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HYDROGEN RECOMBINER CATALYST TEST SUPPORTING DATA

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8A400/D44L2	Michael D. Britton	N/A

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16. KEY

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1	1	Cog.Engr. M.D. Britton	M.D. Button	12/20/94	S4-25	Grout Technology W. J. Powell	W J Powell	12/21/94	H5-27	1	1
1	1	Cog. Mngr. M.J. Schliebe	M J Schliebe	12/20/94	S4-25						

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SUPPORTING DOCUMENT

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KMB 1/19/95

APPROVED FOR PUBLIC RELEASE

6. Author

Name: Michael D. Britton

Michael D. Britton
Signature

Organization/Charge Code 8A400/D44L2

7. Abstract

This document contains supplemental data for the Hydrogen Recombiner Catalyst Test report (WHC-SD-WM-TRP-211).

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HYDROGEN RECOMBINER CATALYST TEST SUPPORTING DATA DOCUMENT

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HYDROGEN RECOMBINER CATALYST TEST SUPPORTING DATA DOCUMENT

FORWARD

This document contains supplemental data for the Hydrogen Recombiner Catalyst Test Report (Britton 1994)..

REFERENCES

Britton, M. D., 1994, *Mitigation of Hydrogen by Oxidation Using Nitrous Oxide and Noble Metal Catalysts*, WHC-SD-WM-TRP-211, Westinghouse Hanford Company, Richland, Washington.

APPENDIX A

MASS SPECTROMETRY ANALYSIS REPORTS

SAMPLES 93-001 THROUGH 93-157

MASTER

Battelle
Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
Richland, Washington 99352
Telephone (509) 376-3358

June 29, 1993

Michael D Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Sir

The gas sample analyses are complete. The WHC work order number is ED3724. The mass spectrometer used is a Finnigan MAT-271 that is calibrated on a monthly basis. Nitrogen is run each day the instrument is used to correct for drift.

The results are attached to this letter.

If you have any questions please contact me.

Sincerely

M W Goheen
Milton W Goheen
Atomic and Molecular Spectroscopy

Concurrence R E Bruinen

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: June 28, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 68
Measurement and test equipment WC38625

Sample Id.	93-001 GSC #1		
Analysis Date	June 25, 1993	Mole	Estimate of
Log-in No.	93-08351	Percent	Precision
Argon		0.035	± 0.002
Carbon dioxide		0.004	± 0.001
Carbon monoxide		<0.005	±
Helium		<0.001	±
Hydrogen		3.55	± 0.06
Methane		<0.001	±
Nitrogen		95.72	± 0.1
Oxygen		0.683	± 0.02
Nitrous oxide		<0.001	±
Other nitrogen oxides		<0.001	±
Comments			

Sample Id.	93-002 GSC #3		
Analysis Date	June 25, 1993	Mole	Estimate of
Log-in No.	93-08352	Percent	Precision
Argon		0.013	± 0.002
Carbon dioxide		0.003	± 0.001
Carbon monoxide		<0.005	±
Helium		<0.001	±
Hydrogen		3.81	± 0.04
Methane		<0.001	±
Nitrogen		95.98	± 0.04
Oxygen		0.198	± 0.003
Nitrous oxide		<0.001	±
Other nitrogen oxides		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: June 28, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 68
Measurement and test equipment WC38625

Sample Id.	93-003 GSC #2		Estimate
Analysis Date	June 25, 1993	Mole	of
Log-in No.	93-08353	Percent	Precision
Argon		0.072	± 0.007
Carbon dioxide		0.006	± 0.001
Carbon monoxide		<0.005	±
Helium		<0.001	±
Hydrogen		3.55	± 0.04
Methane		<0.001	±
Nitrogen		94.87	± 0.04
Oxygen		1.5	± 0.02
Nitrous oxide		<0.001	±
Other nitrogen oxides		<0.001	±
Comments			

Sample Id.	93-004 GSC #4		Estimate
Analysis Date	June 25, 1993	Mole	of
Log-in No.	93-08354	Percent	Precision
Argon		0.03	± 0.003
Carbon dioxide		0.003	± 0.001
Carbon monoxide		<0.005	±
Helium		<0.001	±
Hydrogen		3.72	± 0.04
Methane		<0.001	±
Nitrogen		95.66	± 0.04
Oxygen		0.582	± 0.006
Nitrous oxide		<0.001	±
Other nitrogen oxides		<0.005	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: June 28, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 68
Measurement and test equipment WC38625

Sample Id.	93-005 GSC #5		Estimate
Analysis Date	June 25, 1993	Mole	of
Log-in No.	93-08355	Percent	Precision
Argon		0.029 ±	0.003
Carbon dioxide		0.003 ±	0.001
Carbon monoxide		0.53 ±	0.02
Helium		<0.001 ±	
Hydrogen		0.005 ±	0.001
Methane		<0.001 ±	
Nitrogen		98.88 ±	0.02
Oxygen		0.536 ±	0.005
Nitrous oxide		<0.001 ±	
Other nitrogen oxides		<0.001 ±	
Comments			

Sample Id.	93-006 GSC #6		Estimate
Analysis Date	June 25, 1993	Mole	of
Log-in No.	93-08356	Percent	Precision
Argon		0.015 ±	0.002
Carbon dioxide		0.003 ±	0.001
Carbon monoxide		<0.005 ±	
Helium		<0.001 ±	
Hydrogen		0.0004 ±	0.0002
Methane		<0.001 ±	
Nitrogen		97.7 ±	0.03
Oxygen		2.28 ±	0.03
Nitrous oxide		<0.001 ±	
Other nitrogen oxides		<0.001 ±	
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: June 28, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 68
Measurement and test equipment WC38625

Sample Id.	93-007 GSC #9		Estimate
Analysis Date	June 25, 1993	Mole	of
Log-in No.	93-08357	Percent	Precision
Argon		0.013	± 0.001
Carbon dioxide		0.003	± 0.001
Carbon monoxide		<0.005	±
Helium		<0.001	±
Hydrogen		0.0004	± 0.0002
Methane		0.497	± 0.006
Nitrogen		99.29	± 0.01
Oxygen		0.198	± 0.004
Nitrous oxide		<0.001	±
Other nitrogen oxides		<0.001	±
Comments			

Sample Id.	93-008 GSC #8		Estimate
Analysis Date	June 25, 1993	Mole	of
Log-in No.	93-08358	Percent	Precision
Argon		0.022	± 0.004
Carbon dioxide		<0.005	±
Carbon monoxide		<0.005	±
Helium		<0.001	±
Hydrogen		0.0003	± 0.0002
Methane		0.003	± 0.002
Nitrogen		95.93	± 0.04
Oxygen		0.398	± 0.005
Nitrous oxide		3.64	± 0.04
Other nitrogen oxides		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: June 28, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 68
Measurement and test equipment WC38625

Sample Id.	93-009 GSC #7		
Analysis Date	June 25, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-08359		
Argon		0.021	± 0.002
Carbon dioxide		<0.005	±
Carbon monoxide		<0.005	±
Helium		<0.001	±
Hydrogen		0.0003	± 0.0002
Methane		0.004	± 0.002
Nitrogen		8.93	± 0.09
Oxygen		0.517	± 0.006
Nitrous oxide		90.53	± 0.09
Other nitrogen oxides		<0.005	±
Comments			

Battelle
Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
Richland, Washington 99352
Telephone (509)
376-3358

July 2, 1993

Michael D Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Sir

The gas sample analyses are complete. The WHC work order number is ED3724. The mass spectrometer used is a Finnigan MAT-271 that is calibrated on a monthly basis. Nitrogen is run each day the instrument is used to correct for drift.

The results are attached to this letter.

If you have any questions please contact me.

Sincerely

Milton W. Goheen
Atomic and Molecular Spectroscopy

Concurrence

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 02, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 71
Measurement and test equipment WC38625

Sample Id.	93-010 GSC-14		Estimate
Analysis Date	July 02, 1993	Mole	of
Log-in No.	93-08551	Percent	Precision
Argon		0.02 ±	0.002
Carbon dioxide		0.016 ±	0.002
Carbon monoxide		<0.001 ±	
Helium		<0.001 ±	
Hydrogen		0.326 ±	0.007
Methane		<0.001 ±	
Nitrogen		99.36 ±	0.01
Oxygen		0.283 ±	0.006
Nitrous oxide		<0.001 ±	
Other nitrogen oxides		<0.001 ±	
Comments			

Sample Id.	93-011 GSC-16		Estimate
Analysis Date	July 02, 1993	Mole	of
Log-in No.	93-08552	Percent	Precision
Argon		0.018 ±	0.002
Carbon dioxide		0.0031 ±	0.001
Carbon monoxide		<0.001 ±	
Helium		<0.001 ±	
Hydrogen		0.385 ±	0.007
Methane		0.032 ±	0.004
Nitrogen		99.35 ±	0.01
Oxygen		0.212 ±	0.004
Nitrous oxide		<0.001 ±	
Other nitrogen oxides		<0.001 ±	
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 02, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 71
Measurement and test equipment WC38625

Sample Id.	93-012 GSC-13		
Analysis Date	July 02, 1993	Mole	Estimate of
Log-in No.	93-08553	Percent	Precision
Argon		0.016	± 0.002
Carbon dioxide		0.013	± 0.002
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.029	± 0.003
Methane		0.029	± 0.003
Nitrogen		99.67	± 0.007
Oxygen		0.244	± 0.004
Nitrous oxide		<0.001	±
Other nitrogen oxides		<0.001	±
Comments			

Sample Id.	93-013 GSC-15		
Analysis Date	July 02, 1993	Mole	Estimate of
Log-in No.	93-08554	Percent	Precision
Argon		0.02	± 0.004
Carbon dioxide		0.004	± 0.002
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.558	± 0.008
Methane		<0.001	±
Nitrogen		98.83	± 0.01
Oxygen		0.591	± 0.008
Nitrous oxide		<0.001	±
Other nitrogen oxides		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 02, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 71
Measurement and test equipment WC38625

Sample Id.	93-014 GSC-10		Estimate
Analysis Date	July 02, 1993	Mole	of
Log-in No.	93-08555	Percent	Precision
Argon		0.016 ±	0.002
Carbon dioxide		0.012 ±	0.002
Carbon monoxide		<0.001 ±	
Helium		<0.001 ±	
Hydrogen		0.057 ±	0.005
Methane		<0.001 ±	
Nitrogen		99.712 ±	0.007
Oxygen		0.191 ±	0.004
Nitrous oxide		0.007 ±	0.002
Other nitrogen oxides		<0.001 ±	
Comments			

Sample Id.	93-015 GSC-12		Estimate
Analysis Date	July 02, 1993	Mole	of
Log-in No.	93-08556	Percent	Precision
Argon		0.013 ±	0.002
Carbon dioxide		<0.001 ±	
Carbon monoxide		<0.001 ±	
Helium		<0.001 ±	
Hydrogen		1.07 ±	0.02
Methane		0.002 ±	0.001
Nitrogen		66.4 ±	0.4
Oxygen		0.212 ±	0.004
Nitrous oxide		32.3 ±	0.4
Other nitrogen oxides		<0.01 ±	
Comments			

Battelle
Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
Richland, Washington 99352
Telephone (509)
376-3358

July 12, 1993

Michael D. Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Michael,

Mass spectrometer analyses are complete on your samples delivered 7-8-93. The WHC work order number is ED3724. The mass spectrometer used is a Finnigan MAT-271 that is calibrated on a monthly basis. Nitrogen sensitivity check is run each day the instrument is used.

The results are included with this letter. If you have any questions please contact me at 376-3358.

Sincerely,

Milton W Goheen
Atomic and Molecular Spectroscopy

R E Bunnell
Concurrence

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 9, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 72
Measurement and test equipment WC38625

Sample Id.	93-016	Mole Percent	Estimate of Precision
Analysis Date	July 8, 1993		
Log-in No.	93-08764		
Argon		0.018	± 0.002
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.017	± 0.002
Methane		0.0008	± 0.0004
Nitrogen		60.4	± 0.4
Oxygen		0.343	± 0.006
Nitrous oxide		39.2	± 0.4
Other nitrogen oxides		0.02	± 0.01
Comments			

Sample Id.	93-017	Mole Percent	Estimate of Precision
Analysis Date	July 8, 1993		
Log-in No.	93-08765		
Argon		0.013	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.938	± 0.009
Methane		0.0006	± 0.0004
Nitrogen		58.8	± 0.4
Oxygen		0.221	± 0.002
Nitrous oxide		40.1	± 0.4
Other nitrogen oxides		0.02	± 0.01
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 9, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 72
Measurement and test equipment WC38625

Sample Id.	93-018		
Analysis Date	July 8, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-08766		
Argon		0.011	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.018	± 0.002
Methane		0.0005	± 0.0004
Nitrogen		60.1	± 0.4
Oxygen		0.164	± 0.002
Nitrous oxide		39.7	± 0.4
Other nitrogen oxides		0.02	± 0.01
Comments			

Sample Id.	93-019		
Analysis Date	July 8, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-08767		
Argon		0.014	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.016	± 0.002
Methane		0.0012	± 0.0004
Nitrogen		60.2	± 0.4
Oxygen		0.25	± 0.003
Nitrous oxide		39.5	± 0.4
Other nitrogen oxides		0.003	± 0.0006
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 9, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 72
Measurement and test equipment WC38625

Sample Id.	93-020		
Analysis Date	July 8, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-08768		
Argon		0.017	± 0.002
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.932	± 0.009
Methane		0.0013	± 0.0004
Nitrogen		59.1	± 0.4
Oxygen		0.304	± 0.003
Nitrous oxide		39.7	± 0.4
Other nitrogen oxides		0.0098	± 0.0009
Comments			

Sample Id.	93-021		
Analysis Date	July 8, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-08769		
Argon		0.017	± 0.002
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.02	± 0.002
Methane		0.0012	± 0.0004
Nitrogen		60.4	± 0.4
Oxygen		0.284	± 0.003
Nitrous oxide		39.3	± 0.4
Other nitrogen oxides		0.001	± 0.0004
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 9, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 72
Measurement and test equipment WC38625

Sample Id.	93-022	
Analysis Date	July 8, 1993	Mole Percent / Estimate of Precision
Log-in No.	93-08770	
Argon		0.0099 ± 0.001
Carbon dioxide		<0.001 ±
Carbon monoxide		<0.001 ±
Helium		<0.001 ±
Hydrogen		0.96 ± 0.009
Methane		0.0018 ± 0.0004
Nitrogen		57.6 ± 0.4
Oxygen		0.134 ± 0.002
Nitrous oxide		41.3 ± 0.4
Other nitrogen oxides		0.01 ± 0.001
Comments		

Sample Id.	93-023	
Analysis Date	July 8, 1993	Mole Percent / Estimate of Precision
Log-in No.	93-08771	
Argon		0.012 ± 0.002
Carbon dioxide		<0.001 ±
Carbon monoxide		<0.001 ±
Helium		<0.001 ±
Hydrogen		0.024 ± 0.004
Methane		0.0018 ± 0.0004
Nitrogen		58.8 ± 0.4
Oxygen		0.18 ± 0.002
Nitrous oxide		40.9 ± 0.4
Other nitrogen oxides		<0.001 ±
Comments		

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 9, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 72
Measurement and test equipment WC38625

Sample Id. 93-024 Analysis Date July 8, 1993 Log-in No. 93-08772	Mole Percent	Estimate of Precision
Argon	0.011	± 0.001
Carbon dioxide	<0.001	±
Carbon monoxide	<0.001	±
Helium	<0.001	±
Hydrogen	0.957	± 0.009
Methane	0.0018	± 0.0004
Nitrogen	57.5	± 0.4
Oxygen	0.159	± 0.002
Nitrous oxide	41.4	± 0.4
Other nitrogen oxides	<0.001	±
Comments		

Battelle
Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
Richland, Washington 99352
Telephone (509)
376-3358

July 13, 1993

Michael D. Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Michael,

Mass spectrometer analyses are complete on your samples delivered 7-12-93. The WHC work order number is ED3724. The mass spectrometer used is a Finnigan MAT-271 that is calibrated on a monthly basis. Nitrogen sensitivity check is run each day the instrument is used.

The results are included with this letter. If you have any questions please contact me at 376-3358.

Sincerely,

M W Goheen
Milton W Goheen
Atomic and Molecular Spectroscopy

R. E Bruns
Concurrence

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 13, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 74
Measurement and test equipment WC38625

Sample Id.	93-025		
Analysis Date	July 13, 1993	Mole	Estimate of
Log-in No.	93-08821	Percent	Precision
Argon		0.029	± 0.002
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.023	± 0.002
Methane		<0.001	±
Nitrogen		99.4	± 0.01
Oxygen		0.525	± 0.008
Nitrous oxide		0.025	± 0.002
Other nitrogen oxides		<0.005	±
Comments			

Sample Id.	93-026		
Analysis Date	July 13, 1993	Mole	Estimate of
Log-in No.	93-08822	Percent	Precision
Argon		0.018	± 0.002
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.912	± 0.01
Methane		<0.001	±
Nitrogen		98.32	± 0.01
Oxygen		0.744	± 0.009
Nitrous oxide		0.006	± 0.001
Other nitrogen oxides		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 13, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 74
Measurement and test equipment WC38625

Sample Id.	93-027		Estimate
Analysis Date	July 13, 1993	Mole	of
Log-in No.	93-08823	Percent	Precision
Argon		0.017	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.0143	± 0.0005
Methane		0.029	± 0.01
Nitrogen		59.93	± 0.4
Oxygen		0.334	± 0.005
Nitrous oxide		39.6	± 0.4
Other nitrogen oxides		<0.005	±
Comments			

Sample Id.	93-028		Estimate
Analysis Date	July 13, 1993	Mole	of
Log-in No.	93-08824	Percent	Precision
Argon		0.026	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.926	± 0.01
Methane		0.091	± 0.001
Nitrogen		58.17	± 0.4
Oxygen		0.052	± 0.006
Nitrous oxide		40.27	± 0.4
Other nitrogen oxides		<0.005	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 13, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 74
Measurement and test equipment WC38625

Sample Id.	93-029		
Analysis Date	July 13, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-08825		
Argon		0.031	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.0157	± 0.006
Methane		<0.001	±
Nitrogen		90.98	± 0.1
Oxygen		0.584	± 0.006
Nitrous oxide		8.39	± 0.09
Other nitrogen oxides		<0.005	±
Comments			

Sample Id.	93-030		
Analysis Date	July 13, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-08826		
Argon		0.015	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.913	± 0.01
Methane		<0.001	±
Nitrogen		89.5	± 0.1
Oxygen		0.208	± 0.004
Nitrous oxide		9.37	± 0.1
Other nitrogen oxides		<0.001	±
Comments			

Battelle
Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
Richland, Washington 99352
Telephone (509)
376-3358 .

July 16, 1993

Michael D. Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Michael,

Mass spectrometer analyses are complete on your samples delivered 7-14-93. The WHC work order number is ED3724. The mass spectrometer used is a Finnigan MAT-271 that is calibrated on a monthly basis. Nitrogen sensitivity check is run each day the instrument is used.

The results are included with this letter. If you have any questions please contact me at 376-3358.

Sincerely,

Milton W Goheen
Atomic and Molecular Spectroscopy

Concurrence

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 16, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 75
Measurement and test equipment WC38625

Sample Id.	93-031		
Analysis Date	July 15, 1993	Mole	Estimate of
Log-in No.	93-08925	Percent	Precision
Argon		0.039	± 0.004
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.028	± 0.002
Methane		<0.001	±
Nitrogen		99.14	± 0.07
Oxygen		0.702	± 0.07
Nitrous oxide		0.094	± 0.002
Other nitrogen oxides		0.0012	± 0.0008
Comments			

Sample Id.	93-032		
Analysis Date	July 15, 1993	Mole	Estimate of
Log-in No.	93-08926	Percent	Precision
Argon		0.012	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.0237	± 0.002
Methane		<0.001	±
Nitrogen		99.6	± 0.005
Oxygen		0.119	± 0.002
Nitrous oxide		0.242	± 0.004
Other nitrogen oxides		0.001	± 0.0008
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 16, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 75
Measurement and test equipment WC38625

Sample Id.	93-033		Estimate
Analysis Date	July 15, 1993	Mole	of
Log-in No.	93-08927	Percent	Precision
Argon		0.014	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.924	± 0.01
Methane		<0.001	±
Nitrogen		97.97	± 0.02
Oxygen		0.166	± 0.004
Nitrous oxide		0.93	± 0.01
Other nitrogen oxides		<0.001	±
Comments			

Sample Id.	93-034		Estimate
Analysis Date	July 15, 1993	Mole	of
Log-in No.	93-08928	Percent	Precision
Argon		0.013	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.049	± 0.002
Methane		0.0014	± 0.0008
Nitrogen		59.5	± 0.4
Oxygen		0.211	± 0.004
Nitrous oxide		40.27	± 0.4
Other nitrogen oxides		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 16, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 75
Measurement and test equipment WC38625

Sample Id.	93-035		
Analysis Date	July 15, 1993	Mole	Estimate of
Log-in No.	93-08929	Percent	Precision
Argon		0.015	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.07	± 0.003
Methane		0.001	± 0.0008
Nitrogen		59.5	± 0.4
Oxygen		0.253	± 0.006
Nitrous oxide		40.1	± 0.4
Other nitrogen oxides		<0.001	±
Comments			

Sample Id.	93-036		
Analysis Date	July 15, 1993	Mole	Estimate of
Log-in No.	93-08930	Percent	Precision
Argon		0.011	± 0.002
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.94	± 0.01
Methane		0.0007	± 0.0005
Nitrogen		58.1	± 0.4
Oxygen		0.162	± 0.004
Nitrous oxide		40.8	± 0.4
Other nitrogen oxides		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 16, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 75
Measurement and test equipment WC38625

Sample Id. 93-037 Analysis Date July 15, 1993 Log-in No. 93-08931	Mole Percent	Estimate of Precision
Argon	0.021	± 0.002
Carbon dioxide	<0.001	±
Carbon monoxide	<0.001	±
Helium	<0.001	±
Hydrogen	0.027	± 0.001
Methane	0.0012	± 0.0008
Nitrogen	59.3	± 0.4
Oxygen	0.387	± 0.008
Nitrous oxide	40.2	± 0.4
Other nitrogen oxides	<0.001	±
Comments		

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 16, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 75
Measurement and test equipment WC38625

Sample Id.	93-038		
Analysis Date	July 15, 1993	Mole	Estimate of
Log-in No.	93-08932	Percent	Precision
Argon		0.012	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.03	± 0.001
Methane		<0.001	±
Nitrogen		58.64	± 0.4
Oxygen		0.199	± 0.004
Nitrous oxide		40.5	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia		0.6	
Comments	NH3 estimated		

Sample Id.	93-039		
Analysis Date	July 15, 1993	Mole	Estimate of
Log-in No.	93-08933	Percent	Precision
Argon		0.025	± 0.002
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.92	± 0.01
Methane		<0.001	±
Nitrogen		57.32	± 0.4
Oxygen		0.474	± 0.009
Nitrous oxide		40.5	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia		0.8	
Comments	NH3 estimated		

Battelle
Pacific Northwest Laboratories
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P.O. Box 999
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Telephone (509)
376-3358

July 21, 1993

Michael D. Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Michael,

Mass spectrometer analyses are complete on your samples delivered 7-20-93. The WHC work order number is ED3724. The mass spectrometer used is a Finnigan MAT-271 that is calibrated on a monthly basis. Nitrogen sensitivity check is run each day the instrument is used.

The results are included with this letter. If you have any questions please contact me at 376-3358.

Sincerely,

Milton W Goheen
Atomic and Molecular Spectroscopy

Concurrence
R E Bowman

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 21, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 76
Measurement and test equipment WC38625

Sample Id.	93-040		
Analysis Date	July 21, 1993	Mole	Estimate of
Log-in No.	93-09260	Percent	Precision
Argon		0.028	± 0.002
Carbon dioxide		0.019	± 0.005
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.313	± 0.006
Methane		<0.001	±
Nitrogen		99.04	± 0.01
Oxygen		0.545	± 0.008
Nitrous oxide		0.055	± 0.005
Other nitrogen oxides		<0.001	±
Ammonia			
Comments			

Sample Id.	93-041		
Analysis Date	July 21, 1993	Mole	Estimate of
Log-in No.	93-09261	Percent	Precision
Argon		0.025	± 0.002
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.96	± 0.01
Methane		<0.001	±
Nitrogen		98.01	± 0.01
Oxygen		0.831	± 0.008
Nitrous oxide		0.181	± 0.004
Other nitrogen oxides		0.0016	± 0.0008
Ammonia			
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 21, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 76
Measurement and test equipment WC38625

Sample Id.	93-042		
Analysis Date	July 21, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09262		
Argon		0.0074	± 0.0007
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.1	± 0.002
Methane		0.101	± 0.005
Nitrogen		62.8	± 0.4
Oxygen		0.059	± 0.003
Nitrous oxide		36.9	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia			
Comments			

Sample Id.	93-043		
Analysis Date	July 21, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09263		
Argon		0.013	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.103	± 0.002
Methane		0.1	± 0.005
Nitrogen		62.8	± 0.4
Oxygen		0.202	± 0.004
Nitrous oxide		36.8	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia			
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 21, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 76
Measurement and test equipment WC38625

Sample Id.	03-044		
Analysis Date	July 21, 1993	Mole	Estimate of
Log-in No.	93-09264	Percent	Precision
Argon		0.0095	± 0.0005
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		1.04	± 0.1
Methane		0.1	± 0.005
Nitrogen		61.1	± 0.4
Oxygen		0.099	± 0.005
Nitrous oxide		37.6	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia			
Comments			

Sample Id.	93-045		
Analysis Date	July 21, 1993	Mole	Estimate of
Log-in No.	93-09265	Percent	Precision
Argon		0.022	± 0.002
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.094	± 0.002
Methane		<0.001	±
Nitrogen		91.59	± 0.08
Oxygen		0.315	± 0.006
Nitrous oxide		7.98	± 0.08
Other nitrogen oxides		<0.001	±
Ammonia			
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 21, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 76
Measurement and test equipment WC38625

Sample Id.	93-046		
Analysis Date	July 21, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09266		
Argon		0.017	± 0.002
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.096	± 0.002
Methane		<0.001	±
Nitrogen		91.56	± 0.08
Oxygen		0.196	± 0.004
Nitrous oxide		8.13	± 0.08
Other nitrogen oxides		<0.001	±
Ammonia			
Comments			

Sample Id.	93-047		
Analysis Date	July 21, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09267		
Argon		0.021	± 0.002
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.985	± 0.01
Methane		<0.001	±
Nitrogen		89.81	± 0.01
Oxygen		0.302	± 0.006
Nitrous oxide		8.88	± 0.009
Other nitrogen oxides		<0.001	±
Ammonia			
Comments			

Battelle
Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
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Telephone (509)
376-3358

July 23, 1993

Michael D. Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Michael,

Mass spectrometer analyses are complete on your samples delivered 7-22-93. The WHC work order number is ED3724. The mass spectrometer used is a Finnigan MAT-271 that is calibrated on a monthly basis. Nitrogen sensitivity check is run each day the instrument is used.

The results are included with this letter. If you have any questions please contact me at 376-3358.

Sincerely,

Milton W Goheen
Atomic and Molecular Spectroscopy

Concurrence
7-23-93

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 23, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 77
Measurement and test equipment WC38625

Sample Id.	93-049		
Analysis Date	July 22, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09350		
Argon		0.007	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		1.44	± 0.02
Methane		<0.001	±
Nitrogen		66.6	± 0.3
Oxygen		0.045	± 0.004
Nitrous oxide		31.9	± 0.3
Other nitrogen oxides		<0.01	±
Comments			

Sample Id.	93-050		
Analysis Date	July 22, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09351		
Argon		0.015	± 0.002
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		1.45	± 0.02
Methane		<0.001	±
Nitrogen		64.5	± 0.3
Oxygen		0.214	± 0.004
Nitrous oxide		33.8	± 0.3
Other nitrogen oxides		<0.01	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 23, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 77
Measurement and test equipment WC38625

Sample Id. 93-051 Analysis Date July 22, 1993 Log-in No. 93-09352	Mole Percent	Estimate of Precision
Argon	0.007	± 0.001
Carbon dioxide	<0.001	±
Carbon monoxide	<0.001	±
Helium	<0.001	±
Hydrogen	1.55	± 0.02
Methane	<0.001	±
Nitrogen	63.1	± 0.3
Oxygen	0.04	± 0.004
Nitrous oxide	35.3	± 0.3
Other nitrogen oxides	<0.01	±
Comments		

Sample Id. 93-052 Analysis Date July 22, 1993 Log-in No. 93-09353	Mole Percent	Estimate of Precision
Argon	0.009	± 0.001
Carbon dioxide	<0.001	±
Carbon monoxide	<0.001	±
Helium	<0.001	±
Hydrogen	0.351	± 0.007
Methane	<0.001	±
Nitrogen	99.47	± 0.01
Oxygen	0.143	± 0.003
Nitrous oxide	0.022	± 0.004
Other nitrogen oxides	<0.001	±
Comments		

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 23, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 77
Measurement and test equipment WC38625

Sample Id.	93-053		
Analysis Date	July 22, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09354		
Argon		0.01	± 0.001
Carbon dioxide		0.0012	± 0.0005
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.335	± 0.007
Methane		<0.001	±
Nitrogen		99.51	± 0.01
Oxygen		0.108	± 0.002
Nitrous oxide		0.031	± 0.004
Other nitrogen oxides		<0.001	±
Comments			

Sample Id.	93-054		
Analysis Date	July 22, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09355		
Argon		0.014	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.345	± 0.007
Methane		<0.001	±
Nitrogen		99.4	± 0.01
Oxygen		0.202	± 0.003
Nitrous oxide		0.04	± 0.004
Other nitrogen oxides		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 23, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 77
Measurement and test equipment WC38625

Sample Id.	93-055		
Analysis Date	July 22, 1993	Mole	Estimate of
Log-in No.	93-09356	Percent	Precision
Argon		0.015	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		1.05	± 0.01
Methane		<0.001	±
Nitrogen		98.37	± 0.01
Oxygen		0.564	± 0.007
Nitrous oxide		0.003	± 0.001
Other nitrogen oxides		<0.001	±
Comments			

Sample Id.	93-056		
Analysis Date	July 22, 1993	Mole	Estimate of
Log-in No.	93-09357	Percent	Precision
Argon		0.01	± 0.002
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.152	± 0.003
Methane		0.089	± 0.009
Nitrogen		59.9	± 0.3
Oxygen		0.101	± 0.003
Nitrous oxide		39.7	± 0.3
Other nitrogen oxides		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 23, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 77
Measurement and test equipment WC38625

Sample Id.	93-057		
Analysis Date	July 22, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09358		
Argon		0.012	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.109	± 0.003
Methane		0.092	± 0.009
Nitrogen		59.4	± 0.3
Oxygen		0.158	± 0.003
Nitrous oxide		40.2	± 0.3
Other nitrogen oxides		<0.001	±
Comments			

Sample Id.	93-058		
Analysis Date	July 22, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09359		
Argon		0.009	± 0.001
Carbon dioxide		<0.001	±
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.937	± 0.009
Methane		0.093	± 0.002
Nitrogen		57.8	± 0.3
Oxygen		0.109	± 0.002
Nitrous oxide		41	± 0.3
Other nitrogen oxides		<0.001	±
Comments			

Battelle
Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
Richland, Washington 99352
Telephone (509) 376-3358

July 27, 1993

Michael D. Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Michael,

Mass spectrometer analyses are complete on your samples delivered 7-26-93. The WHC work order number is ED3724. The mass spectrometer used is a Finnigan MAT-271 that is calibrated on a monthly basis. Nitrogen sensitivity check is run each day the instrument is used.

The results are included with this letter. If you have any questions please contact me at 376-3358.

Sincerely,

Milton W Goheen
Atomic and Molecular Spectroscopy

Concurrence

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 27, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 79
Measurement and test equipment WC38625

Sample Id.	93-059		
Analysis Date	July 27, 1993	Mole	Estimate of
Log-in No.	93-09466	Percent	Precision
Argon		0.009	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.232	± 0.004
Methane		0.004	± 0.002
Nitrogen		61.5	± 0.4
Oxygen		0.114	± 0.004
Nitrous oxide		38.1	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Sample Id.	93-060		
Analysis Date	July 27, 1993	Mole	Estimate of
Log-in No.	93-09467	Percent	Precision
Argon		0.019	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.312	± 0.006
Methane		0.015	± 0.005
Nitrogen		61.4	± 0.4
Oxygen		0.354	± 0.006
Nitrous oxide		37.9	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments	NH3 present		

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 27, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 79
Measurement and test equipment WC38625

Sample Id.	93-061		Estimate
Analysis Date	July 27, 1993	Mole	of
Log-in No.	93-09468	Percent	Precision
Argon		0.45 ±	0.009
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		1.02 ±	0.01
Methane		0.013 ±	0.005
Nitrogen		60.2 ±	0.4
Oxygen		0.41 ±	0.008
Nitrous oxide		37.9 ±	0.4
Other nitrogen oxides		<0.001 ±	
Ammonia		<0.001 ±	
Comments			

Sample Id.	93-062		Estimate
Analysis Date	July 27, 1993	Mole	of
Log-in No.	93-09469	Percent	Precision
Argon		0.032 ±	0.003
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.096 ±	0.001
Methane		<0.001 ±	
Nitrogen		91.37 ±	0.08
Oxygen		0.475 ±	0.008
Nitrous oxide		8.02 ±	0.08
Other nitrogen oxides		<0.001 ±	
Ammonia		<0.001 ±	
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 27, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 79
Measurement and test equipment WC38625

Sample Id.	93-063		
Analysis Date	July 27, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09470		
Argon		0.029	± 0.003
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.085	± 0.004
Methane		<0.001	±
Nitrogen		90.84	± 0.09
Oxygen		0.493	± 0.009
Nitrous oxide		8.56	± 0.09
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Sample Id.	93-064		
Analysis Date	July 27, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09471		
Argon		0.025	± 0.003
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.896	± 0.009
Methane		<0.001	±
Nitrogen		89.06	± 0.09
Oxygen		0.42	± 0.008
Nitrous oxide		9.6	± 0.09
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 27, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 79
Measurement and test equipment WC38625

Sample Id.	93-065		
Analysis Date	July 27, 1993	Mole	Estimate of
Log-in No.	93-09472	Percent	Precision
Argon		0.029 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.133 ±	0.003
Methane		<0.001 ±	
Nitrogen		62.4 ±	0.4
Oxygen		0.519 ±	0.009
Nitrous oxide		36.9 ±	0.4
Other nitrogen oxides		<0.001 ±	
Ammonia		<0.001 ±	
Comments			

Sample Id.	93-066		
Analysis Date	July 27, 1993	Mole	Estimate of
Log-in No.	93-09473	Percent	Precision
Argon		0.006 ±	0.001
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.129 ±	0.003
Methane		<0.001 ±	
Nitrogen		61.5 ±	0.4
Oxygen		0.017 ±	0.002
Nitrous oxide		38.4 ±	0.4
Other nitrogen oxides		<0.001 ±	
Ammonia		<0.001 ±	
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 27, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 79
Measurement and test equipment WC38625

Sample Id.	93-067		
Analysis Date	July 27, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09474		
Argon		0.018	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		1.03	± 0.01
Methane		<0.001	±
Nitrogen		60.7	± 0.4
Oxygen		0.288	± 0.006
Nitrous oxide		37.9	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Sample Id.	93-068		
Analysis Date	July 27, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09475		
Argon		0.008	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.399	± 0.008
Methane		<0.001	±
Nitrogen		99.18	± 0.01
Oxygen		<0.001	±
Nitrous oxide		0.408	± 0.008
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 27, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 79
Measurement and test equipment WC38625

Sample Id.	93-069		
Analysis Date	July 27, 1993	Mole	Estimate of
Log-in No.	93-09476	Percent	Precision
Argon		0.008	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.407	± 0.008
Methane		<0.001	±
Nitrogen		99.17	± 0.01
Oxygen		<0.001	±
Nitrous oxide		0.417	± 0.008
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Sample Id.	93-070		
Analysis Date	July 27, 1993	Mole	Estimate of
Log-in No.	93-09477	Percent	Precision
Argon		0.008	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		1.01	± 0.01
Methane		<0.001	±
Nitrogen		97.96	± 0.01
Oxygen		<0.001	±
Nitrous oxide		1.02	± 0.01
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Battelle
Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
Richland, Washington 99352
Telephone (509)
376-3358

July 28, 1993

Michael D. Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Michael,

Mass spectrometer analyses are complete on your samples delivered 7-27-93. The WHC work order number is ED3724. The mass spectrometer used is a Finnigan MAT-271 that is calibrated on a monthly basis. Nitrogen sensitivity check is run each day the instrument is used.

The results are included with this letter. If you have any questions please contact me at 376-3358.

Sincerely,

Milton W Goheen
Atomic and Molecular Spectroscopy

Concurrence 7-28-93

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 27, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 80
Measurement and test equipment WC38625

Sample Id.	93-071		Estimate
Analysis Date	July 27, 1993	Mole	of
Log-in No.	93-09671	Percent	Precision
Argon		0.019 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.096 ±	0.004
Methane		<0.001 ±	
Nitrogen		90.78 ±	0.09
Oxygen		0.215 ±	0.004
Nitrous oxide		8.88 ±	0.09
Other nitrogen oxides		<0.001 ±	
Ammonia		<0.001 ±	
Comments			

Sample Id.	93-072		Estimate
Analysis Date	July 27, 1993	Mole	of
Log-in No.	93-09672	Percent	Precision
Argon		0.011 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.093 ±	0.004
Methane		<0.001 ±	
Nitrogen		90.71 ±	0.09
Oxygen		0.084 ±	0.005
Nitrous oxide		9.1 ±	0.09
Other nitrogen oxides		<0.001 ±	
Ammonia		<0.001 ±	
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 27, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 80
Measurement and test equipment WC38625

Sample Id.	93-073		
Analysis Date	July 27, 1993	Mole	Estimate of
Log-in No.	93-09673	Percent	Precision
Argon		0.027	± 0.003
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.899	± 0.009
Methane		<0.001	±
Nitrogen		88.94	± 0.09
Oxygen		0.435	± 0.008
Nitrous oxide		9.7	± 0.09
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Sample Id.	93-074		
Analysis Date	July 27, 1993	Mole	Estimate of
Log-in No.	93-09674	Percent	Precision
Argon		0.01	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.125	± 0.005
Methane		0.0021	± 0.0002
Nitrogen		61.1	± 0.4
Oxygen		0.091	± 0.009
Nitrous oxide		38.6	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 27, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 80
Measurement and test equipment WC38625

Sample Id.	93-075		Estimate
Analysis Date	July 27, 1993	Mole	of
Log-in No.	93-09675	Percent	Precision
Argon		0.01	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.126	± 0.005
Methane		<0.001	±
Nitrogen		60.71	± 0.4
Oxygen		0.079	± 0.008
Nitrous oxide		39.1	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Sample Id.	93-076		Estimate
Analysis Date	July 27, 1993	Mole	of
Log-in No.	93-09676	Percent	Precision
Argon		0.011	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		1.07	± 0.01
Methane		<0.001	±
Nitrogen		59.3	± 0.4
Oxygen		0.098	± 0.009
Nitrous oxide		39.5	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 27, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 80
Measurement and test equipment WC38625

Sample Id.	93-077		
Analysis Date	July 27, 1993	Mole	Estimate of
Log-in No.	93-09677	Percent	Precision
Argon		0.012	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.143	± 0.005
Methane		<0.001	±
Nitrogen		61.1	± 0.4
Oxygen		0.12	± 0.009
Nitrous oxide		38.6	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Sample Id.	93-078		
Analysis Date	July 27, 1993	Mole	Estimate of
Log-in No.	93-09678	Percent	Precision
Argon		0.009	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.139	± 0.003
Methane		0.004	± 0.002
Nitrogen		61.1	± 0.4
Oxygen		0.064	± 0.006
Nitrous oxide		38.7	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 27, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 80
Measurement and test equipment WC38625

Sample Id.	93-079		
Analysis Date	July 27, 1993	Mole	Estimate of
Log-in No.	93-09679	Percent	Precision
Argon		0.01	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		1.06	± 0.01
Methane		<0.001	±
Nitrogen		59.2	± 0.4
Oxygen		0.092	± 0.009
Nitrous oxide		39.6	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Battelle
Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
Richland, Washington 99352
Telephone (509) 376-3358

July 29, 1993

Michael D. Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Michael,

Mass spectrometer analyses are complete on your samples delivered 7-28-93. The WHC work order number is ED3724. The mass spectrometer used is a Finnigan MAT-271 that is calibrated on a monthly basis. Nitrogen sensitivity check is run each day the instrument is used.

The results are included with this letter. If you have any questions please contact me at 376-3358.

Sincerely,

Milton W Goheen
Atomic and Molecular Spectroscopy

Concurrence 7-27-93

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 28, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 80
Measurement and test equipment WC38625

Sample Id.	93-080		
Analysis Date	July 28, 1993	Mole	Estimate of
Log-in No.	93-09759	Percent	Precision
Argon		0.013	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.137	± 0.003
Methane		0.001	± 0.0005
Nitrogen		60.7	± 0.4
Oxygen		0.136	± 0.003
Nitrous oxide		39	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Sample Id.	93-081		
Analysis Date	July 28, 1993	Mole	Estimate of
Log-in No.	93-09760	Percent	Precision
Argon		0.011	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.301	± 0.008
Methane		<0.001	±
Nitrogen		99.257	± 0.01
Oxygen		0.008	± 0.002
Nitrous oxide		0.422	± 0.008
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 29, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 80
Measurement and test equipment WC38625

Sample Id.	93-082		
Analysis Date	July 28, 1993	Mole	Estimate of
Log-in No.	93-09761	Percent	Precision
Argon		0.009	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.419	± 0.008
Methane		<0.001	±
Nitrogen		99.14	± 0.01
Oxygen		0.007	± 0.002
Nitrous oxide		0.429	± 0.008
Other nitrogen oxides		0.001	± 0.0005
Ethane		<0.001	±
Comments			

Sample Id.	93-083		
Analysis Date	July 28, 1993	Mole	Estimate of
Log-in No.	93-09762	Percent	Precision
Argon		0.008	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		1.02	± 0.02
Methane		<0.001	±
Nitrogen		97.93	± 0.02
Oxygen		0.005	± 0.002
Nitrous oxide		1.03	± 0.02
Other nitrogen oxides		0.005	± 0.002
Ethane		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 28, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 80
Measurement and test equipment WC38625

Sample Id.	93-084		
Analysis Date	July 28, 1993	Mole	Estimate of
Log-in No.	93-09763	Percent	Precision
Argon		0.009	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.324	± 0.009
Methane		<0.001	±
Nitrogen		99.52	± 0.01
Oxygen		0.147	± 0.004
Nitrous oxide		0.003	± 0.002
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Sample Id.	93-085		
Analysis Date	July 28, 1993	Mole	Estimate of
Log-in No.	93-09764	Percent	Precision
Argon		0.008	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.311	± 0.009
Methane		<0.001	±
Nitrogen		99.55	± 0.01
Oxygen		0.127	± 0.003
Nitrous oxide		0.004	± 0.002
Other nitrogen oxides		<0.001	±
Ammonia		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 29, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 80
Measurement and test equipment WC38625

Sample Id.	93-086		Estimate
Analysis Date	July 28, 1993	Mole	of
Log-in No.	93-09765	Percent	Precision
Argon		0.009 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		1.03 ±	0.02
Methane		<0.001 ±	
Nitrogen		98.472 ±	0.02
Oxygen		0.486 ±	0.009
Nitrous oxide		<0.001 ±	
Other nitrogen oxides		0.004 ±	0.003
Ethane		<0.001 ±	
Comments			

Sample Id.	93-087		Estimate
Analysis Date	July 28, 1993	Mole	of
Log-in No.	93-09766	Percent	Precision
Argon		0.006 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		0.12 ±	0.02
Helium		<0.001 ±	
Hydrogen		0.97 ±	0.02
Methane		0.002 ±	0.001
Nitrogen		62.9 ±	0.4
Oxygen		0.005 ±	0.002
Nitrous oxide		36.1 ±	0.4
Other nitrogen oxides		<0.001 ±	
Ethane		<0.001 ±	
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 28, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 80
Measurement and test equipment WC38625

Sample Id. 93-088 Analysis Date July 28, 1993 Log-in No. 93-09767	Mole Percent	Estimate of Precision
Argon	0.006	± 0.002
Carbon dioxide	<0.01	±
Carbon monoxide	0.11	± 0.02
Helium	<0.001	±
Hydrogen	1.04	± 0.02
Methane	<0.001	±
Nitrogen	62.8	± 0.4
Oxygen	0.026	± 0.002
Nitrous oxide	36.1	± 0.4
Other nitrogen oxides	<0.001	±
Ammonia	<0.001	±
Comments		

Battelle
Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
Richland, Washington 99352
Telephone (509) 376-3358

August 3, 1993

Michael D. Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Michael,

Mass spectrometer analyses are complete on your samples delivered 7-29-93. The WHC work order number is ED3724. The mass spectrometer used is a Finnigan MAT-271 that is calibrated on a monthly basis. Nitrogen sensitivity check is run each day the instrument is used.

The results are included with this letter. If you have any questions please contact me at 376-3358.

Sincerely,

Milton W Goheen
Atomic and Molecular Spectroscopy

Concurrence 8-3-93

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 30, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 81
Measurement and test equipment WC38625

Sample Id.	93-089		
Analysis Date	July 29, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09785		
Argon		0.008 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.197 ±	0.004
Methane		<0.001 ±	
Nitrogen		99.66 ±	0.01
Oxygen		0.113 ±	0.003
Nitrous oxide		0.016 ±	0.002
Other nitrogen oxides		<0.001 ±	
Ethane		<0.001 ±	
Comments			

Sample Id.	93-090		
Analysis Date	July 29, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09786		
Argon		0.013 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.203 ±	0.004
Methane		<0.001 ±	
Nitrogen		99.14 ±	0.01
Oxygen		0.234 ±	0.005
Nitrous oxide		0.409 ±	0.008
Other nitrogen oxides		<0.001 ±	
Ethane		<0.001 ±	
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 30, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 81
Measurement and test equipment WC38625

Sample Id. 93-091 Analysis Date July 29, 1993 Log-in No. 93-09787	Mole Percent	Estimate of Precision
Argon	0.114	± 0.003
Carbon dioxide	<0.01	±
Carbon monoxide	<0.01	±
Helium	<0.001	±
Hydrogen	0.871	± 0.01
Methane	<0.001	±
Nitrogen	96.3	± 0.03
Oxygen	2.7	± 0.03
Nitrous oxide	0.012	± 0.002
Other nitrogen oxides	<0.001	±
Ammonia (estimated)	<0.001	±
Comments		

Sample Id. 93-092 Analysis Date July 29, 1993 Log-in No. 93-09788	Mole Percent	Estimate of Precision
Argon	0.009	± 0.002
Carbon dioxide	0.09	± 0.01
Carbon monoxide	<0.001	±
Helium	<0.001	±
Hydrogen	0.074	± 0.003
Methane	<0.001	±
Nitrogen	80.8	± 0.2
Oxygen	0.006	± 0.002
Nitrous oxide	19.1	± 0.2
Other nitrogen oxides	<0.001	±
Ammonia (estimated)	<0.001	±
Comments		

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 30, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 81
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Sample Id.	93-093		
Analysis Date	July 29, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09789		
Argon		0.028	± 0.003
Carbon dioxide		0.144	± 0.003
Carbon monoxide		<0.001	±
Helium		<0.001	±
Hydrogen		0.145	± 0.002
Methane		0.003	± 0.001
Nitrogen		80	± 0.2
Oxygen		0.501	± 0.005
Nitrous oxide		19.2	± 0.2
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.001	±
Comments			

Sample Id.	93-094		
Analysis Date	July 29, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09790		
Argon		0.011	± 0.002
Carbon dioxide		<0.001	±
Carbon monoxide		0.18	± 0.05
Helium		<0.001	±
Hydrogen		1.41	± 0.02
Methane		<0.001	±
Nitrogen		77.2	± 0.3
Oxygen		0.107	± 0.003
Nitrous oxide		21	± 0.3
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 30, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 81
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Sample Id.	93-095		Estimate
Analysis Date	July 29, 1993	Mole	of
Log-in No.	93-09791	Percent	Precision
Argon		0.008	± 0.003
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.151	± 0.004
Methane		<0.001	±
Nitrogen		60	± 0.4
Oxygen		0.062	± 0.006
Nitrous oxide		39.7	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.01	±
Comments	NH3 present		

Sample Id.	93-096		Estimate
Analysis Date	July 29, 1993	Mole	of
Log-in No.	93-09792	Percent	Precision
Argon		0.023	± 0.003
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.154	± 0.003
Methane		0.016	± 0.004
Nitrogen		59.4	± 0.4
Oxygen		0.418	± 0.008
Nitrous oxide		40	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.01	±
Comments	NH3 present		

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 30, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 81
Measurement and test equipment WC38625

Sample Id.	93-097		
Analysis Date	July 29, 1993	Mole	Estimate of
Log-in No.	93-09793	Percent	Precision
Argon		0.008	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.937	± 0.009
Methane		<0.001	±
Nitrogen		57.3	± 0.4
Oxygen		0.075	± 0.005
Nitrous oxide		40.9	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		0.81	± 0.08
Comments			

Sample Id.	93-098		
Analysis Date	July 29, 1993	Mole	Estimate of
Log-in No.	93-09794	Percent	Precision
Argon		0.009	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.119	± 0.003
Methane		<0.001	±
Nitrogen		63.5	± 0.4
Oxygen		0.059	± 0.002
Nitrous oxide		36.3	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.01	±
Comments	NH3 present		

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 30, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 81
Measurement and test equipment WC38625

Sample Id.	93-099		
Analysis Date	July 29, 1993	Mole	Estimate of
Log-in No.	93-09795	Percent	Precision
Argon		0.013	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.105	± 0.003
Methane		0.002	± 0.001
Nitrogen		63.9	± 0.4
Oxygen		0.157	± 0.004
Nitrous oxide		35.8	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.01	±
Comments	NH3 present		

Sample Id.	93-100		
Analysis Date	July 29, 1993	Mole	Estimate of
Log-in No.	93-09796	Percent	Precision
Argon		0.009	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		1.04	± 0.03
Methane		0.002	± 0.001
Nitrogen		62.2	± 0.4
Oxygen		0.071	± 0.005
Nitrous oxide		36.7	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.001	±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 30, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 81
Measurement and test equipment WC38625

Sample Id.	93-101		Estimate
Analysis Date	July 29, 1993	Mole	of
Log-in No.	93-09797	Percent	Precision
Argon		0.022 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.19 ±	0.004
Methane		0.002 ±	0.001
Nitrogen		60.3 ±	0.4
Oxygen		0.304 ±	0.006
Nitrous oxide		39.2 ±	0.4
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		<0.001 ±	
Comments			

Sample Id.	93-102		Estimate
Analysis Date	July 29, 1993	Mole	of
Log-in No.	93-09798	Percent	Precision
Argon		0.01 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.107 ±	0.003
Methane		0.002 ±	0.001
Nitrogen		59.6 ±	0.4
Oxygen		0.098 ±	0.003
Nitrous oxide		40.1 ±	0.4
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		<0.001 ±	
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 30, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 81
Measurement and test equipment WC38625

Sample Id. 93-103 Analysis Date July 29, 1993 Log-in No. 93-09799	Mole Percent	Estimate of Precision
Argon	0.024	± 0.003
Carbon dioxide	<0.01	±
Carbon monoxide	<0.01	±
Helium	<0.001	±
Hydrogen	0.911	± 0.02
Methane	0.004	± 0.002
Nitrogen	58.7	± 0.4
Oxygen	0.438	± 0.008
Nitrous oxide	40	± 0.4
Other nitrogen oxides	<0.001	±
Ammonia (estimated)		±
Comments		

Sample Id. 93-104 Analysis Date July 29, 1993 Log-in No. 93-09800	Mole Percent	Estimate of Precision
Argon	0.054	± 0.003
Carbon dioxide	<0.01	±
Carbon monoxide	<0.01	±
Helium	<0.001	±
Hydrogen	0.183	± 0.004
Methane	<0.001	±
Nitrogen	63.9	± 0.4
Oxygen	1.02	± 0.01
Nitrous oxide	34	± 0.4
Other nitrogen oxides	<0.001	±
Ammonia (estimated)	0.83	± 0.08
Comments		

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: July 30, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 81
Measurement and test equipment WC38625

Sample Id.	93-105		
Analysis Date	July 29, 1993	Mole	Estimate of
Log-in No.	93-09801	Percent	Precision
Argon		0.011	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.201	± 0.004
Methane		<0.001	±
Nitrogen		62.8	± 0.4
Oxygen		0.129	± 0.003
Nitrous oxide		35.8	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		1.07	± 0.1
Comments			

Sample Id.	93-106		
Analysis Date	July 29, 1993	Mole	Estimate of
Log-in No.	93-09802	Percent	Precision
Argon		0.01	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		1.06	± 0.01
Methane		<0.001	±
Nitrogen		61.8	± 0.4
Oxygen		0.123	± 0.003
Nitrous oxide		36.1	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		0.91	± 0.09
Comments			

Battelle
Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
Richland, Washington 99352
Telephone (509)
376-3358

August 6, 1993

Michael D. Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Michael,

Mass spectrometer analyses are complete on your samples delivered 7-30-93. The WHC work order number is ED3724. The mass spectrometer used is a Finnigan MAT-271 that is calibrated on a monthly basis. Nitrogen sensitivity check is run each day the instrument is used.

The results are included with this letter. If you have any questions please contact me at 376-3358.

This is a second sample report. The sample log-in numbers on the first report were incorrect.

Sincerely,

Milton W Goheen
Atomic and Molecular Spectroscopy

Concurrence 8-6-93

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 6, 1993
Subject: Gas Species Analysis
Corrected Copy

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 83
Measurement and test equipment WC38625

Sample Id.	93-107		Estimate
Analysis Date	August 2, 1993	Mole	of
Log-in No.	93-09853	Percent	Precision
Argon		0.032 ±	0.003
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.114 ±	0.002
Methane		<0.001 ±	
Nitrogen		90.96 ±	0.08
Oxygen		0.486 ±	0.009
Nitrous oxide		8.41 ±	0.08
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		<0.01 ±	

Comments: Log-in number corrected

Sample Id.	93-108		Estimate
Analysis Date	August 2, 1993	Mole	of
Log-in No.	93-09854	Percent	Precision
Argon		0.009 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.114 ±	0.003
Methane		<0.001 ±	
Nitrogen		91.37 ±	0.08
Oxygen		0.0004 ±	0.0002
Nitrous oxide		8.51 ±	0.08
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		<0.01 ±	

Comments: Log-in number corrected

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 6, 1993
Subject: Gas Species Analysis
Corrected Copy

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 83
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Sample Id.	93-109		
Analysis Date	August 2, 1993	Mole	Estimate of
Log-in No.	93-09855	Percent	Precision
Argon		0.052	± 0.005
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.97	± 0.02
Methane		<0.001	±
Nitrogen		89.2	± 0.1
Oxygen		0.408	± 0.008
Nitrous oxide		9.4	± 0.1
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.01	±

Comments: Log-in number corrected

Sample Id.	93-110		
Analysis Date	August 2, 1993	Mole	Estimate of
Log-in No.	93-09856	Percent	Precision
Argon		0.015	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.093	± 0.002
Methane		<0.001	±
Nitrogen		99.04	± 0.01
Oxygen		0.088	± 0.008
Nitrous oxide		0.763	± 0.008
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.01	±

Comments: Log-in number corrected

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 6, 1993
Subject: Gas Species Analysis
Corrected Copy

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 83
Measurement and test equipment WC38625

Sample Id.	93-111		Estimate
Analysis Date	August 2, 1993	Mole	of
Log-in No.	93-09857	Percent	Precision
Argon		0.085 ±	0.003
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.17 ±	0.004
Methane		<0.01 ±	
Nitrogen		97.74 ±	0.02
Oxygen		1.74 ±	0.02
Nitrous oxide		0.269 ±	0.005
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		<0.01 ±	

Comments: Log-in number corrected

Sample Id.	93-112		Estimate
Analysis Date	August 2, 1993	Mole	of
Log-in No.	93-09858	Percent	Precision
Argon		0.014 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.9 ±	0.02
Methane		<0.01 ±	
Nitrogen		97.51 ±	0.04
Oxygen		0.151 ±	0.003
Nitrous oxide		1.42 ±	0.03
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		<0.01 ±	

Comments: Log-in number corrected

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 6, 1993
Subject: Gas Species Analysis
Corrected Copy

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 83
Measurement and test equipment WC38625

Sample Id.	93-113		Estimate
Analysis Date	August 2, 1993	Mole	of
Log-in No.	93-09859	Percent	Precision
Argon		0.005	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.124	± 0.003
Methane		0.099	± 0.003
Nitrogen		63	± 0.4
Oxygen		0.0013	± 0.0006
Nitrous oxide		36.8	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.01	±

Comments: Log-in number corrected

Sample Id.	93-114		Estimate
Analysis Date	August 2, 1993	Mole	of
Log-in No.	93-09860	Percent	Precision
Argon		0.012	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.121	± 0.003
Methane		0.097	± 0.003
Nitrogen		63.5	± 0.4
Oxygen		0.151	± 0.003
Nitrous oxide		36.1	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.01	±

Comments: Log-in number corrected

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 6, 1993
Subject: Gas Species Analysis
Corrected Copy

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 83
Measurement and test equipment WC38625

Sample Id.	93-115		Estimate
Analysis Date	August 2, 1993	Mole	of
Log-in No.	93-09861	Percent	Precision
Argon		0.005	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		1.04	± 0.02
Methane		0.098	± 0.003
Nitrogen		61.5	± 0.4
Oxygen		0.002	± 0.001
Nitrous oxide		37.3	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.01	±

Comments: Log-in number corrected

Sample Id.	93-116		Estimate
Analysis Date	August 2, 1993	Mole	of
Log-in No.	93-09862	Percent	Precision
Argon		0.006	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.121	± 0.003
Methane		<0.001	±
Nitrogen		63.3	± 0.4
Oxygen		0.0004	± 0.0002
Nitrous oxide		36.6	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.01	±

Comments: Log-in number corrected

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 6, 1993
Subject: Gas Species Analysis
Corrected Copy

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 83
Measurement and test equipment WC38625

Sample Id.	93-117		
Analysis Date	August 2, 1993	Mole	Estimate of
Log-in No.	93-09863	Percent	Precision
Argon		0.006	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.116	± 0.003
Methane		<0.001	±
Nitrogen		63.3	± 0.4
Oxygen		0.0002	± 0.0001
Nitrous oxide		36.6	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.01	±

Comments: Log-in number corrected

Sample Id.	93-118		
Analysis Date	August 2, 1993	Mole	Estimate of
Log-in No.	93-09864	Percent	Precision
Argon		0.006	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		1.03	± 0.02
Methane		<0.001	±
Nitrogen		61.7	± 0.4
Oxygen		<0.0005	±
Nitrous oxide		37.2	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.01	±

Comments: Log-in number corrected

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 6, 1993
Subject: Gas Species Analysis
Corrected Copy

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 83
Measurement and test equipment WC38625

Sample Id.	93-119		Estimate
Analysis Date	August 2, 1993	Mole	of
Log-in No.	93-09865	Percent	Precision
Argon		0.006 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.148 ±	0.003
Methane		<0.001 ±	
Nitrogen		61.6 ±	0.4
Oxygen		0.0009 ±	0.0005
Nitrous oxide		38.3 ±	0.4
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		<0.01 ±	

Comments: Log-in number corrected

Sample Id.	93-120		Estimate
Analysis Date	August 2, 1993	Mole	of
Log-in No.	93-09866	Percent	Precision
Argon		0.007 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.148 ±	0.003
Methane		<0.001 ±	
Nitrogen		61.7 ±	0.4
Oxygen		0.0016 ±	0.0005
Nitrous oxide		38.1 ±	0.4
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		<0.01 ±	

Comments: Log-in number corrected

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 6, 1993
Subject: Gas Species Analysis
Corrected Copy

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 83
Measurement and test equipment WC38625

Sample Id.	93-121		
Analysis Date	August 2, 1993	Mole	Estimate of
Log-in No.	93-09867	Percent	Precision
Argon		0.007	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		1.04	± 0.02
Methane		<0.001	±
Nitrogen		60.2	± 0.4
Oxygen		0.0018	± 0.0006
Nitrous oxide		38.8	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		<0.01	±

Comments: Log-in number corrected

Battelle
Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
Richland, Washington 99352
Telephone (509) 376-3358

August 5, 1993

Michael D. Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Michael,

Mass spectrometer analyses are complete on your samples delivered 8-3-93. The package number for this work is ED3724. The mass spectrometer used is a Finnigan MAT-271 that is calibrated on a monthly basis. Nitrogen sensitivity check is run each day the instrument is used.

The results are included with this letter. A valve on one of the samples [93-124] was open slighlty and leaked. If you have any questions please contact me at 376-3358.

Sincerely,

M W Goheen

Milton W Goheen
Atomic and Molecular Spectroscopy

Concurrence S J Bos 8-5-93

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 4, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 85
Measurement and test equipment WC38625

Sample Id.	93-122		Estimate
Analysis Date	August 4, 1993	Mole	of
Log-in No.	93-09961	Percent	Precision
Argon		0.005	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.17	± 0.004
Methane		<0.001	±
Nitrogen		62.4	± 0.4
Oxygen		0.0009	± 0.0005
Nitrous oxide		36.6	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		0.78	± 0.1
Comments	NH3 interference		

Sample Id.	93-123		Estimate
Analysis Date	August 4, 1993	Mole	of
Log-in No.	93-09962	Percent	Precision
Argon		0.005	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.168	± 0.004
Methane		<0.001	±
Nitrogen		62.5	± 0.4
Oxygen		0.004	± 0.002
Nitrous oxide		36.4	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)		1	± 0.1
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 4, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 85
Measurement and test equipment WC38625

Sample Id.	93-124		
Analysis Date	August 4, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09963		
Argon		0.577	± 0.009
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.017	± 0.002
Methane		0.004	± 0.001
Nitrogen		70	± 0.3
Oxygen		13.4	± 0.2
Nitrous oxide		15.9	± 0.2
Other nitrogen oxides		<0.001	±
Ammonia (estimated)			±
Comments	valve was slightly open		

Sample Id.	93-125		
Analysis Date	August 4, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09964		
Argon		0.008	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.822	± 0.02
Methane		<0.001	±
Nitrogen		98.77	± 0.02
Oxygen		0.388	± 0.008
Nitrous oxide		0.0128	± 0.002
Other nitrogen oxides		0.002	± 0.001
Ammonia (estimated)			±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 4, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 85
Measurement and test equipment WC38625

Sample Id.	93-126		
Analysis Date	August 4, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09965		
Argon		0.008	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.812	± 0.02
Methane		<0.001	±
Nitrogen		98.77	± 0.02
Oxygen		0.397	± 0.008
Nitrous oxide		0.0062	± 0.002
Other nitrogen oxides		0.003	± 0.002
Ammonia (estimated)			±
Comments			

Sample Id.	93-127		
Analysis Date	August 4, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09966		
Argon		0.008	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		1.02	± 0.02
Methane		<0.001	±
Nitrogen		98.46	± 0.02
Oxygen		0.505	± 0.009
Nitrous oxide		0.008	± 0.002
Other nitrogen oxides		0.004	± 0.003
Ammonia (estimated)			±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 4, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 85
Measurement and test equipment WC38625

Sample Id.	93-128		Estimate of
Analysis Date	August 4, 1993	Mole Percent	Precision
Log-in No.	93-09967		
Argon		0.005 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.111 ±	0.002
Methane		0.102 ±	0.002
Nitrogen		63.2 ±	0.4
Oxygen		0.0007 ±	0.0005
Nitrous oxide		36.6 ±	0.4
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		±	
Comments			

Sample Id.	93-129		Estimate of
Analysis Date	August 4, 1993	Mole Percent	Precision
Log-in No.	93-09968		
Argon		0.004 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.109 ±	0.02
Methane		0.101 ±	0.02
Nitrogen		63.1 ±	0.4
Oxygen		0.0012 ±	0.0006
Nitrous oxide		36.7 ±	0.4
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		±	
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 4, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 85
Measurement and test equipment WC38625

Sample Id.	93-130		Estimate of
Analysis Date	August 4, 1993	Mole Percent	Precision
Log-in No.	93-09969		
Argon		0.005 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		1.05 ±	0.02
Methane		0.101 ±	0.003
Nitrogen		61.6 ±	0.4
Oxygen		0.0017 ±	0.0006
Nitrous oxide		37.3 ±	0.4
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		±	
Comments			

Sample Id.	93-131		Estimate of
Analysis Date	August 4, 1993	Mole Percent	Precision
Log-in No.	93-09970		
Argon		0.013 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.116 ±	0.002
Methane		<0.001 ±	
Nitrogen		58.7 ±	0.4
Oxygen		0.183 ±	0.004
Nitrous oxide		41 ±	0.4
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		±	
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 4, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 85
Measurement and test equipment WC38625

Sample Id.	93-132		
Analysis Date	August 4, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09971		
Argon		0.034	± 0.003
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.107	± 0.002
Methane		<0.001	±
Nitrogen		58.9	± 0.4
Oxygen		0.676	± 0.009
Nitrous oxide		40.3	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)			±
Comments			

Sample Id.	93-133		
Analysis Date	August 4, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09972		
Argon		0.011	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.94	± 0.01
Methane		<0.001	±
Nitrogen		57.2	± 0.4
Oxygen		0.159	± 0.003
Nitrous oxide		41.7	± 0.4
Other nitrogen oxides		<0.001	±
Ammonia (estimated)			±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 4, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 85
Measurement and test equipment WC38625

Sample Id.	93-134		
Analysis Date	August 4, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09973		
Argon		0.014 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.099 ±	0.002
Methane		<0.001 ±	
Nitrogen		91.31 ±	0.08
Oxygen		0.14 ±	0.003
Nitrous oxide		8.43 ±	0.08
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		±	
Comments			

Sample Id.	93-135		
Analysis Date	August 4, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09974		
Argon		0.014 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.102 ±	0.002
Methane		<0.001 ±	
Nitrogen		91.23 ±	0.09
Oxygen		0.14 ±	0.003
Nitrous oxide		8.52 ±	0.09
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		±	
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 4, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 85
Measurement and test equipment WC38625

Sample Id.	93-136		
Analysis Date	August 4, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09975		
Argon		0.01	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		1.03	± 0.02
Methane		<0.001	±
Nitrogen		89.6	± 0.1
Oxygen		0.064	± 0.003
Nitrous oxide		9.3	± 0.1
Other nitrogen oxides		<0.001	±
Ammonia (estimated)			±
Comments			

Sample Id.	93-137		
Analysis Date	August 4, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09976		
Argon		0.014	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		<0.01	±
Helium		<0.001	±
Hydrogen		0.435	± 0.008
Methane		<0.001	±
Nitrogen		98.74	± 0.01
Oxygen		0.156	± 0.003
Nitrous oxide		0.657	± 0.009
Other nitrogen oxides		<0.001	±
Ammonia (estimated)			±
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 4, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 85
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Sample Id.	93-138		
Analysis Date	August 4, 1993	Mole	Estimate of
Log-in No.	93-09977	Percent	Precision
Argon		0.016 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.439 ±	0.008
Methane		<0.001 ±	
Nitrogen		98.76 ±	0.01
Oxygen		0.21 ±	0.004
Nitrous oxide		0.574 ±	0.009
Other nitrogen oxides		0.001 ±	0.0005
Ammonia (estimated)		±	
Comments			

Sample Id.	93-139		
Analysis Date	August 4, 1993	Mole	Estimate of
Log-in No.	93-09978	Percent	Precision
Argon		0.023 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.01 ±	
Helium		<0.001 ±	
Hydrogen		0.982 ±	0.02
Methane		<0.001 ±	
Nitrogen		97.47 ±	0.02
Oxygen		0.355 ±	0.006
Nitrous oxide		1.17 ±	0.02
Other nitrogen oxides		0.0007 ±	0.0005
Ammonia (estimated)		±	
Comments			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 4, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 85
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Sample Id.	93-142		
Analysis Date	August 4, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-09981		
Argon		0.015 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.001 ±	
Helium		<0.001 ±	
Hydrogen		1.62 ±	0.02
Methane		<0.001 ±	
Nitrogen		72.1 ±	0.3
Oxygen		0.217 ±	0.004
Nitrous oxide		26.1 ±	0.3
Other nitrogen oxides		<0.01 ±	
Ammonia (estimated)		±	
Comments			

SAMPLE REANALYZED. SEE ANALYSIS REPORT DATED 8/9/93.

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 4, 1993
Subject: Gas Species Analysis

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 85
Measurement and test equipment WC38625

Sample Id.	93-140		
Analysis Date	August 4, 1993	Mole	Estimate of
Log-in No.	93-09979	Percent	Precision
Argon		0.025 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.001 ±	
Helium		<0.001 ±	
Hydrogen		0.066 ±	0.002
Methane		<0.001 ±	
Nitrogen		74.6 ±	0.3
Oxygen		0.457 ±	0.008
Nitrous oxide		24.9 ±	0.3
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		±	
Comments			

Sample Id.	93-141		
Analysis Date	August 4, 1993	Mole	Estimate of
Log-in No.	93-09980	Percent	Precision
Argon		0.011 ±	0.002
Carbon dioxide		<0.01 ±	
Carbon monoxide		<0.001 ±	
Helium		<0.001 ±	
Hydrogen		0.071 ±	0.002
Methane		<0.001 ±	
Nitrogen		74.6 ±	0.3
Oxygen		0.138 ±	0.003
Nitrous oxide		25.2 ±	0.3
Other nitrogen oxides		<0.001 ±	
Ammonia (estimated)		±	
Comments			

SAMPLE REANALYZED SEE ANALYSIS DATED REPORT DATED 8/9/93

Battelle
Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
Richland, Washington 99352
Telephone (509)
376-3358

August 9, 1993

Michael D. Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Michael,

Mass spectrometer reanalyses are complete on your samples 93-140 through 93-142. There was carbon monoxide in the last two samples but not in 93-140. The high resolution scans on the samples were in error. The secondary electron multiplier [SEM] failed about the time your samples were checked for CO. The samples were rechecked using low resolution scans with carbon monoxide present in the data reduction library. The high resolution method is much more sensitive than the low resolution method. A replacement SEM was ordered in May but lost by WHC delivery. A second SEM was ordered two weeks ago.

If you have any questions please contact me at 376-3358.

Sincerely,

Milton W Goheen
Atomic and Molecular Spectroscopy

S J Bos 8-9-93
Concurrence

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 6, 1993
Subject: Gas Species Analysis
Corrected Copy

To: M.D. Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 85
Measurement and test equipment WC38625

Sample Id.	93-141		Estimate
Analysis Date	August 6, 1993	Mole	of
Log-in No.	93-09980	Percent	Precision
Argon		0.011	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		0.295	± 0.02
Helium		<0.001	±
Hydrogen		0.071	± 0.01
Methane		0.003	± 0.001
Nitrogen		74.3	± 0.3
Oxygen		0.138	± 0.003
Nitrous oxide		25.2	± 0.3
Other nitrogen oxides		<0.001	±

Comments:

Sample Id.	93-142		Estimate
Analysis Date	August 6, 1993	Mole	of
Log-in No.	93-09981	Percent	Precision
Argon		0.015	± 0.002
Carbon dioxide		<0.01	±
Carbon monoxide		1.435	± 0.05
Helium		<0.001	±
Hydrogen		1.63	± 0.02
Methane		0.01	± 0.001
Nitrogen		70.6	± 0.3
Oxygen		0.216	± 0.004
Nitrous oxide		26.1	± 0.3
Other nitrogen oxides		<0.001	±

Comments:

SAMPLE REANALYZED. SEE SAMPLE ANALYSIS REPORT DATED 8/17/93. THIS IS THE REANALYSIS MB3

Battelle
Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
Richland, Washington 99352
Telephone (509)
376-3358

September 2, 1993

Michael D. Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Michael,

Mass spectrometer analyses are complete on your samples delivered 8-6-93. The WHC work order number is ED3724. The mass spectrometer used is a Finnigan MAT-271 that is calibrated on a monthly basis. Nitrogen sensitivity check is run each day the instrument is used.

The results are included with this letter. If you have any questions please contact me at 376-3358.

