National Atmospheric Deposition Program

Mercury Deposition Network

Mercury Analytical Laboratory
2005 Annual Quality Assurance Report

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Definitions of Acronyms and Abbreviations

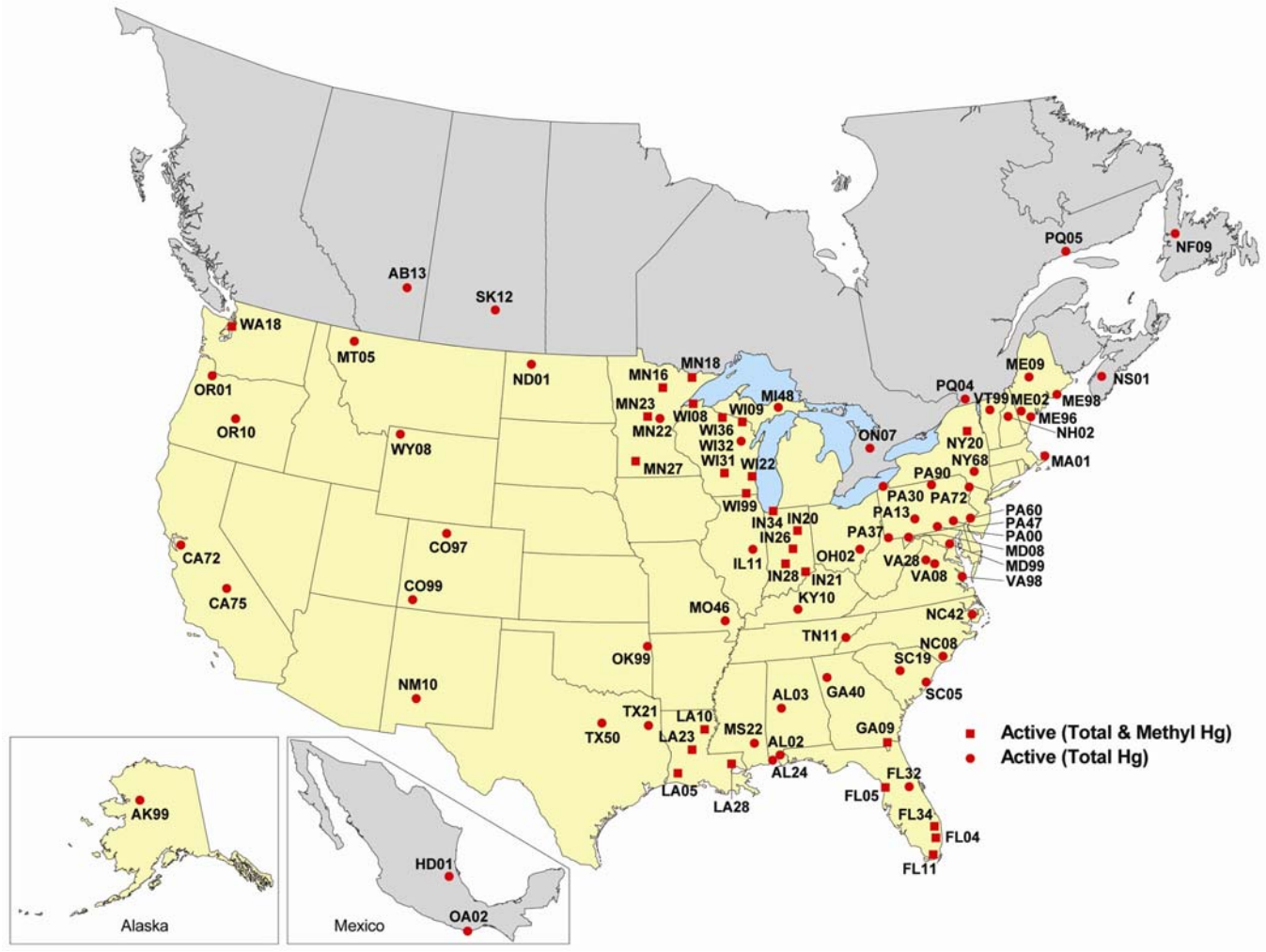
CAL	Central Analytical Lab
CCB	Continued Calibration Blank
CCV	Continued Calibration Verification
COC	Chain of Custody
CRM	Certified Reference Material
CVAFS	Cold Vapor Atomic Fluorescence Spectrometry
DQO	Data Quality Objectives
EMOF	Electronic Mercury Observer Form
HAL	Mercury (Hg) Analytical Lab
ICB	Initial Calibration Blank
ICV	Initial Calibration Verification
MD	Matrix Duplicate
MDL	Method Detection Limit
MDN	Mercury Deposition Network
MOF	Mercury Observer Form
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NADP	National Atmospheric Deposition Program
NED	Network Equipment Depot
PB	Preparation Blanks
PE	Performance Evaluation
PT	Proficiency Test
QA/QC	Quality Assurance/Quality Control
QAP	Quality Assurance Plan
QR	Quality Rating Code
RL	Reporting Limit
RPD	Relative Percent Difference
SOP	Standard Operating Procedure
SRM	Standard Reference Material

1. Introduction

Since January 1996, Frontier GeoSciences Inc. (FGS) has served as the Mercury Analytical Laboratory (HAL) and Site Liaison Center for the Mercury Deposition Network (MDN). MDN, coordinated through the National Atmospheric Deposition Program (NADP), was designed with the primary objective of quantifying the wet deposition of mercury in North America to determine long-term geographic and temporal distributions. MDN has grown to incorporate over 95 sites in the United States and Canada. In 2006, MDN is expected to incorporate 10-15 additional new sites.

As HAL, FGS receives weekly precipitation samples to be analyzed for total mercury. HAL also analyzes samples for methylmercury from selected sites participating in the methylmercury program. The analytical technique — Modified EPA Method 1631 Revision B — was developed by Nicolas S. Bloom, one of FGS' founders. FGS also served as the referee lab for the Method 1631 final validation study.

Robert Brunette, Principle Investigator and HAL Director, oversees FGS's involvement in MDN. He serves as the HAL contact for the multiple agencies currently sponsoring MDN. His multiple roles require him to provide guidance and direction to all HAL staff and to maintain his proficiency in all aspects of HAL activities, including MDN site selection and equipment installation, MDN equipment troubleshooting, field and laboratory training, analysis and report writing, as well as research on new MDN initiatives including Trace Metals (in addition to mercury) in Wet Deposition.



Mr. Brunette is assisted by Gerard Van der Jagt - the MDN Project Manager, and an analytical laboratory staff skilled in processing incoming samples, analyzing sample sets, cleaning glassware, shipping weekly field equipment, and entering data. Senior Research Scientist, Eric M. Prestbo, serves as a Science Advisor for HAL, and helps support MDN related research initiatives. The HAL Director also works closely with FGS' Laboratory Manager, Patrick Strickland and FGS' Quality Assurance Officer, Shelly Fank, to ensure that all Quality Control (QC) parameters are consistently maintained, and that FGS' standards of professional and scientific quality are met.

FGS continued to maintain and demonstrate acceptable quality control in 2005. Due to the addition of new MDN sites, the number of quality control points increased from about 1,500 in 2004, to more than 1,600 quality control measurements in 2005. FGS demonstrated consistency and reproducibility in bottle blanks, preparation blanks, certified reference materials, matrix duplicates, and matrix spikes. All of these parameters are plotted control charts in this report.

Outlook

The MDN continues to gain attention as the largest and longest-running national mercury wet deposition network in North America. Feedback from sponsors and other interested organizations indicates that MDN will experience significant growth in 2006-2007. With this growth, HAL will continue to look for ways to improve the program to ensure the highest quality. The following are goals HAL has set to maintain and improve quality throughout 2006-2007:

HAL will continue to improve our database in 2006.

HAL and the NADP Program Office incorporated dual data entry verification to all database operations.

HAL will continue trace metals in wet deposition research in 2006. There is a strong indication that there are many sponsors that will want to participate in a combined mercury and trace metals program. In 2005, five MDN sites were collecting samples for trace metals following HAL's retrofit and trace metal standard operating procedures.

HAL research in dry deposition of mercury and trace metals in sites in the southern U.S. will continue, likely through 2006. HAL expects this research to lay the groundwork for a potential non-NADP product for interested MDN sponsors.

2. Quality Assurance

2.1. Philosophy and Objectives

Frontier GeoSciences Inc. (FGS) is committed to a rigorous quality assurance program and philosophy. Quality control begins at the bench level. Process improvements are solicited from laboratory technicians and analysts. Management implements the improvements. The Quality Assurance program is a system for ensuring that all information, data, and interpretation resulting from an analytical procedure are technically sound, statistically valid, and appropriately documented.

HAL data quality is assessed against FGS' Data Quality Objectives (DQO). Our DQOs consist of five components: precision, accuracy, representativeness, comparability, and completeness.

- *Precision* is a measure of data reproducibility. HAL assesses analytical precision using matrix duplicates. The acceptance criterion for matrix duplicates is ≤ 25 RPD.
- *Accuracy* is a measure of how close experimental data is to a "true" value. HAL assesses accuracy using certified reference materials and matrix spikes. The acceptance criterion for reference materials and matrix spikes is 75-125% recovery.
- *Representativeness* is a measure of how typical a sample is compared to the sample population. It is achieved by accurate, artifact-free sampling procedures and appropriate sample homogenization.
- *Comparability* is a measure of how variable one set of data is to another. Control charts enable HAL to assess comparability over the course of an ongoing monitoring project such as MDN.
- *Completeness* is measured by the number of usable data points compared to the number of possible data points. HAL DQO for MDN project is at least 95% completeness.

2.2. Method Detection Limits

Method detection limit (MDL) studies are maintained for most matrix/analyte combinations available at FGS. Studies are performed using the protocols in 40 CFR, Section 136, Appendix A. Specifically; seven or more low-level, matrix-specific spikes are processed according to preparation and analytical method protocols. MDL is determined as t*SD of the replicates (where t is the Student's T-value for the number of replicates and SD is the standard deviation). The HAL updates MDL studies periodically for the MDN project. See Appendix A for the latest MDL study results.

2.3. Accreditations

FGS currently holds certifications through departments in eight states: the California Department of Health, the Florida Department of Health, the Louisiana Department of Environmental Quality, the Minnesota Department of Health, the New Jersey Department of Environmental Protection, the New York Department of Health, the Washington Department of Ecology, and the Wisconsin Department of Natural Resources. The Florida Department of Health acts as FGS' primary accreditor under the National Environmental Laboratory Accreditation Program (NELAP).

3. Quality Control

Quality Control (QC) samples each have an expected target value that can be used to objectively assess preparation and analytical method performance. If performance on these known samples is acceptable, client sample results and other *unknowns* are assumed to be acceptable, as well. Conversely, unacceptable QC results require immediate troubleshooting and re-assessment of affected sample results. The HAL utilizes eight types of QC samples for the MDN project: laboratory bottle blanks, preparation blanks, ongoing calibration standards, ongoing calibration blanks, matrix duplicates, matrix spikes, certified reference materials, field blanks, and system blanks.

3.1. Laboratory Bottle Blanks

3.1.1. Description

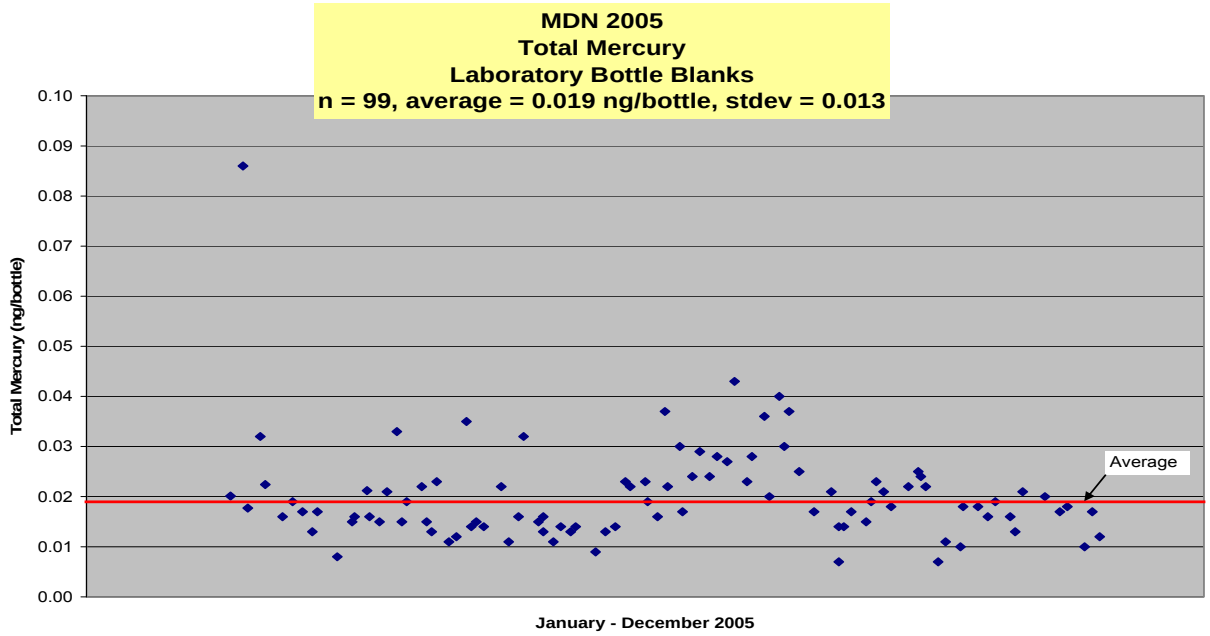
Following cleaning, HAL bottles are charged with 20mL of 1% hydrochloric acid. A random selection of these bottles is then analyzed for total mercury.

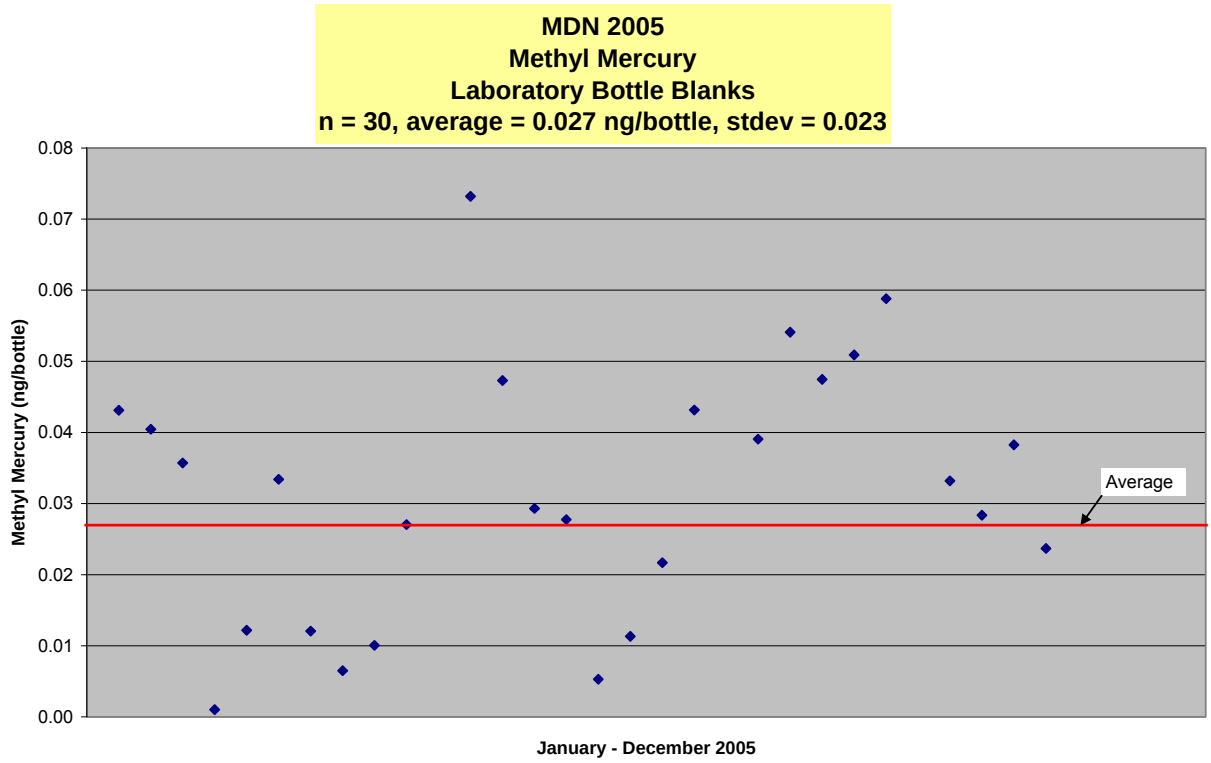
3.1.2. Purpose

Even in an ultra-clean laboratory, mercury exposure is inherent to the handling of MDN sample bottles. Because such contamination is inevitable, it must be analyzed and quantified so that it can be objectively subtracted from final sample results.

3.1.3. Discussion

In 2005, the mean of 99 laboratory bottle blanks was 0.019ng/bottle with a standard deviation of 0.013ng/bottle. In 2005, one laboratory bottle blank was higher than the MDL. The current MDL for total mercury is 0.096ng/L. In 2005, the mean of 30 laboratory blanks for methylmercury was 0.027ng/bottle with a standard deviation of 0.023ng/bottle. The current MDL for methylmercury is 0.015ng/L. Laboratory bottle blanks are expected to be at or near MDL. In cases where the blanks are significantly higher, the situation is investigated. Possible contamination sources are researched and identified. Once the contamination has been isolated and corrected, the run is continued.





3.2. Preparation Blanks

3.2.1. Description

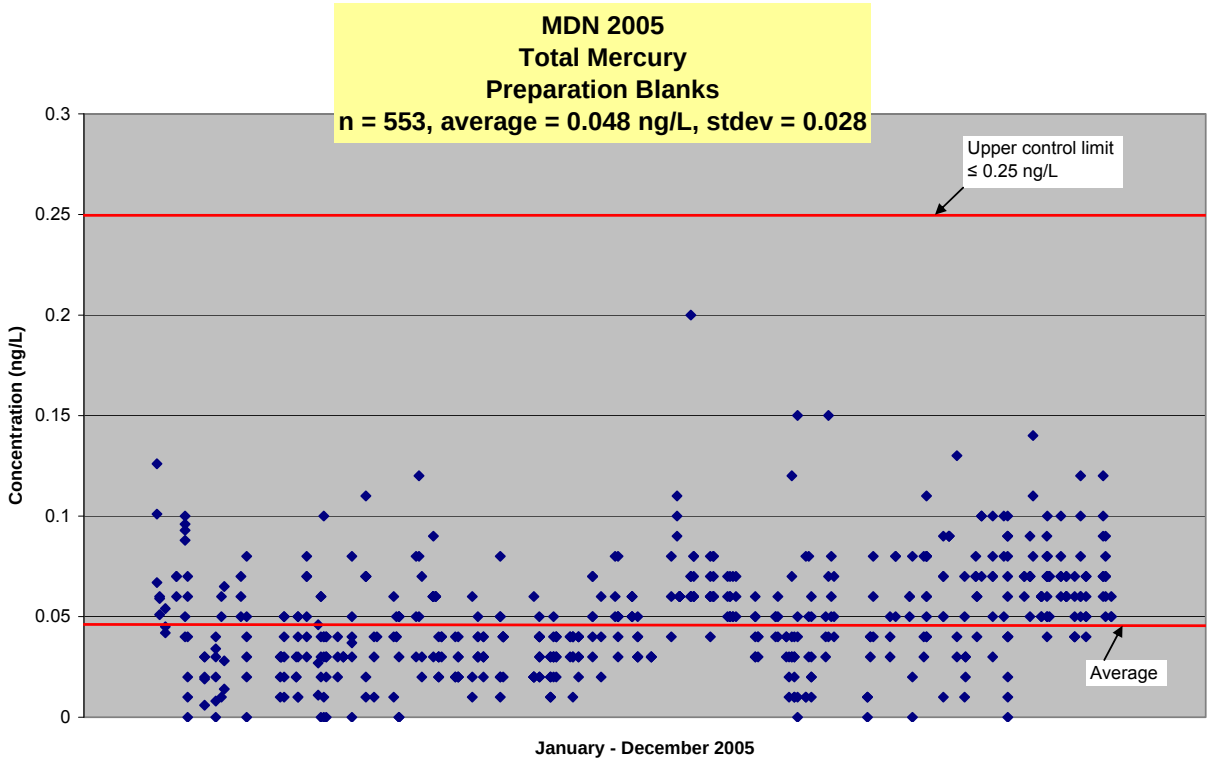
Preparation blanks for total mercury consist of 1% (v/v) 0.2N bromine monochloride, 0.2mL 20% hydroxylamine hydrochloride, and 0.3mL 20% stannous chloride in 100mL of reagent water. Preparation blanks for methylmercury consist of hydrochloric acid, APDC solution, ethylating agent, acetate buffer, and reagent water.

