	Diablo Canyon NPP	HASL Ga-01-R	Ru-103	0.00432 ± 0.00285	0.0127	pCi/m3
N11-0285-001	Diablo Canyon NPP	HASL Ga-01-R	Ru-106	-0.0753 ± 0.0710	0.122	pCi/m3
N11-0285-001	Diablo Canyon NPP	HASL Ga-01-R	Zr-95	-0.0154 ± 0.0142	0.0200	pCi/m3
N11-0285-002	Diablo Canyon NPP	HASL Ga-01-R	Iodine-131	-0.00145 ± 0.00511	0.0155	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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Interim Director

EDMUND G. BROWN, JR.
Governor

PRELIMINARY Analysis Results Report for Task ID. N11-0284

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: 03/16/2011 15:40 Date/Time Received: 03/18/2011 11:27

Site Name: San Luis Obispo / Air Source Name

R Number: R 90425 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ^{3}	End Date/Time	Net Air Volume (M) ^{3}
62361.4	03/11/2011 09:10	63303.4	03/16/2011 15:40	942.0

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA95	Units
N11-0284-001	San Luis Obispo	HASL Ga-01-R	Ba-140	-0.00899 ± 0.0172	0.0374	pCi/m3
N11-0284-001	San Luis Obispo	HASL Ga-01-R	Ce-141	0.00501 ± 0.00516	0.0180	pCi/m3
N11-0284-001	San Luis Obispo	HASL Ga-01-R	Ce-144	-0.00887 ± 0.0211	0.0628	pCi/m3
N11-0284-001	San Luis Obispo	HASL Ga-01-R	Cs-134	0.00144 ± 0.00425	0.0140	pCi/m3
N11-0284-001	San Luis Obispo	HASL Ga-01-R	Cs-137	-0.00612 ± 0.00632	0.0145	pCi/m3
N11-0284-001	San Luis Obispo	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0284-001	San Luis Obispo	DOE RP 710	Gross Beta	±		pCi/m3
N11-0284-001	San Luis Obispo	HASL Ga-01-R	Ru-103	0.00114 ± 0.00393	0.0126	pCi/m3
N11-0284-001	San Luis Obispo	HASL Ga-01-R	Ru-106	-0.0864 ± 0.0663	0.116	pCi/m3
N11-0284-001	San Luis Obispo	HASL Ga-01-R	Zr-95	0.00455 ± 0.00818	0.0217	pCi/m3
N11-0284-002	San Luis Obispo	HASL Ga-01-R	Iodine-131	0.00113 ± 0.00462	0.0134	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.

Howard Backer, M.D., M.P.H.
Interim Director

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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. N11-0277

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:** 03/16/2011 10:00 **Date/Time Received:** 03/17/2011 09:25

Site Name: Los Angeles / Air **Source Name**

R Number: R 93614 **Sample Type:** Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ^{3}	End Date/Time	Net Air Volume (M) ^{3}
84870.8	03/15/2011 09:00	85042.3	03/16/2011 10:00	171.5

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA95	Units
N11-0277-001	Los Angeles	HASL Ga-01-R	Ba-140	-0.0432 ± 0.0898	0.234	pCi/m3
N11-0277-001	Los Angeles	HASL Ga-01-R	Ce-141	0.0294 ± 0.0230	0.0699	pCi/m3
N11-0277-001	Los Angeles	HASL Ga-01-R	Ce-144	-0.00981 ± 0.119	0.297	pCi/m3
N11-0277-001	Los Angeles	HASL Ga-01-R	Cs-134	-0.000141 ± 0.0231	0.0717	pCi/m3
N11-0277-001	Los Angeles	HASL Ga-01-R	Cs-137	-0.0240 ± 0.0315	0.0739	pCi/m3
N11-0277-001	Los Angeles	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0277-001	Los Angeles	DOE RP 710	Gross Beta	±		pCi/m3
N11-0277-001	Los Angeles	HASL Ga-01-R	Ru-103	-0.00946 ± 0.0227	0.0648	pCi/m3
N11-0277-001	Los Angeles	HASL Ga-01-R	Ru-106	0.146 ± 0.194	0.695	pCi/m3
N11-0277-001	Los Angeles	HASL Ga-01-R	Zr-95	0.0253 ± 0.0479	0.108	pCi/m3
N11-0277-002	Los Angeles	HASL Ga-01-R	Iodine-131	0.00407 ± 0.0243	0.0713	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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California Department of Public Health

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Interim Director

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EDMUND G. BROWN, JR.
Governor