Sincerely,

Milton W Goheen
Atomic and Molecular Spectroscopy

Concurrence

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 10, 1993
Subject: Gas Species Analysis

To: M.D.Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 87
Measurement and test equipment WC38625

Sample Id.	93-143		
Analysis Date	August 9, 1993	Mole	Estimate of
Log-in No.	93-10192	Percent	Precision
Argon		0.039	± 0.004
Carbon dioxide			±
Carbon monoxide			±
Helium		<0.001	±
Hydrogen		0.158	± 0.003
Methane		<0.001	±
Nitrogen		62.5	± 0.4
Oxygen		0.673	± 0.009
Nitrous oxide		36.6	± 0.4
Other nitrogen oxides		0.034	± 0.004
Ammonia (estimated)		<0.001	±

Comments:

Sample Id.	93-144		
Analysis Date	August 9, 1993	Mole	Estimate of
Log-in No.	93-10193	Percent	Precision
Argon		0.032	± 0.003
Carbon dioxide			±
Carbon monoxide			±
Helium		<0.001	±
Hydrogen		0.178	± 0.003
Methane		<0.001	±
Nitrogen		62.3	± 0.4
Oxygen		0.543	± 0.009
Nitrous oxide		36.9	± 0.4
Other nitrogen oxides		0.024	± 0.003
Ammonia (estimated)		<0.001	±

Comments:

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 10, 1993
Subject: Gas Species Analysis

To: M.D.Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 87
Measurement and test equipment WC38625

Sample Id.	93-145		
Analysis Date	August 9, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-10194		
Argon		0.014	± 0.001
Carbon dioxide			±
Carbon monoxide			±
Helium		<0.001	±
Hydrogen		1.04	± 0.01
Methane		<0.001	±
Nitrogen		61.2	± 0.4
Oxygen		0.235	± 0.005
Nitrous oxide		37.5	± 0.4
Other nitrogen oxides		0.053	± 0.005
Ammonia (estimated)		<0.001	±
Comments:			

Sample Id.	93-146		
Analysis Date	August 9, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-10195		
Argon		0.009	± 0.001
Carbon dioxide			±
Carbon monoxide			±
Helium		<0.001	±
Hydrogen		0.025	± 0.003
Methane		<0.001	±
Nitrogen		63.2	± 0.4
Oxygen		0.109	± 0.004
Nitrous oxide		36.6	± 0.4
Other nitrogen oxides		0.036	± 0.004
Ammonia (estimated)		<0.001	±
Comments:			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 10, 1993
Subject: Gas Species Analysis

To: M.D.Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 87
Measurement and test equipment WC38625

Sample Id.	93-147		Estimate
Analysis Date	August 9, 1993	Mole	of
Log-in No.	93-10196	Percent	Precision
Argon		0.01	± 0.001
Carbon dioxide			±
Carbon monoxide			±
Helium		<0.001	±
Hydrogen		1.14	± 0.01
Methane		<0.001	±
Nitrogen		61.2	± 0.4
Oxygen		0.146	± 0.004
Nitrous oxide		37.5	± 0.4
Other nitrogen oxides		0.034	± 0.004
Ammonia (estimated)		<0.001	±

Comments:

Sample Id.	93-148		Estimate
Analysis Date	August 9, 1993	Mole	of
Log-in No.	93-10197	Percent	Precision
Argon		0.0047	± 0.0005
Carbon dioxide			±
Carbon monoxide			±
Helium		<0.001	±
Hydrogen		0.021	± 0.003
Methane		<0.001	±
Nitrogen		62.6	± 0.4
Oxygen		0.0014	± 0.0004
Nitrous oxide		37.3	± 0.4
Other nitrogen oxides		0.026	± 0.003
Ammonia (estimated)		<0.001	±

Comments:

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 10, 1993
Subject: Gas Species Analysis

To: M.D.Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 87
Measurement and test equipment WC38625

Sample Id.	93-149		
Analysis Date	August 9, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-10198		
Argon		0.044	± 0.005
Carbon dioxide			±
Carbon monoxide			±
Helium		<0.001	±
Hydrogen		0.052	± 0.005
Methane		<0.001	±
Nitrogen		61.8	± 0.4
Oxygen		0.942	± 0.01
Nitrous oxide		36.9	± 0.4
Other nitrogen oxides		0.013	± 0.002
Ammonia (estimated)		<0.001	±
Comments:			

Sample Id.	93-150		
Analysis Date	August 9, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-10199		
Argon		0.0047	± 0.0005
Carbon dioxide			±
Carbon monoxide			±
Helium		<0.001	±
Hydrogen		1.01	± 0.01
Methane		<0.001	±
Nitrogen		60	± 0.4
Oxygen		0.0011	± 0.0004
Nitrous oxide		39	± 0.4
Other nitrogen oxides		0.063	± 0.006
Ammonia (estimated)		<0.001	±
Comments:			

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 10, 1993
Subject: Gas Species Analysis

To: M.D.Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 87
Measurement and test equipment WC38625

Sample Id.	93-151		
Analysis Date	August 9, 1993	Mole	Estimate of
Log-in No.	93-10200	Percent	Precision
Argon		0.0049	± 0.0005
Carbon dioxide			±
Carbon monoxide			±
Helium		<0.001	±
Hydrogen		0.06	± 0.006
Methane		<0.001	±
Nitrogen		61.2	± 0.4
Oxygen		0.0019	± 0.0004
Nitrous oxide		38.6	± 0.4
Other nitrogen oxides		0.013	± 0.002
Ammonia (estimated)		<0.001	±

Comments:

Battelle
Pacific Northwest Laboratories
Battelle Boulevard
P.O. Box 999
Richland, Washington 99352
Telephone (509)
376-3358

September 2, 1993

Michael D. Britton
Westinghouse Hanford Company
Box 1970, M/S S4-25
Richland, Washington

Dear Michael,

Mass spectrometer analyses are complete on your samples delivered 8-10-93. The WHC work order number is ED3724. The mass spectrometer used is a Finnigan MAT-271 that is calibrated on a monthly basis. Nitrogen sensitivity check is run each day the instrument is used.

The results are included with this letter. If you have any questions please contact me at 376-3358.

Sincerely,

Milton W Goheen
Atomic and Molecular Spectroscopy

Concurrence

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 11, 1993
Subject: Gas Species Analysis

To: M.D.Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 87
Measurement and test equipment WC38625

Sample Id.	93-152		
Analysis Date	August 11, 1993	Mole	Estimate of
Log-in No.	93-10248	Percent	Precision
Argon		0.028	± 0.003
Carbon dioxide			±
Carbon monoxide			±
Helium		<0.001	±
Hydrogen		0.0073	± 0.0005
Methane		<0.001	±
Nitrogen		61.9	± 0.4
Oxygen		0.508	± 0.005
Nitrous oxide		37.4	± 0.4
Other nitrogen oxides		<0.01	±
Ammonia (estimated)		<0.001	±

Comments:

Sample Id.	93-153		
Analysis Date	August 11, 1993	Mole	Estimate of
Log-in No.	93-10249	Percent	Precision
Argon		0.011	± 0.001
Carbon dioxide			±
Carbon monoxide			±
Helium		<0.001	±
Hydrogen		1.03	± 0.01
Methane		<0.001	±
Nitrogen		60.2	± 0.4
Oxygen		0.16	± 0.002
Nitrous oxide		38.5	± 0.4
Other nitrogen oxides		<0.01	±
Ammonia (estimated)		<0.001	±

Comments:

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 11, 1993
Subject: Gas Species Analysis

To: M.D.Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 87
Measurement and test equipment WC38625

Sample Id.	93-154		
Analysis Date	August 11, 1993	Mole	Estimate of
Log-in No.	93-10250	Percent	Precision
Argon		0.013 ±	0.001
Carbon dioxide		±	
Carbon monoxide		±	
Helium		<0.001 ±	
Hydrogen		0.156 ±	0.002
Methane		<0.001 ±	
Nitrogen		61.9 ±	0.4
Oxygen		0.217 ±	0.002
Nitrous oxide		37.5 ±	0.4
Other nitrogen oxides		<0.01 ±	
Ammonia (estimated)		<0.001 ±	

Comments:

Sample Id.	93-155		
Analysis Date	August 11, 1993	Mole	Estimate of
Log-in No.	93-10251	Percent	Precision
Argon		0.0062 ±	0.0006
Carbon dioxide		±	
Carbon monoxide		±	
Helium		<0.001 ±	
Hydrogen		1.03 ±	0.01
Methane		<0.001 ±	
Nitrogen		60.5 ±	0.4
Oxygen		0.052 ±	0.005
Nitrous oxide		38.3 ±	0.4
Other nitrogen oxides		<0.01 ±	
Ammonia (estimated)		<0.001 ±	

Comments:

Pacific Northwest Laboratory

From: Inorganic Mass Spectrometry Lab.
Phone: (509) 376-3358 / mail slot P7-22
Date: August 11, 1993
Subject: Gas Species Analysis

To: M.D.Britton

Analytical procedure: PNL-MA-299 ALO-284
Laboratory record book 54411 Page 87
Measurement and test equipment WC38625

Sample Id.	93-156		
Analysis Date	August 11, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-10252		
Argon		0.0097 ±	0.001
Carbon dioxide		±	
Carbon monoxide		±	
Helium		<0.001 ±	
Hydrogen		1.02 ±	0.01
Methane		<0.001 ±	
Nitrogen		60.4 ±	0.4
Oxygen		0.128 ±	0.002
Nitrous oxide		38.3 ±	0.4
Other nitrogen oxides		<0.01 ±	
Ammonia (estimated)		<0.001 ±	

Comments:

Sample Id.	93-157		
Analysis Date	August 11, 1993	Mole Percent	Estimate of Precision
Log-in No.	93-10253		
Argon		0.0057 ±	0.0006
Carbon dioxide		±	
Carbon monoxide		±	
Helium		<0.001 ±	
Hydrogen		1.05 ±	0.01
Methane		<0.001 ±	
Nitrogen		60.4 ±	0.4
Oxygen		0.037 ±	0.004
Nitrous oxide		38.5 ±	0.4
Other nitrogen oxides		<0.01 ±	
Ammonia (estimated)		<0.001 ±	

Comments:

APPENDIX B

GAS SPECTROMETRY ANALYSIS REPORTS

SAMPLES 93-141 THROUGH 93-658

Westinghouse Hanford Company — Internal Memo

From: Special Analytical Studies
Phone: 373-4051 S3-90
Date: April 6, 1994
Subject: GROUT PROGRAM GAS CHROMATOGRAPHIC SPREAD SHEETS

To: M. D. Britton S4-25

cc: L. L Lockrem S3-90
W. J. Powell L4-75
LAP File/LB

The proceeding spread sheets are the compilation of the Gas Chromatographic work preformed by Special Analytical Studies, WHC, for the grout program under the direction of Chemical Engineering Laboratory, WHC.

Introduction

A gas chromatograph was used to monitor the resulting gases of a designed chemical reaction. The major gas of interest was carbon monoxide and hydrogen. The gas samples were collected via Tedlar™ sample bag. The contents of the sample bag were analyzed by gas chromatography and the immediate results were displayed at the experiment location.

Description

MTI (Microsensor Technology Incorporated) Analytical™ Gas Chromatograph Quad 400, four channel column/detector module system. A single common injection port was fabricated to facilitate the four 1.0 micro liter sample injections.

Channel A. Poropak Q, 8 meter, TCD. Helium carrier gas, column temperature 89°C, column head pressure 27.8 psi. Inject time 100 msec, sample time 10 sec, run time 70 sec. Sample injection size 1.0uL

Channel B. Poroplot U, 6 meter, TCD. Helium carrier gas, column temperature 54°C, column head pressure 30.3 psi. Inject time 100 msec, sample time 10 sec, run time 70 sec. Sample injection size 1.0uL

Channel C. Molesieve 5A, 10 meter, TCD. Helium carrier gas, column temperature 89°C, column head pressure 44.8 psi. Inject time 100 msec, sample time 10 sec, run time 70 sec. Sample injection size 1.0uL

Channel D. Molesieve 5A, 10 meter, TCD. Nitrogen carrier gas, column temperature 89°C, column head pressure 41.8 psi. Inject time 100 msec, sample time 10 sec, run time 70 sec. Sample injection size 1.0uL

The gas chromatograph is controlled by a 486/25 Compaq™ portable computer with docking station. The PC has a 370 megabyte hard drive, uncompressed, with 200 megabyte RAM. Instrument control was by the software package EZChrom 400 Version 3.5.8 supplied by MTI Analytical Instruments™. The methodology parameters are variable by operational application. All data was initially stored to hard drive then transferred and verified to an internal Bernoulli™ 150 for transfer out of the laboratory for compilation and review. Each individual gas chromatographic file is the analytical results of at least 3 sample injections.

Each time that samples were planned to be analyzed a series of calibration standards were run prior to the sample analysis. The concentration of the calibration standards were in the range of the expected gas levels for the tests that were planned that day. The results of these standards analysis were compared to the previous days calibration curve. If significant difference were in the two days standard concentrations (2% of the low end concentration) the calibration curve was recalculated for that day. If there was any extended period of time between two sample runs the instrument was recalibrated. At the daily end of a series of analysis a second set of calibrations standards were analyzed to monitor any detector drift.

The gases of interest were nitrous oxide (channel A and B), carbon monoxide (channel C) and hydrogen (channel C and D).

The chromatograms were processed by importing the EZChrom generated *.PRN file data into a Borland QuatroPro™ spreadsheet and rearranging the data into a presentable form. All chromatograms were individually reviewed for baseline anomalies that might interfere with the integration of the chromatographic peak. The chromatograms that might be influenced by inconsistencies of the baseline have been identified by highlighting the influenced run on the QuatroPro™ spreadsheet.

Results

The data being generated by the chromatographic analysis was initially printed and saved as a hardcopy. At sample run #140 the computer storage capabilities were utilized. Consequently the presented data starts at run #141, #140 being lost to experimental error.

The reported results have been edited for groups of data that show no interesting characteristics, i.e. no data. These data groups have been omitted from the reported data to allow presentation of results in a manner which is readable.

There have been several data files lost either in their generation or sometime during their transfer. These files are identified as;

140	Experimental Error
163-211	Lost by incorrect save command
252-255	Lost
275	Lost
441	Lost

The files numbered 93-400 through 93-440 have a number of baseline discrepancies in channel C. This is a result of the volume of the matrix gas in the injected gas sample. The sample gas matrix consisted of a 40% mixture of nitrous oxide and the remainder of nitrogen and gas of interest. A quantity of N_2O at this concentration effects the baseline stability as it passes the detector. N_2O can be partitioned by a molesieve 5A column if the mass volumes are small enough not to overload the partitioning capacity. If the column is overloaded, as was the case in some of these identified files, the peak stretches out over a considerable time period and appears as a deviation of the expected baseline. The elution of the N_2O was over a long enough period that it was initially perceived as an instrumental error. After identification of the problem, an erratic baseline, it was determined that when running a sample containing large quantities of N_2O a sufficient time between injections should be allowed for the complete elution of this gas. Analyses after this were spaced further apart to compensate for N_2O elution.

Data file #658 was the last analysis.

Conclusion

The files that are highlighted are the ones identified as possibly having erroneous reported values due to baseline shift during a run. The resulting statistics should be viewed as possibly bias. Before accepting the reported statistics of a file in which one or more of the runs have a highlighted bar through a portion of the data, it is necessary to examine the reported peaks. If the baseline shifted during the analysis the integration software may have successfully established a baseline near the analyte peak and thus integrated and reported the correct peak area. Some of the more obvious files that have baseline abnormalities have had statistical corrections made in the data reporting.

M. D. Britton
Page 4
April 6, 1994

12920-SAS94-083

Any data file that shows an area value of "-8888" has a analyte gas concentration that is greater than the dynamic range of the gas chromatograph. This is the result of the analyte gas exceeding the expected maximum concentration. The software allows for the shifting of the dynamic range by changing the detector response. But in shifting the detector response the calibration curve also changes negating any current calibration. Once the analyte gas concentration has been identified then appropriate calibration curves can be established.

L. A. Pingel, Scientist
Special Analytical Studies

drt

Attachment

Sample I.D. Number 93 - 141

	Channel "A" Carbon Dioxide			Channel "A" Nitrous Oxide			Channel "B" Carbon Dioxide			Channel "B" Nitrous oxide			Channel "C" Carbon Monoxide			Channel "D" helium			Channel "D" hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
93-141.prn	21.89	343427	0.006	22.63	183721840	25.206	20.05	0	0	20.57	0	0	51.36	239297	0.006	0	0	0	24.83	9234832	0.07
	21.89	343424	0.006	22.63	182008544	24.843	20.05	0	0	20.57	0	0	51.36	222132	0.006	0	0	0	24.85	9653301	0.073
	21.89	340396	0.007	22.63	181838672	24.893	20.05	0	0	20.57	0	0	51.36	221041	0.006	0	0	0	24.85	10019073	0.076
Average		3.42E+05	0.01		1.82E+08	25.01		0.00E+00	0.00		0.00E+00	0.00		2.26E+05	0.01		0.00E+00	0.00		9.65E+06	0.07
Standard Deviation		1.75E+03	0.00		1.09E+06	0.17		0.00E+00	0.00		0.00E+00	0.00		1.02E+04	0.00		0.00E+00	0.00		3.94E+05	0.00
%RSD		5.11E-01	7.59		6.73E-01	0.67		ERR	ERR		ERR	ERR		4.47E+00	0.00		ERR	ERR		4.08E+00	4.11

Sample I.D. Number 93 - 142

	Channel "A" Carbon Dioxide			Channel "A" Nitrous Oxide			Channel "B" Carbon Dioxide			Channel "B" Nitrous oxide			Channel "C" Carbon Monoxide			Channel "D" helium			Channel "D" hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
93-142.prn	21.85	119270	0.003	22.65	85259042	12.126	19.82	250580	0.003	20.57	0	0	51.36	1201702	0.031	0	0	0	24.79	142903592	1.185
	21.85	123471	0.003	22.65	82955805	12.73	19.82	313185	0.003	20.57	0	0	51.2	1415379	0.036	0	0	0	24.79	150661312	1.255
	21.85	117604	0.003	22.65	87772058	13.519	19.82	204661	0.002	20.57	0	0	51.2	1479126	0.038	0	0	0	24.79	153993784	1.282
Average		1.20E+05	0.00		8.52E+07	13.12		2.56E+05	0.00		0.00E+00	0.00		1.37E+06	0.04		0.00E+00	0.00		1.49E+08	1.24
Standard Deviation		2.51E+03	0.00		2.54E+06	0.39		5.45E+04	0.00		0.00E+00	0.00		1.45E+05	0.00		0.00E+00	0.00		5.68E+06	0.05
%RSD		2.09E-00	0.00		2.98E+00	2.98		2.13E+01	21.65		ERR	ERR		1.06E+01	10.30		ERR	ERR		3.81E+00	3.85

Sample I.D. Number 93 - 143

	Channel "A" Carbon Dioxide			Channel "A" Nitrous Oxide			Channel "B" Carbon Dioxide			Channel "B" Nitrous oxide			Channel "C" Carbon Monoxide			Channel "D" helium			Channel "D" hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
93-143.prn	22.29	217661652	4.794	22.29	217661652	33.511	19.82	0	0	20.57	0	0	52	79670	0.002	0	0	0	24.73	19284746	0.151
	22.31	207321120	4.566	22.31	207321120	31.916	19.82	0	0	20.57	0	0	52	79022	0.002	0	0	0	24.73	19729066	0.155
	21.73	112672	0.002	22.35	200526765	30.872	19.82	0	0	20.57	0	0	52	0	0	0	0	0	24.73	19013056	0.149
Average		1.42E+06	3.12		2.09E+08	32.10		0.00E+00	0.00		0.00E+00	0.00		5.29E+04	0.00		0.00E+00	0.00		1.93E+07	0.15
Standard Deviation		1.23E+06	2.70		8.63E+06	1.33		0.00E+00	0.00		0.00E+00	0.00		4.58E+04	0.00		0.00E+00	0.00		3.63E+05	0.00
%RSD		8.66E-01	86.62		4.14E+00	4.14		ERR	ERR		ERR	ERR		8.66E+01	86.60		ERR	ERR		1.88E+00	2.01

Sample I.D Number 93 - 144

	Channel "A" Carbon Dioxide			Channel "A" Nitrous Oxide			Channel "B" Carbon Dioxide			Channel "B" Nitrous oxide			Channel "C" Carbon Monoxide			Channel "D" helium			Channel "D" hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
93-144.prn	21.81	156596	0.003	22.63	125277120	19.287	19.82	0	0	20.57	0	0	51.2	48777	0.001	0	0	0	24.77	14251875	0.11
	21.81	167679	0.003	22.63	134322544	19.141	19.82	0	0	20.57	0	0	51.2	46227	0.001	0	0	0	24.77	13795545	0.106
	21.81	167805	0.003	22.67	134252632	19.12	19.82	0	0	20.57	0	0	51.2	50221	0.001	0	0	0	24.77	13585263	0.103
Average		1.58E+05	0.00		1.25E+08	19.19		0.00E+00	0.00		0.00E+00	0.00		4.91E+04	0.00		0.00E+00	0.00		1.39E+07	0.11
Standard Deviation		5.51E-02	0.00		5.72E+05	0.09		0.00E+00	0.00		0.00E+00	0.00		1.03E+03	0.00		0.00E+00	0.00		4.21E+05	0.00
%RSD		3.49E-01	0.00		4.59E-01	0.46		ERR	ERR		ERR	ERR		2.10E+00	0.00		ERR	ERR		3.03E+00	3.40

Sample I.D Number 93 - 145

	Channel "A" Carbon Dioxide			Channel "A" Nitrous Oxide			Channel "B" Carbon Dioxide			Channel "B" Nitrous oxide			Channel "C" Carbon Monoxide			Channel "D" helium			Channel "D" hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
93-145.prn	0	0	0	22.37	246718776	37.985	19.82	0	0	20.57	0	0	51.36	372272	0.01	0	0	0	24.81	147654928	1.226
	0	0	0	22.37	245318928	37.766	19.82	0	0	20.57	0	0	51.36	367282	0.009	0	0	0	24.81	145209504	1.206
	0	0	0	22.37	243790800	37.534	19.82	0	0	20.57	0	0	51.36	363484	0.009	0	0	0	24.81	139219944	1.16
Average		0.00E+00	0.00		2.45E+08	37.76		0.00E+00	0.00		0.00E+00	0.00		3.68E+05	0.01		0.00E+00	0.00		1.44E+08	1.20
Standard Deviation		0.00E+00	0.00		1.46E+06	0.23		0.00E+00	0.00		0.00E+00	0.00		4.41E+03	0.00		0.00E+00	0.00		4.90E+06	0.04

Sample I.D. Number: 93 - 146

	Channel "A"				Channel "B"				Channel "C"				Channel "D"			
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
93-146.prn	21.85	234134	0.005	22.41	234173344	35.852	19.82	0	0	20.57	0	0	61.36	0	0	0	0	0	24.85	2907884	0.022
	21.85	226025	0.005	22.41	232932671	35.662	19.82	0	0	20.57	0	0	61.36	0	0	0	0	0	24.85	2842997	0.022
	21.85	226851	0.005	22.41	231693184	35.671	19.82	0	0	20.57	0	0	61.36	0	0	0	0	0	24.87	2859334	0.022
Average		2.30E+05	0.01		2.33E+08	35.86		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		2.90E+06	0.02
Standard Deviation		3.90E+03	0.00		1.24E+06	0.19		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		5.85E+04	0.00
%RSD		1.70E+00	0.00		5.32E-01	0.53		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		2.01E+00	0.00

Sample I.D. Number: 93 - 147

	Channel "A"				Channel "B"				Channel "C"				Channel "D"			
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
93-147.prn	21.93	110781	0.002	22.61	140069120	21.585	19.82	0	0	20.57	0	0	51.2	1695808	0.043	0	0	0	24.91	99443200	0.799
	21.93	110767	0.002	22.61	139258672	21.44	19.82	0	0	20.57	0	0	51.36	1691812	0.043	0	0	0	24.91	95942976	0.795
	21.93	111106	0.002	22.61	139041872	21.252	19.82	0	0	20.57	0	0	51.16	925080	0.024	0	0	0	24.91	94966392	0.787
Average		1.11E+05	0.00		1.39E+08	21.42		0.00E+00	0.00		0.00E+00	0.00		1.43E+06	0.04		0.00E+00	0.00		9.58E+07	0.79
Standard Deviation		1.97E+02	0.00		1.02E+06	0.16		0.00E+00	0.00		0.00E+00	0.00		4.41E+05	0.01		0.00E+00	0.00		7.50E+05	0.01
%RSD		1.78E-01	0.00		7.33E-01	0.73		ERR	ERR		ERR	ERR		3.07E+01	29.92		ERR	ERR		7.83E-01	0.77

Sample I.D. Number: 93 - 148

	Channel "A"				Channel "B"				Channel "C"				Channel "D"			
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
93-148.prn	21.77	370851	0.107	22.45	157357290	26.799	19.8	0	0	0	0	0	60.36	75888	0.002	0	0	0	24.69	2072360	0.016
	21.77	371795	0.107	22.41	164271052	27.995	19.8	0	0	0	0	0	0	0	0	0	0	0	24.69	2078257	0.016
	21.77	368781	0.106	22.41	163519312	27.788	19.8	0	0	0	0	0	0	0	0	0	0	0	24.69	2042069	0.015
Average		3.71E+05	0.11		1.62E+08	25.50		0.00E+00	0.00		0.00E+00	0.00		2.52E+04	0.00		0.00E+00	0.00		2.06E+06	0.03
Standard Deviation		2.47E+03	0.00		3.85E+06	0.61		0.00E+00	0.00		0.00E+00	0.00		4.37E+04	0.00		0.00E+00	0.00		1.94E+04	0.00
%RSD		0.66	0.54		2.38	2.38		ERR	ERR		ERR	ERR		173.21	173.21		ERR	ERR		0.94	3.69

Sample I.D. Number: 93 - 149

	Channel "A"				Channel "B"				Channel "C"				Channel "D"			
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
93-149.prn	21.73	512646	0.147	22.31	210052521	33.104	19.8	0	0	0	0	0	0	0	0	0	0	0	24.69	5877720	0.041
	21.73	510954	0.147	22.31	215165984	33.913	19.8	0	0	0	0	0	0	0	0	0	0	0	24.85	5871763	0.041
	21.73	506836	0.146	22.31	214906440	33.886	19.8	0	0	0	0	0	0	0	0	0	0	0	24.69	5830681	0.044
Average		5.11E+05	0.15		2.13E+08	33.63		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		5.86E+06	0.04
Standard Deviation		2.01E+03	0.00		2.89E+06	0.45		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		2.55E+04	0.00
%RSD		0.39	0.39		1.35	1.35		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		0.44	1.29

Sample I.D. Number: 93 - 150

	Channel "A"				Channel "B"				Channel "C"				Channel "D"			
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
93-150.prn	0	0	0	22.25	241572320	38.077	19.8	0	0	0	0	0	60.56	2238040	0.056	0	0	0	24.71	138036400	1.134
	0	0	0	22.25	247472441	39.007	19.8	0	0	0	0	0	60.56	0	0	0	0	0	24.71	140016184	1.142
	0	0	0	22.25	245203421	38.648	19.8	0	0	0	0	0	60.49	2548668	0.067	0	0	0	24.71	133276144	1.087
Average		0.00E+00	0.00		2.45E+08	38.57		0.00E+00	0.00		0.00E+00	0.00		1.59E+06	0.04		0.00E+00	0.00		1.37E+08	1.12
Standard Deviation		0.00E+00	0.00		2.98E+06	0.47		0.00E+00	0.00		0.00E+00	0.00		1.39E+06	0.04		0.00E+00	0.00		3.64E+06	0.03

Sample I.D. Number 93 - 151

	Channel "A" Carbon Dioxide RT	AREA	AMT	Nitrous Oxide RT	AREA	AMT	Channel "B" Carbon Dioxide RT	AREA	AMT	Nitrous oxide RT	AREA	AMT	Channel "C" Carbon Monoxide RT	AREA	AMT	Channel "D" helium RT	AREA	AMT	hydrogen RT	AREA	AMT
93-151.prn	21.81	348550	01	22.67	68231682	10 753	20.2	-8888	0	20.2	-8888	0	50.36	88175	0.002	0	0	0	24.85	4435269	0.034
	21.79	353935	0.102	22.65	72241832	11.385	20.17	-8888	0	20.17	-8888	0	50.36	0	0	0	0	0	24.87	4786140	0.036
	21.79	356848	0.102	22.63	74808552	11.756	20.16	-8888	0	20.16	-8888	0	0	0	0	0	0	0	24.85	4353977	0.033
Average		3.53E+05	0.10		7.17E+07	11 30		-8.9E+03	0.00		-8.9E+03	0.00		2.94E+04	0.00		0.00E+00	0.00		4.53E+06	0.03
Standard Deviation		4.21E+03	0.00		3.22E+06	0.51		0.00E+00	0.00		0.00E+00	0.00		5.09E+04	0.00		0.00E+00	0.00		2.30E+05	0.00
%RSD		1.19	1.14		4.50	4.50		0.00	ERR		0.00	ERR		173.21	173.21		ERR	ERR		5.08	4.45

Sample I.D. Number 93 - 152

	Channel "A" Carbon Dioxide RT	AREA	AMT	Nitrous Oxide RT	AREA	AMT	Channel "B" Carbon Dioxide RT	AREA	AMT	Nitrous oxide RT	AREA	AMT	Channel "C" Carbon Monoxide RT	AREA	AMT	Channel "D" helium RT	AREA	AMT	hydrogen RT	AREA	AMT
93-152.prn	21.73	477697	0.137	22.37	241385606	36.042	20.16	0	0	20.16	0	0	0	0	0	0	0	0	24.71	895636	0.067
	21.73	476274	0.137	22.31	240160752	37.852	20.16	0	0	20.16	0	0	0	0	0	0	0	0	24.71	894132	0.066
	21.73	471865	0.135	22.31	236352416	37.722	20.16	0	0	20.16	0	0	0	0	0	0	0	0	24.73	877203	0.064
Average		4.75E+05	0.14		2.40E+08	37.87		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		5.90E+05	0.00
Standard Deviation		3.00E+03	0.00		1.02E+06	0.16		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		2.71E+05	0.00
%RSD		0.62	0.85		0.43	0.42		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		45.85	44.61

Sample I.D. Number 93 - 153

	Channel "A" Carbon Dioxide RT	AREA	AMT	Nitrous Oxide RT	AREA	AMT	Channel "B" Carbon Dioxide RT	AREA	AMT	Nitrous oxide RT	AREA	AMT	Channel "C" Carbon Monoxide RT	AREA	AMT	Channel "D" helium RT	AREA	AMT	hydrogen RT	AREA	AMT
93-153.prn	0	0	0	22.26	247239136	38.965	20.16	0	0	20.16	0	0	50.2	3255840	0.086	0	0	0	24.79	139842234	1.141
	0	0	0	22.26	245809328	38.736	20.16	0	0	20.16	0	0	50.2	3266736	0.087	0	0	0	24.79	139206888	1.136
	0	0	0	22.26	245104408	38.626	20.16	0	0	20.16	0	0	50.2	8908446	0.235	0	0	0	24.79	139103408	1.135
Average		0.00E+00	0.00		2.46E+08	38.76		0.00E+00	0.00		0.00E+00	0.00		5.15E+06	0.14		0.00E+00	0.00		1.39E+08	1.13
Standard Deviation		0.00E+00	0.00		1.09E+06	0.17		0.00E+00	0.00		0.00E+00	0.00		3.25E+06	0.09		0.00E+00	0.00		7.78E+05	0.01
%RSD		ERR	ERR		0.44	0.44		ERR	ERR		ERR	ERR		63.19	63.04		ERR	ERR		0.56	0.57

Sample I.D Number 93 - 154

	Channel "A" Carbon Dioxide RT	AREA	AMT	Nitrous Oxide RT	AREA	AMT	Channel "B" Carbon Dioxide RT	AREA	AMT	Nitrous oxide RT	AREA	AMT	Channel "C" Carbon Monoxide RT	AREA	AMT	Channel "D" helium RT	AREA	AMT	hydrogen RT	AREA	AMT
93-154.prn	21.77	433377	0.124	22.32	240962696	37.676	20.16	0	0	20.16	0	0	50.3	0	0	0	0	0	24.75	21106860	0.165
	21.77	431605	0.124	22.33	239397200	37.725	20.16	0	0	20.16	0	0	0	0	0	0	0	0	24.75	21914543	0.172
	21.77	430512	0.124	22.33	239374496	37.725	20.16	0	0	20.16	0	0	50.66	22136096	0.565	0	0	0	24.77	22126804	0.173
Average		4.32E+05	0.12		2.40E+08	37.81		0.00E+00	0.00		0.00E+00	0.00		7.38E+06	0.20		0.00E+00	0.00		2.17E+07	0.17
Standard Deviation		1.46E+03	0.00		9.22E+05	0.15		0.00E+00	0.00		0.00E+00	0.00		1.28E+07	0.34		0.00E+00	0.00		5.38E+05	0.00
%RSD		0.34	0.00		0.38	0.38		ERR	ERR		ERR	ERR		173.21	173.21		ERR	ERR		2.48	2.56

Sample I.D Number 93 - 155

	Channel "A" Carbon Dioxide RT	AREA	AMT	Nitrous Oxide RT	AREA	AMT	Channel "B" Carbon Dioxide RT	AREA	AMT	Nitrous oxide RT	AREA	AMT	Channel "C" Carbon Monoxide RT	AREA	AMT	Channel "D" helium RT	AREA	AMT	hydrogen RT	AREA	AMT
93-155.prn	0	0	0	22.28	246829068	38.605	20.16	0	0	20.16	0	0	50.36	3366654	0.089	0	0	0	24.77	141260032	1.153
	0	0	0	22.29	245318032	38.378	20.16	0	0	20.16	0	0	50.2	3323536	0.088	0	0	0	24.77	145578928	1.186
	0	0	0	22.29	243468400	38.216	20.16	0	0	20.16	0	0	50.2	3275856	0.087	0	0	0	24.77	139477264	1.136
Average		0.00E+00	0.00		2.44E+08	38.47		0.00E+00	0.00		0.00E+00	0.00		3.33E+06	0.09		0.00E+00	0.00		1.41E+08	1.15
Standard Deviation		0.00E+00	0.00		1.93E+06	0.30		0.00E+00	0.00		0.00E+00	0.00		5.56E+04	0.00		0.00E+00	0.00		4.55E+06	0.04

Sample I.D Number: 93 - 156

	Channel "A" Carbon Dioxide RT	AREA	AMT	Channel "A" Nitrous Oxide RT	AREA	AMT	Channel "B" Carbon Dioxide RT	AREA	AMT	Channel "B" Nitrous oxide RT	AREA	AMT	Channel "C" Carbon Monoxide			Channel "D" helium			Channel "D" hydrogen		
93-166.prn	21.85	135274	0.035	22.57	128283912	20.217	20.16	0	0	20.16	0	0	50.2	1645390	0.042	0	0	0	24.75	81852704	0.564
	21.85	133834	0.035	22.57	127492504	20.093	20.16	0	0	20.16	0	0	50.2	2133722	0.056	0	0	0	24.77	83700544	0.58
	21.85	136176	0.036	22.57	129081804	20.34	20.16	0	0	20.16	0	0	50.04	2466972	0.065	0	0	0	24.75	82180048	0.567
Average		1.35E+05	0.04		1.28E+08	20.22		0.00E+00	0.00		0.00E+00	0.00		2.08E+06	0.05		0.00E+00	0.00		8.26E+07	0.67
Standard Deviation		8.04E+02	0.00		7.85E+05	0.12		0.00E+00	0.00		0.00E+00	0.00		4.13E+05	0.01		0.00E+00	0.00		9.90E+06	0.01
%RSD		0.60	1.49		0.61	0.61		ERR	ERR		ERR	ERR		19.84	20.23		ERR	ERR		1.20	1.27

Sample I.D Number: 93 - 157

	Channel "A" Carbon Dioxide RT	AREA	AMT	Channel "A" Nitrous Oxide RT	AREA	AMT	Channel "B" Carbon Dioxide RT	AREA	AMT	Channel "B" Nitrous oxide RT	AREA	AMT	Channel "C" Carbon Monoxide			Channel "D" helium			Channel "D" hydrogen		
93-157.prn	0	0	0	22.30	246159640	39.109	20.16	0	0	20.16	0	0	50.36	4148098	0.11	0	0	0	24.79	140532364	1.147
	0	0	0	22.25	245127582	38.76	20.16	0	0	20.16	0	0	0	0	0	0	0	0	24.81	140207832	1.144
	0	0	0	22.31	244799244	38.58	20.16	0	0	20.16	0	0	0	0	0	0	0	0	24.81	144856112	1.197
Average		0.00E+00	0.00		2.46E+08	38.82		0.00E+00	0.00		0.00E+00	0.00		1.38E+06	0.04		0.00E+00	0.00		1.42E+08	1.16
Standard Deviation		0.00E+00	0.00		1.69E+06	0.27		0.00E+00	0.00		0.00E+00	0.00		2.39E+06	0.06		0.00E+00	0.00		3.63E+06	0.03
%RSD		ERR	ERR		0.69	0.69		ERR	ERR		ERR	ERR		173.21	173.21		ERR	ERR		2.55	2.56

Sample I.D Number: 93 - 158

	Channel "A" Carbon Dioxide RT	AREA	AMT	Channel "A" Nitrous Oxide RT	AREA	AMT	Channel "B" Carbon Dioxide RT	AREA	AMT	Channel "B" Nitrous oxide RT	AREA	AMT	Channel "C" Carbon Monoxide			Channel "D" helium			Channel "D" hydrogen		
93-158.prn	0	0	0	22.25	255440544	40.257	20.16	0	0	20.16	0	0	50.36	3233788	0.085	0	0	0	24.75	124810906	1.018
	0	0	0	22.25	255319728	40.238	20.16	0	0	20.16	0	0	50.36	3397520	0.09	0	0	0	24.75	119040328	0.976
	0	0	0	22.25	253788032	39.998	20.16	0	0	20.16	0	0	50.2	2957760	0.078	0	0	0	24.75	123740152	1.009
Average		0.00E+00	0.00		2.55E+08	40.16		0.00E+00	0.00		0.00E+00	0.00		3.20E+06	0.08		0.00E+00	0.00		1.23E+08	1.00
Standard Deviation		0.00E+00	0.00		9.22E+05	0.15		0.00E+00	0.00		0.00E+00	0.00		2.22E+05	0.01		0.00E+00	0.00		2.73E+06	0.02
%RSD		ERR	ERR		0.36	0.36		ERR	ERR		ERR	ERR		6.95	7.15		ERR	ERR		2.22	2.27

Sample I.D Number: 93 - 159

	Channel "A" Carbon Dioxide RT	AREA	AMT	Channel "A" Nitrous Oxide RT	AREA	AMT	Channel "B" Carbon Dioxide RT	AREA	AMT	Channel "B" Nitrous oxide RT	AREA	AMT	Channel "C" Carbon Monoxide			Channel "D" helium			Channel "D" hydrogen		
93-159.prn	0	0	0	22.25	241752896	38.4	20.16	0	0	20.16	0	0	50.36	3260073	0.084	0	0	0	24.89	125798536	1.026
	0	0	0	22.25	239134352	38.504	20.16	0	0	20.16	0	0	50.36	3141567	0.083	0	0	0	24.89	113337400	0.923
	21.85	39606	0.011	22.25	237121424	37.184	0	0	0	0	0	0	50.36	3000744	0.079	0	0	0	24.89	110953280	0.904
Average		1.32E+04	0.00		2.32E+08	36.62		0.00E+00	0.00		0.00E+00	0.00		3.13E+06	0.08		0.00E+00	0.00		1.17E+08	0.95
Standard Deviation		2.29E+04	0.01		9.32E+06	1.47		0.00E+00	0.00		0.00E+00	0.00		1.30E+05	0.00		0.00E+00	0.00		7.97E+06	0.07
%RSD		173.21	173.21		4.01	4.01		ERR	ERR		ERR	ERR		4.14	4.25		ERR	ERR		6.83	6.90

Sample I.D Number: 93 - 160

	Channel "A" Carbon Dioxide RT	AREA	AMT	Channel "A" Nitrous Oxide RT	AREA	AMT	Channel "B" Carbon Dioxide RT	AREA	AMT	Channel "B" Nitrous oxide RT	AREA	AMT	Channel "C" Carbon Monoxide			Channel "D" helium			Channel "D" hydrogen		
93-160.prn	21.85	46601	0.014	22.25	205705008	32.416	0	0	0	0	0	0	50.36	0	0	0	0	0	24.59	7031797	0.060
	21.85	54047	0.016	22.27	202705424	31.883	0	0	0	0	0	0	50.36	0	0	0	0	0	24.57	6110161	0.046
	21.85	70644	0.02	22.27	186303712	29.672	0	0	0	0	0	0	49.67	694052	0.016	0	0	0	24.57	6051458	0.046
Average		5.78E+04	0.02		1.99E+08	31.33		0.00E+00	0.00		0.00E+00	0.00		2.31E+05	0.01		0.00E+00	0.00		6.40E+06	0.05
Standard Deviation		1.14E+04	0.00		9.22E+06	1.45		0.00E+00	0.00		0.00E+00	0.00		4.01E+05	0.01		0.00E+00	0.00		5.50E+05	0.00

Sample I.D Number: 93 - 161

	Channel "A" Carbon Dioxide			Channel "A" Nitrous Oxide			Channel "B" Carbon Dioxide			Channel "B" Nitrous oxide			Channel "C" Carbon Monoxide			Channel "D" Helium			Channel "D" Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
93-161.prn	22.17	234666816	67.395	22.17	234666816	37.015	0	0	0	0	0	0	49.87	0	0	0	0	0	24.59	7520506	0.057
	0	0	0	22.2*	226290662	36.074	0	0	0	0	0	0	49.87	0	0	0	0	0	24.57	8605302	0.06
	0	0	0	22.2*	219463792	34.99	0	0	0	0	0	0	49.87	0	0	0	0	0	24.5*	8609057	0.06
Average		7.83E+07	22.47		2.28E+08	35.89		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		6.91E+06	0.06
Standard Deviation		1.36E+08	38.91		7.76E+06	1.22		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		5.27E+05	0.00
%RSD		172.21	172.21		3.41	3.41		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		7.63	7.72

Sample I.D. Number: 93 - 162

	Channel "A" Carbon Dioxide			Channel "A" Nitrous Oxide			Channel "B" Carbon Dioxide			Channel "B" Nitrous oxide			Channel "C" Carbon Monoxide			Channel "D" Helium			Channel "D" Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
93-162.prn	21.68	41338	0.012	22.32	200314580	31.589	0	0	0	0	0	0	49.87	0	0	0	0	0	24.62	120899780	0.987
	21.73	70305	0.02	22.37	174460490	27.495	0	0	0	0	0	0	49.87	0	0	0	0	0	24.69	118036890	0.945
	21.73	65647	0.022	22.4*	153445744	24.182	0	0	0	0	0	0	49.87	0	0	0	0	0	24.69	106076112	0.864
Average		6.92E+04	0.02		1.76E+08	27.75		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		1.14E+08	0.92
Standard Deviation		2.73E+04	0.01		2.35E+07	3.70		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		7.56E+06	0.06
%RSD		39.43	40.00		13.33	13.33		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		6.61	6.62

Sample I.D Number 93 - 212

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-212.prn	21.75	91666	0.026	0	0	0	19.85	528358	0.014	0	0	0	46.92	1849116	0.049	0	0	0	24.81	0	0
	21.75	93465	0.027	0	0	0	19.85	517046	0.013	0	0	0	46.92	1843636	0.049	0	0	0	24.81	0	0
	21.75	91490	0.026	0	0	0	19.85	1133922	0.028	0	0	0	46.92	1838433	0.049	0	0	0	24.81	0	0
Average		9.19E+04	0.03		0.00E+00	0.00		7.26E+05	0.02		0.00E+00	0.00		1.84E+06	0.05		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		5.33E+02	0.00		0.00E+00	0.00		3.53E+05	0.01		0.00E+00	0.00		5.34E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		0.58	2.19		ERR	ERR		48.58	48.02		ERR	ERR		0.29	0.00		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 213

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-213.prn	21.75	106367	0.031	0	0	0	19.8	569600	0.015	0	0	0	46.92	2569665	0.066	0	0	0	24.81	0	0
	21.75	106618	0.031	0	0	0	19.81	1314785	0.034	0	0	0	46.92	2558130	0.065	0	0	0	24.81	0	0
	21.75	108786	0.031	0	0	0	19.81	1311832	0.034	0	0	0	46.92	2555145	0.065	0	0	0	24.81	0	0
Average		1.07E+05	0.03		0.00E+00	0.00		1.07E+06	0.03		0.00E+00	0.00		2.56E+06	0.07		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		2.47E+02	0.00		0.00E+00	0.00		4.29E+05	0.01		0.00E+00	0.00		8.23E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		0.23	0.00		ERR	ERR		40.30	39.65		ERR	ERR		0.32	0.85		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 214

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-214.prn	21.75	107791	0.031	0	0	0	19.8	1306434	0.034	0	0	0	46.92	3200103	0.085	0	0	0	24.81	0	
	21.75	106068	0.031	0	0	0	19.8	579524	0.015	0	0	0	46.92	3191397	0.084	0	0	0	24.81	0	
	21.77	104778	0.03	0	0	0	19.8	576080	0.015	0	0	0	46.92	3198581	0.084	0	0	0	24.81	0	
Average		1.07E+05	0.03		0.00E+00	0.00		8.21E+05	0.02		0.00E+00	0.00		3.20E+06	0.08		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		1.82E+03	0.00		0.00E+00	0.00		4.20E+05	0.01		0.00E+00	0.00		4.67E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		1.71	1.88		ERR	ERR		51.15	51.42		ERR	ERR		0.15	0.68		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 215

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-215.prn	21.77	96956	0.026	0	0	0	19.81	523835	0.014	0	0	0	46.92	3546656	0.094	0	0	0	24.81	0	
	21.77	95534	0.027	0	0	0	19.81	517216	0.013	0	0	0	46.92	3546411	0.094	0	0	0	24.81	0	
	21.77	97220	0.026	0	0	0	19.81	1151178	0.03	0	0	0	46.92	3526333	0.093	0	0	0	24.81	0	
Average		9.66E+04	0.03		0.00E+00	0.00		7.31E+05	0.02		0.00E+00	0.00		3.54E+06	0.09		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		9.08E+02	0.00		0.00E+00	0.00		3.64E+05	0.01		0.00E+00	0.00		1.34E+04	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		0.94	2.09		ERR	ERR		49.82	50.21		ERR	ERR		0.38	0.62		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 216

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-216.prn	21.77	81366	0.023	0	0	0	19.82	463228	0.012	0	0	0	46.92	3813506	0.101	0	0	0	24.81	0	0
	21.77	80963	0.023	0	0	0	19.82	459220	0.012	0	0	0	46.92	3796867	0.1	0	0	0	24.81	0	0
	21.77	78983	0.023	0	0	0	19.82	452994	0.012	0	0	0	46.92	3795126	0.1	0	0	0	24.81	0	0
Average		8.04E+04	0.02		0.00E+00	0.00		4.58E+05	0.01		0.00E+00	0.00		3.80E+06	0.10		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		1.30E+03	0.00		0.00E+00	0.00		5.20E+03	0.00		0.00E+00	0.00		9.83E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		1.61	0.00		ERR	ERR		1.13	0.00		ERR	ERR		0.26	0.58		ERR	ERR		ERR	ERR

Sample I.D Number: 93 - 217

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-217.prn	21.77	59034	0.017	0	0	0	19.93	411582	0.011	19.93	411582	0.008	48.92	3985812	0.105	0	0	0	24.81	0	0
	21.77	60253	0.017	0	0	0	19.93	373822	0.01	19.93	373822	0.005	48.92	3973478	0.105	0	0	0	24.81	0	0
	21.77	59855	0.017	0	0	0	19.93	403436	0.01	19.93	403436	0.006	48.92	3965432	0.105	0	0	0	24.81	0	0
Average		5.98E+04	0.02		0.00E+00	0.00		3.96E+05	0.01		3.96E+05	0.01		3.97E+06	0.11		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		6.69E+02	0.00		0.00E+00	0.00		1.99E+04	0.00		1.99E+04	0.00		4.54E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		1.12	0.00		ERR	ERR		5.02	5.59		5.02	10.19		0.11	0.00		ERR	ERR		ERR	ERR

Sample I.D Number: 93 - 218

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-218.prn	21.81	49538	0.014	0	0	0	19.94	344835	0.009	19.94	344835	0.005	48.92	4068615	0.107	0	0	0	24.81	0	0
	21.81	49807	0.014	0	0	0	19.94	341296	0.009	19.94	341296	0.005	48.92	4062089	0.107	0	0	0	24.81	0	0
	21.81	49764	0.014	0	0	0	19.94	338332	0.009	19.94	338332	0.005	48.92	4025626	0.106	0	0	0	24.81	0	0
Average		4.97E+04	0.01		0.00E+00	0.00		3.41E+05	0.01		3.41E+05	0.01		4.05E+06	0.11		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		1.45E+02	0.00		0.00E+00	0.00		3.26E+03	0.00		3.26E+03	0.00		2.32E+04	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		0.29	0.00		ERR	ERR		0.95	0.00		0.95	0.00		0.57	0.54		ERR	ERR		ERR	ERR

Sample I.D Number: 93 - 219

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-219.prn	21.81	38267	0.011	0	0	0	19.94	301110	0.008	19.94	301110	0.004	48.92	4095137	0.108	0	0	0	24.81	0	0
	21.81	38875	0.011	0	0	0	19.94	279106	0.007	19.94	279106	0.004	48.92	4106945	0.108	0	0	0	24.81	0	0
	21.81	37068	0.011	0	0	0	19.94	296368	0.008	19.94	296368	0.004	48.92	4091315	0.108	0	0	0	24.81	0	0
Average		3.81E+04	0.01		0.00E+00	0.00		2.92E+05	0.01		2.92E+05	0.00		4.10E+06	0.11		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		9.55E+02	0.00		0.00E+00	0.00		1.16E+04	0.00		1.16E+04	0.00		8.15E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		2.51	0.00		ERR	ERR		3.96	7.53		3.96	0.00		0.20	0.00		ERR	ERR		ERR	ERR

Sample I.D Number: 93 - 220

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-220.prn	21.81	29654	0.009	0	0	0	19.94	259030	0.007	19.94	259030	0.004	48.92	4177734	0.11	0	0	0	24.81	0	0
	21.81	31614	0.009	0	0	0	19.94	255990	0.007	19.94	255990	0.004	48.92	4185228	0.111	0	0	0	24.81	0	0
	21.81	29648	0.009	0	0	0	19.94	253163	0.007	19.94	253163	0.004	48.92	4189081	0.111	0	0	0	24.81	0	0
Average		3.04E+04	0.01		0.00E+00	0.00		2.56E+05	0.01		2.56E+05	0.00		4.18E+06	0.11		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		1.20E+03	0.00		0.00E+00	0.00		2.93E+03	0.00		2.93E+03	0.00		5.77E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		3.93	0.00		ERR	ERR		1.15	0.00		1.15	0.00		0.14	0.52		ERR	ERR		ERR	ERR

Sample I.D Number: 93 - 221

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-221.prn	21.81	29694	0.009	0	0	0	19.94	230684	0.006	19.94	230684	0.003	48.92	4174184	0.11	0	0	0	24.81	0	0
	21.81	30119	0.009	0	0	0	19.94	231056	0.006	19.94	231056	0.003	48.92	4185213	0.111	0	0	0	24.81	0	0
	0	0	0	0	0	0	19.94	225923	0.006	19.94	225923	0.003	48.92	4170647	0.11	0	0	0	24.81	0	0
Average		1.99E+04	0.01		0.00E+00	0.00		2.29E+05	0.01		2.29E+05	0.00		4.18E+06	0.11		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		1.72E+04	0.01		0.00E+00	0.00		2.91E+03	0.00		2.91E+03	0.00		8.16E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		86.61	86.60		ERR	ERR		1.27	0.00		1.27	0.00		0.20	0.52		ERR	ERR		ERR	ERR

Sample I.D. Number: 93 - 222

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-222.prn	0	0	0	0	0	0	19.96	214206	0.004	19.96	214206	0.003	49.02	4242932	0.112	0	0	0	24.81	0	0
	0	0	0	0	0	0	19.96	195926	0.005	19.96	195926	0.003	49.02	4255389	0.112	0	0	0	24.81	0	0
	0	0	0	0	0	0	19.96	206582	0.005	19.96	206582	0.003	49.02	4263069	0.113	0	0	0	24.81	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		2.06E+05	0.01		2.06E+05	0.00		4.25E+06	0.11		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		9.18E+03	0.00		9.18E+03	0.00		1.02E+04	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		4.47	10.83		4.47	0.00		0.24	0.51		ERR	ERR		ERR	ERR

Sample I.D. Number: 93 - 223

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-223.prn	0	0	0	0	0	0	19.97	204322	0.005	19.97	204322	0.003	49.02	4191667	0.111	0	0	0	24.81	0	0
	0	0	0	0	0	0	19.97	197415	0.005	19.97	197415	0.003	49.02	4193927	0.111	0	0	0	24.81	0	0
	0	0	0	0	0	0	19.97	199277	0.005	19.97	199277	0.003	49.02	4200711	0.111	0	0	0	24.81	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		2.00E+05	0.01		2.00E+05	0.00		4.20E+06	0.11		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		3.57E+03	0.00		3.57E+03	0.00		4.62E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		1.78	0.00		1.78	0.00		0.11	0.00		ERR	ERR		ERR	ERR

Sample I.D. Number: 93 - 224

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-224.prn	0	0	0	0	0	0	19.99	149745	0.004	19.99	149745	0.002	49.06	4300160	0.114	0	0	0	24.81	0	0
	0	0	0	0	0	0	19.99	178048	0.005	19.99	178048	0.003	49.06	4301013	0.114	0	0	0	24.81	0	0
	0	0	0	0	0	0	19.99	153186	0.004	19.99	153186	0.002	49.06	4295865	0.113	0	0	0	24.81	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		1.60E+05	0.00		1.60E+05	0.00		4.30E+06	0.11		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		1.54E+04	0.00		1.54E+04	0.00		2.76E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		9.63	13.32		9.63	24.74		0.06	0.51		ERR	ERR		ERR	ERR

Sample I.D. Number: 93 - 225

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-225.prn	0	0	0	0	0	0	19.96	0	0	19.96	0	0	49.02	4289315	0.113	0	0	0	24.81	0	0
	0	0	0	0	0	0	19.96	144592	0.004	19.96	144592	0.002	49.02	4292001	0.113	0	0	0	24.81	0	0
	0	0	0	0	0	0	19.96	0	0	19.96	0	0	49.02	4293172	0.113	0	0	0	24.81	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		4.82E+04	0.00		4.82E+04	0.00		4.29E+06	0.11		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		8.35E+04	0.00		8.35E+04	0.00		4.53E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		173.21	173.21		173.21	173.21		0.11	0.00		ERR	ERR		ERR	ERR

Sample I.D. Number: 93 - 226

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-226.prn	0	0	0	0	0	0	20.01	154226	0.004	20.01	154226	0.002	49.06	4207597	0.111	0	0	0	24.81	0	0
	0	0	0	0	0	0	20.01	176550	0.005	20.01	176550	0.003	49.06	4207282	0.111	0	0	0	24.81	0	0
	0	0	0	0	0	0	20.01	166518	0.004	20.01	166518	0.002	49.06	4212054	0.111	0	0	0	24.81	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		1.66E+05	0.00		1.66E+05	0.00		4.21E+06	0.11		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		1.13E+04	0.00		1.13E+04	0.00		2.68E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		6.79	13.32		6.79	24.74		0.06	0.00		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 227

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-227.prn	0	0	0	0	0	0	20.01	0	0	20.01	0	0	49.02	4354848	0.115	0	0	0	24.81	0	0
	0	0	0	0	0	0	20.01	0	0	20.01	0	0	49.02	4361521	0.116	0	0	0	24.81	0	0
	0	0	0	0	0	0	20.01	0	0	20.01	0	0	49.02	4373678	0.116	0	0	0	24.81	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		4.37E+06	0.12		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		1.38E+04	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		0.32	0.50		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 228

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-228.prn	0	0	0	0	0	0	20.01	0	0	20.01	0	0	49.02	4345900	0.115	0	0	0	24.81	0	0
	0	0	0	0	0	0	20.01	0	0	20.01	0	0	49.02	4350757	0.115	0	0	0	24.81	0	0
	0	0	0	0	0	0	20.01	0	0	20.01	0	0	49.02	4351485	0.115	0	0	0	24.81	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		4.35E+06	0.12		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		3.03E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		0.07	0.00		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 229

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-229.prn	0	0	0	0	0	0	20.01	0	0	20.01	0	0	49.02	2301878	0.061	0	0	0	24.81	0	0
	0	0	0	0	0	0	20.01	0	0	20.01	0	0	49.02	2282642	0.06	0	0	0	24.81	0	0
	0	0	0	0	0	0	20.01	0	0	20.01	0	0	49.02	2290620	0.061	0	0	0	24.81	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		2.29E+06	0.06		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		9.55E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		0.42	0.95		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 230

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-230.prn	0	0	0	0	0	0	20.01	0	0	20.01	0	0	49.02	915360	0.024	0	0	0	24.81	0	0
	0	0	0	0	0	0	20.01	0	0	20.01	0	0	49.02	934304	0.024	0	0	0	24.81	0	0
	0	0	0	0	0	0	20.01	0	0	20.01	0	0	49.02	926252	0.024	0	0	0	24.81	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		9.22E+05	0.02		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		5.81E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		0.63	0.00		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 231

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-231.prn	0	0	0	0	0	0	20.01	0	0	20.01	0	0	49.02	401328	0.011	0	0	0	24.81	0	0
	0	0	0	0	0	0	20.01	0	0	20.01	0	0	49.02	392058	0.01	0	0	0	24.81	0	0
	0	0	0	0	0	0	20.01	0	0	20.01	0	0	49.02	389030	0.01	0	0	0	24.81	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		3.94E+05	0.01		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		6.41E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		1.62	5.59		ERR	ERR		ERR	ERR

Sample I.D Number: 93 - 232

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-232 prn	0	0	0	0	0	0	20.01	0	0	20.01	0	0	48.01	181308	0.005	0	0	0	24.81	0	0
	0	0	0	0	0	0	20.01	0	0	20.01	0	0	48.01	171444	0.005	0	0	0	24.81	0	0
	0	0	0	0	0	0	20.01	0	0	20.01	0	0	48.01	173454	0.005	0	0	0	24.81	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		1.75E+05	0.01		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		5.43E+03	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		3.10	0.00		ERR	ERR		ERR	ERR

Sample I.D Number: 93 - 233

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-233 prn	21.95	2576591	0.736	0	0	0	20.01	2665814	0.069	20.01	2665814	0.038	48.01	909116	0.024	0	0	0	24.81	0	0
	21.97	2492154	0.715	0	0	0	20.01	2654598	0.069	20.01	2654598	0.038	48.01	815454	0.022	0	0	0	24.81	0	0
	21.97	2535140	0.727	0	0	0	20.01	2662406	0.069	20.01	2662406	0.038	48.01	916095	0.024	0	0	0	24.81	0	0
Average		2.53E+06	0.73		0.00E+00	0.00		2.66E+06	0.07		2.66E+06	0.04		8.79E+05	0.02		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		4.22E+04	0.01		0.00E+00	0.00		5.75E+03	0.00		5.75E+03	0.00		5.55E+04	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		1.67	1.65		ERR	ERR		0.22	0.00		0.22	0.00		6.31	4.95		ERR	ERR		ERR	ERR

Sample I.D Number: 93 - 234

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-234 prn	21.97	2509105	0.72	0	0	0	20.1	2592810	0.067	20.1	2592810	0.037	48.01	526526	0.014	0	0	0	24.81	0	0
	21.97	2494785	0.716	0	0	0	20.1	2611292	0.067	20.1	2611292	0.037	48.02	406456	0.013	0	0	0	24.81	0	0
	21.97	2406902	0.691	0	0	0	20.1	2620512	0.068	20.1	2620512	0.038	48.02	441235	0.012	0	0	0	24.81	0	0
Average		2.47E+06	0.71		0.00E+00	0.00		2.61E+06	0.07		2.61E+06	0.04		4.90E+05	0.01		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		5.53E+04	0.02		0.00E+00	0.00		1.84E+04	0.00		1.84E+04	0.00		4.45E+04	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		2.24	2.22		ERR	ERR		0.70	0.86		0.70	1.55		9.09	7.69		ERR	ERR		ERR	ERR

Sample I.D Number: 93 - 235

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-235 prn	22.03	2829441	0.812	0	0	0	20.15	3050790	0.079	20.15	3050790	0.044	48.02	217056	-0.006	23.05	167751	167751	24.81	0	0
	22.03	2681176	0.827	0	0	0	20.15	3061684	0.079	20.15	3061684	0.044	48.02	0	-0	-22.62	111408296	111408296			
	22.03	2770762	0.795	0	0	0	20.15	3050340	0.079	20.15	3050340	0.044	48.02	274182	0.007	23.02	134758	134758	0	0	0
Average		2.83E+06	0.81		0.00E+00	0.00		3.05E+06	0.08		3.05E+06	0.04		1.64E+05	0.00		3.72E+07	**********		0.00E+00	0.00
Standard Deviation		5.52E+04	0.02		0.00E+00	0.00		6.45E+03	0.00		6.45E+03	0.00		1.45E+05	0.00		6.42E+07	**********		0.00E+00	0.00
%RSD		1.95	1.97		ERR	ERR		0.21	0.00		0.21	0.00		88.34	87.37		172.50	172.50		ERR	ERR

Sample I.D Number: 93 - 236

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-236 prn	22.05	2829581	0.812	0	0	0	20.15	3026816	0.078	20.15	3026816	0.043	0	0	0	-23.09	0	0	0	0	0
	22.05	2818666	0.809	0	0	0	20.15	3026845	0.078	20.15	3026845	0.043	0	0	0	22.85	130337496	130337496			
	22.05	2734985	0.785	0	0	0	20.15	3020486	0.078	20.15	3020486	0.043	0	0	0	0	0	0	0	0	0
Average		2.79E+06	0.80		0.00E+00	0.00		3.03E+06	0.08		3.03E+06	0.04		0.00E+00	0.00		4.34E+07	**********		0.00E+00	0.00
Standard Deviation		5.18E+04	0.01		0.00E+00	0.00		4.26E+03	0.00		4.26E+03	0.00		0.00E+00	0.00		7.53E+07	**********		0.00E+00	0.00
%RSD		1.86	1.86		ERR	ERR		0.14	0.00		0.14	0.00		ERR	ERR		173.21	173.21		ERR	ERR

Sample I.D Number 93 - 237

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-237.prn	22.05	2427145	0.697	0	0	0	20.16	2639640	0.065	20.16	2639640	0.035	0	0	0	0	0	0	0	0	0
	22.05	2459524	0.706	0	0	0	20.17	2639888	0.065	20.17	2639888	0.035	0	0	0	0	0	0	0	0	0
	22.03	2463413	0.707	0	0	0	20.16	2634576	0.065	20.16	2634576	0.035	0	0	0	0	0	0	0	0	0
Average		2.45E+06	0.70		0.00E+00	0.00		2.64E+06	0.07		2.64E+06	0.04		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		1.99E+04	0.01		0.00E+00	0.00		2.99E+03	0.00		2.99E+03	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		0.81	0.78		ERR	ERR		0.11	0.00		0.11	0.00		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 236

	Channel "A"						Channel "B"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Dioxide			Nitrous oxide			Carbon Monoxide			Helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-236.prn	22.05	2236720	0.642	0	0	0	20.17	2415113	0.065	20.17	2415113	0.035	0	0	0	0	0	0	24.77	43457856	0.349
	22.05	2276438	0.653	0	0	0	20.17	978092	0.025	20.17	978092	0.014	0	0	0	0	0	0	24.77	0	0
	22.05	2313118	0.664	0	0	0	20.17	2461030	0.064	20.17	2461030	0.035	0	0	0	0	0	0	24.73	44012336	0.353
Average		2.28E+06	0.65		0.00E+00	0.00		1.95E+06	0.05		1.95E+06	0.03		0.00E+00	0.00		0.00E+00	0.00		2.92E+07	0.23
Standard Deviation		3.82E+04	0.01		0.00E+00	0.00		8.43E+05	0.02		8.43E+05	0.01		0.00E+00	0.00		0.00E+00	0.00		2.53E+07	0.20
%RSD		1.66	1.68		ERR	ERR		43.21	43.63		43.21	43.30		ERR	ERR		ERR	ERR		86.61	86.61

Sample I.D. Number 93 - 239

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-239.prn	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 240

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-240.prn	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 241

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-241.prn	21.73	34799	0.01	0	0	0	0	0	0	0	0	0	24.61	0	0
	21.73	30110	0.009	0	0	0	0	0	0	0	0	0	24.61	0	0
	21.73	29516	0.008	0	0	0	0	0	0	0	0	0	24.61	0	0
Average		3.15E-04	0.01		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		2.89E-03	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		9.19	11.11		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 242

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-242.prn	21.73	57665	0.017	0	0	0	0	0	0	0	0	0	24.61	0	0
	21.73	59574	0.017	0	0	0	0	0	0	0	0	0	24.61	0	0
	21.73	57692	0.017	0	0	0	0	0	0	0	0	0	24.61	0	0
Average		5.84E-04	0.02		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		9.78E-02	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		1.67	0.00		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 243

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-243.prn	21.73	62970	0.016	0	0	0	0	0	0	0	0	0	24.61	0	0
	21.73	63857	0.016	0	0	0	0	0	0	0	0	0	24.61	0	0
	21.73	64546	0.016	0	0	0	0	0	0	0	0	0	24.61	0	0
Average		6.38E+04	0.02		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		8.40E+02	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		1.32	3.15		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 244

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-244.prn	21.77	54184	0.016	0	0	0	0	0	0	0	0	0	24.61	0	0
	21.77	55395	0.016	0	0	0	0	0	0	0	0	0	24.61	0	0
	21.77	55077	0.016	0	0	0	0	0	0	0	0	0	24.61	0	0
Average		5.49E+04	0.02		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		6.39E+02	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		1.16	0.00		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 245

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-245.prn	21.77	33333	0.01	0	0	0	0	0	0	0	0	0	24.61	0	0
	21.77	33605	0.01	0	0	0	0	0	0	0	0	0	24.61	0	0
	21.77	34322	0.01	0	0	0	0	0	0	0	0	0	24.61	0	0
Average		3.38E+04	0.01		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		4.95E+02	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		1.46	0.00		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 246

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-246.prn	21.77	31851	0.009	0	0	0	0	0	0	0	0	0	24.61	0	0
	21.77	32355	0.009	0	0	0	0	0	0	0	0	0	24.61	0	0
	21.77	32255	0.009	0	0	0	0	0	0	0	0	0	24.61	0	0
Average		3.23E+04	0.01		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		5.01E+02	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		1.55	0.00		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number: 93 - 247

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-247.prn	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number: 93 - 248

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-248.prn	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number: 93 - 249

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-249.prn	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number: 93 - 250

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-250.prn	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	24.61	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number | 93 - 251 |

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-251.pm	0	0	0	0	0	0	0	0	0	0	0	0	24.81	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	24.81	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	24.81	0	0
Average		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 256

	Channel "A"			Channel "C"						Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-256.prn	21 97	174943	0 05	0	0	0	66 66	4611324	0 012	22 86	0	0	24 61	0	0
	21 97	173697	0 05	0	0	0	66 66	4614676	0 012	22 23	3873503	0 004	24 61	0	0
	21 97	172500	0 05	0	0	0	66 66	4598714	0 012	22.23	3865241	0 004	0	0	0
Average		1.74E+05	0.05		0 00E-00	0.00		4.61E+06	0.01		2 58E+06	0 00		0.00E+00	0 00
Standard Deviation		1.18E+03	0.00		0 00E-00	0.00		8 42E+03	0 00		2.23E+06	0.00		0.00E+00	0.00
%RSD		0.68	0.00		ERR	ERR		0 18	0 00		86 60	86.60		ERR	ERR

Sample I.D Number 93 - 257

	Channel "A"			Channel "C"						Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-257.prn	21 97	365546	0 105	0	0	0	0	0	0	22 23	14940965	0 014	0	0	0
	21 97	356016	0 102	0	0	0	0	0	0	22 23	15134194	0 014	0	0	0
	21 93	356525	0 103	0	0	0	0	0	0	22 23	14959604	0.014	0	0	0
Average		3 60E+05	0 10		0 00E-00	0.00		0 00E+00	0.00		1.50E+07	0.01		0.00E+00	0.00
Standard Deviation		4 70E+03	0 00		0 00E-00	0 00		0 00E+00	0 00		1.07E+05	0 00		0 00E+00	0.00
%RSD		1.31	1 48		ERR	ERR		ERR	ERR		0.71	0.00		ERR	ERR

Sample I.D. Number 93 - 258

	Channel "A"			Channel "C"						Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-258.prn	21 97	302372	0 087	0	0	0	66 66	1926305	0 005	22.23	5098217	0 005	0	0	0
	21 97	297586	0 085	0	0	0	66 66	1915995	0 005	22 23	5185775	0 005	0	0	0
	21 97	299536	0 086	0	0	0	66 66	1915716	0 005	22 23	5168823	0 005	0	0	0
Average		3 00E+05	0.09		0 00E-00	0 00		1.92E+06	0.01		5.15E+06	0.01		0.00E+00	0.00
Standard Deviation		2 41E+03	0 00		0 00E-00	0 00		6 09E+03	0 00		4.64E+04	0.00		0 00E+00	0 00
%RSD		0.81	1 16		ERR	ERR		0.32	0 00		0.90	0 00		ERR	ERR

Sample I.D. Number 93 - 259

	Channel "A"			Channel "C"						Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-259.prn	21 97	258055	0 074	0	0	0	66 66	3234745	0 005	22.23	0	0	0	0	0
	21 97	258557	0 074	0	0	0	66 66	3249137	0 005	0	0	0	0	0	0
	21 97	259004	0 074	0	0	0	66 66	3239911	0 005	0	0	0	0	0	0
Average		2.59E+05	0 07		0 00E-00	0 00		3.24E+06	0.01		0 00E+00	0.00		0 00E+00	0.00
Standard Deviation		4 75E-02	0.00		0 00E-00	0 00		7.29E+03	0 00		0 00E+00	0 00		0 00E+00	0 00
%RSD		0 18	0 00		ERR	ERR		0 22	0 00		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 260

	Channel "A"			Channel "C"						Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-260.prn	21.07	280274	0.08	0	0	0	66.66	4091766	0.01	22.25	3368946	0.003	0	0	0
	21.07	275497	0.079	0	0	0	66.66	4114894	0.011	22.25	3413281	0.003	0	0	0
	21.07	276715	0.079	0	0	0	66.66	4103089	0.011	22.25	3404121	0.003	0	0	0
Average		2.77E+05	0.08		0.00E+00	0.00		4.10E+06	0.01		3.40E+06	0.00		0.00E+00	0.00
Standard Deviation		2.48E+03	0.00		0.00E+00	0.00		1.68E+04	0.00		2.34E+04	0.00		0.00E+00	0.00
%RSD		0.89	0.73		ERR	ERR		0.41	5.41		0.69	0.00		ERR	ERR

Sample I.D Number 93 - 261

	Channel "A"			Channel "C"						Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-261.prn	21.07	366824	0.105	0	0	0	66.66	4232136	0.011	22.25	16756262	0.015	0	0	0
	21.07	365043	0.105	0	0	0	66.66	4223167	0.011	22.25	16750072	0.015	0	0	0
	21.07	364733	0.105	0	0	0	66.66	4219667	0.011	22.25	16723176	0.015	0	0	0
Average		3.66E+05	0.11		0.00E+00	0.00		4.23E+06	0.01		1.66E+07	0.02		0.00E+00	0.00
Standard Deviation		1.13E+03	0.00		0.00E+00	0.00		6.34E+03	0.00		2.07E+05	0.00		0.00E+00	0.00
%RSD		0.31	0.00		ERR	ERR		0.15	0.00		1.25	0.00		ERR	ERR

Sample I.D Number 93 - 262

	Channel "A"			Channel "C"						Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-262.prn	21.07	219525	0.063	0	0	0	66.66	4561037	0.012	22.25	0	0	0	0	0
	21.07	219819	0.063	0	0	0	66.66	4567363	0.012	0	0	0	0	0	0
	21.07	224125	0.064	0	0	0	66.66	4599983	0.012	0	0	0	0	0	0
Average		2.21E+05	0.06		0.00E+00	0.00		4.58E+06	0.01		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		2.58E+03	0.00		0.00E+00	0.00		2.06E+04	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		1.16	0.91		ERR	ERR		0.45	0.00		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 263

	Channel "A"			Channel "C"						Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-263.prn	21.07	214532	0.062	0	0	0	66.66	4593679	0.012	22.25	307657	0	0	0	0
	21.07	214077	0.061	0	0	0	66.66	4645434	0.012	22.25	306690	0	0	0	0
	21.07	216766	0.062	0	0	0	66.66	4621567	0.012	22.25	304954	0	0	0	0
Average		2.16E+05	0.06		0.00E+00	0.00		4.62E+06	0.01		3.07E+05	0.00		0.00E+00	0.00
Standard Deviation		3.16E+03	0.00		0.00E+00	0.00		2.59E+04	0.00		1.48E+03	0.00		0.00E+00	0.00
%RSD		1.46	1.61		ERR	ERR		0.56	0.00		0.48	ERR		ERR	ERR

Sample I.D. Number 93 - 264

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-264.prn	21.97	2662786	0.764	0	0	0	0	0	0	22.25	280686880	0.259	0	0	0
	21.97	435046	0.125	0	0	0	66.66	4278610	0.011	22.25	22142416	0.02	0	0	0
	21.97	401668	0.115	0	0	0	66.66	4274822	0.011	22.25	21507192	0.02	0	0	0
Average		1.17E+06	0.33		0.00E+00	0.00		4.28E+06	0.01		1.08E+08	0.10		0.00E+00	0.00
Standard Deviation		1.30E+06	0.37		0.00E+00	0.00		2.47E+06	0.01		1.49E+08	0.14		0.00E+00	0.00
%RSD		111.10	111.11		ERR	ERR		57.74	57.74		138.24	139.45		ERR	ERR