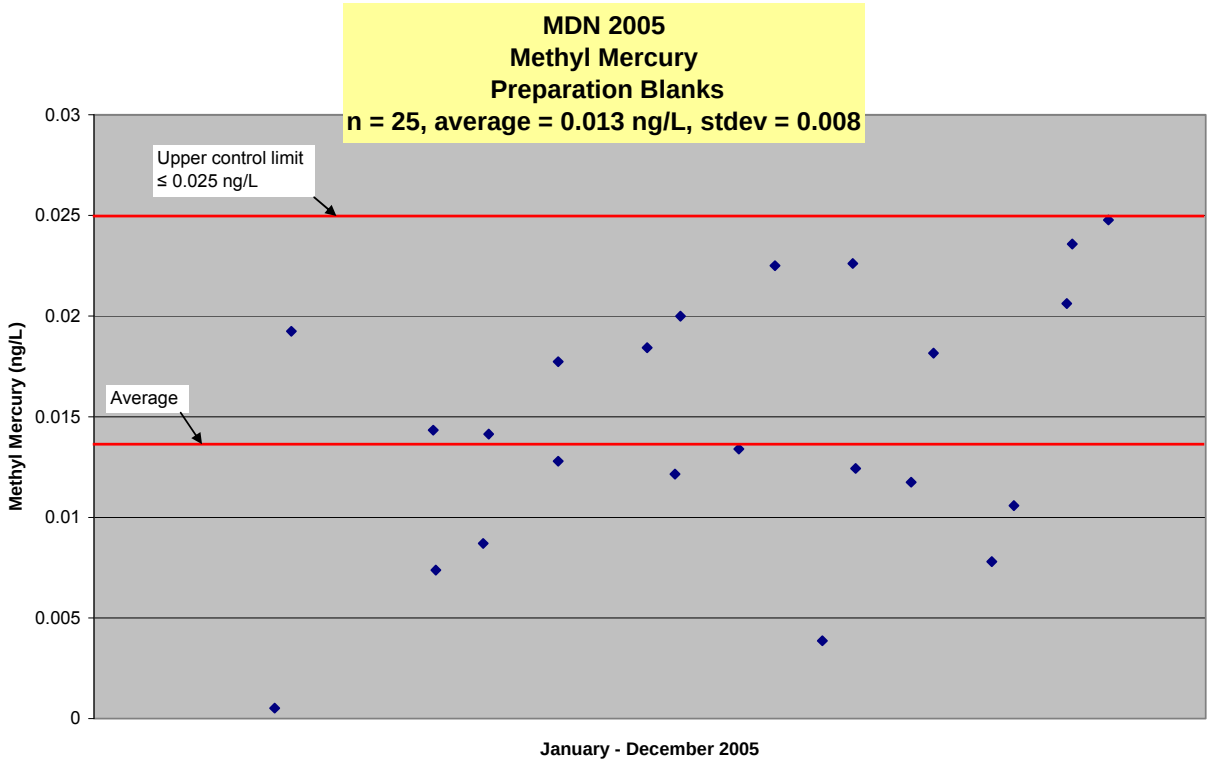
3.2.2. Purpose

Mercury content is inherent even in FGS' preparatory and analytical reagents. Preparation blanks are a measure of how much of each sample result can be attributed to these necessary reagents. Preparation Blanks also help when investigating possible sources of contamination.

3.2.3. Discussion

In 2005, the mean for total mercury of 553 preparation blanks was 0.048ng/L with a standard deviation of 0.028ng/L. In 2005, no preparation blanks for total mercury were above the control limit of 0.25ng/L. In 2005, the mean for methylmercury preparation blanks for 25 analytical runs was 0.013ng/L with a standard deviation of 0.008ng/L. In 2005, the mean of the preparation blanks for methylmercury were all below the control limit of 0.025ng/L.


MDN 2005
Total Mercury
Preparation Blanks
n = 553, average = 0.048 ng/L, stdev = 0.028
Upper control limit
≤ 0.25 ng/L
Average
Concentration (ng/L)
0.3
0.25
0.2
0.15
0.1
0.05
0
January - December 2005


MDN 2005
Methyl Mercury
Preparation Blanks
n = 25, average = 0.013 ng/L, stdev = 0.008
Upper control limit
≤ 0.025 ng/L
Average
Methyl Mercury (ng/L)
0.03
0.025
0.02
0.015
0.01
0.005
0
January - December 2005

3.3. Ongoing Calibration Standards

3.3.1. Description

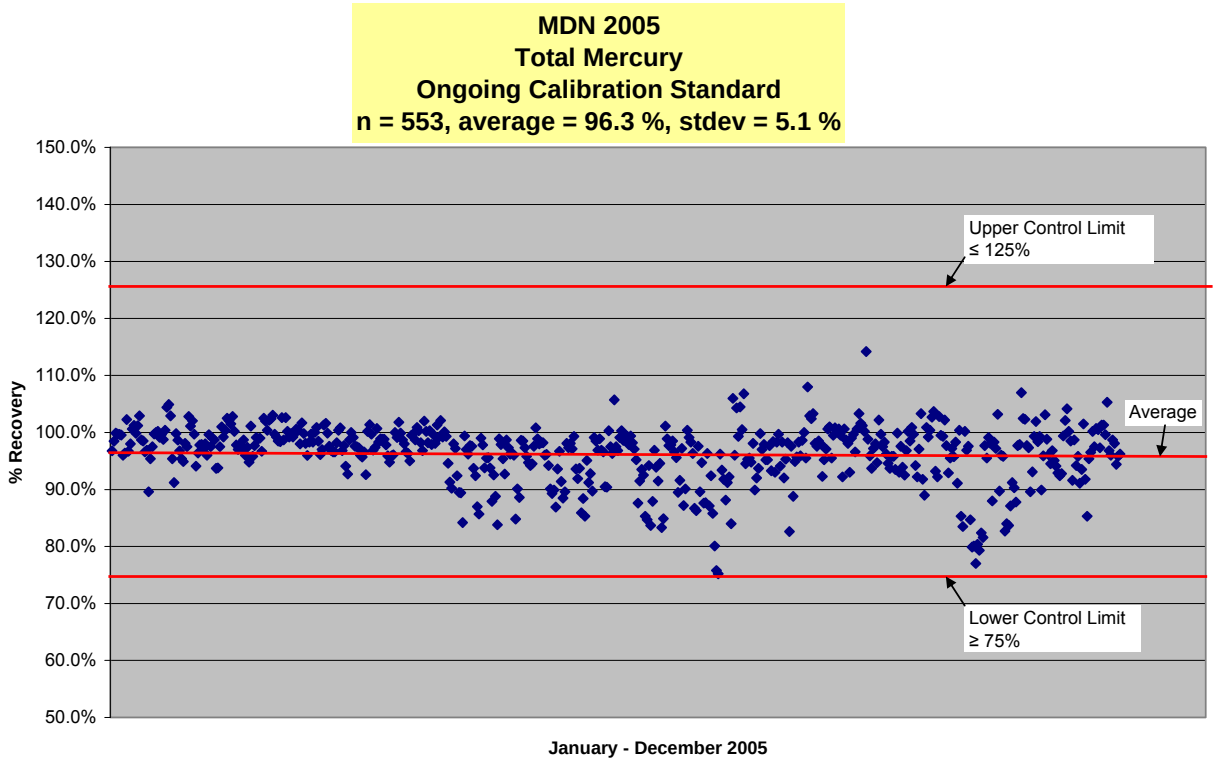
Ongoing calibration standards are continuously analyzed during the course of sample analysis, typically after a suite of ten samples and at the end of each analytical day. A 1.0ng standard for total mercury and a 0.1ng standard for methylmercury are typically analyzed as an ongoing calibration standard.

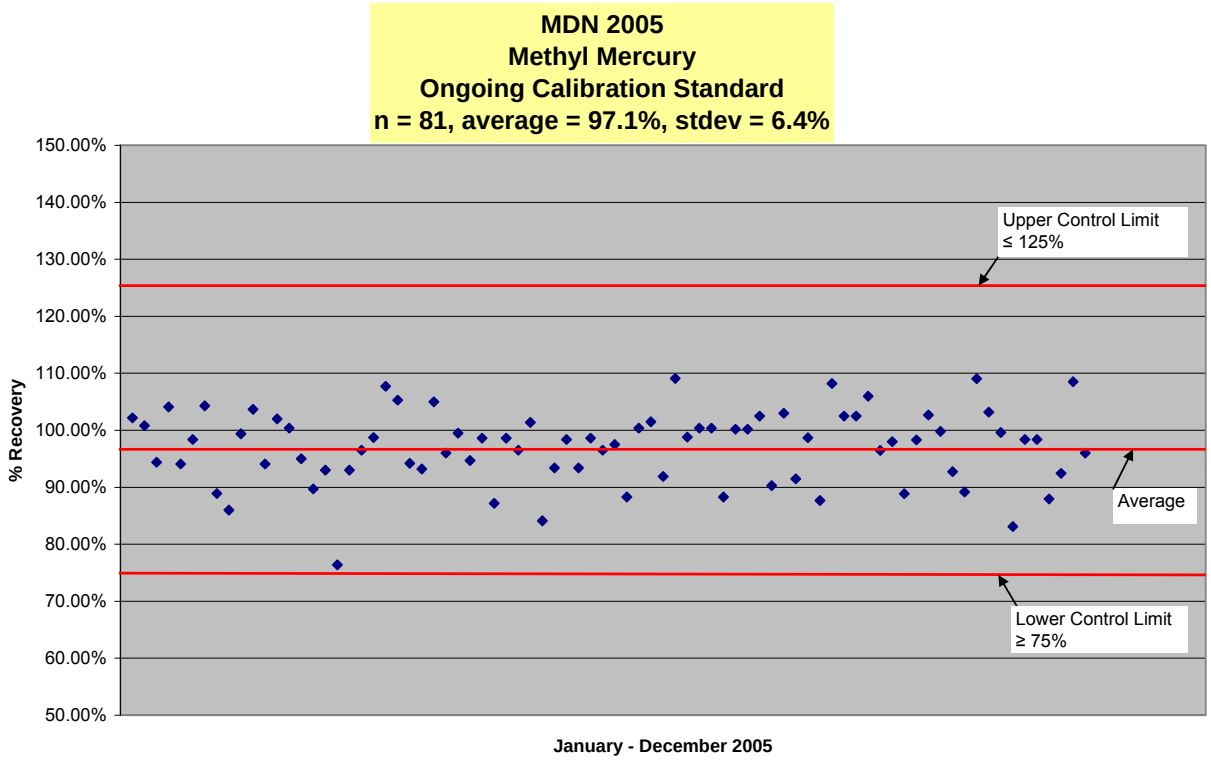
3.3.2. Purpose

Ongoing calibration standards verify that the analytical system is in control. All total mercury standard solutions are traceable to certified standards or manufacturer lot number. Currently there is no commercial available methylmercury standard. All raw data references a unique laboratory ID number for associated standards. This ID may then be traced through the standards logbooks to the original shipment, container, and certification.

3.3.3. Discussion

In 2005, the mean of 553 ongoing calibration standard recoveries for total mercury was 96.3% with a standard deviation of 35.1%. In 2005, no ongoing calibration standards were out statistical control. In 2005, the mean of 81 ongoing calibration standard recoveries for methylmercury was 97.1% with a standard deviation of 6.4 %. There were no ongoing calibration standard recoveries for the MDN project in 2005 that were out of statistical control.





3.4. Ongoing Calibration Blanks

3.4.1. Description

Ongoing calibration blanks are continuously analyzed during the course of sample analysis, typically after a suite of ten samples and at the end of each analytical day.

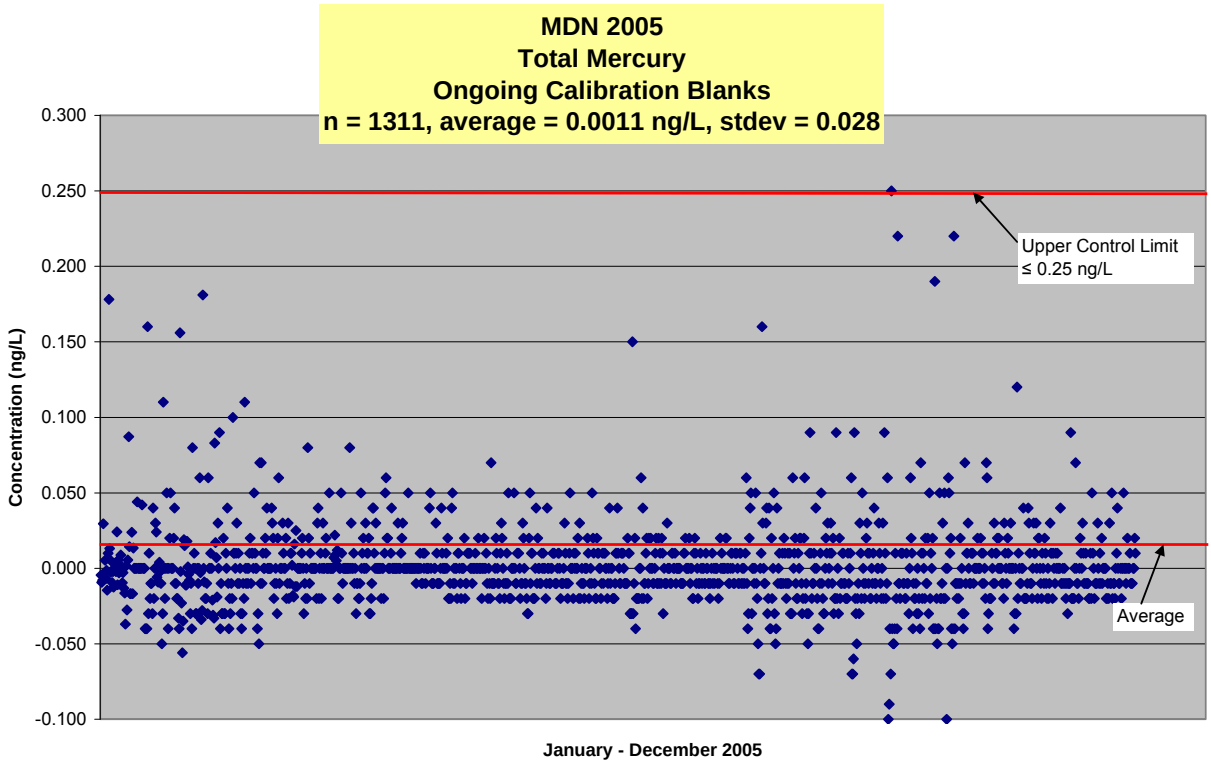
3.4.2. Purpose

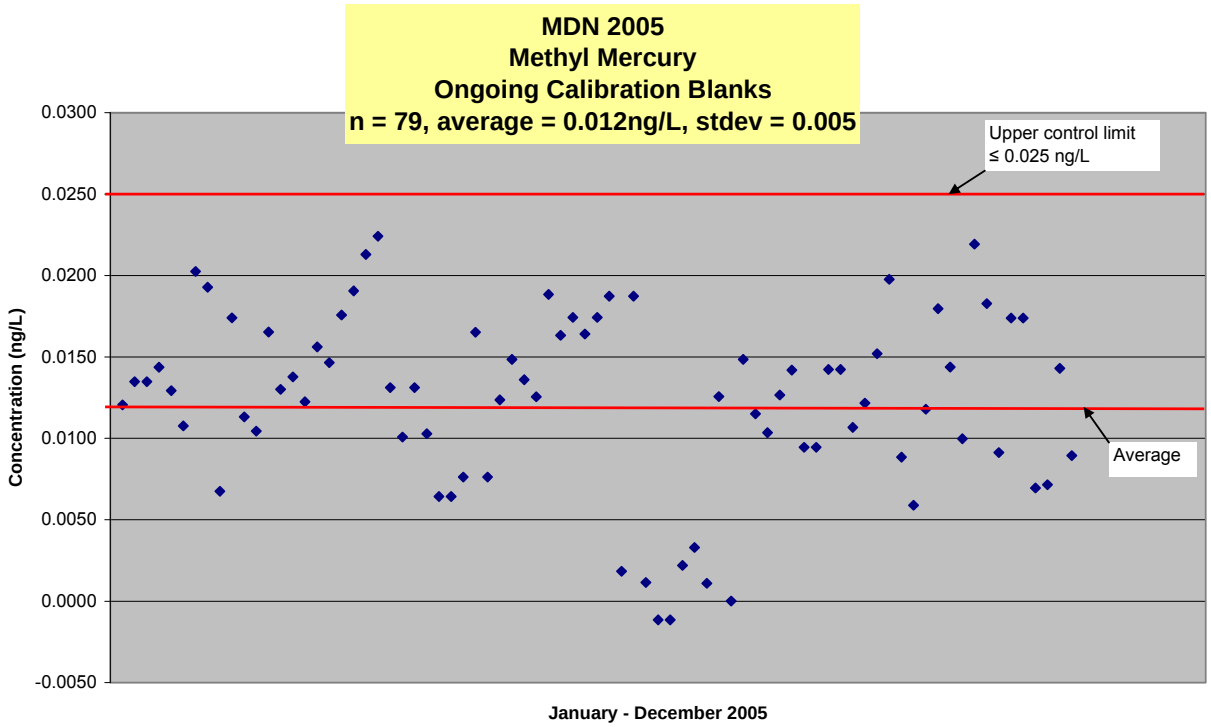
Instrument blanks are used to demonstrate freedom from system contamination, carryover, and to monitor baseline drift.

3.4.3. Discussion

In 2005, the mean concentration of 1311 ongoing calibration blanks for total mercury was 0.0011ng/L with a standard deviation of 0.028. There was one ongoing calibration blank for the MDN project in 2005 that was at the upper control limit (0.25ng/L). In 2005, the mean concentration of 79 ongoing calibration blanks for methylmercury was 0.012ng/L with a standard deviation of 0.005. There were no ongoing calibration blanks for methylmercury that were above the upper control limit (0.025ng/L).

Ongoing calibration blanks are expected to be at or near MDL. In cases where the blanks are significantly higher, the situation is investigated. Possible contamination sources are researched and identified. Once the contamination has been isolated and corrected, the run is continued.