PRELIMINARY Analysis Results Report for Task ID. N11-0287

Analyst: **Analysis Approved By:** **Analysis Approval Date:**

Requestor

Name: **Organization:** Radiologic Health Branch

Addres

City: Sacramento **State:** CA **Zip Code:** 95814-5006 **Phon**

Site and Sample Information

Collector's Name **Date/Time Collected:** 03/16/2011 15:31 **Date/Time Received:** 03/18/2011 11:27

Site Name: San Diego / Air **Source Nam**

R Number: R 90607 **Sample Type:** Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ^{3}	End Date/Time	Net Air Volume (M) ^{3}
77725.2	03/11/2011 14:33	78540.7	03/16/2011 15:31	815.5

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA95	Units
N11-0287-001	San Diego	HASL Ga-01-R	Ba-140	0.0204 ± 0.00722	0.0479	pCi/m3
N11-0287-001	San Diego	HASL Ga-01-R	Ce-141	0.00248 ± 0.00583	0.0197	pCi/m3
N11-0287-001	San Diego	HASL Ga-01-R	Ce-144	-0.0200 ± 0.0257	0.0735	pCi/m3
N11-0287-001	San Diego	HASL Ga-01-R	Cs-134	-0.0263 ± 0.0118	0.0165	pCi/m3
N11-0287-001	San Diego	HASL Ga-01-R	Cs-137	0.0106 ± 0.00407	0.0208	pCi/m3
N11-0287-001	San Diego	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0287-001	San Diego	DOE RP 710	Gross Beta	±		pCi/m3
N11-0287-001	San Diego	HASL Ga-01-R	Ru-103	-0.0107 ± 0.00637	0.0120	pCi/m3
N11-0287-001	San Diego	HASL Ga-01-R	Ru-106	-0.0315 ± 0.0542	0.139	pCi/m3
N11-0287-001	San Diego	HASL Ga-01-R	Zr-95	0.00270 ± 0.0115	0.0296	pCi/m3
N11-0287-002	San Diego	HASL Ga-01-R	Iodine-131	0.00374 ± 0.00445	0.0147	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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Governor

PRELIMINARY Analysis Results Report for Task ID. N11-0290

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: 03/18/2011 10:00 Date/Time Received: 03/21/2011 09:29

Site Name: Eureka / Air Source Name: |

R Number: R 93993 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) [3]	End Date/Time	Net Air Volume (M) [3]
15277.4	03/16/2011 10:25	15641.2	03/18/2011 10:00	363.8

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA95	Units
N11-0290-001	Eureka	HASL Ga-01-R	Ba-140	0.0145 ± 0.0451	0.142	pCi/m3
N11-0290-001	Eureka	HASL Ga-01-R	Ce-141	0.0146 ± 0.00833	0.0306	pCi/m3
N11-0290-001	Eureka	HASL Ga-01-R	Ce-144	-0.0573 ± 0.0617	0.131	pCi/m3
N11-0290-001	Eureka	HASL Ga-01-R	Cs-134	-0.0259 ± 0.0162	0.0320	pCi/m3
N11-0290-001	Eureka	HASL Ga-01-R	Cs-137	-0.0140 ± 0.0180	0.0446	pCi/m3
N11-0290-001	Eureka	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0290-001	Eureka	DOE RP 710	Gross Beta	±		pCi/m3
N11-0290-001	Eureka	HASL Ga-01-R	Ru-103	0.00587 ± 0.00977	0.0317	pCi/m3
N11-0290-001	Eureka	HASL Ga-01-R	Ru-106	-0.152 ± 0.142	0.297	pCi/m3
N11-0290-001	Eureka	HASL Ga-01-R	Zr-95	0.0404 ± 0.0112	0.0489	pCi/m3
N11-0290-002	Eureka	HASL Ga-01-R	Iodine-131	0.789 ± 0.0412	0.0669	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. N11-0293

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:** 03/18/2011 13:18 **Date/Time Received:** 03/21/2011 10:49

Site Name: Humboldt Bay / Air **Source Name**

R Number: R 90460 **Sample Type:** Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) [3]	End Date/Time	Net Air Volume (M) [3]
73715.1	03/16/2011 15:28	74061.3	03/18/2011 13:18	346.2