Sample I.D. Number 93 - 265

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-265.prn	21.97	337999	0.097	0	0	0	66.66	4366710	0.011	22.27	15502606	0.014	0	0	0
	21.97	335914	0.096	0	0	0	66.66	4391352	0.011	22.27	15384116	0.014	0	0	0
	21.97	333223	0.096	0	0	0	66.66	4367207	0.011	22.27	15267056	0.014	0	0	0
Average		3.36E+05	0.10		0.00E+00	0.00		4.38E+06	0.01		1.54E+07	0.01		0.00E+00	0.00
Standard Deviation		2.39E+03	0.00		0.00E+00	0.00		1.32E-04	0.00		1.18E+05	0.00		0.00E+00	0.00
%RSD		0.71	0.60		ERR	ERR		0.30	0.00		0.77	0.00		ERR	ERR

Sample I.D. Number 93 - 266

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-266.prn	22.01	198955	0.057	0	0	0	66.66	4621290	0.012	22.27	0	0	0	0	0
	22.01	197223	0.057	0	0	0	66.66	4641102	0.012	22.27	0	0	0	0	0
	22.01	199332	0.057	0	0	0	66.66	4636027	0.012	0	0	0	0	0	0
Average		1.99E+05	0.06		0.00E+00	0.00		4.63E+06	0.01		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		1.13E-03	0.00		0.00E+00	0.00		1.03E+04	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		0.57	0.00		ERR	ERR		0.22	0.00		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 267

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-267.prn	22.01	2059441	0.591	0	0	0	0	0	0	22.95	108346	0	0	0	0
	22.01	207528	0.595	0	0	0	66.66	47842024	0.123	0	0	0	0	0	0
	22.01	2010822	0.58	0	0	0	66.66	47425808	0.122	0	0	0	0	0	0
Average		2.05E+06	0.59		0.00E+00	0.00		4.76E+07	0.12		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		2.87E+04	0.01		0.00E+00	0.00		2.94E-05	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		1.40	1.39		ERR	ERR		0.62	0.58		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 268

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-268.prn	22.01	2914134	0.838	0	0	0	66.66	0	0	0	0	0	0	0	0
	22.01	2922527	0.839	0	0	0	66.66	45048304	0.117	22.93	73371	0	24.67	108534	0.001
	22.01	2899316	0.832	0	0	0	66.66	45533800	0.117	22.95	65971	0	24.67	0	0
Average		2.91E+06	0.84		0.00E+00	0.00		4.56E+07	0.12		5.24E+04	0.00		3.55E+04	0.00
Standard Deviation		1.23E+04	0.00		0.00E+00	0.00		2.63E+07	0.07		4.60E+04	0.00		6.16E+04	0.00
%RSD		0.42	0.42		ERR	ERR		57.74	57.74		87.71	ERR		173.21	173.21

Sample I.D. Number 93 - 269

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-269.prn	22.01	3952363	1.134	0	0	0	66.66	0	0	0	0	0	0	0	0
	22.01	3957200	1.136	0	0	0	66.66	43766352	0.112	22.93	60276	0	0	0	0
	22.01	3942705	1.131	0	0	0	66.66	43757360	0.112	22.93	64332	0	0	0	0
Average		3.95E+06	1.13		0.00E+00	0.00		4.38E+07	0.11		4.15E+04	0.00		0.00E+00	0.00
Standard Deviation		7.33E+03	0.00		0.00E+00	0.00		2.53E+07	0.06		3.60E+04	0.00		0.00E+00	0.00
%RSD		0.19	0.22		ERR	ERR		57.74	57.74		86.74	ERR		ERR	ERR

Sample I.D. Number 93 - 270

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-270.prn	22.01	1939928	0.555	0	0	0	66.66	47420040	0.122	22.95	65637	0	0	0	0
	22.01	1940524	0.557	0	0	0	66.66	47409536	0.122	22.95	0	0	0	0	0
	22.01	1922932	0.552	0	0	0	66.66	47283192	0.121	22.95	0	0	0	0	0
Average		1.93E+06	0.56		0.00E+00	0.00		4.74E+07	0.12		2.19E+04	0.00		0.00E+00	0.00
Standard Deviation		9.29E+03	0.00		0.00E+00	0.00		7.62E+04	0.00		3.79E+04	0.00		0.00E+00	0.00
%RSD		0.48	0.48		ERR	ERR		0.16	0.47		173.21	ERR		ERR	ERR

Sample I.D. Number 93 - 271

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-271.prn	22.01	8013795	2.3	0	0	0	66.66	35612776	0.092	22.91	88561	0	0	0	0
	22.01	7990990	2.29	0	0	0	66.66	35590652	0.091	22.91	87563	0	0	0	0
	22.01	7986756	2.293	0	0	0	66.66	35413904	0.091	22.91	75836	0	24.67	46760	0
Average		7.99E+06	2.29		0.00E+00	0.00		3.56E+07	0.09		8.40E+04	0.00		1.56E+04	0.00
Standard Deviation		1.71E+04	0.01		0.00E+00	0.00		2.00E+05	0.00		7.08E+03	0.00		2.70E+04	0.00
%RSD		0.21	0.22		ERR	ERR		0.56	0.53		8.42	ERR		173.21	ERR

Sample I.D. Number 93 - 272

	Channel "A"				Channel "C"				Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen	
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-272.prn	22.01	1823173	0.523	0	0	0	66.66	47178400	0.121	0	0	0	24.67	78651	0.001
	22.01	1790077	0.514	0	0	0	66.66	47166164	0.121	0	0	0	24.67	0	0
	22.01	1773204	0.509	0	0	0	66.66	47284584	0.121	0	0	0	24.67	0	0
Average		1.80E+06	0.52		0.00E+00	0.00		4.72E+07	0.12		0.00E+00	0.00		2.62E+04	0.00
Standard Deviation		2.54E+04	0.01		0.00E+00	0.00		5.92E+04	0.00		0.00E+00	0.00		4.54E+04	0.00
%RSD		1.42	1.38		ERR	ERR		0.13	0.00		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 273

	Channel "A"				Channel "C"				Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen	
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-273.prn	22.01	2762851	0.793	0	0	0	66.66	44861712	0.115	0	0	0	24.67	0	0
	22.01	2767209	0.803	0	0	0	66.66	45278862	0.116	0	0	0	24.66	66876	0.001
	22.01	2772639	0.796	0	0	0	66.66	45053520	0.116	0	0	0	24.66	62247	0
Average		2.78E+06	0.80		0.00E+00	0.00		4.51E+07	0.12		0.00E+00	0.00		4.30E+04	0.00
Standard Deviation		1.78E+04	0.01		0.00E+00	0.00		1.99E+05	0.00		0.00E+00	0.00		3.73E+04	0.00
%RSD		0.64	0.64		ERR	ERR		0.44	0.50		ERR	ERR		86.77	173.21

Sample I.D. Number 93 - 274

	Channel "A"				Channel "C"				Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen	
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-274.prn	22.01	3412497	0.979	0	0	0	67.35	1392046	0.004	0	0	0	0	0	0
	22.01	3416306	0.98	0	0	0	66.66	44127284	0.112	0	0	0	0	0	0
	22.01	3394825	0.974	0	0	0	66.66	44186516	0.113	0	0	0	0	0	0
Average		3.41E+06	0.98		0.00E+00	0.00		2.99E+07	0.08		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		1.15E+04	0.00		0.00E+00	0.00		2.47E+07	0.06		0.00E+00	0.00		0.00E+00	0.00
%RSD		0.34	0.33		ERR	ERR		82.57	82.08		ERR	ERR		ERR	ERR

{DOWN 4} {getnumber what is the first run number ,a233}
{RIGHT} {GETnumber What is the last run Number ,a234} {DOWN 9}
{/ Publish,Font}3 {getnumber What is the number of runs per page G220} {RIGHT 16}
{DOWN 2} {FOR A236,A233,A234 1,A215} {down} {end} {L} {D}
{END} {HOME}

Sample I.D. Number 93 - 276

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-276.prn	22.05	2759193	0.792	0	0	0	66.66	44774526	0.115	0	0	0	24.69	83450	0.001
	22.05	2752185	0.79	0	0	0	66.66	44751976	0.115	0	0	0	24.66	0	0
Average	22.05	1.84E+06	0.53	0	0.00E+00	0.00	66.66	2.98E+07	~~0.07~~ 0.115	0	0.00E+00	0.00	24.69	2.78E+04	0.00
Standard Deviation		1.59E+06	0.46		0.00E+00	0.00		2.58E+07	~~0.07~~ 0.0		0.00E+00	0.00		4.82E+04	0.00
%RSD		86.60	86.60		ERR	ERR		86.60	86.60		ERR	ERR		173.2%	173.2%
%RSD		0.01	18963.34		ERR	ERR		3.35E-04	1.30E-05		ERR	ERR		3.59E-01	3.00E+07

Sample I.D. Number 93 - 277

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-277.prn	22.13	1560247	0.453	22.13	1560247	0.255	67	48466958	0.124	0	0	0	24.81	83200	0.001
	22.13	1578128	0.453	22.13	1578128	0.254	67	49130072	0.126	0	0	0	24.81	0	0
	22.13	1573498	0.452	22.13	1573498	0.254	67	47889078	0.123	0	0	0	24.81	0	0
Average		1.58E+06	0.45		1.58E+06	0.25		4.85E+07	0.124		0.00E+00	0.00		2.77E+04	0.00
Standard Deviation		3.45E+03	0.00		3.45E-03	0.00		6.21E+05	0.00		0.00E+00	0.00		4.80E+04	0.00
%RSD		0.22	0.73		0.22	0.23		1.28	1.23		ERR	ERR		173.2%	173.2%

Sample I.D Number 93 - 278

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-278.prn	22.13	4429205	1.271	22.13	4429205	0.714	67	0	0	0	0	0	24.81	0	0
	22.13	4393146	1.261	22.13	4393146	0.708	67	0	0	0	0	0	24.81	0	0
	22.13	4433215	1.272	22.13	4433215	0.715	67	0	0	0	0	0	0	0	0
Average		4.42E+06	1.27		4.42E+06	0.71		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		2.18E+04	0.01		2.18E-04	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		0.49	0.48		0.49	0.53		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 279

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-279.prn	22.13	3714162	1.066	22.13	3714162	0.595	67	18231752	0.047	0	0	0	0	0	0
	22.13	3706795	1.064	22.13	3706795	0.593	67	18205856	0.047	0	0	0	0	0	0
	22.13	3715577	1.066	22.13	3715577	0.595	67	18393342	0.047	0	0	0	0	0	0
Average		3.71E+06	1.07		3.71E-06	0.60		1.83E-07	0.05		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		4.72E-03	0.00		4.72E+03	0.00		1.01E-05	0.00		0.00E+00	0.00		0.00E-00	0.00
%RSD		0.13	0.11		0.13	0.10		0.55	0.00		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 280

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-280.prn	22.13	2100186	0.602	22.13	2100186	0.335	67	39018144	0.1	0	0	0	0	0	0
	22.13	2061516	0.592	22.13	2061516	0.332	67	38983756	0.1	0	0	0	0	0	0
	22.13	2057518	0.59	22.13	2057518	0.332	67	39175788	0.1	0	0	0	24.81	64209	0.001
Average		2.07E+06	0.60		2.07E-06	0.33		3.91E+07	0.10		0.00E+00	0.00		2.14E+04	0.00
Standard Deviation		2.36E+04	0.01		2.36E-04	0.00		1.02E+05	0.00		0.00E+00	0.00		3.71E+04	0.00
%RSD		1.14	1.18		1.14	1.21		0.26	0.00		ERR	ERR		173.21	173.21

Sample I.D Number 93 - 281

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-281.prn	22.17	2594542	0.745	22.17	2594542	0.416	67	44432780	0.114	0	0	0	24.81	60350	0
	22.17	2575556	0.739	22.17	2575556	0.415	67	44561356	0.114	0	0	0	24.81	0	0
	22.16	2559863	0.735	22.16	2559863	0.413	67	44486256	0.114	0	0	0	24.81	54016	0
Average		2.58E+06	0.74		2.58E+06	0.42		4.45E+07	0.11		0.00E+00	0.00		3.81E+04	0.00
Standard Deviation		1.74E+04	0.01		1.74E-04	0.00		5.93E-04	0.00		0.00E+00	0.00		3.32E+04	0.00
%RSD		0.67	0.68		0.67	0.67		0.13	0.00		ERR	ERR		87.00	ERR

Sample I.D. Number 93 - 282

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-282.prn	22.16	3541277	1.016	22.16	3541277	0.571	67	44159640	0.113	0	0	0	24.81	0	0
	22.16	3555687	1.02	22.16	3555687	0.573	67	43903328	0.113	0	0	0	24.81	59351	0
	22.16	3563523	1.022	22.16	3563523	0.575	67	44043576	0.113	0	0	0	24.83	55662	0
Average		3.55E+06	1.02		3.55E-06	0.57		4.40E-07	0.11		0.00E+00	0.00		3.83E+04	0.00
Standard Deviation		1.13E-04	0.00		1.13E-04	0.00		1.28E-05	0.00		0.00E+00	0.00		3.33E+04	0.00
%RSD		0.32	0.34		0.32	0.35		0.29	0.00		ERR	ERR		86.74	ERR

Sample I.D Number 93 - 283

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-283.prn	0	0	0	22.16	2084076	0.336	67	46932348	0.12	0	0	0	24.83	0	0
	0	0	0	22.16	2090600	0.337	67	46994296	0.12	0	0	0	24.83	0	0
	0	0	0	22.16	2074535	0.335	67	46962752	0.12	0	0	0	24.83	0	0
Average		0.00E+00	0.00		2.08E-06	0.34		4.70E+07	0.12		0.00E-00	0.00		0.00E+00	0.00
Standard Deviation		0.00E-00	0.00		8.22E-03	0.00		2.61E-04	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		0.39	0.30		0.06	0.00		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 284

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-284.prn	0	0	0	22.16	1656937	0.301	67	47461304	0.123	0	0	0	24.83	86937	0.001
	22.17	1818136	0.522	22.17	1818136	0.293	67	47432752	0.122	0	0	0	24.83	0	0
	22.17	1825200	0.524	22.17	1825200	0.294	67	48163296	0.124	0	0	0	24.83	0	0
Average		1.21E-06	0.35		1.84E+06	0.30		4.77E+07	0.123		0.00E-00	0.00		2.90E+04	0.00
Standard Deviation		1.05E+06	0.30		2.75E+04	0.00		4.26E+05	0.00		0.00E+00	0.00		5.02E+04	0.00
%RSD		86.60	86.60		1.49	1.47		0.89	0.94		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 285

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-285.prn	0	0	0	22.16	3607059	0.582	67	43956086	0.113	0	0	0	24.83	0	0
	0	0	0	22.16	3605270	0.581	67	43874712	0.112	0	0	0	24.83	0	0
	0	0	0	22.16	3597167	0.58	67	44141152	0.113	0	0	0	24.85	90342	0.001
Average		0.00E+00	0.00		3.60E+06	0.58		4.40E+07	0.113		0.00E+00	0.00		3.01E+04	0.00
Standard Deviation		0.00E+00	0.00		5.27E+03	0.00		1.37E+05	0.00		0.00E+00	0.00		5.22E+04	0.00
%RSD		ERR	ERR		0.15	0.17		0.31	0.51		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 286

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-286.prn	0	0	0	22.16	1727423	0.276	67	47261804	0.121	0	0	0	24.87	82422	0.001
	0	0	0	22.21	1732166	0.276	67	0	✓	0	0	0	0	0	0
	0	0	0	22.21	1732116	0.276	67	48857620	0.12	0	0	0	24.87	86056	0.001
Average		0.00E-00	0.00		1.73E+06	0.28		3.14E+07	0.08 0.121		0.00E+00	0.00		5.62E+04	0.00
Standard Deviation		0.00E-00	0.00		2.73E+03	0.00		2.72E-07	0.07		0.00E+00	0.00		4.87E+04	0.00
%RSD		ERR	ERR		0.16	0.00		86.60	86.60		ERR	ERR		86.66	86.60

Sample I.D Number 93 - 287

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-287.prn	0	0	0	22.16	1724897	0.276	67	48523800	0.124	0	0	0	24.87	0	0
	0	0	0	22.16	1759725	0.284	67	48342424	0.124	0	0	0	24.87	65067	0.001
	0	0	0	22.16	1726512	0.276	67	46225298	0.124	0	0	0	24.87	0	0
Average		0.00E-00	0.00		1.74E+06	0.28		4.84E+07	0.124		0.00E+00	0.00		2.17E+04	0.00
Standard Deviation		0.00E-00	0.00		1.89E-04	0.00		1.50E-05	0.00		0.00E+00	0.00		3.76E+04	0.00
%RSD		ERR	ERR		0.09	1.15		0.31	0.00		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 288

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-288.prn	0	0	0	22.23	1804822	0.291	67	0		0	0	0	0	0	0
	0	0	0	22.23	1792056	0.289	67	48317632	0.124	0	0	0	24.67	105292	0.001
	0	0	0	22.23	1809984	0.291	67	50161626	0.129	0	0	0	24.67	0	0
Average		0.00E+00	0.00		1.80E+06	0.29		3.28E+07	0.08 0.127		0.00E+00	0.00		3.51E+04	0.00
Standard Deviation		0.00E+00	0.00		8.06E+03	0.00		2.84E+07	0.07		0.00E+00	0.00		6.08E+04	0.00
%RSD		ERR	ERR		0.45	0.40		86.65	86.65		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 289

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-289.prn	0	0	0	22.23	1705592	0.275	67	47060706	0.122	0	0	0	24.67	85721	0.001
	0	0	0	22.23	1695270	0.273	67	48161252	0.124	0	0	0	24.67	0	0
	0	0	0	22.23	1698404	0.274	67	47957336	0.123	0	0	0	24.67	0	0
Average		0.00E+00	0.00		1.70E+06	0.27		4.80E+07	0.123		0.00E+00	0.00		2.86E+04	0.00
Standard Deviation		0.00E+00	0.00		5.29E+03	0.00		1.34E+06	0.00		0.00E+00	0.00		4.95E+04	0.00
%RSD		ERR	ERR		0.31	0.36		0.28	0.47		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 290

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-290.prn	0	0	0	22.21	3602572	0.581	67	43469164	0.112	0	0	0	24.67	0	0
	0	0	0	22.21	3554032	0.573	66.89	43456484	0.111	0	0	0	24.67	0	0
	0	0	0	22.21	3549817	0.572	67	43765296	0.112	0	0	0	24.67	0	0
Average		0.00E+00	0.00		3.57E+06	0.55		4.36E-07	0.112		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		2.94E+04	0.00		1.70E-05	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		0.82	0.86		0.39	0.52		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 291

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-291.prn	0	0	0	22.25	1920812	0.31	67	46944716	0.12	0	0	0	24.67	0	0
	0	0	0	22.25	1924114	0.31	67	45999706	0.12	0	0	0	24.67	0	0
	0	0	0	22.25	1911673	0.308	67	47307140	0.121	0	0	0	24.67	0	0
Average		0.00E+00	0.00		1.92E+06	0.31		4.71E-07	0.12		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		6.33E+03	0.00		1.95E-05	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		0.33	0.37		0.41	0.48		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 292

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-292.prn	0	0	0	22.25	1870531	0.302	67	23446036	0.06	0	0	0	24.67	0	0
	0	0	0	22.25	1661051	0.3	67	23452776	0.06	0	0	0	24.67	0	0
	0	0	0	22.25	1653784	0.299	67	23348252	0.06	0	0	0	24.67	0	0
Average		0.00E+00	0.00		1.86E+06	0.30		2.34E+07	0.06		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		8.40E+03	0.00		5.80E+04	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		0.45	0.5*		0.25	0.00		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 293

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-293.prn	0	0	0	22.25	2372202	0.383	67	9369814	0.025	0	0	0	24.67	0	0
	0	0	0	22.25	2376184	0.385	67	9396856	0.025	0	0	0	24.67	0	0
	0	0	0	22.25	2393740	0.386	67	9427302	0.025	0	0	0	24.67	0	0
Average		0.00E+00	0.00		2.38E+06	0.38		9.86E+06	0.03		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		1.15E+04	0.00		1.47E+05	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		0.48	0.45		1.49	2.28		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 294

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-294.prn	0	0	0	22.25	1669992	0.302	67	4133992	0.011	0	0	0	24.67	0	0
	0	0	0	22.25	1626744	0.295	67	4271660	0.011	0	0	0	24.67	0	0
	0	0	0	22.25	1655244	0.299	67	4271214	0.011	0	0	0	24.67	0	0
Average		0.00E+00	0.00		1.85E+06	0.30		4.23E+06	0.01		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		2.09E+04	0.00		7.94E+04	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		1.13	1.18		1.88	0.00		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 295

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-295.prn	0	0	0	22.27	1810011	0.292	67	889178	0.002	0	0	0	24.67	0	0
	0	0	0	22.27	1600178	0.29	67	914917	0.002	0	0	0	24.67	0	0
	0	0	0	22.27	1615421	0.293	67	817372	0.002	0	0	0	24.67	0	0
Average		0.00E+00	0.00		1.81E+06	0.29		8.74E+05	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		7.74E+03	0.00		5.06E+04	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		0.43	0.52		5.79	0.00		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 296

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-296.prn	0	0	0	22.25	3352150	0.541	67	0	0	0	0	0	24.67	0	0
	0	0	0	22.25	3370105	0.543	67	284020	0.001	0	0	0	24.67	0	0
	0	0	0	22.25	3356125	0.541	67	0	0	0	0	0	24.67	0	0
Average		0.00E+00	0.00		3.36E+06	0.54		9.50E-04	0.00		0.00E+00	0.00		0.00E-00	0.00
Standard Deviation		0.00E-00	0.00		9.43E+03	0.00		1.64E+05	0.00		0.00E+00	0.00		0.00E-00	0.00
%RSD		ERR	ERR		0.28	0.2*		173.2*	173.2*		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 297

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-297.prn	0	0	0	22.27	1843379	0.297	67	0	0	0	0	0	24.67	0	0
	0	0	0	22.27	1832310	0.295	67	0	0	0	0	0	24.67	0	0
	0	0	0	22.27	1837133	0.295	67	0	0	0	0	0	24.67	0	0
Average		0.00E+00	0.00		1.84E+06	0.30		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		5.55E+03	0.00		0.00E+00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		0.30	0.34		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 298

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-298.prn	0	0	0	22.29	1920816	0.31*	67	0	0	0	0	0	24.67	0	0
	0	0	0	22.27	1952457	0.315	67	0	0	0	0	0	24.67	0	0
	0	0	0	22.27	1937588	0.312	67	0	0	0	0	0	24.67	0	0
Average		0.00E-00	0.00		1.94E+06	0.31*		0.00E-00	0.00		0.00E+00	0.00		0.00E+00	0.00
Standard Deviation		0.00E+00	0.00		1.58E+04	0.00		0.00E-00	0.00		0.00E+00	0.00		0.00E+00	0.00
%RSD		ERR	ERR		0.82	0.8*		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number: 93 - 299

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			nelium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-299.prn	21.07	1570468	0.451	0	0	0	66.36	48222726	0.124	22.67	311050	0	24.61	0	0
	21.07	1591306	0.457	0	0	0	66.36	48000986	0.123	22.69	64506	0	24.61	0	0
	21.07	1567686	0.45	0	0	0	66.36	47917704	0.123	0	0	0	24.61	61543	0
Average		1.58E+06	0.453		0.00E+00	0.000		4.80E+07	0.123		1.25E+05	0.000		2.05E+04	0.000
Standard Deviation		1.28E+04	0.004		0.00E+00	0.000		1.58E+05	0.00		1.65E+05	0.000		3.55E+04	0.000
%RSD		0.81	0.84		ERR	ERR		0.33	0.47		131.23	ERR		173.21	ERR

Sample I.D. Number: 93 - 300

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			nelium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-300.prn	21.07	1819824	0.522	0	0	0	66.36	0	0	0	0	0	24.61	0	0
	21.07	1778054	0.51	0	0	0	66.36	0	0	0	0	0	24.61	0	0
	21.07	1756405	0.504	0	0	0	66.36	0	0	0	0	0	24.61	0	0
Average		1.78E+06	0.512		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		3.22E+04	0.009		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000
%RSD		1.81	1.79		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number: 93 - 301

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			nelium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-301.prn	21.06	3866607	1.056	0	0	0	66.36	13514752	0.035	0	0	0	24.61	0	0
	21.07	3863075	1.05	0	0	0	66.36	13390382	0.034	0	0	0	24.61	0	0
	21.07	3885501	1.056	0	0	0	66.36	13390870	0.034	0	0	0	24.61	0	0
Average		3.69E+06	1.059		0.00E+00	0.000		1.34E+07	0.034		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		4.09E+03	0.001		0.00E+00	0.000		7.17E+04	0.001		0.00E+00	0.000		0.00E+00	0.000
%RSD		0.11	0.11		ERR	ERR		0.53	1.68		ERR	ERR		ERR	ERR

Sample I.D. Number: 93 - 302

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			nelium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-302.prn	21.05	3982276	1.143	0	0	0	66.36	33666246	0.086	0	0	0	24.61	0	0
	21.05	3967324	1.139	0	0	0	66.36	33611756	0.086	0	0	0	24.61	0	0
	21.05	3938482	1.13	0	0	0	66.36	33788246	0.087	0	0	0	24.61	0	0
Average		3.96E+06	1.137		0.00E+00	0.000		3.37E+07	0.086		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		2.23E+04	0.007		0.00E+00	0.000		9.04E+04	0.001		0.00E+00	0.000		0.00E+00	0.000
%RSD		0.56	0.58		ERR	ERR		0.27	0.67		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 303

	Channel "A"			Channel "C"						Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-303.prn	21.97	3338148	0.958	0	0	0	66.36	43511600	0.112	0	0	0	24.59	66928	0.000
	21.97	3337163	0.958	0	0	0	66.36	43629216	0.112	0	0	0	24.59	0	0
	21.96	3347562	0.961	0	0	0	66.36	43348886	0.111	0	0	0	24.59	0	0
Average		3.34E+06	0.959		0.00E+00	0.000		4.35E-07	0.112		0.00E+00	0.000		2.23E+04	0.000
Standard Deviation		5.74E+03	0.002		0.00E+00	0.000		1.41E+05	0.000		0.00E+00	0.000		3.86E+04	0.000
%RSD		0.17	0.18		ERR	ERR		0.32	0.52		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 304

	Channel "A"			Channel "C"						Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-304.prn	21.97	3159493	0.907	0	0	0	66.36	45902666	0.118	0	0	0	24.59	0	0
	21.97	3153193	0.905	0	0	0	66.36	46110516	0.118	0	0	0	24.61	104726	0.000
	21.97	3166856	0.909	0	0	0	66.36	46133152	0.118	0	0	0	24.61	50204	0
Average		3.16E+06	0.907		0.00E+00	0.000		4.60E+07	0.118		0.00E+00	0.000		5.16E+04	0.000
Standard Deviation		6.84E+03	0.002		0.00E+00	0.000		1.27E+06	0.000		0.00E+00	0.000		5.24E+04	0.000
%RSD		0.22	0.22		ERR	ERR		0.28	0.00		ERR	ERR		101.42	173.21

Sample I.D. Number 93 - 305

	Channel "A"			Channel "C"						Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-305.prn	21.97	2982935	0.855	0	0	0	66.36	47040320	0.121	0	0	0	24.61	0	0
	21.96	2979292	0.855	0	0	0	66.36	46987984	0.12	0	0	0	24.61	76531	0.000
	21.97	2986146	0.857	0	0	0	66.36	47061624	0.121	0	0	0	24.61	0	0
Average		2.98E+06	0.854		0.00E+00	0.000		4.70E+07	0.121		0.00E+00	0.000		2.55E+04	0.000
Standard Deviation		8.63E-03	0.003		0.00E+00	0.000		3.40E+04	0.000		0.00E+00	0.000		4.42E+04	0.000
%RSD		0.30	0.31		ERR	ERR		0.07	0.48		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 306

	Channel "A"			Channel "C"						Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-306.prn	21.97	2590270	0.743	0	0	0	66.36	47797258	0.123	22.89	30685	0	24.61	0	0
	21.97	2593292	0.744	0	0	0	66.36	47465768	0.122	22.89	0	0	24.61	0	0
	21.97	2590830	0.743	0	0	0	66.36	47663104	0.122	22.89	0	0	24.61	0	0
Average		2.59E+06	0.744		0.00E+00	0.000		4.77E+07	0.122		1.02E-04	0.000		0.00E-00	0.000
Standard Deviation		3.28E-03	0.001		0.00E+00	0.000		1.69E+06	0.000		1.77E+04	0.000		0.00E-00	0.000
%RSD		0.13	0.13		ERR	ERR		0.35	0.47		173.21	ERR		ERR	ERR

Sample I.D. Number: 93 - 307

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-307.prn	21.07	2383436	0.684	0	0	0	66.36	48031676	0.123	0	0	0	24.61	59095	0
	21.07	2379607	0.683	0	0	0	66.36	47581526	0.122	0	0	0	24.63	57015	0
	21.07	2368794	0.686	0	0	0	66.36	47859984	0.123	0	0	0	24.61	74588	0.001
Average		2.39E+06	0.685		0.00E+00	0.000		4.78E+07	0.123		0.00E+00	0.000		6.36E+04	0.000
Standard Deviation		1.02E-04	0.003		0.00E+00	0.000		2.27E+05	0.001		0.00E+00	0.000		9.60E+03	0.001
%RSD		0.43	0.39		ERR	ERR		0.48	0.47		ERR	ERR		15.11	173.21

Sample I.D. Number: 93 - 308

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-308.prn	21.07	2338274	0.671	0	0	0	66.36	47722456	0.122	0	0	0	24.61	0	0
	21.07	2340020	0.672	0	0	0	66.36	47516676	0.122	0	0	0	24.63	70001	0.001
	21.07	2357794	0.677	0	0	0	66.36	47584344	0.122	0	0	0	24.63	0	0
Average		2.35E+06	0.673		0.00E+00	0.000		4.76E+07	0.122		0.00E+00	0.000		2.33E+04	0.000
Standard Deviation		1.08E+04	0.003		0.00E+00	0.000		1.05E+05	0.000		0.00E+00	0.000		4.04E+04	0.001
%RSD		0.46	0.48		ERR	ERR		0.22	0.00		ERR	ERR		173.21	173.21

Sample I.D. Number: 93 - 309

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-309.prn	21.07	2222616	0.638	0	0	0	66.36	48021032	0.123	0	0	0	24.63	0	0
	21.07	2246846	0.645	0	0	0	66.36	47903976	0.123	0	0	0	24.63	0	0
	21.07	2222556	0.638	0	0	0	66.36	47955382	0.123	0	0	0	24.63	0	0
Average		2.23E+06	0.640		0.00E+00	0.000		4.80E+07	0.123		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		1.52E+04	0.004		0.00E+00	0.000		5.87E+04	0.000		0.00E+00	0.000		0.00E+00	0.000
%RSD		0.68	0.63		ERR	ERR		0.12	0.00		ERR	ERR		ERR	ERR

Sample I.D. Number: 93 - 310

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-310.prn	21.07	2201866	0.632	0	0	0	66.36	47665452	0.122	0	0	0	24.63	0	0
	21.07	2186540	0.628	0	0	0	66.36	47964544	0.123	0	0	0	24.63	0	0
	21.07	2185844	0.627	0	0	0	66.36	47703816	0.122	0	0	0	24.63	86446	0.001
Average		2.19E+06	0.629		0.00E+00	0.000		4.78E+07	0.122		0.00E+00	0.000		2.88E+04	0.000
Standard Deviation		8.58E+03	0.003		0.00E+00	0.000		1.74E+05	0.001		0.00E+00	0.000		4.99E+04	0.001
%RSD		0.39	0.42		ERR	ERR		0.36	0.47		ERR	ERR		173.21	173.21

Sample I.D Number 93 - 311

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-311.prn	21 97	3640799	1 046	0	0	0	66 36	45012772	0 115	22 89	58942	0	24 63	85616	0 001
	21 97	3627750	1 041	0	0	0	66 36	45266720	0 116	22 89	0	0	24 63	0	0
	21 97	3639541	1 044	0	0	0	66 36	45217266	0 116	22 89	0	0	24 63	0	0
Average		3 64E+06	1.043		0 00E+00	0 000		4.52E+07	0.116		1.96E+04	0.000		2 85E+04	0.000
Standard Deviation		7.20E+03	0.002		0 00E+00	0.000		1.33E+05	0.001		3 40E+04	0.000		4.94E+04	0.001
%RSD		0.20	0.20		ERR	ERR		0 29	0.50		173.21	ERR		173.21	173.21

Sample I.D Number 93 - 312

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-312.prn	21 97	2063598	0 592	0	0	0	66 36	47636924	0 123	0	0	0	24 63	69267	0 001
	21 97	2042966	0 586	0	0	0	66 36	47740324	0 122	0	0	0	24 63	67320	0 001
	21 97	2085223	0 598	0	0	0	66 36	47962120	0 123	0	0	0	24 63	0	0
Average		2 06E+06	0 592		0 00E+00	0 000		4 78E+07	0 123		0 00E+00	0.000		4.55E+04	0.001
Standard Deviation		2.11E+04	0 006		0 00E+00	0 000		1 11E+05	0.00*		0 00E+00	0 000		3.94E+04	0.001
%RSD		1.02	1 01		ERR	ERR		0 23	0 47		ERR	ERR		86 63	86 60

Sample I.D. Number 93 - 313

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-313 prn	22 01	1990486	0 571	0	0	0	66 36	47964844	0 123	0	0	0	24 63	0	0
	22 01	1986993	0 57	0	0	0	66 36	48020406	0 123	0	0	0	24 63	0	0
	22 01	2005973	0 575	0	0	0	66 36	47843824	0 123	0	0	0	24 65	64006	0 001
Average		1.99E+06	0 572		0 00E+00	0 000		4 79E+07	0 123		0 00E+00	0.000		2 13E+04	0 000
Standard Deviation		1.01E+04	0 003		0 00E+00	0.000		9 03E+04	0.000		0.00E+00	0.000		3 70E+04	0 001
%RSD		0.51	0.56		ERR	ERR		0 19	0 00		ERR	ERR		173.21	173.21

Sample I.D Number 93 - 314

	Channe "A" Carbon Dioxide			Nitrous Oxide			Channe "C" Carbon Monoxide			Channe "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-314.prn	22 01	1517918	0 436	0	0	0	66 36	48709112	0 125	22 97	324570	0	0	0	0
	22 01	1505716	0 432	0	0	0	66 36	47749064	0 122	22 95	66605	0	0	0	0
	22 01	1521286	0 437	0	0	0	66 36	47419950	0 122	22 95	0	0	0	0	0
Average		1 51E+06	0 435		0 00E+00	0 000		4 80E+07	0 123		1.31E+05	0 000		0 00E+00	0.000
Standard Deviation		8 19E+03	0 003		0 00E+00	0 000		6 70E+05	0 002		1 71E+05	0 000		0 00E+00	0 000
%RSD		0 54	0 61		ERR	ERR		1 40	1 41		130 52	ERR		ERR	ERR

Sample I.D. Number 93 - 315

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-315.prn	22.01	4334616	1.244	0	0	0	66.36	0	0	22.05	0	0	0	0	0
	22.01	4316252	1.239	0	0	0	66.36	0	0	22.05	0	0	0	0	0
	22.01	4297600	1.23	0	0	0	66.36	0	0	22.05	0	0	0	0	0
Average		4.31E+06	1.238		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		2.40E+04	0.007		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000
%RSD		0.56	0.57		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 316

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-316.prn	22.01	7124092	2.045	0	0	0	66.36	11254036	0.029	22.05	0	0	0	0	0
	22.01	7114851	2.042	0	0	0	66.36	11032460	0.028	22.05	0	0	0	0	0
	22.01	7057644	2.025	0	0	0	66.36	11616553	0.03	22.05	0	0	0	0	0
Average		7.10E+06	2.037		0.00E+00	0.000		1.14E+07	0.029		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		3.63E+04	0.011		0.00E+00	0.000		4.04E+05	0.001		0.00E+00	0.000		0.00E+00	0.000
%RSD		0.51	0.53		ERR	ERR		3.56	3.45		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 317

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-317.prn	22.01	11957260	3.421	0	0	0	66.36	21633256	0.056	22.05	0	0	0	0	0
	22.01	11909721	3.418	0	0	0	66.36	21756486	0.056	22.05	0	0	0	0	0
	22.01	11933757	3.425	0	0	0	66.36	21771672	0.056	22.05	0	0	0	0	0
Average		1.19E+07	3.425		0.00E+00	0.000		2.18E+07	0.056		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		2.38E+04	0.007		0.00E+00	0.000		4.06E+04	0.000		0.00E+00	0.000		0.00E+00	0.000
%RSD		0.20	0.19		ERR	ERR		0.19	0.00		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 318

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-318.prn	22.05	14058239	4.024	0	0	0	66.36	28736106	0.074	22.05	0	0	0	0	0
	22.05	13942238	4.001	0	0	0	66.36	28340154	0.073	22.05	0	0	0	0	0
	22.05	13946021	4.003	0	0	0	66.36	28740832	0.074	22.05	0	0	0	0	0
Average		1.40E+07	4.013		0.00E+00	0.000		2.86E+07	0.074		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		6.54E+04	0.019		0.00E+00	0.000		2.25E+05	0.001		0.00E+00	0.000		0.00E+00	0.000
%RSD		0.47	0.46		ERR	ERR		0.79	0.78		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 319

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-319.prn	22.05	13430706	3.857	0	0	0	55.36	35512156	0.091	0	0	0	24.69	47329	0
	22.05	13373827	3.838	0	0	0	55.36	35364426	0.091	0	0	0	24.69	0	0
	22.05	13408696	3.848	0	0	0	55.36	35311676	0.091	0	0	0	24.71	72096	0.001
Average		1.34E+07	3.848		0.00E+00	0.000		3.54E+07	0.091		0.00E+00	0.000		3.98E-04	0.000
Standard Deviation		3.30E-04	0.010		0.00E+00	0.000		1.04E+05	0.000		0.00E+00	0.000		3.66E-04	0.001
%RSD		0.25	0.25		ERR	ERR		0.29	0.00		ERR	ERR		92.02	173.21

Sample I.D. Number 93 - 320

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-320.prn	22.05	11699955	3.356	0	0	0	55.36	40104526	0.103	0	0	0	24.69	75419	0.001
	22.05	11685014	3.354	0	0	0	55.36	40179020	0.103	0	0	0	24.71	55816	0
	22.05	11702401	3.356	0	0	0	55.36	40411026	0.104	0	0	0	24.71	0	0
Average		1.17E+07	3.357		0.00E+00	0.000		4.03E+07	0.103		0.00E+00	0.000		4.41E-04	0.000
Standard Deviation		8.33E-03	0.002		0.00E+00	0.000		1.30E+05	0.001		0.00E+00	0.000		3.93E-04	0.001
%RSD		0.07	0.07		ERR	ERR		0.32	0.56		ERR	ERR		89.14	173.21

Sample I.D. Number 93 - 321

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-321.prn	22.05	11608701	3.417	0	0	0	55.36	38053846	0.096	0	0	0	24.71	0	0
	22.05	11644024	3.369	0	0	0	55.36	38129556	0.096	22.93	54156	0	24.71	0	0
	22.05	11625607	3.394	0	0	0	55.36	37977526	0.097	22.93	0	0	24.71	0	0
Average		1.19E+07	3.403		0.00E+00	0.000		3.81E+07	0.098		1.81E+04	0.000		0.00E-00	0.000
Standard Deviation		4.35E-04	0.012		0.00E-00	0.000		7.60E+04	0.000		3.13E-04	0.000		0.00E-00	0.000
%RSD		0.37	0.36		ERR	ERR		0.20	0.59		173.21	ERR		ERR	ERR

Sample I.D Number 93 - 322

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-322.prn	22.05	8435813	2.427	0	0	0	55.36	44434556	0.114	22.93	0	0	24.71	0	0
	22.05	8404857	2.418	0	0	0	55.36	44251800	0.113	0	0	0	24.73	6759	0.001
	22.05	8391725	2.406	0	0	0	55.36	44206000	0.114	0	0	0	24.73	0	0
Average		8.41E-06	2.414		0.00E+00	0.000		4.43E+07	0.114		0.00E+00	0.000		2.25E-04	0.000
Standard Deviation		2.26E+04	0.007		0.00E-00	0.000		9.50E-04	0.001		0.00E+00	0.000		3.90E+04	0.001
%RSD		0.27	0.28		ERR	ERR		0.21	0.51		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 323

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-323.prn	22.06	7200451	2.066	0	0	0	66.36	45218456	0.116	0	0	0	24.73	0	0
	22.06	7173341	2.059	0	0	0	66.36	45244984	0.116	0	0	0	24.73	0	0
	22.06	7188233	2.063	0	0	0	66.36	45424076	0.116	0	0	0	24.73	0	0
Average		7.19E+06	2.064		0.00E+00	0.000		4.53E+07	0.116		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		1.81E+04	0.005		0.00E+00	0.000		1.12E+05	0.000		0.00E+00	0.000		0.00E+00	0.000
%RSD		0.25	0.24		ERR	ERR		0.25	0.00		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 324

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-324.prn	22.06	7477295	2.146	0	0	0	66.36	43231880	0.111	0	0	0	24.73	0	0
	22.06	7408573	2.126	0	0	0	66.36	43253972	0.111	0	0	0	24.73	89035	0.001
	22.09	7369853	2.115	0	0	0	66.36	43380156	0.111	0	0	0	24.73	0	0
Average		7.42E+06	2.129		0.00E+00	0.000		4.33E+07	0.111		0.00E+00	0.000		2.97E+04	0.000
Standard Deviation		5.45E+04	0.016		0.00E+00	0.000		8.00E+04	0.000		0.00E+00	0.000		5.14E-04	0.001
%RSD		0.73	0.74		ERR	ERR		0.18	0.00		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 325

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-325.prn	22.06	5696283	1.625	0	0	0	66.36	46206636	0.116	0	0	0	24.75	105116	0.000
	22.06	5687796	1.632	0	0	0	66.36	46103606	0.116	0	0	0	24.75	72997	0.000
	22.06	5650476	1.622	0	0	0	66.36	46279184	0.116	0	0	0	24.75	0	0
Average		5.68E+06	1.630		0.00E+00	0.000		4.62E+07	0.116		0.00E+00	0.000		5.93E+04	0.001
Standard Deviation		2.51E+04	0.007		0.00E+00	0.000		8.62E+04	0.000		0.00E+00	0.000		5.39E-04	0.001
%RSD		0.44	0.42		ERR	ERR		0.19	0.49		ERR	ERR		90.76	86.60

Sample I.D Number 93 - 326

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-326.prn	22.09	5326443	1.529	0	0	0	66.66	45363044	0.116	0	0	0	24.75	0	0
	22.09	5323143	1.528	0	0	0	66.66	45433404	0.116	0	0	0	24.75	101690	0.000
	22.09	5327102	1.529	0	0	0	66.66	44983928	0.115	0	0	0	24.73	87205	0.000
Average		5.33E+06	1.529		0.00E+00	0.000		4.53E+07	0.116		0.00E+00	0.000		6.30E-04	0.001
Standard Deviation		2.76E-03	0.001		0.00E+00	0.000		2.46E+05	0.001		0.00E+00	0.000		5.51E-04	0.001
%RSD		0.05	0.04		ERR	ERR		0.54	0.50		ERR	ERR		87.38	86.60

Sample I.D. Number 93 - 327

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-327.prn	22.05	4126022	1.185	0	0	0	66.36	46771580	0.12	0	0	0	24.73	0	0
	22.05	4095456	1.175	0	0	0	66.36	46745372	0.12	0	0	0	24.73	100470	0.007
	22.05	4091720	1.174	0	0	0	66.36	46762352	0.12	0	0	0	24.73	0	0
Average		4.11E+06	1.178		0.00E+00	0.000		4.68E+07	0.120		0.00E+00	0.000		3.35E+04	0.003
Standard Deviation		2.00E+04	0.006		0.00E+00	0.000		1.33E+04	0.000		0.00E+00	0.000		5.80E+04	0.001
%RSD		0.49	0.52		ERR	ERR		0.03	0.00		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 328

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-328.prn	22.05	4497530	1.287	0	0	0	66.36	45563864	0.117	0	0	0	24.71	88026	0.007
	22.05	4456561	1.276	0	0	0	66.36	45571112	0.117	0	0	0	24.73	66297	0.005
	22.05	4456510	1.276	0	0	0	66.36	45467080	0.117	0	0	0	24.71	63940	0.005
Average		4.47E+06	1.283		0.00E+00	0.000		4.55E+07	0.117		0.00E+00	0.000		7.27E+04	0.006
Standard Deviation		2.31E+04	0.007		0.00E+00	0.000		4.66E+04	0.000		0.00E+00	0.000		1.33E+04	0.000
%RSD		0.52	0.54		ERR	ERR		0.10	0.00		ERR	ERR		18.31	0.00

Sample I.D. Number 93 - 329

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-329.prn	22.05	3421712	0.986	0	0	0	66.36	47177784	0.121	0	0	0	24.71	0	0
	22.05	3423075	0.986	0	0	0	66.36	47122080	0.121	0	0	0	24.71	0	0
	22.05	3398967	0.979	0	0	0	66.36	47117704	0.121	0	0	0	24.71	59951	0
Average		3.42E+06	0.981		0.00E+00	0.000		4.71E+07	0.121		0.00E+00	0.000		2.00E+04	0.000
Standard Deviation		1.70E+04	0.005		0.00E+00	0.000		3.35E+04	0.000		0.00E+00	0.000		3.46E+04	0.000
%RSD		0.50	0.52		ERR	ERR		0.07	0.00		ERR	ERR		173.21	ERR

Sample I.D. Number 93 - 330

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-330.prn	22.05	4099313	1.176	0	0	0	66.36	45803846	0.117	22.97	36424	0	24.69	58457	0
	22.05	4045004	1.161	0	0	0	66.36	45582936	0.117	22.97	0	0	24.69	0	0
	22.05	4091563	1.185	0	0	0	66.36	45478192	0.117	22.97	0	0	24.69	0	0
Average		4.07E+06	1.168		0.00E+00	0.000		4.56E+07	0.117		1.21E+04	0.000		1.95E+04	0.000
Standard Deviation		2.78E+04	0.008		0.00E+00	0.000		1.66E+05	0.000		2.10E+04	0.000		3.38E+04	0.000
%RSD		0.68	0.65		ERR	ERR		0.36	0.00		173.21	ERR		173.21	ERR

Sample I.D. Number 93 - 331

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-331.prn	22.01	3007072	0.863	0	0	0	66.36	47170404	0.121	0	0	0	24.69	99343	0.001
	22.01	3012716	0.865	0	0	0	66.36	47222904	0.121	0	0	0	24.69	41344	0
	22.01	3004766	0.862	0	0	0	66.36	47473168	0.122	0	0	0	24.69	82693	0.001
Average		3.01E+06	0.863		0.00E+00	0.000		4.73E+07	0.121		0.00E+00	0.000		7.46E+04	0.001
Standard Deviation		4.09E+03	0.002		0.00E+00	0.000		1.62E+05	0.001		0.00E+00	0.000		2.99E+04	0.001
%RSD		0.14	0.18		ERR	ERR		0.34	0.48		ERR	ERR		40.11	86.60

Sample I.D. Number 93 - 332

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-332.prn	22.01	3480552	0.999	0	0	0	66.36	45882360	0.116	0	0	0	24.69	0	0
	22.01	3460730	0.993	0	0	0	66.36	45612044	0.117	0	0	0	24.69	0	0
	22.01	3473116	0.997	0	0	0	66.36	45535266	0.117	0	0	0	24.69	90275	0.001
Average		3.47E+06	0.996		0.00E+00	0.000		4.57E+07	0.117		0.00E+00	0.000		3.01E+04	0.000
Standard Deviation		1.00E+04	0.003		0.00E+00	0.000		1.82E+05	0.001		0.00E+00	0.000		5.21E+04	0.001
%RSD		0.29	0.31		ERR	ERR		0.40	0.49		ERR	ERR		173.21	173.21

Sample I.D Number 93 - 333

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-333.prn	22.01	2804630	0.805	0	0	0	66.36	47275712	0.121	22.69	52607	0	24.69	67542	0.001
	22.01	2762776	0.793	0	0	0	66.36	47275824	0.121	0	0	0	24.71	71234	0.001
	22.01	2769211	0.795	0	0	0	66.36	47174520	0.121	0	0	0	24.71	0	0
Average		2.79E+06	0.800		0.00E+00	0.000		4.72E+07	0.121		1.75E+04	0.000		4.63E+04	0.001
Standard Deviation		1.79E+04	0.005		0.00E+00	0.000		5.85E+04	0.000		3.04E+04	0.000		4.01E+04	0.001
%RSD		0.64	0.63		ERR	ERR		0.12	0.00		173.21	ERR		86.69	86.60

Sample I.D Number 93 - 334

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-334.prn	22.05	3286767	0.942	0	0	0	66.36	45758564	0.117	0	0	0	24.69	90777	0.001
	22.05	3316321	0.952	0	0	0	66.36	45763824	0.117	0	0	0	24.69	0	0
	22.05	3317657	0.952	0	0	0	66.36	45556886	0.117	0	0	0	24.69	70226	0.001
Average		3.31E+06	0.949		0.00E+00	0.000		4.57E+07	0.117		0.00E+00	0.000		5.37E+04	0.001
Standard Deviation		1.92E+04	0.006		0.00E+00	0.000		1.17E+05	0.000		0.00E+00	0.000		4.76E+04	0.001
%RSD		0.58	0.61		ERR	ERR		0.26	0.00		ERR	ERR		88.69	86.60

Sample I.D. Number 93 - 335

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-335.prn	22.06	2760976	0.795	0	0	0	66.36	47066792	0.121	0	0	0	24.69	86013	0.005
	22.06	2746612	0.788	0	0	0	66.36	46837152	0.12	0	0	0	24.69	0	0
	22.06	2771407	0.795	0	0	0	66.36	46786320	0.12	0	0	0	24.71	46750	0
Average		2.77E+06	0.794		0.00E+00	0.000		4.69E+07	0.120		0.00E+00	0.000		4.53E-04	0.000
Standard Deviation		1.77E+04	0.005		0.00E+00	0.000		1.49E+05	0.001		0.00E+00	0.000		4.32E+04	0.001
%RSD		0.64	0.65		ERR	ERR		0.32	0.48		ERR	ERR		95.42	173.21

Sample I.D. Number 93 - 336

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-336.prn	22.06	5753216	1.657	0	0	0	66.36	41527476	0.106	0	0	0	24.71	0	0
	22.06	5788892	1.667	0	0	0	66.36	41405796	0.106	22.93	35376	0	24.71	0	0
	22.06	5751369	1.65	0	0	0	66.36	41605764	0.107	22.93	0	0	24.71	0	0
Average		5.76E+06	1.654		0.00E+00	0.000		4.15E+07	0.106		1.18E+04	0.000		0.00E+00	0.000
Standard Deviation		2.12E+04	0.006		0.00E+00	0.000		1.01E+05	0.001		2.04E+04	0.000		0.00E+00	0.000
%RSD		0.37	0.37		ERR	ERR		0.24	0.54		173.21	ERR		ERR	ERR

Sample I.D. Number 93 - 337

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-337.prn	22.06	3194065	0.917	0	0	0	66.36	45852854	0.116	22.93	0	0	24.71	0	0
	22.06	3201259	0.919	0	0	0	66.36	45675116	0.117	0	0	0	24.73	55432	0
	22.06	3170006	0.91	0	0	0	66.36	45767412	0.117	0	0	0	24.73	70026	0.005
Average		3.19E+06	0.915		0.00E+00	0.000		4.58E+07	0.117		0.00E+00	0.000		4.21E+04	0.000
Standard Deviation		1.64E+04	0.005		0.00E+00	0.000		8.89E+04	0.001		0.00E+00	0.000		3.73E+04	0.001
%RSD		0.51	0.52		ERR	ERR		0.19	0.49		ERR	ERR		88.53	173.21

Sample I.D. Number 93 - 338

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-338.prn	22.06	2275353	0.653	0	0	0	66.36	47193340	0.121	0	0	0	24.73	0	0
	22.06	2290936	0.656	0	0	0	66.36	47344852	0.121	0	0	0	24.73	87205	0.005
	22.06	2276271	0.653	0	0	0	66.36	47120284	0.121	0	0	0	24.73	0	0
Average		2.28E+06	0.655		0.00E+00	0.000		4.72E+07	0.121		0.00E+00	0.000		2.91E+04	0.000
Standard Deviation		1.22E+04	0.003		0.00E+00	0.000		1.14E+05	0.000		0.00E+00	0.000		5.04E+04	0.001
%RSD		0.53	0.53		ERR	ERR		0.24	0.00		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 339

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-339.prn	22 09	3165793	0 906	0	0	0	66.36	45631232	0 116	0	0	0	24.73	0	0
	22.09	3146820	0 903	0	0	0	66 36	45791356	0 117	0	0	0	24.73	0	0
	22 09	3140566	0 904	0	0	0	66.36	45743848	0 117	0	0	0	24 73	0	0
Average		3.15E+06	0.905		0.00E+00	0.000		4.58E+07	0.117		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		1.08E+04	0.003		0 00E-00	0.000		9 74E-04	0.001		0.00E+00	0.000		0 00E+00	0.000
%RSD		0.34	0.36		ERR	ERR		0.21	0 49		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 340

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channe "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-340.prn	22 09	2193956	0 63	0	0	0	66.36	48072280	0 123	0	0	0	24 73	0	0
	22.09	2209611	0 634	0	0	0	66 36	47200920	0 121	0	0	0	24 75	72124	0 001
	22 09	2190675	0 629	0	0	0	66 36	47518200	0 122	23.01	30542	0	24.75	58028	0
Average		2.20E+06	0 631		0.00E-00	0.000		4.76E+07	0 122		1.02E+04	0.000		4.34E+04	0.000
Standard Deviation		1.02E+04	0.003		0 00E-00	0.000		4.02E-05	0 001		1.76E+04	0 000		3.82E+04	0.001
%RSD		0 46	0 42		ERR	ERR		0.84	0 82		173.21	ERR		88.11	173.21

Sample I.D. Number 93 - 341

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channe "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-341.prn	22 09	2227739	0 639	0	0	0	66 36	46256004	0 116	0	0	0	24 75	62716	0
	22 13	2226694	0 639	22 13	2226694	0 359	66 36	45831780	0 116	0	0	0	24 75	0	0
	22 13	2253630	0 647	22 13	2253630	0 363	66 36	46368792	0 116	0	0	0	24 75	0	0
Average		2.24E+06	0 642		1 49E-06	0.241		4 62E+07	0 119		0.00E+00	0.000		2.09E+04	0.000
Standard Deviation		1.54E+04	0.005		1.29E-06	0 208		2.83E-05	0 001		0.00E+00	0.000		3.62E+04	0.000
%RSD		0 69	0.72		86 61	86 61		0.61	0 49		ERR	ERR		173.21	ERR

Sample I.D. Number 93 - 342

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channe "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-342.prn	22 13	1561321	0 448	22 13	1561321	0 252	66 36	47223454	0 121	0	0	0	24 75	0	0
	22 13	1555537	0 446	22 13	1555537	0 252	66 36	47112056	0 121	0	0	0	24 75	0	0
	22 13	1573932	0 452	22 13	1573932	0 254	66 36	47037820	0 121	0	0	0	24 75	0	0
Average		1.57E+06	0 450		1 57E+06	0 253		4.71E+07	0 121		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		6 42E-03	0 002		6 42E-03	0.001		9 88E+04	0 000		0 00E+00	0 000		0.00E+00	0 000
%RSD		0 41	0 46		0 41	0 46		0 21	0 00		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 343

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-343.prn	22 13	1699661	0 486	22 13	1699661	0 274	66 36	47066836	0 121	0	0	0	24 79	59046	0
	22 13	1719660	0 492	22 13	1719660	0 277	66 36	47196016	0 121	0	0	0	24 79	51997	0
	22 13	1659036	0 476	22 13	1659036	0 268	66 36	47467084	0 122	0	0	0	24 79	0	0
Average		1.69E+06	0.486		1.69E+06	0.273		4.73E+07	0.121		0.00E+00	0.000		3.70E-04	0.000
Standard Deviation		3.04E+04	0.009		3.04E-04	0.005		2.21E+05	0.001		0.00E+00	0.000		3.22E+04	0.000
%RSD		1.80	1.80		1.80	1.66		0 47	0 48		ERR	ERR		87.12	ERR

Sample I.D Number 93 - 344

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-344.prn	22 13	1914381	0 540	22 13	1914381	0 305	66 66	46569352	0 12	0	0	0	24 79	38772	0
	22 13	1868205	0 533	22 13	1868205	0 3	66 66	46367152	0 119	0	0	0	24 79	0	0
	22 13	1855640	0 535	22 13	1855640	0 301	66 66	46557446	0 119	0	0	0	24 79	0	0
Average		1.88E+06	0.539		1.88E+06	0.303		4.65E+07	0.119		0.00E+00	0.000		1.23E-04	0.000
Standard Deviation		3.05E+04	0.009		3.05E-04	0.005		1.37E-05	0.001		0.00E+00	0.000		2.12E-04	0.000
%RSD		1.62	1.62		1 62	1 63		0 29	0 48		ERR	ERR		173.21	ERR

Sample I.D. Number QASTD 299

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
QASTD299	21 93	2343272	0 672	0	0	0	66 36	199944864	0 505	22 81	15722226	0.015	24 59	458787	0.004
	21 93	2303507	0 661	0	0	0	66 36	198509552	0 500	22 81	16017181	0.015	24 59	309666	0 002
	21 93	2316993	0 665	0	0	0	66 36	198113168	0 506	22 81	16238816	0 015	24 59	253321	0 002
Average		2.32E+06	6.66E-01		0.00E-00	0.00E+00		1.98E-08	5.07E-01		1.60E+07	1.50E-02		3.41E+05	2.67E-03
Standard Deviation		2.02E-04	5.57E-03		0.00E-00	0.00E+00		8.55E-05	2.08E-03		2.59E+05	0.00E+00		1.08E+05	1.15E-03
%RSD		0 87	0 84		ERR	ERR		0 43	0 41		1.62	0.00		31.17	43.30

Sample I.D Number QASTD 344

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
QASTD344	22 15	2921167	0 838	22 15	2921167	0 471	66 36	185928648	0 477	23 01	13161384	0 012	24 81	225412	0 002
	22 15	2900999	0 832	22 15	2900999	0 469	66 36	185229984	0 475	23 01	13220371	0 012	24 81	195176	0 002
	22 15	2902953	0 833	22 15	2902953	0 469	66 36	185763616	0 476	23 01	13163603	0 012	24 81	225983	0 002
Average		2.91E+06	8.34E-01		2.91E-06	4.69E-01		1.86E-08	4.76E-01		1.32E+07	1.20E-02		2.16E+05	2.00E-03
Standard Deviation		1.11E-04	3.21E-03		1.11E-04	1.73E-03		3.65E-05	1.00E-03		2.84E+04	0.00E+00		1.76E+04	0.00E+00
%RSD		0 38	0 39		0 38	0 37		0 20	0 21		0 22	0 00		8 18	0.00

Sample I.D. Number 93 - 345

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-345.prn	21.97	2567154	0.737	0	0	0	66.04	45408166	0.126	22.95	323532	0	24.63	0	0
	21.97	2522748	0.724	0	0	0	66.04	45762762	0.131	22.95	0	0	24.63	61895	0
	21.97	2552953	0.733	0	0	0	66.04	44953252	0.126	0	0	0	24.65	64749	0.001
Average		2.55E+06	0.731		0.00E+00	0.000		4.54E+07	0.129		1.08E+05	0.000		6.33E+04	0.000
Standard Deviation		2.27E+04	0.007		0.00E+00	0.000		4.31E+05	0.002		1.87E+05	0.000		3.66E+04	0.001
%RSD		0.89	0.9		ERR	ERR		0.95	1.18		173.21	ERR		57.76	173.21

Sample I.D. Number 93 - 346

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-346.prn	21.97	3565754	1.023	0	0	0	66.04	0	0	0	0	0	24.65	0	0
	21.97	3565195	1.023	0	0	0	66.04	0	0	0	0	0	24.65	0	0
	21.97	3513375	1.008	0	0	0	66.04	0	0	0	0	0	24.65	0	0
Average		3.55E+06	1.018		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		3.01E+04	0.009		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000
%RSD		0.85	0.85		ERR	ERR		ERR	ERR		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 347

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-347.prn	21.97	3260629	0.941	0	0	0	66.04	16765680	0.048	0	0	0	24.65	0	0
	21.97	3234533	0.926	0	0	0	66.04	16828808	0.048	0	0	0	24.65	0	0
	21.97	3207200	0.92	0	0	0	66.04	16557780	0.047	0	0	0	24.65	0	0
Average		3.24E+06	0.930		0.00E+00	0.000		1.67E+07	0.048		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		3.71E+04	0.011		0.00E+00	0.000		1.48E+05	0.001		0.00E+00	0.000		0.00E+00	0.000
%RSD		1.15	1.14		ERR	ERR		0.88	1.21		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 348

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-348.prn	21.97	2495054	0.716	0	0	0	66.04	39322045	0.112	0	0	0	24.65	0	0
	21.97	2490077	0.715	0	0	0	66.04	39271616	0.112	0	0	0	24.63	53586	0
	21.97	2504922	0.719	0	0	0	66.04	39230688	0.112	0	0	0	24.65	0	0
Average		2.50E+06	0.717		0.00E+00	0.000		3.93E+07	0.112		0.00E+00	0.000		5.36E+04	0.000
Standard Deviation		7.59E+03	0.002		0.00E+00	0.000		5.78E+04	0.000		0.00E+00	0.000		3.09E+04	0.000
%RSD		0.30	0.29		ERR	ERR		0.15	0.00		ERR	ERR		57.74	ERR

Sample I.D Number 93 - 349

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-349.prn	21 97	2255197	0 647	0	0	0	66 04	45282824	0 129	0	0	0	24 63	61764	0
	21 97	2237281	0 642	0	0	0	66 04	45196556	0 129	0	0	0	24.65	69162	0
	21 97	2230576	0 643	0	0	0	66 04	45211712	0 129	0	0	0	24 63	62004	0 001
Average		2.24E+06	0 644		0 00E+00	0 000		4.52E+07	0 129		0.00E+00	0.000		6 13E+04	0.000
Standard Deviation		9.75E+03	0 003		0 00E+00	0.000		4 61E+04	0.000		0.00E+00	0.000		1.92E+03	0.001
%RSD		0 43	0 41		ERR	ERR		0 10	0.00		ERR	ERR		3.13	173.21

Sample I.D. Number 93 - 350

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-350.prn	21 97	1993796	0 571	0	0	0	66 04	47088000	0 134	0	0	0	24 65	95153	0 001
	21 97	2002176	0 575	0	0	0	66 04	47063528	0 134	0	0	0	24 65	0	0
	21 97	1992917	0 572	0	0	0	66 04	47008688	0 134	0	0	0	24 65	0	0
Average		2.00E+06	0 573		0 00E+00	0 000		4 71E+07	0 134		0.00E+00	0 000		9 52E+04	1.00E-03
Standard Deviation		5 11E+03	0 002		0 00E+00	0 000		4 06E+04	0 000		0 00E+00	0 000		5 49E+04	0.001
%RSD		0.26	0 30		ERR	ERR		0.09	0.00		ERR	ERR		57.74	57.74

Sample I.D. Number 93 - 351

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-351.prn	21 97	2099740	0 603	0	0	0	66 04	47672100	0 137	0	0	0	24 65	0	0
	21 97	2065263	0 593	0	0	0	66 04	47102400	0 134	0	0	0	24 65	0	0
	21 97	2076517	0 596	0	0	0	66 04	47112332	0 134	0	0	0	24 65	10605*	0 001
Average		2 09E+06	0 599		0 00E+00	0 000		4 74E+07	0 135		0.00E+00	0.000		3.54E+04	0 000
Standard Deviation		1.17E+04	0 004		0 00E+00	0 000		4 42E+05	0 002		0.00E+00	0.000		6.12E+04	0.001
%RSD		0 56	0 60		ERR	ERR		0 93	1.28		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 352

	Channel "A"						Channe "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-352.prn	21 97	2132127	0 613	0	0	0	66 04	47250664	0 135	0	0	0	24 65	0	0
	21 97	2124882	0 61*	0	0	0	66 04	47172120	0 135	0	0	0	24 65	90712	0 001
	21 97	2129032	0 611	0	0	0	66 04	47060756	0 134	22 95	1371521	0 001	24 65	0	0
Average		2 13E+06	0 611		0 00E+00	0 000		4 72E+07	0 135		4 57E+05	0.000		3.02E+04	0.000
Standard Deviation		3 64E+03	0 001		0 00E+00	0 000		9 54E+04	0 001		7 92E+05	0 001		5.24E+04	0 001
%RSD		0.17	0 16		ERR	ERR		0 20	0 43		173 21	173 21		173.21	173.21

Sample I.D. Number 93 - 353

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-353.prn	21.97	2162605	0.621	0	0	0	66.04	47420504	0.135	22.65	0	0	24.65	0	0
	21.97	2116786	0.607	0	0	0	66.04	46821824	0.134	0	0	0	24.65	59714	0
	21.97	2132719	0.612	0	0	0	66.04	47154492	0.134	0	0	0	24.65	0	0
Average		2.14E+06	0.613		0.00E+00	0.000		4.72E+07	0.134		0.00E+00	0.000		1.99E+04	0.000
Standard Deviation		2.33E+04	0.007		0.00E+00	0.000		2.50E+05	0.001		0.00E+00	0.000		3.45E+04	0.000
%RSD		1.09	1.16		ERR	ERR		0.53	0.43		ERR	ERR		173.21	ERR

Sample I.D. Number 93 - 354

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-354.prn	21.97	1921995	0.552	0	0	0	66.04	47023632	0.134	0	0	0	24.65	0	0
	21.97	1923074	0.552	0	0	0	66.04	47348840	0.135	0	0	0	24.65	89174	0.001
	21.97	1912343	0.549	0	0	0	66.04	47184092	0.135	0	0	0	24.65	86165	0.001
Average		1.92E+06	0.551		0.00E+00	0.000		4.72E+07	0.135		0.00E+00	0.000		5.85E+04	0.001
Standard Deviation		5.91E+03	0.002		0.00E+00	0.000		1.63E+05	0.001		0.00E+00	0.000		5.06E+04	0.001
%RSD		0.31	0.31		ERR	ERR		0.34	0.43		ERR	ERR		86.64	86.60

Sample I.D. Number 93 - 355

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-355.prn	21.97	1899632	0.545	0	0	0	66.04	47572920	0.135	0	0	0	24.65	0	0
	21.97	1897135	0.544	0	0	0	66.04	47410248	0.135	0	0	0	24.65	0	0
	22.01	1883712	0.541	0	0	0	66.04	47140764	0.134	0	0	0	24.67	92900	0.001
Average		1.89E+06	0.543		0.00E+00	0.000		4.74E+07	0.135		0.00E+00	0.000		3.10E+04	0.000
Standard Deviation		8.56E+03	0.002		0.00E+00	0.000		2.13E+05	0.001		0.00E+00	0.000		5.36E+04	0.001
%RSD		0.45	0.38		ERR	ERR		0.45	0.74		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 356

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-356.prn	21.97	1937985	0.556	0	0	0	66.04	47062396	0.134	0	0	0	24.67	0	0
	22.01	1952605	0.56	0	0	0	66.04	47195920	0.135	0	0	0	24.65	60128	0
	22.01	1916921	0.55	0	0	0	66.04	46982024	0.134	0	0	0	24.67	73036	0.001
Average		1.94E+06	0.556		0.00E+00	0.000		4.71E+07	0.134		0.00E+00	0.000		4.44E+04	0.000
Standard Deviation		1.70E+04	0.005		0.00E+00	0.000		1.07E+05	0.001		0.00E+00	0.000		3.90E+04	0.001
%RSD		0.88	0.81		ERR	ERR		0.23	0.43		ERR	ERR		87.82	173.21

Sample I.D. Number 93 - 357

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-357.prn	22.01	1818816	0.522	0	0	0	66.04	47245188	0.135	0	0	0	24.67	0	0
	22.01	1776298	0.51	0	0	0	66.04	47245004	0.135	0	0	0	24.67	0	0
	22.01	1821497	0.523	0	0	0	66.04	47100644	0.134	0	0	0	24.67	0	0
Average		1.81E+06	0.518		0.00E+00	0.000		4.72E+07	0.135		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		2.54E+04	0.007		0.00E+00	0.000		7.82E+04	0.001		0.00E+00	0.000		0.00E+00	0.000
%RSD		1.40	1.40		ERR	ERR		0.17	0.43		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 358

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-358.prn	22.01	1917960	0.55	0	0	0	66.04	47267632	0.135	0	0	0	24.67	46745	0
	22.01	1919579	0.551	0	0	0	66.04	47582492	0.136	0	0	0	24.67	0	0
	22.01	1823749	0.543	0	0	0	66.04	47529932	0.135	0	0	0	24.66	51031	0
Average		1.91E+06	0.548		0.00E+00	0.000		4.75E+07	0.136		0.00E+00	0.000		3.36E+04	0.000
Standard Deviation		1.45E+04	0.004		0.00E+00	0.000		1.57E+05	0.001		0.00E+00	0.000		2.91E+04	0.000
%RSD		0.76	0.80		ERR	ERR		0.33	0.43		ERR	ERR		86.73	ERR

Sample I.D. Number 93 - 359

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-359.prn	22.01	1807672	0.519	0	0	0	66.04	47424784	0.135	0	0	0	24.67	94287	0.001
	22.01	1778576	0.51	0	0	0	66.04	47142758	0.134	0	0	0	24.67	0	0
	22.01	1792899	0.514	0	0	0	66.04	47126804	0.134	0	0	0	24.67	61626	0
Average		1.79E+06	0.514		0.00E+00	0.000		4.72E+07	0.134		0.00E+00	0.000		5.20E+04	0.000
Standard Deviation		1.46E+04	0.005		0.00E+00	0.000		1.68E+05	0.001		0.00E+00	0.000		4.79E+04	0.001
%RSD		0.82	0.88		ERR	ERR		0.35	0.43		ERR	ERR		92.13	173.21

Sample I.D Number 93 - 360

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-360.prn	22.01	1526049	0.438	0	0	0	66.04	47307204	0.135	0	0	0	24.67	120769	0.001
	22.01	1519025	0.436	0	0	0	66.04	47379116	0.135	0	0	0	24.67	0	0
	22.01	1515488	0.435	0	0	0	66.04	47418084	0.135	0	0	0	24.66	83629	0.001
Average		1.52E+06	0.436		0.00E+00	0.000		4.74E+07	0.135		0.00E+00	0.000		6.15E+04	0.001
Standard Deviation		5.30E+03	0.002		0.00E+00	0.000		5.67E+04	0.000		0.00E+00	0.000		6.04E+04	0.001
%RSD		0.35	0.35		ERR	ERR		0.12	0.00		ERR	ERR		98.29	86.60

Sample I.D. Number 93 - 361

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-361.prn	22.01	4626044	1.326	0	0	0	66.04	42126732	0.12	0	0	0	24.67	62016	0
	22.01	4603220	1.321	0	0	0	66.04	42034480	0.12	0	0	0	24.67	0	0
	22.01	4537417	1.302	0	0	0	66.04	42007424	0.12	22.91	52981	0	24.67	0	0
Average		4.59E+06	1.317		0.00E+00	0.000		4.21E+07	0.120		1.77E+04	0.000		2.07E+04	0.000
Standard Deviation		4.68E+04	0.013		0.00E+00	0.000		6.37E+04	0.000		3.06E+04	0.000		3.58E+04	0.000
%RSD		1.02	1.02		ERR	ERR		0.15	0.00		173.21	ERR		173.21	ERR

Sample I.D Number 93 - 362

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-362.prn	22.01	1471660	0.423	0	0	0	66.04	47186620	0.135	22.91	0	0	24.67	0	0
	22.01	1484935	0.426	0	0	0	66.04	47276186	0.135	22.91	0	0	24.67	0	0
	22.01	1443675	0.414	0	0	0	66.04	47386704	0.135	22.91	0	0	24.67	0	0
Average		1.47E+06	0.421		0.00E+00	0.000		4.73E+07	0.135		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		2.10E+04	0.006		0.00E+00	0.000		1.01E+05	0.000		0.00E+00	0.000		0.00E+00	0.000
%RSD		1.43	1.45		ERR	ERR		0.21	0.00		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 363

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-363.prn	22.01	1533265	0.44	0	0	0	66.04	47156860	0.134	22.91	0	0	24.67	0	0
	22.01	1499419	0.43	0	0	0	66.04	47298838	0.135	0	0	0	24.67	60548	0.001
	22.01	1506814	0.432	0	0	0	66.04	47231152	0.135	0	0	0	24.67	72973	0.001
Average		1.51E+06	0.434		0.00E+00	0.000		4.72E+07	0.135		0.00E+00	0.000		5.12E-04	0.001
Standard Deviation		1.78E+04	0.005		0.00E+00	0.000		7.10E+04	0.001		0.00E+00	0.000		4.45E+04	0.001
%RSD		1.18	1.22		ERR	ERR		0.15	0.43		ERR	ERR		86.92	86.60

Sample I.D Number 93 - 364

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-364.prn	22.01	1490340	0.426	0	0	0	66.04	47454440	0.135	22.97	164712	0	24.67	77676	0.001
	22.01	1475044	0.423	0	0	0	66.04	47492930	0.135	22.97	0	0	24.67	0	0
	22.01	1436726	0.412	0	0	0	66.04	47282692	0.135	0	0	0	24.67	63597	0.001
Average		1.47E+06	0.421		0.00E+00	0.000		4.74E+07	0.135		5.49E+04	0.000		4.71E+04	0.001
Standard Deviation		2.76E+04	0.008		0.00E+00	0.000		1.12E+05	0.000		9.51E+04	0.000		4.14E+04	0.001
%RSD		1.88	1.94		ERR	ERR		0.24	0.00		173.21	ERR		87.88	86.60