MDN 2005
Total Mercury
Ongoing Calibration Blanks
n = 1311, average = 0.0011 ng/L, stdev = 0.028
0.300
0.250
0.200
0.150
0.100
0.050
0.000
-0.050
-0.100
Concentration (ng/L)
Upper Control Limit
≤ 0.25 ng/L
Average
January - December 2005


MDN 2005
Methyl Mercury
Ongoing Calibration Blanks
n = 79, average = 0.012ng/L, stdev = 0.005
0.0300
0.0250
0.0200
0.0150
0.0100
0.0050
0.0000
-0.0050
Concentration (ng/L)
Upper control limit
≤ 0.025 ng/L
Average
January - December 2005

3.5. Matrix Duplicates

3.5.1. Description

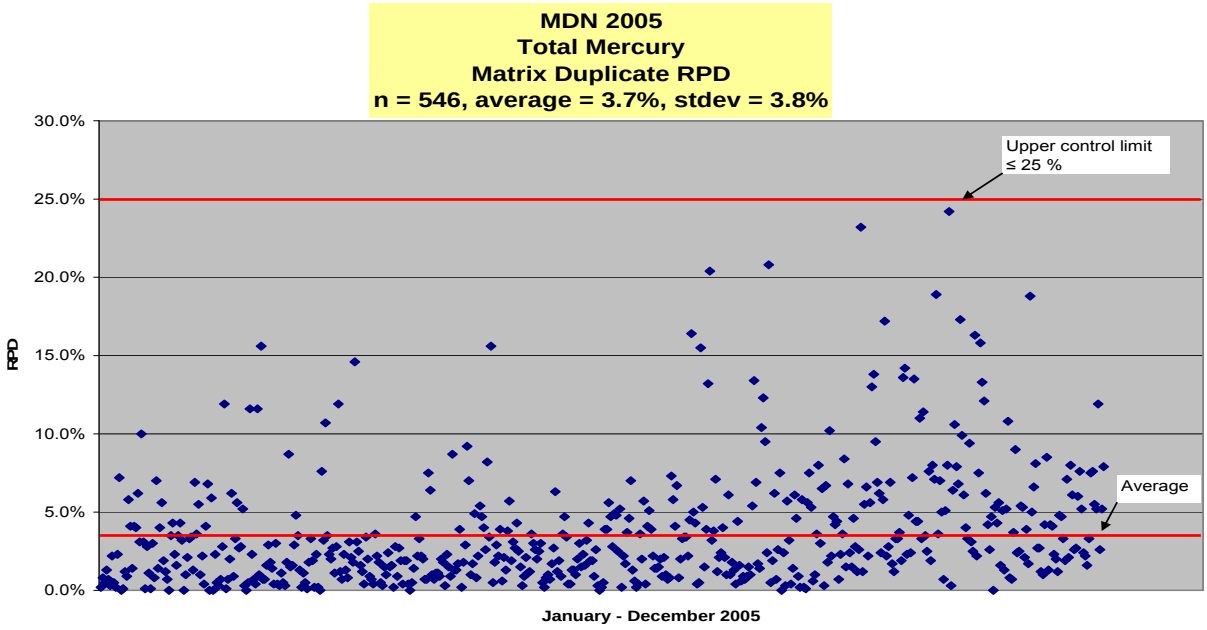
Matrix duplicates are created when an existing sample is split into two portions that can then be compared analytically.

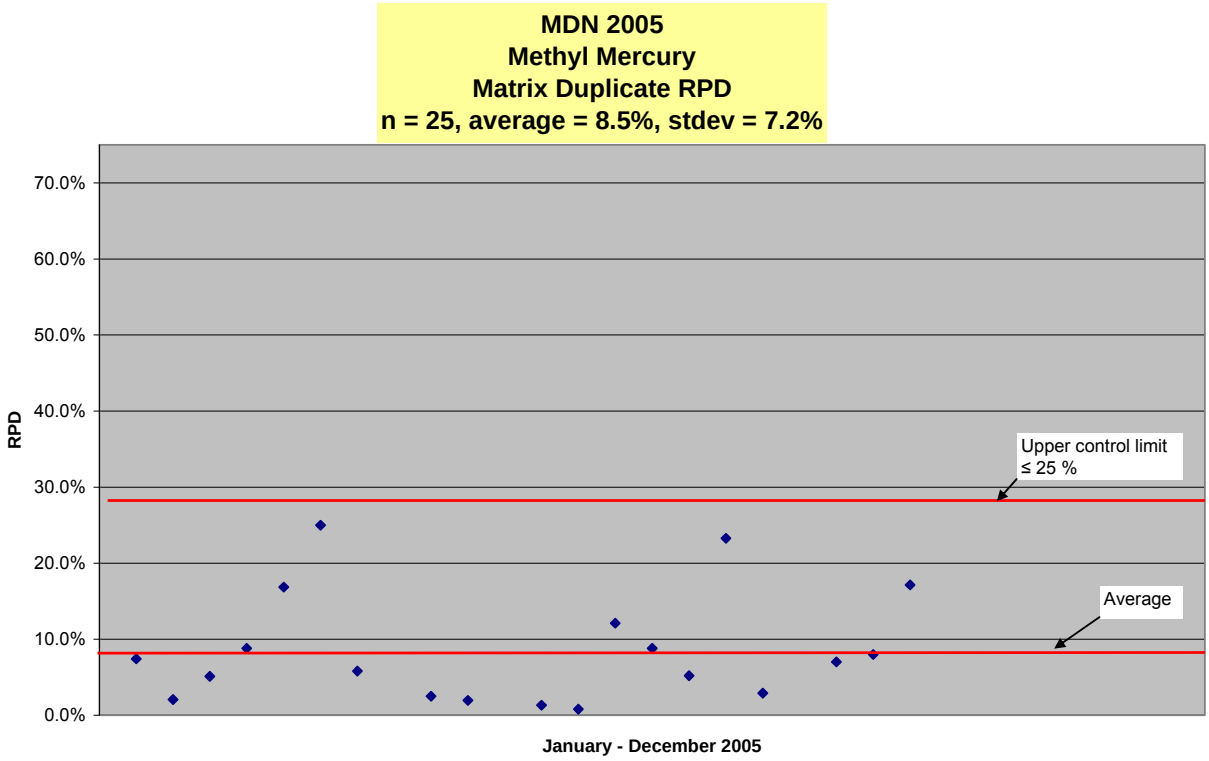
3.5.2. Purpose

As there is no theoretical difference between a pair of matrix duplicates, their relative percent difference (RPD) is expected to be less than 25%. Out of control results are indicative of a heterogeneous sample matrix and/or poor analytical precision.

3.5.3. Discussion

In 2005, the mean RPD of 546 matrix duplicate pairs for total mercury was 3.7% with a standard deviation of 3.8%. This low mean reflects the homogeneous nature of the MDN sample matrix, as well as the analytical precision of HAL. In 2005, the mean RPD of 23 matrix duplicate pairs for methylmercury was 8.4 % with a standard deviation of 7.2%. Several RPDs were above the 25% RPD acceptance level. However, all of these matrix duplicates concentrations were less than or equal to five times the MDL. At such low concentrations, variability is expected to increase. Therefore, the larger RPD values at low concentrations are not of concern. No corrective action was taken.





3.6. Matrix Spikes

3.6.1. Description

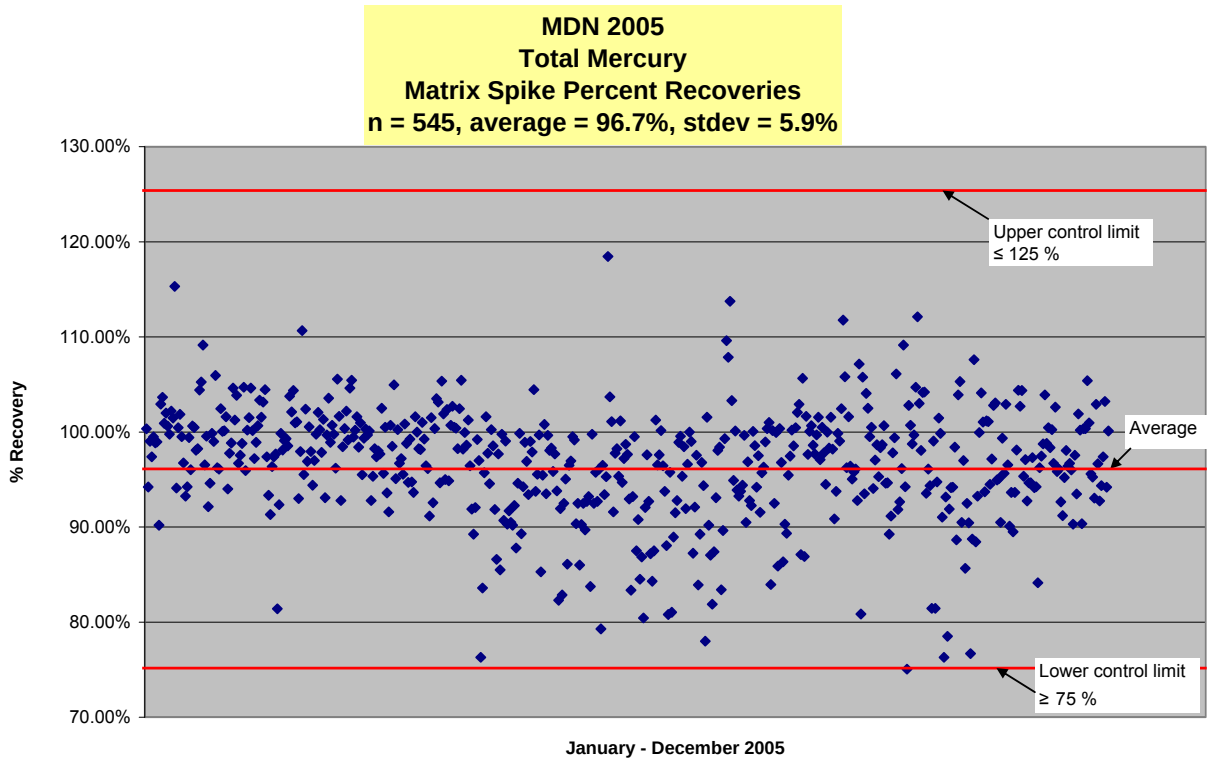
A matrix spike is created when an MDN sample with known mercury content is supplemented with an additional 1.00ng of mercury standard.

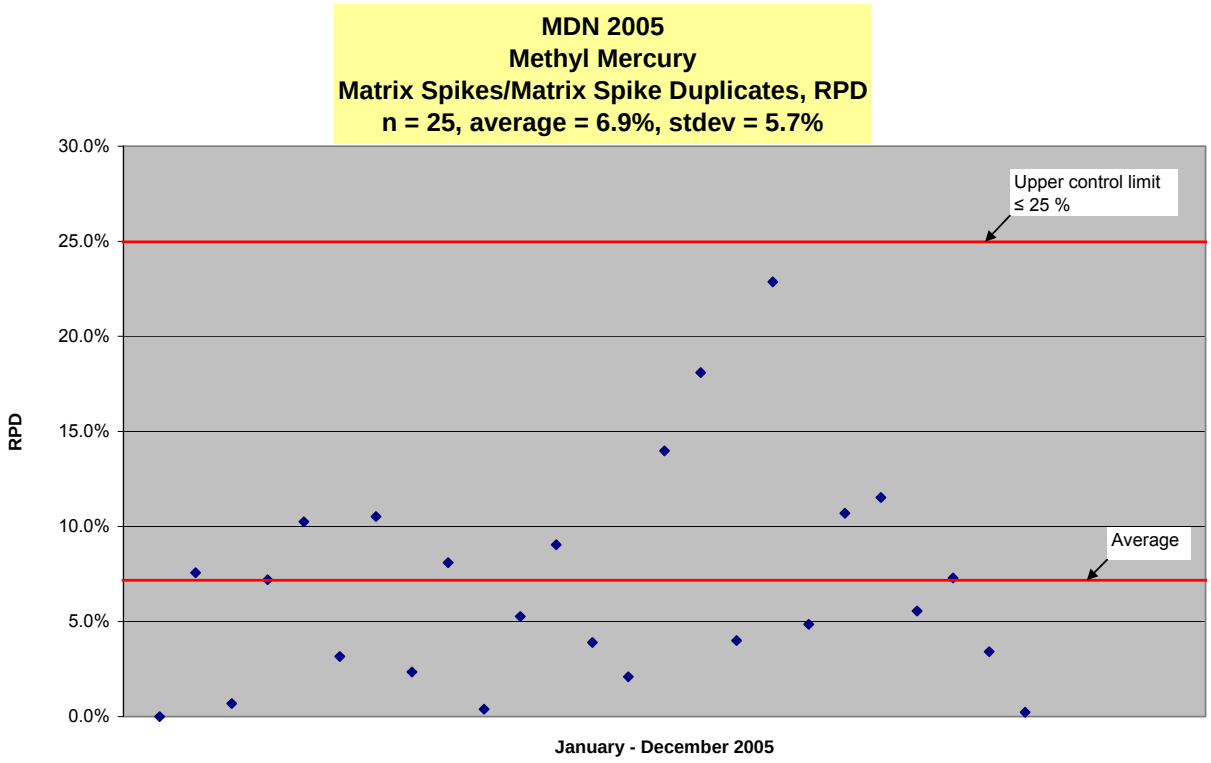
3.6.2. Purpose

As the combined mercury content of the matrix spike sample is known in theory, matrix spike recoveries are expected to be within 75% and 125% of this theoretical value. Matrix spike recoveries determine if, and how, the sample matrix interferes with target analyte recovery. They also ensure that HAL's preparation and analytical procedures do not result in significant analyte losses.

3.6.3. Discussion

In 2005, the mean of 545 matrix spike recoveries for total mercury was 96.7% with a standard deviation of 5.9%. There were no unacceptable matrix spike recoveries for the MDN project in 2005. This is indicative of a chemically passive sample matrix, as well as good analytical accuracy. Had any Matrix Spikes fallen outside the 75%-125% control limits, involved samples would have been rerun to investigate possible matrix interference. In 2005, the mean RPD of 23 matrix spike/matrix spike duplicates for methyl mercury was 7.1% with a standard deviation of 5.9%. No matrix spike/matrix spike duplicate RPD was above the acceptance criteria.


MDN 2005
Total Mercury
Matrix Spike Percent Recoveries
n = 545, average = 96.7%, stdev = 5.9%
130.00%
120.00%
110.00%
100.00%
90.00%
80.00%
70.00%
% Recovery
Upper control limit
≤ 125 %
Average
Lower control limit
≥ 75 %
January - December 2005


MDN 2005
Methyl Mercury
Matrix Spikes/Matrix Spike Duplicates, RPD
n = 25, average = 6.9%, stdev = 5.7%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
RPD
Upper control limit
≤ 25 %
Average
January - December 2005

3.7. Certified Reference Materials

3.7.1. Description

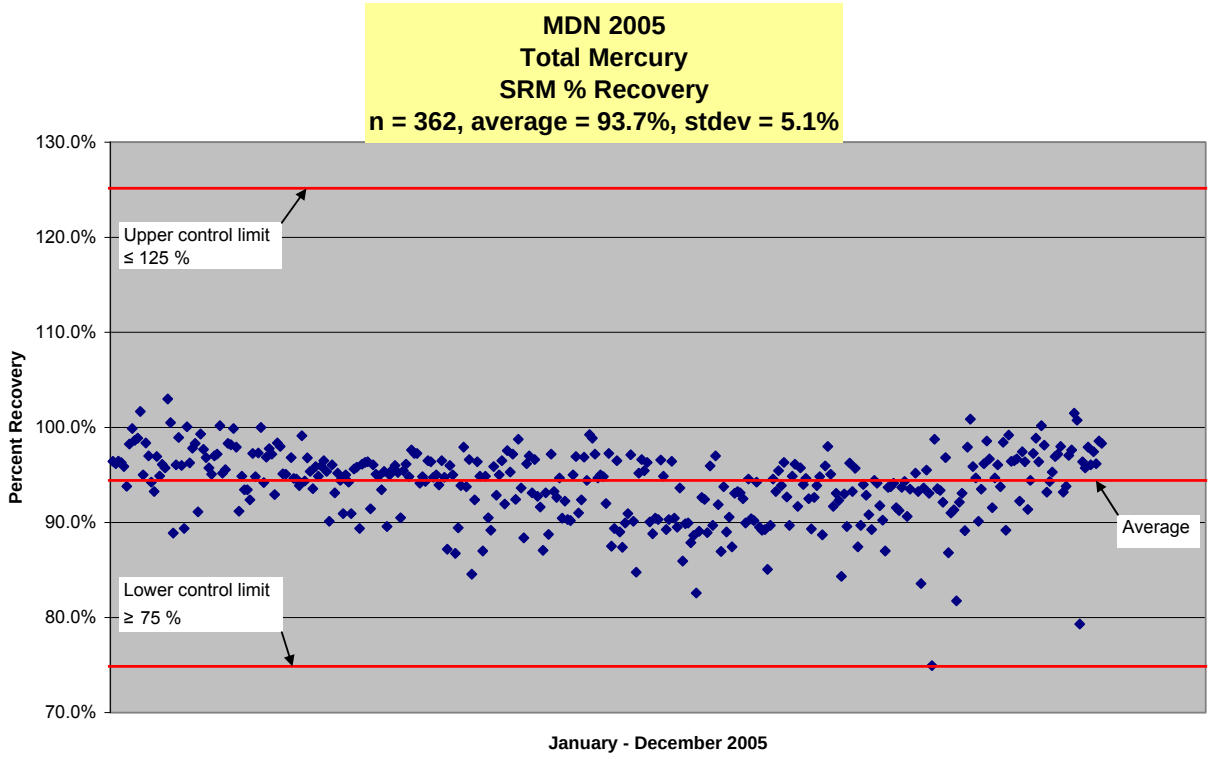
Certified reference materials are commercially available samples containing known quantities of analyte in a specific matrix. Currently, there is no available Reference Material matching the MDN rainwater matrix. Instead, HAL uses National Institute of Standards and Technology Reference Material 1641d – Total Mercury in Water. For methylmercury, HAL uses National Research Council Canada Reference Material DORM-2.