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA95	Units
N11-0293-001	Humboldt Bay NPP	HASL Ga-01-R	Ba-140	-0.0772 ± 0.0674	0.149	pCi/m3
N11-0293-001	Humboldt Bay NPP	HASL Ga-01-R	Ce-141	0.0388 ± 0.00758	0.0411	pCi/m3
N11-0293-001	Humboldt Bay NPP	HASL Ga-01-R	Ce-144	0.0549 ± 0.0570	0.168	pCi/m3
N11-0293-001	Humboldt Bay NPP	HASL Ga-01-R	Cs-134	-0.0230 ± 0.0183	0.0400	pCi/m3
N11-0293-001	Humboldt Bay NPP	HASL Ga-01-R	Cs-137	-0.0166 ± 0.0200	0.0501	pCi/m3
N11-0293-001	Humboldt Bay NPP	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0293-001	Humboldt Bay NPP	DOE RP 710	Gross Beta	±		pCi/m3
N11-0293-001	Humboldt Bay NPP	HASL Ga-01-R	I-131	0.101 ± 0.0163	0.0592	pCi/m3
N11-0293-001	Humboldt Bay NPP	HASL Ga-01-R	Ru-103	-0.00419 ± 0.0125	0.0366	pCi/m3
N11-0293-001	Humboldt Bay NPP	HASL Ga-01-R	Ru-106	0.0785 ± 0.0719	0.300	pCi/m3
N11-0293-001	Humboldt Bay NPP	HASL Ga-01-R	Zr-95	0.0408 ± 0.0269	0.0581	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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Interim Director

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EDMUND G. BROWN, JR.
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PRELIMINARY Analysis Results Report for Task ID. N11-0280

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:** 03/18/2011 09:00 **Date/Time Received:** 03/18/2011 09:56

Site Name: Richmond / Air **Source Name:**

R Number: R 91568 **Sample Type:** Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) [3]	End Date/Time	Net Air Volume (M) [3]
3505.3	03/16/2011 09:00	3839.8	03/18/2011 09:00	334.5

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA95	Units
N11-0280-001	Richmond	HASL Ga-01-R	Ba-140	-0.0188 ± 0.0405	0.106	pCi/m3
N11-0280-001	Richmond	HASL Ga-01-R	Ce-141	0.00693 ± 0.0130	0.0361	pCi/m3
N11-0280-001	Richmond	HASL Ga-01-R	Ce-144	-0.0483 ± 0.0628	0.150	pCi/m3
N11-0280-001	Richmond	HASL Ga-01-R	Cs-134	0.0316 ± 0.00840	0.0425	pCi/m3
N11-0280-001	Richmond	HASL Ga-01-R	Cs-137	0.0241 ± 0.0112	0.0475	pCi/m3
N11-0280-001	Richmond	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0280-001	Richmond	DOE RP 710	Gross Beta	±		pCi/m3
N11-0280-001	Richmond	HASL Ga-01-R	I-131	0.190 ± 0.0135	0.0284	pCi/m3
N11-0280-001	Richmond	HASL Ga-01-R	Ru-103	0.0185 ± 0.00655	0.0315	pCi/m3
N11-0280-001	Richmond	HASL Ga-01-R	Ru-106	-0.0990 ± 0.115	0.276	pCi/m3
N11-0280-001	Richmond	HASL Ga-01-R	Zr-95	-0.0400 ± 0.0392	0.0570	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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California Department of Public Health

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EDMUND G. BROWN, JR.
Governor

PRELIMINARY Analysis Results Report for Task ID. N11-0296

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: 03/18/2011 14:44 Date/Time Received: 03/21/2011 11:39

Site Name: Livermore / Air Source Name:

R Number: R 91045 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) ^{3}	End Date/Time	Net Air Volume (M) ^{3}
30891.3	03/16/2011 11:45	31286.1	03/18/2011 14:44	394.8

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA95	Units
N11-0296-001	Livermore	HASL Ga-01-R	Ba-140	-0.0687 ± 0.0562	0.119	pCi/m3
N11-0296-001	Livermore	HASL Ga-01-R	Ce-141	-0.0136 ± 0.0134	0.0312	pCi/m3
N11-0296-001	Livermore	HASL Ga-01-R	Ce-144	-0.101 ± 0.0603	0.125	pCi/m3
N11-0296-001	Livermore	HASL Ga-01-R	Cs-134	0.0181 ± 0.00909	0.0357	pCi/m3
N11-0296-001	Livermore	HASL Ga-01-R	Cs-137	0.0272 ± 0.00940	0.0456	pCi/m3
N11-0296-001	Livermore	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0296-001	Livermore	DOE RP 710	Gross Beta	±		pCi/m3
N11-0296-001	Livermore	HASL Ga-01-R	I-131	0.220 ± 0.0151	0.0315	pCi/m3
N11-0296-001	Livermore	HASL Ga-01-R	Ru-103	0.0141 ± 0.00891	0.0330	pCi/m3
N11-0296-001	Livermore	HASL Ga-01-R	Ru-106	0.0247 ± 0.0914	0.250	pCi/m3
N11-0296-001	Livermore	HASL Ga-01-R	Zr-95	0.0109 ± 0.0255	0.0641	pCi/m3
N11-0296-002	Livermore	HASL Ga-01-R	Iodine-131	0.292 ± 0.0242	0.0592	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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PRELIMINARY Analysis Results Report for Task ID. N11-0292