Sample I.D. Number 93 - 365

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-365.prn	22.01	3054614	0.877	0	0	0	66.04	44019126	0.126	0	0	0	24.65	76472	0.001
	22.01	3034072	0.871	0	0	0	66.04	45083352	0.129	0	0	0	0	0	0
	22.01	3040374	0.872	0	0	0	66.04	44900632	0.128	0	0	0	24.65	74883	0.001
Average		3.04E+06	0.873		0.00E+00	0.000		4.50E+07	0.128		0.00E+00	0.000		5.05E-04	0.001
Standard Deviation		1.01E+04	0.003		0.00E+00	0.000		8.54E+04	0.001		0.00E+00	0.000		4.37E-04	0.001
%RSD		0.33	0.37		ERR	ERR		0.19	0.45		ERR	ERR		86.62	86.60

Sample I.D. Number 93 - 366

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-366.prn	22.01	2145468	0.616	0	0	0	66.04	19516726	0.056	22.97	115676	0	24.65	0	0
	22.01	2119848	0.608	0	0	0	66.04	19361476	0.056	22.93	39855	0	0	0	0
	22.01	2107104	0.605	0	0	0	66.04	19946106	0.057	22.93	0	0	0	0	0
Average		2.12E+06	0.610		0.00E+00	0.000		1.98E+07	0.056		5.18E+04	0.000		0.00E+00	0.000
Standard Deviation		1.95E-04	0.006		0.00E-00	0.000		1.74E+05	0.001		5.88E+04	0.000		0.00E+00	0.000
%RSD		0.92	0.93		ERR	ERR		0.88	1.02		113.35	ERR		ERR	ERR

Sample I.D Number 93 - 367

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-367.prn	22.01	3193382	0.916	0	0	0	66.04	36997528	0.105	0	0	0	24.65	60810	0
	22.01	3173870	0.911	0	0	0	66.04	36618480	0.104	0	0	0	24.65	0	0
	22.01	3170097	0.91	0	0	0	66.04	36563356	0.104	0	0	0	24.65	0	0
Average		3.18E-06	0.912		0.00E+00	0.000		3.66E+07	0.104		0.00E+00	0.000		2.03E-04	0.000
Standard Deviation		1.25E-04	0.003		0.00E-00	0.000		6.76E-04	0.001		0.00E+00	0.000		3.51E+04	0.000
%RSD		0.39	0.35		ERR	ERR		0.18	0.55		ERR	ERR		173.21	ERR

Sample I.D. Number 93 - 368

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-368.prn	22.01	1810465	0.52	0	0	0	66.04	45005256	0.128	0	0	0	24.67	60875	0
	22.01	1830103	0.525	0	0	0	66.04	44934544	0.128	0	0	0	24.67	0	0
	22.01	1800252	0.517	0	0	0	66.04	45012206	0.128	0	0	0	24.67	88330	0.001
Average		1.81E-06	0.521		0.00E+00	0.000		4.50E-07	0.128		0.00E+00	0.000		4.97E-04	0.000
Standard Deviation		1.52E-04	0.004		0.00E-00	0.000		4.30E-04	0.000		0.00E+00	0.000		4.52E-04	0.001
%RSD		0.84	0.78		ERR	ERR		0.10	0.00		ERR	ERR		90.89	173.21

Sample I.D. Number 93 - 369

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-369.prn	22.01	2800873	0.804	0	0	0	65.04	45160232	0.129	0	0	0	24.67	0	0
	22.01	2785406	0.799	0	0	0	65.04	45259060	0.129	0	0	0	24.67	84793	0.001
	22.01	2794065	0.802	0	0	0	65.04	45404040	0.129	0	0	0	24.67	0	0
Average		2.79E+06	0.802		0.00E+00	0.000		4.53E+07	0.129		0.00E+00	0.000		2.83E+04	0.000
Standard Deviation		7.81E+03	0.003		0.00E+00	0.000		1.23E+05	0.000		0.00E+00	0.000		4.90E+04	0.001
%RSD		0.28	0.31		ERR	ERR		0.27	0.00		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 370

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-370.prn	22.01	1844244	0.529	0	0	0	65.04	47133200	0.134	0	0	0	24.67	0	0
	22.01	1794042	0.515	0	0	0	65.04	47036620	0.134	0	0	0	24.67	0	0
	22.01	1787476	0.513	0	0	0	65.04	47222016	0.135	0	0	0	24.65	62380	0.001
Average		1.81E+06	0.519		0.00E+00	0.000		4.71E+07	0.134		0.00E+00	0.000		2.75E+04	0.000
Standard Deviation		3.11E+04	0.009		0.00E+00	0.000		9.17E+04	0.001		0.00E+00	0.000		4.76E+04	0.001
%RSD		1.72	1.68		ERR	ERR		0.19	0.43		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 371

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-371.prn	22.01	2901017	0.833	0	0	0	65.04	45518104	0.13	0	0	0	24.65	0	0
	22.01	2900231	0.832	0	0	0	65.04	45400160	0.129	0	0	0	24.67	78456	0.001
	22.01	2897295	0.831	0	0	0	65.04	45339336	0.129	0	0	0	24.67	0	0
Average		2.90E+06	0.832		0.00E+00	0.000		4.54E+07	0.129		0.00E+00	0.000		2.62E+04	0.000
Standard Deviation		1.97E+03	0.001		0.00E+00	0.000		9.01E+04	0.001		0.00E+00	0.000		4.53E+04	0.001
%RSD		0.07	0.12		ERR	ERR		0.20	0.45		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 372

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-372.prn	22.01	1695975	0.487	0	0	0	65.04	47578650	0.135	0	0	0	24.67	0	0
	22.01	1689916	0.485	0	0	0	65.04	47360950	0.135	0	0	0	24.67	78036	0.001
	22.01	1691547	0.485	0	0	0	65.04	47424912	0.135	0	0	0	24.67	0	0
Average		1.69E+06	0.486		0.00E+00	0.000		4.75E+07	0.135		0.00E+00	0.000		2.60E+04	0.000
Standard Deviation		3.13E+03	0.001		0.00E+00	0.000		1.65E+05	0.001		0.00E+00	0.000		4.51E+04	0.001
%RSD		0.19	0.24		ERR	ERR		0.35	0.43		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 373

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-373.prn	22.01	2796101	0.803	0	0	0	65.04	45854720	0.131	22.97	112760	0	24.67	0	0
	22.01	2822591	0.81	0	0	0	65.04	45634768	0.131	0	0	0	24.65	75000	0.001
	22.01	2774962	0.796	0	0	0	65.04	45728760	0.13	0	0	0	24.65	0	0
Average		2.80E+06	0.803		0.00E+00	0.000		4.58E+07	0.131		3.76E-04	0.000		2.50E+04	0.000
Standard Deviation		2.38E+04	0.007		0.00E+00	0.000		6.77E+04	0.001		6.51E-04	0.000		4.33E+04	0.001
%RSD		0.85	0.87		ERR	ERR		0.15	0.44		173.21	ERR		173.21	173.21

Sample I.D. Number 93 - 374

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-374.prn	22.01	1665022	0.478	0	0	0	65.04	47205264	0.135	0	0	0	24.67	69980	0.001
	22.01	1676002	0.482	0	0	0	65.04	47339012	0.135	0	0	0	24.67	0	0
	22.01	1660816	0.476	0	0	0	65.04	47210216	0.135	0	0	0	24.67	0	0
Average		1.67E+06	0.480		0.00E+00	0.000		4.73E+07	0.135		0.00E+00	0.000		2.33E-04	0.000
Standard Deviation		6.30E+03	0.002		0.00E+00	0.000		7.58E+04	0.000		0.00E+00	0.000		4.04E-04	0.001
%RSD		0.38	0.43		ERR	ERR		0.16	0.00		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 375

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-375.prn	22.01	4047587	1.162	0	0	0	65.04	43047500	0.123	0	0	0	24.67	69522	0.001
	22.01	4057454	1.164	0	0	0	65.04	43036520	0.123	0	0	0	24.67	0	0
	22.01	4101380	1.177	0	0	0	65.04	51532112	0.147	0	0	0	24.69	60165	0
Average		4.07E+06	1.168		0.00E+00	0.000		4.59E+07	0.131		0.00E+00	0.000		4.32E-04	0.000
Standard Deviation		2.86E-04	0.008		0.00E+00	0.000		4.90E+06	0.014		0.00E+00	0.000		3.77E-04	0.001
%RSD		0.70	0.70		ERR	ERR		10.69	10.58		ERR	ERR		87.28	173.21

Sample I.D Number 93 - 376

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-376.prn	22.01	1456745	0.418	0	0	0	65.04	47385024	0.135	0	0	0	24.67	75416	0.001
	22.01	1416190	0.407	0	0	0	65.04	47317400	0.135	0	0	0	24.67	0	0
	22.01	1423556	0.409	0	0	0	65.04	47297984	0.135	0	0	0	24.67	0	0
Average		1.43E+06	0.411		0.00E+00	0.000		4.73E+07	0.135		0.00E+00	0.000		2.51E-04	0.000
Standard Deviation		2.09E-04	0.006		0.00E+00	0.000		4.57E-04	0.000		0.00E+00	0.000		4.35E+04	0.001
%RSD		1.46	1.42		ERR	ERR		0.10	0.00		ERR	ERR		173.21	173.21

Sample I.D. Number: 93 - 377

	Channel "A" Carbon Dioxide			Channel "A" Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			Channel "D" hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-377.prn	22.01	4892060	1.404	0	0	0	66.04	169123200	0.482	22.01	22789852	0.021	24.69	156715	0.001
	22.01	4872350	1.398	0	0	0	66.04	169209040	0.483	22.01	24000798	0.022	24.69	147312	0.001
	22.01	4892032	1.401	0	0	0	66.04	168522626	0.481	22.69	22434504	0.021	24.69	127060	0.001
Average		4.88E+06	1.401		0.00E+00	0.000		1.69E+08	0.482		2.31E+07	0.021		1.44E+05	0.001
Standard Deviation		1.03E+04	0.003		0.00E+00	0.000		3.17E+05	0.001		8.21E+05	0.001		1.60E+04	0.000
%RSD		0.21	0.21		ERR	ERR		0.19	0.21		3.56	2.71		11.11	0.00

Sample I.D. Number: 93 - 378

	Channel "A" Carbon Dioxide			Channel "A" Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			Channel "D" hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-378.prn	22.01	1797246	0.516	0	0	0	66.04	46639444	0.134	22.69	123631	0	24.69	0	0
	22.01	1753640	0.503	0	0	0	66.04	47349440	0.135	0	0	0	0	0	0
	22.01	1761100	0.505	0	0	0	66.04	47021360	0.134	0	0	0	24.69	69960	0.001
Average		1.77E+06	0.508		0.00E+00	0.000		4.71E+07	0.134		4.12E+04	0.000		2.23E+04	0.000
Standard Deviation		2.33E-04	0.007		0.00E+00	0.000		2.58E+05	0.001		7.14E+04	0.000		3.87E+04	0.001
%RSD		1.32	1.38		ERR	ERR		0.55	0.43		173.21	ERR		173.21	173.21

Sample I.D. Number: 93 - 379

	Channel "A" Carbon Dioxide			Channel "A" Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			Channel "D" hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-379.prn	22.01	2135100	0.613	0	0	0	66.04	46585644	0.133	0	0	0	24.69	0	0
	22.01	2130463	0.611	0	0	0	66.04	46371656	0.132	22.97	49653	0	24.69	0	0
	22.01	2127056	0.61	0	0	0	66.04	46516144	0.133	22.97	0	0	24.69	0	0
Average		2.13E+06	0.611		0.00E+00	0.000		4.65E+07	0.133		1.66E+04	0.000		0.00E+00	0.000
Standard Deviation		4.04E+03	0.002		0.00E+00	0.000		1.10E+05	0.001		2.87E+04	0.000		0.00E+00	0.000
%RSD		0.19	0.25		ERR	ERR		0.24	0.44		173.21	ERR		ERR	ERR

Sample I.D. Number: 93 - 380

	Channel "A" Carbon Dioxide			Channel "A" Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			Channel "D" hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-380.prn	22.01	5402732	1.55	0	0	0	66.04	18333272	0.051	22.97	0	0	24.69	0	0
	22.01	5345743	1.534	0	0	0	66.04	18382992	0.052	22.97	0	0	24.69	0	0
	22.01	5345294	1.534	0	0	0	66.04	18362340	0.052	22.97	0	0	24.69	0	0
Average		5.36E+06	1.539		0.00E+00	0.000		1.81E+07	0.052		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		3.30E-04	0.009		0.00E+00	0.000		2.50E-04	0.001		0.00E+00	0.000		0.00E+00	0.000
%RSD		0.62	0.60		ERR	ERR		0.14	1.12		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 381

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-381.prn	22.01	10100677	2.899	0	0	0	66.04	21221356	0.061	22.07	0	0	24.69	0	0
	22.01	10095658	2.897	0	0	0	66.04	21276176	0.061	22.07	0	0	24.69	0	0
	22.01	10075557	2.891	0	0	0	66.36	21421164	0.061	22.07	0	0	24.69	0	0
Average		1.01E+07	2.896		0.00E+00	0.000		2.13E+07	0.061		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		1.33E+04	0.004		0.00E+00	0.000		1.03E+05	0.000		0.00E+00	0.000		0.00E+00	0.000
%RSD		0.13	0.14		ERR	ERR		0.48	0.00		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 382

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-382.prn	22.01	13982540	4.013	0	0	0	66.04	23470012	0.067	22.07	0	0	24.69	0	0
	22.01	14025117	4.025	0	0	0	66.04	23465916	0.067	22.07	0	0	24.69	0	0
	22.01	14029681	4.026	0	0	0	66.04	23399644	0.067	22.07	38447	0	24.69	0	0
Average		1.40E+07	4.021		0.00E+00	0.000		2.34E+07	0.067		1.28E+04	0.000		0.00E+00	0.000
Standard Deviation		2.61E+04	0.007		0.00E+00	0.000		3.98E+04	0.000		2.22E+04	0.000		0.00E+00	0.000
%RSD		0.19	0.18		ERR	ERR		0.17	0.00		173.21	ERR		ERR	ERR

Sample I.D. Number 93 - 383

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-383.prn	22.01	15820467	4.54	0	0	0	66.04	26003280	0.077	22.07	59793	0	24.69	0	0
	22.01	15615152	4.536	0	0	0	66.04	18497184	0.062	22.07	0	0	24.69	0	0
	22.01	15721566	4.512	0	0	0	66.04	26526672	0.076	22.07	0	0	24.69	0	0
Average		1.58E+07	4.530		0.00E+00	0.000		2.40E+07	0.069	076	1.99E+04	0.000		0.00E+00	0.000
Standard Deviation		5.56E+04	0.016		0.00E+00	0.000		4.78E+06	0.014		3.45E+04	0.000		0.00E+00	0.000
%RSD		0.35	0.34		ERR	ERR		19.89	19.77		173.21	ERR		ERR	ERR

Sample I.D. Number 93 - 384

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-384.prn	22.01	16331567	4.667	0	0	0	66.04	30374774	0.087	22.07	0	0	24.69	0	0
	22.01	16300995	4.676	0	0	0	66.04	30269180	0.086	22.07	0	0	24.69	0	0
	22.01	16291303	4.672	0	0	0	66.04	30472684	0.087	22.07	0	0	24.69	0	0
Average		1.63E+07	4.679		0.00E+00	0.000		3.04E+07	0.087		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		2.53E+04	0.008		0.00E+00	0.000		9.18E+04	0.00		0.00E+00	0.000		0.00E+00	0.000
%RSD		0.16	0.16		ERR	ERR		0.30	0.67		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 385

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-385.prn	22.01	15585612	4.467	0	0	0	66.04	34847580	0.099	22.07	35856	0	24.71	46714	0
	22.01	15586422	4.473	0	0	0	66.04	34868276	0.099	22.07	0	0	24.71	0	0
	22.01	15579294	4.471	0	0	0	66.04	34360406	0.098	22.07	0	0	24.71	0	0
Average		1.56E+07	4.470		0.00E+00	0.000		3.47E+07	0.099		1.20E+04	0.000		1.56E+04	0.000
Standard Deviation		1.06E+04	0.003		0.00E+00	0.000		2.70E+05	0.001		2.07E+04	0.000		2.70E-04	0.000
%RSD		0.07	0.07		ERR	ERR		0.78	0.59		173.21	ERR		173.21	ERR

Sample I.D. Number 93 - 386

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-386.prn	22.01	13455730	3.861	0	0	0	66.04	39511102	0.113	22.07	0	0	24.71	0	0
	22.01	13402450	3.872	0	0	0	66.04	39655720	0.113	22.07	0	0	24.71	0	0
	22.01	13476053	3.867	0	0	0	66.04	39395104	0.112	22.07	0	0	24.71	0	0
Average		1.35E+07	3.867		0.00E+00	0.000		3.96E+07	0.113		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		1.84E+04	0.006		0.00E+00	0.000		1.39E+05	0.001		0.00E+00	0.000		0.00E+00	0.000
%RSD		0.14	0.14		ERR	ERR		0.35	0.51		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 387

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-387.prn	22.01	10961105	3.151	0	0	0	66.04	43563712	0.125	0	0	0	24.71	68971	0.001
	22.01	10974616	3.149	0	0	0	66.04	43347656	0.124	0	0	0	24.71	0	0
	22.01	10952090	3.143	0	0	0	66.04	43660328	0.125	0	0	0	24.71	0	0
Average		1.10E+07	3.148		0.00E+00	0.000		4.36E+07	0.125		0.00E+00	0.000		2.30E+04	0.000
Standard Deviation		1.47E+04	0.004		0.00E+00	0.000		1.93E+05	0.001		0.00E+00	0.000		3.98E+04	0.001
%RSD		0.13	0.13		ERR	ERR		0.44	0.46		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 388

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hyorogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-388.prn	22.01	8855034	2.547	0	0	0	66.04	45160290	0.129	0	0	0	24.71	0	0
	22.01	8906107	2.528	0	0	0	66.04	45035785	0.128	0	0	0	24.71	0	0
	22.01	8703616	2.524	0	0	0	66.04	44916896	0.128	0	0	0	24.71	0	0
Average		8.82E+06	2.531		0.00E+00	0.000		4.50E+07	0.128		0.00E+00	0.000		0.00E-00	0.000
Standard Deviation		3.25E+04	0.009		0.00E+00	0.000		1.21E+05	0.001		0.00E+00	0.000		0.00E-00	0.000
%RSD		0.37	0.35		ERR	ERR		0.27	0.45		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 389

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-389.prn	22.01	7307122	2.097	0	0	0	65.04	45215490	0.129	0	0	0	24.71	0	0
	22.01	7270323	2.086	0	0	0	65.04	45434760	0.13	0	0	0	24.71	0	0
	22.01	7283137	2.09	0	0	0	65.04	45111432	0.129	0	0	0	24.71	0	0
Average		7.29E+06	2.091		0.00E+00	0.000		4.53E+07	0.129		0.00E+00	0.000		0.00E+00	0.000
Standard Deviation		1.87E+04	0.006		0.00E+00	0.000		1.65E+05	0.001		0.00E+00	0.000		0.00E+00	0.000
%RSD		0.26	0.27		ERR	ERR		0.36	0.45		ERR	ERR		ERR	ERR

Sample I.D Number 93 - 390

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-390.prn	22.05	6012900	1.726	0	0	0	65.04	46021616	0.131	0	0	0	24.71	66093	0.001
	22.01	5956307	1.709	0	0	0	65.04	46751216	0.133	0	0	0	24.71	75892	0.001
	22.01	5979551	1.716	0	0	0	65.04	46404594	0.132	0	0	0	24.71	67248	0.001
Average		5.98E+06	1.717		0.00E+00	0.000		4.64E+07	0.132		0.00E+00	0.000		8.07E+04	0.001
Standard Deviation		2.85E+04	0.009		0.00E+00	0.000		3.65E+05	0.001		0.00E+00	0.000		1.47E+04	0.000
%RSD		0.48	0.50		ERR	ERR		0.79	0.76		ERR	ERR		18.19	0.00

Sample I.D. Number 93 - 391

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-391.prn	22.05	6657295	1.910	0	0	0	65.04	44030032	0.126	0	0	0	24.71	76920	0.001
	22.05	6652353	1.909	0	0	0	65.04	44304044	0.126	0	0	0	24.71	0	0
	22.05	6682434	1.918	0	0	0	65.04	44099292	0.126	0	0	0	24.71	0	0
Average		6.67E+06	1.915		0.00E+00	0.000		4.41E+07	0.126		0.00E+00	0.000		2.56E+04	0.000
Standard Deviation		1.89E+04	0.006		0.00E+00	0.000		1.43E+05	0.000		0.00E+00	0.000		4.44E+04	0.001
%RSD		0.28	0.28		ERR	ERR		0.32	0.00		ERR	ERR		173.21	173.21

Sample I.D Number 93 - 392

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-392.prn	22.01	4546209	1.305	0	0	0	65.04	46095000	0.134	0	0	0	24.71	0	0
	22.01	4497600	1.291	0	0	0	65.04	46924512	0.134	0	0	0	24.71	72956	0.001
	22.01	4507340	1.292	0	0	0	65.04	46876760	0.134	0	0	0	24.71	0	0
Average		4.52E+06	1.296		0.00E+00	0.000		4.69E+07	0.134		0.00E+00	0.000		2.43E+04	0.000
Standard Deviation		2.70E+04	0.008		0.00E+00	0.000		5.95E+04	0.000		0.00E+00	0.000		4.21E+04	0.001
%RSD		0.60	0.60		ERR	ERR		0.13	0.00		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 393

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-393.prn	22.01	5348905	1.535	0	0	0	66.04	44781944	0.126	0	0	0	24.71	71096	0.001
	22.01	5313511	1.525	0	0	0	66.04	44776336	0.128	0	0	0	24.71	0	0
	22.01	5302642	1.522	0	0	0	66.04	44629540	0.126	22.43	242316	0	24.71	0	0
Average		5.32E+06	1.527		0.00E+00	0.000		4.48E+07	0.128		8.08E+04	0.000		2.37E+04	0.000
Standard Deviation		2.42E+04	0.007		0.00E+00	0.000		2.93E+04	0.000		1.40E+05	0.000		4.10E+04	0.001
%RSD		0.45	0.45		ERR	ERR		0.07	0.00		173.21	ERR		173.21	173.21

Sample I.D. Number 93 - 394

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-394.prn	22.01	3710740	1.065	0	0	0	66.04	47216712	0.135	0	0	0	24.71	91562	0.001
	22.01	3723526	1.069	0	0	0	66.04	47132952	0.134	0	0	0	24.71	0	0
	22.01	3700978	1.062	0	0	0	66.04	46944400	0.134	0	0	0	24.71	0	0
Average		3.71E+06	1.065		0.00E+00	0.000		4.71E+07	0.134		0.00E+00	0.000		3.05E+04	0.000
Standard Deviation		1.13E+04	0.004		0.00E+00	0.000		1.39E+05	0.001		0.00E+00	0.000		5.29E+04	0.001
%RSD		0.30	0.33		ERR	ERR		0.30	0.43		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 395

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-395.prn	22.05	1534100	0.44	0	0	0	66.04	46961460	0.134	0	0	0	24.71	82150	0.001
	22.05	1531546	0.44	0	0	0	66.04	46939352	0.134	0	0	0	24.71	0	0
	22.05	1515327	0.435	0	0	0	66.04	47214860	0.135	0	0	0	24.71	0	0
Average		1.53E+06	0.438		0.00E+00	0.000		4.70E+07	0.134		0.00E+00	0.000		2.74E+04	0.000
Standard Deviation		1.02E+04	0.003		0.00E+00	0.000		1.53E+05	0.001		0.00E+00	0.000		4.74E+04	0.001
%RSD		0.67	0.66		ERR	ERR		0.33	0.43		ERR	ERR		173.21	173.21

Sample I.D. Number 93 - 396

	Channel "A" Carbon Dioxide			Nitrous Oxide			Channel "C" Carbon Monoxide			Channel "D" helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-396.prn	22.05	1926604	0.559	0	0	0	66.04	46043960	0.131	0	0	0	24.73	54124	0
	22.05	1910280	0.548	0	0	0	66.04	46547624	0.133	0	0	0	24.73	0	0
	22.05	1906012	0.548	0	0	0	66.04	46095704	0.131	0	0	0	24.76	88370	0.001
Average		1.92E+06	0.550		0.00E+00	0.000		4.62E+07	0.132		0.00E+00	0.000		4.75E-04	0.000
Standard Deviation		1.13E+04	0.003		0.00E+00	0.000		2.77E+05	0.001		0.00E+00	0.000		4.46E+04	0.001
%RSD		0.59	0.53		ERR	ERR		0.60	0.88		ERR	ERR		93.81	173.21

Sample I.D Number | 93 - 397 |

	Channel "A"						Channel "C"			Channel "D"					
	Carbon Dioxide			Nitrous Oxide			Carbon Monoxide			nellum			hydroger		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-397.prn	22 05	5233639	1 502	0	0	0	66 04	163668816	0 467	22 9[illegible]	22365716	0 021	24 73	162012	0 001
	22 05	5208978	1 495	0	0	0	66 04	164375776	0 469	22 93	21400544	0.02	24 71	150555	0 001
	22 05	5200902	1 495	0	0	0	66 04	163945136	0 468	22 93	20782032	0.019	24 71	14886[illegible]	0 001
Average		5 22E+06	1 497		0 00E+00	0 000		1.64E+08	0 468		2 15E+07	0.020		1.54E+05	0.001
Standard Deviation		1 40E+04	0 004		0 00E+00	0 000		3 56E+05	0.001		7.98E+05	0.001		7.15E+03	0.000
%RSD		0.27	0.27		ERR	ERR		0.22	0.21		3 71	5.00		4.65	0.00

{DOWN 4}	{getnumber what is the first run number ,A603}		
{RIGHT}	{GETnumber What is the last run Number ,A604}		{DOWN 5}
{/ Publish;Font}3	{getnumber What is the number of runs per page ,G590}		{RIGHT 15}
{DOWN 2}	{FOR A606,A603,A604,1,A585}		{down}{end}{L}{D}
{END}	{HOME}		
{RIGHT} ~	{FOR G591,A603,F590,1,C595}	356	4
{DOWN 3}	{HOME}		359
{RIGHT}			
{/ Publish;Font}1		A606=@INT{((A607-A606)/G593)}	
{;DOWN}			
{UP}	{/ Print;Block}		
{END}	{BACKSPACE}.		
{RIGHT}	{FOR C606,1,G590,1,I586}		
{DOWN 3} ~	{RIGHT 15}{UP} ~		
{LEFT 2}	{/ Print;Rotated}l		
{DOWN 4}	{/ Print;PrintToFit}		
	{FOR C607,1,G590,1,I586}		

345
397

398 5
5

Sample I.D. Number 93 - 398

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-398.pm	10.11	360356816	2.875	0	0	0	66.04	35244344	0.113	23.03	20421459	6.019	24.01	7745006276	3.05
	10.11	357144192	2.849	0	0	0	66.04	0	0	23.07	335435	0	24.01	7659449249	3.02
	10.09	358730944	2.846	0	0	0	66.04	0	0	0	0	0	24.01	7757992272	3.055
	10.09	355672800	2.838	0	0	0	66.04	0	0	22.99	78214	0	24.89	7640255536	3.009
Average		3.57E+08	2.852		0.00E+00	0.000		8.81E+06	0.028		5.23E+06	0.005		7.70E+08	3.033
Standard Deviation		2.02E+06	0.016		0.00E+00	0.000		1.76E+07	0.057		1.02E+07	0.010		5.73E+06	0.023
%RSD		0.56	0.56		ERR	ERR		200.00	200.00		194.37	200.00		0.74	0.75

Sample I.D. Number 93 - 399

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-399.pm	10.13	345060280	2.76	0	0	0	66.04	0	0	23.05	16950003	0	24.05	7766771072	2.995
	10.13	343639456	2.744	0	0	0	66.04	0	0	23.03	341023	0	24.03	7666652648	2.957
	10.13	341484832	2.725	0	0	0	66.04	0	0	0	0	0	24.03	7652704100	2.944
	10.11	342292864	2.732	0	0	0	66.04	0	0	0	0	0	25.57	32424602	-0.351
Average		3.43E+08	2.740		0.00E+00	0.000		0.00E+00	0.000		5.08E+06	0.000		7.70E+08	2.964
Standard Deviation		1.98E+06	0.016		0.00E+00	0.000		0.00E+00	0.000		9.92E+06	0.000		6.32E+06	0.028
%RSD		0.58	0.57		ERR	ERR		ERR	ERR		195.55	ERR		0.82	0.95

Sample I.D. Number: 93 - 400

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-400.prn	19.09	304011486	2.433	20.03	0	0	65.4	0	0	22.97	12743336	0	24.69	-8886	0
	19.09	305414912	2.437	20.03	0	0	65.4	0	0	0	0	0	0	0	0
	19.09	304120704	2.426	20.03	0	0	65.4	0	0	0	0	0	24.69	501324480	1.757
	19.09	302824896	2.416	20.03	0	0	65.4	0	0	0	0	0	24.69	501400288	1.757
Average		3.04E+08	2.428		0.00E+00	0.000		0.00E+00	0.000		3.19E+06	0.000		2.51E+08	~~0.878~~ 1.757
Standard Deviation		1.13E+06	0.009		0.00E+00	0.000		0.00E+00	0.000		6.37E+06	0.000		2.89E+08	~~1.014~~
%RSD		0.37	0.38		ERR	ERR		ERR	ERR		200.00	ERR		115.47	115.47

Sample I.D. Number: 93 - 401

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-401.prn	19.09	303605920	2.422	20.03	0	0	65.4	0	0	22.97	8916304	0	24.69	508920896	1.786
	19.09	302780704	2.416	20.03	0	0	65.4	0	0	22.97	97405	0	24.71	518005600	1.820
	19.09	301302656	2.404	20.03	0	0	65.4	0	0	0	0	0	24.69	515288704	1.80
	19.09	301580704	2.406	20.03	0	0	65.4	0	0	0	0	0	24.69	494532480	~~1.726~~
Average		3.02E+08	2.412		0.00E+00	0.000		0.00E+00	0.000		2.25E+06	0.000		5.09E+08	1.790
Standard Deviation		1.07E+06	0.008		0.00E+00	0.000		0.00E+00	0.000		4.44E+06	0.000		1.06E+07	0.048
%RSD		0.35	0.35		ERR	ERR		ERR	ERR		197.13	ERR		2.08	2.66

Sample I.D. Number: 93 - 402

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-402.prn	19.03	481344928	3.84	19.95	3313794	0.008	65.4	0	0	22.99	12417178	0	24.69	39983512	-0.321
	19.03	482734432	3.851	19.95	3347337	0.008	65.4	0	0	22.97	216431	0	24.69	37400000	-0.329
	19.02	484030144	3.862	19.95	3343779	0.008	65.4	0	0	0	0	0	24.69	38305088	-0.324
	19.03	482501504	3.85	19.95	3325351	0.008	65.4	0	0	0	0	0	24.69	37474080	-0.328
Average		4.83E+08	3.851		3.33E+06	0.008		0.00E+00	0.000		3.16E+06	0.000		3.80E+07	-0.326
Standard Deviation		1.10E+06	0.009		1.58E+04	0.000		0.00E+00	0.000		6.17E+06	0.000		7.51E+05	0.004
%RSD		0.23	0.23		0.47	0.00		ERR	ERR		195.46	ERR		1.97	-1.14

Sample I.D. Number: 93 - 403

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-403.prn	19.09	348200896	2.776	19.95	0	0	65.4	0	0	22.97	3298368	0	24.69	49291952	-0.275
	19.07	344826544	2.752	19.95	0	0	65.4	0	0	0	0	0	24.69	49332524	-0.276
	19.07	345235136	2.754	19.95	0	0	65.4	0	0	0	0	0	24.69	49246912	-0.275
	19.07	345301248	2.755	0	0	0	65.4	0	0	0	0	0	24.69	49363696	-0.273
Average		3.46E+08	2.760		0.00E+00	0.000		0.00E+00	0.000		8.25E+05	0.000		4.94E+07	-0.275
Standard Deviation		1.54E+06	0.012		0.00E+00	0.000		0.00E+00	0.000		1.65E+06	0.000		2.89E+05	0.001
%RSD		0.44	0.44		ERR	ERR		ERR	ERR		200.00	ERR		0.58	-0.36

Sample I.D. Number: 93 - 404

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-404.prn	19.06	325826304	2.6	0	0	0	65.4	0	0	22.99	3352966	0	24.69	44616580	-0.296
	19.06	323155232	2.578	0	0	0	65.4	0	0	22.95	86760	0	24.69	44566856	-0.296
	19.06	323107648	2.578	0	0	0	65.4	0	0	0	0	0	24.69	45067800	-0.294
	19.09	322254496	2.571	0	0	0	65.4	0	0	0	0	0	24.69	42507992	-0.305
Average		3.24E+08	2.582		0.00E+00	0.000		0.00E+00	0.000		8.60E+05	0.000		4.42E+07	-0.298
Standard Deviation		1.55E+06	0.013		0.00E+00	0.000		0.00E+00	0.000		1.66E+06	0.000		1.09E+06	0.005
%RSD		0.48	0.49		ERR	ERR		ERR	ERR		193.33	ERR		2.48	-1.65

Sample I.D. Number: 93 - 405

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-405.prn	19.11	300984352	2.401	19.95	0	0	65.4	0	0	22.99	5927492	0	24.71	48535244	-0.276
	19.11	298960864	2.385	19.95	0	0	65.4	0	0	0	0	0	24.71	49562356	-0.274
	19.11	299075808	2.393	19.95	0	0	65.4	0	0	0	0	0	24.71	49076736	-0.272
	19.11	299346272	2.395	19.95	0	0	65.4	0	0	0	0	0	24.71	47823152	-0.282
Average		3.00E+08	2.392		0.00E+00	0.000		0.00E+00	0.000		1.48E+06	0.000		4.90E+07	-0.277
Standard Deviation		8.84E+05	0.007		0.00E+00	0.000		0.00E+00	0.000		2.96E+06	0.000		9.78E+05	0.005
%RSD		0.29	0.29		ERR	ERR		ERR	ERR		200.00	ERR		2.00	-1.65

Sample I.D. Number: 93 - 406

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-406.prn	19.11	309762304	2.471	19.95	0	0	65.4	0	0	0	0	0	0	0	0
	19.11	307240280	2.451	19.95	0	0	65.4	0	0	22.99	1590494	0	24.71	47417228	-0.284
	19.11	306750072	2.447	19.95	0	0	65.4	0	0	0	0	0	24.71	47588520	-0.283
	19.11	307893568	2.456	19.95	0	0	65.4	0	0	0	0	0	24.71	47821000	-0.282
Average		3.08E+08	2.456		0.00E+00	0.000		0.00E+00	0.000		3.98E+05	0.000		4.76E+07	-0.283
Standard Deviation		1.32E+06	0.011		0.00E+00	0.000		0.00E+00	0.000		7.95E+05	0.000		2.03E+05	0.001
%RSD		0.43	0.43		ERR	ERR		ERR	ERR		200.00	ERR		0.43	-0.35

Sample I.D. Number: 93 - 407

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-407.prn	19.11	299274688	2.386	19.95	0	0	65.4	0	0	23.01	2060016	0	24.71	47906760	-0.261
	19.11	298784288	2.384	19.95	0	0	65.4	0	0	0	0	0	24.71	49526984	-0.274
	19.11	297679520	2.375	19.95	0	0	65.4	0	0	0	0	0	24.71	49497376	-0.274
	19.11	298225856	2.379	19.95	0	0	65.4	0	0	0	0	0	24.71	52849760	-0.256
Average		2.98E+08	2.382		0.00E+00	0.000		0.00E+00	0.000		5.15E+05	0.000		5.00E+07	-0.272
Standard Deviation		6.90E+05	0.006		0.00E+00	0.000		0.00E+00	0.000		1.03E+06	0.000		2.07E+06	0.009
%RSD		0.23	0.24		ERR	ERR		ERR	ERR		200.00	ERR		4.15	-3.41

Sample I.D. Number: 93 - 408

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-408.prn	19 11	347234845	2 77	19 95	0	0	65 4	0	0	23 01	359581	0	24 71	37737500	-0 327
	19 11	347455958	2 772	19 95	0	0	0	0	0	22 99	114385	0	24 73	39533816	-0 316
	19 11	346543302	2 781	19 95	0	0	0	0	0	22 99	78946	0	24 71	37408048	-0 329
	19 11	349706800	2 76	19 95	0	0	0	0	0	0	0	0	24 71	38556776	-0 323
Average		3 48E+08	2.778		0.00E+00	0.000		0.00E+00	0.000		9 47E+05	0.000		3.83E+07	-0.325
Standard Deviation		1.14E+06	0 009		0 00E+00	0.000		0.00E+00	0.000		1.77E+06	0.000		9.59E+05	0.004
%RSD		0.33	0 33		ERR	ERR		ERR	ERR		186.46	ERR		2.50	-1.37

Sample I.D. Number: 93 - 409

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-409.prn	19 13	307110656	2 45	19 95	0	0	0	0	0	23 03	2940778	0	24 73	49511760	-0.274
	19 13	304202240	2 427	19 95	0	0	0	0	0	23 03	0	0	24 73	0	~~0~~
	19 13	302659488	2 415	19 95	0	0	0	0	0	0	0	0	24 73	47651536	-0 282
	19 13	304154656	2 427	19 95	0	0	0	0	0	0	0	0	24 73	48386520	-0 276
Average		3.05E+08	2 430		0 00E+00	0 000		0.00E+00	0.000		7.10E+05	0.000		3.64E+07	~~-0.285~~ 0.278
Standard Deviation		1.86E+06	0 015		0 00E+00	0 000		0 00E+00	0 000		1 42E+06	0.000		2.43E+07	0 139 0.004
%RSD		0.61	0 60		ERR	ERR		ERR	ERR		200.00	ERR		66.70	-66.69

Sample I.D. Number: 93 - 410

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-410.prn	19 11	339532064	2 709	19 95	0	0	0	0	0	23 03	3503394	0	24 73	42750128	-0 305
	19 11	340355295	2 715	19 95	0	0	0	0	0	22 99	95776	0	24 73	39370464	-0 33
	19 11	340266076	2 715	19 95	0	0	0	0	0	22 95	76144	0	24 73	42376760	-0 306
	19 11	340555392	2 717	19 95	0	0	0	0	0	0	0	0	24 73	40160408	-0 316
Average		3 40E+08	2 714		0.00E+00	0 000		0.00E+00	0.000		9 42E+05	0.000		4.12E+07	-0.312
Standard Deviation		4 47E+05	0 003		0 00E+00	0 000		0 00E+00	0.000		1 77E+06	0.000		1.65E+06	0.007
%RSD		0 13	0 13		ERR	ERR		ERR	ERR		187.66	ERR		4.01	-2.38

Sample I.D. Number: 93 - 411

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-411.prn	19 13	307671520	2 455	19 95	0	0	0	0	0	23 03	2866842	0	24 73	47012352	-0 285
	19 13	305980184	2 441	19 95	0	0	0	0	0	0	0	0	24 73	46584792	-0 287
	19 13	306048512	2 442	0	0	0	0	0	0	0	0	0	24 73	47950920	-0 281
	19 13	304050080	2 426	0	0	0	0	0	0	0	0	0	24 72	48076800	-0.276
Average		3 06E+08	2 441		0 00E+00	0 000		0.00E+00	0 000		7.24E+05	0.000		4.77E+07	-0.282
Standard Deviation		1 48E+06	0 012		0 00E+00	0 000		0 00E+00	0 000		1 45E+06	0.000		1.11E+06	0.005
%RSD		0 48	0 49		ERR	ERR		ERR	ERR		200 00	ERR		2.32	-1.72

Sample I.D. Number 93 - 412

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-412.prn	10 13	335973535	2 681	19 95	0	0	65 72	0	0	23 05	5260023	0.005	24 75	41650624	0 164
	10 13	335988824	2 681	19 95	0	0	65 72	0	0	22.69	103093	0	24 75	43224040	0 17
	10 13	336017312	2 681	19 95	0	0	65 72	0	0	0	0	0	24 73	41849844	0 165
	10 13	339169446	2 706	0	0	0	65 72	0	0	0	0	0	24 75	19507948	~~0 077~~
Average		3.37E+08	2.687		0.00E+00	0.000		0.00E+00	0.000		1.35E+06	0.001		3.66E+07	~~0.144~~ 0.166
Standard Deviation		1.59E+06	0.012		0.00E+00	0.000		0.00E+00	0.000		2.63E+06	0.003		1.13E+07	~~0.045~~ 0.003
%RSD		0 47	0 47		ERR	ERR		ERR	ERR		194.94	200.00		30.99	31.07

Sample I.D. Number 93 - 413

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-413.prn	10 15	303446736	2 421	0	0	0	65 25	99173632	1 275	23 05	1184560	0 001	24.75	48555504	0 197
	10 15	301739968	2 407	0	0	0	65 25	0	0	0	0	0	24 75	50400768	0 196
	10 15	301661408	2 407	0	0	0	65 25	0	0	0	0	0	24 75	49542204	0 195
	10 15	300853728	2 4	0	0	0	65 25	0	0	0	0	0	24 75	48741232	0 192
Average		3.02E+08	2 409		0.00E+00	0.000		9 93E+07	0 319		2.96E+05	0 000		4.93E+07	0.194
Standard Deviation		1.09E+06	0 009		0.00E+00	0.000		1.99E+08	0 638		5 92E+05	0.001		8 44E+05	0 003
%RSD		0 36	0 37		ERR	ERR		200 00	200 00		200.00	200 00		1.71	1.63

Sample I.D. Number 93 - 414

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-414.prn	10 15	338946446	2 686	0	0	0	65 25	0	0	23 05	3992570	0 004	24.77	40565976	0 16
	10 15	338935904	2 704	0	0	0	65 25	0	0	23 03	93149	0	24 77	42063440	0 169
	10 15	341220864	2 722	0	0	0	65 25	0	0	22 99	69106	0	24 77	38825636	0 153
	10 15	341251776	2.723	0	0	0	65 25	0	0	22 97	66760	0	24 77	39136412	0 154
Average		3 40E+08	2 709		0 00E+00	0 000		0 00E+00	0 000		1.06E+06	0.001		4.04E+07	0.159
Standard Deviation		2.07E+06	0 017		0 00E+00	0.000		0 00E+00	0 000		1 95E+06	0.002		1.89E+06	0.007
%RSD		0 61	0.61		ERR	ERR		ERR	ERR		184.35	200.00		4.68	4.62

Sample I.D. Number 93 - 415

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-415.prn	10 17	301760544	2 408	0	0	0	65 25	0	0	23 07	2421300	0 002	24 79	49385156	0 197
	10 17	300550336	2 398	0	0	0	65 25	0	0	0	0	0	24 79	49876202	0 196
	10 16	299107200	2 386	0	0	0	65 25	0	0	0	0	0	24 79	47849984	0 188
	10 16	300663952	2 399	0	0	0	65 25	0	0	0	0	0	24 79	49918200	0 197
Average		3 01E+08	2 398		0 00E+00	0 000		0 00E+00	0 000		6 05E+05	0 001		4.94E+07	0.195
Standard Deviation		1.10E+06	0 009		0 00E+00	0 000		0 00E+00	0 000		1 21E+06	0 001		1 04E+06	0.004
%RSD		0 37	0 38		ERR	ERR		ERR	ERR		200 00	200 00		2 11	2 24

Sample I.D Number 93 - 416

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-416.prn	19 17	352036704	2 813	0	0	0	86 4	6572241?2	1 ?05	23 05	3287066	0 003	24 76	38048136	0 15
	19 17	348170592	2 778	0	0	0	86 4	.0	0	23 05	192330	0	24 76	37574120	0 149
	19 19	349458112	2 788	0	0	0	86 4	0	0	23 0?	92008	0	24 76	39275064	0 151
	19 16	345744992	2 758	0	0	0	86 4	0	0	23 0?	78160	0	24 76	39019500	0 154
Average		3 49E+08	2.784		0.00E+00	0 000		1.64E-08	0 527		9.07E+05	0.001		3.82E+07	0 151
Standard Deviation		2.87E+06	0.023		0.00E+00	0 000		3.29E+08	1.055		1.57E+06	0.002		6.02E+05	0.003
%RSD		0.82	0 82		ERR	ERR		200.00	200 00		173 46	200.00		1.58	1.66

Sample I.D. Number 93 - 417

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-417.prn	19 21	297651072	2 375	0	0	0	86 4	0	0	0	0	0	.0	.0	0
	19.21	297624832	2 375	0	0	0	86 4	0	0	23 05	5587513	0 005	24 81	49088408	0 193
	19 21	298420832	2.381	0	0	0	85 85	576936320	1 656	0	0	0	24 81	50035024	0 197
	19 21	298358400	2 38	0	0	0	85 85	510011936	1 656	0	0	0	24 81	51137328	0 201
Average		2.98E+08	2.378		0.00E+00	0 000		2.75E+08	0.882		1.86E-06	0.002		3.76E+07	~~0.148~~ 0.197
Standard Deviation		4.35E+05	0 003		0.00E+00	0 000		3.18E-08	1.021		3.21E+06	0.003		2.51E+07	~~0.000~~ 0.004
%RSD		0 15	0 13		ERR	ERR		115 80	115.80		173 21	173.21		66.70	66 70

Sample I.D. Number 93 - 418

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-418.prn	19 21	307970496	2 457	0	0	0	85 72	3579652	0 012	23 11	4434635	0 004	24 83	53517864	0 211
	19 21	307684992	2 455	0	0	0	85 72	3335728	0 011	23 05	71932	0	24 83	52643568	0.207
	19 21	307656486	2 455	0	0	0	85 72	0	0	0	0	0	24 83	53567706	0 211
	19 23	309855744	2 448	0	0	0	85 72	0	0	0	0	0	24 83	0	0
Average		3.08E+08	2 454		0 00E+00	0 000		3.51E-06	0 012		1 13E-06	0.001		4.00E+07	~~0.157~~ 0.280
Standard Deviation		4.79E-05	0 004		0.00E+00	0 000		2 41E-05	0 00?		2 21E+06	0 002		2.66E+07	0.105 0.002
%RSD		0 16	0 16		ERR	ERR		6 87	6 15		195.77	200.00		66.68	66 68

Sample I.D. Number 93 - 419

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-419.prn	19 23	301493152	2 405	0	0	0	85 72	5500685	0 016	23 11	2724766	0 003	24 83	69221744	0 272
	19 23	301177920	2 403	0	0	0	85 72	5799819	0 016	0	0	0	24 83	68641416	0 27
	19 23	299911936	2 393	0	0	0	85 72	5602325	0 016	0	0	0	24 83	69392792	0 273
	19 23	298436992	2 381	0	0	0	85 72	0	0	0	0	0	24 83	69274464	0 273
Average		3 00E+08	2 396		0 00E+00	0 000		5.77E-06	0 019		6 81E-05	0.001		6 91E+07	0 272
Standard Deviation		1.39E+06	0 011		0 00E+00	0 000		1 53E-05	0 001		1 36E-06	0 002		3.32E+05	0.001
%RSD		0 46	0 46		ERR	ERR		2 66	3 09		200 00	200 00		0 48	0 52

Sample I.D. Number 93 - 420

	Channel "A" (%) Nitrous Oxi			Carbon Dio			Channel "C" (%) Carbon Mo			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-420.prn	19 25	299194304	2.357	0	0	0	65 72	0	0	23 15	4927891	0 005	24 89	-8886	0
	19 25	295788544	2 36	0	0	0	65 72	0	0	0	0	0	24.87	-8886	0
	19 25	297822016	2 376	0	0	0	65 72	17312864	0.056	0	0	0	24.87	-8886	0
	19 25	299373120	2 389	0	0	0	65 72	17093062	0 055	23 06	26550	0	24.87	486920640	1 925
Average		2.98E+08	2.378		0.00E+00	0.000		1.72E+07	0.056		1.24E+06	0.001		1.22E+08	~~0.48~~ 1.925
Standard Deviation		1.66E+06	0.013		0.00E+00	0.000		1.55E+05	0.001		2 46E+06	0 003		2.44E+08	~~0.958~~ —
%RSD		0.56	0.55		ERR	ERR		0 90	1.27		198.57	200.00		200.01	200.00

Sample I.D. Number 93 - 421

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-421.prn	19.23	307219008	2 451	0	0	0	65 72	0	0	23 11	1136000	0 001	24 85	80043856	0 315
	19 23	305564160	2 445	0	0	0	65 72	0	0	0	0	0	24 85	78445680	0 309
	19 23	307434368	2 452	0	0	0	65 72	6155648	0 02	0	0	0	24 85	79588032	0.313
	19 23	304761376	2 432	0	0	0	65 72	10075816	0 032	0	0	0	24 85	76785592	0 31
Average		3.06E+08	2 446		0.00E+00	0 000		8 12E-06	0.026		2.84E+05	0.000		7.92E+07	0.312
Standard Deviation		1.21E+06	0.009		0 00E+00	0 000		2.77E-06	0.008		5.68E+05	0.001		7.31E+05	0.003
%RSD		0 40	0.36		ERR	ERR		34 16	32.64		200.00	200.00		0.92	0.86

Sample I.D Number 93 - 422

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-422.prn	19 27	299490400	2 369	20 0*	0	0	65 72	0	0	23 17	12378608	0 011	24.89	102928512	0 405
	19 27	298095520	2 376	20 0*	0	0	65 72	0	0	22 19	177046	0	24.85	105748000	0 416
	19 27	297553536	2 374	0	0	0	65 72	0	0	0	0	0	24 91	108335728	0 427
	19 27	297000320	2 37	0	0	0	65 72	7527936	0.024	0	0	0	24.89	106442344	0 419
Average		2.98E+08	2.376		0 00E+00	0.000		1.88E+06	~~6.000~~ 0.024		3 14E+06	0.003		1.06E+08	0.417
Standard Deviation		1.07E+06	0 008		0 00E+00	0.000		3 76E-06	~~0.012~~		6 16E+06	0 006		2.24E+06	0.009
%RSD		0.36	0 34		ERR	ERR		200 00	200.00		196.26	200.00		2 12	2 16

Sample I.D Number 93 - 423

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-423 prn	19 23	492629088	3 93	0	0	0	65 72	0	0	23 06	546570	0 001	24 01	514005	0 002
	19.23	505339456	4 032	0	0	0	65 72	0	0	23 06	208448	0	24 01	0	0
	19 23	500645472	3 994	0	0	0	65 72	0	0	23 06	303216	0	24 01	0	0
	19 23	499124960	3 982	0	0	0	65 72	0	0	23 0*	520490	0	24 01	0	0
Average	4	4 99E+08	3 985		0 00E+00	0 000		0 00E+00	0 000		4 17E+05	0.000		1.28E+05	0.001
Standard Deviation		5 25E+06	0 042	AMT	0 00E+00	0 000	AMT	0 00E+00	0.000		1.35E+05	0 001		2 57E+05	0.001
%RSD	1	1 05	1 06	2 371	ERR	ERR	0	ERR	ERR	0.03*	32 31	200 00	0	200.00	200 00

Sample I.D. Number 93 - 424

Oct 29, 199 Channel "A" 19.29 294826688

	Nitrous Oxide			Carbon Dioxide			Channe "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-424.prn	19 29	334398608	2 666	0	0	0	65 72	9857348	0 028	23 15	149202	0	24 91	137095000	0 54
	19 29	334680672	2 67	0	0	0	65 72	9879936	0 028	23 13	122083	0	24 91	140746560	0 554
	19 29	334049376	2 665	0	0	0	65 72	9837416	0 028	23 13	91256	0	24 91	141730864	0 558
	19 29	333702992	2 663	0	0	0	65 72	0	0	23 05	62316	0	24 91	134609048	0 531
Average		3.34E+08	2 667		0 00E+00	0 000		8 86E-06	0 028		1.06E+05	0.000		1.39E+08	0.546
Standard Deviation		3.88E+05	0.003		0.00E+00	0 000		1.98E-04	0.000		3 76E+04	0.000		3.22E+06	0 013
%RSD		0 12	0 12		ERR	ERR		0.22	0 00		35 44	ERR		2.32	2.29

Sample I.D Number 93 - 425

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channe "C" (%) Carbon Monoxide			Channe "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-425 prn	19 29	322636992	2 574	0	0	0	65 72	0	0	0	0	0	24 91	207556128	0 817
	19 29	321468224	2 565	0	0	0	65 72	0	0	0	0	0	24 91	207454000	0 817
	19 29	319160952	2 546	0	0	0	65 72	0	0	0	0	0	24 91	208191440	0 82
	19 29	320626528	2 56	0	0	0	65 72	9935456	0 032	0	0	0	24 93	213423696	0.84
Average		3.21E+08	2.56		0 00E+00	0 000		8.94E-06	0 032		0.00E+00	0.000		2.09E+08	0.824
Standard Deviation		1.45E+06	0.012		0 00E+00	0.000		ERR	ERR		0 00E+00	0.000		2.86E+06	0.011
%RSD		0 45	0 46		ERR	ERR		ERR	ERR		ERR	ERR		1.37	1.35

Sample I.D. Number 93 - 426

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channe "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-426 prn	19 31	295570288	2 356	0	0	0	65 72	14424054	0 046	23 19	446042	0	24 93	332466624	1.309
	19 31	295224384	2 355	0	0	0	65 72	14393467	0 046	0	0	0	24 93	330010208	1.303
	19 31	294060048	2 345	0	0	0	65 72	14280168	0 046	0	0	0	24 93	348453072	~~1.446~~
	19 31	293504960	2 340	0	0	0	65 72	0	0	0	0	0	24 93	332580800	1.31
Average		2 95E+08	2 350		0.00E+00	0 000		1 44E-07	0 046		1 12E+05	0.000		3.36E+08	~~1.692~~ 1.307
Standard Deviation		9 29E+05	0 007		0 00E+00	0 000		6 08E-04	0 000		2.23E+05	0 000		8.27E+06	0 032 0.004
%RSD		0 32	0 32		ERR	ERR		0 42	0 00		200.00	ERR		2 46	2 45

Sample I.D Number 93 - 427

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channe "C" (%) Carbon Monoxide			Channe "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-427.prn	19 31	295736848	2 35	0	0	0	65 72	11282176	0 036	23 27	164656	0	24 95	426568672	1 66
	19 31	295527104	2 334	0	0	0	65 72	11726000	0.039	0	0	0	24 95	432314208	1 702
	19 31	292913408	2 335	0	0	0	65 4	12704768	0 041	0	0	0	24 95	408522752	1 609
	19 31	293470336	2 34	0	0	0	65 4	0	0	0	0	0	24 95	409836832	1.61
Average		2 94E+08	2 343		0 00E+00	0 000		1 19E-07	0 038		4 12E+04	0.000		4 19E+08	1.650
Standard Deviation		1 46E+06	0 012		0 00E+00	0 000		7 38E-05	0 003		8 23E+04	0 000		1.22E+07	0 048
%RSD		0 50	0 51		ERR	ERR		6 11	8 57		200 00	ERR		2 91	2 90

Sample I.D. Number 93 - 428

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-428.pm	10.31	329358846	2.626	0	0	0	65.4	0	0	23.16	1165756	0.001	24.95	390700298	1.536
	10.31	335151046	2.682	0	0	0	65.4	0	0	0	0	0	24.95	389272256	1.533
	10.31	336163104	2.682	0	0	0	65.4	0	0	0	0	0	24.95	395555008	1.556
	10.31	331131392	2.642	0	0	0	65.4	0	0	0	0	0	24.95	371452752	1.463
Average		3.33E+08	2.659		0.00E+00	0.000		0.00E+00	0.000		2.91E+05	0.000		3.87E+08	1.523
Standard Deviation		3.49E+06	0.028		0.00E+00	0.000		0.00E+00	0.000		5.83E+05	0.001		1.05E+07	0.041
%RSD		1.05	1.04		ERR	ERR		ERR	ERR		200.00	200.00		2.72	2.72

Sample I.D Number 93 - 429

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-429.pm	10.31	314090550	2.505	0	0	0	65.4	6333528	0.019	23.23	186976	0	24.95	446506095	1.765
	10.31	323884926	2.584	0	0	0	65.4	11354366	0.035	0	0	0	24.95	308146049	1.213
	10.31	323677246	2.582	0	0	0	65.4	0	0	23.13	76344	0	24.95	370519296	1.464
	10.31	335726912	2.678	0	0	0	65.4	0	0	23.15	170156	0	24.97	368889480	1.453
Average		3.24E+08	2.586		0.00E+00	0.000		8.68E+06	0.028		1.09E+05	0.000		3.76E+08	1.462
Standard Deviation		8.86E+06	0.071		0.00E+00	0.000		3.78E+06	0.012		8.69E+04	0.000		5.75E+07	0.227
%RSD		2.73	2.74		ERR	ERR		43.56	43.7		79.80	ERR		15.29	15.29

Sample I.D Number 93 - 430

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-430.pm	10.33	293340056	2.34	0	0	0	65.4	0	0	23.23	116776	0	24.97	507093696	1.997
	10.33	291933120	2.329	0	0	0	65.4	0	0	0	0	0	24.97	499057840	1.965
	10.32	293116264	2.339	0	0	0	65.32	1620457.20	0.584	0	0	0	24.97	-8688	0
	10.33	292924096	2.337	0	0	0	65.4	1670974.86	0.535	0	0	0	24.97	-8688	0
Average		2.93E+08	2.336		0.00E+00	0.000		1.75E+08	0.560	Impossible	2.97E+04	0.000		2.52E+08	~~0.004~~ 0. 1.981
Standard Deviation		6.24E+05	0.005		0.00E+00	0.000		1.06E+07	0.034		5.94E+04	0.000		2.90E+08	1.144 0.023
%RSD		0.21	0.21		ERR	ERR		6.06	6.06		200.00	ERR		115.48	115.48

Sample I.D. Number 93 - 431

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-431.pm	10.33	322229824	2.571	0	0	0	65.72	14152855	0.045	23.25	2285370	0.002	24.99	441292512	1.738
	10.33	322997440	2.575	0	0	0	65.72	0	0	0	0	0	24.97	433501248	1.707
	10.33	322525376	2.573	0	0	0	65.72	0	0	0	0	0	24.97	434982240	1.713
	10.33	324036480	2.585	0	0	0	65.72	0	0	0	0	0	24.99	450977824	1.776
Average		3.23E+08	2.576		0.00E+00	0.000		1.42E+07	0.045		5.71E+05	0.001		4.40E+08	1.733
Standard Deviation		8.00E+05	0.006		0.00E+00	0.000		ERR	ERR		1.14E+06	0.001		7.97E+06	0.032
%RSD		0.25	0.24		ERR	ERR		ERR	ERR		200.00	200.00		1.81	1.82

Sample I.D. Number 93 - 432

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-432.prn	16 35	293326464	2 34	0	0	0	65 72	16823735	0.054	23 27	1271296	0 00*	24 99	521627648	2 054
	16 35	293534304	2 343	0	0	0	65 72	0	0	0	0	0	24.99	510145696	2 009
	16 35	293749760	2 344	0	0	0	65 72	0	0	0	0	0	24 99	407601344	1 959
	16.35	293672416	2 343	0	0	0	65 72	0	0	0	0	0	24 99	514672000	2.027
Average		2.94E+08	2.343		0.00E+00	0 000		1.68E-07	0 054		3 18E+05	0.000		5.11E+08	2.012
Standard Deviation		1.86E+05	0 002		0.00E-00	0 000		ERR	ERR		6.36E+05	0.001		1.01E+07	0.040
%RSD		0 06	0.07		ERR	ERR		ERR	ERR		200 00	200 00		1.98	1.99

Sample I.D Number 93 - 433

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channe "C" (%) Carbon Monoxide			Channe "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-433.prn	16 35	332410112	2 652	0	0	0	65 72	0	0	23 25	1388516	0 001	24 99	415412832	1 636
	16 35	333271808	2 659	0	0	0	65 72	0	0	0	0	0	24 99	412770976	1 625
	16 35	332456176	2 652	0	0	0	65 72	0	0	0	0	0	24 99	446966656	1.76
	16 35	331544896	2 645	0	0	0	65 72	0	0	23 23	59553	0	24 99	420568128	1 656
Average		3.32E+08	2.652		0.00E+00	0.000		0.00E+00	0.000		3 62E+05	0.000		4.24E+08	1.669
Standard Deviation		7.05E+05	0 006		0 00E+00	0 000		0 00E+00	0.000		6 85E+05	0.001		1.57E+07	0.062
%RSD		0.21	0 22		ERR	ERR		ERR	ERR		189 16	200 00		3 70	3.71

Sample I.D Number 93 - 434

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channe "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-434.prn	16 35	336369888	2 684	0	0	0	65 04	14135696	0 045	23 20	308626	0	24 99	425617504	1 676
	16 35	338520512	2 701	0	0	0	65 04	0	0	0	0	0	24 99	419843008	1.653
	16 35	337068672	2 689	0	0	0	65 04	0	0	23 20	80412	0	24 99	403988128	1 591
	16 35	337646176	2 695	0	0	0	65 04	0	0	23 2*	80508	0	25 01	433463872	1 707
Average		3 37E+08	2 692		0 00E+00	0 000		1 41E-07	0 045		1 12E+05	0.000		4.21E+08	1.657
Standard Deviation		9 94E+05	0 007		0 00E-00	0.000		ERR	ERR		1.36E+05	0.000		1.25E-07	0.049
%RSD		0 28	0 27		ERR	ERR		ERR	ERR		120.32	ERR		2.97	2 96

Sample I.D Number 93 - 435

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channe "C" (%) Carbon Monoxide			Channe "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-435 prn	16 35	342516672	2 733	0	0	0	65 72	0375488	0 03	23 27	392928	0	25 01	10578496	0.042
	16 35	340663840	2 716	0	0	0	65 04	13929184	0 045	23 19	87683	0	24 99	398565248	1 589
	16 35	341301408	2 722	0	0	0	65 04	0	0	0	0	0	25 01	411797408	1 622
	16 35	341862240	2 726	0	0	0	65 04	0	0	0	0	0	24 99	395747392	1 556
Average		3 42E+08	2 726		0 00E+00	0 000		1 17E-07	0 038		1 20E+05	0.000		3.04E+08	~~1.496~~ 1.583
Standard Deviation		7 93E+05	0 006		0 00E+00	0 000		3 22E-08	0.011		1 86E-05	0 000		1 98E+08	~~6 77~~ 0.034
%RSD		0 23	0 24		ERR	ERR		27 53	28 28		155.21	ERR		64 39	64 37

Sample I.D. Number 93 - 436

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-436.pm	19.37	316357488	2.524	0	0	0	65.04	0	0	23.27	346132	0	25.01	451656606	1.779
	19.37	315870040	2.52	0	0	0	65.04	35888752	0.051	0	0	0	25.01	6686	0
	19.37	316541096	2.525	0	0	0	65.04	15593240	0.05	0	0	0	25.01	459977152	1.657
	19.37	315380092	2.518	0	0	0	65.72	11313152	0.035	23.25	66036	0	25.01	459270400	1.806
Average		3.16E+08	2.521		0.00E+00	0.000		1.43E-07	0.046		1.03E+05	0.000		3.52E+08	~~1.885~~ 1.848
Standard Deviation		5.22E+05	0.004		0.00E+00	0.000		2.55E+06	0.008		1.65E+05	0.000		2.35E+08	0.927 0.0955
%RSD		0.17	0.16		ERR	ERR		17.91	18.35		160.15	ERR		66.91	66.90

Sample I.D. Number 93 - 437

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-437.pm	19.37	323169440	2.578	0	0	0	65.04	14178255	0.045	23.29	3714858	0.003	25.02	475826806	1.874
	19.37	322924026	2.576	0	0	0	65.04	0	0	0	0	0	25.01	440159806	1.733
	19.37	323704854	2.582	0	0	0	65.04	0	0	0	0	0	25.01	440297152	1.734
	19.37	324508640	2.59	0	0	0	65.04	0	0	0	0	0	25.01	452840824	1.783
Average		3.24E+08	2.582		0.00E+00	0.000		1.42E+07	0.045		9.29E+05	0.001		4.52E+08	1.781
Standard Deviation		7.46E+05	0.006		0.00E+00	0.000		ERR	ERR		1.86E+06	0.002		1.68E+07	0.066
%RSD		0.23	0.24		ERR	ERR		ERR	ERR		200.00	200.00		3.71	3.72

Sample I.D. Number 93 - 438

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-438.pm	19.36	293920028	2.345	0	0	0	65.04	16713984	0.054	0	0	0	25.01	0	0
	19.36	293980384	2.345	0	0	0	65.04	0	0	0	0	0	25.17	48918688	0.165
	19.39	293447776	2.341	0	0	0	65.04	0	0	0	0	0	25.02	6886	0
	19.39	294459840	2.349	0	0	0	65.04	0	0	0	0	0	25.03	6886	0
Average		2.94E+08	2.345		0.00E+00	0.000		1.67E+07	0.054		0.00E+00	0.000		1.22E+07	0.048
Standard Deviation		4.14E+05	0.003		0.00E+00	0.000		ERR	ERR		0.00E+00	0.000		2.45E+07	0.097
%RSD		0.14	0.14		ERR	ERR		ERR	ERR		ERR	ERR		200.10	200.00

Sample I.D. Number 93 - 439

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-439.pm	19.39	304843808	2.432	0	0	0	65.04	16446000	0.053	23.29	472692	0	25.03	0	0
	19.39	303251584	2.419	0	0	0	65.04	0	0	0	0	0	25.03	488337440	1.923
	19.39	302567744	2.414	0	0	0	65.04	0	0	0	0	0	25.03	6886	0
	19.39	301864224	2.408	0	0	0	65.04	0	0	0	0	0	25.75	698648320	2.751
Average		3.03E+08	2.419		0.00E+00	0.000		1.64E+07	0.053		1.18E+05	0.000		2.97E+08	~~1.769~~ 1.923
Standard Deviation		1.27E+06	0.010		0.00E+00	0.000		ERR	ERR		2.36E+05	0.000		3.53E+08	~~1.894~~ -
%RSD		0.42	0.41		ERR	ERR		ERR	ERR		200.00	ERR		119.04	119.04

Sample I.D. Number 93 - 440

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-440.prn	19 33	496909184	3 995	0	0	0	65 04	1185*3084	0 39	23 2*	15267560	0 014	25 07	234336	0.001
	19 33	502927520	4 013	0	0	0	65 04	1191508S4	0 382	23 2*	14554457	0 013	25 07	0	0
	19 33	503982144	4 021	0	0	0	65 86	3712816?0	1.192	23 2*	14458563	0 013	24 99	75368	0
	19 33	502323136	4 006	0	0	0	65 96	2213222?2	0 71	23 2*	14360031	0 013	24 99	0	0
Average		5.02E+08	4 002		0 00E+00	0 000		1.19E+08	0 381		1.47E+07	0 013		7.74E+04	0.000
Standard Deviation		3 15E+06	0 025		0.00E+00	0 000		4.50E+05	0.001		4.20E+05	0.001		1.10E+05	0.001
%RSD		0 63	0 63		ERR	ERR		0.38	0.37		2.87	3 77		142.69	200 00

Sample I.D. Number 93 - 442

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-442.prn	10 13	518437052	4 135	0	0	0	04 44	43170806	0 103	23 05	1253758	0.012	24 79	1755064	0.007
	10 13	523783360	4 179	0	0	0	04 44	42618748	0 103	23.05	141071	0	24 77	1911498	0.006
	10 13	520373086	4 152	0	0	0	04 44	42611078	0 103	0	0	0	24 77	1924189	0 006
	10 13	521804480	4 163	0	0	0	04 44	42545840	0 102	0	0	0	24.77	1944807	0.008
Average		5.21E+08	4.158		0.00E+00	0.000		4.29E+07	0.103		3.21E+06	0.003		1.88E+06	0.008
Standard Deviation		2.26E+06	0.018		0.00E+00	0.000		2.57E+05	0.001		6.32E+06	0.006		8.70E+04	0.001
%RSD		0.43	0.44		ERR	ERR		0.60	0.49		197.08	200.00		4.62	6.45

Sample I.D. Number 93 - 443

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-443.prn	10 13	521587200	4 16'	0	0	0	04 44	41699265	0 1	23 06	2230065	0 002	24.81	1416240	0 006
	10 13	520409768	4 153	0	0	0	04 44	41617264	0 1	0	0	0	24 77	1414371	0 006
	10 13	520176384	4 15	0	0	0	04 44	41535112	0 099	0	0	0	24.81	1419192	0.006
	10 15	516109736	4 116	0	0	0	04 44	41324562	0 099	0	0	0	24.81	1389595	0 006
Average		5.20E+08	4 146		0.00E+00	0 000		4.15E+07	0 100		5.58E+05	0.001		1.41E+06	0.006
Standard Deviation		2.36E+06	0.019		0 00E+00	0 000		1.34E+05	0 001		1.12E+06	0.001		1.41E+04	0.001
%RSD		0 45	0 46		ERR	ERR		0.32	0.58		200.00	200.00		1.00	8.70

Sample I.D. Number 93 - 444

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT									
93-444.prn	10 15	515993024	4 117	0	0	0	04 44	650482	0 002	23 11	7501404	0.007	24 81	0	0
	10 15	516270976	4 135	0	0	0	04 12	436311	0 001	23 11	85159	0	24 81	0	0
	10 15	514747392	4 107	0	0	0	04 44	462002	0 001	23 11	0	0	24.81	0	0
	10 15	515771616	4 115	0	0	0	04 44	589286	0 001	23 11	0	0	24 81	0	0
Average		5 16E+08	4 119		0 00E+00	0.000		5.35E+05	0 001		1.90E+06	0 002		0.00E+00	0.000
Standard Deviation		1.49E+06	0 012		0.00E+00	0.000		1.02E+05	0 001		3 74E+06	0.004		0.00E+00	0.000
%RSD		0.29	0 29		ERR	ERR		19 12	40.00		196.98	200.00		ERR	ERR

Sample I.D. Number 93 - 445

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-445 prn	10 17	516304126	4 12	0	0	0	04 44	12541416	0 03	23 11	195100	0	24 77	35096	0
	10 17	514773280	4 107	0	0	0	04 44	24685576	0 059	23 09	45676	0	0	0	0
	10 17	514093440	4 102	0	0	0	04 44	12437696	0 03	0	0	0	24 81	47216	0
	10 17	511691552	4 092	0	0	0	04 44	12405596	0 03	0	0	0	24.81	0	0
Average		5 14E+08	4 103		0 00E+00	0 000		1 65E+07	0 037		6 02E+04	0.000		2.06E+04	0.000
Standard Deviation		1.94E+06	0.016		0 00E+00	0 000		6 11E+06	0.015		9.25E+04	0 000		2 43E+04	0.000
%RSD		0 38	0 38		ERR	ERR		39 39	38 93		153 62	ERR		117.95	ERR

Sample I.D. Number 93 - 447

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-447.prn	19.19	513164752	4.094	0	0	0	64.44	20033300	0.048	23.13	2342575	0.002	24.81	34002	0
	19.19	514015008	4.105	0	0	0	64.44	20087203	0.048	0	0	0	24.81	69477	0
	19.19	514105360	4.102	0	0	0	64.44	20124048	0.048	0	0	0	24.81	0	0
	19.19	511814272	4.082	0	0	0	64.44	19985904	0.048	0	0	0	24.81	0	0
Average		5.14E+08	4.097		0.00E+00	0.000		2.01E+07	0.048		5.86E+05	0.001		2.38E+04	0.000
Standard Deviation		1.35E+06	0.011		0.00E+00	0.000		6.09E+04	0.000		1.17E+06	0.001		2.94E+04	0.000
%RSD		0.26	0.26		ERR	ERR		0.30	0.00		200.00	200.00		123.49	ERR

Sample I.D Number 93 - 448

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-448.prn	19.19	511525152	4.081	0	0	0	64.44	23476280	0.056	23.13	40205*	0	24.81	84017	0
	19.19	512398896	4.086	0	0	0	64.76	23526024	0.056	0	0	0	24.81	52213	0
	19.19	511893504	4.084	0	0	0	64.76	23522066	0.057	0	0	0	24.85	68750	0
	19.19	510611936	4.074	0	0	0	64.76	87864824	0.21	0	0	0	24.89	69783	0
Average		5.12E+08	4.082		0.00E+00	0.000		3.96E+07	0.095		1.01E+05	0.000		6.89E+04	0.000
Standard Deviation		7.53E+05	0.006		0.00E+00	0.000		3.22E+07	0.077		2.01E+05	0.000		1.34E+04	0.000
%RSD		0.15	0.14		ERR	ERR		81.19	81.09		200.00	ERR		19.39	ERR

Sample I.D. Number 93 - 449

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-449.prn	19.19	511644180	4.084	0	0	0	64.44	27193280	0.065	23.15	970854	0.001	24.85	117383	0
	19.19	511407532	4.091	0	0	0	64.44	26736436	0.064	0	0	0	24.85	136991	0.00*
	19.19	512477600	4.086	0	0	0	64.44	27366116	0.066	23.09	41382	0	24.85	93695	0
	19.19	512603136	4.09	0	0	0	64.44	27140156	0.065	0	0	0	24.85	116804	0
Average		5.12E+08	4.086		0.00E+00	0.000		2.71E+07	0.065		2.53E+05	0.000		1.16E+05	0.000
Standard Deviation		5.24E+05	0.004		0.00E+00	0.000		2.66E+05	0.00*		4.79E+05	0.001		1.77E+04	0.001
%RSD		0.10	0.10		ERR	ERR		0.98	1.26		189.26	200.00		15.23	200.00