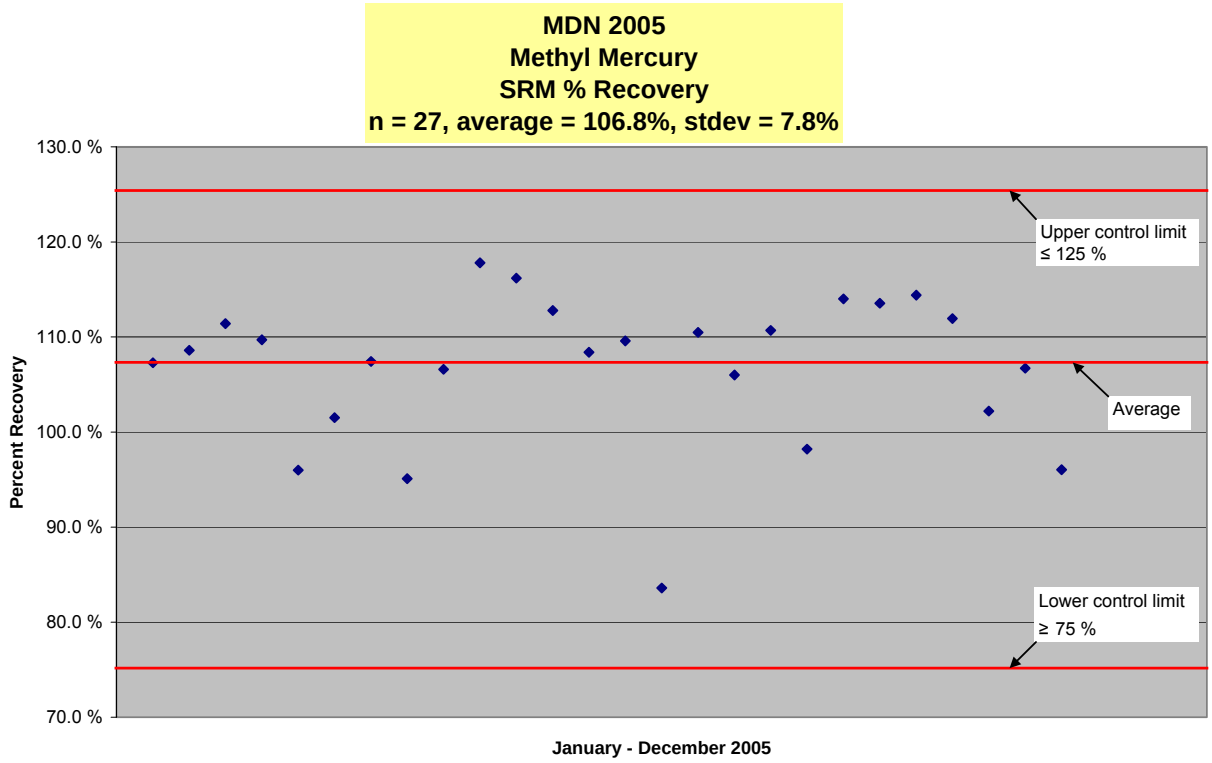
3.7.2. Purpose

Certified reference materials are used to demonstrate HAL's ability to recover a target analyte from a specific matrix. They are also a secondary source for verifying the validity of the analytical curve.

3.7.3. Discussion

In 2005, the mean of 362 certified reference material recoveries for total mercury was 93.7% with a standard deviation of 5.1%. For methylmercury, the mean of 27 certified reference material recoveries was 106.8% with a standard deviation of 7.8%. In 2005, there were no recoveries outside the control limits for total and methylmercury. Failing recoveries are immediately rerun to ensure that the analytical failure is isolated rather than systemic.




MDN 2005
Methyl Mercury
SRM % Recovery
n = 27, average = 106.8%, stdev = 7.8%
130.0 %
120.0 %
110.0 %
100.0 %
90.0 %
80.0 %
70.0 %
Percent Recovery
Upper control limit
≤ 125 %
Average
Lower control limit
≥ 75 %
January - December 2005

4. Calculations

Calculations have been color-coded in instances where results become variables in subsequent calculations.

4.1. Calculation: Gross MDN Sample Concentration

{(Sample PA - Ave BB) / Slope} - {(Aliquot * BrCl RB) / 100} = ng Hg/aliquot (mL)

Sample PA = sample peak area (PA units)
Ave BB = average bubbler blank (PA units)
Slope = slope (PA units/ng)
Aliquot = volume of sample analyzed (mL)
BrCl RB = BrCl reagent blank value (ng/mL of preservative)
1/100 = correction for 1% preservation concentration

4.2. Calculation: Net MDN Sample Concentration

ng Hg/aliquot (mL) * mL / Sample Bottle = ng Hg/Sample Bottle

ng Hg/Sample Bottle – ng Hg/Quarterly Bottle Blank = net ng Hg/Sample Bottle

net ng Hg/Sample Bottle * (Sample Bottle / mL) * 1000 = net ng Hg/L

4.3. Calculation: MDN Deposition

(net ng Hg/L) * (precip vol (mL) / 120.0cm^2) * (1/1000mL) * (10000cm^2/m^2) = (ng/m^2)

Alternatively, because there are 10000 cm^2 in 1m^2:

(net ng Hg/L) * (precip vol (mL) / 120.0cm^2)*10 = (ng/m^2)

120.0cm^2 = Area of MDN Funnel
Precip volume (mL) = Precipitation Volume — see below

The standard rain gauge (Belfort) is used for the precipitation volume when the rain gauge data has passed Quality Assurance.

Precip volume (Rain Gauge (mL)) = Inches of Rain (rain gauge) * (825mL / Inch Belfort)

When the standard rain gauge (Belfort) has not passed Quality Assurance, we use the Bottle Catch to calculate deposition (as long as the Event Recorder shows that the collector worked properly).

Precip volume (Bottle Catch (mL)) = Total mL of sample captured in MDN Sample Bottle minus 20mL preservative

5. Analytical Run Sequence

HAL routinely includes the aforementioned QC samples in all of its analyses for the MDN project. The following bench sheet shows how these samples are arranged within a typical analysis day. For every set of ten samples analyzed, the sample set is preceded and superceded with a matrix duplicate, a matrix spike, ongoing calibration standard, and an ongoing calibration blank. In addition, after the twentieth sample an additional reference material sample is analyzed.

MDN Precipitation Sample Analysis Lab Sheet

Analysis Date:
Analyzer:
Analyst:

FGS DATA SET ID:
MDN LAB DATA SET CODE:
REVIEWER: DATE:

Analytical Run
D=Duplicate Analysis

Trap Set:
S=Sample Spike @ 1.00ng

Run	Tp	Bub	HAL Code	Sample ID	PA	% BrCl	Aliquot Volume	THg per Aliquot	THg Conc (Net)	Remarks
1	1	1		4.00 ng						
2	2	2		2.00 ng						
3	3	3		1.00 ng						
4	4	4		0.50 ng						
5	5	1		0.05 ng						
6	6	2		BB-1						
7	7	3		BB-2						
8	8	4		BB-3						
9	9	1		NIST1641d		2				
10	10	2		BrCl-1						
11	1	3		BrCl-2						
12	2	4		BrCl-3						
13	3	1		BB-4						
14	4	2		Sample #1						
15	5	3		Sample #1 D						
16	6	4		Sample #1 S						
17	7	1		Sample #2						
18	8	2		Sample #3						
19	9	3		Sample #4						
20	10	4		Sample #5						
21	1	1		Sample #6						
22	2	2		Sample #7						
23	3	3		Sample #8						
24	4	4		Sample #9						
25	5	1		Sample #10						
26	6	2		1.00						
27	7	3		BB-5						
28	8	4		Sample #11						
29	9	3		Sample #12						
30	10	4		Sample #13						
31	1	1		Sample #14						
32	2	2		Sample #15						
33	3	3		Sample #16						
34	4	4		Sample #17						
35	5	1		Sample #18						
36	6	2		Sample #19						
37	7	3		Sample #20						
38	8	4		Sample #11 D						
39	9	3		Sample #11 S						
40	10	4		1.00						
41	1	1		BB-6						
42	2	2		NIST1641d						
43	3	3		Sample #21						
44	4	4		Sample #22						
45	5	1		Sample #23						
46	6	2		etc…						
47	7	3								
48	8	4								
49	9	1								
50	10	2								
51	1	3								
52	2	4								
53	3	1		Sample #21 D						
54	4	2		Sample #21 S						
55	5	3		1.00						
56	6	4		BB-7						

Key

- Reference materials
- Preparation blanks
- Matrix duplicates
- Matrix spikes
- Ongoing calibration
- Ongoing calibration

6. Proficiency Tests and Laboratory Intercomparisons

Proficiency tests (PT) and laboratory intercomparisons are an important part of the Quality Assurance Program. Each year, FGS completes at least four PTs representing a suite of trace metals in wastewater and solid waste matrices. While these studies are a requirement of accreditation, they are also a valuable tool for internal quality control.

6.1. Proficiency Tests

The following proficiency tests were completed by HAL during 2005. Results for these tests are available upon request.

Table 1

Non-Potable Water / Solid and Hazardous Waste Proficiency Study	New York Department of Health	01/2005
Water Pollution	Analytical Products Group	02/2005
Water Pollution	Analytical Products Group	03/2005
Non-Potable Water / Solid and Hazardous Waste Proficiency Study	New York Department of Health	07/2005
Water Pollution	Analytical Products Group	09/2005
DMRQA	Analytical Products Group	09/2005

6.2. Laboratory Intercomparisons

HAL participates in a U.S. Geological Survey PE sample laboratory intercomparison program. This program is coordinated by the USGS.

FGS is also an invited participant in several domestic and international laboratory intercomparisons each year. Many intercomparison participants are fellow world leaders in mercury and trace metals analysis. While functionally similar to PTs, these studies often involve more complex matrices or additional analytes and while project-specific intercomparison studies are helpful for assessing interlaboratory comparability, they do not necessarily address individual laboratory accuracy, and are not designed to function as third party validation. For these reasons although FGS does provide proficiency test study results, clients are not provided with intercomparison study results.

The following laboratory intercomparison studies were completed by HAL during 2005.

Table 2

Ambient Water	Florida Department of Environmental Protection	01/2005
Water	National Water Research Institute Environment Canada	01/2005
Tissue	International Measurement Evaluation Programme/ Institute for Reference Materials and Measurements	02/2005
Tissue	International Atomic Energy Agency	02/2005
Tissue	NIST/NOAA	03/2005
Sediments and Tissues	National Research Council Canada	07/2005
Ambient Water	Florida Department of Environmental Protection	01/2005

7. Field Quality Control

7.1. Field Bottle Blanks

7.1.1. Description

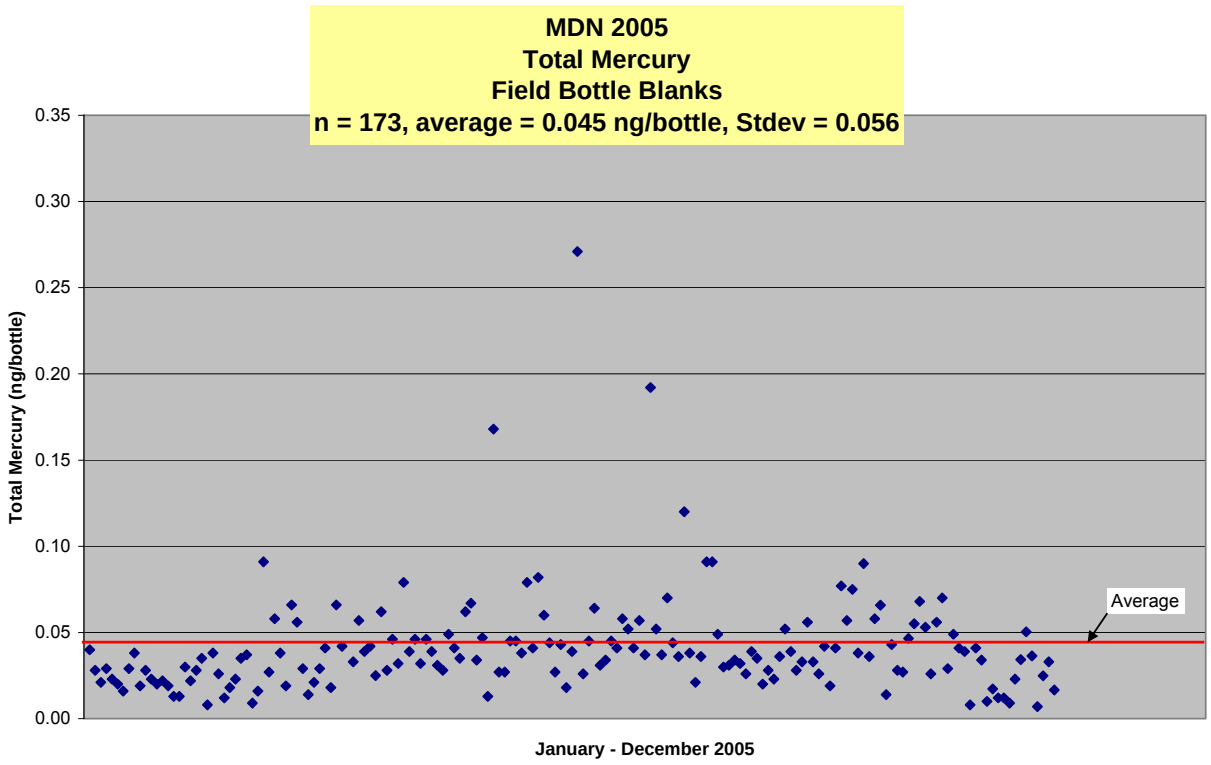
A field bottle blank has the same contents as a laboratory bottle blank. However, this blank is left exposed at the sampling site for the entire collection period without any collector openings. All field bottle blanks that maintain at least 15mL of the initial 20mL 1% hydrochloric acid charge are then analyzed for total mercury.

7.1.2. Purpose

Outside of the controlled laboratory environment, ambient mercury levels increase and additional sample handling occurs. Because such contamination sources are inevitable, their contributions must be quantified so that they can be objectively subtracted from final sample results.

7.1.3. Discussion

In 2005, the mean of 173 Field Bottle Blanks was 0.045ng/bottle with a standard deviation of 0.056ng/bottle. This suggests that the MDN aerochem collector protects the sample train and bottle well and the field exposure is minimal.



7.2. Field System Blanks

7.2.1. Description

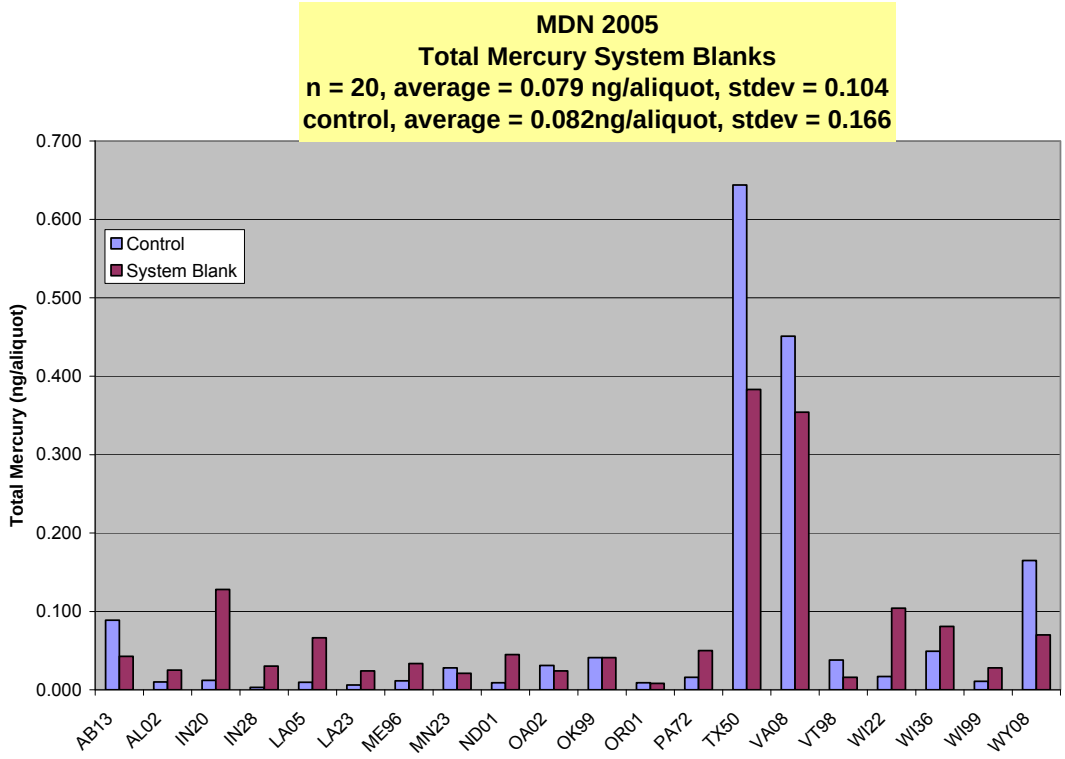
A field system blank is essentially a field bottle blank in which a solution is poured through the wet side collection sample train that was installed in the field for an entire week with no precipitation.

7.2.2. Purpose

This quality assurance program, conducted jointly by the U.S. Geological Survey and FGS, is intended to measure the effects of field exposure, handling, and processing on the chemistry of MDN precipitation samples.

7.2.3. Discussion

In 2005, the mean of 20 system blanks was 0.079ng/aliquot with a standard deviation of 0.104ng/aliquot. This again suggests that the MDN sample train is well protected.



8. Quality Rating Codes

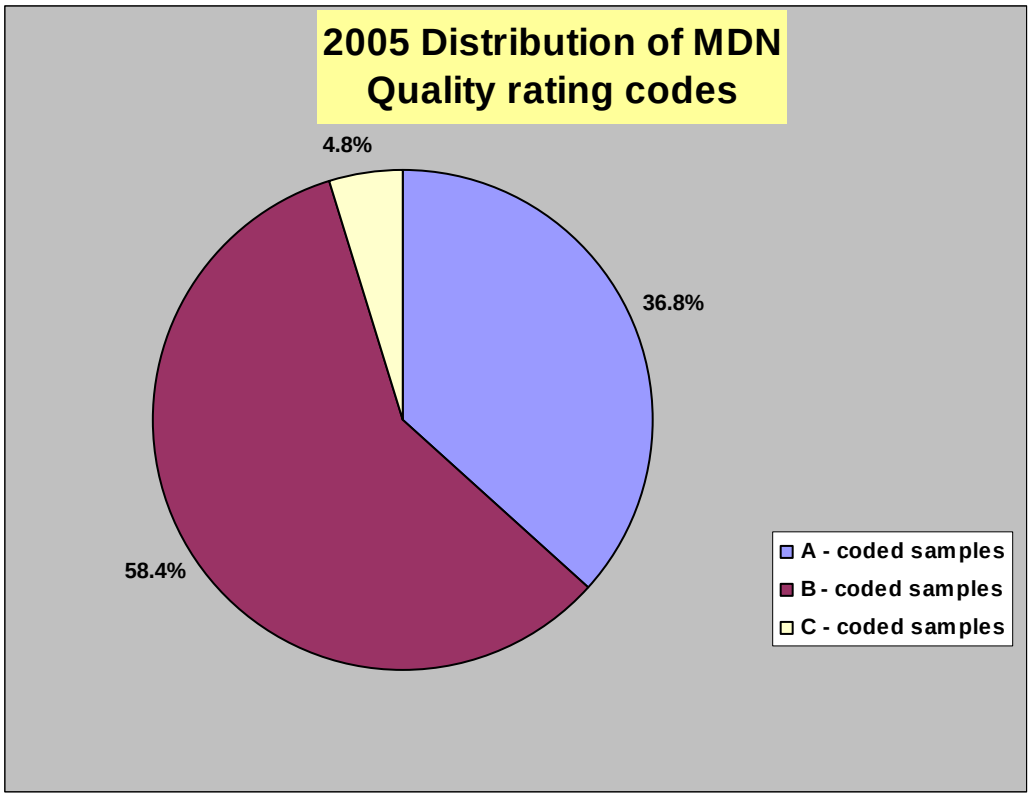
The quality rating code (QR) is designed as a user-friendly method to indicate the overall quality of each individual MDN data value. The MDN QR is modeled directly from the NADP AirMon QR. The QR code is what the general user of the final database will use in the evaluation of MDN data. This QR code is assigned by the computer program based on the results of the notes codes given to each MDN sample. A general description of each code follows.

A. Valid samples with no problems; contained only water; all sampling and laboratory protocols were followed; all required equipment was installed and operating properly.