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:** 03/18/2011 08:50 **Date/Time Received:** 03/21/2011 09:42

Site Name: Diablo Canyon / Air **Source Name**

R Number: R 90427 **Sample Type:** Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M.)[3]	End Date/Time	Net Air Volume (M.)[3]
24379.7	03/16/2011 16:10	24679.2	03/18/2011 08:50	299.5

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA95	Units
N11-0292-001	Diablo Canyon NPP	HASL Ga-01-R	Ba-140	0.125 ± 0.0393	0.180	pCi/m3
N11-0292-001	Diablo Canyon NPP	HASL Ga-01-R	Ce-141	0.00552 ± 0.0136	0.0377	pCi/m3
N11-0292-001	Diablo Canyon NPP	HASL Ga-01-R	Ce-144	-0.145 ± 0.0760	0.155	pCi/m3
N11-0292-001	Diablo Canyon NPP	HASL Ga-01-R	Cs-134	0.0306 ± 0.00857	0.0446	pCi/m3
N11-0292-001	Diablo Canyon NPP	HASL Ga-01-R	Cs-137	-0.000159 ± 0.0203	0.0579	pCi/m3
N11-0292-001	Diablo Canyon NPP	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0292-001	Diablo Canyon NPP	DOE RP 710	Gross Beta	±		pCi/m3
N11-0292-001	Diablo Canyon NPP	HASL Ga-01-R	I-131	0.156 ± 0.0156	0.0423	pCi/m3
N11-0292-001	Diablo Canyon NPP	HASL Ga-01-R	Ru-103	0.0212 ± 0.00732	0.0365	pCi/m3
N11-0292-001	Diablo Canyon NPP	HASL Ga-01-R	Ru-106	-0.00403 ± 0.112	0.320	pCi/m3
N11-0292-001	Diablo Canyon NPP	HASL Ga-01-R	Zr-95	-0.0112 ± 0.0283	0.0632	pCi/m3
N11-0292-002	Diablo Canyon NPP	HASL Ga-01-R	Iodine-131	0.482 ± 0.0355	0.0796	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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Interim Director

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EDMUND G. BROWN, JR.
Governor

PRELIMINARY Analysis Results Report for Task ID. N11-0291

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:** 03/18/2011 09:19 **Date/Time Received:** 03/21/2011 09:35

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

R Number: R 90428 **Sample Type:** Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) [3]	End Date/Time	Net Air Volume (M) [3]
63303.4	03/16/2011 15:45	63611.5	03/18/2011 09:19	308.1

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA95	Units
N11-0291-001	San Luis Obispo	HASL Ga-01-R	Ba-140	-0.0215 ± 0.0593	0.149	pCi/m3
N11-0291-001	San Luis Obispo	HASL Ga-01-R	Ce-141	0.00408 ± 0.0172	0.0494	pCi/m3
N11-0291-001	San Luis Obispo	HASL Ga-01-R	Ce-144	0.114 ± 0.0654	0.219	pCi/m3
N11-0291-001	San Luis Obispo	HASL Ga-01-R	Cs-134	0.000936 ± 0.0125	0.0403	pCi/m3
N11-0291-001	San Luis Obispo	HASL Ga-01-R	Cs-137	-0.0387 ± 0.0233	0.0506	pCi/m3
N11-0291-001	San Luis Obispo	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0291-001	San Luis Obispo	DOE RP 710	Gross Beta	±		pCi/m3
N11-0291-001	San Luis Obispo	HASL Ga-01-R	I-131	0.114 ± 0.0136	0.0409	pCi/m3
N11-0291-001	San Luis Obispo	HASL Ga-01-R	Ru-103	-0.0252 ± 0.0170	0.0320	pCi/m3
N11-0291-001	San Luis Obispo	HASL Ga-01-R	Ru-106	-0.290 ± 0.142	0.311	pCi/m3
N11-0291-001	San Luis Obispo	HASL Ga-01-R	Zr-95	0.0496 ± 0.0233	0.0693	pCi/m3
N11-0291-002	San Luis Obispo	HASL Ga-01-R	Iodine-131	0.328 ± 0.0293	0.0741	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.