Sample I.D Number 93 - 450

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-450.prn	19.19	512315808	4.087	0	0	0	64.44	37099864	0.089	23.17	1929907	0.002	24.85	145402	0.001
	19.19	508965920	4.06*	0	0	0	64.44	37466040	0.09	0	0	0	24.85	154660	0.00*
	19.21	510818688	4.076	0	0	0	64.44	37352232	0.089	0	0	0	24.85	159036	0.00*
	19.21	511146648	4.078	0	0	0	64.44	37184848	0.089	0	0	0	24.85	113111	0
Average		5.11E+08	4.076		0.00E+00	0.000		3.73E+07	0.089		4.82E+05	0.001		1.43E+05	0.001
Standard Deviation		1.39E+06	0.011		0.00E+00	0.000		1.65E+05	0.001		9.65E+05	0.001		2.08E+04	0.001
%RSD		0.27	0.28		ERR	ERR		0.44	0.56		200.00	200.00		14.51	66.67

Sample I.D. Number: 93 - 451

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-451.prn	19.21	516548144	4.122	0	0	0	64.44	37825840	0.091	23.17	1715385E	0.016	24.85	129745	0.001
	19.21	520477184	4.153	0	0	0	64.44	39840864	0.096	23.17	330156	0	24.85	137099	0.001
	19.21	515106848	4.11	0	0	0	64.44	38405584	0.097	23.13	100914	0	24.85	115855	0
	19.21	517842752	4.132	0	0	0	64.44	38833056	0.096	0	0	0	24.85	143043	0.001
Average		5.18E+08	4.129		0.00E+00	0.000		3.69E+07	0.089		4.40E+05	0.004		1.31E+05	0.001
Standard Deviation		2.27E+06	0.018		0.00E+00	0.000		6.02E+05	0.002		8.51E+06	0.008		1.17E+04	0.001
%RSD		0.44	0.44		ERR	ERR		1.63	1.96		193.49	200.00		8.92	66.67

Sample I.D. Number: 93 - 452

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-452.prn	19.21	516299008	4.110	0	0	0	64.44	41408064	0.099	23.17	313056	0	24.85	148933	0.001
	19.21	515690336	4.114	0	0	0	64.44	41448592	0.099	0	0	0	24.85	136284	0.001
	19.21	514212160	4.103	0	0	0	64.44	41567360	0.1	23.15	50575	0	24.85	144789	0.001
	19.21	514058464	4.101	0	0	0	64.44	41334184	0.099	0	0	0	24.89	86331	0
Average		5.15E+08	4.109		0.00E+00	0.000		4.14E+07	0.099		9.09E-04	0.000		1.29E+05	0.001
Standard Deviation		1.10E+06	0.009		0.00E-00	0.000		1.06E+05	0.001		1.50E-05	0.000		2.90E+04	0.001
%RSD		0.21	0.21		ERR	ERR		0.26	0.50		165.07	ERR		22.45	66.67

Sample I.D. Number: 93 - 453

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-453.prn	19.21	514358816	4.104	0	0	0	64.44	13057848	0.031	23.16	1754480	0.002	24.89	0	0
	19.21	513265280	4.095	0	0	0	64.44	12814056	0.031	22.13	43815	0	24.89	0	0
	19.21	513097728	4.094	0	0	0	64.44	12800556	0.031	23.13	0	0	24.89	0	0
	19.21	512922464	4.092	0	0	0	64.44	13035021	0.031	23.13	0	0	24.89	0	0
Average		5.13E+08	4.096		0.00E+00	0.000		1.29E+07	0.031		4.50E+05	0.001		0.00E+00	0.000
Standard Deviation		6.47E+05	0.005		0.00E-00	0.000		1.39E+05	0.000		8.70E+05	0.001		0.00E+00	0.000
%RSD		0.13	0.13		ERR	ERR		1.07	0.00		193.56	200.00		ERR	ERR

Sample I.D. Number: 93 - 454

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-454.prn	19.21	512481600	4.089	0	0	0	64.44	19411452	0.045	23.16	3509762	0.003	24.89	0	0
	19.21	511519104	4.081	0	0	0	64.44	19410094	0.045	22.16	0	0	24.89	0	0
	19.21	511062688	4.085	0	0	0	64.44	19447872	0.047	23.16	0	0	24.89	0	0
	19.21	511729408	4.093	0	0	0	64.44	19236960	0.045	23.16	0	0	24.89	0	0
Average		5.12E+08	4.085		0.00E-00	0.000		1.94E+07	0.046		8.77E+05	0.001		0.00E+00	0.000
Standard Deviation		4.14E+05	0.003		0.00E+00	0.000		4.56E+04	0.001		1.75E+06	0.002		0.00E+00	0.000
%RSD		0.08	0.08		ERR	ERR		0.24	1.08		200.00	200.00		ERR	ERR

Sample I.D Number 93 - 455

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-455.prn	10 21	512202784	4 087	0	0	0	64 44	21987246	0 053	23 19	3709445	0 003	24 89	0	0
	10 21	513478016	4 097	0	0	0	64 44	22071292	0 053	23 19	0	0	24 89	0	0
	10 21	513264609	4 095	0	0	0	64 76	22124756	0 053	23 19	0	0	24 89	0	0
	10 21	510854976	4 076	0	0	0	64 44	22009340	0 053	23 11	55822	0	24 89	0	0
Average		5 12E+08	4.089		0.00E+00	0.000		2.21E+07	0.053		9.41E+05	0.001		0.00E+00	0.000
Standard Deviation		1.20E+06	0 010		0.00E+00	0.000		5.67E+04	0.000		1.85E+06	0.002		0.00E+00	0.000
%RSD		0.23	0 23		ERR	ERR		0 26	0.00		196 08	200 00		ERR	ERR

Sample I.D. Number 93 - 456

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-456.prn	10 21	502714336	4 057	0	0	0	64 44	0	0	0	0	0	0	0	0
	10 21	513157085	4 094	0	0	0	64 76	29208178	0 07	0	0	0	0	0	0
	10 21	509160840	4 063	0	0	0	64 76	29084638	0 07	0	0	0	24 89	47866	0
	10 21	510947965	4 077	0	0	0	64 44	29273846	0 07	0	0	0	24 89	34568	0
Average		5 11E+08	4.075		0.00E+00	0.000		2.92E+07	0.070		0.00E+00	0.000		4 12E+04	0.000
Standard Deviation		1.76E+06	0 014		0.00E+00	0.000		9.61E+04	0 000		0.00E+00	0.000		9.40E+03	0.000
%RSD		0 34	0 34		ERR	ERR		0 33	0.00		ERR	ERR		22.82	ERR

Sample I.D. Number 93 - 457

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-457.prn	10 21	513455486	4 087	0	0	0	64 44	30431656	0 073	23 19	2514926	0 002	24 85	98982	0
	10 21	512472672	4 080	0	0	0	64 76	29930242	0 071	0	0	0	24 85	81480	0
	10 21	512415232	4 086	0	0	0	64 44	29236428	0 07	0	0	0	24 89	103093	0
	10 21	512139485	4 086	0	0	0	64 76	29565762	0 071	0	0	0	24 89	89282	0
Average		5 13E+08	4.090		0.00E+00	0.000		2.97E+07	0.071		6 29E+05	0.001		9.32E+04	0.000
Standard Deviation		5.75E+05	0.005		0.00E+00	0.000		5.05E+05	0.001		1.26E+06	0 001		9.73E+03	0.000
%RSD		0.1	0 12		ERR	ERR		1.70	1.77		200.00	200 00		10.44	ERR

Sample I.D. Number 93 - 458

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-458.prn	10 23	510891616	4 076	0	0	0	64 44	37256592	0 086	23 19	4321400	0 004	24 89	92415	0
	10 21	511597440	4 082	0	0	0	64 44	37222678	0 086	0	0	0	24 89	114791	0
	10 21	512018496	4 085	0	0	0	64 44	37467180	0 09	0	0	0	24 89	67696	0
	10 21	511914208	4 084	0	0	0	64 76	37662696	0 09	0	0	0	24 89	116442	0
Average		5 12E+08	4 082		0 00E+00	0 000		3 74E+07	0 090		1.08E+06	0.001		9.78E+04	0.000
Standard Deviation		5 08E+05	0 004		0 00E+00	0 000		2 05E+05	0 001		2 16E+06	0.002		2.29E+04	0.000
%RSD		0 10	0 10		ERR	ERR		0 55	0 65		200.00	200 00		23.39	ERR

Sample I.D. Number 93 - 459

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-459.prn	19.23	511457632	4.081	0	0	0	64.44	34833256	0.083	23.16	2579572	0.002	24.89	126456	0
	19.23	510397248	4.072	0	0	0	64.76	34453000	0.082	0	0	0	24.89	84408	0
	19.23	510840608	4.076	0	0	0	64.76	34378744	0.082	23.13	51552	0	24.89	105900	0
	19.23	511643456	4.082	0	0	0	64.76	34051664	0.082	0	0	0	24.89	125147	0
Average		5.11E+08	4.078		0.00E+00	0.000		3.44E+07	0.082		6.58E+05	0.001		1.10E+05	0.000
Standard Deviation		5.82E+05	0.005		0.00E+00	0.000		3.21E+05	0.001		1.28E+06	0.001		1.98E+04	0.000
%RSD		0.11	0.11		ERR	ERR		0.93	0.61		194.81	200.00		17.88	ERR

Sample I.D. Number 93 - 460

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-460.prn	19.23	510821664	4.076	0	0	0	64.44	40261328	0.096	23.2[illegible]	3752456	0.003	24.89	99757	0
	19.23	509693568	4.067	0	0	0	64.76	40229664	0.096	0	0	0	24.89	111497	0
	19.23	511467520	4.081	0	0	0	64.44	40291772	0.096	0	0	0	24.89	112412	0
	19.23	509573568	4.066	0	0	0	64.44	40162612	0.096	0	0	0	24.89	125384	0
Average		5.10E+08	4.073		0.00E+00	0.000		4.02E+07	0.096		9.38E+05	0.001		1.12E+05	0.000
Standard Deviation		9.13E+05	0.007		0.00E+00	0.000		4.65E+04	0.000		1.88E+06	0.002		1.05E+04	0.000
%RSD		0.18	0.18		ERR	ERR		0.12	0.00		200.00	200.00		8.39	ERR

Sample I.D. Number 93 - 461

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-461.prn	19.23	511360096	4.08	0	0	0	64.44	35427926	0.085	23.16	266396[illegible]	0.002	24.89	137914	0.001
	19.22	512510368	4.089	0	0	0	64.44	34579592	0.083	0	0	0	24.89	124270	0
	19.23	511420000	4.08	0	0	0	64.44	34532992	0.083	23.13	77045	0	24.89	133699	0.001
	19.23	509015680	4.061	0	0	0	64.44	34365664	0.082	0	0	0	24.89	130709	0.001
Average		5.11E+08	4.078		0.00E+00	0.000		3.47E+07	0.083		6.85E+05	0.001		1.32E+05	0.001
Standard Deviation		1.47E+06	0.012		0.00E+00	0.000		4.76E+05	0.001		1.32E+06	0.001		5.74E+03	0.001
%RSD		0.29	0.29		ERR	ERR		1.37	1.51		192.58	200.00		4.36	66.67

Sample I.D Number 93 - 462

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-462.prn	19.23	511088688	4.076	0	0	0	64.44	40952144	0.098	23.21	3932436	0.004	24.89	148126	0.001
	19.23	511441984	4.08	0	0	0	64.76	41774688	0.1	0	0	0	24.89	125499	0
	19.23	509760960	4.067	0	0	0	64.76	40848496	0.098	0	0	0	24.89	129219	0.001
	19.23	509959360	4.069	0	0	0	64.76	40852704	0.098	0	0	0	24.89	101176	0
Average		5.11E+08	4.074		0.00E+00	0.000		4.11E+07	0.099		9.83E+05	0.001		1.26E+05	0.001
Standard Deviation		8.28E+05	0.006		0.00E+00	0.000		4.48E+05	0.001		1.97E+06	0.002		1.93E+04	0.001
%RSD		0.16	0.16		ERR	ERR		1.09	1.02		200.00	200.00		15.31	115.47

Sample I.D Number 93 - 463

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-463.pm	10 23	511238816	4 076	0	0	0	64 44	35540396	0 085	23 21	3139700	0 003	24.89	127527	0 001
	10 23	510705568	4 075	0	0	0	64 44	34630660	0.083	0	0	0	24 89	113809	0
	10.23	511268992	4 076	0	0	0	64 44	34925160	0 084	0	0	0	24.89	123508	0
	10 23	510617376	4 074	0	0	0	64 44	34694032	0 083	0	0	0	24 89	127879	0 001
Average		5.11E+08	4.077		0.00E+00	0.000		3.50E+07	0.084		7.85E+05	0.001		1.23E+05	0.001
Standard Deviation		3 44E+05	0.003		0 00E+00	0.000		3.74E+05	0 001		1.57E+06	0.002		6.51E+03	0.001
%RSD		0.07	0.06		ERR	ERR		1.07	1.14		200.00	200.00		5.29	115 47

Sample I.D. Number 93 - 464

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-464.pm	10 23	509006466	4 061	0	0	0	64 44	41276536	0 099	23 21	221409	0	24 89	132778	0 001
	10 23	508472320	4 057	0	0	0	64 44	41208460	0 099	0	0	0	24 89	121785	0
	10 22	507993056	4 053	0	0	0	64 44	41330752	0 099	0	0	0	24 89	124990	0
	10 23	509244064	4 063	0	0	0	64 44	40755408	0 098	0	0	0	24 89	120246	0
Average		5.09E+08	4.059		0.00E+00	0 000		4 12E+07	0 099		5.54E+04	0.000		1.25E+05	0.000
Standard Deviation		5 60E+05	0.004		0.00E+00	0 000		2.75E+05	0 001		1.11E+05	0.000		5.58E+03	0.001
%RSD		0 11	0 11		ERR	ERR		0 67	0.51		200 00	ERR		4.47	200 00

Sample I.D. Number 93 - 465

	Channel "A" (%) Nitrous Oxide			Carbon Dioxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) helium			hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT			
93-465 pm	10 23	507017344	4 045	0	0	0	64 76	40434816	0 097	23 19	145680	0	24 89	144129	0 001
	10 23	508993728	4 061	0	0	0	64 76	40721000	0.097	0	0	0	24 89	146705	0 001
	10 22	508566024	4 058	0	0	0	64 76	40834376	0 096	0	0	0	24.89	129356	0 001
	10.23	507585568	4 05	0	0	0	64 76	40400000	0 097	0	0	0	24 89	119405	0
Average		5 08E+08	4 054		0.00E+00	0 000		4.06E+07	0 097		3.64E+04	0.000		1.35E+05	0.001
Standard Deviation		9 02E+05	0 007		0 00E+00	0.000		2.14E+05	0 001		7.28E+04	0.000		1.28E+04	0.001
%RSD		0 18	0 18		ERR	ERR		0.53	0.5		200.00	ERR		9.50	66 67

Sample I.D Number 93 - 466

	Channel"A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-465.prn	22.85	1204389	0.003	0	0	0	18.12	1217940	0.2	58.66	0	0	24.77	253226356	0.983
	22.85	1139723	0.003	0	0	0	18.1	872576	0.11	65.08	28770944	0.069	24.77	250695680	0.974
	22.85	1115654	0.003	0	0	0	18.09	948576	0.155	65.05	0	0	24.77	0	0
Average		1.15E+06	0.003		0.00E+00	0.000		9.45E+05	0.155		9.59E+06	0.023		1.68E+08	0.652
Standard Deviation		4.60E+04	0.000		0.00E+00	0.000		2.73E+05	0.045		1.66E+07	0.040		1.45E+08	0.565
%RSD		3.99	0.00		ERR	ERR		28.86	29.03		173.21	173.21		86.61	86.61

Sample I.D. Number 93 - 467

	Channel"A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-467.prn	22.85	986743	0.003	0	0	0	18.12	1260306	0.207	65.06	0	0	24.77	259256606	1.007
	22.85	869740	0.003	0	0	0	18.12	1240427	0.205	65.06	0	0	24.73	255863776	0.994
	22.85	806870	0.002	0	0	0	18.12	1177638	0.195	65.06	0	0	24.73	256864592	0.998
Average		9.14E+05	0.003		0.00E+00	0.000		1.23E+06	0.202 0.206		0.00E+00	0.000		2.57E+08	1.000
Standard Deviation		6.37E+04	0.001		0.00E+00	0.000		4.48E+04	0.008		0.00E+00	0.000		1.73E+06	0.007
%RSD		6.97	21.65		ERR	ERR		3.65	3.75		ERR	ERR		0.67	0.67

Sample I.D. Number 93 - 468

	Channel"A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-468.prn	22.89	1355944	0.004	0	0	0	18.12	0	~~0~~	65.08	0	0	24.77	22722016	0.088
	22.89	1249941	0.004	0	0	0	0	0	~~0~~	65.06	0	0	24.77	23150660	0.09
	22.85	1286667	0.004	0	0	0	18.1	61346	0.01	65.06	0	0	24.77	24141704	0.094
Average		1.30E+06	0.004		0.00E+00	0.000		2.04E+04	~~0.003~~ .01		0.00E+00	0.000		2.33E+07	0.091
Standard Deviation		5.38E+04	0.000		0.00E+00	0.000		3.54E+04	0.006		0.00E+00	0.000		7.27E+05	0.003
%RSD		4.15	0.00		ERR	ERR		173.21	173.21		ERR	ERR		3.12	3.37

Sample I.D Number 93 - 469

	Channel"A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-469.prn	22.85	1032103	0.003	0	0	0	0	0	0	65.08	0	0	24.77	0	0
	22.87	870846	0.002	0	0	0	18.1	46652	0.008	65.06	0	0	24.73	22008972	0.085
	22.87	831335	0.002	0	0	0	18.1	47400	0.008	65.06	0	0	24.73	23146812	0.09
Average		9.11E+05	0.002		0.00E+00	0.000		3.21E+04	~~0.005~~ .008		0.00E+00	0.000		2.26E+07	0.088
Standard Deviation		1.06E+05	0.001		0.00E+00	0.000		2.78E+04	0.005		0.00E+00	0.000		8.06E+05	0.004
%RSD		11.67	24.74		ERR	ERR		86.62	86.60		ERR	ERR		3.57	4.04

Sample I.D. Number 93 - 470

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-470.prn	22.85	1122596	0.003	0	0	0	16.1	37456	0.005	65.08	0	0	24.77	23700250	0.092
	22.87	894671	0.002	0	0	0	16.1	40363	0.007	65.06	0	0	24.73	23214072	0.09
	22.87	912939	0.003	0	0	0	0	0	~~0~~	65.08	0	0	24.73	22040504	0.086
Average		9.73E+05	0.003		0.00E+00	0.000		2.59E+04	~~0.004~~ .006		0.00E+00	0.000		2.33E+07	0.090
Standard Deviation		1.30E+05	0.001		0.00E+00	0.000		2.25E+04	0.004		0.00E+00	0.000		3.86E+05	0.002
%RSD		13.35	21.65		ERR	ERR		86.78	87.37		ERR	ERR		1.66	1.69

Sample I.D. Number 93 - 471

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-471.prn	22.85	1186754	0.003	0	0	0	16.11	35405	0.005	65.06	0	0	24.73	23173776	0.09
	22.87	993105	0.003	0	0	0	0	0	~~0~~	65.08	0	0	24.73	21903800	0.085
	22.87	955021	0.003	0	0	0	0	0	~~0~~	65.06	0	0	24.73	22526640	0.087
Average		1.04E+06	0.003		0.00E+00	0.000		1.18E+04	0.002 ~~.006~~		0.00E+00	0.000		2.26E+07	0.087
Standard Deviation		1.24E+05	0.000		0.00E+00	0.000		2.04E+04	0.003		0.00E+00	0.000		5.91E+05	0.003
%RSD		11.89	0.00		ERR	ERR		173.21	173.21		ERR	ERR		2.62	2.88

Sample I.D. Number 93 - 472

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-472.prn	22.85	779937	0.002	0	0	0	0	0	~~0~~	65.06	0	0	0	0	0
	22.87	563585	0.002	0	0	0	16.1	817184	0.134	65.06	0	0	24.73	256859168	0.998
	22.87	573273	0.002	0	0	0	16.1	968526	0.162	65.06	0	0	24.77	261914256	1.017
Average		6.39E+05	0.002		0.00E+00	0.000		6.02E+05	~~0.095~~ 0.148		0.00E+00	0.000		2.59E+08	1.008
Standard Deviation		1.22E+05	0.000		0.00E+00	0.000		5.28E+05	0.087		0.00E+00	0.000		3.57E+06	0.013
%RSD		19.10	0.00		ERR	ERR		87.76	87.76		ERR	ERR		1.38	1.33

Sample I.D. Number 93 - 473

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-473.prn	22.87	1516619	0.004	0	0	0	16.11	1224454	0.201	65.06	0	0	24.77	0	0
	22.85	1209435	0.003	0	0	0	16.13	1229250	0.202	65.06	0	0	24.73	257074096	0.998
	22.85	1213069	0.003	0	0	0	16.13	1240076	0.203	65.06	0	0	24.73	257016416	0.998
Average		1.31E+06	0.003		0.00E+00	0.000		1.23E+06	0.202		0.00E+00	0.000		2.57E+08	0.998
Standard Deviation		1.76E+05	0.001		0.00E+00	0.000		8.00E+03	0.001		0.00E+00	0.000		4.08E+04	0.000
%RSD		13.44	17.32		ERR	ERR		0.65	0.50		ERR	ERR		0.02	0.00

Sample I.D. Number 93 - 474

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-474.pm	22.85	754044	0.002	0	0	0	18.11	1160732	0.19	55.08	0	0	24.73	240048336	0.932
	22.85	758746	0.002	0	0	0	18.06	953056	0.156	55.08	0	0	24.73	249029988	0.971
	22.85	754887	0.002	0	0	0	18.1	659136	0.108	55.05	0	0	24.73	0	0
Average		7.69E+05	0.002		0.00E+00	0.000		9.24E+05	0.151		0.00E+00	0.000		1.63E+08	0.634
Standard Deviation		2.16E+04	0.000		0.00E+00	0.000		2.52E+05	0.041		0.00E+00	0.000		1.42E+08	0.550
%RSD		2.81	0.00		ERR	ERR		27.27	27.22		ERR	ERR		86.66	86.66

Sample I.D. Number 93 - 475

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-475.pm	22.85	1035678	0.003	0	0	0	18.1	1193384	0.196	55.08	0	0	24.73	0	0
	22.85	977105	0.003	0	0	0	18.12	1145936	0.186	55.08	0	0	24.73	246121152	0.956
	22.85	943782	0.003	0	0	0	18.11	1183756	0.194	55.08	0	0	24.73	0	0
Average		1.01E+06	0.003		0.00E+00	0.000		1.17E+06	0.193		0.00E+00	0.000		2.46E+08	0.956
Standard Deviation		7.98E+04	0.000		0.00E+00	0.000		2.51E+04	0.004		0.00E+00	0.000		ERR	ERR
%RSD		7.94	0.00		ERR	ERR		2.14	2.16		ERR	ERR		ERR	ERR

Sample I.D. Number 93 - 476

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-476.pm	22.87	1661771	0.005	0	0	0	18.12	1125656	0.185	58.86	14264373	0.034	24.77	244346528	0.949
	22.87	1593477	0.004	0	0	0	18.12	1132667	0.185	58.86	13129144	0.031	24.77	232987328	0.905
	22.87	1606733	0.005	0	0	0	18.12	1127826	0.185	58.86	0	0	24.77	240370048	0.933
Average		1.62E+06	0.005		0.00E+00	0.000		1.13E+06	0.185		9.13E+06	0.022	0.033	2.39E+08	0.929
Standard Deviation		3.58E+04	0.001		0.00E+00	0.000		3.59E+03	0.001		7.93E+06	0.019		5.76E+06	0.022
%RSD		2.21	12.37		ERR	ERR		0.32	0.31		86.83	86.88		2.41	2.40

Sample I.D. Number 93 - 477

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-477.pm	22.89	1850646	0.005	0	0	0	18.11	86432	0.014	58.88	0	0	24.77	36241656	0.141
	22.89	1776745	0.005	0	0	0	18.11	89235	0.015	58.88	0	0	24.77	35940784	0.14
	22.89	1720942	0.005	0	0	0	18.11	72616	0.012	58.86	0	0	24.77	36864080	0.144
Average		1.78E+06	0.005		0.00E+00	0.000		8.28E+04	0.014		0.00E+00	0.000		3.64E+07	0.142
Standard Deviation		6.51E+04	0.000		0.00E+00	0.000		8.90E+03	0.002		0.00E+00	0.000		5.26E+05	0.002
%RSD		3.65	0.00		ERR	ERR		10.75	11.18		ERR	ERR		1.45	1.47

Sample I.D. Number 93 - 478

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-478.prn	22.93	9493165	0.027	0	0	0	18.11	0	0	58.68	0	0	24.77	24063322	0.097
	22.93	8922372	0.025	0	0	0	17.16	94994	0.016	58.68	0	0	24.77	0	0
	22.93	9291216	0.026	0	0	0	17.2	46981	0.008	58.68	0	0	24.77	26304066	0.102
Average		9.24E+06	0.026		0.00E+00	0.000		4.80E+04	0.008 0.024		0.00E+00	0.000		1.71E+07	0.066
Standard Deviation		2.89E+05	0.001		0.00E+00	0.000		4.75E+04	0.008		0.00E+00	0.000		1.48E+07	0.058
%RSD		3.13	3.85		ERR	ERR		98.99	100.00		ERR	ERR		86.69	86.68

Sample I.D. Number 93 - 479

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-479.prn	22.87	3325432	0.009	0	0	0	0	0	0	58.65	0	0	24.77	38276016	0.149
	22.89	2992002	0.008	0	0	0	0	0	0	58.68	0	0	24.77	34873944	0.135
	22.89	2935067	0.008	0	0	0	0	0	0	58.68	0	0	24.77	34731808	0.135
Average		3.08E+06	0.008		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000		3.60E+07	0.140
Standard Deviation		2.11E+05	0.001		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000		2.01E+06	0.008
%RSD		6.83	6.93		ERR	ERR		ERR	ERR		ERR	ERR		5.58	5.79

Sample I.D. Number 93 - 480

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-480.prn	22.93	8835042	0.025	0	0	0	18.11	52382	0.009	58.68	0	0	24.77	30746108	0.119
	22.93	8851994	0.025	0	0	0	18.11	0	0	58.65	0	0	24.77	30917640	0.12
	22.93	8834283	0.025	0	0	0	18.11	0	0	58.68	0	0	24.75	16868074	0.066
Average		8.84E+06	0.025		0.00E+00	0.000		1.75E+04	0.003 0.009		0.00E+00	0.000		2.62E+07	0.102
Standard Deviation		1.00E-04	0.000		0.00E+00	0.000		3.02E+04	0.005		0.00E+00	0.000		8.06E+06	0.031
%RSD		0.11	0.00		ERR	ERR		173.21	173.21		ERR	ERR		30.80	30.39

Sample I.D Number 93 - 481

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-481.prn	22.87	4242721	0.012	0	0	0	18.12	107204	0.018	58.68	0	0	24.75	0	0
	22.89	3764610	0.011	0	0	0	18.11	94407	0.015	58.65	0	0	24.77	42784408	0.166
	22.89	3770630	0.011	0	0	0	18.1	137904	0.023	58.68	0	0	24.77	44678220	0.174
Average		3.93E+06	0.011		0.00E+00	0.000		1.13E+05	0.019		0.00E+00	0.000		2.92E+07	0.113
Standard Deviation		2.74E+05	0.001		0.00E+00	0.000		2.24E+04	0.004		0.00E+00	0.000		2.53E+07	0.098
%RSD		6.99	5.09		ERR	ERR		19.75	21.65		ERR	ERR		86.66	86.67

Sample I.D. Number 93 - 482

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-482.pm	22.93	10351351	0.029	0	0	0	18.12	89840	0.015	58.66	0	0	24.77	42135352	0.164
	22.93	10239715	0.029	0	0	0	18.12	92642	0.015	58.68	0	0	24.77	40541100	0.157
	22.93	10179204	0.029	0	0	0	18.09	169552	0.029	58.66	0	0	24.77	40785004	0.158
Average		1.03E+07	0.029		0.00E+00	0.000		1.14E+05	0.019		0.00E+00	0.000		4.12E+07	0.160
Standard Deviation		8.73E+04	0.000		0.00E+00	0.000		3.94E+04	0.006		0.00E+00	0.000		8.59E+05	0.004
%RSD		0.85	0.00		ERR	ERR		34.51	34.02		ERR	ERR		2.09	2.37

Sample I.D. Number 93 - 483

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-483.pm	22.87	4537012	0.013	0	0	0	0	0	0	58.66	0	0	24.77	58095736	0.226
	22.87	4382835	0.012	0	0	0	0	0	0	58.69	0	0	24.77	58070068	0.229
	22.87	4359717	0.012	0	0	0	18.11	117140	0.019	58.66	0	0	25.53	109231768	0.424
Average		4.43E+06	0.012		0.00E+00	0.000		3.90E+04	0.006 0.019		0.00E+00	0.000		7.54E+07	0.293
Standard Deviation		9.30E+04	0.001		0.00E+00	0.000		6.76E+04	0.011		0.00E+00	0.000		2.93E+07	0.113
%RSD		2.10	4.68		ERR	ERR		173.21	173.21		ERR	ERR		38.81	38.72

Sample I.D. Number 93 - 484

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-484.pm	22.91	7751657	0.022	0	0	0	0	0	0	58.66	0	0	24.77	65102972	0.253
	22.91	7710206	0.022	0	0	0	0	0	0	58.66	0	0	24.75	20771664	0.081
	22.91	7726836	0.022	0	0	0	18.05	843232	0.136	58.68	0	0	24.77	66323824	0.258
Average		7.73E+06	0.022		0.00E+00	0.000		2.81E+05	0.046		0.00E+00	0.000		5.07E+07	0.197
Standard Deviation		1.70E+04	0.000		0.00E+00	0.000		4.87E+05	0.080		0.00E+00	0.000		2.60E+07	0.101
%RSD		0.22	0.00		ERR	ERR		173.21	173.21		ERR	ERR		51.16	51.07

Sample I.D. Number 93 - 485

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-485.pm	22.87	4357602	0.012	0	0	0	0	0	0	58.68	0	0	0	0	0
	22.87	4295632	0.012	0	0	0	18.12	366874	0.061	58.68	0	0	24.77	92553632	0.359
	22.87	4272173	0.012	0	0	0	18.12	383730	0.063	58.66	0	0	24.77	91009912	0.353
Average		4.31E+06	0.012		0.00E+00	0.000		3.76E+05	0.062		0.00E+00	0.000		9.18E+07	0.356
Standard Deviation		4.41E+04	0.000		0.00E+00	0.000		1.05E+04	0.001		0.00E+00	0.000		1.09E+06	0.004
%RSD		1.02	0.00		ERR	ERR		2.79	2.28		ERR	ERR		1.19	1.19

Sample I.D. Number 93 - 486

	Channel"A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-486.prn	22.93	8480506	0.024	0	0	0	16.11	380036	0.063	58.68	0	0	24.77	0	0
	22.91	8111299	0.023	0	0	0	16.12	386614	0.063	58.66	0	0	24.77	93975096	0.365
	22.91	8133126	0.023	0	0	0	16.16	399976	0.063	58.68	0	0	24.77	90541406	0.352
Average		8.24E+06	0.023		0.00E+00	0.000		3.23E+05	0.063 0.063		0.00E+00	0.000		9.23E+07	0.359
Standard Deviation		2.12E+05	0.001		0.00E+00	0.000		1.06E+05	0.017		0.00E+00	0.000		2.43E+06	0.009
%RSD		2.57	2.47		ERR	ERR		32.92	32.68		ERR	ERR		2.63	2.56

Sample I.D. Number 93 - 487

	Channel"A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-487.prn	22.87	3932755	0.011	0	0	0	16.13	666536	0.105	58.66	0	0	24.77	146051646	0.567
	22.89	3499155	0.01	0	0	0	0	0	0	58.69	0	0	24.77	147126512	0.571
	22.87	3842234	0.011	0	0	0	0	0	0	58.68	0	0	24.77	144465760	0.561
Average		3.76E+06	0.011		0.00E+00	0.000		2.22E+05	0.036 0.109		0.00E+00	0.000		1.46E+08	0.566
Standard Deviation		2.29E+05	0.001		0.00E+00	0.000		3.85E+05	0.063		0.00E+00	0.000		1.34E+06	0.005
%RSD		6.09	5.41		ERR	ERR		173.21	173.21		ERR	ERR		0.92	0.89

Sample I.D Number 93 - 488

	Channel"A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-488.prn	22.87	3433436	0.01	0	0	0	16.12	836704	0.137	58.66	0	0	24.77	182870304	0.71
	22.87	3351936	0.009	0	0	0	16.12	2990336	0.491	58.66	0	0	24.77	182105984	0.706
	22.87	3366726	0.009	0	0	0	16.12	1226268	0.202	58.68	0	0	24.77	0	0
Average		3.38E+06	0.009		0.00E+00	0.000		1.69E+06	0.277 0.137		0.00E+00	0.000		1.22E+08	0.473
Standard Deviation		4.34E+04	0.001		0.00E+00	0.000		1.15E+06	0.188		0.00E+00	0.000		1.05E+08	0.409
%RSD		1.28	6.19		ERR	ERR		68.08	68.11		ERR	ERR		86.60	86.60

Sample I.D. Number 93 - 489

	Channel"A" (%) Carbon Dioxide			Nitrous Oxide			Channe "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-489.prn	22.87	3078002	0.009	0	0	0	0	0	0	0	0	0	0	0	0
	22.86	2753680	0.008	0	0	0	16.14	942700	0.139	0	0	0	24.77	212403744	0.825
	22.89	2692841	0.008	0	0	0	16.14	799342	0.131	0	0	0	24.77	215599680	0.837
Average		2.84E+06	0.008		0.00E+00	0.000		8.21E+05	0.135		0.00E+00	0.000		2.14E+08	0.831
Standard Deviation		2.08E+05	0.001		0.00E+00	0.000		3.07E+04	0.005		0.00E+00	0.000		2.26E+06	0.008
%RSD		7.30	6.93		ERR	ERR		3.73	3.68		ERR	ERR		1.06	1.02

Sample I.D. Number: 93 - 490

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-490.prn	22.87	750526	0.002	0	0	0	0	0	0	0	0	0	24.77	245872240	0.955
	22.89	777008	0.002	0	0	0	18.12	1173102	0.192	0	0	0	24.75	30690200	0.119
	22.89	745185	0.002	0	0	0	18.11	1193244	0.196	0	0	0	24.77	254398016	0.988
Average		7.61E+05	0.002		0.00E+00	0.000		7.89E+05	0.129 ~~0.129~~ 0.194		0.00E+00	0.000		1.77E+08	0.687
Standard Deviation		1.59E+04	0.000		0.00E+00	0.000		6.83E+05	0.112		0.00E+00	0.000		1.27E+08	0.492
%RSD		2.10	0.00		ERR	ERR		86.61	86.62		ERR	ERR		71.63	71.65

Sample I.D. Number: 93 - 491

	Channel "A" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-491.prn	22.89	730067	0.002	0	0	0	18.12	1178624	0.193	0	0	0	24.73	242657200	0.942
	22.89	650417	0.002	0	0	0	18.11	1313152	0.215	0	0	0	24.77	262599472	1.02
	22.89	631402	0.002	0	0	0	18.1	1026144	0.168	0	0	0	24.75	256373536	0.996
Average		6.74E+05	0.002		0.00E+00	0.000		1.17E+06	0.192		0.00E+00	0.000		2.54E+08	0.986
Standard Deviation		5.07E+04	0.000		0.00E+00	0.000		1.44E+05	0.024		0.00E+00	0.000		1.02E+07	0.040
%RSD		7.52	0.00		ERR	ERR		12.25	12.25		ERR	ERR		4.02	4.05

Sample I.D. Number: 93 - 492

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-492.prn	22.89	782929	5.361	0	0	0	19.92	258454592	44.522	56.76	0	0	24.93	751574336	0.709
	22.89	780257	5.287	0	0	0	19.92	257912656	44.429	56.76	0	0	0	0	~~0~~
	22.89	788067	5.396	0	0	0	19.92	258112496	44.463	56.76	0	0	24.93	747768768	0.706
Average		7.80E+05	5.341		0.00E+00	0.000		2.58E+08	44.471		0.00E+00	0.000		5.00E+08	~~0.472~~ 0.708
Standard Deviation		9.72E+03	0.067		0.00E+00	0.000		2.74E+05	0.047		0.00E+00	0.000		4.33E+08	~~0.408~~ 0.002
%RSD		1.25	1.25		ERR	ERR		0.11	0.11		ERR	ERR		86.60	86.60

Sample I.D. Number: 93 - 493

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-493.prn	22.89	656826	4.497	0	0	0	19.92	259572640	44.715	56.76	0	0	24.85	753686560	0.711
	22.89	621212	4.253	0	0	0	19.92	259353488	44.677	56.76	0	0	24.93	758516288	0.716
	22.89	592439	4.056	0	0	0	19.92	258511216	44.532	56.76	0	0	0	0	0
Average		6.23E+05	4.269		0.00E+00	0.000		2.59E+08	44.641		0.00E+00	0.000		7.56E+08	0.714
Standard Deviation		3.23E+04	0.221		0.00E+00	0.000		5.60E+05	0.097		0.00E+00	0.000		3.49E+06	0.004
%RSD		5.17	5.18		ERR	ERR		0.22	0.22		ERR	ERR		0.46	0.50

Sample I.D. Number: 93 - 494

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-494.prn	22.89	2942406	20.146	0	0	0	19.92	252565648	43.508	56.76	0	0	24.85	131311584	0.124
	22.87	2699203	18.412	0	0	0	19.92	253042296	43.59	56.76	0	0	24.85	132004736	0.125
	22.87	2694319	18.447	0	0	0	19.92	252793504	43.547	56.76	0	0	24.85	131775728	0.124
Average		2.78E+06	19.002		0.00E+00	0.000		2.53E+08	43.548		0.00E+00	0.000		1.32E+08	0.124
Standard Deviation		1.45E+05	0.991		0.00E+00	0.000		2.38E+05	0.041		0.00E+00	0.000		3.53E+05	0.001
%RSD		5.22	5.22		ERR	ERR		0.09	0.09		ERR	ERR		0.27	0.46

Sample I.D. Number: 93 - 495

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-495.prn	22.87	2597886	17.787	0	0	0	19.92	252180096	43.441	56.76	0	0	24.85	139922192	0.132
	22.87	2466026	16.884	0	0	0	19.92	252627824	43.518	56.76	0	0	24.85	137142208	0.129
	22.87	2448799	16.765	0	0	0	19.92	251142912	43.263	56.76	0	0	24.85	139228080	0.13
Average		2.50E+06	17.146		0.00E+00	0.000		2.52E+08	43.407		0.00E+00	0.000		1.38E+08	0.130
Standard Deviation		8.16E+04	0.559		0.00E+00	0.000		7.62E+05	0.131		0.00E+00	0.000		1.40E+06	0.002
%RSD		3.26	3.26		ERR	ERR		0.30	0.30		ERR	ERR		1.01	1.17

Sample I.D. Number 93 - 496

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-496.prn	22.66	2466088	16.896	0	0	0	19.92	251099072	43.255	55.76	0	0	24.85	132867000	0.125
	22.67	2284952	15.508	0	0	0	19.92	251213008	43.275	55.76	0	0	24.85	135466704	0.128
	22.67	2269810	15.541	0	0	0	19.92	250483632	43.149	55.76	0	0	24.85	134521552	0.127
Average		2.33E+06	15.982		0.00E+00	0.000		2.51E+08	43.226		0.00E+00	0.000		1.34E+08	0.127
Standard Deviation		1.16E+05	0.793		0.00E+00	0.000		3.92E+05	0.068		0.00E+00	0.000		1.30E+06	0.002
%RSD		4.97	4.96		ERR	ERR		0.16	0.16		ERR	ERR		0.97	1.21

Sample I.D. Number 93 - 497

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-497.prn	22.67	2068742	14.164	0	0	0	19.92	251199440	43.272	55.76	0	0	24.56	140146880	0.141
	22.67	1931147	13.222	0	0	0	19.92	250880392	43.219	55.76	0	0	24.85	132307080	0.125
	22.67	1909272	13.482	0	0	0	19.92	250602680	43.17	55.76	0	0	24.83	139649968	0.132
Average		1.99E+06	13.623		0.00E+00	0.000		2.51E+08	43.220		0.00E+00	0.000		1.36E+08	0.129
Standard Deviation		7.10E+04	0.486		0.00E+00	0.000		2.98E+05	0.051		0.00E+00	0.000		5.33E+06	0.005
%RSD		3.57	3.57		ERR	ERR		0.12	0.12		ERR	ERR		3.92	3.85

Sample I.D. Number 93 - 498

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-498.prn	22.67	1916730	13.117	0	0	0	19.92	251240960	43.279	55.76	0	0	24.85	129874096	0.123
	22.67	1810946	12.399	0	0	0	19.92	252060928	43.576	55.76	0	0	24.85	0	0
	22.67	1822510	12.476	0	0	0	19.92	253309840	43.636	55.76	0	0	24.85	133521384	0.126
Average		1.85E+06	12.665		0.00E+00	0.000		2.53E+08	43.497		0.00E+00	0.000		8.78E+07	~~0.083~~ 0.125
Standard Deviation		5.75E+04	0.394		0.00E+00	0.000		1.11E+06	0.191		0.00E+00	0.000		7.61E+07	0.072 0.002
%RSD		3.11	3.11		ERR	ERR		0.44	0.44		ERR	ERR		86.63	86.62

Sample I.D. Number 93 - 499

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-499.prn	22.67	1745444	11.951	0	0	0	19.92	253162480	43.61	55.76	0	0	24.85	134902848	0.127
	22.67	1677920	11.486	0	0	0	19.92	253462784	43.662	55.76	0	0	24.85	133071512	0.126
	22.67	1684053	11.53	0	0	0	19.92	252775360	43.544	55.76	0	0	24.83	137822432	0.13
Average		1.70E+06	11.656		0.00E+00	0.000		2.53E+08	43.605		0.00E+00	0.000		1.35E+08	0.128
Standard Deviation		3.73E+04	0.256		0.00E+00	0.000		3.45E+05	0.059		0.00E+00	0.000		2.40E+06	0.002
%RSD		2.19	2.20		ERR	ERR		0.14	0.14		ERR	ERR		1.77	1.63

Sample I.D. Number 93 - 500

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-500.prn	22.87	2507701	17.17	0	0	0	19.92	247405888	42.619	56.44	4207104	0.011	24.85	184873472	0.156
	22.87	2435291	16.674	0	0	0	19.92	248021440	42.725	56.76	5562556	0.014	24.85	187510256	0.158
	22.87	2430146	16.639	0	0	0	19.92	248745424	42.85	56.76	0	0	24.85	169349216	0.16
Average		2.46E+06	16.828		0.00E+00	0.000		2.48E+08	42.731		4.88E+06	0.013		1.67E+08	0.158
Standard Deviation		4.34E+04	0.297		0.00E+00	0.000		6.70E+05	0.116		9.58E+05	0.002		2.25E+06	0.002
%RSD		1.76	1.76		ERR	ERR		0.27	0.27		19.62	16.97		1.35	1.27

Sample I.D. Number 93 - 501

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-501.prn	22.87	3502736	23.982	0	0	0	19.92	246801776	42.515	56.76	0	0	24.85	208983360	0.197
	22.87	3429443	23.481	0	0	0	19.92	246817024	42.517	56.76	0	0	24.85	220142112	0.208
	22.87	3444005	23.58	0	0	0	19.92	247650448	42.661	56.76	7781260	0.02	24.85	214515712	0.202
Average		3.46E+06	23.681		0.00E+00	0.000		2.47E+08	42.564		7.78E+06	0.020		2.15E+08	0.202
Standard Deviation		3.88E+04	0.265		0.00E+00	0.000		4.86E+05	0.084		ERR	ERR		5.58E+06	0.006
%RSD		1.12	1.12		ERR	ERR		0.20	0.20		ERR	ERR		2.60	2.72

Sample I.D. Number 93 - 502

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-502.prn	22.87	3798067	25.905	0	0	0	19.92	246922064	42.535	56.76	9997106	0.026	24.85	301327040	0.264
	22.87	3706305	25.378	0	0	0	19.92	247071248	42.561	56.76	10025724	0.026	24.85	301491200	0.265
	22.87	3675991	25.169	0	0	0	19.92	247851264	42.696	56.76	10143640	0.026	24.81	284033216	0.269
Average		3.73E+06	25.517		0.00E+00	0.000		2.47E+08	42.597		1.01E+07	0.026		2.96E+08	0.279
Standard Deviation		6.36E+04	0.435		0.00E+00	0.000		4.99E+05	0.086		7.77E+04	0.000		9.51E+06	0.009
%RSD		1.71	1.71		ERR	ERR		0.20	0.20		0.77	0.00		3.21	3.21

Sample I.D. Number 93 - 503

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-503.prn	22.85	1947056	13.331	0	0	0	19.92	250131520	43.086	56.76	21224272	0.055	24.89	738698496	0.697
	22.89	9223184	63.149	0	0	0	19.92	247003312	42.549	56.76	21339426	0.055	24.71	732023424	0.691
	22.91	12274483	84.04	0	0	0	19.92	240767136	41.475	56.76	0	0	0	0	0
Average		7.81E+06	53.507		0.00E+00	0.000		2.46E+08	42.372		2.13E+07	0.055		7.35E+08	0.694
Standard Deviation		5.31E+06	36.327		0.00E+00	0.000		4.76E+06	0.819		8.14E+04	0.000		4.72E+06	0.004
%RSD		67.89	67.89		ERR	ERR		1.93	1.93		0.38	0.00		0.64	0.61

Sample I.D. Number 93 - 504

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-504.prn	22.67	3462432	23.708	0	0	0	19.92	247488288	42.633	0	0	0	24.85	453320832	0.426
	22.67	3400083	23.276	0	0	0	19.92	247940580	42.711	0	0	0	24.83	435062256	0.411
	22.67	3434677	23.516	0	0	0	19.92	247001184	42.549	55.76	12008736	0.033	24.85	446018386	0.422
Average		3.43E+06	23.501		0.00E+00	0.000		2.47E+08	42.631		1.29E+07	0.033		4.45E+08	0.420
Standard Deviation		3.12E+04	0.214		0.00E+00	0.000		4.70E+05	0.081		ERR	ERR		9.25E+06	0.009
%RSD		0.91	0.91		ERR	ERR		0.19	0.19		ERR	ERR		2.08	2.05

Sample I.D. Number 93 - 505

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-505.prn	22.67	3060501	20.954	0	0	0	19.92	244049350	42.041	55.76	0	0	24.85	-8886	0
	22.67	3003448	20.564	0	0	0	19.92	245086800	42.219	55.76	0	0	24.85	-8888	0
	22.67	3039284	20.809	0	0	0	19.92	245263024	42.253	55.76	15217932	0.039	24.85	-8886	0
Average		3.03E+06	20.776		0.00E+00	0.000		2.45E+08	42.171		1.52E+07	0.039		-8.9E+03	0.000
Standard Deviation		2.88E+04	0.197		0.00E+00	0.000		6.63E+05	0.114		ERR	ERR		0.00E+00	0.000
%RSD		0.95	0.95		ERR	ERR		0.27	0.27		ERR	ERR		0.00	ERR

Sample I.D. Number 93 - 506

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-506.prn	22.67	2647010	18.123	0	0	0	19.92	250906384	43.222	56.44	110373696	0.31	24.85	670693632	0.633
	22.65	2469222	17.023	0	0	0	19.92	251586112	43.339	55.76	18175296	0.047	24.85	673783552	0.636
	22.65	2497000	17.096	0	0	0	19.92	251547996	43.332	56.44	2242304	0.006	24.85	686162048	0.648
Average		2.54E+06	17.414		0.00E+00	0.000		2.51E+08	43.298		4.66E+07	0.121		6.77E+08	0.639
Standard Deviation		8.99E+04	0.615		0.00E+00	0.000		3.82E+05	0.066		6.35E+07	0.165		8.11E+06	0.008
%RSD		3.53	3.53		ERR	ERR		0.15	0.15		136.33	136.33		1.20	1.24

Sample I.D. Number 93 - 507

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-507.prn	22.65	2165924	14.966	0	0	0	19.92	248987328	42.891	56.76	19227076	0.05	24.85	0	~~0~~
	22.65	2040025	13.966	0	0	0	19.92	248639808	42.856	56.76	18988544	0.049	24.89	723443328	0.683
	22.65	2045083	14.002	0	0	0	19.92	250197952	43.1	56.76	24634864	0.064	24.85	724224704	0.684
Average		2.09E+06	14.312		0.00E+00	0.000		2.49E+08	42.952		2.10E+07	0.054		4.83E+08	~~0.456~~ 0.684
Standard Deviation		8.28E+04	0.567		0.00E+00	0.000		7.45E+05	0.128		3.31E+06	0.008		4.18E+08	~~0.395~~ 0.007
%RSD		3.96	3.96		ERR	ERR		0.30	0.30		15.74	15.44		86.60	86.60

Sample I.D. Number 93 - 508

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-508.prn	22.69	3381901	23.165	0	0	0	19.92	235706080	40.604	56.44	10839520	0.026	24.89	728301296	0.687
	22.69	3219449	22.043	0	0	0	20	236236400	40.695	56.44	16592192	0.04	24.89	736384768	0.695
	22.69	3211772	21.99	0	0	0	19.92	235544144	40.576	56.44	19104640	0.05	24.89	728430848	0.687
Average		3.27E+06	22.396		0.00E+00	0.000		2.36E+08	40.625		1.52E+07	0.039		7.31E+08	0.690
Standard Deviation		9.61E+04	0.658		0.00E+00	0.000		3.62E+05	0.062		4.14E+06	0.011		4.60E+06	0.005
%RSD		2.94	2.94		ERR	ERR		0.15	0.15		27.25	28.00		0.63	0.67

Sample I.D. Number 93 - 509

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-509.prn	22.69	2762423	18.914	0	0	0	19.92	241604208	41.635	56.76	20892526	0.054	24.89	748170008	0.706
	22.69	2666377	18.256	0	0	0	19.92	242049048	41.6	56.76	21135016	0.055	24.89	731880000	0.691
	22.65	2672460	18.298	0	0	0	19.92	241399424	41.584	56.76	21147456	0.055	24.89	743486336	0.702
Average		2.70E+06	18.489		0.00E+00	0.000		2.42E+08	41.673		2.11E+07	0.055		7.41E+08	0.700
Standard Deviation		5.38E+04	0.368		0.00E+00	0.000		6.54E+05	0.113		1.44E+05	0.001		8.39E+06	0.008
%RSD		1.99	1.99		ERR	ERR		0.27	0.27		0.68	1.06		1.13	1.11

Sample I.D. Number 93 - 510

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-510.prn	22.69	6132452	41.987	0	0	0	20.06	205621536	35.455	56.44	16929056	0.044	24.85	662686720	0.654
	22.69	6025424	41.255	0	0	0	20.08	206565568	35.584	56.44	17401696	0.045	24.85	675131264	0.637
	22.69	6027916	41.272	0	0	0	20.06	205008256	35.315	56.76	17697920	0.046	24.85	685576880	0.647
Average		6.06E+06	41.505		0.00E+00	0.000		2.06E+08	35.451		1.73E+07	0.045		6.85E+08	0.646
Standard Deviation		6.11E+04	0.418		0.00E+00	0.000		7.79E+05	0.135		4.42E+05	0.001		8.92E+06	0.009
%RSD		1.01	1.01		ERR	ERR		0.38	0.38		2.55	2.22		1.30	1.32

Sample I.D Number 93 - 511

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-511.prn	22.67	1504342	10.916	0	0	0	19.92	251075184	43.251	56.44	13262848	0.034	0	0	0
	22.65	1301004	9.455	0	0	0	19.92	251033840	43.399	56.44	9804800	0.025	24.81	8686	0
	22.65	1368692	9.372	0	0	0	19.92	251100720	43.255	56.44	21463296	0.056	24.89	751795648	0.71
Average		1.45E+06	9.914		0.00E+00	0.000		2.51E+08	43.302		1.48E+07	0.038		2.51E+08	~~0.237~~ 0.71
Standard Deviation		1.27E+05	0.868		0.00E+00	0.000		4.89E+05	0.084		5.99E+06	0.016		4.34E+08	~~0.416~~
%RSD		8.76	8.76		ERR	ERR		0.19	0.19		40.34	41.60		173.21	173.21

Sample I.D. Number 93 - 512

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-512.pm	22.67	2430697	16.642	0	0	0	19.92	242999408	41.644	55.76	21316880	0.055	24.85	717889726	0.676
	22.86	2463387	16.866	0	0	0	19.92	239683952	41.323	55.76	21124304	0.055	24.81	723377620	0.683
	22.85	2887171	19.631	0	0	0	19.92	238195206	41.032	55.76	20488800	0.053	24.81	706853312	0.667
Average		2.59E+06	17.713		0.00E+00	0.000		2.40E+08	41.400		2.10E+07	0.054		7.16E+08	0.676
Standard Deviation		2.43E+05	1.665		0.00E+00	0.000		2.39E+06	0.411		4.34E+05	0.001		8.42E+06	0.008
%RSD		9.40	9.40		ERR	ERR		0.99	0.99		2.07	2.13		1.18	1.21

Sample I.D. Number 93 - 513

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-513.pm	22.67	1355351	9.28	0	0	0	19.92	250087472	43.081	55.76	0	0	24.81	0	0
	22.67	1224597	8.384	0	0	0	19.92	250006784	43.083	55.76	0	0	24.81	-8888	0
	22.67	1208143	8.272	0	0	0	19.92	248756040	42.852	55.76	0	0	24.81	-8888	0
Average		1.26E+06	8.645		0.00E+00	0.000		2.50E+08	43.005		0.00E+00	0.000		-5.9E+03	0.000
Standard Deviation		8.07E+04	0.552		0.00E+00	0.000		7.70E+05	0.133		0.00E+00	0.000		5.13E+03	0.000
%RSD		6.39	6.39		ERR	ERR		0.31	0.31		ERR	ERR		-86.60	ERR

Sample I.D. Number 93 - 514

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-514.pm	22.67	1210660	8.286	0	0	0	19.92	250332368	43.123	55.76	21058176	0.057	24.89	761770432	0.719
	22.67	1096386	7.507	0	0	0	19.92	251657920	43.351	55.76	21466064	0.056	24.86	757853440	0.715
	22.67	1048271	7.177	0	0	0	19.92	250067906	43.077	55.76	21632224	0.056	24.89	751774464	0.71
Average		1.12E+06	7.658		0.00E+00	0.000		2.51E+08	43.184		2.17E+07	0.056		7.57E+08	0.715
Standard Deviation		8.34E+04	0.571		0.00E+00	0.000		8.52E+05	0.147		2.37E+05	0.001		5.04E+06	0.005
%RSD		7.46	7.46		ERR	ERR		0.34	0.34		1.09	1.02		0.67	0.63

Sample I.D. Number 93 - 515

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-515.pm	22.67	1287716	8.817	0	0	0	19.92	249067920	42.905	55.76	0	0	24.89	736520152	0.697
	22.67	1027361	7.034	0	0	0	19.92	249506576	42.981	55.76	0	0	24.81	-8888	———
	22.67	1012109	6.93	0	0	0	19.92	249132576	42.916	55.44	7592800	0.02	24.81	-8888	———
Average		1.11E+06	7.594		0.00E+00	0.000		2.49E+08	42.934		2.56E+06	0.007		2.46E+08	~~0.232~~ 0.697
Standard Deviation		1.55E+05	1.061		0.00E+00	0.000		2.37E+05	0.041		4.44E+06	0.012		4.26E+08	~~0.402~~
%RSD		13.97	13.97		ERR	ERR		0.10	0.10		173.21	173.21		173.21	173.21

Sample I.D. Number 93 - 516

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-516.prn	22.89	2640566	18.12	0	0	0	19.92	235649904	40.694	56.76	20201726	0.052	24.89	730796160	0.69
	22.86	2529567	17.316	0	0	0	19.92	236576192	40.753	56.76	19147584	0.047	24.89	744260992	0.702
	22.89	2536044	17.364	0	0	0	19.92	237237152	40.867	56.76	20442176	0.053	24.89	741470336	0.7
Average		2.57E+06	17.601		0.00E+00	0.000		2.36E+08	40.738		1.96E+07	0.051		7.39E+08	0.697
Standard Deviation		6.58E+04	0.450		0.00E+00	0.000		7.97E+05	0.137		1.26E+06	0.003		7.11E+06	0.006
%RSD		2.56	2.56		ERR	ERR		0.34	0.34		6.44	6.34		0.96	0.92

Sample I.D. Number 93 - 517

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-517.prn	22.87	739676	5.064	0	0	0	19.92	248712160	42.844	56.76	20236952	0.052	24.81	739941760	0.698
	22.87	540208	3.699	0	0	0	19.92	251009984	43.24	56.76	22174104	0.058	24.81	745060192	0.703
	22.87	557386	3.885	0	0	0	19.92	250312256	43.119	56.76	21769044	0.056	24.81	751308288	0.709
Average		6.16E+05	4.216		0.00E+00	0.000		2.50E+08	43.068		2.14E+07	0.055		7.45E+08	0.703
Standard Deviation		1.08E+05	0.740		0.00E+00	0.000		1.18E+06	0.203		1.02E+06	0.003		5.69E+06	0.006
%RSD		17.57	17.56		ERR	ERR		0.47	0.47		4.78	5.52		0.76	0.78

Sample I.D. Number 93 - 518

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-518.prn	22.89	1159895	7.941	0	0	0	19.92	247084448	42.563	56.76	21636000	0.057	24.81	752812928	0.71
	22.87	1112396	7.616	0	0	0	19.92	247998880	42.716	56.76	21408760	0.056	24.81	756057024	0.714
	22.87	1101932	7.545	0	0	0	19.92	247821536	42.69	56.76	21608880	0.056	24.81	737968256	0.696
Average		1.12E+06	7.701		0.00E+00	0.000		2.48E+08	42.656		2.16E+07	0.056		7.49E+08	0.707
Standard Deviation		3.09E+04	0.211		0.00E+00	0.000		4.74E+05	0.082		2.15E+05	0.001		9.64E+06	0.009
%RSD		2.75	2.74		ERR	ERR		0.19	0.19		0.99	1.02		1.29	1.34

Sample I.D. Number: 93 - 519

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-519.prn	0	0	0	23.07	1639294	25.478	0	0	0	21.04	270348	0.036	0	0	0	58.44	47821834	0.115	34.85	7448788	0.008
	0	0	0	23.03	1906180	21.101	0	0	0	21.04	297948	0.038	0	0	0	58.44	47906392	0.115	34.85	5383651	0.006
	0	0	0	23.03	1587343	20.591	0	0	0	21.04	272902	0.037	0	0	0	58.44	47354800	0.114	34.85	5225038	0.004
Average		0.00E+00	0.000		1.70E+06	22.390		0.00E+00	0.000		2.70E+05	0.036		0.00E+00	0.000		4.76E+07	0.115		6.02E+06	0.005
Standard Deviation		0.00E+00	0.000		2.04E+05	2.686		0.00E+00	0.000		2.48E+03	0.001		0.00E+00	0.000		2.27E+05	0.001		1.24E+06	0.001
%RSD		ERR	ERR		12.00	12.00		ERR	ERR		0.92	1.59		ERR	ERR		0.48	0.50		20.61	24.74

Sample I.D. Number: 93 - 520

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-520.prn	0	0	0	23.03	1635948	24.12	0	0	0	21.04	234234	0.031	0	0	0	58.44	47333234	0.114	34.85	2287534	0.002
	0	0	0	23.06	1631408	21.433	0	0	0	21.04	234879	0.032	0	0	0	58.44	47518040	0.114	34.81	1829623	0.001
	0	0	0	23.06	1617936	21.295	0	0	0	21.04	218387	0.029	0	0	0	58.44	47695048	0.115	34.81	1843183	0.001
Average		0.00E+00	0.000		1.70E+06	22.269		0.00E+00	0.000		2.30E+05	0.031		0.00E+00	0.000		4.75E+07	0.114		1.97E+06	0.001
Standard Deviation		0.00E+00	0.000		1.22E+05	1.605		0.00E+00	0.000		9.93E+03	0.002		0.00E+00	0.000		1.34E+05	0.001		2.26E+05	0.001
%RSD		ERR	ERR		7.21	7.21		ERR	ERR		4.32	4.98		ERR	ERR		0.28	0.50		11.50	43.30

Sample I.D. Number: 93 - 521

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-521.prn	0	0	0	23.01	4185486	56.967	20.18	41135	0.005	21	130907	0.018	0	0	0	58.44	13926920	0.034	34.81	302351	0
	0	0	0	23.01	3734588	48.083	20.18	41942	0.006	21	133584	0.018	0	0	0	58.44	14152952	0.034	34.81	317467	0
	0	0	0	23.01	3792514	48.825	20.18	39337	0.005	21	134402	0.018	0	0	0	58.44	13967107	0.034	34.81	320613	0
Average		0.00E+00	0.000		3.90E+06	51.292		4.08E+04	0.005		1.33E+05	0.018		0.00E+00	0.000		1.40E+07	0.034		3.13E+05	0.000
Standard Deviation		0.00E+00	0.000		2.45E+05	3.223		1.33E+03	0.000		1.82E+03	0.000		0.00E+00	0.000		1.21E+05	0.000		9.73E+03	0.000
%RSD		ERR	ERR		6.28	6.28		3.27	0.00		1.37	0.00		ERR	ERR		0.86	0.00		3.10	ERR

Sample I.D. Number: 93 - 522

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-522.prn	0	0	0	23.01	7504170	96.958	20.18	77227	0.01	21.04	114668	0.015	0	0	0	58.44	0	~~0~~	0	0	0
	0	0	0	23.01	7219655	34.849	20.18	76367	0.01	21.04	114506	0.015	0	0	0	58.44	17085814	0.041	34.81	258171	0
	0	0	0	23.01	7247781	36.218	20.18	74991	0.009	21.04	113606	0.015	0	0	0	58.44	15878503	0.038	34.85	445410	0
Average		0.00E+00	0.000		7.26E+06	95.942		7.62E+04	0.010		1.14E+05	0.015		0.00E+00	0.000		1.10E+07	~~0.026~~ 0.039		2.34E+05	0.000
Standard Deviation		0.00E+00	0.000		4.30E+04	0.565		1.13E+03	0.001		5.27E+02	0.000		0.00E+00	0.000		9.55E+06	~~0.029~~ 0.004		2.24E+05	0.000
%RSD		ERR	ERR		0.59	0.59		1.49	5.97		0.46	0.00		ERR	ERR		86.74	86.79		95.69	ERR

Sample I.D. Number: 93 - 523

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-523.prn	0	0	0	23.03	11362726	146.842	20.18	121263	0.016	21.04	132078	0.018	0	0	0	58.44	20671008	0.06	34.81	236164	0
	0	0	0	23.03	11360356	146.829	20.18	120233	0.016	21.04	134831	0.018	0	0	0	58.44	21119098	0.061	34.81	235615	0
	0	0	0	23.03	11603143	150.16	20.18	117406	0.015	21.04	131487	0.018	0	0	0	58.44	21343186	0.061	34.81	0	0
Average		0.00E+00	0.000		1.14E+07	150.120		1.20E+05	0.015		1.33E+05	0.018		0.00E+00	0.000		2.11E+07	0.061		1.58E+05	0.000
Standard Deviation		0.00E+00	0.000		7.06E+04	0.927		1.99E+03	0.000		1.84E+03	0.000		0.00E+00	0.000		1.36E+05	0.001		1.37E+05	0.000
%RSD		ERR	ERR		0.62	0.62		1.67	0.00		1.38	0.00		ERR	ERR		0.65	1.14		86.61	ERR

Sample I D Number 93 - 524

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Channel "B" (%) Nitrous Oxide			Channel "C" (%) Hydrogen			Channel "C" (%) Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-524 prn	0	0	0	23.01	9119377	118.807	20.18	35337	0.011	21.04	73371	0.01	0	0	0	0	0	✓	0	0	0
	0	0	0	23.01	9040947	118.777	20.18	34831	0.011	21.04	74798	0.01	0	0	0	58.44	33178632	0.08	34.81	295982	0
	0	0	0	23.01	9073423	117.859	20.18	37017	0.012	21.09	73791	0.01	0	0	0	58.44	33052920	0.08	34.81	271853	0
Average		0.00E+00	0.000		9.04E+06	118.824		8.97E+04	0.011		7.40E+04	0.010		0.00E+00	0.000		2.21E+07	~~0.053~~ 0.08		1.79E+05	0.000
Standard Deviation		0.00E+00	0.000		7.30E+04	0.960		6.40E+03	0.001		7.32E+02	0.000		0.00E+00	0.000		1.91E+07	~~0.046~~ 0.00		1.56E+05	0.000
%RSD		ERR	ERR		0.81	0.81		7.14	5.09		0.99	0.00		ERR	ERR		86.60	86.60		86.62	ERR

Sample I D. Number 93 - 525

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Channel "B" (%) Nitrous Oxide			Channel "C" (%) Hydrogen			Channel "C" (%) Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-525.prn	0	0	0	23.03	9626486	125.496	20.18	102918	0.013	21.08	57417	0.008	0	0	0	58.44	36290058	0.092	34.81	325035	0
	0	0	0	23.03	9533482	125.234	20.18	103327	0.013	21.08	58328	0.007	0	0	0	58.44	36558952	0.093	34.81	282570	0
	0	0	0	23.03	9468187	124.403	20.18	100463	0.013	21.08	54054	0.007	0	0	0	58.44	36404304	0.092	34.81	295898	0
Average		0.00E+00	0.000		9.54E+06	125.377		1.02E+05	0.013		5.56E+04	0.007		0.00E+00	0.000		3.84E+07	0.092		3.01E+05	0.000
Standard Deviation		0.00E+00	0.000		8.02E+04	1.053		1.27E+03	0.000		1.70E+03	0.001		0.00E+00	0.000		1.32E+05	0.001		2.06E+04	0.000
%RSD		ERR	ERR		0.84	0.84		1.25	0.00		3.05	7.87		ERR	ERR		0.34	0.63		6.88	ERR

Sample I D. Number 93 - 526

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Channel "B" (%) Nitrous Oxide			Channel "C" (%) Hydrogen			Channel "C" (%) Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-526 prn	0	0	0	23.03	9474990	86.062	0	0	0	21.04	1098638	0.148	0	0	0	58.44	45127368	0.108	34.85	715733	0.001
	0	0	0	23.03	9617843	85.829	20.18	86527	0.009	21.08	120472	0.018	0	0	0	58.44	45361818	0.108	34.81	302357	0
	0	0	0	23.03	9490457	85.299	20.18	56218	0.008	21.04	73183	0.01	0	0	0	58.44	45132752	0.108	34.81	271184	0
Average		0.00E+00	0.000		6.49E+06	85.320		4.56E+04	0.008		4.28E+05	0.057		0.00E+00	0.000		4.52E+07	0.109		4.30E+05	0.000
Standard Deviation		0.00E+00	0.000		2.18E+04	0.287		3.95E+04	0.005		5.74E+05	0.077		0.00E+00	0.000		1.34E+05	0.000		2.48E+05	0.001
%RSD		ERR	ERR		0.34	0.34		86.60	86.60		134.12	134.03		ERR	ERR		0.30	0.00		57.74	173.21

Sample I.D. Number 93 - 527

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Channel "B" (%) Nitrous Oxide			Channel "C" (%) Hydrogen			Channel "C" (%) Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-527 prn	0	0	0	23.03	9048390	116.866	20.18	97375	0.012	21.04	63791	0.011	0	0	0	58.44	39801486	0.096	34.81	341072	0
	0	0	0	23.03	9003306	116.252	20.18	94805	0.012	21.04	75294	0.01	0	0	0	58.44	39486678	0.096	34.81	218581	0
	0	0	0	23.03	9122676	116.854	20.18	99729	0.012	21.04	78613	0.011	0	0	0	58.44	39666904	0.096	34.81	341008	0
Average		0.00E+00	0.000		9.06E+06	119.008		9.62E+04	0.012		7.92E+04	0.011		0.00E+00	0.000		3.97E+07	0.096		2.34E+05	0.000
Standard Deviation		0.00E+00	0.000		8.04E+04	0.793		1.46E+03	0.000		4.29E+03	0.001		0.00E+00	0.000		2.06E+05	0.001		1.30E+04	0.000
%RSD		ERR	ERR		0.67	0.67		1.51	0.00		5.41	5.41		ERR	ERR		0.52	0.61		5.55	ERR

Sample I.D. Number 93 - 528

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Channel "B" (%) Nitrous Oxide			Channel "C" (%) Hydrogen			Channel "C" (%) Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-528.prn	0	0	0	23.03	4904316	63.117	20.18	50066	0.009	21.04	54096	0.007	0	0	0	58.44	46634312	0.112	34.81	0	0
	0	0	0	23.03	4963798	61.271	20.18	48274	0.008	21.04	52952	0.007	0	0	0	58.44	46634312	0.112	34.81	0	0
	0	0	0	23.03	4587018	60.394	20.18	46241	0.008	21.04	53183	0.007	0	0	0	58.44	46816812	0.113	34.81	225968	0
Average		0.00E+00	0.000		4.69E+06	61.594		4.89E+04	0.008		5.34E+04	0.007		0.00E+00	0.000		4.67E+07	0.113		1.13E+05	0.000
Standard Deviation		0.00E+00	0.000		1.06E+05	1.390		1.04E+03	0.000		6.00E+02	0.000		0.00E+00	0.000		1.36E+05	0.001		1.60E+05	0.000
%RSD		ERR	ERR		2.26	2.26		2.12	0.00		1.12	0.00		ERR	ERR		0.29	0.63		141.42	ERR

Sample I.D. Number 93 - 529

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-529.prn	0	0	0	23.01	4344427	56.775	20.18	43503	0.006	21	159921	0.021	0	0	0	58.44	47203618	0.114	34.81	213922	0
	0	0	0	23.03	4140179	54.392	20.18	41430	0.006	21	152070	0.022	0	0	0	58.44	47234768	0.114	34.81	197958	0
	0	0	0	23.03	4072782	53.507	20.18	43919	0.006	21	167934	0.022	0	0	0	58.44	48890204	0.113	34.81	189632	0
Average		0.00E+00	0.000		4.15E+06	54.558		4.30E+04	0.005		1.63E+05	0.022		0.00E+00	0.000		4.71E+07	0.114		2.01E+05	0.000
Standard Deviation		0.00E+00	0.000		8.70E+04	1.143		1.33E+03	0.001		3.97E+03	0.001		0.00E+00	0.000		1.91E+05	0.001		1.23E+04	0.000
%RSD		ERR	ERR		2.10	2.10		3.10	10.83		2.44	2.66		ERR	ERR		0.40	0.51		6.11	ERR

Sample I.D. Number 93 - 530

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-530.prn	0	0	0	23.03	3967729	50.681	20.18	38745	0.006	21.04	26296	0.004	0	0	0	58.44	47731612	0.116	34.81	184378	0
	0	0	0	22.99	3751970	48.298	20.18	37500	0.006	21.04	27597	0.004	0	0	0	58.44	48877800	0.113	34.81	186117	0
	0	0	0	22.99	3762101	48.425	20.18	38072	0.006	21.04	26294	0.004	0	0	0	58.44	48877800	0.113	34.81	186117	0
Average		0.00E+00	0.000		3.79E+06	49.798		3.88E+04	0.005		2.80E+04	0.004		0.00E+00	0.000		4.74E+07	0.114		1.85E+05	0.000
Standard Deviation		0.00E+00	0.000		5.85E+04	0.768		1.15E+03	0.000		4.14E+02	0.000		0.00E+00	0.000		5.33E+05	0.001		5.93E+02	0.000
%RSD		ERR	ERR		1.54	1.54		2.97	0.00		1.48	0.00		ERR	ERR		1.13	1.24		0.32	ERR

Sample I.D. Number 93 - 531

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-531.prn	0	0	0	22.99	3470436	46.593	20.18	36963	0.005	21.04	50630	0.007	0	0	0	58.44	47585832	0.116	34.81	195951	0
	0	0	0	22.99	3379992	44.394	20.18	33298	0.004	21.04	52948	0.007	0	0	0	58.44	47585832	0.116	34.81	195951	0
	0	0	0	22.99	3318982	43.577	20.18	33634	0.004	21.04	58436	0.008	0	0	0	58.44	65213552	~~0.164~~ 0.115	34.81	186630	0
Average		0.00E+00	0.000		3.39E+06	44.511		3.44E+04	0.004		5.35E+04	0.007		0.00E+00	0.000		5.54E+07	~~0.134~~		1.81E+05	0.000
Standard Deviation		0.00E+00	0.000		7.73E+04	1.016		1.41E+03	0.001		2.84E+03	0.001		0.00E+00	0.000		1.11E+07	0.026		2.05E+04	0.000
%RSD		ERR	ERR		2.28	2.28		4.10	13.32		5.30	7.87		ERR	ERR		19.95	19.60		11.33	ERR