B. Valid samples with minor problems; may have contaminants such as insects or other debris; there may be an exception to approved sampling or laboratory methods; required equipment may be lacking or not operating properly. The laboratory does not consider these problems sufficient to invalidate the data, but there is more uncertainty than for A data. These data are used along with A data to calculate average concentrations and deposition.

C. Invalid samples; major problems occurred; the laboratory does not have confidence in the data.

The HAL processed 5263 samples in 2005. 1937 samples received a QR code of A, 3072 received a B QR code, and 254 received a C QR code. FGS continued to maintain and demonstrate acceptable quality control in 2005.



Appendix A

Matrix Specific MDL Studies

Matrix Specific MDL Study 1

Objective Determine the method detection limit (MDL) for total mercury in water using preservation method FGS 012 and analysis method FGS 069, and following the protocols outlined in 40 CFR 136. As detailed below, the MDL for total mercury in water was determined to be 0.096ng/L.

Analytical Method A calibration was performed according to FGS 069. Briefly, this method incorporates oxidation with the addition of BrCl, reduction of mercury in the sample aliquot with $SnCl_2$, analysis by purge and trap and dual amalgamation CVAFS. The MDL study consisted of the analysis of nine replicates of a waters sample spiked with 0.5ng/L mercury oxidized with 1% BrCl. The results of these measurements are found in the table below, as well in the raw data sheets (ID # THg9-050331-1). All results are reported uncorrected for the method blanks.

MDL Calculation Using 40 CFR 136, the MDL was calculated using the standard deviation of the spiked samples, with n=10 replicates (9 degrees of freedom). In this case, the t value of 2.821 was used in the following equation, where s is the standard deviation of the results obtained on samples spiked at a level near the MDL.

$$MDL = t*s$$

The MDL calculated from these data is (2.821)*(0.034), or 0.096ng/L.

Total Mercury in Water (THg) MDL Study (CVAFS #9)
March 31, 2005

Sample		THg (ng/L)	%Rec
method blank #1		0.039	-
method blank #2		0.018	-
method blank #3		0.030	-
	Mean	0.029	-
	SD	0.011	-
IPR-1(5.0 ng/L)		5.044	100.9
IPR-2(5.0 ng/L)		4.995	99.9
IPR-3(5.0 ng/L)		5.173	103.5
IPR-4(5.0 ng/L)		5.144	102.9
	Mean	5.089	101.8
	SD	0.084	1.7
MDL-1 (0.5 ng/L)		0.510	102.0
MDL-2 (0.5 ng/L)		0.601	120.2
MDL-3 (0.5 ng/L)		0.480	96.0
MDL-4 (0.5 ng/L)		0.511	102.2
MDL-5 (0.5 ng/L)		0.521	104.2
MDL-6 (0.5 ng/L)		0.524	104.8
MDL-7 (0.5 ng/L)		0.492	98.4
MDL-8 (0.5 ng/L)		0.479	95.8
MDL-9 (0.5 ng/L)		0.478	95.6
MDL-10 (0.5 ng/L)		0.511	102.2
	Mean	**0.511**	**102.1**
	SD	**0.034**	**6.9**
NIST 1641d		**16.167**	**101.0**
certified value NIST 1641 d		16.010	-

Matrix Specific MDL Study 2

Objective Determine the method detection limit (MDL) for total mercury in water using preservation method FGS 012 and analysis method FGS 069, and following the protocols outlined in 40 CFR 136. As detailed below, the MDL for total mercury in water was determined to be 0.055ng/L.

Analytical Method A calibration was performed according to FGS 069. Briefly, this method incorporates oxidation with the addition of BrCl, reduction of mercury in the sample aliquot with $SnCl_2$, analysis by purge and trap and dual amalgamation CVAFS. The MDL study consisted of the analysis of nine replicates of a waters sample spiked with 0.5ng/L mercury oxidized with 1% BrCl. The results of these measurements are found in the table below, as well in the raw data sheets (ID # THg9-050331-1). All results are reported uncorrected for the method blanks.

MDL Calculation Using 40 CFR 136, the MDL was calculated using the standard deviation of the spiked samples, with n=10 replicates (9 degrees of freedom). In this case, the t value of 2.896 was used in the following equation, where s is the standard deviation of the results obtained on samples spiked at a level near the MDL.

$$MDL = t*s$$

The MDL calculated from these data is (2.896)*(0.019), or 0.055ng/L.

Total Mercury in Water (THg) MDL Study (CVAFS #10)
March 31, 2005

Sample		THg (ng/L)	%Rec
method blank #1		0.040	-
method blank #2		0.062	-
method blank #3		0.035	-
	Mean	0.046	-
	SD	0.014	-
IPR-1(5.0 ng/L)		5.020	100.4
IPR-2(5.0 ng/L)		5.186	103.7
IPR-3(5.0 ng/L)		5.129	102.6
IPR-4(5.0 ng/L)		5.122	102.4
	Mean	5.114	102.3
	SD	0.069	1.4
MDL-1 (0.5 ng/L)		0.542	108.4
MDL-2 (0.5 ng/L)		0.480	96.0
MDL-3 (0.5 ng/L)		0.533	106.6
MDL-4 (0.5 ng/L)		0.510	102.0
MDL-5 (0.5 ng/L)		0.517	103.4
MDL-6 (0.5 ng/L)		0.514	102.8
MDL-7 (0.5 ng/L)		0.547	109.4
MDL-8 (0.5 ng/L)		0.524	104.8
MDL-9 (0.5 ng/L)		0.515	103.0
	Mean	0.520	104.0
	SD	0.019	3.8
NIST 1641d		15.853	99.0
certified value NIST 1641 d		16.010	-

Matrix Specific MDL Study 3

Objective Determine the method detection limit (MDL) for methyl mercury in water, using distillation method FGS 013, and following the protocols outlined in 40 CFR 136. As detailed below, the MDL for methylmercury in water was determined to be 0.015ng/L.

Analytical Method A calibration was performed according to FGS 070. Briefly, this method incorporates distillation followed by analysis utilizing aqueous phase ethylation, CV purge and trap, thermal desorption, GC separation, pyrolytic decomposition, and detection using CVAFS. The MDL study consisted of the distillation and analysis of nine waters spiked with 0.111ng/L of MHg. The results of these measurements are found in the table below, as well in the raw data sheets (ID # MHg1-050616-1). All results are reported uncorrected for the method blanks.

MDL Calculation Using 40 CFR 136, the MDL was calculated using the standard deviation of the spiked samples, with n=9 replicates (8 degrees of freedom). In this case, the t value of 2.896 was used in the following equation, where s is the standard deviation of the results obtained on samples spiked at a level near the MDL.

$$MDL = t*s$$

The MDL calculated from these data is (2.896)*(0.005), or 0.015ng/L.

Methyl Mercury in Water (MHg) MDL Study (CV-GC-AFS #1)
June 16, 2005

Sample		MeHg (ng/L)	%Rec
method blank #1		0.019	-
method blank #2		0.017	-
method blank #3		0.014	-
	Mean	0.017	-
	SD	0.003	-
MDL #1+ 0.111 ng/L		0.116	104.6
MDL #2+ 0.111 ng/L		0.110	99.3
MDL #3+ 0.111 ng/L		0.113	102.0
MDL #4+ 0.111 ng/L		0.119	107.3
MDL #5+ 0.111 ng/L		0.100	90.4
MDL #6+ 0.111 ng/L		0.114	102.8
MDL #7+ 0.111 ng/L		0.110	99.3
MDL #8+ 0.111 ng/L		0.111	100.2
MDL #9+ 0.111 ng/L		0.110	99.3
	Mean	0.112	100.6
	SD	0.005	0.0
DORM-2 (4470ug/L)		4415	98.8

Appendix B

QC Summary Tables

MDN ANALYSIS QC SUMMARY

ANALYSIS	CALIBRATION R	BRCL BLK CONC	SRM (NIST 1641-TV=8.005 NG/ML	%REC	DUPLICATES BOTTLE ID	RPD	SPIKES BOTTLE ID	REC.	BOTTLE BLANKS BOTTLE ID	CONC
2005-001	1/24/2005	1.00000	0.090 NG/L	7.70 NG/ML	96.2%	MDN0801	0.5%	MDN0801	100.3%	MDN21500.024 NG/BOTTLE
	CVAFS-10			7.72 NG/ML	96.4%	MDN2344	0.8%	MDN2344	94.21%	
						MDN2531	0.2%	MDN2531	99.03%	
2005-002	1/25/2005	1.00000	0.050 NG/L	7.71 NG/ML	96.3%	MDN0276	1.3%	MDN0801	97.4%	
	CVAFS-10			7.72 NG/ML	96.4%	MDN0795	0.7%	MDN0795	99.5%	
						MDN2409	0.3%	MDN2409	98.9%	
2005-003	3/14/2005	0.99990	0.020 NG/L	7.67 NG/ML	95.9%	MDN2035	0.5%	MDN2035	102.9%	MDN25650.108 NG/BOTTLE
	CVAFS-9			7.51 NG/ML	93.8%	MDN2302	2.2%	MDN2302	90.2%	
						MDN2583	0.2%	MDN2583	98.9%	
2005-004	1/31/2005	0.99990	0.060 NG/L	7.99 NG/ML	99.9%	MDN0757	7.2%	MDN0757	103.7%	
	CVAFS-9			7.86 NG/ML	98.3%	MDN2085	2.3%	MDN2085	100.9%	
						MDN2670	0.0%	MDN2670	102.0%	
2005-005	1/27/2005	0.99990	0.040 NG/L	7.91 NG/ML	98.9%	MDN0020	0.1%	MDN0020	102.2%	MDN23960.022 NG/BOTTLE
	CVAFS-10			7.90 NG/ML	98.6%	MDN0952	0.9%	MDN0952	100.6%	
						MDN2665	1.2%	MDN2665	99.8%	
2005-006	2/10/2005	0.99910	0.020 NG/L	8.14 NG/ML	101.7%	MDN2051	5.8%	MDN2051	94.1%	MDN24940.040 NG/BOTTLE
	CVAFS-9			7.60 NG/ML	95.0%	MDN2663	1.4%	MDN2663	115.3%	
						MDN2673	4.1%	MDN2673	101.45%	
2005-007	2/3/2005	0.99980	0.060 NG/L	7.76 NG/ML	97.0%	MDN0183	4.1%	MDN0183	99.5%	
	CVAFS-9			7.87 NG/ML	98.4%	MDN2506	4.0%	MDN2506	101.9%	
						MDN2590	6.2%	MDN2590	100.5%	
2005-008	2/14/2005	0.99960	0.010 NG/L	7.54 NG/ML	94.3%	MDN2246	3.1%	MDN2246	96.8%	
	CVAFS-9			7.46 NG/ML	93.3%	MDN2353	10.0%	MDN2353	94.3%	
						MDN2701	3.1%	MDN2701	93.3%	
2005-009	2/10/2005	0.99990	0.000 NG/L	7.76 NG/ML	96.9%	MDN0184	2.8%	MDN0184	100.6%	
	CVAFS-10			7.60 NG/ML	94.9%	MDN0698	1.1%	MDN0698	96.0%	
						MDN0949	0.1%	MDN0949	99.4%	

2005-010	2/3/2005	0.99990	0.090 NG/L	7.66 NG/ML	95.7%	MDN1964	0.8%	MDN1964	98.1%	MDN19860.027 NG/BOTTLE
	CVAFS-10			7.69 NG/ML	96.1%	MDN2192	0.1%	MDN2192	100.5%	
						MDN2213	3.0%	MDN2213	98.2%	
2005-011	2/4/2005	0.99950	0.050 NG/L	8.24 NG/ML	103.0%	MDN0123	4.0%	MDN0123	105.3%	MDN01180.020 NG/BOTTLE
	CVAFS-9			8.04 NG/ML	100.5%	MDN1918	1.4%	MDN1918	104.4%	
						MDN2260	7.0%	MDN2260	109.1%	
2005-012	2/23/2005	0.99990	0.050 NG/L	7.69 NG/ML	96.1%	MDN0639	5.6%	MDN0639	96.6%	MDN22440.024 NG/BOTTLE
	CVAFS-9			7.11 NG/ML	88.9%	MDN2547	1.9%	MDN2547	99.6%	
						MDN2678	1.2%	MDN2678	92.2%	
2005-013	2/14/2005	0.99960	0.020 NG/L	7.68 NG/ML	96.0%	MDN1914	0.7%	MDN1914	99.0%	
	CVAFS-10			7.92 NG/ML	98.9%	MDN2559	0.0%	MDN2559	94.6%	
						MDN2638	3.5%	MDN2638	99.9%	
2005-014	2/16/2005	0.99960	0.000 NG/L	8.01 NG/ML	100.1%	MDN0824	1.6%	MDN0824	96.3%	MDN02960.021 NG/BOTTLE
	CVAFS-9			7.15 NG/ML	89.4%	MDN0916	4.3%	MDN0916	106.0%	
						MDN2058	2.3%	MDN2058	96.1%	
2005-015	2/17/2005	0.99920	0.030 NG/L	7.83 NG/ML	97.8%	MDN2146	3.2%	MDN2146	100.1%	
	CVAFS-10			7.71 NG/ML	96.3%	MDN2330	3.5%	MDN2330	102.4%	
						MDN2643	4.3%	MDN2643	100.1%	
2005-016	3/15/2005	0.99980	0.010 NG/L	7.29 NG/ML	91.1%	MDN0655	1.0%	MDN0655	101.6%	MDN24460.016 NG/BOTTLE
	CVAFS-9			7.87 NG/ML	98.3%	MDN2049	0.0%	MDN2049	94.0%	
						MDN2668	2.1%	MDN2668	97.8%	
2005-017	3/9/2005	1.00000	0.020 NG/L	7.95 NG/ML	99.3%	MDN0284	3.3%	MDN0284	104.6%	MDN08160.021 NG/BOTTLE
	CVAFS-9			7.82 NG/ML	97.7%	MDN2201	1.3%	MDN2201	101.3%	
						MDN2550	3.4%	MDN2550	98.9%	
2005-018	2/25/2005	0.99980	0.030 NG/L	7.75 NG/ML	96.8%	MDN0673	5.5%	MDN0673	96.7%	
	CVAFS-9			7.66 NG/ML	95.8%	MDN0741	6.9%	MDN0741	103.9%	
						MDN2189	3.6%	MDN2189	97.6%	
2005-019	2/25/2005	1.00000	0.000 NG/L	7.76 NG/ML	97.0%	MDN0927	0.4%	MDN0927	98.8%	
	CVAFS-10			7.61 NG/ML	95.1%	MDN1947	2.2%	MDN1947	96.0%	
						MDN2437	1.0%	MDN2437	104.7%	
2005-020	3/24/2005	0.99990	0.030 NG/L	8.02 NG/ML	100.2%	MDN2482	4.1%	MDN2482	104.6%	MDN25070.010 NG/BOTTLE
	CVAFS-9			7.78 NG/ML	97.2%	MDN2585	6.8%	MDN2585	100.2%	
						MDN2597	0.0%	MDN2597	101.5%	

2005-021	3/24/2005	0.99990	0.030 NG/L	7.65 NG/ML	95.6%	MDN0676	5.9%	MDN0676	97.2%	
	CVAFS-10			7.62 NG/ML	95.2%	MDN0820	0.0%	MDN0820	98.9%	
						MDN0959	2.3%	MDN0959	100.2%	
2005-022	3/9/2005	0.99940	0.030 NG/L	7.86 NG/ML	98.2%	MDN2345	0.3%	MDN2345	101.6%	
	CVAFS-10			7.87 NG/ML	98.3%	MDN2365	0.7%	MDN2365	103.4%	
						MDN2473	0.5%	MDN2473	100.7%	
2005-023	3/10/2005	0.99980	0.010 NG/L	7.99 NG/ML	99.9%	MDN0931	11.9%	MDN0931	97.4%	MDN08980.018 NG/BOTTLE
	CVAFS-9			7.84 NG/ML	97.9%	MDN2088	0.1%	MDN2088	104.5%	
						MDN2497	2.8%	MDN2497	103.1%	
2005-024	3/10/2005	1.00000	0.040 NG/L	7.59 NG/ML	94.9%	MDN2101	2.0%	MDN2101	93.4%	
	CVAFS-10			7.30 NG/ML	91.2%	MDN2501	0.7%	MDN2501	96.4%	
						MDN2691	6.2%	MDN2691	91.3%	
2005-025	3/15/2005	1.00000	0.040 NG/L	7.48 NG/ML	93.4%	MDN0795	3.3%	MDN0795	97.4%	MDN25080.020 NG/BOTTLE
	CVAFS-10			7.48 NG/ML	93.4%	MDN2050	0.9%	MDN2050	97.7%	
						MDN2578	5.6%	MDN2578	81.4%	
2005-026	3/18/2005	0.99970	0.060 NG/L	7.78 NG/ML	97.3%	MDN1950	2.8%	MDN1950	92.4%	
	CVAFS-9			7.39 NG/ML	92.4%	MDN2666	2.7%	MDN2666	99.9%	
						MDN2671	5.2%	MDN2671	98.1%	
2005-027	3/18/2005	1.00000	0.040 NG/L	7.79 NG/ML	97.3%	MDN0132	0.0%	MDN0132	99.3%	MDN04480.020 NG/BOTTLE
	CVAFS-10			7.59 NG/ML	94.8%	MDN0405	0.3%	MDN0405	98.6%	
						MDN1969	0.5%	MDN1969	99.1%	
2005-028	3/25/2005	0.99910	0.020 NG/L	8.00 NG/ML	100.0%	MDN0262	2.3%	MDN0262	103.8%	MDN01170.018 NG/BOTTLE
	CVAFS-9			7.54 NG/ML	94.2%	MDN2448	11.6%	MDN2448	102.1%	
						MDN2711	0.7%	MDN2711	104.4%	
2005-029	3/22/2005	0.99970	0.020 NG/L	7.83 NG/ML	97.8%	MDN0899	1.0%	MDN0899	101.0%	
	CVAFS-10			7.75 NG/ML	96.9%	MDN2379	0.4%	MDN2379	101.1%	
						MDN2679	11.6%	MDN2679	93.0%	
2005-030	3/25/2005	0.99990	0.030 NG/L	7.78 NG/ML	97.2%	MDN0853	0.7%	MDN0853	98.0%	MDN08200.041 NG/BOTTLE
	CVAFS-10			7.44 NG/ML	92.9%	MDN0857	15.6%	MDN0857	95.5%	MDN24520.026 NG/BOTTLE
						MDN1976	0.7%	MDN1976	110.7%	
2005-031	3/23/2005	0.99970	0.030 NG/L	7.87 NG/ML	98.4%	MDN1949	2.9%	MDN1949	102.4%	
	CVAFS-9			7.84 NG/ML	98.0%	MDN2502	1.6%	MDN2502	100.6%	
						MDN2716	1.8%	MDN2716	96.9%	