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

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EDMUND G. BROWN, JR.
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PRELIMINARY Analysis Results Report for Task ID. N11-0305

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:** 03/18/2011 09:00 **Date/Time Received:** 03/23/2011 10:24

Site Name: Los Angeles / Air **Source Name:**

R Number: R 93615 **Sample Type:** Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) [3]	End Date/Time	Net Air Volume (M) [3]
85042.3	03/16/2011 09:00	85366.1	03/18/2011 09:00	323.8

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDAs	Units
N11-0305-001	Los Angeles	HASL Ga-01-R	Ba-140	-0.0481 ± 0.0542	0.125	pCi/m3
N11-0305-001	Los Angeles	HASL Ga-01-R	Ce-141	0.00453 ± 0.0112	0.0320	pCi/m3
N11-0305-001	Los Angeles	HASL Ga-01-R	Ce-144	0.0871 ± 0.0402	0.142	pCi/m3
N11-0305-001	Los Angeles	HASL Ga-01-R	Cs-134	0.00723 ± 0.0123	0.0401	pCi/m3
N11-0305-001	Los Angeles	HASL Ga-01-R	Cs-137	0.0228 ± 0.00932	0.0441	pCi/m3
N11-0305-001	Los Angeles	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0305-001	Los Angeles	DOE RP 710	Gross Beta	±		pCi/m3
N11-0305-001	Los Angeles	HASL Ga-01-R	I-132	0.00754 ± 0.0354	0.101	pCi/m3
N11-0305-001	Los Angeles	HASL Ga-01-R	Ru-103	0.0187 ± 0.00593	0.0330	pCi/m3
N11-0305-001	Los Angeles	HASL Ga-01-R	Ru-106	-0.00140 ± 0.102	0.297	pCi/m3
N11-0305-001	Los Angeles	HASL Ga-01-R	Te-132	-0.00877 ± 0.0233	0.0676	pCi/m3
N11-0305-001	Los Angeles	HASL Ga-01-R	Zr-95	-0.0358 ± 0.0354	0.0597	pCi/m3
N11-0305-002	Los Angeles	HASL Ga-01-R	Iodine-131	0.220 ± 0.0225	0.0533	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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Howard Backer, M.D., M.P.H.
Interim Director

EDMUND G. BROWN, JR.
Governor

PRELIMINARY Analysis Results Report for Task ID. N11-0294

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: 03/18/2011 15:04 Date/Time Received: 03/21/2011 10:55

Site Name: San Diego / Air Source Name:

R Number: R 90608 Sample Type: Air Filter

Air Filter Information

Start Volume	Start Date/Time	End Volume (M) [3]	End Date/Time	Net Air Volume (M) [3]
78540.7	03/16/2011 15:35	78868.9	03/18/2011 15:04	328.2

Sample ID	Sampling Point	Method	Parameter	Result ± CE	MDA95	Units
N11-0294-001	San Diego	HASL Ga-01-R	Ba-140	-0.0164 ± 0.0529	0.132	pCi/m3
N11-0294-001	San Diego	HASL Ga-01-R	Ce-141	-0.0113 ± 0.0135	0.0314	pCi/m3
N11-0294-001	San Diego	HASL Ga-01-R	Ce-144	0.0255 ± 0.0538	0.150	pCi/m3
N11-0294-001	San Diego	HASL Ga-01-R	Cs-134	0.0140 ± 0.0104	0.0383	pCi/m3
N11-0294-001	San Diego	HASL Ga-01-R	Cs-137	0.00326 ± 0.0119	0.0379	pCi/m3
N11-0294-001	San Diego	DOE RP 710	Gross Alpha	±		pCi/m3
N11-0294-001	San Diego	DOE RP 710	Gross Beta	±		pCi/m3
N11-0294-001	San Diego	HASL Ga-01-R	Ru-103	0.00456 ± 0.00832	0.0280	pCi/m3
N11-0294-001	San Diego	HASL Ga-01-R	Ru-106	-0.103 ± 0.118	0.283	pCi/m3
N11-0294-001	San Diego	HASL Ga-01-R	Zr-95	0.0102 ± 0.0262	0.0598	pCi/m3
N11-0294-002	San Diego	HASL Ga-01-R	Iodine-131	0.126 ± 0.0211	0.107	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.