Sample I.D. Number 93 - 532

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-532.prn	0	0	0	22.99	3343686	43.928	20.18	30970	0.004	21.04	22696	0.003	0	0	0	58.44	47483336	0.114	34.81	159634	0
	0	0	0	22.99	3100478	40.739	20.18	31403	0.004	21.04	20838	0.003	0	0	0	58.44	47564064	0.116	34.81	167975	0
	0	0	0	22.99	3067187	40.104	20.18	30791	0.004	21.04	21265	0.003	0	0	0	58.44	47462752	0.114	34.81	0	0
Average		0.00E+00	0.000		3.17E+06	41.609		3.21E+04	0.004		2.17E+04	0.003		0.00E+00	0.000		4.75E+07	0.114		1.09E+05	0.000
Standard Deviation		0.00E+00	0.000		1.54E+05	2.028		1.69E+03	0.000		9.09E+02	0.000		0.00E+00	0.000		1.03E+05	0.001		9.45E+04	0.000
%RSD		ERR	ERR		4.87	4.87		5.26	0.00		4.19	0.00		ERR	ERR		0.22	0.50		86.68	ERR

Sample I.D. Number 93 - 533

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-533.prn	0	0	0	22.99	3181200	41.006	20.18	30448	0.004	21.04	34387	0.005	0	0	0	58.44	47870096	0.116	34.77	147730	0
	0	0	0	22.99	2884097	36.418	20.18	28215	0.004	21.04	36508	0.005	0	0	0	58.44	47718736	0.116	34.81	156103	0
	0	0	0	22.99	2942236	36.917	20.18	30463	0.004	21.04	37500	0.005	0	0	0	58.44	47535848	0.114	34.81	0	0
Average		0.00E+00	0.000		3.00E+06	39.446		3.00E+04	0.004		3.58E+04	0.005		0.00E+00	0.000		4.76E+07	0.115		1.01E+05	0.000
Standard Deviation		0.00E+00	0.000		1.05E+05	1.373		7.17E+02	0.000		1.60E+03	0.000		0.00E+00	0.000		9.62E+04	0.001		8.75E+04	0.000
%RSD		ERR	ERR		3.48	3.48		2.39	0.00		4.48	0.00		ERR	ERR		0.20	0.50		86.68	ERR

Sample I.D. Number: 93 - 534

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-534.prn	0	0	0	23.03	2879160	37.012	20.18	27969	0.004	21.04	20029	0.003	0	0	0	58.44	47938636	0.116	34.81	157213	0
	0	0	0	23.03	2794198	36.709	20.18	28062	0.004	21.04	19447	0.003	0	0	0	58.44	47929034	0.116	34.81	153183	0
	0	0	0	22.98	2781715	36.546	20.18	28353	0.004	21.04	19428	0.003	0	0	0	58.44	47793152	0.116	34.77	3457099	0.002
Average		0.00E+00	0.000		2.82E+06	37.022		2.81E+04	0.004		1.96E+04	0.003		0.00E+00	0.000		4.79E+07	0.115		9.22E+05	0.001
Standard Deviation		0.00E+00	0.000		5.25E+04	0.689		2.44E+02	0.000		3.42E+02	0.000		0.00E+00	0.000		8.14E+04	0.000		1.33E+06	0.001
%RSD		ERR	ERR		1.86	1.86		0.87	0.00		1.74	0.00		ERR	ERR		0.17	0.00		144.07	173.21

Sample I.D. Number: 93 - 535

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-535.prn	0	0	0	22.98	2966562	38.262	0	0	0	21.06	61478	0.008	0	0	0	58.44	47783308	0.115	34.81	181995	0
	0	0	0	22.98	2720027	35.04	0	0	0	21.04	95068	0.013	0	0	0	58.44	47963420	0.115	34.81	180621	0
	0	0	0	22.98	2783120	36.775	20.18	26161	0.003	21	48056	0.006	0	0	0	58.44	47793152	0.116	34.77	3457099	0.002
Average		0.00E+00	0.000		2.81E+06	36.959		8.73E+03	0.001		6.82E+04	0.009		0.00E+00	0.000		4.78E+07	0.115		1.71E+05	0.000
Standard Deviation		0.00E+00	0.000		1.52E+05	1.995		1.51E+04	0.002		2.42E+04	0.004		0.00E+00	0.000		7.07E+04	0.000		1.34E+04	0.000
%RSD		ERR	ERR		5.40	5.40		173.21	173.21		35.51	40.06		ERR	ERR		0.15	0.00		7.84	ERR

Sample I.D. Number: 93 - 536

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-536.prn	0	0	0	23.03	1907310	23.744	20.18	0	0	21	0	0	0	0	0	58.44	47372320	0.114	34.81	115407	0
	0	0	0	23.03	1580189	20.691	20.18	0	0	21	0	0	0	0	0	58.44	47782928	0.115	34.81	155135	0
	0	0	0	23.03	1816413	21.229	20.18	0	0	21	0	0	0	0	0	58.44	47297704	0.114	34.81	143506	0
Average		0.00E+00	0.000		1.67E+06	21.955		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000		4.75E+07	0.114		1.38E+05	0.000
Standard Deviation		0.00E+00	0.000		1.19E+05	1.559		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000		2.50E+05	0.001		2.02E+04	0.000
%RSD		ERR	ERR		7.10	7.10		ERR	ERR		ERR	ERR		ERR	ERR		0.53	0.50		14.63	ERR

Sample I.D. Number: 93 - 537

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-537.prn	0	0	0	23.03	1803141	21.061	20.18	0	0	21	0	0	0	0	0	58.44	48294352	0.116	34.81	156782	0
	0	0	0	23.03	1596674	18.657	20.18	0	0	21	0	0	0	0	0	58.44	47956416	0.115	34.81	167504	0
	0	0	0	23.03	1664738	17.798	20.18	0	0	21	0	0	0	0	0	58.44	47768736	0.116	34.81	151838	0
Average		0.00E+00	0.000		1.45E+06	19.039		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000		4.80E+07	0.115		1.59E+05	0.000
Standard Deviation		0.00E+00	0.000		1.34E+05	1.766		0.00E+00	0.000		0.00E+00	0.000		0.00E+00	0.000		2.82E+05	0.001		7.84E+03	0.000
%RSD		ERR	ERR		9.28	9.28		ERR	ERR		ERR	ERR		ERR	ERR		0.59	0.50		4.92	ERR

Sample I.D. Number 93 - 538

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	23.02	1951342	26.026	20.16	199750	0.025	21.12	21946	0.003	0	0	0	64.84	42504704	0.105	24.85	217123	0
	23.03	1960030	24.438	20.16	192875	0.024	21.12	21072	0.003	0	0	0	64.84	41935872	0.104	24.85	171555	0
	23.03	1748555	22.048	20.16	182915	0.023	21.12	17490	0.002	0	0	0	64.84	42123840	0.104	24.81	160506	0
Average		1.86E+06	24.470		1.92E+05	0.024		2.02E-04	0.003		0.00E+00	0.000		4.22E+07	0.104		1.83E+05	0.000
Standard Deviation		1.17E+05	1.542		8.00E+03	0.001		2.36E+03	0.001		0.00E+00	0.000		2.90E+05	0.001		3.00E+04	0.000
%RSD		6.30	6.30		4.18	4.17		11.71	21.65		ERR	ERR		0.69	0.55		16.39	ERR

Sample I.D. Number 93 - 539

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	23.03	1679417	22.004	20.16	169332	0.021	21.12	0	0	0	0	0	64.84	43185344	0.107	24.86	177176	0
	23.05	1535748	20.178	20.16	161330	0.02	21.12	0	0	0	0	0	64.84	43296608	0.107	24.86	163327	0
	23.03	1488468	19.552	20.16	162616	0.02	21.12	0	0	0	0	0	64.84	43042624	0.107	24.85	168307	0
Average		1.57E+06	20.698		1.64E+05	0.020		0.00E+00	0.000		0.00E+00	0.000		4.32E+07	0.107		1.76E+05	0.000
Standard Deviation		9.95E+04	1.307		4.13E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.26E+05	0.000		7.65E+03	0.000
%RSD		6.34	6.34		2.51	2.84		ERR	ERR		ERR	ERR		0.30	0.00		4.28	ERR

Sample I.D. Number 93 - 540

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	23.01	6812475	86.872	20.16	710495	0.089	21.12	0	0	0	0	0	64.84	6080656	0.02	24.86	0	0
	23.05	6505782	82.47	20.16	704421	0.089	21.12	0	0	0	0	0	64.84	8029147	0.02	24.85	0	0
	23.01	6507406	82.492	20.16	703227	0.088	21.12	0	0	0	0	0	64.84	7551333	0.019	24.86	0	0
Average		6.54E+06	85.945		7.06E+05	0.089		0.00E+00	0.000		0.00E+00	0.000		7.89E+06	0.020		0.00E+00	0.000
Standard Deviation		6.11E+04	0.803		3.90E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.92E+05	0.001		0.00E+00	0.000
%RSD		0.93	0.93		0.55	0.85		ERR	ERR		ERR	ERR		3.70	2.94		ERR	ERR

Sample I.D. Number 93 - 541

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	23.01	10264463	134.661	20.16	1114823	0.14	21.12	0	0	0	0	0	64.84	16037115	0.04	24.85	0	0
	23.01	10228543	134.379	20.16	1111880	0.14	21.12	0	0	0	0	0	64.84	15998992	0.04	24.86	0	0
	23.01	10233395	134.443	20.16	1114256	0.14	21.12	0	0	0	0	0	64.84	15999781	0.039	24.85	0	0
Average		1.02E+07	134.558		1.11E+06	0.140		0.00E+00	0.000		0.00E+00	0.000		1.59E+07	0.040		0.00E+00	0.000
Standard Deviation		1.95E+04	0.256		1.71E+03	0.000		0.00E+00	0.000		0.00E+00	0.000		1.90E+05	0.001		0.00E+00	0.000
%RSD		0.19	0.19		0.15	0.00		ERR	ERR		ERR	ERR		1.20	1.46		ERR	ERR

Sample I.D. Number 93 - 542

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	23.01	12227800	160.842	20.16	1327798	0.167	21.12	0	0	0	0	0	64.84	21953652	0.054	24.85	0	0
	23.03	12196688	160.236	20.16	1327610	0.167	21.12	0	0	0	0	0	64.84	21888188	0.054	24.85	0	0
	23.03	12095503	158.906	20.16	1314492	0.165	21.12	0	0	0	0	0	64.84	21241000	0.053	24.85	0	0
Average		1.22E+07	159.928		1.32E+06	0.166		0.00E+00	0.000		0.00E+00	0.000		2.17E+07	0.054		0.00E+00	0.000
Standard Deviation		6.91E+04	0.908		7.35E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		3.96E+05	0.001		0.00E+00	0.000
%RSD		0.57	0.57		0.56	0.69		ERR	ERR		ERR	ERR		1.83	1.08		ERR	ERR

Sample I.D. Number 93 - 543

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	22.99	12182621	160.051	20.16	1316899	0.165	21.12	0	0	0	0	0	64.84	26813328	0.071	24.81	45143	0
	23.03	12114584	159.157	20.16	1312985	0.165	21.12	0	0	0	0	0	64.84	26648404	0.071	24.81	45435	0
	23.03	12110507	159.103	20.16	1311833	0.165	21.12	0	0	0	0	0	64.84	26125578	0.07	24.81	0	0
Average		1.21E+07	159.437		1.31E+06	0.165		0.00E+00	0.000		0.00E+00	0.000		2.85E+07	0.071		3.02E+04	0.000
Standard Deviation		4.05E+04	0.532		2.08E+03	0.000		0.00E+00	0.000		0.00E+00	0.000		3.58E+05	0.001		2.61E+04	0.000
%RSD		0.33	0.33		0.16	0.00		ERR	ERR		ERR	ERR		1.26	0.82		86.60	ERR

Sample I.D. Number 93 - 544

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	23.03	10783413	141.666	20.16	1159195	0.146	21.12	0	0	0	0	0	64.84	35388692	0.088	24.81	105718	0
	23.03	10607515	139.356	20.16	1151830	0.145	21.12	0	0	0	0	0	64.84	35819484	0.089	24.81	92188	0
	22.99	10697406	140.536	20.16	1160223	0.145	21.12	0	0	0	0	0	64.84	35523968	0.088	24.81	110919	0
Average		1.07E+07	140.522		1.15E+06	0.145		0.00E+00	0.000		0.00E+00	0.000		3.56E+07	0.088		1.03E+05	0.000
Standard Deviation		8.60E+04	1.155		4.83E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.29E+05	0.001		9.68E+03	0.000
%RSD		0.82	0.82		0.42	0.40		ERR	ERR		ERR	ERR		0.64	0.66		9.40	ERR

Sample I.D. Number 93 - 545

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	22.95	8958415	117.666	20.16	966734	0.122	21.12	0	0	0	0	0	64.84	39622306	0.098	24.81	122839	0
	22.99	8671982	113.929	20.16	943477	0.118	21.12	0	0	0	0	0	64.84	39746496	0.098	24.81	129311	0
	22.95	8609425	113.043	20.16	952222	0.12	21.12	0	0	0	0	0	64.84	39687616	0.099	24.81	134161	0
Average		8.81E+06	115.746		9.54E+05	0.120		0.00E+00	0.000		0.00E+00	0.000		3.98E+07	0.098		1.29E+05	0.000
Standard Deviation		1.42E+05	1.871		1.22E+04	0.002		0.00E+00	0.000		0.00E+00	0.000		1.33E+05	0.001		5.68E+03	0.000
%RSD		1.62	1.62		1.28	1.67		ERR	ERR		ERR	ERR		0.33	0.69		4.41	ERR

Sample I.D. Number 93 - 546

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
22.99	7409595	97.344	20.06	799883	0.1	21.12	0	0	0	0	0	54.84	41485840	0.103	84.81	125379	0
22.99	7209348	94.701	20.06	786144	0.099	21.12	0	0	0	0	0	54.84	41536880	0.103	84.81	91375	0
22.99	7293677	95.822	20.06	785984	0.099	21.12	0	0	0	0	0	54.84	41260852	0.102	84.81	130341	0
Average	7.30E+06	95.956		7.90E+05	0.099		0.00E+00	0.000		0.00E+00	0.000		4.15E+07	0.103		1.16E+05	0.000
Standard Deviation	1.01E+05	1.327		7.39E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.91E+05	0.001		2.12E+04	0.000
%RSD	1.38	1.38		0.94	0.58		ERR	ERR		ERR	ERR		0.46	0.56		18.31	ERR

Sample I.D. Number 93 - 547

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
22.99	6406906	84.192	20.06	684627	0.088	21.12	0	0	0	0	0	54.84	41764484	0.103	84.81	161312	0
22.97	6229033	81.835	20.06	675720	0.087	21.12	0	0	0	0	0	54.84	42148376	0.104	84.81	142613	0
22.99	6252600	82.144	20.06	679378	0.088	21.12	0	0	0	0	0	54.84	41832608	0.104	84.81	151829	0
Average	6.30E+06	82.726		6.80E+05	0.085		0.00E+00	0.000		0.00E+00	0.000		4.19E+07	0.104		1.52E+05	0.000
Standard Deviation	9.78E+04	1.284		4.48E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.06E+05	0.001		9.35E+03	0.000
%RSD	1.55	1.55		0.66	0.68		ERR	ERR		ERR	ERR		0.49	0.56		6.16	ERR

Sample I.D. Number 93 - 548

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
22.99	5648555	74.209	20.06	602516	0.078	21.12	0	0	0	0	0	54.84	41939240	0.104	84.81	135634	0
23.01	5501638	72.276	20.06	597480	0.075	21.12	0	0	0	0	0	54.84	42190434	0.104	84.81	162685	0
23.01	5465919	72.072	20.06	596596	0.076	21.12	0	0	0	0	0	54.84	42118200	0.104	84.81	129493	0
Average	5.55E+06	72.852		5.99E+05	0.075		0.00E+00	0.000		0.00E+00	0.000		4.21E+07	0.104		1.39E+05	0.000
Standard Deviation	8.97E+04	1.178		3.19E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.29E+05	0.000		1.21E+04	0.000
%RSD	1.62	1.62		0.53	0.77		ERR	ERR		ERR	ERR		0.31	0.00		8.68	ERR

Sample I.D. Number 93 - 549

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
22.97	5026546	66.037	20.06	541050	0.068	21.12	0	0	0	0	0	54.84	43481400	0.105	84.81	161058	0
23.01	4693127	64.294	20.06	533692	0.067	21.12	0	0	0	0	0	54.84	42227616	0.105	84.81	160538	0
22.97	4903212	64.417	20.06	529563	0.067	21.12	0	0	0	0	0	54.84	42513140	0.105	84.81	150534	0
Average	4.94E+06	64.913		5.35E+05	0.067		0.00E+00	0.000		0.00E+00	0.000		4.24E+07	0.105		1.51E+05	0.000
Standard Deviation	7.43E+04	0.976		5.80E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.52E+05	0.000		3.01E+02	0.000
%RSD	1.50	1.50		1.08	0.86		ERR	ERR		ERR	ERR		0.36	0.00		0.20	ERR

Sample I.D Number 93 - 550

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
22.09	4798699	63.046	20.08	505891	0.094	21.12	0	0	0	0	0	54.84	42204040	0.105	34.81	181321	0
22.07	4687163	61.576	20.08	501652	0.093	21.12	0	0	0	0	0	54.84	42381080	0.105	34.81	152048	0
22.07	4686046	61.574	20.08	495879	0.092	21.12	0	0	0	0	0	54.84	42390372	0.105	34.81	171628	0
Average	4.72E+06	62.066		5.01E+05	0.093		0.00E+00	0.000		0.00E+00	0.000		4.23E+07	0.105		1.62E+05	0.000
Standard Deviation	6.46E+04	0.849		5.05E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.00E+05	0.000		9.50E+03	0.000
%RSD	1.37	1.37		1.01	1.59		ERR	ERR		ERR	ERR		0.24	0.00		5.87	ERR

Sample I.D. Number 93 - 551

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
22.07	4339816	57.016	20.08	456319	0.057	21.12	0	0	0	0	0	54.84	42170920	0.104	34.81	142510	0
22.07	4141714	54.412	20.08	459707	0.057	21.12	0	0	0	0	0	54.84	42830520	0.106	34.81	166202	0
22.07	4120925	54.139	20.08	453466	0.057	21.12	0	0	0	0	0	54.84	42273096	0.105	34.81	135952	0
Average	4.20E+06	55.189		4.54E+05	0.057		0.00E+00	0.000		0.00E+00	0.000		4.24E+07	0.105		1.49E+05	0.000
Standard Deviation	1.21E+05	1.588		2.81E+03	0.000		0.00E+00	0.000		0.00E+00	0.000		3.55E+05	0.001		1.70E+04	0.000
%RSD	2.88	2.88		0.62	0.00		ERR	ERR		ERR	ERR		0.84	0.95		11.45	ERR

Sample I.D. Number 93 - 552

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
22.07	4089521	53.727	20.08	429747	0.054	21.12	0	0	0	0	0	54.84	42177120	0.104	34.81	155422	0
22.07	3995231	51.174	20.08	422318	0.053	21.12	0	0	0	0	0	54.84	42718224	0.106	34.81	156780	0
22.07	3943573	50.495	20.08	422024	0.053	21.12	0	0	0	0	0	54.84	42448752	0.105	34.81	174354	0
Average	3.94E+06	51.799		4.25E+05	0.053		0.00E+00	0.000		0.00E+00	0.000		4.24E+07	0.105		1.62E+05	0.000
Standard Deviation	1.30E+05	1.704		4.38E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.71E+05	0.001		1.06E+04	0.000
%RSD	3.29	3.29		1.03	1.08		ERR	ERR		ERR	ERR		0.64	0.95		6.51	ERR

Sample I.D. Number 93 - 553

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
23.01	3852092	50.607	20.08	409493	0.051	21.12	0	0	0	0	0	54.84	42599312	0.106	34.81	148221	0
22.07	3804930	49.411	20.08	400829	0.05	21.12	0	0	0	0	0	54.84	42444864	0.105	34.81	143774	0
22.07	3687043	48.436	20.08	393497	0.049	21.12	0	0	0	0	0	54.84	42437512	0.105	34.85	155385	0
Average	3.74E+06	49.152		4.00E+05	0.050		0.00E+00	0.000		0.00E+00	0.000		4.25E+07	0.105		1.49E+05	0.000
Standard Deviation	9.59E+04	1.260		7.04E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		8.66E+04	0.001		5.85E+03	0.000
%RSD	2.56	2.56		1.76	2.00		ERR	ERR		ERR	ERR		0.20	0.55		3.92	ERR

Sample I.D. Number 93 - 554

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	22.97	3631295	50.334	20.08	399015	0.05	21.12	0	0	0	0	0	54.84	42601818	0.106	24.81	144048	0
	22.97	3605731	47.371	20.08	388337	0.046	21.12	0	0	0	0	0	54.92	36158140	0.09	24.81	163836	0
	22.97	3614747	47.489	20.08	385343	0.045	21.12	0	0	17.87	862370	0.127	54.84	41187186	0.102	24.85	172832	0
Average		3.68E+06	48.398		3.90E+05	0.049		0.00E+00	0.000		2.21E+05	0.042		4.00E+07	0.099		1.60E+05	0.000
Standard Deviation		1.28E+05	1.678		7.92E+03	0.001		0.00E+00	0.000		3.82E+05	0.073		3.38E+06	0.008		1.47E+04	0.000
%RSD		3.47	3.47		2.03	2.37		ERR	ERR		173.21	173.21		8.47	8.38		9.19	ERR

Sample I.D. Number 93 - 555

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	22.99	1655306	21.747	20.16	173312	0.022	0	0	0	0	0	0	54.84	43395490	0.107	24.81	161996	0
	22.99	1484692	19.505	20.16	165191	0.021	0	0	0	0	0	0	54.84	43365182	0.107	24.81	171783	0
	22.99	1518836	19.954	20.16	162630	0.02	0	0	0	0	0	0	54.84	41015128	0.102	24.81	163033	0
Average		1.55E+06	20.393		1.67E+05	0.021		0.00E+00	0.000		0.00E+00	0.000		4.26E+07	0.105		1.66E+05	0.000
Standard Deviation		9.07E+04	1.191		5.51E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.37E+06	0.003		5.39E+03	0.000
%RSD		5.84	5.84		3.30	4.76		ERR	ERR		ERR	ERR		3.22	2.74		3.25	ERR

Sample I.D. Number 93 - 556

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	22.99	2135877	28.06	20.16	211795	0.027	0	0	0	0	0	0	54.84	42904720	0.106	24.81	173537	0
	22.96	1790808	23.527	20.16	183207	0.023	0	0	0	0	0	0	54.84	42772968	0.106	24.85	163768	0
	22.99	1747633	22.96	20.16	182930	0.023	0	0	0	0	0	0	54.84	42669332	0.106	24.81	167955	0
Average		1.89E+06	24.849		1.93E+05	0.024		0.00E+00	0.000		0.00E+00	0.000		4.29E+07	0.106		1.75E+05	0.000
Standard Deviation		2.13E+05	2.795		1.66E+04	0.002		0.00E+00	0.000		0.00E+00	0.000		9.59E+04	0.000		8.02E+03	0.000
%RSD		11.25	11.25		8.61	9.49		ERR	ERR		ERR	ERR		0.22	0.00		4.58	ERR

Sample I.D. Number 93 - 557

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	23.01	1634256	23.966	20.16	183763	0.023	0	0	0	0	0	0	54.52	43432680	0.106	34.85	1589104	0.001
	23.01	1670053	21.841	20.16	178624	0.022	0	0	0	0	0	0	54.52	42663904	0.104	34.85	1534854	0.001
	23.01	1667807	21.908	20.16	180916	0.023	0	0	0	0	0	0	54.52	42452736	0.103	34.85	1568612	0.001
Average		1.72E+06	22.605		1.81E+05	0.023		0.00E+00	0.000		0.00E+00	0.000		4.29E+07	0.104		1.56E+06	0.001
Standard Deviation		8.97E+04	1.178		2.57E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		5.12E+05	0.002		3.29E+04	0.000
%RSD		5.22	5.21		1.42	2.55		ERR	ERR		ERR	ERR		1.20	1.46		2.11	0.00

Sample I.D. Number 93 - 558

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	23.01	1606216	23.758	20.16	183689	0.023	0	0	0	0	0	0	54.52	42267760	0.103	34.85	934644	0.001
	23.02	1621644	21.302	20.16	179677	0.022	0	0	0	0	0	0	54.52	42692624	0.104	34.85	902234	0.001
	23.03	1741025	22.672	20.16	185874	0.024	0	0	0	0	0	0	54.54	42342088	0.103	34.85	901581	0.001
Average		1.72E+06	22.644		1.84E+05	0.023		0.00E+00	0.000		0.00E+00	0.000		4.24E+07	0.103		8.76E+05	0.001
Standard Deviation		9.45E+04	1.242		4.50E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.53E+05	0.001		6.55E+04	0.000
%RSD		5.49	5.49		2.45	2.47		ERR	ERR		ERR	ERR		0.60	0.56		7.48	0.00

Sample I.D. Number 93 - 559

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	22.99	5183662	69.104	20.08	565175	0.071	0	0	0	0	0	0	54.52	5602616	0.014	34.85	132376	0
	22.99	5133601	67.447	20.08	557037	0.07	0	0	0	0	0	0	54.52	5304986	0.013	34.85	165784	0
	22.99	5097919	66.975	20.08	552033	0.069	0	0	0	0	0	0	54.52	5822906	0.014	34.81	172392	0
Average		5.14E+06	67.509		5.58E+05	0.070		0.00E+00	0.000		0.00E+00	0.000		5.58E+06	0.014		1.54E+05	0.000
Standard Deviation		4.32E+04	0.567		6.63E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.60E+05	0.001		2.01E+04	0.000
%RSD		0.84	0.84		1.19	1.43		ERR	ERR		ERR	ERR		4.66	4.22		13.10	ERR

Sample I.D. Number 93 - 560

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	22.99	10405596	136.705	20.08	1139945	0.143	0	0	0	0	0	0	54.52	12610284	0.031	34.81	195415	0
	22.99	10412028	136.789	20.08	1143282	0.144	0	0	0	0	0	0	54.52	13047690	0.031	34.81	197548	0
	22.99	10494246	137.869	20.08	1141814	0.143	0	0	0	0	0	0	54.52	13052202	0.032	34.85	222615	0
Average		1.04E+07	137.121		1.14E+06	0.143		0.00E+00	0.000		0.00E+00	0.000		1.28E+07	0.031		2.05E+05	0.000
Standard Deviation		4.94E+04	0.649		4.98E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.21E+05	0.001		1.51E+04	0.000
%RSD		0.47	0.47		0.44	0.40		ERR	ERR		ERR	ERR		1.72	1.84		7.34	ERR

Sample I.D. Number **93 - 561**

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
23.01	12500103	164.222	20.08	1353429	0.17	0	0	0	0	0	0	54.52	18157432	0.044	34.65	197643	0
22.99	12443389	163.477	20.08	1350188	0.17	0	0	0	0	0	0	54.52	18203230	0.044	34.61	199504	0
22.98	12474877	163.889	20.08	1356714	0.171	0	0	0	0	0	0	54.52	18092520	0.044	34.31	215326	0
Average	1.25E+07	163.862		1.35E+06	0.170		0.00E+00	0.000		0.00E+00	0.000		1.82E+07	0.044		2.04E+05	0.000
Standard Deviation	2.84E+04	0.373		3.32E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		5.56E+04	0.000		9.72E+03	0.000
%RSD	0.23	0.23		0.25	0.34		ERR	ERR		ERR	ERR		0.31	0.00		4.76	ERR

Sample I.D. Number **93 - 562**

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
22.99	14847186	195.057	20.08	1611491	0.203	0	0	0	0	0	0	54.52	19228304	0.047	34.61	185943	0
22.98	15030944	197.471	20.08	1633570	0.205	0	0	0	0	0	0	54.52	20321748	0.05	34.31	185347	0
22.98	15091068	198.269	20.08	1640679	0.206	0	0	0	0	0	0	54.52	20285736	0.049	34.31	190321	0
Average	1.50E+07	196.932		1.63E+06	0.205		0.00E+00	0.000		0.00E+00	0.000		1.99E+07	0.049		1.81E+05	0.000
Standard Deviation	1.27E+05	1.672		1.52E+04	0.002		0.00E+00	0.000		0.00E+00	0.000		6.22E+05	0.002		1.29E+04	0.000
%RSD	0.85	0.85		0.93	0.75		ERR	ERR		ERR	ERR		3.12	3.14		7.13	ERR

Sample I.D. Number **93 - 563**

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
22.98	14650129	195.095	20.08	1612292	0.203	0	0	0	0	0	0	54.52	24794880	0.09	34.61	186061	0
22.97	14864442	196.283	20.08	1635347	0.202	0	0	0	0	0	0	54.52	25184424	0.091	34.61	111125	0
22.97	14840473	196.069	20.08	1612151	0.203	0	0	0	0	0	0	54.52	25178754	0.091	34.31	178057	0
Average	1.49E+07	195.116		1.61E+06	0.203		0.00E+00	0.000		0.00E+00	0.000		2.51E+07	0.091		1.59E+05	0.000
Standard Deviation	1.21E+04	0.158		2.30E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.27E+05	0.001		4.20E+04	0.000
%RSD	0.08	0.08		0.14	0.28		ERR	ERR		ERR	ERR		0.90	0.95		26.35	ERR

Sample I.D. Number **93 - 564**

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
22.99	14693693	195.67	20.08	1611145	0.203	0	0	0	0	0	0	54.52	26904234	0.07	34.61	154306	0
22.97	14621161	192.697	20.08	1593600	0.2	0	0	0	0	0	0	54.52	29050694	0.071	34.65	179558	0
22.97	14648797	192.46	20.08	1597617	0.2	0	0	0	0	0	0	54.52	28751278	0.07	34.61	165343	0
Average	1.47E+07	193.402		1.60E+06	0.201		0.00E+00	0.000		0.00E+00	0.000		2.89E+07	0.070		1.64E+05	0.000
Standard Deviation	1.50E+05	1.972		1.22E+04	0.002		0.00E+00	0.000		0.00E+00	0.000		1.50E+05	0.001		9.71E+03	0.000
%RSD	1.02	1.02		0.77	0.86		ERR	ERR		ERR	ERR		0.52	0.82		5.91	ERR

Sample I.D. Number 93 - 565

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
22.97	13704697	180.048	20.08	1483591	0.187	0	0	0	0	0	0	54.52	32874210	0.08	34.31	166312	0
22.97	13705598	180.059	20.08	1491407	0.187	0	0	0	0	0	0	54.52	33415008	0.079	34.31	172770	0
22.97	13642373	179.228	20.08	1487101	0.187	0	0	0	0	0	0	54.52	32546450	0.079	34.31	165728	0
Average	1.37E+07	179.779		1.49E+06	0.187		0.00E+00	0.000		0.00E+00	0.000		3.25E+07	0.079		1.76E+05	0.000
Standard Deviation	3.63E+04	0.477		3.00E+03	0.000		0.00E+00	0.000		0.00E+00	0.000		1.30E+05	0.001		9.05E+03	0.000
%RSD	0.27	0.27		0.20	0.00		ERR	ERR		ERR	ERR		0.40	0.73		5.15	ERR

Sample I.D. Number 93 - 566

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
22.97	12719170	167.1	20.08	1374514	0.173	0	0	0	0	0	0	54.84	35123504	0.086	34.31	167213	0
22.97	12665748	166.398	20.08	1377919	0.173	0	0	0	0	0	0	54.84	35091400	0.085	34.31	143617	0
22.97	12634094	165.982	20.08	1378741	0.173	0	0	0	0	0	0	54.84	35118432	0.086	34.31	161041	0
Average	1.27E+07	166.493		1.38E+06	0.173		0.00E+00	0.000		0.00E+00	0.000		3.51E+07	0.086		1.57E+05	0.000
Standard Deviation	4.30E+04	0.565		1.73E+03	0.000		0.00E+00	0.000		0.00E+00	0.000		1.68E+04	0.001		1.22E+04	0.000
%RSD	0.34	0.34		0.13	0.00		ERR	ERR		ERR	ERR		0.05	0.67		7.78	ERR

Sample I.D. Number 93 - 567

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
22.97	11192836	147.047	20.08	1220171	0.153	0	0	0	0	0	0	54.52	37748296	0.092	34.31	160506	0
22.97	11114900	146.023	20.08	1216461	0.153	0	0	0	0	0	0	54.52	37531690	0.091	34.31	161090	0
22.97	11026054	144.858	20.08	1209435	0.152	0	0	0	0	0	0	54.52	37427720	0.091	34.31	201535	0
Average	1.11E+07	145.975		1.22E+06	0.153		0.00E+00	0.000		0.00E+00	0.000		3.76E+07	0.091		1.74E+05	0.000
Standard Deviation	8.35E+04	1.096		6.34E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.62E+05	0.001		2.35E+04	0.000
%RSD	0.75	0.75		0.52	0.38		ERR	ERR		ERR	ERR		0.43	0.63		13.49	ERR

Sample I.D. Number 93 - 568

Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
22.97	10530056	138.34	20.08	1133025	0.142	0	0	0	0	0	0	54.52	37937772	0.092	34.31	154125	0
22.97	10486253	137.641	20.08	1134650	0.143	0	0	0	0	0	0	54.52	38273636	0.093	34.31	169923	0
22.97	10375782	136.313	20.08	1129423	0.142	0	0	0	0	0	0	54.52	38187020	0.093	34.31	151594	0
Average	1.05E+07	137.398		1.13E+06	0.142		0.00E+00	0.000		0.00E+00	0.000		3.81E+07	0.093		1.59E+05	0.000
Standard Deviation	7.77E+04	1.021		2.68E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.72E+05	0.001		9.93E+03	0.000
%RSD	0.74	0.74		0.24	0.41		ERR	ERR		ERR	ERR		0.45	0.62		6.26	ERR

Sample I.D. Number 93 - 569

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	22.97	9065855	119.495	20.08	968505	0.122	0	0	0	0	0	0	54.52	39854490	0.097	34.81	153576	0
	22.97	8914278	117.112	20.08	963330	0.121	0	0	0	0	0	0	54.52	39705092	0.097	34.81	149116	0
	22.97	8938998	117.437	20.08	962252	0.121	0	0	0	0	0	0	54.52	39967000	0.097	34.81	145792	0
Average		8.98E+06	118.015		9.65E+05	0.121		0.00E+00	0.000		0.00E+00	0.000		3.98E+07	0.097		1.49E+05	0.000
Standard Deviation		9.84E+04	1.292		3.34E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.31E+05	0.000		3.91E+03	0.000
%RSD		1.09	1.10		0.35	0.48		ERR	ERR		ERR	ERR		0.33	0.00		2.61	ERR

Sample I.D. Number 93 - 570

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	22.99	9144047	120.143	20.08	963565	0.124	0	0	0	0	0	0	54.52	39610552	0.094	34.81	135640	0
	22.96	9100910	119.564	20.08	963553	0.124	0	0	0	0	0	0	54.52	39194392	0.093	34.81	155061	0
	22.99	9051200	118.911	20.08	962560	0.124	0	0	0	0	0	0	54.52	38607072	0.094	34.81	134371	0
Average		9.10E+06	119.539		9.63E+05	0.124		0.00E+00	0.000		0.00E+00	0.000		3.85E+07	0.094		1.42E+05	0.000
Standard Deviation		4.69E+04	0.616		5.77E+02	0.000		0.00E+00	0.000		0.00E+00	0.000		2.39E+05	0.001		1.16E+04	0.000
%RSD		0.52	0.52		0.06	0.00		ERR	ERR		ERR	ERR		0.62	0.62		8.18	ERR

Sample I.D. Number 93 - 571

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	22.97	7277017	95.602	20.08	769953	0.098	0	0	0	0	0	0	54.52	41317456	0.101	34.81	99300	0
	22.97	7116404	93.493	20.08	779953	0.099	0	0	0	0	0	0	54.52	40711820	0.099	34.81	154704	0
	22.97	7142702	93.838	20.08	778976	0.099	0	0	0	0	0	0	54.52	40582836	0.099	34.81	162794	0
Average		7.18E+06	94.311		7.81E+05	0.098		0.00E+00	0.000		0.00E+00	0.000		4.09E+07	0.100		1.39E+05	0.000
Standard Deviation		8.61E+04	1.132		5.12E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		4.00E+05	0.001		3.51E-04	0.000
%RSD		1.20	1.20		0.66	0.58		ERR	ERR		ERR	ERR		0.98	1.16		25.35	ERR

Sample I.D. Number 93 - 572

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	22.97	7128795	93.577	20.08	782268	0.099	0	0	0	0	0	0	54.52	40709712	0.099	34.81	120312	0
	22.97	7001232	93.102	20.12	769754	0.097	0	0	0	0	0	0	54.52	39675834	0.097	34.81	94765	0
	22.97	7141200	93.616	20.08	771002	0.097	0	0	0	0	0	0	54.52	40048872	0.1	34.81	97918	0
Average		7.12E+06	93.619		7.68E+05	0.097		0.00E+00	0.000		0.00E+00	0.000		4.04E+07	0.099		1.04E+05	0.000
Standard Deviation		2.53E+04	0.332		4.71E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		6.76E+05	0.002		1.39E+04	0.000
%RSD		0.36	0.36		0.61	0.60		ERR	ERR		ERR	ERR		1.67	1.55		13.35	ERR

Sample I.D. Number 93 - 573

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	22.97	6032136	79.348	20.08	652985	0.082	0	0	0	0	0	0	54.52	41525528	0.101	34.81	155783	0
	22.97	5856034	76.934	20.08	634867	0.08	0	0	0	0	0	0	54.52	40879792	0.1	34.81	150046	0
	22.97	5903422	77.544	20.08	647093	0.081	0	0	0	0	0	0	54.52	41539212	0.101	34.81	150978	0
Average		5.93E+06	77.909		6.46E+05	0.081		0.00E+00	0.000		0.00E+00	0.000		4.13E+07	0.101		1.55E+05	0.000
Standard Deviation		9.13E+04	1.199		7.09E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		3.77E+05	0.001		4.98E+03	0.000
%RSD		1.54	1.54		1.10	1.23		ERR	ERR		ERR	ERR		0.91	0.57		3.21	ERR

Sample I.D. Number 93 - 574

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	22.97	6006429	78.91	20.08	646270	0.081	0	0	0	0	0	0	54.52	40973600	0.1	34.81	150705	0
	22.97	5964803	78.628	20.08	651087	0.082	0	0	0	0	0	0	54.52	40958744	0.1	34.81	145948	0
	22.97	5962532	78.334	20.08	648637	0.082	0	0	0	0	0	0	54.52	40628800	0.099	34.81	141622	0
Average		5.98E+06	78.623		6.49E+05	0.082		0.00E+00	0.000		0.00E+00	0.000		4.09E+07	0.100		1.46E+05	0.000
Standard Deviation		2.19E+04	0.288		1.49E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		7.93E+04	0.001		4.54E+03	0.000
%RSD		0.37	0.37		0.23	0.71		ERR	ERR		ERR	ERR		0.19	0.68		3.11	ERR

Sample I.D. Number 93 - 575

	Channel "A" (ppm) Carbon Dioxide			Channel "B" (%) Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT									
	22.99	5087227	66.834	20.08	555838	0.07	0	0	0	0	0	0	54.52	41939934	0.102	34.81	146610	0
	22.97	5017036	65.912	20.08	547708	0.069	0	0	0	0	0	0	54.52	42382664	0.103	34.81	148690	0
	22.97	4999275	65.676	20.08	545575	0.069	0	0	0	0	0	0	54.52	41966372	0.102	34.81	134977	0
Average		5.03E+06	66.142		5.53E+05	0.069		0.00E+00	0.000		0.00E+00	0.000		4.21E+07	0.102		1.43E+05	0.000
Standard Deviation		4.65E+04	0.611		5.41E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.49E+05	0.001		7.39E+03	0.000
%RSD		0.92	0.92		0.98	0.83		ERR	ERR		ERR	ERR		0.59	0.56		5.15	ERR

Sample I.D. Number: 93 - 576

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-576.prn	0	0	0	22.97	5315823	69.839	20.08	570341	0.072	0	0	0	0	0	0	54.52	41340472	0.101	34.81	155963	0
	0	0	0	22.97	5304196	70.473	20.08	563487	0.073	0	0	0	0	0	0	54.52	41110040	0.1	34.81	141368	0
	0	0	0	22.97	5294253	68.554	20.08	576109	0.072	0	0	0	0	0	0	54.52	40785258	0.099	34.81	135089	0
Average		0.00E+00	0.000		5.32E+06	69.955		5.76E+05	0.072		0.00E+00	0.000		0.00E+00	0.000		4.11E+07	0.100		1.44E+05	0.000
Standard Deviation		0.00E+00	0.000		3.68E+04	0.470		6.07E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.90E+05	0.001		1.07E+04	0.000
%RSD		ERR	ERR		0.67	0.67		1.05	0.80		ERR	ERR		ERR	ERR		0.70	1.00		7.43	ERR

Sample I.D. Number: 93 - 577

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-577.prn	0	0	0	22.95	4609671	60.559	20.08	489487	0.062	0	0	0	0	0	0	54.52	43490112	0.104	34.81	166012	0
	0	0	0	22.97	4480439	58.892	20.08	479206	0.06	0	0	0	0	0	0	54.52	42191752	0.103	34.81	140922	0
	0	0	0	22.97	4453121	58.888	20.08	481818	0.061	0	0	0	0	0	0	54.52	43402908	0.103	34.81	149535	0
Average		0.00E+00	0.000		4.52E+06	59.440		4.83E+05	0.061		0.00E+00	0.000		0.00E+00	0.000		4.24E+07	0.103		1.53E+05	0.000
Standard Deviation		0.00E+00	0.000		7.38E+04	0.970		5.74E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.53E+05	0.001		1.38E+04	0.000
%RSD		ERR	ERR		1.63	1.63		1.19	1.64		ERR	ERR		ERR	ERR		0.36	0.56		9.08	ERR

Sample I.D. Number: 93 - 578

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-578.prn	0	0	0	22.95	8063806	91.752	20.08	754361	0.095	0	0	0	0	0	0	54.52	36196032	0.083	34.81	131074	0
	0	0	0	22.95	7720067	101.431	20.08	827274	0.104	0	0	0	0	0	0	54.52	36510032	0.089	34.85	93485	0
	0	0	0	22.98	7523847	102.704	20.08	846498	0.118	0	0	0	0	0	0	54.52	36739344	0.089	34.85	0	0
Average		0.00E+00	0.000		7.51E+06	98.656		8.43E+05	0.106		0.00E+00	0.000		0.00E+00	0.000		3.71E+07	0.090		7.49E+04	0.000
Standard Deviation		0.00E+00	0.000		4.58E+05	6.017		9.81E+04	0.012		0.00E+00	0.000		0.00E+00	0.000		8.97E+05	0.002		6.75E+04	0.000
%RSD		ERR	ERR		6.10	6.10		11.63	11.44		ERR	ERR		ERR	ERR		2.42	2.56		90.17	ERR

Sample I.D. Number: 93 - 579

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-579.prn	0	0	0	22.97	1581698	20.914	20.08	163350	0.021	0	0	0	0	0	0	54.52	42904448	0.104	34.81	145305	0
	0	0	0	22.97	1483148	18.222	20.08	151113	0.02	0	0	0	0	0	0	54.52	42589336	0.104	34.81	156802	0
	0	0	0	22.97	1444800	18.002	20.08	150693	0.02	0	0	0	0	0	0	54.52	42913432	0.104	34.81	162983	0
Average		0.00E+00	0.000		1.50E+06	19.713		1.62E+05	0.020		0.00E+00	0.000		0.00E+00	0.000		4.28E+07	0.104		1.58E+05	0.000
Standard Deviation		0.00E+00	0.000		7.96E+04	1.046		1.43E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		6.92E+04	0.000		1.15E+04	0.000
%RSD		ERR	ERR		5.31	5.31		0.88	2.84		ERR	ERR		ERR	ERR		0.16	0.00		7.24	ERR

Sample I.D. Number: 93 - 580

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-580.prn	0	0	0	22.98	4356996	57.341	20.08	448338	0.058	0	0	0	0	0	0	54.52	38790353	0.094	34.81	163613	0
	0	0	0	22.98	4081838	53.754	20.08	429078	0.054	0	0	0	0	0	0	54.52	38686440	0.096	34.81	183578	0
	0	0	0	22.98	4048128	53.189	20.08	423481	0.053	0	0	0	0	0	0	54.52	38986644	0.095	34.81	167021	0
Average		0.00E+00	0.000		4.17E+06	54.730		4.34E+05	0.054		0.00E+00	0.000		0.00E+00	0.000		3.89E+07	0.095		1.55E+05	0.000
Standard Deviation		0.00E+00	0.000		1.67E+05	2.192		1.36E+04	0.002		0.00E+00	0.000		0.00E+00	0.000		1.04E+05	0.001		8.34E+03	0.000
%RSD		ERR	ERR		4.00	4.01		3.14	2.81		ERR	ERR		ERR	ERR		0.27	0.61		5.39	ERR

Sample ID Number 93 - 581

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio									Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-581 pm	0	0	0	22.90	4718435	62.002	20.08	498187	0.093	0	0	0	0	0	0	54.52	37000304	0.092	34.81	1547046	0.001
	0	0	0	22.95	6482663	85.187	20.08	702610	0.088	0	0	0	0	0	0	54.52	34872496	0.086	34.81	1490660	0.001
	0	0	0	22.99	7281574	95.693	20.08	739600	0.090	0	0	0	0	0	0	54.52	34258052	0.083	34.81	1672309	0.001
Average		0.00E+00	0.000		6.16E+06	80.944		6.64E+05	0.083		0.00E+00	0.000		0.00E+00	0.000		3.56E+07	0.087		1.57E+06	0.001
Standard Deviation		0.00E+00	0.000		1.31E+06	17.223		1.50E+05	0.018		0.00E+00	0.000		0.00E+00	0.000		1.78E+06	0.005		9.29E+04	0.000
%RSD		ERR	ERR		21.28	21.28		22.56	22.14		ERR	ERR		ERR	ERR		5.00	5.45		5.92	0.00

Sample ID Number 93 - 582

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio									Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-582.pm	0	0	0	22.95	4916358	64.578	20.08	523128	0.066	0	0	0	0	0	0	54.52	37866512	0.092	34.81	1003161	0.001
	0	0	0	22.97	4731118	62.158	20.08	511770	0.064	0	0	0	0	0	0	54.52	37563140	0.092	34.81	1039918	0.001
	0	0	0	22.95	4764290	62.654	20.08	513783	0.065	0	0	0	0	0	0	54.52	37343440	0.091	34.81	1039527	0.001
Average		0.00E+00	0.000		4.81E+06	63.195		5.16E+05	0.065		0.00E+00	0.000		0.00E+00	0.000		3.75E+07	0.092		1.03E+06	0.001
Standard Deviation		0.00E+00	0.000		9.48E+04	1.246		6.05E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.21E+05	0.001		2.11E+04	0.000
%RSD		ERR	ERR		1.97	1.97		1.17	1.54		ERR	ERR		ERR	ERR		0.59	0.63		2.05	0.00

Sample ID Number 93 - 583

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio									Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-583.pm	0	0	0	22.95	4783740	62.678	20.08	513398	0.065	0	0	0	0	0	0	54.52	9445454	0.023	34.81	0	0
	0	0	0	22.95	4629637	60.822	20.08	505371	0.064	0	0	0	0	0	0	54.52	9504101	0.021	34.81	29693	0
	0	0	0	22.95	4696101	61.301	20.1	503101	0.063	0	0	0	0	0	0	54.52	9516063	0.021	34.77	43645	0
Average		0.00E+00	0.000		4.70E+06	61.700		5.07E+05	0.064		0.00E+00	0.000		0.00E+00	0.000		8.84E+06	0.022		2.44E+04	0.000
Standard Deviation		0.00E+00	0.000		8.62E+04	1.132		5.40E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		5.23E+05	0.001		2.22E+04	0.000
%RSD		ERR	ERR		1.83	1.83		1.07	1.56		ERR	ERR		ERR	ERR		5.92	5.33		91.13	ERR

Sample ID Number 93 - 584

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio									Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-584.pm	0	0	0	22.95	11258014	147.904	20.08	1215297	0.153	0	0	0	0	0	0	54.52	10250418	0.025	34.77	0	0
	0	0	0	22.95	11173268	146.79	20.08	1205181	0.151	0	0	0	0	0	0	54.52	10664551	0.026	34.77	36668	0
	0	0	0	22.95	11146337	146.439	20.08	1215440	0.153	0	0	0	0	0	0	54.52	10668508	0.027	34.77	44311	0
Average		0.00E+00	0.000		1.12E+07	147.043		1.21E+06	0.152		0.00E+00	0.000		0.00E+00	0.000		1.06E+07	0.026		2.70E+04	0.000
Standard Deviation		0.00E+00	0.000		5.83E+04	0.766		6.18E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		3.26E+05	0.001		2.37E+04	0.000
%RSD		ERR	ERR		0.52	0.52		0.51	0.76		ERR	ERR		ERR	ERR		3.07	3.85		87.75	ERR

Sample ID Number 93 - 585

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio									Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-585.pm	0	0	0	22.95	9673732	131.031	20.08	1074958	0.135	0	0	0	0	0	0	54.52	14994983	0.037	34.77	0	0
	0	0	0	22.95	9682706	126.588	20.08	1075163	0.135	0	0	0	0	0	0	54.52	15387726	0.038	34.77	0	0
	0	0	0	22.96	9665096	128.867	20.08	1072542	0.135	0	0	0	0	0	0	54.52	15066222	0.037	34.76	184970	0
Average		0.00E+00	0.000		9.91E+06	130.156		1.07E+06	0.135		0.00E+00	0.000		0.00E+00	0.000		1.52E+07	0.037		5.17E+04	0.000
Standard Deviation		0.00E+00	0.000		5.88E+04	0.773		1.46E+03	0.000		0.00E+00	0.000		0.00E+00	0.000		2.11E+05	0.001		1.07E+05	0.000
%RSD		ERR	ERR		0.59	0.59		0.14	0.00		ERR	ERR		ERR	ERR		1.39	1.55		173.21	ERR

Sample I.D. Number 93 - 586

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-586.prn	0	0	0	22.97	13415058	163.116	20.08	1352160	0.17	0	0	0	0	0	0	54.52	19080364	0.046	34.77	39418	0
	0	0	0	22.97	13494429	164.147	20.08	1360611	0.171	0	0	0	0	0	0	54.52	19069348	0.046	34.81	43798	0
	0	0	0	22.97	13480889	163.988	20.08	1353238	0.17	0	0	0	0	0	0	54.52	19007642	0.046	34.77	44364	0
Average		0.00E+00	0.000		1.25E+07	163.744		1.36E+06	0.170		0.00E+00	0.000		0.00E+00	0.000		1.91E+07	0.046		4.25E+04	0.000
Standard Deviation		0.00E+00	0.000		4.19E+04	0.551		4.71E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		4.48E+04	0.000		2.71E+03	0.000
%RSD		ERR	ERR		0.34	0.34		0.35	0.34		ERR	ERR		ERR	ERR		0.23	0.00		6.38	ERR

Sample I.D. Number 93 - 587

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-587.prn	0	0	0	22.97	11327102	148.911	20.08	1223944	0.154	0	0	0	0	0	0	54.52	25950736	0.063	34.77	85803	0
	0	0	0	22.95	11196342	147.133	20.08	1217894	0.153	0	0	0	0	0	0	54.52	25905906	0.063	34.81	55049	0
	0	0	0	22.96	11277997	148.188	20.11	1217964	0.153	0	0	0	0	0	0	54.52	25930452	0.063	34.81	37028	0
Average		0.00E+00	0.000		1.13E+07	148.037		1.22E+06	0.153		0.00E+00	0.000		0.00E+00	0.000		2.59E+07	0.063		6.96E+04	0.000
Standard Deviation		0.00E+00	0.000		8.44E+04	0.846		3.56E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.25E+04	0.000		1.59E+04	0.000
%RSD		ERR	ERR		0.57	0.57		0.29	0.38		ERR	ERR		ERR	ERR		0.09	0.00		22.89	ERR

Sample I.D. Number 93 - 588

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-588.prn	0	0	0	22.99	12165271	160.048	20.08	1316507	0.165	0	0	0	0	0	0	54.52	29990136	0.073	34.81	135343	0
	0	0	0	22.98	12160958	160.025	20.08	1322905	0.166	0	0	0	0	0	0	54.52	29948812	0.073	34.81	74712	0
	0	0	0	22.99	12079041	158.69	20.08	1316778	0.166	0	0	0	0	0	0	54.52	29918588	0.073	34.81	74364	0
Average		0.00E+00	0.000		1.21E+07	159.600		1.32E+06	0.166		0.00E+00	0.000		0.00E+00	0.000		2.99E+07	0.073		9.48E+04	0.000
Standard Deviation		0.00E+00	0.000		6.00E+04	0.789		3.56E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		7.02E+04	0.000		3.51E+04	0.000
%RSD		ERR	ERR		0.49	0.49		0.27	0.35		ERR	ERR		ERR	ERR		0.23	0.00		37.03	ERR

Sample I.D. Number 93 - 589

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-589.prn	0	0	0	22.97	9391109	123.378	20.08	1016743	0.128	0	0	0	0	0	0	54.52	36098358	0.093	34.81	152743	0
	0	0	0	22.97	9215234	121.066	20.08	1006068	0.127	0	0	0	0	0	0	54.52	36347206	0.093	34.81	144748	0
	0	0	0	22.97	9206982	120.958	20.08	1004830	0.126	0	0	0	0	0	0	54.52	36361580	0.093	34.81	93223	0
Average		0.00E+00	0.000		9.27E+06	121.801		1.01E+06	0.127		0.00E+00	0.000		0.00E+00	0.000		3.83E+07	0.093		1.34E+05	0.000
Standard Deviation		0.00E+00	0.000		1.04E+05	1.367		5.75E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.55E+05	0.000		3.61E+04	0.000
%RSD		ERR	ERR		1.12	1.12		0.57	0.79		ERR	ERR		ERR	ERR		0.40	0.00		27.01	ERR

Sample I.D. Number 93 - 590

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-590.prn	0	0	0	22.98	9643099	126.316	20.08	1062874	0.134	0	0	0	0	0	0	54.52	37662200	0.092	34.81	129687	0
	0	0	0	22.98	9598187	125.98	20.08	1050127	0.132	0	0	0	0	0	0	54.52	37636636	0.092	34.81	136778	0
	0	0	0	22.98	9681434	127.101	20.08	1064832	0.131	0	0	0	0	0	0	54.52	37296480	0.091	34.81	140916	0
Average		0.00E+00	0.000		9.73E+06	127.832		1.05E+06	0.132		0.00E+00	0.000		0.00E+00	0.000		3.75E+07	0.092		1.38E+05	0.000
Standard Deviation		0.00E+00	0.000		9.80E+04	1.288		8.75E+03	0.002		0.00E+00	0.000		0.00E+00	0.000		2.20E+05	0.001		8.65E+03	0.000
%RSD		ERR	ERR		1.01	1.01		0.83	1.15		ERR	ERR		ERR	ERR		0.59	0.63		6.29	ERR

Sample I D Number 93 - 591

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-591 pm	0	0	0	22.97	7067292	82.847	20.08	783017	0.096	0	0	0	0	0	0	54.52	41473068	0.101	34.81	158186	0
	0	0	0	22.97	9819006	90.91	20.08	757545	0.095	0	0	0	0	0	0	54.52	42127006	0.103	34.81	166706	0
	0	0	0	22.97	8803106	90.681	20.08	751621	0.094	0	0	0	0	0	0	54.52	41072020	0.1	34.31	143537	0
Average		0.00E+00	0.000		6.96E+06	91.483		7.57E+05	0.095		0.00E+00	0.000		0.00E+00	0.000		4.16E+07	0.101		1.56E+05	0.000
Standard Deviation		0.00E+00	0.000		9.03E+04	1.187		5.75E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		5.33E+05	0.002		1.26E+04	0.000
%RSD		ERR	ERR		1.30	1.30		0.76	1.05		ERR	ERR		ERR	ERR		1.28	1.51		8.06	ERR

Sample I D Number 93 - 592

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-592.pm	0	0	0	22.98	8796356	116.169	20.08	947458	0.119	0	0	0	0	0	0	54.52	37713448	0.092	34.81	154346	0
	0	0	0	23.01	8741162	114.838	20.08	948205	0.119	0	0	0	0	0	0	54.52	37673968	0.092	34.81	149305	0
	0	0	0	22.97	8873712	113.962	20.08	943128	0.119	0	0	0	0	0	0	54.52	37589040	0.092	34.81	85058	0
Average		0.00E+00	0.000		8.73E+06	114.653		9.46E+05	0.119		0.00E+00	0.000		0.00E+00	0.000		3.77E+07	0.092		1.30E+05	0.000
Standard Deviation		0.00E+00	0.000		4.79E+04	0.629		2.74E+03	0.000		0.00E+00	0.000		0.00E+00	0.000		6.34E+04	0.000		3.86E+04	0.000
%RSD		ERR	ERR		0.55	0.55		0.29	0.00		ERR	ERR		ERR	ERR		0.17	0.00		29.81	ERR

Sample I D Number 93 - 593

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-593 pm	0	0	0	22.98	5634183	74.02	20.08	904772	0.078	0	0	0	0	0	0	54.52	42336490	0.103	34.81	163508	0
	0	0	0	22.98	5469074	72.1	20.08	596148	0.075	0	0	0	0	0	0	54.52	42111664	0.103	34.81	157558	0
	0	0	0	22.98	5606733	72.372	20.08	598718	0.075	0	0	0	0	0	0	54.52	42268018	0.103	34.66	161908	0
Average		0.00E+00	0.000		5.54E+06	72.831		6.01E+05	0.075		0.00E+00	0.000		0.00E+00	0.000		4.23E+07	0.103		1.68E+05	0.000
Standard Deviation		0.00E+00	0.000		7.91E+04	1.039		3.38E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.47E+05	0.000		1.27E+04	0.000
%RSD		ERR	ERR		1.43	1.43		0.56	0.77		ERR	ERR		ERR	ERR		0.35	0.00		7.57	ERR

Sample I D Number 93 - 594

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-594 pm	0	0	0	22.98	5100873	68.004	20.08	554368	0.07	0	0	0	0	0	0	54.52	42532752	0.104	34.81	214158	0
	0	0	0	23.01	5002947	66.737	20.08	545145	0.068	0	0	0	0	0	0	54.52	42579080	0.104	34.81	157986	0
	0	0	0	22.98	5021858	66.975	20.08	543808	0.068	0	0	0	0	0	0	54.52	42368684	0.103	34.81	146510	0
Average		0.00E+00	0.000		5.07E+06	66.589		5.48E+05	0.069		0.00E+00	0.000		0.00E+00	0.000		4.25E+07	0.104		1.73E+05	0.000
Standard Deviation		0.00E+00	0.000		9.77E+04	1.284		5.55E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.10E+05	0.001		3.62E+04	0.000
%RSD		ERR	ERR		1.93	1.93		1.01	1.45		ERR	ERR		ERR	ERR		0.26	0.56		20.94	ERR

Sample I D. Number 93 - 595

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-595 pm	0	0	0	22.99	4867454	65.129	20.08	525814	0.068	0	0	0	0	0	0	54.52	42487046	0.103	34.81	154529	0
	0	0	0	22.98	4796066	62.996	20.08	516833	0.065	0	0	0	0	0	0	54.52	41755432	0.102	34.85	150799	0
	0	0	0	22.99	4760968	62.548	20.08	513306	0.065	0	0	0	0	0	0	54.52	42215792	0.103	34.81	157530	0
Average		0.00E+00	0.000		4.84E+06	63.558		5.18E+05	0.065		0.00E+00	0.000		0.00E+00	0.000		4.22E+07	0.103		1.44E+05	0.000
Standard Deviation		0.00E+00	0.000		1.05E+05	1.379		8.57E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		3.70E+05	0.001		2.52E+04	0.000
%RSD		ERR	ERR		2.17	2.17		1.27	0.88		ERR	ERR		ERR	ERR		0.88	0.56		17.54	ERR

Sample I D Number 93 - 596

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-596.prn	0	0	0	22.98	4491786	58.012	20.08	479505	3.06	0	0	0	0	0	0	54.52	42239472	0.103	34.81	185190	0
	0	0	0	22.98	4338080	57.005	20.08	469068	0.058	0	0	0	0	0	0	54.52	42361312	0.103	34.81	118538	0
	0	0	0	22.98	4350068	57.15	20.08	464961	0.058	0	0	0	0	0	0	54.52	41335588	0.101	34.81	148331	0
Average		0.00E+00	0.000		4.39E+06	57.722		4.70E+05	0.059		0.00E+00	0.000		0.00E+00	0.000		4.20E+07	0.102		1.51E+05	0.000
Standard Deviation		0.00E+00	0.000		8.52E+04	1.119		5.96E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		5.60E+05	0.001		3.34E+04	0.000
%RSD		ERR	ERR		1.94	1.94		1.27	1.69		ERR	ERR		ERR	ERR		1.33	1.13		22.18	ERR

Sample I.D. Number 93 - 597

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-597.prn	0	0	0	22.98	4217022	56.402	20.08	448648	0.058	0	0	0	0	0	0	54.52	42799920	0.104	34.81	0	0
	0	0	0	22.98	3968628	53.832	20.08	439675	0.055	0	0	0	0	0	0	54.52	42253800	0.103	34.85	181468	0
	0	0	0	22.98	4028533	52.925	20.08	435316	0.055	0	0	0	17.98	504836	0.087	54.52	42454340	0.103	34.83	157140	0
Average		0.00E+00	0.000		4.08E+06	53.620		4.41E+05	0.056		0.00E+00	0.000		1.68E+05	0.032		4.25E+07	0.103		1.06E+05	0.000
Standard Deviation		0.00E+00	0.000		1.18E+05	1.556		6.70E+03	0.001		0.00E+00	0.000		2.91E+05	0.056		2.58E+05	0.001		9.20E+04	0.000
%RSD		ERR	ERR		2.90	2.90		1.52	1.04		ERR	ERR		173.21	173.21		0.61	0.56		86.63	ERR

Sample I.D. Number 93 - 598

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-598.prn	0	0	0	22.98	3041825	38.862	20.18	309921	0.039	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	23.01	2630476	37.306	20.18	297501	0.037	0	0	0	0	0	0	54.52	40799472	0.099	34.85	157325	0
	0	0	0	23.01	2639434	37.306	20.18	296202	0.037	0	0	0	0	0	0	54.52	40542960	0.098	34.81	151298	0
Average		0.00E+00	0.000		2.91E+06	38.191		3.01E+05	0.038		0.00E+00	0.000		0.00E+00	0.000		4.07E+07	0.099		1.54E+05	0.000
Standard Deviation		0.00E+00	0.000		1.17E+05	1.534		7.57E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.82E+05	0.000		4.26E+03	0.000
%RSD		ERR	ERR		4.02	4.02		2.51	3.07		ERR	ERR		ERR	ERR		0.45	0.00		2.76	ERR

Sample I.D. Number 93 - 599

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-599.prn	0	0	0	22.98	1737754	22.63	20.18	179008	0.023	0	0	0	0	0	0	54.52	42981824	0.105	34.81	189565	0
	0	0	0	22.98	1569068	20.629	20.08	166718	0.021	0	0	0	0	0	0	54.52	42589444	0.104	34.81	105934	0
	0	0	0	22.98	1584808	20.658	20.08	172145	0.022	0	0	0	0	0	0	54.52	42838400	0.104	34.81	156332	0
Average		0.00E+00	0.000		1.62E+06	21.337		1.73E+05	0.022		0.00E+00	0.000		0.00E+00	0.000		4.28E+07	0.104		1.50E+05	0.000
Standard Deviation		0.00E+00	0.000		9.84E+04	1.293		5.24E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.84E+05	0.001		4.20E+04	0.000
%RSD		ERR	ERR		6.06	6.06		3.02	4.55		ERR	ERR		ERR	ERR		0.43	0.55		27.98	ERR

Sample I D. Number 93 - 600

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-600.prn	0	0	0	23.01	1787961	23.223	20.18	186333	0.024	0	0	0	0	0	0	54.2	43706652	0.106	34.81	483372	0
	0	0	0	23.03	1600157	21.022	20.18	179528	0.022	0	0	0	0	0	0	54.2	43200204	0.104	34.81	483301	0
	0	0	0	23.03	1614298	21.209	20.18	179390	0.023	0	0	0	0	0	0	54.2	43415204	0.103	34.81	483930	0
Average		0.00E+00	0.000		1.66E+06	21.818		1.82E+05	0.023		0.00E+00	0.000		0.00E+00	0.000		4.31E+07	0.104		4.87E+05	0.000
Standard Deviation		0.00E+00	0.000		9.29E+04	1.221		5.43E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		6.52E+05	0.002		5.64E+03	0.000
%RSD		ERR	ERR		5.59	5.59		2.98	4.35		ERR	ERR		ERR	ERR		1.51	1.46		1.16	ERR

Sample I D Number: 93 - 601

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-601.prn	0	0	0	23.03	2130125	27.605	20.18	218927	0.027	0	0	0	0	0	0	54.52	41904840	0.101	34.81	378299	0
	0	0	0	23.01	1958087	25.724	20.18	210425	0.026	0	0	0	0	0	0	54.52	42531823	0.103	34.81	316440	0
	0	0	0	23.01	2006958	26.364	20.18	207008	0.026	0	0	0	0	0	0	54.52	43488356	0.103	34.81	304068	0
Average		0.00E+00	0.000		2.03E+06	26.688		2.12E+05	0.026		0.00E+00	0.000		0.00E+00	0.000		4.23E+07	0.102		3.33E+05	0.000
Standard Deviation		0.00E+00	0.000		8.88E+04	1.167		5.02E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		4.08E+05	0.001		3.97E+04	0.000
%RSD		ERR	ERR		4.37	4.37		2.37	2.19		ERR	ERR		ERR	ERR		0.96	1.13		11.94	ERR

Sample I D Number: 93 - 602

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-602.prn	0	0	0	23.03	2321029	30.403	20.18	346878	0.031	0	0	0	0	0	0	54.2	6320936	0.016	34.81	0	0
	0	0	0	23.03	2349250	29.55	20.18	342833	0.03	0	0	0	0	0	0	54.2	6182106	0.015	34.81	0	0
	0	0	0	23.03	2206648	28.993	20.18	343265	0.031	0	0	0	0	0	0	54.2	5220037	0.015	34.81	0	0
Average		0.00E+00	0.000		2.26E+06	29.879		2.45E+05	0.031		0.00E+00	0.000		0.00E+00	0.000		6.24E+06	0.015		0.00E+00	0.000
Standard Deviation		0.00E+00	0.000		5.77E+04	0.758		3.46E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		7.18E+04	0.000		0.00E+00	0.000
%RSD		ERR	ERR		2.55	2.55		1.41	1.88		ERR	ERR		ERR	ERR		1.15	0.00		ERR	ERR

Sample I D. Number: 93 - 603

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-603.prn	0	0	0	23.03	7016266	92.177	20.18	752401	0.095	0	0	0	0	0	0	54.52	11696079	0.026	34.81	0	0
	0	0	0	23.03	6935961	91.122	20.18	748068	0.094	0	0	0	0	0	0	54.52	12121555	0.029	34.81	0	0
	0	0	0	23.03	6951391	91.325	20.18	747934	0.094	0	0	0	0	0	0	54.52	11991650	0.029	34.81	0	0
Average		0.00E+00	0.000		6.97E+06	91.541		7.50E+05	0.094		0.00E+00	0.000		0.00E+00	0.000		1.19E+07	0.029		0.00E+00	0.000
Standard Deviation		0.00E+00	0.000		4.26E+04	0.560		2.72E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.18E+05	0.001		0.00E+00	0.000
%RSD		ERR	ERR		0.61	0.61		0.36	0.61		ERR	ERR		ERR	ERR		1.83	2.01		ERR	ERR

Sample I D. Number: 93 - 604

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-604.prn	0	0	0	23.01	6749951	88.678	20.18	726877	0.092	0	0	0	0	0	0	54.52	16900058	0.041	34.81	0	0
	0	0	0	23.01	6647567	87.336	20.18	717405	0.09	0	0	0	0	0	0	54.52	16557118	0.04	34.81	0	0
	0	0	0	23.01	6803068	89.78	20.18	713218	0.09	0	0	0	0	0	0	54.52	16720277	0.04	34.81	0	0
Average		0.00E+00	0.000		6.67E+06	87.591		7.20E+05	0.091		0.00E+00	0.000		0.00E+00	0.000		1.67E+07	0.040		0.00E+00	0.000
Standard Deviation		0.00E+00	0.000		7.49E+04	0.984		8.11E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.72E+05	0.001		0.00E+00	0.000
%RSD		ERR	ERR		1.12	1.12		1.13	1.27		ERR	ERR		ERR	ERR		1.03	1.43		ERR	ERR

Sample I D. Number: 93 - 605

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-605.prn	0	0	0	23.03	8020028	118.502	20.18	877900	0.123	0	0	0	0	0	0	54.52	18931104	0.049	34.81	54508	0
	0	0	0	23.03	8067582	119.792	20.18	866358	0.121	0	0	0	0	0	0	54.52	19559466	0.047	34.81	33734	0
	0	0	0	23.03	8097461	119.206	20.18	862833	0.121	0	0	0	0	0	0	54.52	19612290	0.047	34.81	26548	0
Average		0.00E+00	0.000		8.97E+06	117.823		9.69E+05	0.122		0.00E+00	0.000		0.00E+00	0.000		1.94E+07	0.047		3.82E+04	0.000
Standard Deviation		0.00E+00	0.000		7.09E+04	0.931		7.85E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		3.79E+05	0.001		1.46E+04	0.000
%RSD		ERR	ERR		0.79	0.79		0.81	0.95		ERR	ERR		ERR	ERR		1.98	1.24		38.30	ERR

Sample I.D. Number: 93 - 606

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-606.prn	0	0	0	23.06	8101303	106.433	20.18	369611	0.109	0	0	0	0	0	0	54.52	25828028	0.063	34.91	34892	0
	0	0	0	23.06	7911308	103.936	20.18	362098	0.106	0	0	0	0	0	0	54.52	25839100	0.062	34.95	47350	0
	0	0	0	23.06	7930707	104.191	20.18	354892	0.107	0	0	0	0	0	0	54.52	25832124	0.062	34.85	0	0
Average		0.00E+00	0.000		7.98E+06	104 853		8.62E+05	0.108		0.00E+00	0.000		0.00E+00	0.000		2.58E+07	0.062		2.74E+04	0.000
Standard Deviation		0.00E+00	0.000		1 05E+05	1 374		7 31E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.52E+05	0.001		2.45E+04	0.000
%RSD		ERR	ERR		1.31	1.31		0.85	0.93		ERR	ERR		ERR	ERR		0.59	0.93		89.55	ERR

Sample I.D. Number: 93 - 607

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-607.prn	0	0	0	23.06	9648654	126.772	20.18	1040631	0.131	0	0	0	0	0	0	54.52	29122288	0.07	34.85	67040	0
	0	0	0	23.03	9634008	126.043	20.18	1036696	0.13	0	0	0	0	0	0	54.52	29100122	0.07	34.81	77213	0
	0	0	0	23.06	9636274	126.588	20.18	1034401	0.13	0	0	0	0	0	0	54.52	29729739	0.069	34.81	61366	0
Average		0.00E+00	0.000		9 63E+06	126.474		1 04E+06	0.130		0.00E+00	0.000		0.00E+00	0.000		2.90E+07	0.070		6.85E+04	0.000
Standard Deviation		0.00E+00	0.000		2.86E+04	0.375		3.26E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.21E+05	0.001		8.03E+03	0.000
%RSD		ERR	ERR		0.30	0.30		0.31	0.44		ERR	ERR		ERR	ERR		0.76	0.83		11.71	ERR

Sample I.D. Number: 93 - 608

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-608.prn	0	0	0	23.03	7329262	96.269	20.18	780754	0.049	0	0	0	0	0	0	54.52	35004760	0.065	34.85	125495	0
	0	0	0	23.06	7136709	93.759	20.18	775328	0.097	0	0	0	0	0	0	54.52	37457072	0.091	34.85	105816	0
	0	0	0	23.03	7220206	94.836	20.18	778821	0.098	0	0	0	0	0	0	54.52	37153420	0.09	34.85	130771	0
Average		0.00E+00	0.000		7 23E+06	94 968		7 80E+05	0.098		0.00E+00	0.000		0.00E+00	0.000		3.65E+07	0.089		1.21E+05	0.000
Standard Deviation		0.00E+00	0.000		9.66E+04	1 269		5.84E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1 34E+06	0.003		1 32E+04	0.000
%RSD		ERR	ERR		1.34	1 34		0.75	1 02		ERR	ERR		ERR	ERR		3.66	3.63		10.90	ERR

Sample I.D. Number: 93 - 609

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-609.prn	0	0	0	23.06	8622034	115.9	20.18	361338	0.12	0	0	0	0	0	0	54.52	36816144	0.069	34.85	122354	0
	0	0	0	23.03	8494463	114.225	20.18	340022	0.116	0	0	0	0	0	0	54.52	35510200	0.066	34.85	100170	0
	0	0	0	23.06	8731186	114.707	20.18	340067	0.116	0	0	0	0	0	0	54.52	35862332	0.066	34.85	77421	0
Average		0.00E+00	0.000		8.75E+06	114 944		9 44E+05	0.119		0.00E+00	0.000		0.00E+00	0.000		3.69E+07	0.067		1.03E+05	0.000
Standard Deviation		0.00E+00	0.000		9.67E+04	0.862		6.52E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		5.97E+05	0.002		2.31E+04	0.000
%RSD		ERR	ERR		0.75	0.75		0.69	0.97		ERR	ERR		ERR	ERR		1 66	1 99		22.43	ERR