2005-032	3/29/2005	0.99990	0.030 NG/L	7.61 NG/ML	95.1%	MDN2601	1.4%	MDN2601	97.0%	
	CVAFS-10			7.61 NG/ML	95.1%	MDN2659	0.4%	MDN2659	94.4%	
						MDN3016	3.0%	MDN3016	98.0%	
2005-033	3/23/2005	0.99980	0.030 NG/L	2.83 NG/ML	35.4%	MDN0988	0.4%	MDN0988	100.3%	MDN30070.018 NG/BOTTLE
	CVAFS-10			7.75 NG/ML	96.8%	MDN2078	1.1%	MDN2078	99.8%	
						MDN2514	0.3%	MDN2514	102.1%	
2005-034	3/31/2005	0.99980	0.030 NG/L	7.57 NG/ML	94.6%	MDN0123	0.3%	MDN0123	101.3%	
	CVAFS-9			7.57 NG/ML	94.6%	MDN2254	1.8%	MDN2254	97.9%	
						MDN2531	0.5%	MDN2531	93.1%	
2005-035	4/3/2005	0.99970	0.050 NG/L	7.93 NG/ML	99.1%	MDN2150	8.7%	MDN2150	103.6%	MDN22480.023 NG/BOTTLE
	CVAFS-9			7.51 NG/ML	93.9%	MDN2534	1.5%	MDN2534	99.7%	
						MDN3008	1.6%	MDN3008	98.9%	
2005-036	4/3/2005	0.99990	0.010 NG/L	7.75 NG/ML	96.8%	MDN0185	2.9%	MDN0185	96.2%	MDN19660.028 NG/BOTTLE
	CVAFS-10			7.55 NG/ML	94.4%	MDN0688	3.5%	MDN0688	99.8%	
						MDN0827	4.8%	MDN0827	100.7%	
2005-037	4/8/2005	0.99990	0.040 NG/L	7.49 NG/ML	93.6%	MDN0668	1.1%	MDN0668	105.5%	MDN19520.026 NG/BOTTLE
	CVAFS-9			7.63 NG/ML	95.4%	MDN1710	1.3%	MDN1710	101.65%	
						MDN2205	0.2%	MDN2205	92.8%	
2005-038	4/8/2005	0.99990	-0.260 NG/L	7.67 NG/ML	95.9%	MDN2477	0.1%	MDN2477	98.5%	MDN24800.018 NG/BOTTLE
	CVAFS-10			7.59 NG/ML	94.9%	MDN2673	1.8%	MDN2673	102.2%	MDN17420.016 NG/BOTTLE
						MDN3000	0.5%	MDN3000	100.4%	
2005-039	4/11/2005	0.99940	0.070 NG/L	7.68 NG/ML	95.9%	MDN0646	0.2%	MDN0646	99.2%	MDN03980.026 NG/BOTTLE
	CVAFS-10					MDN0767	1.9%	MDN0767	104.6%	
						MDN2559	3.3%	MDN2559	105.5%	
2005-040	4/12/2005	0.99970	0.000 NG/L	7.63 NG/ML	95.4%	MDN2085	0.2%	MDN2085	99.5%	
	CVAFS-10			7.72 NG/ML	96.5%	MDN2322	2.3%	MDN2322	101.6%	
						MDN2455	0.0%	MDN2455	100.2%	
2005-041	4/18/2005	1.00000	0.030 NG/L	7.69 NG/ML	96.1%	MDN0296	10.7%	MDN0296	95.5%	
	CVAFS-9			7.21 NG/ML	90.1%	MDN0410	3.2%	MDN0410	98.4%	
						MDN2167	7.6%	MDN2067	101.0%	
2005-042	4/19/2005	0.99980	0.040 NG/L	7.62 NG/ML	95.2%	MDN0120	3.5%	MDN20120	99.7%	
	CVAFS-10			7.45 NG/ML	93.1%	MDN1983	2.0%	MDN1983	100.3%	
						MDN1995	2.3%	MDN1995	99.4%	

2005-043	4/20/2005	0.99990	0.010 NG/L	7.56 NG/ML	94.4%	MDN0797	1.1%	MDN0797	92.8%	MDN25650.014 NG/BOTTLE
	CVAFS-9			7.28 NG/ML	90.9%	MDN0979	2.8%	MDN0979	100.1%	MDN06560.014 NG/BOTTLE
						MDN2691	2.7%	MDN2691	95.4%	
2005-044	4/20/2005	1.00000	0.040 NG/L	7.60 NG/ML	95.0%	MDN0931	11.9%	MDN0931	97.4%	
	CVAFS-10			7.54 NG/ML	94.3%	MDN2260	0.7%	MDN2260	98.3%	
						MDN2605	1.2%	MDN2605	98.0%	
2005-045	4/28/2005	1.00000	0.040 NG/L	7.65 NG/ML	95.6%	MDN0937	0.8%	MDN0937	102.5%	MDN30040.016 NG/BOTTLE
	CVAFS-9			7.28 NG/ML	90.9%	MDN2525	1.3%	MDN2525	97.7%	
						MDN2613	2.3%	MDN2613	95.6%	
2005-046	4/26/2005	1.00000	0.050 NG/L	7.67 NG/ML	95.8%	MDN2137	3.1%	MDN2137	93.6%	MDN22670.041 NG/BOTTLE
	CVAFS-9			7.15 NG/ML	89.4%	MDN2235	2.1%	MDN2235	100.5%	
						MDN2533	1.8%	MDN2533	91.6%	
2005-047	5/2/2005	1.00000	0.050 NG/L	7.71 NG/ML	96.3%	MDN1996	2.5%	MDN1996	98.5%	MDN19920.017 NG/BOTTLE
	CVAFS-10			7.69 NG/ML	96.1%	MDN2360	14.6%	MDN2360	105.0%	
						MDN2724	3.1%	MDN2724	100.7%	
2005-048	5/2/2005	0.99990	0.050 NG/L	7.71 NG/ML	96.4%	MDN0494	1.2%	MDN0494	100.3%	
	CVAFS-9			7.32 NG/ML	91.4%	MDN0800	0.4%	MDN0800	95.1%	
						MDN0836	1.6%	MDN0836	96.7%	
2005-049	4/27/2005	1.00000	0.080 NG/L	7.69 NG/ML	96.1%	MDN1914	2.0%	MDN1914	97.2%	MDN09140.018 NG/BOTTLE
	CVAFS-10			7.61 NG/ML	95.1%	MDN2289	3.4%	MDN2289	100.9%	
						MDN2365	0.9%	MDN2365	95.6%	
2005-050	5/3/2005	0.99990	0.050 NG/L	7.59 NG/ML	94.9%	MDN0791	0.4%	MDN0791	94.7%	MDN23310.027 NG/BOTTLE
	CVAFS-10			7.48 NG/ML	93.4%	MDN0833	3.6%	MDN0833	98.8%	
						MDN2562	0.7%	MDN2562	99.3%	
2005-051	5/4/2005	0.99990	0.020 NG/L	7.63 NG/ML	95.4%	MDN0765	1.8%	MDN0765	94.8%	
	CVAFS-9			7.17 NG/ML	89.6%	MDN0811	0.5%	MDN0811	93.7%	
						MDN2242	2.2%	MDN2242	101.6%	
2005-052	5/5/2005	0.99990	0.030 NG/L	7.60 NG/ML	95.0%	MDN0148	0.3%	MDN0148	98.3%	MDN25650.026 NG/BOTTLE
	CVAFS-10			7.65 NG/ML	95.6%	MDN2345	1.0%	MDN2345	100.0%	
						MDN2638	1.5%	MDN2638	98.2%	
2005-053	5/4/2005	0.99990	0.030 NG/L	7.68 NG/ML	96.0%	MDN2003	2.4%	MDN2003	99.3%	
	CVAFS-10			7.62 NG/ML	95.3%	MDN2193	1.6%	MDN2193	96.5%	
						MDN2649	1.5%	MDN2649	101.0%	

2005-054	5/10/2005	0.99990	0.020 NG/L	7.64 NG/ML	95.4%	MDN1913	0.9%	MDN1913	96.2%	MDN04100.013 NG/BOTTLE
	CVAFS-9			7.24 NG/ML	90.5%	MDN2209	0.2%	MDN2209	91.2%	
						MDN2598	2.8%	MDN2598	101.5%	
2005-055	5/11/2005	0.99970	0.020 NG/L	7.69 NG/ML	96.1%	MDN2352	1.9%	MDN2352	103.5%	
	CVAFS-9			7.59 NG/ML	94.8%	MDN2412	2.7%	MDN2412	100.4%	
						MDN2553	0.4%	MDN2553	92.6%	
2005-056	5/11/2005	0.99990	0.020 NG/L	7.78 NG/ML	97.3%	MDN0102	1.9%	MDN0102	94.7%	MDN22840.019 NG/BOTTLE
	CVAFS-10			7.81 NG/ML	97.6%	MDN0267	1.9%	MDN0267	103.2%	MDN23530.036 NG/BOTTLE
						MDN0819	0.4%	MDN0819	105.4%	
2005-057	5/16/2005	0.99980	0.030 NG/L	7.78 NG/ML	97.3%	MDN0180	0.0%	MDN0180	95.0%	
	CVAFS-9			7.53 NG/ML	94.1%	MDN2712	1.4%	MDN2712	102.4%	
						MDN2717	0.5%	MDN2717	101.9%	
2005-058	5/18/2005	0.99970	0.030 NG/L	7.59 NG/ML	94.8%	MDN1922	4.7%	MDN1922	94.9%	
	CVAFS-9			7.55 NG/ML	94.3%	MDN2243	3.3%	MDN2243	102.7%	
						MDN2709	2.2%	MDN2709	100.7%	
2005-059	5/18/2005	0.99990	0.030 NG/L	7.72 NG/ML	96.5%	MDN2438	0.7%	MDN2438	100.5%	MDN02560.015 NG/BOTTLE
	CVAFS-10			7.71 NG/ML	96.4%	MDN2616	2.0%	MDN2616	98.3%	MDN07650.017 NG/BOTTLE
						MDN2666	2.2%	MDN2666	100.4%	
2005-060	5/20/2005	0.99940	0.020 NG/L	7.60 NG/ML	95.0%	MDN2460	6.4%	MDN2460	102.5%	MDN17550.019 NG/BOTTLE
	CVAFS-9			7.58 NG/ML	94.8%	MDN2559	7.5%	MDN2559	105.5%	
						MDN3017	0.7%	MDN3017	98.2%	
2005-061	5/20/2005	1.00000	0.030 NG/L	7.72 NG/ML	96.5%	MDN0668	1.1%	MDN0668	100.0%	
	CVAFS-10			7.52 NG/ML	93.9%	MDN2120	0.7%	MDN2120	101.3%	
						MDN2670	1.0%	MDN2670	98.6%	
2005-062	5/26/2005	1.00000	0.050 NG/L	7.58 NG/ML	94.8%	MDN0698	2.0%	MDN0698	89.3%	MDN20730.012 NG/BOTTLE
	CVAFS-9			6.98 NG/ML	87.2%	MDN0843	0.9%	MDN0843	91.9%	
						MDN2461	1.1%	MDN2461	96.5%	
2005-063	5/26/2005	1.00000	0.010 NG/L	7.68 NG/ML	96.0%	MDN0116	2.3%	MDN0116	99.2%	MDN06760.016 NG/BOTTLE
	CVAFS-10			7.60 NG/ML	95.0%	MDN0693	1.8%	MDN0693	97.0%	
						MDN3005	0.3%	MDN3055	92.1%	
2005-064	5/27/2005	0.99980	0.030 NG/L	7.16 NG/ML	89.4%	MDN0495	8.7%	MDN0495	76.3%	
	CVAFS-9			6.94 NG/ML	86.8%	MDN2097	0.9%	MDN2097	83.6%	
						MDN2626	1.5%	MDN2626	95.7%	

2005-065	5/27/2005	1.00000	0.030 NG/L	7.84 NG/ML	97.9%	MDN0187	1.7%	MDN0187	101.6%	MDN02670.016 NG/BOTTLE
	CVAFS-10			7.51 NG/ML	93.9%	MDN1901	1.3%	MDN1901	97.8%	
						MDN1930	1.3%	MDN1930	94.6%	
2005-066	6/9/2005	1.00000	0.030 NG/L	7.73 NG/ML	96.6%	MDN9902	3.9%	MDN9902	100.3%	
	CVAFS-10			7.50 NG/ML	93.8%	MDN9903	0.2%	MDN9903	91.9%	
						MDN9905	1.8%	MDN9905	98.6%	
2005-067	6/7/2005	1.00000	0.030 NG/L	7.39 NG/ML	92.4%	MDN2538	9.2%	MDN2538	97.7%	MDN28180.016 NG/BOTTLE
	CVAFS-9			6.77 NG/ML	84.6%	MDN2600	2.9%	MDN2600	85.5%	
						MDN9909	7.0%	MDN9909	86.6%	
2005-068	6/7/2005	1.00000	0.010 NG/L	7.71 NG/ML	96.4%	MDN0834	4.9%	MDN0834	99.1%	
	CVAFS-10			7.59 NG/ML	94.9%	MDN2053	1.0%	MDN2053	90.7%	
						MDN2246	1.7%	MDN2246	99.8%	
2005-069	6/9/2005	0.99970	0.040 NG/L	7.59 NG/ML	94.9%	MDN0864	0.8%	MDN0864	90.5%	
	CVAFS-9			6.96 NG/ML	87.0%	MDN0894	2.2%	MDN0894	91.7%	
						MDN2199	5.4%	MDN2199	90.3%	
2005-070	6/13/2005	0.99990	0.020 NG/L	7.24 NG/ML	90.5%	MDN0427	4.0%	MDN0427	87.8%	MDN21600.011 NG/BOTTLE
	CVAFS-9			7.14 NG/ML	89.2%	MDN2261	2.6%	MDN2261	90.2%	
						MDN2533	4.7%	MDN2533	92.3%	
2005-071	6/13/2005	1.00000	0.010 NG/L	7.67 NG/ML	95.9%	MDN2016	15.6%	MDN2016	89.3%	
	CVAFS-10			7.43 NG/ML	92.9%	MDN2522	8.2%	MDN2522	94.6%	
						MDN2612	3.4%	MDN2612	99.9%	
2005-072	6/14/2005	1.00000	0.030 NG/L	7.72 NG/ML	96.5%	MDN2244	1.8%	MDN2211	98.9%	MDN02920.014 NG/BOTTLE
	CVAFS-10			7.60 NG/ML	95.0%	MDN2279	0.5%	MDN2279	94.3%	
						MDN2470	2.9%	MDN2470	96.9%	
2005-073	6/14/2005	0.99890	0.030 NG/L	7.81 NG/ML	97.6%	MDN0770	2.2%	MDN0770	93.4%	
	CVAFS-9			7.36 NG/ML	91.9%					
2005-074	6/15/2005	1.00000	0.020 NG/L	7.78 NG/ML	97.2%	MDN0800	3.9%	MDN0800	97.9%	
	CVAFS-10			7.63 NG/ML	95.3%	MDN2298	2.1%	MDN2298	104.5%	
						MDN2535	1.3%	MDN2535	99.0%	
2005-075	6/15/2005	0.99980	0.030 NG/L	7.90 NG/ML	98.8%	MDN0672	0.6%	MDN0672	95.6%	
	CVAFS-9			7.40 NG/ML	92.4%	MDN0758	5.7%	MDN0758	99.7%	
						MDN2266	1.9%	MDN2266	93.8%	

2005-076	6/21/2005	0.99980	0.030 NG/L	7.49 NG/ML	93.6%	MDN0297	3.8%	MDN0297	85.3%	MDN20090.016 NG/BOTTLE
	CVAFS-9			7.07 NG/ML	88.4%	MDN2015	4.3%	MDN2015	95.5%	
						MDN2146	3.1%	MDN2146	100.8%	
2005-077	6/21/2005	1.00000	0.020 NG/L	7.76 NG/ML	97.0%	MDN2360	2.7%	MDN2360	98.1%	
	CVAFS-10			7.70 NG/ML	96.2%	MDN2466	2.5%	MDN2466	93.5%	
						MDN2498	1.5%	MDN2498	99.7%	
2005-078	6/23/2005	1.00000	0.020 NG/L	7.73 NG/ML	96.6%	MDN2336	0.3%	MDN2336	95.9%	MDN24720.027 NG/BOTTLE
	CVAFS-10			7.45 NG/ML	93.1%	MDN2349	1.1%	MDN2349	98.3%	MDN19680.025 NG/BOTTLE
						MDN2397	2.1%	MDN2397	97.7%	
2005-079	6/20/2005	1.00000	0.030 NG/L	7.42 NG/ML	92.8%	MDN1979	1.2%	MDN1979	93.8%	
	CVAFS-9					MDN2488	3.6%	MDN2488	82.3%	
2005-080	6/23/2005	1.00000	0.030 NG/L	6.97 NG/ML	87.1%	MDN0666	2.0%	MDN0666	92.0%	
	CVAFS-9			7.33 NG/ML	91.6%	MDN2153	3.0%	MDN2153	82.9%	
						MDN2542	2.6%	MDN2542	92.5%	
2005-081	6/28/2005	1.00000	0.050 NG/L	7.45 NG/ML	93.1%	MDN1924	2.5%	MDN1942	96.5%	MDN22950.026 NG/BOTTLE
	CVAFS-9			7.10 NG/ML	88.8%	MDN2447	3.0%	MDN2447	95.1%	
						MDN2563	0.5%	MDN2563	86.1%	
2005-082	6/28/2005	1.00000	0.040 NG/L	7.78 NG/ML	97.2%	MDN0646	0.2%	MDN0646	99.2%	
	CVAFS-10			7.46 NG/ML	93.3%	MDN0973	1.0%	MDN0973	99.5%	
						MDN2725	0.8%	MDN2725	97.0%	
2005-083	7/1/2005	0.99980	0.040 ng/L	7.58 ng/mL	94.7%	MDN0190	2.7%	MDN0190	90.4%	
	CVAFS-9			7.41 ng/mL	92.6%	MDN1997	1.7%	MDN1997	92.5%	
						MDN2577	0.7%	MDN2577	86.0%	
2005-084	7/6/2005	0.99990	0.060 ng/L	7.38 ng/mL	92.3%	MDN2192	1.9%	MDN2192	92.5%	MDN2010 0.023 ng/Bottle
	CVAFS-9			7.24 ng/mL	90.4%	MDN2484	1.2%	MDN2484	89.7%	MDN2673 0.029 ng/Bottle
						MDN9914	6.3%	MDN9914	90.3%	MDN2054 0.019 ng/Bottle
2005-085	7/7/2005	0.99990	0.060 ng/L	7.22 ng/mL	90.2%	MDN0823	4.7%	MDN0823	92.7%	
	CVAFS-9			7.23 ng/mL	90.3%	MDN2014	0.9%	MDN2014	93.2%	
						MDN2762	3.6%	MDN2762	83.8%	
2005-086	7/7/2005	1.00000	0.040 ng/L	7.76 ng/mL	96.9%	MDN0945	0.4%	MDN0945	92.5%	MDN2101 0.025 ng/Bottle
	CVAFS-10			7.60 ng/mL	95.0%	MDN1937	0.4%	MDN1937	99.8%	MDN2134 0.042 ng/Bottle
						MDN2766	3.4%	MDN2766	95.8%	