Sample I.D. Number: 93 - 610

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-610.prn	0	0	0	23.03	5821818	76.498	20.18	629877	0.078	0	0	0	0	0	0	54.52	41987348	0.101	34.85	127731	0
	0	0	0	23.06	5707879	74.988	20.18	623314	0.078	0	0	0	0	0	0	54.52	42211348	0.102	34.85	117669	0
	0	0	0	23.01	5876782	74.679	20.18	621002	0.078	0	0	0	0	0	0	54.52	41833692	0.1	34.85	98913	0
Average		0.00E+00	0.000		5.74E+06	75 351		6 25E+05	0.078		0.00E+00	0.000		0.00E+00	0.000		4 19E+07	0.101		1.11E+05	0.000
Standard Deviation		0.00E+00	0.000		7 64E+04	1 004		4 66E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		3.39E+05	0.001		2.13E+04	0.000
%RSD		ERR	ERR		1 33	1 33		0.75	0.74		ERR	ERR		ERR	ERR		0.81	0.99		19 22	ERR

Sample I D Number 93 - 611

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio						Channel "C" (%) Hydrogen						Channel "D" (%) Hydrogen					
				Carbon Dio			Nitrous Oxi						Carbon Mo								
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-611 prn	0	0	0	23.03	5620987	59.69	20.18	736228	0.083	0	0	0	0	0	0	54.52	39188579	0.095	34.86	176475	0
	0	0	0	23.03	5603106	58.377	20.18	734917	0.082	0	0	0	0	0	0	54.52	39096804	0.095	34.85	123465	0
	0	0	0	23.03	5795683	58.279	20.18	731858	0.092	0	0	0	0	0	0	54.52	39281820	0.095	34.85	140985	0
Average		0.00E+00	0.000		6.81E+06	89.449		7.34E+05	0.092		0.00E+00	0.000		0.00E+00	0.000		3.93E+07	0.095		1.47E+05	0.000
Standard Deviation		0.00E+00	0.000		1.64E+04	0.216		2.24E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.14E+05	0.000		2.74E+04	0.000
%RSD		ERR	ERR		0.24	0.24		0.31	0.63		ERR	ERR		ERR	ERR		0.29	0.00		18.71	ERR

Sample I D. Number 93 - 612

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio						Channel "C" (%) Hydrogen						Channel "D" (%) Hydrogen					
				Carbon Dio			Nitrous Oxi						Carbon Mo								
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-612.prn	0	0	0	23.01	4833098	54.817	20.18	520033	0.068	0	0	0	0	0	0	54.52	43415834	0.103	34.81	146681	0
	0	0	0	23.01	4796870	52.865	20.18	516997	0.066	0	0	0	0	0	0	54.52	43460932	0.103	34.35	146820	0
	0	0	0	22.99	4736651	52.27	20.18	520135	0.065	0	0	0	0	0	0	54.2	43487779	0.103	34.81	157833	0
Average		0.00E+00	0.000		4.82E+06	53.324		5.22E+05	0.065		0.00E+00	0.000		0.00E+00	0.000		4.25E+07	0.103		1.50E+05	0.000
Standard Deviation		0.00E+00	0.000		1.01E+05	1.329		4.92E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		3.64E+04	0.000		6.28E+03	0.000
%RSD		ERR	ERR		2.10	2.10		0.94	0.88		ERR	ERR		ERR	ERR		0.09	0.00		4.18	ERR

Sample I D Number 93 - 613

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio						Channel "C" (%) Hydrogen						Channel "D" (%) Hydrogen					
				Carbon Dio			Nitrous Oxi						Carbon Mo								
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-613.prn	0	0	0	22.99	4459511	50.587	20.18	475568	0.06	0	0	0	0	0	0	54.52	42390552	0.102	34.81	90781	0
	0	0	0	22.99	4322990	50.794	20.18	474957	0.06	0	0	0	0	0	0	54.52	43160312	0.104	34.35	100343	0
	0	0	0	22.98	4322782	50.781	20.18	487543	0.058	0	0	0	0	0	0	54.52	42566960	0.103	34.31	139055	0
Average		0.00E+00	0.000		4.37E+06	57.391		4.73E+05	0.060		0.00E+00	0.000		0.00E+00	0.000		4.27E+07	0.103		1.07E+05	0.000
Standard Deviation		0.00E+00	0.000		7.89E+04	1.036		4.44E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		3.94E+05	0.001		3.00E+04	0.000
%RSD		ERR	ERR		1.81	1.81		0.94	0.97		ERR	ERR		ERR	ERR		0.92	0.97		28.04	ERR

Sample I D Number 93 - 614

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio						Channel "C" (%) Hydrogen						Channel "D" (%) Hydrogen					
				Carbon Dio			Nitrous Oxi						Carbon Mo								
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-614.prn	0	0	0	22.99	4143201	54.432	20.18	445354	0.058	0	0	0	0	0	0	54.52	42926360	0.104	34.81	166043	0
	0	0	0	22.98	4037362	53.042	20.18	437423	0.055	0	0	0	0	0	0	54.52	42819034	0.103	34.81	136790	0
	0	0	0	22.99	3985347	52.356	20.18	435218	0.055	0	0	0	0	0	0	54.52	42878328	0.104	34.81	143332	0
Average		0.00E+00	0.000		4.06E+06	53.277		4.39E+05	0.055		0.00E+00	0.000		0.00E+00	0.000		4.28E+07	0.104		1.49E+05	0.000
Standard Deviation		0.00E+00	0.000		8.04E+04	1.057		5.33E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.65E+05	0.001		1.65E+04	0.000
%RSD		ERR	ERR		1.98	1.98		1.21	1.04		ERR	ERR		ERR	ERR		0.39	0.56		11.03	ERR

Sample I D Number 93 - 615

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio						Channel "C" (%) Hydrogen						Channel "D" (%) Hydrogen					
				Carbon Dio			Nitrous Oxi						Carbon Mo								
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-615.prn	0	0	0	22.98	4023484	52.848	20.18	434691	0.063	0	0	0	0	0	0	54.52	43334032	0.105	34.81	141787	0
	0	0	0	22.99	3868298	50.828	20.18	418954	0.052	0	0	0	0	0	0	54.52	42548348	0.103	34.81	147541	0
	0	0	0	22.97	3854098	50.642	20.18	413481	0.052	0	0	0	0	0	0	54.52	42925120	0.104	34.81	136066	0
Average		0.00E+00	0.000		3.92E+06	51.439		4.17E+05	0.052		0.00E+00	0.000		0.00E+00	0.000		4.29E+07	0.104		1.42E+05	0.000
Standard Deviation		0.00E+00	0.000		9.30E+04	1.222		6.73E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		3.93E+05	0.001		4.76E+03	0.000
%RSD		ERR	ERR		2.38	2.38		1.61	1.10		ERR	ERR		ERR	ERR		0.92	0.96		3.34	ERR

Sample I.D. Number: 93 - 616

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-616 ppm	0	0	0	23.01	3680644	48.359	20.18	397454	0.05	0	0	0	0	0	0	54.52	43070694	0.104	34.81	166002	0
	0	0	0	22.97	3599040	47.293	20.18	390642	0.049	0	0	0	0	0	0	54.52	43481812	0.103	34.81	145307	0
	0	0	0	22.97	3588306	48.153	20.18	389169	0.049	0	0	0	0	0	0	54.52	42116500	0.102	34.81	151641	0
Average		0.00E+00	0.000		3.62E+06	47.498		3.92E+05	0.049		0.00E+00	0.000		0.00E+00	0.000		4.25E+07	0.103		1.54E+05	0.000
Standard Deviation		0.00E+00	0.000		5.90E+04	0.775		4.60E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		4.83E+05	0.001		1.06E+04	0.000
%RSD		ERR	ERR		1.63	1.63		1.17	1.17		ERR	ERR		ERR	ERR		1.14	0.97		6.88	ERR

Sample I.D. Number: 93 - 617

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-617 ppm	0	0	0	22.97	3736906	48.094	20.18	387790	0.049	0	0	0	0	0	0	54.2	43415232	0.103	34.81	146294	0
	0	0	0	22.97	3623702	48.293	20.08	381281	0.049	0	0	0	0	0	0	54.52	42060048	0.102	34.81	85802	0
	0	0	0	22.97	3554018	48.691	20.08	380934	0.049	0	0	0	0	0	0	54.52	42795858	0.103	34.77	136629	0
Average		0.00E+00	0.000		3.60E+06	47.359		3.83E+05	0.048		0.00E+00	0.000		0.00E+00	0.000		4.24E+07	0.103		1.24E+05	0.000
Standard Deviation		0.00E+00	0.000		1.15E+05	1.515		3.86E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		3.47E+05	0.001		3.32E+04	0.000
%RSD		ERR	ERR		3.20	3.20		1.01	1.19		ERR	ERR		ERR	ERR		0.82	0.56		26.89	ERR

Sample I.D. Number: 93 - 618

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-618 ppm	0	0	0	22.97	1061674	20.093	20.18	172573	0.022	0	0	0	0	0	0	54.52	42719529	0.103	34.81	122371	0
	0	0	0	22.97	1629939	20.06	20.18	319454	0.039	0	0	0	0	0	0	54.2	43036704	0.104	34.89	136736	0
	0	0	0	22.97	1640587	20.34	20.18	167922	0.021	0	0	0	0	0	0	54.52	42909518	0.103	34.77	142348	0
Average		0.00E+00	0.000		1.58E+06	20.798		2.18E+05	0.027		0.00E+00	0.000		0.00E+00	0.000		4.28E+07	0.103		1.34E+05	0.000
Standard Deviation		0.00E+00	0.000		8.57E+04	1.125		8.22E+04	0.010		0.00E+00	0.000		0.00E+00	0.000		2.23E+05	0.001		1.06E+04	0.000
%RSD		ERR	ERR		5.41	5.41		37.76	37.01		ERR	ERR		ERR	ERR		0.52	0.56		7.89	ERR

Sample I.D. Number: 93 - 619

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dio			Carbon Dio			Nitrous Oxi			Channel "C" (%) Hydrogen			Carbon Mo			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-619 ppm	0	0	0	22.97	1500346	18.711	20.18	158953	0.02	0	0	0	0	0	0	54.2	43065184	0.104	34.81	194566	0
	0	0	0	22.97	1418194	18.905	20.18	147494	0.019	0	0	0	0	0	0	54.52	42978596	0.104	34.81	156600	0
	0	0	0	22.97	1404213	18.648	20.18	148394	0.019	0	0	0	0	0	0	54.52	43276506	0.105	34.81	143699	0
Average		0.00E+00	0.000		1.44E+06	18.921		1.52E+05	0.019		0.00E+00	0.000		0.00E+00	0.000		4.31E+07	0.104		1.65E+05	0.000
Standard Deviation		0.00E+00	0.000		5.24E+04	0.688		6.43E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.54E+05	0.001		2.65E+04	0.000
%RSD		ERR	ERR		3.64	3.64		4.24	2.99		ERR	ERR		ERR	ERR		0.36	0.55		16.04	ERR

Sample I D Number: 93 - 620

	Channel "A" (ppm)			Channel "B" (%)						Channel "C" (%)						Channel "D" (%)					
	Methane			Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Hydrogen			Carbon Monoxide			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-620.prn	0	0	0	0	0	0	20.32	216837	0.027	21	0	0	0	0	0	60.52	43031896	0.103	24.77	1645268	0.001
	0	0	0	0	0	0	20.32	199983	0.025	21	0	0	0	0	0	60.52	43537672	0.105	24.77	1678614	0.001
	0	0	0	0	0	0	20.32	199080	0.025	21	0	0	0	0	0	60.36	43252384	0.104	24.77	1646465	0.001
Average		0.00E+00	0.000		0.00E+00	0.000		2.05E+05	0.026		0.00E+00	0.000		0.00E+00	0.000		4.33E+07	0.104		1.66E+06	0.001
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		9.65E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.54E+05	0.001		1.78E+04	0.000
%RSD		ERR	ERR		ERR	ERR		4.71	4.50		ERR	ERR		ERR	ERR		0.59	0.96		1.07	0.00

Sample I.D. Number: 93 - 621

	Channel "A" (ppm)			Channel "B" (%)						Channel "C" (%)						Channel "D" (%)					
	Methane			Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Hydrogen			Carbon Monoxide			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-621.prn	0	0	0	0	0	0	20.32	222147	0.028	21	0	0	0	0	0	60.52	43045632	0.104	24.77	1100922	0.001
	0	0	0	0	0	0	20.32	210187	0.027	21	0	0	0	0	0	60.52	42967932	0.103	24.77	1208962	0.001
	0	0	0	0	0	0	20.32	214684	0.027	21	0	0	0	0	0	60.52	42779400	0.103	24.77	1134156	0.001
Average		0.00E+00	0.000		0.00E+00	0.000		2.18E+05	0.027		0.00E+00	0.000		0.00E+00	0.000		4.29E+07	0.103		1.14E+06	0.001
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		3.95E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.37E+05	0.001		5.95E+04	0.000
%RSD		ERR	ERR		ERR	ERR		1.82	2.11		ERR	ERR		ERR	ERR		0.32	0.56		5.21	0.00

Sample I.D Number: 93 - 622

	Channel "A" (ppm)			Channel "B" (%)						Channel "C" (%)						Channel "D" (%)					
	Methane			Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Hydrogen			Carbon Monoxide			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-622.prn	0	0	0	0	0	0	20.32	444714	0.056	21	0	0	0	0	0	60.52	7204394	0.017	24.73	63211	0
	0	0	0	0	0	0	20.32	436643	0.055	21	0	0	0	0	0	60.52	7134184	0.017	24.73	41664	0
	0	0	0	0	0	0	20.32	431714	0.054	21	0	0	0	0	0	60.52	7083431	0.017	24.73	62200	0
Average		0.00E+00	0.000		0.00E+00	0.000		4.38E+05	0.055		0.00E+00	0.000		0.00E+00	0.000		7.13E+06	0.017		5.24E+04	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		6.56E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		7.14E+04	0.000		1.02E+04	0.000
%RSD		ERR	ERR		ERR	ERR		1.50	1.82		ERR	ERR		ERR	ERR		1.00	0.00		19.44	ERR

Sample I.D Number: 93 - 623

	Channel "A" (ppm)			Channel "B" (%)						Channel "C" (%)						Channel "D" (%)					
	Methane			Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Hydrogen			Carbon Monoxide			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-623.prn	0	0	0	0	0	0	20.32	1089322	0.137	21	0	0	0	0	0	60.52	12020499	0.029	24.73	0	0
	0	0	0	0	0	0	20.32	1086682	0.137	21	0	0	0	0	0	60.52	11932285	0.029	24.73	42507	0
	0	0	0	0	0	0	20.32	1063104	0.136	21	0	0	0	0	0	60.52	11956800	0.029	24.73	0	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.09E+06	0.137		0.00E+00	0.000		0.00E+00	0.000		1.20E+07	0.029		1.42E+04	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		5.15E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		4.55E+04	0.000		2.45E+04	0.000
%RSD		ERR	ERR		ERR	ERR		0.47	0.42		ERR	ERR		ERR	ERR		0.38	0.00		173.21	ERR

Sample I D Number: 93 - 624

	Channel "A" (ppm)			Channel "B" (%)						Channel "C" (%)						Channel "D" (%)					
	Methane			Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Hydrogen			Carbon Monoxide			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-624.prn	0	0	0	0	0	0	20.32	1062686	0.134	21	0	0	0	0	0	60.52	16781635	0.04	24.73	67874	0
	0	0	0	0	0	0	20.32	1050487	0.132	21	0	0	0	0	0	60.52	16930632	0.041	24.73	68853	0
	0	0	0	0	0	0	20.32	1054907	0.133	21	0	0	0	0	0	60.52	17050992	0.041	24.73	0	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.06E+06	0.133		0.00E+00	0.000		0.00E+00	0.000		1.69E+07	0.041		4.23E+04	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		6.31E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.45E+05	0.001		3.70E+04	0.000
%RSD		ERR	ERR		ERR	ERR		0.60	0.75		ERR	ERR		ERR	ERR		0.86	1.42		87.55	ERR

Sample I D Number: 93 - 625

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen				Channel "D" (%) Carbon Monoxide				Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-625.prn	0	0	0	0	0	0	20.32	1356584	0.171	21	0	0	0	0	0	50.52	19369434	0.047	24.73	0	0
	0	0	0	0	0	0	20.32	1370691	0.172	21	0	0	0	0	0	50.52	18903486	0.045	24.73	64657	0
	0	0	0	0	0	0	20.32	1356291	0.17	21	0	0	0	0	0	50.52	19278920	0.046	24.77	61337	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.36E+06	0.171		0.00E+00	0.000		0.00E+00	0.000		1.92E+07	0.046		3.53E+04	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		7.82E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.47E+05	0.001		3.05E+04	0.000
%RSD		ERR	ERR		ERR	ERR		0.57	0.34		ERR	ERR		ERR	ERR		1.29	2.17		86.73	ERR

Sample I.D. Number: 93 - 626

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen				Channel "D" (%) Carbon Monoxide				Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-626.prn	0	0	0	0	0	0	20.32	1228530	0.154	21	0	0	0	0	0	50.52	20611572	0.004	24.73	62712	0
	0	0	0	0	0	0	20.32	1210922	0.152	21	0	0	0	0	0	50.52	20530384	0.004	24.77	65392	0
	0	0	0	0	0	0	20.32	1214030	0.153	21	0	0	0	0	0	50.52	20515442	0.002	24.77	66626	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.22E+06	0.153		0.00E+00	0.000		0.00E+00	0.000		2.64E+07	0.003		5.82E+04	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		8.26E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		3.81E+05	0.001		7.38E+03	0.000
%RSD		ERR	ERR		ERR	ERR		0.68	0.65		ERR	ERR		ERR	ERR		1.44	1.82		12.68	ERR

Sample I D. Number: 93 - 627

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen				Channel "D" (%) Carbon Monoxide				Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-627.prn	0	0	0	0	0	0	20.32	1419185	0.178	21	0	0	0	0	0	50.52	27526926	0.006	24.77	97864	0
	0	0	0	0	0	0	20.32	1453062	0.183	21	0	0	0	0	0	50.52	27081840	0.005	24.77	112373	0
	0	0	0	0	0	0	20.32	1456724	0.183	21	0	0	0	0	0	50.52	27144636	0.005	24.77	92273	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.44E+06	0.181		0.00E+00	0.000		0.00E+00	0.000		2.73E+07	0.005		1.01E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		2.07E+04	0.003		0.00E+00	0.000		0.00E+00	0.000		2.41E+05	0.001		1.04E+04	0.000
%RSD		ERR	ERR		ERR	ERR		1.43	1.59		ERR	ERR		ERR	ERR		0.88	0.88		10.29	ERR

Sample I.D. Number: 93 - 628

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen				Channel "D" (%) Carbon Monoxide				Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-628.prn	0	0	0	0	0	0	20.32	1076413	0.135	21	0	0	0	0	0	50.52	0	0	0	0	0
	0	0	0	0	0	0	20.32	1071258	0.135	21	0	0	0	0	0	50.52	36711784	0.086	24.77	113687	0
	0	0	0	0	0	0	20.32	1066984	0.134	21	0	0	0	0	0	50.52	36626448	0.086	24.77	127321	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.07E+06	0.135		0.00E+00	0.000		0.00E+00	0.000		3.68E+07	0.089		1.21E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		3.81E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		8.11E+04	0.001		9.64E+03	0.000
%RSD		ERR	ERR		ERR	ERR		0.36	0.43		ERR	ERR		ERR	ERR		0.22	0.80		8.00	ERR

Sample I.D Number: 93 - 629

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen				Channel "D" (%) Carbon Monoxide				Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-629.prn	0	0	0	0	0	0	20.4	1294480	0.155	21	0	0	0	0	0	50.52	34356232	0.082	24.81	166966	0
	0	0	0	0	0	0	20.4	1294710	0.155	21	0	0	0	0	0	50.52	33889600	0.082	24.77	140273	0
	0	0	0	0	0	0	20.4	1306180	0.156	21	0	0	0	0	0	50.52	33550192	0.081	24.77	143647	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.29E+06	0.162		0.00E+00	0.000		0.00E+00	0.000		3.39E+07	0.082		1.63E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		2.15E+04	0.003		0.00E+00	0.000		0.00E+00	0.000		4.05E+05	0.001		1.23E+04	0.000
%RSD		ERR	ERR		ERR	ERR		1.67	1.63		ERR	ERR		ERR	ERR		1.19	1.22		8.07	ERR

Sample I D Number: 93 - 630

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide				Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen				Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-630 prn	0	0	0	0	0	0	20.4	818412	0.103	21	0	0	0	0	0	50.52	42264744	0.102	24.77	137378	0
	0	0	0	0	0	0	20.4	813606	0.102	21	0	0	0	0	0	50.52	42326376	0.102	24.81	160810	0
	0	0	0	0	0	0	20.4	806225	0.101	21	0	0	0	0	0	50.52	42052934	0.103	24.77	152117	0
Average		0.00E+00	0.000		0.00E+00	0.000		8.13E+05	0.102		0.00E+00	0.000		0.00E+00	0.000		4.25E+07	0.102		1.47E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		6.14E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		3.83E+05	0.001		8.16E+03	0.000
%RSD		ERR	ERR		ERR	ERR		0.76	0.98		ERR	ERR		ERR	ERR		0.90	0.56		5.56	ERR

Sample I.D Number: 93 - 631

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide				Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen				Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-631 prn	0	0	0	0	0	0	20.4	981785	0.123	21	0	0	0	0	0	50.52	37900060	0.091	24.77	126852	0
	0	0	0	0	0	0	20.4	1037585	0.13	21	0	0	0	0	0	50.52	37177686	0.089	24.81	128345	0
	0	0	0	0	0	0	20.4	1058174	0.133	21	0	0	0	0	0	50.52	38944504	0.093	24.77	107683	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.03E+06	0.129		0.00E+00	0.000		0.00E+00	0.000		3.73E+07	0.090		1.21E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		3.87E+04	0.005		0.00E+00	0.000		0.00E+00	0.000		4.98E+05	0.001		1.15E+04	0.000
%RSD		ERR	ERR		ERR	ERR		3.77	3.99		ERR	ERR		ERR	ERR		1.33	1.29		9.53	ERR

Sample I.D Number: 93 - 632

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide				Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen				Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-632 prn	0	0	0	0	0	0	20.4	870816	0.084	21	0	0	0	0	0	50.52	42166096	0.101	24.77	144940	0
	0	0	0	0	0	0	20.4	858651	0.083	21	0	0	0	0	0	50.52	43135888	0.104	24.81	147183	0
	0	0	0	0	0	0	20.4	864606	0.084	21	0	0	0	0	0	50.52	40720096	0.098	24.81	137150	0
Average		0.00E+00	0.000		0.00E+00	0.000		6.65E+05	0.084		0.00E+00	0.000		0.00E+00	0.000		4.20E+07	0.101		1.43E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		5.98E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.21E+06	0.003		5.26E+03	0.000
%RSD		ERR	ERR		ERR	ERR		0.90	0.69		ERR	ERR		ERR	ERR		2.89	2.97		3.67	ERR

Sample I D Number: 93 - 633

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide				Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen				Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-633 prn	0	0	0	0	0	0	20.4	732182	0.092	21	0	0	0	0	0	50.52	40933228	0.098	24.77	134172	0
	0	0	0	0	0	0	20.4	726541	0.091	21	0	0	0	0	0	50.52	40576260	0.098	24.77	127980	0
	0	0	0	0	0	0	20.4	722016	0.091	21	0	0	0	0	0	50.52	40920920	0.098	24.81	85754	0
Average		0.00E+00	0.000		0.00E+00	0.000		7.27E+05	0.091		0.00E+00	0.000		0.00E+00	0.000		4.08E+07	0.098		1.16E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		4.81E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.03E+05	0.000		2.63E+04	0.000
%RSD		ERR	ERR		ERR	ERR		0.66	0.63		ERR	ERR		ERR	ERR		0.50	0.00		22.72	ERR

Sample I D Number: 93 - 634

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide				Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen				Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-634 prn	0	0	0	0	0	0	20.4	544114	0.068	21	0	0	0	0	0	50.52	42873404	0.103	24.81	136825	0
	0	0	0	0	0	0	20.4	536880	0.067	21	0	0	0	0	0	50.52	43536128	0.105	24.81	83208	0
	0	0	0	0	0	0	20.4	537244	0.068	21	0	0	0	0	0	50.52	43103320	0.104	24.81	157318	0
Average		0.00E+00	0.000		0.00E+00	0.000		5.39E+05	0.068		0.00E+00	0.000		0.00E+00	0.000		4.32E+07	0.104		1.26E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		4.48E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		3.38E+05	0.001		3.82E+04	0.000
%RSD		ERR	ERR		ERR	ERR		0.82	0.85		ERR	ERR		ERR	ERR		0.78	0.96		30.42	ERR

Sample I.D Number 93 - 635

	Channel "A" (ppm)			Channel "B" (%)						Channel "C" (%)						Channel "D" (%)			
	Methane			Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Hydrogen			Carbon Monoxide			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-635 pm	0	0	0	0	0	0	20.4	514080	0.065	21	0	0	0	0	0	60.52	43228884	0.104	24.77	153359	0
	0	0	0	0	0	0	20.4	507350	0.064	21	0	0	0	0	0	60.52	43032296	0.103	24.77	139308	0
	0	0	0	0	0	0	20.4	509221	0.064	21	0	0	0	0	0	60.52	43126112	0.104	24.77	140426	0
Average		0.00E+00	0.000		0.00E+00	0.000		5.10E+05	0.064		0.00E+00	0.000		0.00E+00	0.000		4.31E+07	0.104		1.44E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		3.47E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		9.84E+04	0.001		7.81E+03	0.000
%RSD		ERR	ERR		ERR	ERR		0.68	0.90		ERR	ERR		ERR	ERR		0.23	0.56		5.41	ERR

Sample I.D. Number 93 - 636

	Channel "A" (ppm)			Channel "B" (%)						Channel "C" (%)						Channel "D" (%)			
	Methane			Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Hydrogen			Carbon Monoxide			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-636 pm	0	0	0	0	0	0	20.4	322377	0.041	21	0	0	0	0	0	60.52	41822996	0.101	24.77	148702	0
	0	0	0	0	0	0	20.4	314172	0.039	21	0	0	0	0	0	60.52	41535840	0.1	24.77	0	0
	0	0	0	0	0	0	20.4	308588	0.039	21	0	0	0	0	0	60.52	41810512	0.101	24.77	131858	0
Average		0.00E+00	0.000		0.00E+00	0.000		3.15E+05	0.040		0.00E+00	0.000		0.00E+00	0.000		4.17E+07	0.101		9.38E+04	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		6.94E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.65E+05	0.001		8.17E+04	0.000
%RSD		ERR	ERR		ERR	ERR		2.20	2.91		ERR	ERR		ERR	ERR		0.40	0.57		87.14	ERR

Sample I.D. Number 93 - 637

	Channel "A" (ppm)			Channel "B" (%)						Channel "C" (%)						Channel "D" (%)			
	Methane			Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Hydrogen			Carbon Monoxide			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-637.pm	0	0	0	0	0	0	20.4	212678	0.027	21	0	0	0	0	0	60.52	0	0	0	0	0
	0	0	0	0	0	0	20.32	207567	0.026	21	0	0	0	0	0	60.52	43227072	0.104	24.77	105636	0
	0	0	0	0	0	0	20.32	208184	0.026	21	0	0	0	0	0	60.52	43368948	0.104	24.77	141092	0
Average		0.00E+00	0.000		0.00E+00	0.000		2.09E+05	0.026		0.00E+00	0.000		0.00E+00	0.000		4.33E+07	0.104		1.23E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		2.79E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.10E+05	0.000		2.61E+04	0.000
%RSD		ERR	ERR		ERR	ERR		1.33	2.19		ERR	ERR		ERR	ERR		0.25	0.00		20.32	ERR

Sample I.D Number 93 - 638

	Channel "A" (ppm)			Channel "B" (%)						Channel "C" (%)						Channel "D" (%)			
	Methane			Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Hydrogen			Carbon Monoxide			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-638 pm	0	0	0	0	0	0	20.32	156461	0.02	21	0	0	0	0	0	60.52	44023280	0.106	24.77	1090226	0.001
	0	0	0	0	0	0	20.32	156364	0.02	21	0	0	0	0	0	60.52	44144718	0.106	24.77	1074303	0.001
	0	0	0	0	0	0	20.32	157233	0.02	21	0	0	0	0	0	60.52	43771760	0.105	24.77	1070769	0.001
Average		0.00E+00	0.000		0.00E+00	0.000		1.61E+05	0.020		0.00E+00	0.000		0.00E+00	0.000		4.40E+07	0.106		1.08E+06	0.001
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		6.74E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.90E+05	0.001		1.04E+04	0.000
%RSD		ERR	ERR		ERR	ERR		4.19	2.84		ERR	ERR		ERR	ERR		0.43	0.55		0.96	0.00

Sample I.D Number 93 - 639

	Channel "A" (ppm)			Channel "B" (%)						Channel "C" (%)						Channel "D" (%)			
	Methane			Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Hydrogen			Carbon Monoxide			Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-639 pm	0	0	0	0	0	0	20.32	423303	0.053	21	0	0	0	0	0	60.36	39899320	0.096	24.77	715604	0.001
	0	0	0	0	0	0	20.32	412718	0.052	21	0	0	0	0	0	60.36	39936586	0.096	24.77	718426	0.001
	0	0	0	0	0	0	20.32	416041	0.052	21	0	0	0	0	0	60.36	40107184	0.096	24.77	705629	0.001
Average		0.00E+00	0.000		0.00E+00	0.000		4.17E+05	0.052		0.00E+00	0.000		0.00E+00	0.000		3.99E+07	0.096		7.13E+05	0.001
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		5.44E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.48E+05	0.000		6.73E+03	0.000
%RSD		ERR	ERR		ERR	ERR		1.30	1.10		ERR	ERR		ERR	ERR		0.37	0.00		0.94	0.00

Sample I.D Number: 93 - 640

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen						Channel "D" (%) Hydrogen					
							Carbon Dioxide			Nitrous Oxide						Carbon Monoxide					
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-640.prn	0	0	0	0	0	0	20.32	574605	0.072	21	0	0	0	0	0	50.36	7326566	0.016	24.77	0	0
	0	0	0	0	0	0	20.32	564203	0.07	21	0	0	0	0	0	50.36	7120163	0.017	24.77	0	0
	0	0	0	0	0	0	20.32	563614	0.071	21	0	0	0	0	0	50.82	7364773	0.016	24.77	0	0
Average		0.00E+00	0.000		0.00E+00	0.000		5.68E+05	0.071		0.00E+00	0.000		0.00E+00	0.000		7.27E+06	0.018		0.00E+00	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		6.03E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.28E+05	0.001		0.00E+00	0.000
%RSD		ERR	ERR		ERR	ERR		1.06	0.81		ERR	ERR		ERR	ERR		1.76	3.27		ERR	ERR

Sample I.D Number: 93 - 641

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen						Channel "D" (%) Hydrogen					
							Carbon Dioxide			Nitrous Oxide						Carbon Monoxide					
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-641.prn	0	0	0	0	0	0	20.32	1263644	0.16	21	0	0	0	0	0	50.36	12281862	0.03	24.77	0	0
	0	0	0	0	0	0	20.32	1273572	0.16	21	0	0	0	0	0	50.82	12253163	0.029	24.77	0	0
	0	0	0	0	0	0	20.32	1271643	0.16	21	0	0	0	0	0	50.82	12357432	0.03	24.77	0	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.28E+06	0.160		0.00E+00	0.000		0.00E+00	0.000		1.23E+07	0.030		0.00E+00	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		6.65E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		5.39E+04	0.001		0.00E+00	0.000
%RSD		ERR	ERR		ERR	ERR		0.52	0.36		ERR	ERR		ERR	ERR		0.44	1.95		ERR	ERR

Sample I.D Number: 93 - 642

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen						Channel "D" (%) Hydrogen					
							Carbon Dioxide			Nitrous Oxide						Carbon Monoxide					
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-642.prn	0	0	0	0	0	0	20.32	1317378	0.166	21	0	0	0	0	0	50.36	18102160	0.044	24.77	0	0
	0	0	0	0	0	0	20.32	1306341	0.164	21	0	0	0	0	0	50.82	18342984	0.044	24.77	0	0
	0	0	0	0	0	0	20.32	1305925	0.165	21	0	0	0	0	0	50.36	18266534	0.044	24.77	0	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.31E+06	0.165		0.00E+00	0.000		0.00E+00	0.000		1.82E+07	0.044		0.00E+00	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		5.81E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		8.96E+04	0.000		0.00E+00	0.000
%RSD		ERR	ERR		ERR	ERR		0.44	0.61		ERR	ERR		ERR	ERR		0.49	0.00		ERR	ERR

Sample I.D Number: 93 - 643

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen						Channel "D" (%) Hydrogen					
							Carbon Dioxide			Nitrous Oxide						Carbon Monoxide					
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-643.prn	0	0	0	0	0	0	20.32	1563675	0.197	21	0	0	0	0	0	50.36	21473705	0.052	24.73	44665	0
	0	0	0	0	0	0	20.32	1552575	0.195	21	0	0	0	0	0	50.36	21795600	0.052	24.73	48055	0
	0	0	0	0	0	0	20.32	1553334	0.195	21	0	0	0	0	0	50.36	21422560	0.052	24.73	34726	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.56E+06	0.196		0.00E+00	0.000		0.00E+00	0.000		2.16E+07	0.052		4.25E+04	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		6.20E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.68E+05	0.000		6.93E+03	0.000
%RSD		ERR	ERR		ERR	ERR		0.40	0.59		ERR	ERR		ERR	ERR		0.78	0.00		16.31	ERR

Sample I.D Number: 93 - 644

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen						Channel "D" (%) Hydrogen					
							Carbon Dioxide			Nitrous Oxide						Carbon Monoxide					
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-644.prn	0	0	0	0	0	0	20.32	1366035	0.174	21	0	0	0	0	0	50.36	29606008	0.066	24.73	61957	0
	0	0	0	0	0	0	20.32	1382984	0.174	21	0	0	0	0	0	50.36	29920980	0.07	24.73	71826	0
	0	0	0	0	0	0	20.32	1374152	0.173	21	0	0	17.89	2060	0	50.36	29919356	0.07	24.73	0	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.38E+06	0.174		0.00E+00	0.000		6.87E+02	0.000		2.88E+07	0.070		4.46E+04	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		7.02E+03	0.001		0.00E+00	0.000		1.19E+03	0.000		1.81E+05	0.001		3.89E+04	0.000
%RSD		ERR	ERR		ERR	ERR		0.51	0.33		ERR	ERR		173.21	ERR		0.63	0.82		87.31	ERR

Sample I.D Number 93 - 645

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-645.prn	0	0	0	0	0	0	20.32	1458072	0.183	21	0	0	0	0	0	50.36	31532388	0.076	94.73	106574	0
	0	0	0	0	0	0	20.32	1459463	0.183	21	0	0	0	0	0	50.36	31543084	0.076	94.73	100453	0
	0	0	0	0	0	0	20.32	1458502	0.183	21	0	0	0	0	0	50.36	31462700	0.076	94.73	82964	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.46E+06	0.183		0.00E+00	0.000		0.00E+00	0.000		3.15E+07	0.076		9.72E+04	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		1.74E+03	0.000		0.00E+00	0.000		0.00E+00	0.000		9.98E+04	0.001		1.33E+04	0.000
%RSD		ERR	ERR		ERR	ERR		0.12	0.00		ERR	ERR		ERR	ERR		0.32	0.76		13.63	ERR

Sample I.D. Number 93 - 646

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-646.prn	0	0	0	0	0	0	20.32	1097102	0.138	21	0	0	0	0	0	50.36	39831840	0.096	94.73	136200	0
	0	0	0	0	0	0	20.32	1083356	0.136	21	0	0	0	0	0	50.36	39557536	0.095	94.73	133977	0
	0	0	0	0	0	0	20.32	1084298	0.136	21	0	0	0	0	0	50.36	40093356	0.096	94.73	126982	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.09E+06	0.137		0.00E+00	0.000		0.00E+00	0.000		3.98E+07	0.096		1.32E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		7.68E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.68E+05	0.001		4.81E+03	0.000
%RSD		ERR	ERR		ERR	ERR		0.71	0.84		ERR	ERR		ERR	ERR		0.67	0.60		3.63	ERR

Sample I.D Number 93 - 647

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-647.prn	0	0	0	0	0	0	20.32	1317834	0.166	21	0	0	0	0	0	50.36	35023672	0.094	94.73	185935	0
	0	0	0	0	0	0	20.32	1307402	0.164	21	0	0	0	0	0	50.36	36093784	0.097	94.73	143078	0
	0	0	0	0	0	0	20.32	1317600	0.166	21	0	0	0	0	0	50.36	35581600	0.096	94.73	126093	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.31E+06	0.165		0.00E+00	0.000		0.00E+00	0.000		3.56E+07	0.096		1.45E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		5.96E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		5.35E+05	0.002		2.00E+04	0.000
%RSD		ERR	ERR		ERR	ERR		0.45	0.70		ERR	ERR		ERR	ERR		1.50	1.78		13.78	ERR

Sample I.D Number 93 - 648

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-648.prn	0	0	0	0	0	0	20.32	831547	0.104	21	0	0	0	0	0	50.36	42699056	0.103	94.73	155052	0
	0	0	0	0	0	0	20.32	818915	0.103	21	0	0	0	0	0	50.36	42874308	0.103	94.73	147115	0
	0	0	0	0	0	0	20.32	822142	0.103	21	0	0	0	0	0	50.36	42626792	0.103	94.73	148320	0
Average		0.00E+00	0.000		0.00E+00	0.000		8.24E+05	0.103		0.00E+00	0.000		0.00E+00	0.000		4.28E+07	0.103		1.50E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		6.45E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.51E+05	0.000		4.28E+03	0.000
%RSD		ERR	ERR		ERR	ERR		0.78	0.56		ERR	ERR		ERR	ERR		0.35	0.00		2.85	ERR

Sample I.D Number 93 - 649

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide			Carbon Dioxide			Nitrous Oxide			Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-649.prn	0	0	0	0	0	0	20.32	1070484	0.135	21	0	0	0	0	0	50.36	37982512	0.091	94.73	136063	0
	0	0	0	0	0	0	20.32	1073236	0.135	21	0	0	0	0	0	50.36	37816544	0.091	94.73	136546	0
	0	0	0	0	0	0	20.32	1071874	0.135	0	0	0	0	0	0	50.36	37431332	0.09	94.73	123619	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.07E+06	0.135		0.00E+00	0.000		0.00E+00	0.000		3.76E+07	0.091		1.32E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		1.39E+03	0.000		0.00E+00	0.000		0.00E+00	0.000		1.93E+05	0.001		6.96E+03	0.000
%RSD		ERR	ERR		ERR	ERR		0.13	0.00		ERR	ERR		ERR	ERR		0.51	0.64		5.28	ERR

Sample I.D Number 93 - 650

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen						Channel "D" (%) Hydrogen					
							Carbon Dioxide			Nitrous Oxide						Carbon Monoxide					
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-650.prn	0	0	0	0	0	0	20.32	867235	0.084	0	0	0	0	0	0	60.38	43700884	0.105	24.73	143474	0
	0	0	0	0	0	0	20.32	858267	0.083	0	0	0	0	0	0	60.38	43203990	0.104	24.73	143345	0
	0	0	0	0	0	0	20.32	855774	0.082	0	0	0	0	0	0	60.36	43000588	0.106	24.73	126819	0
Average		0.00E+00	0.000		0.00E+00	0.000		6.60E+05	0.083		0.00E+00	0.000		0.00E+00	0.000		4.36E+07	0.105		1.38E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		6.02E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		3.59E+05	0.001		9.27E+03	0.000
%RSD		ERR	ERR		ERR	ERR		0.91	1.20		ERR	ERR		ERR	ERR		0.82	0.95		6.74	ERR

Sample I.D. Number 93 - 651

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen						Channel "D" (%) Hydrogen					
							Carbon Dioxide			Nitrous Oxide						Carbon Monoxide					
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-651.prn	0	0	0	0	0	0	20.32	875923	0.11	0	0	0	0	0	0	60.36	39078096	0.094	24.73	137504	0
	0	0	0	0	0	0	20.32	871837	0.11	0	0	0	0	0	0	60.36	38804320	0.093	24.73	76770	0
	0	0	0	0	0	0	20.32	870315	0.109	0	0	0	0	0	0	60.36	38504320	0.093	24.73	76770	0
Average		0.00E+00	0.000		0.00E+00	0.000		6.73E+05	0.110		0.00E+00	0.000		0.00E+00	0.000		3.89E+07	0.094		1.07E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		2.90E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		1.92E+05	0.001		4.29E+04	0.000
%RSD		ERR	ERR		ERR	ERR		0.39	0.53		ERR	ERR		ERR	ERR		0.49	0.76		40.08	ERR

Sample I.D Number 93 - 652

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen						Channel "D" (%) Hydrogen					
							Carbon Dioxide			Nitrous Oxide						Carbon Monoxide					
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-652.prn	0	0	0	0	0	0	20.32	559026	0.07	0	0	0	0	0	0	60.36	43179340	0.104	24.73	130786	0
	0	0	0	0	0	0	20.32	556502	0.07	0	0	0	0	0	0	60.36	44013896	0.106	24.73	91774	0
	0	0	0	0	0	0	20.32	549415	0.069	0	0	0	0	0	0	60.36	43551008	0.105	24.73	91409	0
Average		0.00E+00	0.000		0.00E+00	0.000		5.55E+05	0.070		0.00E+00	0.000		0.00E+00	0.000		4.36E+07	0.105		1.05E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		4.98E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		4.18E+05	0.001		2.26E+04	0.000
%RSD		ERR	ERR		ERR	ERR		0.90	0.83		ERR	ERR		ERR	ERR		0.96	0.95		21.62	ERR

Sample I.D Number 93 - 653

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen						Channel "D" (%) Hydrogen					
							Carbon Dioxide			Nitrous Oxide						Carbon Monoxide					
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-653.prn	0	0	0	0	0	0	20.32	661920	0.105	0	0	0	0	0	0	60.36	37656080	0.091	24.73	84612	0
	0	0	0	0	0	0	20.32	658722	0.105	0	0	0	0	0	0	60.36	37703436	0.091	24.73	133480	0
	0	0	0	0	0	0	20.32	657330	0.105	0	0	0	0	0	0	60.36	37699448	0.091	24.73	79469	0
Average		0.00E+00	0.000		0.00E+00	0.000		8.59E+05	0.108		0.00E+00	0.000		0.00E+00	0.000		3.78E+07	0.091		1.02E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		2.35E+03	0.000		0.00E+00	0.000		0.00E+00	0.000		1.04E+05	0.000		2.77E+04	0.000
%RSD		ERR	ERR		ERR	ERR		0.27	0.00		ERR	ERR		ERR	ERR		0.27	0.00		27.21	ERR

Sample I.D Number 93 - 654

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen						Channel "D" (%) Hydrogen					
							Carbon Dioxide			Nitrous Oxide						Carbon Monoxide					
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-654.prn	0	0	0	0	0	0	20.32	488700	0.061	0	0	0	0	0	0	60.36	43617628	0.105	24.73	103664	0
	0	0	0	0	0	0	20.32	480700	0.06	0	0	0	0	0	0	60.36	43609340	0.105	24.73	132344	0
	0	0	0	0	0	0	20.32	478310	0.06	0	0	0	0	0	0	60.36	42569236	0.103	24.77	140250	0
Average		0.00E+00	0.000		0.00E+00	0.000		4.83E+05	0.060		0.00E+00	0.000		0.00E+00	0.000		4.34E+07	0.104		1.28E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		5.44E+03	0.000		0.00E+00	0.000		0.00E+00	0.000		4.18E+05	0.001		2.26E+04	0.000
%RSD		ERR	ERR		ERR	ERR		1.13	0.96		ERR	ERR		ERR	ERR		0.96	1.11		17.64	ERR

Sample I.D. Number 93 - 655

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-655.prn	0	0	0	0	0	0	20.32	534886	0.067	0	0	0	0	0	0	50.36	42596472	0.102	94.73	110268	0
	0	0	0	0	0	0	20.32	527806	0.066	0	0	0	0	0	0	50.36	42378256	0.102	94.77	157062	0
	0	0	0	0	0	0	20.32	526852	0.066	0	0	0	0	0	0	50.36	43323018	0.104	94.73	118243	0
Average		0.00E+00	0.000		0.00E+00	0.000		5.30E+05	0.066		0.00E+00	0.000		0.00E+00	0.000		4.28E+07	0.103		1.22E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		4.21E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		4.95E+05	0.001		1.37E+04	0.000
%RSD		ERR	ERR		ERR	ERR		0.79	0.87		ERR	ERR		ERR	ERR		1.16	1.12		11.18	ERR

Sample I.D. Number 93 - 656

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-656.prn	0	0	0	0	0	0	20.32	431858	0.054	0	0	0	0	0	0	50.36	43234872	0.104	94.73	143105	0
	0	0	0	0	0	0	20.32	422934	0.053	0	0	0	0	0	0	50.36	43441392	0.104	94.77	136948	0
	0	0	0	0	0	0	20.32	422482	0.053	0	0	0	0	0	0	50.36	42599392	0.103	94.77	0	0
Average		0.00E+00	0.000		0.00E+00	0.000		4.26E+05	0.053		0.00E+00	0.000		0.00E+00	0.000		4.32E+07	0.104		9.31E+04	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		5.29E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		2.21E+05	0.001		8.07E+04	0.000
%RSD		ERR	ERR		ERR	ERR		1.24	1.08		ERR	ERR		ERR	ERR		0.51	0.56		86.68	ERR

Sample I.D. Number 93 - 657

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-657.prn	0	0	0	0	0	0	20.32	240879	0.031	0	0	0	0	0	0	50.36	42157844	0.101	94.77	165887	0
	0	0	0	0	0	0	20.32	236743	0.03	0	0	0	0	0	0	50.36	42945976	0.103	94.77	135091	0
	0	0	0	0	0	0	20.32	232414	0.029	0	0	0	0	0	0	50.36	42707168	0.103	94.77	143532	0
Average		0.00E+00	0.000		0.00E+00	0.000		2.39E+05	0.030		0.00E+00	0.000		0.00E+00	0.000		4.26E+07	0.102		1.45E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		7.31E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		4.04E+05	0.001		9.94E+03	0.000
%RSD		ERR	ERR		ERR	ERR		3.07	3.33		ERR	ERR		ERR	ERR		0.95	1.13		6.85	ERR

Sample I.D Number 93 - 658

	Channel "A" (ppm) Methane			Channel "B" (%) Carbon Dioxide						Channel "C" (%) Hydrogen			Carbon Monoxide			Channel "D" (%) Hydrogen		
	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT	RT	AREA	AMT
93-658.prn	0	0	0	0	0	0	20.32	163261	0.021	0	0	0	0	0	0	50.36	43499352	0.102	94.77	122618	0
	0	0	0	0	0	0	20.32	154134	0.019	0	0	0	0	0	0	50.36	43017976	0.103	94.77	148563	0
	0	0	0	0	0	0	20.32	155746	0.02	0	0	0	0	0	0	50.36	43017976	0.103	94.77	148563	0
Average		0.00E+00	0.000		0.00E+00	0.000		1.58E+05	0.020		0.00E+00	0.000		0.00E+00	0.000		4.28E+07	0.103		1.35E+05	0.000
Standard Deviation		0.00E+00	0.000		0.00E+00	0.000		4.87E+03	0.001		0.00E+00	0.000		0.00E+00	0.000		3.67E+05	0.001		1.68E+04	0.000
%RSD		ERR	ERR		ERR	ERR		3.09	5.00		ERR	ERR		ERR	ERR		0.86	0.69		12.48	ERR

APPENDIX C

MASS SPECTROMETER PROCEDURE: PNL-MA-299 ALO-284

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PNL TECHNICAL PROCEDURE

TITLE: PNL-ALO-284, (REPLACES 7-40.18 & HTA-4-34), QUANTITATIVE ANALYSIS OF GAS SAMPLES

1.0 APPLICABILITY

This procedure describes the mass spectrometer techniquest for the quantitative determination of atoms, molecules or isotopes in gas mixtures. The method is applicable to gases that are permanent gases (noncondensible at room temperature). Condensible gases may adsorb to the walls of the vacuum lines and chambers. Some reactive gases which may react with or chemsorb to the vacuum walls are very difficult to analyze.

2.0 DEFINITIONS

None.

3.0 RESPONSIBLE STAFF

Cognizant Scientist
Analyst

4.0 PROCEDURE

4.1 Equipment and Materials

- Gas mass spectrometer.
- Mass spectrometer inlet.
- High vacuum/gas rack.
- Capacitance manometer.

Calibration gases pure and mixtures. Natural occurring gases (xenon, krypton, etc.) for isotopic ananyses. Many calibration mixtures can be purchased, other mixtures which are not available comercially or can not be purchased in a reasonable time frame must be prepared on a gas mixing rack. For general work pure gases of the best quality available are usually used. Trace level impurities in gases used for standards can be corrected for by obtaining calibration data on the impurity gases.

NOTE: Anyone operating this type of equipment should be fully trained prior to any attempt to analyze samples.

Author	Date	Project Mgr.	Date	QAD Representative	Date
MW Goheen		N/A		LJ Ethridge	
Technical Reviewer	Date	Line Mgr.	Date	Other	Date
N/A		JJ McCowan		All original signatures on file	

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4.2 Performance Check and/or Calibration

A performance check should be made to ensure that the instrument is responding properly for the particular sample to be analyzed. Usually a standard, working standard or pure gas is used for this check. The frequency depends on the particular instrument and type of sample to be analyzed. The timing could be monthly or daily as determined by the Cognizant Scientist.

CValibration is done when a major change occurs, i.e., (filament replacement--refocus, etc.). For mixture analysis, calibraton is checked whenever the measured inlet pressure differs by more than 20 percent from the total of the analyzed partial pressures. Differences can be from condensible constituents such as water in the sample mixtures. Calibration factors for seldom encountered gases are run as determined by the Cognizant Scientist.

The Analyst shall perform the following steps unless otherwise specified.

4.2.1 Install a cylinder or bulb of the calibration gas on the vacuum/gas rack of the mass spectrometer.

4.2.2 Evacuate the connecting lines between the bulb/cylinder and all inlet lines.

4.2.3 Close the valves to the vacuum pumps and obtain a sample sized for the particular calibration. Record the reading of the manometer in the mass spectrometer diary book or log books.

4.2.4 Introduce the sample into the mass spectrometer.

4.2.5 On a timing sequence after the inlet valve is opened, scan or peak step through the mass spectra of intrest.

4.2.6 Identify and measure the recorded peaks. make corrections for interferences from background, moleculars fragments and multiple ionizations.

4.2.7 Calculate sensitivity/calibration factors from the measured isotopes, atoms, molecular ions, or ion fragments. Record the factors in the mass spectrometer operating guide book or in the appropriate log book.

4.3 Sample Analysis

The Analyst shall perform the following steps unless otherwise specified.

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4.3.1 Attach the cylinder/bulb containing the sample gas to the vacuum rack.

4.3.2 Evacuate the connecting lines containing the sample gas to the vacuum rack.

4.3.3 Close the valves to the vacuum pumps and obtain a sample sized for the particular calibration.

4.3.4 Introduce the sample into the ion source of the mass spectrometer.

4.3.5 On a timing sequence after the inlet valve is opened, scan or peak step through the mass spectra of interest.

4.3.6 Identify and measure the mass peaks. Make corrections for interferences from background, molecular fragments and multiple ionizations.

4.4 Calculations

Calculate the amount of each gas or isotope of interest. For gas mixture analysis, normalize the gases present in the mixture to volume or mole percent. At present this calculation is done by hand. The calculation could be done on a control and data reduction computer.

4.5 Records

Records will be maintained and controlled so as to conform with the requirements of MCS-033. Laboratory Record Books and Analytical Report forms provide a mechanism for control of most records. ~~Laboratory Record Books will be used in accordance with PAP-1704.~~ File a copy of the report and also file the recorder chart of computer print out (if any).

4.6 Procedure Qualification

None required. This procedure is considered self-qualifying due to its dependence on analytical standards. Additionally, it is considered qualified because it has independent technical review.

APPENDIX D

ALTERNATE ANALYTICAL METHOD FOR AMMONIA AND WATER VAPOR

ALO 93-09260→ 67

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Mike Britton
S4-25

July 26, 1993

Gas Analysis

As you are aware, water and ammonia are difficult to measure in conventional sample cylinders such as you are using. The main problem is that both compounds adsorb on the container wall to some extent, causing a variety of memory effects. Milt Goheen and I always recommend that these compounds be monitored by on-line instruments which are available at modest costs. I have found that even these can take prolonged purging to come to a stable reading.

I have attempted to measure ammonia and water in a set of your samples by flushing the sample cylinders out and trapping the analytes in acid (ammonia) or desiccant (water). By putting several volumes of gas through the cylinders I removed most of the weakly adsorbed analyte. Depending on the treatment history of the cylinders, analytes from previous sampling runs may have been present and removed as well.

Another related error source is that if you flush sample gas through the cylinder during the sampling process, by the adsorption process the inner cylinder wall can act as a collector. This will result in more total analyte in the cylinder than in a comparable volume of sample gas. I observed this when I passed room air through one of your cylinders for several minutes, then analyzed the contents for water. The result was that the sample was 140% of the true value.

Listed here are the results of my analysis of the sample set. These are regarded as experimental and were not done to any QA level. By the nature of the process, only one compound can be measured on each cylinder.

#	v% water	v% ammonia
93-040	lost	
93-041		0.0016
93-042	1.5	
93-043		<0.001
93-044	<0.1	
93-045	1.3	
93-046	0.8	
93-047	<0.1	

R. Keough 7/26/93
RF Keough

Reviewer
7-26-93

APPENDIX E

SAMPLE LOG SHEETS

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 1

Sample #	GSC #	Run ##	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-001	1	C-1	6/23/93	6	(1) 2	~~35~~ 30	500	20	F1	in out	4% H_2	
93-002	3	C-1	6-23-93	6	(1) 2	~~4~~	500	20	F1	in out	4% H_2	
93-003	2	C1	6-23-93	6	(1) 2	1.5	500	20	F1	in out	4% H_2	
93-004	4	C1	6-23-93	6	(1) 2	6.75	250	20	F1	in out	4% H_2	
93-005	5	C1	6-23-93	6	(1) 2	4	500	20	F1	in out	0.5% CO	
93-006	6	C1	6-23-93	6	(1) 2	4	500	20	F1	in out	2.0% O_2	
93-007	9	C1	6-23-93	6	(1) 2	4	500	20	F1	in out	0.5% CH_4	
93-008	8	C1	6-24-93	6	(1) 2	4	500	20	F1	in out	4.9% N_2O	
93-009	7	C1	6-24-93	6	(1) 2	4	500	20	F1	in out	100% N_2O	
93-010	14	1	6/29/93	14	(1) 2	4	500	21	N1	in (out)	< 0.4% H_2	outlet
93-011	16	1	6/29/93	14	(1) 2	3	500	21	N1	(in) out	< 0.4% H_2	Inlet, sitting on GSC w/ loose during sampling.
					1 2					in out		
					1 2					in out		
93-012	12	4	6/30/93	16	(1) 2	4	500	19.2	N1	in (out)	< 0.4% H_2, 40.05% O_2	
93-013	15	4	6/30/93	16	(1) 2	5	500	19	N1	(in) out	0.6% H_2, 0.3% O_2	
93-014	10	5	6/30/93	17	(1) 2	5	275	21	4	in (out)	N. N_2O	
93-015	12	5	6/30/93	17	(1) 2	5	275	22	4	(in) out	H. H_2O	
					1 2					in out		
93-016	18	6	7/6/93	19	(1) 2	5	250	21	4	in (out)	> 1.7% H_2, < 1.7% H_2	
93-017	11	6	7/6/93	19	(1) 2	5	250	21	4	(in) out	1' "	
93-018	17	7	7/7/93	20	(1) 2	115	275	21	4	in (out)		
93-019	6	7	7/7/93	20	(1) 2	150	275	21	4	in (out)		
93-020	1	7	7/7/93	20	(1) 2	360	275	21	4	(in) out		
93-021	8	8	7/7/93	21	(1) 2	~~1124~~ 1324	275	23	5	in (out)		
93-022	9	8	7/7/93	21	(1) 2	~~1124~~ 1324	275	23	5	(in) out		
93-023	7	8	7/8/93	21	(1) 2	1005	275	22	5	in (out)		
93-024	2	8	7/8/93	21	(1) 2	1005	275	22	5	(in) out		

* First 9 samples C-1 calibration samples
Sample 93-010 Test Run #1

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 2

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-025	5	9	7/8/93	22	① 2	240	275	20	1	in (out)	~0% H_2 ~2% O_2 ~1% H_2O	V-9: Reactor purge was ON
93-026	3	9	7/8/93	22	① 2	240	275	20	1	(in) out	1% H_2 0.5% O_2	but Regulator was backed off.
					2					in out		
93-027	10	10	7/9/93	23	① 2	955	275	21	7	in (out)	<1% H_2 0.1% CH_4 1% H_2O ~0% N_2O	
93-028	16	10	7/9/93	23	① 2	955	275	21	7	(in) out	1% H_2 0.1% CH_4 40% N_2O	
93-029	15	11	7/9/93	23	① 2	470	275	21	3	in (out)	<1% H_2 ~1% H_2 ~10% N_2O	
93-030	14	11	7/9/93	23	① 2	440	275	21	3	(in) out	1% H_2 10% N_2O	
93-031	12	12	7/12/93	26	① 2	~~740~~ 470	275	21	2	in (out)	<1% H_2 <1% N_2O ~1% H_2	
93-032	4	12	7/12/93	26	① 2	170	275	20	2	in (out)	<1% H_2 <1% N_2 ~1% H_2	
93-033	13	12	7/12/93	26	① 2	170	275	20	2	(in) out	~1% H_2 ~1% N_2O	
93-034	7	13	7/13/93	26	① ②	150	275	20	6 1	in (out)	<1% H_2 <1% N_2	
93-035	6	13	7/13/93	26	① ②	270	275	20	6 1	in (out)	<1% H_2 <1% N_2O	
93-036	2	13	7/13/93	26	① ②	270	275	20	6 1	(in) out	~1% H_2 40% N_2 17.0	
93-037	8	14	7/14/93	28	① 2	150	275	19	8	in (out)	<1% H_2 <1% NH_3 40% N_2 <2.5% H_2O	
93-038	11	14	7/14/93	28	① 2	240	275	15	5	in (out)	<1% H_2 <1% NH_3 40% N_2O <2.5% H_2O	
93-039	9	14	7/14/93	28	① 2	240	275	15	5	(in) out	1% H_2 1% NH_3 40% N_2O	
93-040	15	15	7/16/93	30	1 ②	45	900	17	1	in (out)	<1% H_2 <1% H_2O <0.5% O_2	
93-041	1	15	7/16/93	30	1 ②	45	900	17	1	(in) out	1% H_2 0.5% O_2	
93-042	14	16	7/20/93	70	1 ②	60	700	17	7	in (out)	<1% H_2 <0.1% CH_4 <1% N_2O <40% N_2O	
93-043	10	16	7/20/93	70	1 ②	120	700	18	7	in (out)	<1% H_2 <0.1% CH_4 <1% H_2O <40% N_2O	
93-044	16	16	7/20/93	70	1 ②	120	700	18	7	(in) out	<1% H_2 <0.1% CH_4 <40% N_2O	
93-045	3	17	7/20/93	70	1 ②	60	700	19	3	in (out)	<1% H_2 <10% N_2O Balance N_2 <1% H_2O	
93-046	18	17	7/20/93	70	1 ②	120	700	19	3	in (out)	<1% H_2 <1% H_2O <3% N_2O	
93-047	5	17	7/20/93	70	1 ②	120	700	19	3	(in) out	<1% H_2 ~10% N_2O	
VOID 93-048	~~8~~		7/21/93	71	1 ②	~~60~~	~~700~~	19	6	in (out)	~~<1% H_2 <1% H_2O <0.1% CO <40% N_2O~~	
93-049	13	18	7/21/93	73	1 ②	60	50	21	6	in (out)	<1% H_2 <1% H_2O <0.1% CO <0.1% CO_2 <40% N_2O	
93-050	8	18	7/21/93	73	1 ②	120	50	21	6	in (out)	<1% H_2 <1% H_2O <0.1% CO <0.1% CO <40% N_2O	

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 3

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-057	17	18	7/21/93	73	1 (2)	120	500	21	6	(in) out	<1% H_2, <.1% CO <40% N_2O	
93-052	7	19	7/22/93	73	1 (2)	60	700	18	1	in (out)	<1% H_2, <1% H_2O <0.25% O_2	
93-053	6	19	7/22/93	73	1 (2)	30	400	19	1	in (out)	<1% H_2, <1% H_2O <0.25% O_2	
93-054	11	19	7/22/93	73	1 (2)	90	400	20	1	in (out)	<1% H_2, <1% H_2O <0.25% O_2	
93-055	4	19	7/22/93	73	1 (2)	96	400	20	1	(in) out	<1% H_2 <0.5% O_2	
					1 2					in out		
93-056	2	21	7/22/93	31	(1) 2	60	275	19	7	in (out)	<1% H_2, <0.1% CH_4 <1% H_2O <40% N_2O	
93-057	9	21	7/22/93	31	(1) 2	120	275	19	7	in (out)	<1% H_2 <0.1% CH_4 <1% H_2O <40% N_2O	
93-058	12	21	7/22/93	31	(1) 2	120	275	19	7	(in) out	<1% H_2 <0.1% CH_4 <40% N_2O	
					1 2					in out	~~<1% H_2 <0.1% CH_4 <40% N_2O~~	
93-059	14	22	7/22/93	74	1 (2)	110	650	21	5	in (out)	<1% H_2, <1% NH_3 <2.5% H_2O, <40% N_2O	
93-060	10	22	7/22/93	74	1 (2)	170	650	22	8	in (out)	<1% H_2, <1% NH_3 <2.5% H_2O <40% N_2O	
93-061	15	22	7/22/93	74	1 (2)	170	650	22	5	(in) out	<1% H_2, <1% NH_3, <40% N_2O	
93-062	5	23	7/22/93	32	(1) 2	45	275	22	3	in (out)	<1% H_2 <1% H_2O <10% N_2O	
93-063	1	23	7/22/93	32	(1) 2	105	275	23	3	in (out)	<1% H_2 <1% H_2O <10% N_2O	
93-064	16	23	7/22/93	32	(1) 2	105	275	23	3	(in) out	<1% H_2 <10% N_2O	
93-065	3	24	7/23/93	74	1 (2)	138	750	20	4	in (out)	<1% H_2, <1% H_2O, <40%	
93-066	19	24	7/23/93	74	1 (2)	209	750	20	4	in (out)	4% H_2, <1% H_2O <40% N_2O	
93-067	18	24	7/23/93	74	1 (2)	209	750	20	4	(in) out	<1% H_2 < 40 % N_2O	
93-068	20	25	7/23/93	75	1 (2)	124	750	21	2	in (out)	<1% H_2, <1% H_2O, <1% N_2O	
93-069	22	25	7/23/93	75	1 (2)	305	750	21	2	in (out)	<1% H_2, <1% H_2O, <1% N_2O	
93-070	21	25	7/23/93	75	1 (2)	205	750	21	2	(in) out	<1% H_2, <1% N_2O	
93-071	8	26	7/26/93	32	(1) 2	60	275	19	3	in (out)	<1% H_2, <1% H_2O <10% N_2O	
93-072	13	26	7/26/93	32	(1) 2	120	275	20	3	in (out)	<1% H_2 <1% H_2O <10% N_2O	
93-073	9	26	7/26/93	32	(1) 2	120	275	20	3	(in) out	<1% H_2 <40% N_2O	
93-074	11	27	9/30/93	75	1 (2)	60	750	20	5	in (out)	<1% H_2, <3.25% H_2O, <40% N_2O	
93-075	17	27	9/30/93	75	1 (2)	120	750	21	5	in (out)	<1% H_2, <3.25% H_2O, <40% N_2O	

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 4

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-076	12	27	9/26/93	75	1 (2)	120	750	21	5	(in) out	<1% H_2, <2.25% H_2O, <40% N_2O	
93-077	4	28	9/26/93	75	1 (2)	60	888	22	5	in (out)	<1% H_2, <3.25% H_2O, <40% N_2O	
93-078	6	28	9/26/93	75	1 (2)	120	888	22.7	5	in (out)	<1% H_2, <3.25% H_2O, <40% N_2O	
93-079	2	28	9/26/93	78	1 (2)	120	888	22.7	5	(in) out	<1% H_2, <2.25% H_2O, <40% N_2O	
93-080	7	28	9/27/93	78	1 (2)	1210	888	21.3	5	in (out)	<1% H_2, <3.25% H_2O, <40% N_2O	
93-081	32	30	9/27/93	78	1 (2)	60	750	21.0	2	in (out)	<1% H_2, <1% H_2O, <1% N_2O	
93-082	31	30	9/27/93	78	1 (2)	130	750	21.0	2	in (out)	<1% H_2, <1% H_2O, <1% N_2O	
93-083	33	30	9/27/93	78	1 (2)	130	750	21.0	2	(in) out	<1% H_2, <1% N_2O	
93-084	35	31	9/27/93	79	1 (2)	60	750	21.4	1	in (out)	<1% H_2, <1% H_2O, <0.25% O_2	
93-085	23	31	9/27/93	79	1 (2)	120	750	22.1	1	in (out)	<1% H_2, <1% H_2O, <0.25% O_2	
93-086	25	31	9/27/93	79	1 (2)	120	750	22.1	1	(in) out	<1% H_2, <0.5% O_2	
93-087	34	29	9/28/93	33	(1) 2	1260	25	18.7	6	in (out)	<1% H_2, <1% H_2O, <0.1% CO, <0.1% CO_2, <40% N_2O	
93-088	24	29	9/28/93	33	(1) 2	1260	25	18.7	6	(in) out	<1% H_2, <0.1% CO, <40% N_2O	
93-089	28	33	9/28/93	33	(1) 2	75	275	19.2	1	in (out)	<1% H_2, <1% N_2O, <0.25% O_2	
93-090	11	33	9/28/93	34	(1) 2	120	275	19.1	1	in (out)	<1% H_2, <1% N_2O, <0.25% O_2	
93-091	26	33	9/28/93	34	(1) 2	120	275	19.1	1	(in) out	<1% H_2, <0.5% O_2	
93-092	30	32	9/28/93	79	1 (2)	150	50	19.3	6	in (out)	<1% H_2, <1% H_2O, <0.1% CO, <0.1% CO, <40% N_2O	
93-093	29	32	9/28/93	79	1 (2)	220	50	19.4	6	in (out)	<1% H_2, <1% H_2O, <0.1% CO, <0.1% CO, <40% N_2O	
93-094	29	32	9/28/93	79	1 (2)	220	50	19.4	6	(in) out	<1% H_2, <1% CO, <40% N_2O	
93-095	~~3~~ 2 recalculate	34	9/28/93	34	(1) 2	60	275	19.8	8	in (out)	<1% H_2, <1% NH_3, <2.5% H_2O, <40% N_2O	
93-096	5	34	9/28/93	34	(1) 2	120	275	20.3	8	in (out)	<1% H_2, <1% NH_3, <2.5% H_2O, <40% N_2O	
93-097	4	34	9/28/93	34	(1) 2	120	275	20.3	8	(in) out	<1% H_2, <1% NH_3, <40% N_2O	
93-098	17	35	9/28/93	79	1 (2)	60	750	22.2	4	in (out)	<1% H_2, <1% H_2O, <40% N_2O	
93-099	6	35	9/27/93	80	1 (2)	120	750	22.8	4	in (out)	<1% H_2, <1% H_2O, <40% N_2O	
93-100	~~2~~ 8	35	9/27/93	80	1 (2)	120	750	22.5	4	(in) out	<1% H_2, <40% N_2O	
					1 2					in out		
					1 2					in out		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 5

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-101	8	36	7/28/93	34	(1) 2	60	275	20.9	4	in (out)	<1% H_2, <1% H_2O, <40% N_2O	
93-102	10	36	7/28/93	34	(1) 2	120	275	21.0	4	in (out)	<1% H_2, <1% H_2O, <40% N_2O	
93-103	9	36	7/28/93	34	(1) 2	120	275	21.0	4	(in) out	<1% H_2, <40% N_2O	
93-104	1	37	7/28/93	80	1 (2)	60	650	22.8	8	in (out)	<1% H_2 <1% NH_3 <2.5% H_2O <40% N_2O	
93-105	18	37	7/28/93	80	1 (2)	120	650	23.3	8	in (out)	<1% H_2 <1% NH_3 <2.5% H_2O <40% N_2O	
93-106	13	37	7/28/93	80	1 (2)	120	650	23.3	8	(in) out	<1% H_2 <1% NH_3 <40% N_2O	
93-107	16	38	7/29/93	80	1 (2)	80	700	20.8	3	in (out)	<1% H_2 <1% H_2O <10% N_2O	
93-108	21	38	7/29/93	80	1 (2)	140	700	21.0	3	in (out)	<1% H_2, <1% H_2O, <10% N_2O	
93-109	15	38	7/29/93	80	1 (2)	140	700	21.0	3	(in) out	<1% H_2, <10% N_2O	
93-110	3	39	7/29/93	35	(1) 2	70	275	18.8	2	in (out)	<1% H_2 <1% H_2O <1% N_2O	
93-111	19	39	7/29/93	35	(1) 2	165	275	19.1	2	in (out)	<1% H_2 <1% H_2O <1% N_2O	
93-112	14	39	7/29/93	35	(1) 2	165	275	19.1	2	(in) out	<1% H_2 <1% N_2O	
93-113	22	40	7/29/93	81	1 (2)	65	700	21.5	7	in (out)	<1% H_2, <0.1% CH_4, <1% H_2O, <40% N_2O	
93-114	7	40	7/29/93	81	1 (2)	155	700	21.8	7	in (out)	<1% H_2 <0.1% CH_4 <1% H_2O <40% N_2O	
93-115	20	40	7/29/93	81	1 (2)	155	700	21.8	7	(in) out	<1% H_2, <0.1% CH_4, <40% N_2O	
93-116	35	41	7/29/93	81	1 (2)	60	750	22.1	4	in (out)	<1% H_2, <1% H_2O, <40% N_2O	
93-117	33	41	7/29/93	81	1 (2)	120	750	22.2	4	in (out)	<1% H_2, <1% H_2O, <40% N_2O	
93-118	31	41	7/29/93	81	1 (2)	120	750	22.2	4	(in) out	<1% H_2, <40% N_2O	
93-119	37	42	7/29/93	81	1 (2)	60	588	19.6	5	in (out)	<1% H_2, <3.25% H_2O, <40% N_2O	
93-120	32	42	7/29/93	81	1 (2)	120	588	19.9	5	in (out)	<1% H_2, <3.25% H_2O, <40% N_2O	
93-121	36	42	7/29/93	81	1 (2)	120	588	19.9	5	(in) out	<1% H_2, <2.25% H_2O, <40% N_2O	
93-122	34	43	7/30/93	86	1 (2)	60	650	20.0	8	in (out)	<1% H_2 <1% NH_3 <2.5% H_2O <10% N_2O	
93-123	23	43	7/31/93	86	1 (2)	130	650	20.0	8	in (out)	<1% H_2 <1% NH_3 <2.5% H_2O <40% N_2O	
93-124	24	43	7/30/93	86	1 (2)	130	650	20.0	8	(in) out	<1% H_2 <1% NH_3 <40% N_2O	
93-125	27	44	7/30/93	86	1 (2)	60	750	19.4	1	in (out)	<1% H_2, <1% H_2O, <0.25% O_2	
93-126	29	44	7/30/93	86	1 (2)	120	750	19.6	1	in (out)	<1% H_2, <1% H_2O, <0.25% O_2	
93-127	25	44	7/30/93	86	1 (2)	120	750	19.6	1	(in) out	<1% H_2, <0.5% O_2	