2005-087	7/12/2005	0.99990	0.050 ng/L	7.39 ng/mL	92.4%	MDN2454	1.0%	MDN2454	79.3%		
	CVAFS-9			7.28 ng/mL	91.0%	MDN2735	1.3%	MDN2735	96.1%		
						MDN2754	1.3%	MDN2754	92.7%		
2005-088	7/12/2005	1.00000	0.050 ng/L	7.75 ng/mL	96.9%	MDN0257	3.0%	MDN0257	95.3%	MDN2503	0.033 ng/Bottle
	CVAFS-10			7.56 ng/mL	94.4%	MDN2322	1.5%	MDN2322	93.4%		
						MDN2765	2.0%	MDN2765	96.5%		
2005-089	7/14/2005	0.99690	0.260 ng/L	7.94 ng/mL	99.3%	MDN0843	3.2%	MDN0843	103.7%		
	CVAFS-9			7.91 ng/mL	98.9%	MDN2369	1.6%	MDN2369	101.1%		
						MDN2519	2.3%	MDN2549	118.5%		
2005-090	7/14/2005	1.00000	0.350 ng/L	7.78 ng/mL	97.2%	MDN1904	1.9%	MDN1904	91.6%	MDN2576	0.021 ng/Bottle
	CVAFS-10			7.58 ng/mL	94.7%	MDN2428	1.9%	MDN2428	97.8%		
						MDN2587	4.3%	MDN2587	98.3%		
2005-091	7/19/2005	1.00000	0.030 ng/L	7.59 ng/mL	94.8%	MDN0850	0.9%	MDN0850	95.4%		
	CVAFS-10			7.60 ng/mL	95.0%	MDN2807	0.3%	MDN2807	101.2%		
						MDN2813	2.6%	MDN2813	94.7%		
2005-092	7/26/2005	0.99990	0.060 ng/L	7.78 ng/mL	97.3%	MDN0633	0.2%	MDN0633	97.7%		
	CVAFS-10			7.36 ng/mL	92.0%	MDN1972	0.5%	MDN1972	97.2%		
						MDN2717	0.0%	MDN2717	98.7%		
2005-093	8/15/2005	0.99990	0.050 ng/L	7.15 ng/mL	89.4%	MDN2159	3.9%	MDN2159	83.4%	MDN1979	0.027 ng/Bottle
	CVAFS-9			7.00 ng/mL	87.5%	MDN2271	5.6%	MDN2271	93.0%	MDN2569	0.033 ng/Bottle
						MDN2456	3.9%	MDN2456	93.2%		
2005-094	7/28/2005	0.99960	0.090 ng/L	7.72 ng/mL	96.5%	MDN1983	2.8%	MDN1983	87.5%		
	CVAFS-9			7.12 ng/mL	89.0%	MDN2429	4.7%	MDN2429	90.8%		
						MDN2561	4.9%	MDN2561	99.5%		
2005-095	7/29/2005	0.99990	0.050 ng/L	7.20 ng/mL	89.9%	MDN0155	4.8%	MDN0155	80.5%		
	CVAFS-9			6.99 ng/mL	87.4%	MDN2316	2.5%	MDN2316	86.9%		
						MDN2679	5.2%	MDN2679	84.5%		
2005-096	7/29/2005	1.00000	0.050 ng/L	7.77 ng/mL	97.1%	MDN0075	0.2%	MDN0075	97.6%		
	CVAFS-10			7.28 ng/mL	90.9%	MDN2354	1.7%	MDN2354	92.7%		
						MDN2712	2.2%	MDN2712	92.1%		
2005-097	8/2/2005	0.99990	0.060 ng/L	7.21 ng/mL	90.1%	MDN0795	7.0%	MDN0795	87.2%	MDN2084	0.032 ng/Bottle
	CVAFS-9			6.78 ng/mL	84.8%	MDN2099	3.7%	MDN2099	87.5%	MDN0970	0.027 ng/Bottle
						MDN2112	4.6%	MDN2112	84.3%	MDN2593	0.031 ng/Bottle

2005-098	8/2/2005	0.99980	0.100 ng/L	7.73 ng/mL	96.6%	MDN0761	0.2%	MDN0761	96.6%	MDN2703	0.048 ng/Bottle
	CVAFS-10			7.62 ng/mL	95.2%	MDN2185	0.6%	MDN2185	101.3%		
						MDN2670	1.3%	MDN2670	97.6%		
2005-099	8/3/2005	1.00000	0.060 ng/L	7.71 ng/mL	96.3%	MDN0414	0.4%	MDN0414	96.5%		
	CVAFS-10			7.64 ng/mL	95.4%	MDN1955	2.0%	MDN1955	93.8%		
						MDN2548	3.6%	MDN2548	100.2%		
2005-100	8/3/2005	0.99990	0.060 ng/L	7.11 ng/mL	88.8%	MDN0649	4.1%	MDN0649	80.8%		
	CVAFS-9			7.21 ng/mL	90.1%	MDN0871	0.4%	MDN0871	95.8%		
						MDN3003	5.7%	MDN3003	88.1%		
2005-101	8/9/2005	0.99980	0.050 ng/L	7.23 ng/mL	90.3%	MDN0956	5.1%	MDN0956	81.1%		
	CVAFS-9			7.24 ng/mL	90.4%	MDN2184	3.9%	MDN2184	89.0%		
						MDN2572	2.2%	MDN2572	91.5%		
2005-102	8/9/2005	1.00000	0.060 ng/L	7.73 ng/mL	96.6%	MDN0937	1.5%	MDN0937	99.6%	MDN2813	0.026 ng/Bottle
	CVAFS-10			7.59 ng/mL	94.9%	MDN2406	1.4%	MDN2406	92.8%		
						MDN2612	1.4%	MDN2612	98.9%		
2005-103	8/10/2005	0.99990	0.060 ng/L	7.23 ng/mL	90.3%	MDN0666	2.0%	MDN0666	92.0%		
	CVAFS-9			7.14 ng/mL	89.3%	MDN0772	0.9%	MDN0772	95.4%		
						MDN2775	2.1%	MDN2775	98.5%		
2005-104	8/10/2005	1.00000	0.060 ng/L	7.72 ng/mL	96.4%	MDN2205	0.7%	MDN2205	100.0%	MDN2649	0.032 ng/Bottle
	CVAFS-10					MDN2474	1.0%	MDN2474	99.0%		
						MDN2477	0.8%	MDN2477	96.6%		
2005-105	8/16/2005	0.99980	0.050 ng/L	7.16 ng/mL	89.5%	MDN0925	4.1%	MDN0925	97.6%		
	CVAFS-9			7.24 ng/mL	90.4%	MDN2168	5.8%	MDN2168	87.3%		
						MDN2786	7.3%	MDN2786	92.1%		
2005-106	8/16/2005	0.99990	0.050 ng/L	7.49 ng/mL	93.6%	MDN0734	2.0%	MDN0734	96.8%	MDN0979	0.040 ng/Bottle
	CVAFS-10			6.88 ng/mL	85.9%	MDN0894	0.8%	MDN0894	89.3%		
						MDN2518	6.7%	MDN2518	83.9%		
2005-107	8/17/2005	0.99990	0.050 ng/L	7.19 ng/mL	89.9%	MDN0936	3.4%	MDN0936	94.4%	MDN0831	0.022 ng/Bottle
	CVAFS-9			7.20 ng/mL	89.9%	MDN2063	3.4%	MDN2063	78.0%		
						MDN2490	3.3%	MDN2490	101.6%		
2005-108	8/18/2005	0.99980	0.050 ng/L	7.03 ng/mL	87.9%	MDN2302	2.2%	MDN2302	90.2%		
	CVAFS-9					MDN2645	4.5%	MDN2645	87.1%		

2005-109	8/25/2005	0.99950	0.050 ng/L	7.09 ng/mL	88.6%	MDN2009	16.4%	MDN2009	81.9%			
	CVAFS-9											
2005-110	8/25/2005	0.99950	0.030 ng/L	6.61 ng/mL	82.6%	MDN2280	5.0%	MDN2280	87.4%			
	CVAFS-10											
2005-111	8/26/2005	0.99990	0.030 ng/L	7.41 ng/mL	92.6%	MDN0667	0.5%	MDN0667	93.1%			
	CVAFS-9			7.13 ng/mL	89.1%	MDN2566	4.3%	MDN2566	98.1%			
						MDN2596	0.4%	MDN2596	98.4%			
2005-112	9/1/2005	1.00000	0.040 ng/L	7.40 ng/mL	92.4%	MDN2299	15.5%	MDN2266	83.4%			
	CVAFS-9			7.12 ng/mL	88.9%	MDN2413	5.3%	MDN2413	89.7%			
						MDN2746	1.5%	MDN2746	99.3%			
2005-113	9/9/2005	0.99800	0.000 ng/L	7.18 ng/mL	89.7%	MDN0741	13.2%	MDN0741	107.9%	MDN2127	0.037 ng/Bottle	
	CVAFS-9			7.68 ng/mL	95.9%	MDN0954	20.4%	MDN0954	113.8%	MDN1953	0.031 ng/Bottle	
						MDN2685	3.9%	MDN2685	109.6%			
2005-114	9/7/2005	0.99970	0.030 ng/L	7.35 ng/mL	91.9%	MDN0156	3.2%	MDN0156	103.3%	MDN2214	0.023 ng/Bottle	
	CVAFS-9			7.76 ng/mL	97.0%	MDN1902	3.8%	MDN1902	94.9%			
						MDN2472	7.1%	MDN2472	100.1%			
2005-115	9/8/2005	1.00000	0.020 ng/L	7.50 ng/mL	93.8%	MDN2443	2.4%	MDN2443	93.3%			
	CVAFS-10			6.96 ng/mL	86.9%	MDN2498	1.2%	MDN2498	93.8%			
						MDN2718	2.1%	MDN2718	93.9%			
2005-116	9/6/2005	0.99960	0.020 ng/L	7.12 ng/mL	89.0%	MDN0783	2.1%	MDN0783	94.4%			
	CVAFS-10			7.25 ng/mL	90.6%	MDN2277	4.0%	MDN2277	90.5%			
						MDN2708	1.0%	MDN2708	99.7%			
2005-117	9/2/2005	1.00000	0.040 ng/L	7.45 ng/mL	93.1%	MDN0163	1.8%	MDN0163	96.9%	MDN2368	-0.070 ng/Bottle	
	CVAFS-10			7.00 ng/mL	87.4%	MDN0980	1.0%	MDN0980	92.3%	MDN2262	0.020 ng/Bottle	
						MDN2753	6.1%	MDN2753	92.8%			
2005-118	9/7/2005	0.99990	0.080 ng/L	7.46 ng/mL	93.3%	MDN0739	4.4%	MDN0739	98.6%	MDN0688	0.043 ng/Bottle	
	CVAFS-10			7.45 ng/mL	93.1%	MDN2314	1.3%	MDN2314	100.1%	MDN0899	0.040 ng/Bottle	
						MDN2397	0.4%	MDN2397	94.2%			
2005-119	9/5/2005	0.99900	0.030 ng/L	7.40 ng/mL	92.5%	MDN0196	1.6%	MDN0196	97.5%			
	CVAFS-10			7.20 ng/mL	89.9%	MDN2654	0.6%	MDN2654	95.7%			
						MDN2717	0.9%	MDN2717	91.6%			

2005-120	9/9/2005	1.00000	0.070 ng/L	7.57 ng/mL	94.6%	MDN0151	1.5%	MDN0151	100.4%		
	CVAFS-10			7.23 ng/mL	90.4%	MDN2211	0.7%	MDN2211	96.3%		
						MDN2388	0.9%	MDN2388	99.0%		
2005-121	9/8/2005	0.99950	0.020 ng/L	7.54 ng/mL	94.3%	MDN2267	1.0%	MDN2267	101.0%		
	CVAFS-9			7.22 ng/mL	90.2%	MDN2328	13.4%	MDN2328	100.2%		
						MDN2648	5.4%	MDN2648	84.0%		
2005-122	9/12/2005	0.99860	0.030 ng/L	7.16 ng/mL	89.5%	MDN0442	6.9%	MDN0442	100.0%		
	CVAFS-9					MDN1997	1.7%	MDN1997	92.5%		
2005-123	9/13/2005	0.99940	0.050 ng/L	7.14 ng/mL	89.2%	MDN1750	12.3%	MDN1750	85.9%	MDN0667	0.017 ng/Bottle
	CVAFS-9			7.14 ng/mL	89.3%	MDN1930	1.4%	MDN1930	100.4%	MDN0933	0.008 ng/Bottle
						MDN2072	10.4%	MDN2072	96.8%		
2005-124	9/14/2005	0.99710	0.010 ng/L	6.81 ng/mL	85.1%	MDN2483	2.4%	MDN2483	86.4%		
	CVAFS-9			7.18 ng/mL	89.7%	MDN2639	20.8%	MDN2639	90.3%		
						MDN2713	9.5%	MDN2713	89.4%		
2005-125	9/14/2005	0.99990	0.040 ng/L	7.57 ng/mL	94.6%	MDN0287	6.2%	MDN0287	95.5%		
	CVAFS-10			7.46 ng/mL	93.3%	MDN2504	1.9%	MDN2504	100.2%		
						MDN2601	0.5%	MDN2601	97.5%		
2005-126	9/20/2005	0.99990	0.080 ng/L	7.64 ng/mL	95.4%	MDN0765	2.6%	MDN0765	102.1%	MDN2706	0.015 ng/Bottle
	CVAFS-10			7.51 ng/mL	93.9%	MDN2141	0.7%	MDN2141	98.6%		
						MDN2150	7.5%	MDN2150	100.5%		
2005-127	9/22/2005	0.99830	0.080 ng/L	7.42 ng/mL	92.7%	MDN2101	0.0%	MDN2101	102.9%		
	CVAFS-10			7.71 ng/mL	96.3%	MDN2125	0.3%	MDN2125	105.7%		
						MDN2519	2.4%	MDN2519	87.1%		
2005-128	9/19/2005	1.00000	0.040 ng/L	7.59 ng/mL	94.9%	MDN0691	5.7%	MDN0691	101.7%		
	CVAFS-10			7.18 ng/mL	89.7%	MDN2117	3.2%	MDN2117	86.9%		
						MDN2493	0.4%	MDN2493	97.7%		
2005-129	9/21/2005	0.99970	0.060 ng/L	7.69 ng/mL	96.1%	MDN0405	4.6%	MDN0405	100.1%	MDN2238	0.020 ng/Bottle
	CVAFS-10			7.34 ng/mL	91.7%	MDN0642	6.1%	MDN0642	100.7%		
						MDN2378	1.4%	MDN2378	98.6%		

2005-130	10/4/2005	0.99990	0.000 ng/L	7.66 ng/mL	95.8%	MDN0843	0.2%	MDN0843	99.7%	MDN2648	0.021 ng/Bottle
	CVAFS-10			7.52 ng/mL	94.0%	MDN0934	5.8%	MDN0934	101.6%	MDN0442	0.016 ng/Bottle
						MDN2050	0.9%	MDN2050	97.7%		
2005-131	10/5/2005	0.99990	0.030 ng/L	7.57 ng/mL	94.6%	MDN1966	5.6%	MDN1966	100.5%		
	CVAFS-10			7.40 ng/mL	92.5%	MDN2400	0.2%	MDN2400	97.1%		
						MDN2495	0.1%	MDN2495	97.8%		
2005-132	10/19/200	1.00000	0.050 ng/L	7.15 ng/mL	89.3%	MDN1735	5.3%	MDN1735	100.0%		
	CVAFS-10			7.41 ng/mL	92.6%	MDN2003	0.6%	MDN2003	98.3%		
						MDN2801	7.5%	MDN2801	94.5%		
2005-133	10/6/2005	0.99970	0.050 ng/L	7.59 ng/mL	94.8%	MDN0754	3.6%	MDN0754	98.2%	MDN2184	0.026 ng/Bottle
	CVAFS-9			7.51 ng/mL	93.9%	MDN0759	1.0%	MDN0759	101.6%	MDN2217	0.023 ng/Bottle
						MDN0866	8.0%	MDN0866	90.9%		
2005-134	10/14/200	0.99980	0.060 ng/L	7.68 ng/mL	95.9%	MDN1931	6.5%	MDN1931	99.1%		
	CVAFS-10			7.10 ng/mL	88.7%	MDN2108	3.0%	MDN2108	93.8%		
						MDN2380	0.3%	MDN2380	99.9%		
2005-135	10/12/200	0.99980	0.040 ng/L	7.84 ng/mL	98.0%	MDN0127	1.8%	MDN0127	105.8%	MDN2085	0.020 ng/Bottle
	CVAFS-10			7.61 ng/mL	95.1%	MDN0437	10.2%	MDN0437	102.5%		
						MDN2518	6.7%	MDN2518	111.8%		
2005-136	10/19/200	0.99870	-0.070 ng/L	7.45 ng/mL	93.1%	MDN1986	4.2%	MDN1986	96.3%		
	CVAFS-9			7.34 ng/mL	91.7%	MDN2242	2.2%	MDN2242	101.6%		
						MDN2469	4.7%	MDN2469	96.4%		
2005-137	10/20/200	0.99990	0.030 ng/L	6.75 ng/mL	84.3%	MDN0427	0.7%	MDN0427	95.1%		
	CVAFS-9			7.39 ng/mL	92.3%	MDN0439	4.4%	MDN0439	95.8%		
						MDN2445	2.3%	MDN2445	96.1%		
2005-138	10/25/200	0.99970	0.050 ng/L	7.17 ng/mL	89.6%	MDN2016	3.6%	MDN2016	80.9%		
	CVAFS-9			7.44 ng/mL	93.0%	MDN2564	1.5%	MDN2564	107.2%		
						MDN2719	8.4%	MDN2719	92.8%		
2005-139	10/31/200	0.99990	0.050 ng/L	7.70 ng/mL	96.3%	MDN2466	1.5%	MDN2466	93.5%	MDN0255	0.024 ng/Bottle
	CVAFS-10					MDN2499	6.8%	MDN2499	105.8%		
						MDN2567	2.4%	MDN2567	104.1%		
2005-140	10/24/200	0.99960	0.040 ng/L	7.46 ng/mL	93.3%	MDN0761	2.8%	MDN0761	102.5%		
	CVAFS-9					MDN2657	4.6%	MDN2657	99.5%		

2005-141	10/25/200	0.99990	0.070 ng/L	7.66 ng/mL	95.7%	MDN0815	1.2%	MDN0815	97.1%	MDN0020	0.028 ng/Bottle
	CVAFS-10					MDN2175	23.2%	MDN2175	94.1%	MDN0668	0.027 ng/Bottle
						MDN2674	2.6%	MDN2674	100.5%		
2005-142	11/23/200	0.99990	0.020 ng/L	7.00 ng/mL	87.4%	MDN2086	6.6%	MDN2086	95.3%		
	CVAFS-9			7.18 ng/mL	89.7%	MDN2751	1.2%	MDN2751	98.7%		
						MDN2796	5.5%	MDN2796	98.4%		
2005-143	11/2/2005	0.99990	0.080 ng/L	7.52 ng/mL	94.0%	MDN0719	2.2%	MDN0719	98.7%		
	CVAFS-10			7.43 ng/mL	92.9%	MDN2132	13.0%	MDN2131	100.7%		
						MDN2437	5.6%	MDN2437	94.6%		
2005-144	12/7/2005	0.99850	0.070 ng/L	7.14 ng/mL	89.3%	MDN2097	13.8%	MDN2097	94.7%	MDN2324	0.012 ng/Bottle
	CVAFS-9			7.27 ng/mL	90.8%	MDN2408	9.5%	MDN2408	89.3%	MDN2451	0.008 ng/Bottle
						MDN2596	6.9%	MDN2596	91.2%	MDN0735	0.025 ng/Bottle
2005-145	11/5/2005	1.00000	0.060 ng/L	7.53 ng/mL	94.1%	MDN2131	2.4%	MDN2131	106.1%		
	CVAFS-10			7.56 ng/mL	94.4%	MDN2221	5.8%	MDN2221	99.4%		
						MDN2804	6.2%	MDN2804	97.8%		
2005-146	12/7/2005	0.99780	0.050 ng/L	7.22 ng/mL	90.3%	MDN1996	2.2%	MDN1996	92.7%		
	CVAFS-9			7.34 ng/mL	91.8%	MDN2044	2.8%	MDN2044	91.9%		
						MDN2683	17.2%	MDN2683	96.2%		
2005-147	11/8/2005	0.99980	0.040 ng/L	6.96 ng/mL	87.0%	MDN2278	6.9%	MDN2278	109.2%		
	CVAFS-9			7.50 ng/mL	93.7%	MDN2366	1.2%	MDN2366	75.1%		
						MDN2477	1.7%	MDN2477	94.3%		
2005-148	11/8/2005	0.99990	0.020 ng/L	7.53 ng/mL	94.1%	MDN2509	3.7%	MDN2509	98.8%		
	CVAFS-10			7.50 ng/mL	93.8%	MDN2632	3.3%	MDN2632	102.8%		
						MDN2810	3.3%	MDN2810	100.7%		
2005-149	11/12/200	0.99930	0.070 ng/L	7.30 ng/mL	91.3%	MDN0758	1.9%	MDN0758	99.7%	MDN0187	0.011 ng/Bottle
	CVAFS-9			7.33 ng/mL	91.6%	MDN2480	14.2%	MDN2480	112.1%		
						MDN2609	13.6%	MDN2609	104.7%		
2005-150	11/12/200	0.99730	0.050 ng/L	7.50 ng/mL	93.7%	MDN2328	2.4%	MDN2328	98.1%		
	CVAFS-10			7.55 ng/mL	94.3%	MDN2502	4.8%	MDN2502	103.0%		
						MDN2792	2.3%	MDN2792	104.2%		

2005-151	12/7/2005	0.99960	0.070 ng/L	7.48 ng/mL	93.5%	MDN0445	13.5%	MDN0445	96.1%	MDN0144	0.020 ng/Bottle
	CVAFS-10			7.25 ng/mL	90.6%	MDN0739	4.4%	MDN0739	104.2%		
						MDN0952	7.2%	MDN0952	93.6%		
2005-152	11/18/200	0.99960	0.080 ng/L	7.62 ng/mL	95.2%	MDN3004	4.4%	MDN3004	94.4%		
	CVAFS-9			4.85 ng/mL	60.6%						
2005-153	11/14/200	0.99980	0.090 ng/L	7.46 ng/mL	93.3%	MDN0397	11.0%	MDN0397	81.5%		
	CVAFS-9			6.69 ng/mL	83.6%	MDN2108	3.3%	MDN2108	99.1%		
						MDN2626	11.4%	MDN2626	81.5%		
2005-154	11/18/200	0.99980	0.050 ng/L	7.49 ng/mL	93.6%	MDN0960	7.6%	MDN0960	101.5%	MDN0421	0.021 ng/Bottle
	CVAFS-10			7.64 ng/mL	95.5%	MDN2215	2.5%	MDN2215	94.8%		
						MDN2638	3.5%	MDN2638	99.9%		
2005-155	12/7/2005	0.99950	0.080 ng/L	7.45 ng/mL	93.1%	MDN1760	8.0%	MDN1760	76.3%		
	CVAFS-9			6.00 ng/mL	75.0%	MDN2802	1.9%	MDN2802	91.1%		
						MDN0945	7.1%	MDN0945	93.2%		
2005-156	11/23/200	0.99810	0.080 ng/L	7.90 ng/mL	98.8%	MDN2330	18.9%	MDN2230	78.5%		
	CVAFS-9										
2005-157	11/23/200	0.99980	0.070 ng/L	7.47 ng/mL	93.4%	MDN1907	5.0%	MDN1907	94.2%		
	CVAFS-10			7.49 ng/mL	93.6%	MDN2589	3.6%	MDN2289	91.9%		
						MDN2657	7.0%	MDN2657	94.2%		
2005-158	11/29/200	0.99870	0.060 ng/L	7.37 ng/mL	92.1%	MDN0177	0.7%	MDN0177	98.4%		
	CVAFS-9										
2005-159	12/1/2005	0.99960	0.070 ng/L	6.95 ng/mL	86.8%	MDN2169	5.1%	MDN2169	105.3%	MDN2482	0.022 ng/Bottle
	CVAFS-10			7.75 ng/mL	96.8%	MDN2670	8.0%	MDN2670	88.7%	MDN2780	0.018 ng/Bottle
						MDN2752	24.2%	MDN2752	103.9%		
2005-160	12/5/2005	0.99990	0.050 ng/L	7.28 ng/mL	91.0%	MDN2450	6.4%	MDN2450	97.0%		
	CVAFS-9			7.31 ng/mL	91.3%	MDN2515	0.3%	MDN2515	90.5%		
						MDN2650	10.6%	MDN2650	85.7%		
2005-161	12/5/2005	0.99930	0.050 ng/L	6.54 ng/mL	81.8%	MDN2030	7.9%	MDN2030	90.5%		
	CVAFS-10			7.37 ng/mL	92.1%	MDN2054	17.3%	MDN2054	92.5%		
						MDN2548	6.8%	MDN2548	76.7%		

2005-162	12/12/200	0.99960	0.070 ng/L	7.45 ng/mL	93.1%	MDN0923	4.0%	MDN0923	88.8%	MDN2051	0.023 ng/Bottle
	CVAFS-10			7.13 ng/mL	89.1%	MDN2212	6.1%	MDN2212	88.5%	MDN2243	0.015 ng/Bottle
						MDN2521	9.9%	MDN2521	107.6%		
2005-163	12/19/200	0.99890	0.100 ng/L	7.84 ng/mL	97.9%	MDN0683	9.4%	MDN0683	100.0%	MDN2571	0.025 ng/Bottle
	CVAFS-10			8.07 ng/mL	100.9%	MDN0857	3.3%	MDN0857	93.3%	MDN0256	0.019 ng/Bottle
						MDN2660	3.1%	MDN2660	104.1%	MDN2053	0.015 ng/Bottle
2005-164	12/2/2005	0.99980	0.110 ng/L	7.58 ng/mL	94.7%	MDN1735	2.5%	MDN1735	93.7%		
	CVAFS-10			7.67 ng/mL	95.9%	MDN2547	2.2%	MDN2547	101.2%		
						MDN2796	16.3%	MDN2796	101.1%		
2005-165	12/8/2005	0.99920	0.060 ng/L	7.21 ng/mL	90.1%	MDN0189	13.3%	MDN0189	101.1%		
	CVAFS-10			7.48 ng/mL	93.5%	MDN2569	15.8%	MDN2569	97.2%		
						MDN2801	7.5%	MDN2801	94.5%		
2005-166	12/14/200	0.99990	0.060 ng/L	7.89 ng/mL	98.6%	MDN0151	12.1%	MDN0151	102.8%		
	CVAFS-10			7.70 ng/mL	96.2%	MDN2091	6.2%	MDN2091	103.1%		
						MDN2469	4.2%	MDN2469	95.0%		
2005-167	12/12/200	0.99980	0.100 ng/L	7.74 ng/mL	96.7%	MDN1914	2.6%	MDN1914	95.1%		
	CVAFS-9										
2005-168	12/1/2005	0.99970	0.060 ng/L	7.33 ng/mL	91.6%	MDN0792	0.0%	MDN0792	90.5%		
	CVAFS-9					MDN2772	4.7%	MDN2772	99.4%		
2005-169	11/22/200	0.99970	0.080 ng/L	7.58 ng/mL	94.7%	MDN2662	4.3%	MDN2662	102.9%		
	CVAFS-10					MDN2758	5.3%	MDN2758	95.7%		
2005-170	12/17/200	0.99980	0.040 ng/L	7.69 ng/mL	96.1%	MDN0487	1.6%	MDN0487	90.1%		
	CVAFS-9			7.50 ng/mL	93.8%	MDN0639	5.6%	MDN0639	96.6%		
						MDN0870	5.1%	MDN0870	93.7%		
2005-171	12/17/200	0.99920	0.050 ng/L	7.88 ng/mL	98.4%	MDN0979	1.3%	MDN0979	98.1%	MDN0693	0.020 ng/Bottle
	CVAFS-10			7.14 ng/mL	89.2%	MDN1755	10.8%	MDN1755	93.7%		
						MDN2564	5.2%	MDN2564	89.5%		
2005-172	12/19/200	0.99980	0.050 ng/L	7.72 ng/mL	96.4%	MDN0408	0.8%	MDN0408	104.4%		
	CVAFS-9			7.94 ng/mL	99.2%	MDN1759	3.7%	MDN1759	102.7%		
						MDN2711	0.7%	MDN2711	104.4%		

2005-173	12/21/200	0.99990	0.040 ng/L	7.74 ng/mL	96.7%	MDN0664	2.4%	MDN0664	95.4%			
	CVAFS-9			7.72 ng/mL	96.5%	MDN2425	2.5%	MDN2425	92.8%			
						MDN2634	9.0%	MDN2634	97.1%			
2005-174	12/21/200	0.99970	0.060 ng/L	7.80 ng/mL	97.4%	MDN2021	2.1%	MDN2021	94.7%			
	CVAFS-10			7.38 ng/mL	92.3%	MDN2049	5.4%	MDN2049	94.7%			
						MDN2176	5.3%	MDN2176	97.3%			
2005-175	12/27/200	0.99950	0.060 ng/L	7.71 ng/mL	96.4%	MDN0796	3.9%	MDN0796	94.2%	MDN2681	0.021 ng/Bottle	
	CVAFS-9			7.31 ng/mL	91.4%	MDN2016	18.8%	MDN2016	84.2%			
						MDN2477	1.7%	MDN2477	94.3%			
2005-176	12/28/200	0.99990	0.080 ng/L	7.78 ng/mL	97.3%	MDN2217	6.6%	MDN2217	97.5%			
	CVAFS-10			7.56 ng/mL	94.4%	MDN2568	5.0%	MDN2568	96.3%			
						MDN2724	8.1%	MDN2724	98.8%			
2005-177	12/14/200	0.99950	0.060 ng/L	7.91 ng/mL	98.9%	MDN0698	2.7%	MDN0698	103.9%			
	CVAFS-9					MDN2428	2.7%	MDN2428	98.8%			
2005-178	12/28/200	0.99920	0.050 ng/L	7.71 ng/mL	96.4%	MDN0494	1.2%	MDN0494	100.3%			
	CVAFS-9			8.02 ng/mL	100.2%	MDN2599	4.2%	MDN2599	100.5%			
						MDN2702	1.0%	MDN2702	98.4%			
2005-179	12/27/200	0.99970	0.100 ng/L	7.85 ng/mL	98.1%	MDN0102	1.3%	MDN0102	102.6%			
	CVAFS-10			7.46 ng/mL	93.2%	MDN2132	8.5%	MDN2132	96.7%			
						MDN2465	4.2%	MDN2465	95.9%			
2005-180	12/30/200	0.99990	0.050 ng/L	7.63 ng/mL	95.3%	MDN2119	2.3%	MDN2119	92.7%	MDN2198	0.011 ng/Bottle	
	CVAFS-9			7.55 ng/mL	94.3%	MDN2254	4.1%	MDN2254	91.2%			
						MDN2383	2.0%	MDN2383	96.1%			
2005-181	1/3/2006	0.99990	0.050 ng/L	7.78 ng/mL	97.2%	MDN2076	1.2%	MDN2076	95.2%	MDN2438	0.019 ng/Bottle	
	CVAFS-9			7.76 ng/mL	96.9%	MDN2460	4.8%	MDN2460	98.1%			
						MDN2725	4.7%	MDN2725	96.4%			
2005-182	1/3/2006	0.99970	0.060 ng/L	7.84 ng/mL	98.0%	MDN0898	3.3%	MDN0898	90.3%	MDN0870	0.014 ng/Bottle	
	CVAFS-10			7.46 ng/mL	93.2%	MDN2313	7.1%	MDN2313	96.0%			
						MDN2409	1.9%	MDN2409	96.7%			
2005-183	1/4/2006	1.00000	0.070 ng/L	7.77 ng/mL	97.1%	MDN2170	2.1%	MDN2170	101.9%			
	CVAFS-10			7.51 ng/mL	93.8%	MDN2563	6.1%	MDN2563	93.5%			
						MDN2622	8.0%	MDN2622	97.6%			

2005-184	1/9/2006	0.99970	0.060 ng/L	8.12 ng/mL	101.5%	MDN0190	2.7%	MDN0190	90.4%		
	CVAFS-9			7.81 ng/mL	97.6%	MDN2292	2.6%	MDN2292	100.2%		
						MDN2791	6.0%	MDN2791	100.4%		
2005-185	1/9/2006	1.00000	0.090 ng/L	8.06 ng/mL	100.7%	MDN0739	7.6%	MDN0739	101.0%		
	CVAFS-10			6.35 ng/mL	79.3%	MDN2282	5.2%	MDN2282	100.4%		
						MDN2667	2.4%	MDN2667	105.4%		
2005-186	1/11/2006	0.99970	0.070 ng/L	7.66 ng/mL	95.8%	MDN0646	2.2%	MDN0646	93.1%		
	CVAFS-9			7.71 ng/mL	96.4%	MDN2265	3.3%	MDN2265	95.3%		
						MDN2476	1.6%	MDN2476	95.6%		
2005-187	1/11/2006	0.99990	0.100 ng/L	7.84 ng/mL	97.9%	MDN2233	7.6%	MDN2233	102.9%		
	CVAFS-10			7.69 ng/mL	96.1%	MDN2416	5.5%	MDN2416	92.8%		
						MDN2676	7.5%	MDN2676	96.7%		
2005-188	1/16/2006	0.99990	0.080 ng/L	7.70 ng/mL	96.2%	MDN0756	5.2%	MDN0756	94.4%	MDN0020	0.014 ng/Bottle
	CVAFS-10			7.80 ng/mL	97.4%	MDN0931	11.9%	MDN0931	97.4%		
						MDN2680	2.6%	MDN2680	103.2%		
2005-189	1/25/2006	0.99980	0.080 ng/L	7.87 ng/mL	98.3%	MDN0152	7.9%	MDN0152	100.1%		
	CVAFS-10			7.89 ng/mL	98.6%	MDN0638	5.2%	MDN0638	94.2%		

Methylmercury QC 2005 Summary

Analysis			Calibration	BrCl Blnk	SRM (DORM-2)		Duplicates		Spikes			
Batch	Date	Instr	R	Conc	TV=4.47 ng/mL	Rec	Sample ID	RPD	Sample ID	Rec MS	Rec MSD	RPD
2005-130	1/4/2005	CVAFS-1	0.99987	0.0133 ng/L	4.80 ng/mL	107.3%	LA1020041207	7.41%	LA0520041214	101.4%	101.4%	0.0%
2005-131	1/13/2005	CVAFS-7	0.99870	0.0102 ng/L	5.27 ng/mL	117.8%	IL11 COMP 022	2.08%	LA2320041123	97.6%	105.5%	7.6%
2005-132	1/19/2005	MHg7	0.99972	0.0140 ng/L	5.20 ng/mL	116.2%	LA0520050104	5.13%	LA0520050111	96.6%	97.3%	0.7%
2005-133	3/11/2005	MHg1	0.99997	0.0138 ng/L	4.85 ng/mL	108.6%	LA1020050110	8.79%	LA2820050207	99.8%	107.4%	7.2%
2005-134	3/11/2005	MHg7	0.99835	0.0154 ng/L	5.04 ng/mL	112.8%	LA1020050118	16.84%	SC9920050118	81.1%	95.4%	10.3%
2005-135	3/12/2005	MHg1	0.99970	0.0159 ng/L	4.98 ng/mL	111.4%	LA1020050215	25.00%	SC9920050215	111.3%	106.5%	3.2%
2005-136	3/29/2005	MHg7	0.99991	0.0179 ng/L	4.84 ng/mL	108.4%	LA0520050301	5.80%	GA09 COMP 031	100.3%	89.7%	10.5%
2005-137	3/31/2005	MHg7	0.99961	0.0196 ng/L	4.90 ng/mL	109.6%	LA2320050322	46.88%	NS0120050315	102.5%	105.2%	2.3%
2005-138	4/25/2005	MHg7	0.99991	0.0169 ng/L	3.74 ng/mL	83.6%	FL05 COMP 032	2.50%	FL32 COMP 020	96.5%	105.0%	8.1%
2005-139	4/25/2005	MHg7	0.99620	0.0159 ng/L	4.94 ng/mL	110.5%	SC9920050329	1.94%	OR10 COMP 030	97.9%	98.4%	0.4%
2005-140	5/27/2005	MHg7	0.99960	0.0121 ng/L	4.74 ng/mL	106.0%	FL05 COMP 033	58.33%	OR10 COMP 031	81.4%	86.5%	5.3%
2005-141	6/6/2005	MHg7	0.99960	0.0121 ng/L	4.95 ng/mL	110.7%	18WA20050510	1.32%	WA1920050510	97.1%	87.0%	9.0%
2005-142	6/8/2005	MHg1	0.99840	0.0144 ng/L	2.46 ng/mL	109.7%	NS0120050510	0.80%	MN27 COMP 113	86.1%	81.8%	3.9%
2005-143	6/29/2005	MHg1	0.99836	0.0132 ng/L	4.29 ng/mL	96.0%	OR10 COMP 032	12.12%	OR10 COMP 032	85.2%	83.3%	2.1%
2005-144	7/12/2005	MHg7	0.99967	0.0118 ng/L	4.39 ng/mL	98.2%	WA2020050624	8.81%	WA2020050607	84.7%	100.6%	14.0%
2005-146	7/29/2005	MHg7	0.99950	0.0147 ng/L	4.54 ng/mL	101.5%	WI09 COMP 111	5.22%	LA2820050705	79.5%	96.3%	18.1%
					5.09 ng/mL	114.0%						
2005-148	8/9/2005	MHg1	0.99947	0.0199 ng/L	4.80 ng/mL	107.4%	FL05 COMP 035	23.26%	GA09 COMP 035	98.6%	102.8%	4.0%
2005-149	8/10/2005	MHg7	0.99982	0.0163 ng/L	5.08 ng/mL	113.5%	FL32 COMP 024	2.91%	VA98 COMP 008	103.1%	80.4%	22.9%
2005-150	8/30/2005	MHg7	0.99940	0.0092 ng/L	5.11 ng/mL	114.4%	LA0520050719	60.18%	LA1020050719	108.5%	103.2%	4.9%
2005-151	9/7/2005	MHg1	0.99970	0.0116 ng/L	4.25 ng/mL	95.1%	FL32 COMP 025	7.02%	WI31 COMP 045	81.8%	92.3%	10.7%
2005-153	9/28/2005	MHg7	0.99988	0.0137 ng/L	5.00 ng/mL	111.9%	OH0220080831	8.00%	LA2820050901	97.5%	86.3%	11.5%
2005-154	10/6/2005	MHg7	0.99910	0.0183 ng/L	4.57 ng/mL	102.2%	IN26(sb)20050913	17.14%	IN26(cb)20050913	95.3%	100.7%	5.6%
2005-155	10/25/2005	MHg1	0.99850	0.0087 ng/L	4.77 ng/mL	106.6%	MN27 COMP 117	62.88%	MN27 COMP 117	78.9%	86.1%	7.3%
2005-156	10/27/2005	MHg7	0.99949	0.0152 ng/L	4.77 ng/mL	106.7%	VT99 COMP 002	96.77%	VT98 COMP 002	91.8%	95.2%	3.4%
2005-157	11/9/2005	MHg7	0.99935	0.0098 ng/L	4.29 ng/mL	96.0%	OA02(cb)20050802	46.15%	WA2020051018	117.4%	117.1%	0.2%