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 6

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-128	28	45	8/2/93	86	1 (2)	60	700	20.8	7	in (out)	<1% H_2, <0.1% CH_4, <1% H_2O @ <40% N_2	
93-129	26	45	8/2/93	86	1 (2)	100	700	21.1	7	in (out)	<1% H_2, <0.1% CH_4, <1% H_2O, <40% N_2	
93-130	30	45	8/2/93	86	1 (2)	100	700	21.1	7	(in) out	<1% H_2, <0.1% CH_4	<40% N_2
93-131	6	46	8/2/93	35	(1) 2	150	275	19.4	5	in (out)	<1% H_2, <3.25% H_2O	<40% N_2
93-132	5	46	8/2/93	35	(1) 2	155	275	19.6	5	in (out)	<1% H_2, <3.25% H_2O, <40% N_2	
93-133	4	46	8/2/93	35	(1) 2	155	275	19.6	5	(in) out	<1% H_2, <2.25% H_2O	<40% N_2
93-134	2	47	8/2/93	87	1 (2)	60	700	21.2	3	in (out)	<1% N_2, <1% H_2O,	<10% N_2
93-135	12	47	8/2/93	87	1 (2)	120	700	21.6	3	in (out)	<1% H_2, <1% H_2O	<10% N_2
93-136	17	47	8/2/93	87	1 (2)	120	700	21.6	3	(in) out	<1% H_2,	<10% N_2
93-137	13	48	8/2/93	88	1 (2)	60	750	21.2	2	in (out)	<1% H_2, <1% H_2O	<1% N_2
93-138	18	48	8/2/93	88	1 (2)	120	750	21.6	2	in (out)	<1% H_2	<1% H_2O <1% N_2
93-139	1	48	8/2/93	88	1 (2)	120	750	21.6	2	(in) out	<1% H_2,	<1% N_2
93-140	9	49	8/3/93	88	1 (2)	1010	50	19.0	6	in (out)	<1% H_2, <1% H_2O, <0	1% CO, <0.1% CO_2, <40% N_2
93-141	10	49	8/3/93	88	1 (2)	1070	50	19.2	6	in (out)	<1% H_2, <1% H_2O, <0.1% CO <0.1% CO_2, <40% N_2	
93-142	8	49	8/3/93	88	1 (2)	1070	50	19.2	6	(in) out	<1% H_2, <1% CO,	<40% N_2
93-143	3	50	8/3/93	90	1 (2)	95	750	22.8	10	in (out)	<1% H_2, <1% H_2O <0.01% CO <0.01% CO_2, <40% N_2	
93-144	15	50	8/3/93	90	1 (2)	110	750	22.8	10	in (out)	<1% H_2, <1% H_2O <0.01% CO <0.01% CO_2, <40% N_2	
93-145	14	50	8/3/93	90	1 (2)	110	750	22.8	10	(in) out	<1% H_2, <0.01% CO	<40% N_2
93-146	16	N/A	8/4/93	91	1 (2)	150	300	22.1	6	in (out)	<1% H_2, <1% H_2O <0.1% CO <0.1% CO_2	<40% N_2
93-147	7	N/A	8/4/93	91	1 (2)	150	300	22.1	6	(in) out	<1% H_2, <1% CO	<40% N_2
93-148	20	N/A	8/5/93	91	1 (2)	1105	300	19.9	6	in (out)	<1% H_2, <1% H_2O <0.1% CO <0.1% CO_2, <40% N_2	
93-149	19	55	8/5/93	92	1 (2)	60	555	22.2	6	in (out)	<1% H_2, <1% H_2O <0.1% CO, <0.1% CO_2, <40% N_2	
93-150	21	55	8/5/93	92	1 (2)	60	558	23.2	6	(in) out	<1% H_2, <0.1% CO	<40% N_2
93-151	22	54	8/5/93	92	1 (2)	75	558	23.2	6	in (out)	<1% H_2, <0.1% CO <1% H_2O <0.1% CO_2, <40% N_2	
					1 2					in out		
					1 2					in out		
					1 2					in out		

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HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 7

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-152	5	156	8/9/93	92	1 (2)	190	500	20.6	6	in (out)	<1% H_2, <1% H_2, <0.1% CO, <0.1% CO_2, <40% N_2	
93-153	6	156	8/9/93	92	1 (2)	190	500	20.6	6	(in) out	<1% H_2, <0.1% CO, <40% N_2	
93-154	1	156	8/9/93	92	1 (2)	220	500	21.6	6	in (out)	<1% H_2, <1% H_2, <0.1% CO, <0.1% CO_2, <40% N_2	
93-155	13	157	8/10/93	93	1 (2)	900	750	19.3	6	in (out)	<1% H_2, <1% H_2, <0.1% CO, <0.1% CO, <40% N_2	
93-156	2	157	8/10/93	93	1 (2)	675	750	18.6	6	in (out)	<1% H_2, <1% H_2, <0.1% CO, <0.1% CO_2, <40% N_2	
93-157	12	157	8/10/93	93	1 (2)	975	750	18.6	6	(in) out	<1% H_2, <0.1% CO, <40% N_2	
93-158	18	159	8/12/93	40	(1) 2	2265	200	18.9	6	in (out)	<1% H_2, <1% H_2, <0.1% CO, <0.1% CO_2, <40% N_2	
93-159	17	159	8/12/93	40	(1) 2	2255	200	19.0	6	(in) out	<1% H_2, <0.1% CO, <40% N_2	
93-160	4	162	8/26/93	95	1 (2)	1740	750	21.2	8	in (out)	<1% H_2, <1% NH_3, <2.5% H_2, <40% N_2	
93-161	33	162	8/26/93	95	1 (2)	1770	750	21.4	8	in (out)	<1% H_2, <1% NH_3, <2.5% H_2, <40% N_2	
93-162	35	162	8/26/93	95	1 (2)	1770	750	21.4	8	(in) out	<1% H_2, <1% NH_3, <40% N_2	
93-163	Replace	63	8/31/93	96	1 (2)	V660	750	20.6	7	in (out)	<1% H_2, <1% CH_4, <1% H_2, <40% N_2	
93-164	Replace	163	8/31/93	96	1 (2)	V690	750	20.7	7	in (out)	<1% H_2, <1% CH_4, <1% H_2, <40% N_2	
93-165	Replace	163	8/31/93	96	1 (2)	V690	750	20.8	7	(in) out	<1% H_2, <1% CH_4, <40% N_2	
93-166	REPLACE	64	9/3/93	96	1 (2)		750	19.5	5	in (out)	<1% H_2,	
93-167	Replace	64	9/3/93	96	1 (2)		750	21.5	5	in (out)	<1% H_2	
93-168	RED	64	9/3/93	96	1 (2)		750	21.5	5	(in) out	1% H_2	
93-169	NO	F	9/7/93	97	1 (2)					in out	0.5% CO	
93-170	NO	65	9/30/93	97	1 (2)	0	500	25	13	(in) out	0.1% CO	
93-171	red	F	9/30/93	97	~~1~~ 2					in out	0.5% CO.	
93-172			9/30/93	97	1 2	15	500	26	13	in (out)		
93-173			9/30/93	97	1 2	30	500	26	13	in (out)		
93-174	Red	F	10/7/93		1 2	0	N/A			in out	CO BLEED GAS	
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					1 2					in out		
					1 2					in out		
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HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 8

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-175		67	10/14	97	(1) 2	0	500	15	13	(in) out		
93-176		67	10/14	97	(1) 2	15	500	15	13	in (out)		
93-177		67	10/14	97	(1) 2	30	500	15	13	in (out)		
93-178		67	10/14	97	(1) 2	45	500	15	13	in (out)		
93-179		67	10/14	98	(1) 2	60	500	15	13	in (out)		
93-180		67	10/14	98	(1) 2	75	500	15	13	in (out)		
93-181		67	10/14	98	(1) 2	90	500	14	13	in (out)		
93-182		67	10/14	98	(1) 2	105	500	14	13	in (out)		
93-183		67	10/14	98	(1) 2	120	500	14	13	in (out)		
93-184		67	10/14	98	(1) 2	135	500	14	13	in (out)		
93-185		67	10/14	98	(1) 2	150	500	15	13	in (out)		
93-186		67	10/14	98	(1) 2	165	500	15	13	in (out)		
93-187		67	10/14	98	(1) 2	180	500	15	13	in (out)		
93-188		67	10/14	98	(1) 2	195	500	16	13	in (out)		
93-189		67	10/14	98	(1) 2	210	500	16	13	in (out)		
93-190		67	10/14	98	(1) 2	225	500	16	13	(in) out		
93-191		67	10/14	98	(1) 2	0	500	16	N_2	in (out)		
93-192		67	10/14	98	(1) 2	15	500	16	N_2	in (out)		
93-193		67	10/14	98	(1) 2	30	500	17	N_2	in (out)		
93-194		67	10/14	98	1 (2)	45	500	17	N_2	in (out)		
93-195		67	10/14	98	1 (2)	60	500	17	N_2	in (out)		
93-196		68	10/14	98	1 (2)	75	500	17	13	(in) out		
93-197		68	10/14	98	1 (2)	0	500	17	13	in (out)		
93-198		68	10/14	98	1 (2)	15	500	19	13	in (out)		
93-199		68	10/14	98	1 (2)	30	500	19	13	in (out)		
93-200		68	10/14	98	1 (2)	45	500	19	13	in (out)		
93-201		68	10/14	98	1 (2)	60	500	19	13	in (out)		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 9

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-202		68	10/14	98	1 (2)	75	500	20	13	in (out)		
93-203		68	11/14	98	1 (2)	90	500	20	13	in (out)		
93-204		68	10/14	98	1 (2)	0	500	20	N_2	in (out)		
93-205		68	10/14	98	1 (2)	15	500	20	N_2	in (out)		
93-206		68	10/14	98	1 (2)	30	500	20	N_2	in (out)		
93-207		68	10/14	98	1 (2)	45	500	20	N_2	in (out)		
93-208		68	10/14	98	1 (2)	60	500	20	N_2	in (out)		
93-209		68	10/14	98	1 (2)	75	500	20	N_2	in (out)		
93-210		69	10/18	99	1 (2)	0	500	14	~~13~~ 19	in (out)		
93-211		69	10/18	99	1 (2)	10	500	14	13	in (out)		
93-212		69	10/18	99	1 (2)	20	500	14	13	in (out)		
93-213		69	10/18	99	1 (2)	30	500	15	13	in (out)		
93-214		69	10/18	99	1 (2)	40	500	16	13	in (out)		
93-215		69	10/18	99	1 (2)	50	500	16	13	in (out)		
93-216		69	10/18	99	1 (2)	60	500	16	13	in (out)		
93-217		69	10/18	99	1 (2)	70	500	17	13	in (out)		
93-218		69	10/18	99	1 (2)	80	500	17	13	in (out)		
93-219		69	10/18	99	1 (2)	90	500	16	13	in (out)		
93-220		69	10/18	99	1 2	100	500	17	13	in (out)		
93-221		69	10/18	99	1 (2)	110	500	16	13	in (out)		
93-222		69	10/18	99	1 (2)	120	500	17	13	in (out)		
93-223		69	10/18	99	1 (2)	130	500	17	13	in (out)		
93-224		69	10/18	99	1 (2)	140	500	17	13	in (out)		
93-225		69	10/18	99	1 (2)	150	500	17	13	in (out)		
93-226		69	10/18	99	1 (2)	170	500	18	13	in (out)		
93-227		69	10/18	99	1 (2)	185	500	19	13	(in) out		
93-228		69	10/18	99	1 (2)	190	500	19	N_2	in (out)		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 10

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-229	69	69	10/18	99	1 (2)	200	500	19	13	in (out)		
93-230	69	69	10/18	99	1 (2)	210	500	19	13	in (out)		
93-231		69	10/18	99	1 (2)	220	500	19	13	in (out)		
93-232		69	10/14	99	1 (2)	230	500	19	13	in (out)		
93-233		69	10/18	99	1 (2)	240	500	20	13	in (out)		
93-234		69	10/14	99	1 (2)	250	500	20	13	in (out)		
93-235		69	10/18	99	1 (2)	260	500	21	13	in (out)		
93-236		69	10/15	100	1 (2)	270	500	21	13	in (out)		
93-237		69	10/18	100	1 (2)	280	500	21	13	in (out)		
93-238		69	10/15	100	1 (2)	290	500	20	13	in (out)		
					1 2					in out		
93-239		70	10/19	100	1 (2)	0	0	14	13	(in) out		
93-240		70	10/19	100	1 (2)	0	0	14	13	in (out)		
93-241		70	10/19	100	1 (2)	10	500	14	13	in (out)		
93-242		70	10/19	100	1 (2)	20	500	15	13	in (out)		
93-243		70	10/19	100	1 (2)	30	500	14	13	in (out)		
93-244		70	10/19	100	1 (2)	40	500	14	13	in (out)		
93-245		70	10/19	100	1 (2)	50	500	15	13	in (out)		
93-246		70	10/19	100	1 (2)	60	500	15	13	in (out)		
93-247		70	10/19	100	1 (2)	70	500	15	13	in (out)		
93-248		70	10/19	100	1 (2)	80	500	15	13	in (out)		
93-249		70	10/19	100	1 (2)	90	500	15	13	in (out)		
93-250		70	10/19	100	1 (2)	100	500	15	13	in (out)		
93251		70	10/19	100	1 (2)	110	500	15	13	in (out)		
93-252		70	10/19	100	1 (2)	120	500	15	13	in (out)		
93-253		70	10/19	100	1 (2)	130	500	15	13	in (out)		
93-254		70	10/19	100	1 (2)	140	500	16	13	in (out)		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 11

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-255		70	10/19	100	1 (C)	150	500	16	13	in (out)		
93-256		71	10/25	101	1 (B)	0	500	13	13	(in) out		
93-257		71	10/25	101	1 (C)	2	500	13	13	in (out)		
93-258		71	10/25	101	1 (C)	10	500	14	13	in (out)		
93-259		71	10/25	101	1 (C)	20	500	14	13	in (out)		
93-260		71	10/25	101	1 (C)	30	500	14	13	in (out)		
93-261		71	10/25	101	1 (C)	40	500	14	13	in (out)		
93-262		71	10/25	101	1 (C)	50	500	14	13	in (out)		
93-263		71	10/25	101	1 (C)	60	500	14	13	in (out)		
93-264		71	10/25	101	1 (C)	70	500	14	13	in (out)		
93-265		71	10/25	101	1 (C)	80	500	14	13	in (out)		
93-266		71	10/25	101	1 (C)	90	500	14	13	in (out)		
93-267		71	10/25	101	1 (C)	105	500	14	13	in (out)		
93-268		71	10/25	101	1 (C)	120	500	15	13	in (out)		
93-269		71	10/25	101	1 (C)	136	500	15	13	in (out)		
93-270		71	10/25	101	1 (C)	150	500	16	13	in (out)		
93-271		71	10/25	101	1 (C)	165	500	15	13	in (out)		
93-272		171	10/25	101	1 (C)	150	500	14	13	in (out)		
93-273		171	10/25	101	1 (C)	195	500	14	13	in (out)		
93-274		171	10/25	101	1 (C)	210	500	16	13	in (out)		
93-275		171	10/25	101	1 (C)	225	500	17	13	in (out)		
93-276		72	10/25	101	1 (C)		500	17	13	in (out)		
93-277		72	10/25	101	1 (B)	0	500	18	13	(in) out		
93-278		72	10/25	101	1 (B)	0	500	18	13	in (out)		
93-279		72	10/25	101	1 (C)	10	500	17	13	in (out)		
93-280		172	10/25	102	1 (C)	20	500	18	13	in (out)		
93-281		172	10/25	102	1 (C)	30	500	17	13	in (out)		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 12

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-282		172	10/25	102	1 (2)	40	500	18	13	in (out)		
93-283		172	10/25	102	1 (2)	50	500	15	13	in (out)		
93-284		172	10/25	102	1 (2)	60	500	19	13	in (out)		
93-285		172	10/25	102	1 (2)	70	500	19	13	in (out)		
93-286		172	10/25	102	1 (2)	80	500	20	13	in (out)		
93-287		172	10/25	102	1 (2)	90	500	20	13	in (out)		
93-288		172	10/25	102	1 (2)	100	500	21	13	in (out)		
93-289		172	10/25	102	1 (2)	110	500	20	13	in (out)		
93-290		172	10/25	102	1 (2)	112	500	20	13	(in) out		
93-291		172	10/25	102	1 (2)	0	1000	21	N_2	in (out)		
93-292		172	10/25	102	1 (2)	6	1000	21	N_2	in (out)		
93-293		172	10/25	102	1 (2)	10	1000	21	N_2	in (out)		
93-294		172	10/25	102	1 (2)	15	1000	21	N_2	in (out)		
93-295		172	10/25	102	1 (2)	25	1000	21	N_2	in (out)		
93-296		172	10/25	102	1 (2)	35	1000	21	N_2	in (out)		
93-297		172	10/25	102	1 (2)	45	1000	21	N_2	in (out)		
93-298		172	10/25	102	1 (2)	55	1000	21	N_2	in (out)		
					1 2					in out		
93-299		173	10/26	102	1 (2)	0	500	14	13	(in) (out)		
93-300		173	10/26	102	1 (2)	0	500	14	13	in (out)		
93-301		173	10/26	102	1 (2)	10	500	14	13	in (out)		
93-302		173	10/26	102	1 (2)	20	500	14	13	in (out)		
93-303		173	10/26	102	1 (2)	30	500	14	13	in (out)		
93-304		173	10/26	102	1 (2)	40	500	14	13	in (out)		
93-305		173	10/26	102	1 (2)	50	500	14	13	in (out)		
93-306		173	10/26	103	1 (2)	60	500	14	13	in (out)		
93-307		173	10/26	103	1 (2)	70	500	14	13	in (out)		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 13

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-308		173	10/26	103	1 (2)	80	500	14	13	in (out)		
93-309		173	10/26	103	1 (2)	90	500	14	13	in (out)		
93 310		173	10/26	103	1 (2)	100	500	15	13	in (out)		
93-311		173	10/26	103	1 (2)	110	500	15	13	in (out)		
93-312		173	10/26	103	1 (2)	120	500	15	13	in (out)		
93-313		173	10/26	103	1 (2)	130	500	15	13	in (out)		
					1 2					in out		
93 314		174	10/26	103	1 (2)	0	500	17	13	(in) out		
93-315		174	10/26	103	1 (2)	0	500	17	13	in (out)		
93-316		174	10/26	103	1 (2)	10	500	17	13	in (out)		
93-317		174	10/26	103	1 (2)	20	500	17	13	in (out)		
93-318		174	10/26	103	1 (2)	30	500	17	13	in (out)		
93-319		174	10/26	103	1 (2)	40	500	17	13	in (out)		
93-320		174	10/26	103	1 (2)	50	500	17	13	in (out)		
93-321		174	10/26	103	1 (2)	60	500	17	13	in (out)		
93-322		174	10/26	103	1 (2)	70	500	17	13	in (out)		
93-323		174	10/26	103	1 (2)	80	500	17	13	in (out)		
93-324		174	10/26	103	1 (2)	90	500	16	13	in (out)		
93-325		174	10/26	103	1 (2)	100	500	16	13	in (out)		
93-326		174	10/26	103	1 (2)	110	500	16	13	in (out)		
93-327		174	10/26	103	1 (2)	120	500	15	13	in (out)		
93 328		174	10/26	103	1 (2)	130	500	14	13	in (out)		
93329		174	10/26	103	1 (2)	140	500	14	13	in (out)		
93-330		174	10/26	103	1 (2)	150	500	13	13	in (out)		
93-331		174	10/26	103	1 (2)	160	500	13	13	in (out)		
93 332		174	10/26	103	1 (2)	170	500	13	13	in (out)		
93-333		174	10/26	103	1 (2)	180	500	14	13	in (out)		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 14

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-334		174	10/26	103	1 (2)	190	500	14	13	in (out)		
93-335		174	10/26	103	1 (2)	200	500	15	13	in (out)		
93-336		174	10/26	103	1 (2)	210	500	15	13	in (out)		
93-337		174	10/26	103	1 (2)	220	500	16	13	in (out)		
93-338		174	10/26	103	1 (2)	230	500	17	13	in (out)		
93-339		174	10/26	104	1 (2)	240	500	16	13	in (out)		
93-340		174	10/26	104	1 (2)	250	500	17	13	in (out)		
93-341		174	10/26	104	1 (2)	260	500	17	13	(in) out		
93-342		174	10/26	104	1 (2)	270	500	17	13	(in) out		
93-343		174	10/26	104	1 (2)	280	500	17	13	(in) out		
93-344		174	10/26	104	1 (2)	290	500	17	13	(in) out		
					2					in out		
93-345		175	10/27	104	1 (2)	0	500	14.5	13	(in) out		
93-346		175	10/27	104	1 (2)	0	500	14.4	13	in (out)		
93-347		175	10/27	104	1 (2)	10	500	14.4	13	in (out)		
93-348		175	10/27	104	1 (2)	20	500	14.4	13	in (out)		
93-349		175	10/27	104	1 (2)	30	500	14.4	13	in (out)		
93-350		175	10/27	104	1 (2)	42	500	14.5	13	in (out)		
93-351		175	10/27	104	1 (2)	50	500	14.4	13	in (out)		
93-352		175	10/27	104	1 (2)	60	500	14.4	13	in (out)		
93-353		175	10/27	104	1 (2)	70	500	14.5	13	in (out)		
93-354		175	10/27	104	1 (2)	80	500	14.5	13	in (out)		
93-355		175	10/27	104	1 (2)	90	500	14.5	13	in (out)		
93-356		175	10/27	104	1 (2)	100	500	14.4	13	in (out)		
93-357		175	10/27	104	1 (2)	110	500	14.5	13	in (out)		
93-358		175	10/27	104	1 (2)	120	500	14.5	13	in (out)		
93-359		175	10/27	104	1 (2)	130	500	14.5	13	in (out)		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 15

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Como in N2 balance)	Comments
93-360		175	10/27	105	1	140	500	14.5	13	in out		MDB
93-361		175	10/27	105	1	150	500	14.5	13	in out		MDB
93-362		175	10/27	105	1	160	500	14.5	13	in out		MDB
93-363		175	10/27	105	1	170	500	14.5	13	in out		MDB
~~93-364~~		~~175~~	~~10/27~~		1					in out		
93-365		176	10/27	105	1	0	500	13.5	13	in out		
93-365		176	10/27	105	1	0	500	13.6	13	in out		
93-366		176	10/27	105	1	10	500	13.8	13	in out		
93-367		176	10/27	105	1	20	500	13.81	13	in out		
93-368		176	10/27	105	1	30	500	13.91	13	in out		
93-369		176	10/27	105	1	40	500	13.91	13	in out		
93-370		176	10/27	105	1	50	500	13.91	13	in out		
93-371		176	10/27	105	1	60	500	14.01	13	in out		
93-372		176	10/27	105	1	70	500	14.01	13	in out		
93-373		176	10/27	105	1	80	500	14.01	13	in out		
93-374		176	10/27	105	1	90	500	14.0	13	in out		
93-375		176	10/27	105	1	100	500	14.0	13	in out		
93-376		176	10/27	105	1	90	500	14.0	13	in out		
93-377		176	10/27	105	1	—	—	—	5m	in out	0.5% CO from tool bottle	
~~93-378~~		~~177~~	~~10/27~~				500			out		MDB
93-378		177	10/27	106	1	—	500	—	13	in out		
93-379		177	10/27	106	1	—	500	—	13	in out		
93-380		177	10/27	106	1	10	500	13.6	13	in out		
93-381		177	10/27	106	1	20	500	13.9	13	in out		
93-382		177	10/27	106	1	30	500	14.2	13	in out		
93-383		177	10/27	106	1	40	500	14.3	13	in out		
93-384		177	10/27	106	1	50	500	14.4	13	in out		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 16

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-385		77	10/27	106	1 (2)	60	500	14.5	13	in (out)		
93-386		77	10/27	106	1 (2)	70	500	14.5	13	in (out)		
93-387		77	10/27	106	1 (2)	80	500	14.6	13	in (out)		
93-388		77	10/27	106	1 (2)	90	500	14.7	13	in (out)		
93-389		77	10/27	106	1 (2)	100	500	14.6	13	in (out)		
93-390		77	10/27	106	1 (2)	110	500	14.7	13	in (out)		
93-391		77	10/27	106	1 (2)	120	500	14.7	13	in (out)		
93-392		77	10/27	106	1 (2)	130	500	14.7	13	in (out)		
93-393		77	10/27	106	1 (2)	140	500	14.8	13	in (out)		
93-394		77	10/27	106	1 (2)	150	500	14.8	13	in (out)		
93-395		77	10/27	106	1 (2)	155	500	14.9	13	(in) out		
93-396		77	10/27	106	1 (2)	160	500	14.9	13	(in) out		
93-397		77	10/27	106	1 (2)	—	—	—	—	~~in~~ out	QA STD GAS from 0.5% CO in N2 bottle #2. Seal	
					1 2					in out		
93-398		78	10/28	107	1 (2)	0	500		4	(in) out		
93-399		78	10/28	107	1 (2)	5	500		4	(in) out		
					1 2					in out		
93-400		78	10/29	107	1 (2)	0	~~500~~ 535		4	(in) out		
93-401		78	10/29	107	1 (2)	5	535		4	(in) out		
93-402		78	10/29	107	1 (2)	10	535	15	4	(in) out		
93-403		78	10/29	107	1 (2)	20	535	15.5 15.6	4	(in) out		
93-404		78	10/29	107	1 (2)	30	535	15.6	4	(in) out		
93-405		78	10/29	107	1 (2)	40	535	15.5	4	(in) out		
93-406		78	10/29	107	1 (2)	50	535	15.7	4	(in) out		
93-407		78	10/29	107	1 (2)	60	535	15.8	4	(in) out		
93-408		78	10/29	107	1 (2)	70	535	15.8	4	(in) out		
93-409		78	10/29	107	1 (2)	80	535	15.9	4	(in) out		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 17

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-410		78	10/29	107	1 (2)	90	535	16.0	4	in out		
93-411		78	10/29	107	1 (2)	100	535	16.0	4	in out		
93-412		78	10/29	107	1 (2)	110	535	16.0	4	in out		
93-413		78	10/29	107	1 (2)	120	535	16.0	4	in out		
93-414		78	10/29	107	1 (2)	130	535	16.1	4	in out		
93-415		78	10/29	107	1 (2)	140	535	16.1	4	in out		
93-416		78	10/29	107	1 (2)	150	535	16.2	4	in out		
93-417		78	10/29	107	1 (2)	160	535	16.4	14	in out		
93-418		78	10/29	107	1 (2)	170	490	16.5	14	in out		
93-419		78	10/29	107	1 (2)	180	475	16.6	14	in out		
93-420	16	78	10/29	107	1 (2)	190	475	16.6	14	in out		
93-421		78	10/29	107	1 (2)	190	475	16.6	14	in out		
93-422		78	10/29	107	1 (2)	200	475	16.7	14	in out		
93-423		78	10/29	107	1 (2)	210	475	16.9	14	in out		
93-424		78	10/29	107	1 (2)	220	475	16.9	14	in out		
93-425		78	10/29	107	1 (2)	230	475	17.0	14	in out		
93-426		78	10/29	107	1 (2)	240	475	17.0	14	in out		
93-427		78	10/29	107	1 (2)	250	475	17.0	14	in out		
93-428		78	10/29	107	1 (2)	260	475	17.0	14	in out		
93-429		78	10/29	107	1 (2)	270	475	17.1	14	in out		
93-430		78	10/29	107	1 (2)	280	475	17.3	14	in out		
93-431		78	10/29	107	1 (2)	290	475	17.3	14	in out		
93-432		78	10/29	107	1 (2)	300	475	17.4	14	in out		
93-433		78	10/29	108	1 (2)	310	475	17.6	14	in out		
93-434		78	10/29	108	1 (2)	320	475	17.7	14	in out		
93-435		78	10/29	108	1 (2)	330	475	17.8	14	in out		
93-436		78	10/29	108	1 (2)	340	475	17.9	14	in out		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 18

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Como in N2 balance)	Comments
93-437		78	10/29	108	1 (2)	350	475	18.0	14	in (out)		
93-438		78	10/29	108	1 (2)	~~350~~ 1440	475	—	14	(in) out		
93-439		78	10/29	108	1 (2)		475	—	14	(in) out		
					1 2					in out		
93-440		78	10/29	108	1 (2)		495	—	~~X~~	(out)	1440 QA STD	CO feed gas 0.5% in N_2
93-441		78	10/29	108	1 (2)		495	—	~~X~~	(out)	CA STD	H_2 feed gas
					1 2					in out		
93-442		79	11/2	108	1 (2)	0	500	17	13	(in) out		
93-443		79	11/2	108	1 (2)	0	500	18	13	(in) out		
93-444		79	11/2	108	1 (2)	15	500	15.2	13	in (out)		
93-445		79	11/2	108	1 (2)	20	500	15.2	13	in (out)		
93-446		79	11/2	108	1 (2)	30	500	15.4	13	in (out)		
93-447		79	11/2	108	1 (2)	40	500	15.5	13	in (out)		
93-448		79	11/2	108	1 (2)	50	500	15.6	13	in (out)		
93-449		79	11/2	108	1 (2)	60	500	15.7	13	in (out)		
93-450		79	11/2	108	1 (2)	70	500	15.7	13	in (out)		
~~93-451~~					1 2					in out		
					1 2					in out		
93-451		80	11/2	109	1 (2)	0	500	16.5	13	(in) out		
93-452		80	11/2	109	1 (2)	0	500	16.5	13	(in) out		
93-453		80	11/2	109	1 (2)	10	500	16.4	13	in (out)		
93-454		80	11/2	109	1 (2)	20	500	16.6	13	in (out)		
93-455		80	11/2	109	1 (2)	30	500	16.6	13	in (out)		
93-456		80	11/2	109	1 (2)	40	500	16.9	13	in (out)		
93-457		80	11/2	109	1 (2)	50	500	16.9	13	in (out)		
93-458		80	11/2	109	1 (2)	60	500	17	15	in (out)		
93-459		80	11/2	109	1 (2)	70	500	17.1	13	in (out)		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 19

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-460		80	11/2	109	1 (2)	50	500	17.1	13	in (out)		
93-461		80	11/2	109	1 (2)	90	500	17.1	13	in (out)		
93-462		80	11/2	109	1 (2)	100	500	17.3	13	in (out)		
93-463		80	11/2	109	1 (2)	110	500	17.2	13	in (out)		
93-464		80	11/2	109	1 (2)	—	500	17.2	13	(in) out		
93-465		80	11/2	109	1 (2)	—	500	17.2	13	(in) out		
					1 2					in out		
93-466		81	11/23	109	1 (2)	—	7412	14.4	4	(in) out		
93-467		81	11/23	109	1 (2)	—	7412	14	4	(in) out		
93-468		81	11/23	110	1 (2)	30	450	14.7	4	in (out)		
93-469		81	11/23	110	1 (2)	45	416	14.7	4	in (out)		
93-470		81	11/23	110	1 (2)	60	416	14.7	4	in (out)		
93-471		81	11/23	110	1 (2)	75	450	14.7	4	in (out)		
93-472		81	11/23	110	1 (2)	~~30~~	424	14.8	4	(in) out		
93-473		81	11/23	110	1 (2)	75	416	14.8	4	(in) out		
93-474		81	11/23	110	1 (2)	75	—	14.8	14	(in) out		
93-475		81	11/23	110	1 (2)	75		14.8	14	(in) out		
93-476		81	11/23	110	1 (2)	0			14	(in) out		
93-477		81	11/23	110	1 (2)	10	~~460~~	14.6	~~14.0~~	in (out)		
93-478		81	11/23	110	1 (2)	20	460	14.8	14	in (out)		
93-479		81	11/23	110	1 (2)	30	460	14.9	14	in (out)		
93-480		81	11/23	110	1 (2)	40	460	15.0	14	in (out)		
93-481		81	11/23	110	1 (2)	50	460	15.0	14	in (out)		
93-482		81	11/23	110	1 (2)	60	460	15.0	14	in (out)		
93-483		81	11/23	110	1 (2)	70	460	15.0	14	in (out)		
93-484		81	11/23	110	1 (2)	80	460	15.0	14	in (out)		
93-485		81	11/23	110	1 (2)	90	460	14.9	14	in (out)		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 20

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-484		81	11/23	110	1 (2)	100	460	14.9	14	in (out)		
93-487		81	11/23	110	1 (2)	110	460	14.9	14	in (out)		
93-488		81	11/23	110	1 (2)	120	460	14.8	14	in (out)		
93-489		81	11/23	110	1 (2)	130	460	14.8	14	in (out)		
93-490		81	11/23	110	1 (2)	132	460	14.8	14	(in) out		
93-491		81	11/23	110	1 (2)	139	460	14.7	14	(in) out		
					1 2					in out		
93-492		82	12/1	111	1 (2)	0	500	16.0	4	(in) out		
93-493		82	12/1	111	1 (2)	0	500	16.0	4	(in) out		
93-494		82	12/1	111	1 (2)	55	500	17.4	4	in (out)		
93-495		82	12/1	111	1 (2)	65	500	17.5	4	in (out)		
93-496		82	12/1	111	1 (2)	75	500	17.6	4	in (out)		
93-497		82	12/1	112	1 (2)	85	500	17.6	4	in (out)		
93-498		82	12/1	112	1 (2)	95	500	17.5	4	in (out)		
93-499		82	12/1	112	1 (2)	105	500	17.6	4	in (out)		
93-500		82	12/1	112	1 (2)	10	500	17.4	14	in (out)		
93-501		82	12/1	112	1 (2)	20	500	17.2	14	in (out)		
93-502		82	12/1	112	1 (2)	30	500	17.0	14	in (out)		
93-503		82	12/1	112	1 (2)	~~40~~	~~500~~	17.0	14	(in) out		
93-504		82	12/1	112	1 (2)	40	500	17.0	14	in (out)		
93-505		82	12/1	112	1 (2)	50	500	16.8	14	in (out)		
93-506		82	12/1	112	1 (2)	60	500	16.4	14	in (out)		
93-507		82	12/1	112	1 (2)	70	500	16.0	14	in (out)		
93-508		82	12/1	112	1 (2)	80	500	15.8	14	in (out)		
93-509		82	12/1	112	1 (2)	90	500	15.7	14	in (out)		
93-510		82	12/1	112	1 (2)	100	500	15.6	14	in (out)		
93-511		82	12/1	112	1 (2)	110	500	15.6	14	in (out)		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 21

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-512		82	12/1	112	1 (2)	120	500	15.6	14	in (out)		
93-513		82	12/1	112	1 (2)	130	500	15.5	14	in (out)		
93-514		82	12/1	112	1 (2)	150	500	15.5	14	in out		
93-515		82	12/1	112	1 (2)	170	500	15.5	14	in (out)		
93-516		82	12/1	112	1 (2)	190	500	15.5	14	in (out)		
93-517		82	12/1	112	1 (2)	120	500	15.5	14	(in) out		
93-518		82	12/1	112	1 (2)	205	500	15.5	14	(in) out		
					1 2					in out		
93-519		83	12/2	113	1 (2)	0	475	18	13	(in) out		
93-520		83	12/2	113	1 (2)	0	475	18	13	(in) out		
93-521		83	12/2	113	1 (2)	10	475	15.8	13	in (out)		
93-522		83	12/2	113	1 (2)	20	475	15.8	13	in (out)		
93-523		83	12/2	113	1 (2)	30	475	15.8	13	in (out)		
93-524		83	12/2	113	1 (2)	40	475	15.9	13	in (out)		
93-525		83	12/2	113	1 (2)	50	475	15.9	13	in (out)		
93-526		83	12/2	113	1 (2)	60	475	15.9	13	in (out)		
93-527		83	12/2	113	1 (2)	70	475	15.9	13	in (out)		
93-528		83	12/2	113	1 (2)	80	475	15.9	13	in (out)		
93-529		83	12/2	113	1 (2)	90	475	15.9	13	in (out)		
93-530		83	12/2	113	1 (2)	100	475	15.9	13	in (out)		
93-531		83	12/2	113	1 (2)	110	475	16.0	13	in (out)		
93-532		83	12/2	113	1 (2)	120	475	16.0	13	in (out)		
93-533		83	12/2	113	1 (2)	130	475	16.0	13	in (out)		
93-534		83	12/2	113	1 (2)	140	475		13	in (out)		
93-535		83	12/2	113	1 (2)	150	475		13	(in) (out)		
93-536		83	12/2	113	(1) (2)	0	—		13	(in) out		
93-537		83	12/2	113	1 (2)	0	—	16.1	17	(in) out		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 22

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-538	—	84	12/7	114	1 ②	0		15.4	13	(in) out		
93-539		84	12/7	114	1 ②	0		15.5	13	(in) out		
93-540		84	12/7	114	1 ②	10		15.6	13	in (out)		
93-541		84	12/7	114	1 ②	20		15.7	13	in (out)		
93-542		84	12/7	114	1 ②	30		15.7	13	in (out)		
93-543		84	12/7	114	1 ②	40		15.7	13	in (out)		
93-544		84	12/7	114	1 ②	50		15.7	13	in (out)		
93-545		84	12/7	114	1 ②	60		15.7	13	in (out)		
93-546		84	12/7	114	1 ②	70		15.7	13	in (out)		
93-547		84	12/7	114	1 ②	80		15.7	13	in (out)		
93-548		84	12/7	114	1 ②	90		15.7	13	in (out)		
93-549		84	12/7	114	1 ②	100		15.7	13	in (out)		
93-550		84	12/7	114	1 ②	110		15.6	13	in (out)		
93-551		84	12/7	114	1 ②	120		15.6	13	in (out)		
93-552		84	12/7	114	1 ②	130		15.5	13	in (out)		
93-553		84	12/7	114	1 ②	140		15.5	13	in (out)		
93-554		84	12/7	114	1 ②	150		15.5	13	in (out)		
93-555		84	12/7	114	1 ②	153		15.5	13	(in) out		
93-556		84	12/7	114	1 ②	169		15.5	13	(in) out		
					2					in out		
93-557		85	12/8	115	1 ②	0		14.5	13	(in) out		
93-558		85	12/8	115	1 ②	0		14.5	13	(in) out		
93-559		85	12/8	115	1 ②	10	500	14.8	13	in (out)		
93-560		85	12/8	115	1 ②	20	500	14.9	13	in (out)		
93-561		85	12/8	115	1 ②	30	500	14.9	13	in (out)		
93-562		85	12/8	115	1 ②	40	500	14.9	13	in (out)		
93-563		85	12/8	115	1 ②	50	500	14.9	13	in (out)		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 23

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-564		85	12/8	115	1 (2)	60	500	14.9	13	in (out)		
93-565		85	12/8	115	1 (2)	70	500	14.9	13	in (out)		
93-566		85	12/8	115	1 (2)	80	500	14.9	13	in (out)		
93-567		85	12/8	115	1 (2)	90	500	14.9	13	in (out)		
93-568		85	12/8	115	1 (2)	100	500	14.9	13	in (out)		
93-569		85	12/8	115	1 (2)	110	500	14.9	13	in (out)		
93-570		85	12/8	115	1 (2)	120	500	14.9	13	in (out)		
93-571		85	12/8	115	1 (2)	130	500	14.9	13	in (out)		
93-572		85	12/8	115	1 (2)	140	500	14.9	13	in (out)		
93-573		85	12/8	115	1 (2)	150	500	14.9	13	in (out)		
93-574		85	12/8	115	1 (2)	160	500	14.9	13	in (out)		
93-575		85	12/8	115	1 (2)	170	500	14.9	13	in (out)		
93-576		85	12/8	115	1 (2)	180	500	14.9	13	in (out)		
93-577		85	12/8	115	1 (2)	190	500	14.8	13	in (out)		
93-578		85	12/8	115	1 (2)	200	500	14.9	13	in (out)		
93-579		85	12/8	115	1 (2)	202	500	14.9	13	(in) out		
93-580		85	12/8	115	1 (2)	205	500	14.9	13	(in) out		
					1 2					in out		
93-581		86	12/9	116	1 (2)	—			13	(in) out		
93-582		86	12/8	116	1 (2)	0	—		13	(in) out		
93-583		86	12/8	116	1 (2)	10	500	14.1	13	in (out)		
93-584		86	12/8	116	1 (2)	20	500	14.2	13	in (out)		
93-585		86	12/8	116	1 (2)	30	500	14.4	13	in (out)		
93-586		86	12/8	116	1 (2)	40	500	14.5	13	in (out)		
93-587		86	12/8	116	1 (2)	50	500	14.5	13	in (out)		
93-588		86	12/8	116	1 (2)	60	500	14.6	13	in (out)		
93-589		86	12/8	116	1 (2)	70	500	14.7	13	in (out)		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 24

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-590		86	12/8	116	1 (2)	80	500	14.7	13	in (out)		
93-591		86	12/8	116	1 (2)	90	500	14.8	13	in (out)		
93-592		86	12/8	116	1 (2)	100	500	14.7	13	in (out)		
93-593		86	12/8	116	1 (2)	110	500	14.7	13	in (out)		
93-594		86	12/8	116	1 (2)	120	500	14.7	13	in (out)		
93-595		86	12/8	116	1 (2)	130	500	14.7	13	in (out)		
93-596		86	12/8	116	1 (2)	140	500	14.7	13	in (out)		
93-597		86	12/8	116	1 (2)	150	500	14.8	13	in (out)		
93-598		86	12/8	116	1 (2)	153	500	14.8	13	(in) out		
93-599		86	12/8	116	1 (2)	158	500	14.8	13	(in) out		
					1 2					in out		
					1 2					in out		
93-600		87	12/9	117	1 (2)	0	—	—	13	(in) out		
93-601		87	12/9	117	1 (2)	0	—	—	13	(in) out		
93-602		87	12/9	117	1 (2)	10	500	16.4	13	in (out)		
93-603		87	12/9	117	1 (2)	20	500	16.4	13	in (out)		
93-604		87	12/9	117	1 (2)	30	500	16.5	13	in (out)		
93-605		87	12/9	117	1 (2)	40	500	16.5	13	in (out)		
93-606		87	12/9	117	1 (2)	50	500	16.5	13	in (out)		
93-607		87	12/9	117	1 (2)	60	500	16.6	13	in (out)		
93-608		87	12/9	117	1 (2)	70	500	16.6	13	in (out)		
93-609		87	12/9	117	1 (2)	80	500	16.6	13	in (out)		
93-610		87	12/9	117	1 (2)	90	500	16.7	13	in (out)		
93-611		87	12/9	117	1 (2)	100	500	16.7	13	in (out)		
93-612		87	12/9	117	1 (2)	110	500	16.7	13	in (out)		
93-613		87	12/9	117	1 (2)	120	500	16.8	13	in (out)		
93-614		87	12/9	117	1 (2)	130	500	16.8	13	in (out)		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 25

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Comp in N2 balance)	Comments
93-615		87	12/9	117	1 (2)	140	500	16.7	13	in (out)		
93-616		87	12/9	117	1 (2)	150	500	16.6	13	in (out)		
93-617		87	12/9	117	1 (2)	160	500	16.6	13	in (out)		
93-618		87	12/9	117	1 (2)	162	500	16.5	13	(in) out		
93-619		87	12/9	117	1 (2)	167	500	16.6	13	(in) out		
					1 2					~~in out~~		
					1 2					~~in out~~		
93-620		88	12/20	118	1 (2)	0	500	—	13	(in) out		
93-621		88	12/20	118	1 (2)	0	500	—	13	(in) out		
93-622		88	12/20	118	1 (2)	10	500	15.6	13	in (out)		
93-623		88	12/20	118	1 (2)	20	500	15.6	13	in (out)		
93-624		88	12/20	118	1 (2)	30	500	15.6	13	in (out)		
93-625		88	12/20	118	1 (2)	40	500	15.6	13	in (out)		
93-626		88	12/20	118	1 (2)	50	500	15.7	13	in (out)		
93-627		88	12/20	118	1 (2)	60	500	15.7	13	in (out)		
93-628		88	12/20	118	1 (2)	70	500	15.8	13	in (out)		
93-629		88	12/20	118	1 (2)	80	500	15.8	13	in (out)		
93-630		88	12/20	118	1 (2)	90	500	15.8	13	in (out)		
93-631		88	12/20	118	1 (2)	100	500	15.8	13	in (out)		
93-632		88	12/20	118	1 (2)	110	500	15.8	13	in (out)		
93-633		88	12/20	118	1 (2)	120	500	15.9	13	in (out)		
93-634		88	12/20	118	1 (2)	130	500	15.9	13	in (out)		
93-635		88	12/20	118	1 (2)	140	500	15.9	13	in (out)		
93-636		88	12/20	118	1 (2)	—	500	15.9	13	(in) out		
93-637		88	12/20	118	1 (2)	—	500	15.9	13	(in) out		
					1 2					~~in out~~		
					1 2					~~in out~~		

HYDROGEN RECOMBINER CATALYST TEST – SAMPLE LOG SHEET

SHEET 2 c

Sample #	GSC #	Run #	Date	Page	Appar.	Time (min)	Flowrate (sccm)	Temp (°C)	FM#	Inlet/ Outlet	Expected Composition (% Como in N2 balance)	Comments
93-638		89	12/20	118	1 (2)	Ø	500	—	13	(in) out		
93-639		89	12/20	118	1 (2)	Ø	500	—	13	(in) out		
93-640		89	12/20	119	1 (2)	10	500	15.9	13	in (out)		
93-641		89	12/20	119	1 (2)	20	500	15.9	13	in (out)		
93-642		89	12/20	119	1 (2)	30	500	15.9	13	in (out)		
93-643		89	12/20	119	1 (2)	40	500	15.9	13	in (out)		
93-644		89	12/20	119	1 (2)	50	500	15.9	13	in (out)		
93-645		89	12/20	119	1 (2)	60	500	15.8	13	in (out)		
93-646		89	12/20	119	1 (2)	70	500	15.8	13	in (out)		
93-647		89	12/20	119	1 (2)	80	500	15.8	13	in (out)		
93-648		89	12/20	119	1 (2)	90	500	15.8	13	in (out)		
93-649		89	12/20	119	1 (2)	100	500	15.7	13	in (out)		
93-650		89	12/20	119	1 (2)	110	500	15.7	13	in (out)		
93-651		89	12/20	119	1 (2)	120	500	15.7	13	in (out)		
93-652		89	12/20	119	1 (2)	130	500	15.7	13	in (out)		
93-653		89	12/20	119	1 (2)	140	500	15.7	13	in (out)		
93-654		89	12/20	119	1 (2)	150	500	15.7	13	in (out)		
93-655		89	12/20	119	1 (2)	160	500	15.7	13	in (out)		
93-656		89	12/20	119	1 (2)	170	500	15.7	13	in (out)		
93-657		89	12/20	119	1 (2)	178	—	—	13	(in) out		
93-658		89	12/20	119	1 (2)	178	—	—	13	(in) out		
					1 2					in out		
					1 2					in out		
					1 2					in out		
					1 2					in out		
					1 2					in out		
					1 2					in out		

APPENDIX F

JOB SAFETY ANALYSIS

CEL JOB SAFETY ANALYSIS	JOB DESCRIPTION: HYDROGEN RECOMBINER CATALYST PERFORMANCE AND DURABILITY TEST	CHARGE CODE: D44L2	CEL-JSA-93-005
	COMPONENT		BUILDING: 2703E
REVIEWED BY INDUSTRIAL SAFETY	PREPARED BY: Michael D. Britton		DATE: June 17, 1993
DATE: 6-22-93 INITIALS:	MANAGER SIGNATURE: M. J. Schliebe		DATE: 6/17/93

SAFETY EQUIPMENT REQUIRED	TOOLS & EQUIPMENT REQUIRED	JOB PREPARATION
Safety glasses	Available in safety lockers: Ammonia gas masks Insulated gloves	Read following MSDS: H_2 MSDS 1252 N_2O MSDS 1394 O_2 MSDS 1406 CO in N_2 MSDS 16617 14.3% CH_4 in N_2 MSDS 26351 NH_3 MSDS 1039
	HAZARDOUS MATERIALS	**RELATED REQUIREMENTS**
	100% N_2O 10% N_2O in N_2 5% NH_3 in N_2 Non-hazardous gases 4% H_2 in N_2 4% O_2 in N_2 0.5% CO in N_2 0.5% CH_4 in N_2	RADIATION WORK PROCEDURE YES___ NO_X_ NUCLEAR SAFETY SPEC. YES___ NO_X_ QUALITY ASSURANCE YES___ NO_X_

JOB STEP	HAZARD	SAFETY RULES AND SAFE PRACTICES
Unexpected gas leaks	Personnel exposure to N_2O and/or NH_3	Experiment is performed in a large ventilated building. Pressure checks are performed each time the reactor head is removed or the tubing lines are reconfigured. Gas masks for NH_3 are available for the lab personnel.
Accidental high temperature operations	The catalyzed reaction is exothermic. Metallic equipment and lines could become hot.	The system is to be operated between 20 and 40°C. If equipment exceeds 60°C, the system will be shut down, a "Hot Surfaces" warning sign will be hung on the apparatus, and the system will be allowed to cool down. If the need to handle hot equipment arises, insulated gloves will be used to handle it.

APPENDIX G

CERTIFICATE OF MIXTURE ANALYSIS FOR FEED GASES

CERTIFICATE OF MIXTURE ANALYSIS

MATHESON GAS PRODUCTS INC.
NEWARK, CALIFORNIA

TO: WESTINGHOUSE HANFORD

FROM: MATHESON GAS PRODUCTS
6775 CENTRAL AVENUE
NEWARK, CALIFORNIA 94560

P.O. WGS-YVV-279075

W.O. 103-74053 / M36-1222

PRODUCT: 4.00 PCT HYDROGEN, PREP
BAL NITROGEN, PREP

CYLINDER NO.	COMPONENT	ANALYSIS
AS-50620	HYDROGEN	4.07%
	NITROGEN	BALANCE
AS-54718	HYDROGEN	4.07%
	NITROGEN	BALANCE

CYLINDER SIZE: 1A

TOP PRESSURE: 2000 PSIG

C.G.A. : 350

GAS VOLUME : 209 Cu.Ft.

THE PRODUCT LISTED ABOVE AND FURNISHED UNDER THE REFERENCED PURCHASE ORDER HAS BEEN TESTED AND FOUND TO CONTAIN THE COMPONENT CONCENTRATION STATED ABOVE.

ANALYST

06-02-93
DATE

CERTIFICATE OF MIXTURE ANALYSIS

MATHESON GAS PRODUCTS INC.
NEWARK, CALIFORNIA

TO: WESTINGHOUSE HANFORD

FROM: MATHESON GAS PRODUCTS
6775 CENTRAL AVENUE
NEWARK, CALIFORNIA 94560

P.O. WGA-YVV-279075

W.O. 103-74053 / M36-1219

PRODUCT: 4.00 PCT NITROUS OXIDE, CP
BAL NITROGEN, PREP

CYLINDER NO.	COMPONENT	ANALYSIS
FF-15137	NITROUS OXIDE	3.87%
	NITROGEN	BALANCE

CYLINDER SIZE: 2 TOP PRESSURE: 1000 PSIG

C.G.A. : 350 GAS VOLUME : 40 Cu.Ft.

THE PRODUCT LISTED ABOVE AND FURNISHED UNDER THE REFERENCED PURCHASE ORDER HAS BEEN TESTED AND FOUND TO CONTAIN THE COMPONENT CONCENTRATION STATED ABOVE.

ANALYST

06-02-93
DATE

CERTIFICATE OF MIXTURE ANALYSIS

MATHESON GAS PRODUCTS INC.
NEWARK, CALIFORNIA

TO: WESTINGHOUSE HANFORD

FROM: MATHESON GAS PRODUCTS
6775 CENTRAL AVENUE
NEWARK, CALIFORNIA 94560

P.O. WGA-YVV-279075

W.O. 103-74053 / M36-1218

PRODUCT: 2.00 PCT OXYGEN, EXTRA DRY
BAL NITROGEN, PREP

CYLINDER NO.	COMPONENT	ANALYSIS
FF-18921	OXYGEN	2.06%
	NITROGEN	BALANCE

CYLINDER SIZE: 2 TOP PRESSURE: 2000 PSIG

C.G.A. : 580 GAS VOLUME : 81 Cu.Ft.

THE PRODUCT LISTED ABOVE AND FURNISHED UNDER THE REFERENCED PURCHASE ORDER HAS BEEN TESTED AND FOUND TO CONTAIN THE COMPONENT CONCENTRATION STATED ABOVE.

S.H. Ballard
ANALYST

06-02-93
DATE

CERTIFICATE OF MIXTURE ANALYSIS

MATHESON GAS PRODUCTS INC.
NEWARK, CALIFORNIA

TO: WESTINGHOUSE HANFORD

FROM: MATHESON GAS PRODUCTS
6775 CENTRAL AVENUE
NEWARK, CALIFORNIA 94560

P.O. WGA-YVV-279075

W.O. 103-74053 / M36-1220

PRODUCT: 0.50 PCT CARBON MONOXIDE, CP
BAL NITROGEN, PREP

CYLINDER NO.	COMPONENT	ANALYSIS
FF-12928	CARBON MONOXIDE NITROGEN	0.50% BALANCE

CYLINDER SIZE: 2

TOP PRESSURE: 1650 PSIG

C.G.A. : 350

GAS VOLUME : 67 Cu.Ft.

THE PRODUCT LISTED ABOVE AND FURNISHED UNDER THE REFERENCED PURCHASE ORDER HAS BEEN TESTED AND FOUND TO CONTAIN THE COMPONENT CONCENTRATION STATED ABOVE.

ANALYST

06-02-93
DATE

C E R T I F I C A T E O F M I X T U R E A N A L Y S I S

MATHESON GAS PRODUCTS INC.
NEWARK, CALIFORNIA

TO: WESTINGHOUSE HANFORD

FROM: MATHESON GAS PRODUCTS
6775 CENTRAL AVENUE
NEWARK, CALIFORNIA 94560

P.O. WGA-YVV-279075

W.O. 103-74053 / M36-1221

PRODUCT: 0.50 PCT METHANE, CP
BAL NITROGEN, PREP

CYLINDER NO.	COMPONENT	ANALYSIS
FF-2899	METHANE	0.50%
	NITROGEN	BALANCE

CYLINDER SIZE: 2 TOP PRESSURE: 2000 PSIG

C.G.A. : 350 GAS VOLUME : 81 Cu.Ft.

THE PRODUCT LISTED ABOVE AND FURNISHED UNDER THE REFERENCED PURCHASE ORDER HAS BEEN TESTED AND FOUND TO CONTAIN THE COMPONENT CONCENTRATION STATED ABOVE.

ANALYST

06-02-93
DATE

CERTIFICATE OF MIXTURE ANALYSIS

MATHESON GAS PRODUCTS INC.
NEWARK, CALIFORNIA

TO: WESTINGHOUSE HANFORD CO.
2355 STEVENS DRIVE
RICHLAND, WASHINGTON 99352

FROM: MATHESON GAS PRODUCTS
6775 CENTRAL AVENUE
NEWARK, CALIFORNIA 94560

PO: WGS-YVV-279078

W.O.: 103-74013

PRODUCT: 5.00% AMMONIA
BAL. NITROGEN

LOT NO.	CYLINDER NO.	COMPONENTS	ANALYSIS
M36-1217	FF-19852	AMMONIA NITROGEN	5.05% BAL.

CYLINDER SIZE: 2P

TOP PRESSURE: 1800 PSIG

C.G.A. : 705

GAS VOLUME : 73 Cu.Ft.

THE PRODUCT LISTED ABOVE AND FURNISHED UNDER THE REFERENCED PURCHASE ORDER HAS BEEN TESTED AND FOUND TO CONTAIN THE COMPONENT CONCENTRATION STATED ABOVE.

ANALYST

6-1-93
DATE

** CERTIFICATE OF COMPLIANCE **

MATHESON GAS PRODUCTS INC.
6775 CENTRAL AVE.
NEWARK, CALIFORNIA 94560
510-793-2559

TO: WESTINGHOUSE HANFORD
2355 STEVENS DRIVE
RICHLAND, WASH. 99352

P.O. WGS-YVV-279075

PRODUCT	SPECIFICATION
NITROUS OXIDE, SFC PURITY	99.995%

LINDER SERIAL NUMBER(S)

SX-25334
SX-25338

THE PRODUCT LISTED ABOVE AND FURNISHED UNDER THE REFERENCED PURCHASE ORDER COMPLIES WITH SPECIFICATIONS FOUND IN OUR CURRENT GENERAL CATALOG.

CERTIFICATE OF MIXTURE ANALYSIS

MATHESON GAS PRODUCTS INC.
NEWARK, CALIFORNIA

TO: WESTINGHOUSE HANFORD

FROM. MATHESON GAS PRODUCTS
6775 CENTRAL AVENUE
NEWARK, CALIFORNIA 94560

P.O. WGS-VVV-303944

W.O. 103-76064 / M36-1947

PRODUCT: 0.50 PCT CARBON MONOXIDE, CP
BAL NITROGEN, HP

CYLINDER NO.	COMPONENT	ANALYSIS.
FF-32813	CARBON MONOXIDE NITROGEN	0.50% BALANCE

CYLINDER SIZE: 2

TOP PRESSURE: 1650 PSIG

C.G.A. : 350

GAS VOLUME : 71 Cu.Ft.

THE PRODUCT LISTED ABOVE AND FURNISHED UNDER THE REFERENCED PURCHASE ORDER HAS BEEN TESTED AND FOUND TO CONTAIN THE COMPONENT CONCENTRATION STATED ABOVE.

ANALYST

09-09-93
DATE

APPENDIX H

FLOW CONTROLLER CALIBRATION CHECK

Figure H-1. Calibration Check for Flow Controller SN C18600.

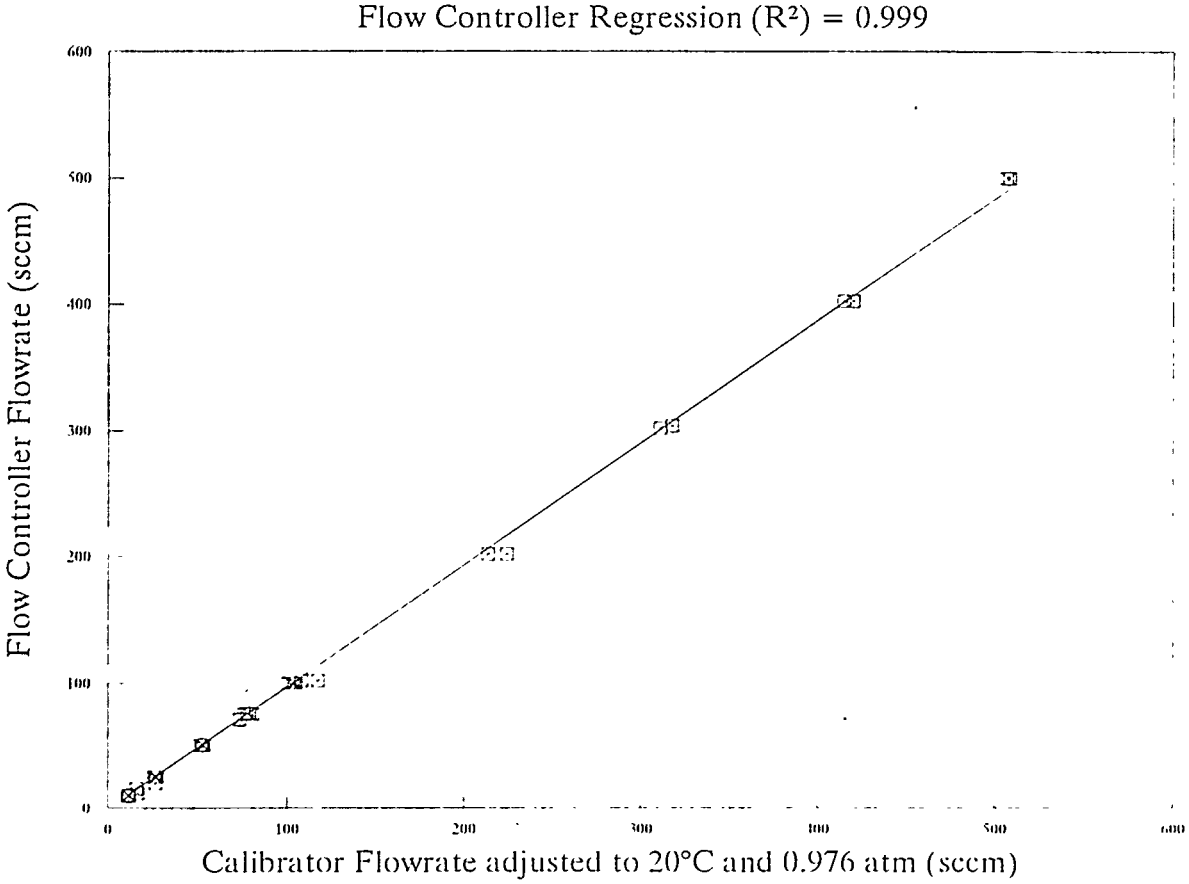


Table H-1. Calibration Check for Flow Controller SN C18600.

Flow Controller SN C18600			Bios Flow Calibrator:		
Flow meter SN C18600			Base SN B588		
Channel 1			Cell SN 5525		
Run #	Controller Flowrate sccm	Gas Temp °C	Calibrator Flowrate as read mL/min	adj to 20°C sccm	% Error
1	102.0	20.2	111.2	108.5	6.0
2	12.0	20.3	16.9	16.5	27.2
3	500.0	20.1	520.5	507.8	1.5
4	202.0	20.2	229.8	224.1	9.9
5	304.0	20.1	325.7	317.8	4.3
6	402.0	20.1	425.3	415.0	3.1
7	102.0	20.2	120.4	117.4	13.1
8	302.0	20.2	318.8	310.9	2.9
9	202.0	20.2	218.8	213.4	5.3
10	20.0	20.3	27.0	26.3	24.0
11	500.0	20.1	519.3	506.7	1.3
12	402.0	20.2	430.8	420.2	4.3

Flow Controller SN C18600			Bios flow Calibrator:		
Flow meter SN C18601			Base SN B588		
Channel 2			Cell SN 5525		
Run #	Flow Contro Flowrate sccm	Gas Temp °C	Calibrator Flowrate as read mL/min	adj to 20°C sccm	% Error
1	100.0	18.8	107.2	105.1	4.8
2	10.0	18.5	11.4	11.2	10.6
3	24 8	18.6	26.9	26.4	6 0
4	50.0	18.7	53.7	52.6	5.0
5	74.8	18.5	82.3	80.7	7.4
6	10.0	18.5	11.5	11.3	11.4
7	50.0	18.5	54.9	53.9	7.2
8	24 8	18.7	27.4	26.9	7.7
9	100.0	18.6	102.7	100.7	0.7
10	74 8	18.6	80.7	79.1	5 5

Flow Controller SN C18600			Bios flow Calibrator.		
Flow meter SN C18602			Base SN B588		
Channel 3			Cell SN 5525		
Run #	Controller Flowrate sccm	Gas Temp °C	Calibrator Flowrate as read mL/min	adj to 20°C sccm	% Erroi
1	100.0	19.6	107.0	104.6	4.4
2	50.0	19.5	54.1	52.9	5.5
3	15.6	19.5	16 2	15 8	1.5
4	10 4	19.6	11.4	11 1	6.7
5	70.4	19.7	75.2	73.5	4 2
6	25.2	19.7	26.7	26.1	3 4
7	10.0	19.4	11.2	11.0	8 7
8	50.4	19.4	53.4	52 2	3.5
9	100.0	19.4	105.9	103 6	3 4
10	70 8	19.3	75.3	73.7	3 9

Flow Controller SN C18600			Bios flow Calibrator:		
Flow meter SN C18603			Base SN B588		
Channel 4			Cell SN 5525		
Run #	Flow Contro Flowrate sccm	Gas Temp °C	Calibrator Flowrate as read mL/min	adj to 20°C sccm	% Error
1	100.0	19.2	105.4	103.2	3.1
2	10.0	19.5	11.1	10.9	7.9
3	24.8	20.1	25.9	25.3	1.9
4	50.0	19.9	52.5	51.3	2.5
5	74.8	19.8	79.7	77.8	3.9
6	10 0	19.8	11.4	11.1	10.2
7	50 0	19.9	52.4	51.2	2.3
8	24.8	20.1	26.4	25.8	3.7
9	100.0	20.1	103.2	100.7	0.7
10	74.8	20.1	78.1	76 2	1.8

Flow Controller SN C18600			Bios flow Calibrator		
Flow meter SN C18604			Base SN B588		
Channel 5			Cell SN 5525		
Run #	Flow Contro Flowrate sccm	Gas Temp °C	Calibrator Flowrate as read mL/min	adj to 20°C sccm	% Error
1	100.0	19.3	105.9	103.6	3.5
2	10.0	19.4	12.2	11.9	16.2
3	25.2	19.3	27.6	27.0	6.7
4	50.0	19.5	53.8	52.6	4 9
5	75.6	19.5	79.4	77 6	2 6
6	9.6	18.6	11.7	11.5	16.3
7	50.4	18.6	53.1	52.1	3 2
8	25.2	18.7	28.1	27.5	8 5
9	100.0	18.7	104.2	102.2	2.1
10	75.2	18.7	81.0	79.4	5.3

Figure H-2. Calibration Check for Flow Controller SN C18605.

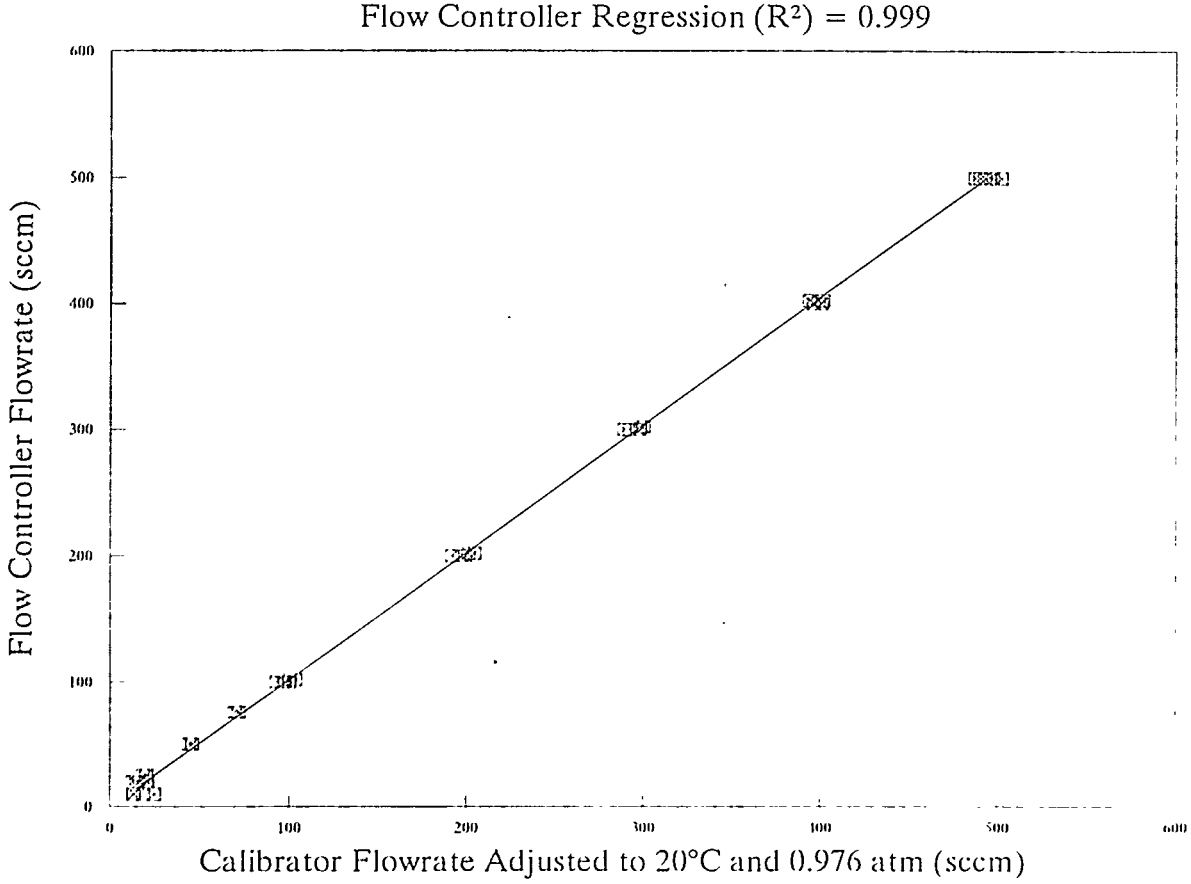


Table H-2. Calibration Check for Flow Controller SN C18605.

Flow Controller SN C18605 Flow meter SN C18605 Channel 1			Bios flow Calibrator: Base SN B588 Cell SN 5525		
Run #	Controller Flowrate sccm	Gas Temp °C	Calibrator Flowrate as read mL/min	adj to 20°C sccm	% Error
1	500.0	19.1	506.2	495.6	0.9
2	102.0	19.1	102.7	100.5	1.4
3	20.0	19.0	20.7	20.3	1.3
4	202.0	19.0	205.4	201.2	0.4
5	302.0	19.0	306.4	300.1	0.6
6	402.0	19.1	407.5	398.9	0.8
7	102.0	19.1	105.9	103.7	1.6
8	302.0	19.2	304.6	298.1	1.3
9	202.0	19.2	209.2	204.7	1.3
10	20.0	19.2	21.5	21.0	4.9
11	500.0	19.2	512.8	501.9	0.4
12	402.0	19.1	410.3	401 7	0.1

Flow Controller SN C18605 Flow meter SN C18606 Channel 2			Bios flow Calibrator: Base SN B588 Cell SN 5525		
Run #	Controller Flowrate sccm	Gas Temp °C	Calibrator Flowrate as read mL/min	adj to 20°C sccm	% Error
1	500.0	17.3	499.9	492.4	1.5
2	100.0	17 3	99.7	98.2	1.8
3	18.0	17.4	15.4	15.2	18.7
4	200.0	17.5	200.7	197.6	1.2
5	300.0	17 6	302.7	297.9	0.7
6	400.0	17.6	402.1	395.7	1.1
7	100 0	17 6	101.9	100.3	0.3
8	300.0	17.7	301.3	296.4	1.2
9	200.0	17.8	202.7	199.3	0.3
10	20.0	17 9	16.4	16.1	24 1
11	500.0	18.0	498.8	490.2	2.0
12	400.0	18.1	407.8	400.6	0.2

Flow Controller SN C18605 Flow meter SN C18607 Channel 3			Bios flow Calibrator: Base SN B588 Cell SN 5525		
Run #	Controller Flowrate sccm	Gas Temp °C	Calibrator Flowrate as read mL/min	adj to 20°C sccm	% Error
1	500.0	18.2	506.0	496.9	0.6
2	100.0	18.3	99.5	97.7	2 4
3	20.0	18.4	14.8	14.5	37 7
4	200.0	18.6	195.7	191 9	4 2
5	300.0	18.5	294.6	289.0	3.8
6	402.0	18.6	401.6	393.8	2.1
7	100.0	18.6	97.9	96.0	4.2
8	300.0	18.6	298.1	292 3	2.6
9	200.0	18 6	200 0	196.1	2.0
10	20.0	18.7	13.1	12.8	55 7
11	500.0	18.7	497.1	487.3	2.6
12	400.0	18.8	404.5	396.4	0 9

Flow Controller SN C18605 Flow meter SN C18608 Channel 4			Bios flow Calibrator: Base SN B588 Cell SN 5525		
Run #	Controller Flowrate sccm	Gas Temp °C	Calibrator Flowrate as read mL/min	adj to 20°C sccm	% Error
1	100.0	16.9	97.3	96.0	4.2
2	10.0	18.5	18.9	18.5	46.1
3	25.2	17.8	20.3	20.0	26.2
4	50.0	17.9	46.5	45.7	9.4
5	75.2	18.0	72.5	71.2	5.5
6	50.0	18.6	46.7	45.8	9.2
7	10.0	19.2	25.0	24.5	59.1
8	25.2	19.4	20.9	20.4	23.3
9	100.0	19.5	99.1	96.9	3.2
10	75.2	19.5	73.8	72.2	4.2

Flow Controller SN C18605 Flow meter SN C18609 Channel 5			Bios flow Calibrator Base SN B588 Cell SN 5525		
Run #	Controller Flowrate sccm	Gas Temp °C	Calibrator Flowrate as read mL/min	adj to 20 C sccm	% Error
1	100.0	19.6	95.1	92.9	7 6
2	10.0	19.5	13 5	13.2	24.2
3	25.2	19.6	18.8	18 4	37.2
4	50.0	19.5	45.4	44.4	12.6
5	75.2	19.4	71.4	69 8	7.7
6	10.0	19.2	13.5	13 2	24 3
7	50.0	19.2	45.0	44.0	13.5
8	25.2	19.2	18.8	18.4	37.0

APPENDIX I

WESTINGHOUSE STANDARDS LABORATORY REPORT ON BOIS FLOW CALIBRATOR

WESTINGHOUSE STANDARDS LABORATORY PHYSICAL AND ELECTRICAL REPORT

CUSTODIAN/ADDRESS: BRITTON MD 54-28

STANDARDS CODE NUMBER: 817-28-02-008

NEW / MODIFY

REFERENCE NUMBER: 372237

ORGANIZATION CODE: W12130

WORK ORDER: D44L2

INSTRUMENT: N CALIBRATOR DIOS DC-1SC DRY CAL

SERIAL NUMBER: S-525

PROPERTY NUMBER: N/A

RECALL STATUS: 1 ACTIVE, 2 NONRECALL, 3 SUSPENDED, 4 DELETED — 2

RECALL CYCLE: 360

TOLERANCE HISTORY:

ROOM: N/A

BUILDING: 2703E

SERVICE DEPARTMENT: 9

DATE RECEIVED: 930624

TOLERANCE AS RECEIVED: 1 IN, 2 OUT, 3 NA, 4 FAILED

SHIPPING DAY: TH

COMMENTS:

SENDER: D PAINE 3-5134

INSTRUMENT SPECIFICATIONS: SEE CALCULATIONS Below!

TRAINING HOURS:

CALIBRATION HOURS: 3.0

REPAIR HOURS:

OTHER HOURS:

MATERIALS:

TOTAL CHARGE = ($120 x SUM OF HOURS) + MATERIAL

STANDARD(S) USED IN CALIBRATION TRACEABLE TO NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY OR NATIONALLY RECOGNIZED STANDARDS — 4:1 RATIO Y [X] N [ ]

	EXPIRATION DATE
002-35-40-001	3-3-94
002-28-06-002	3-22-94
002-29-06-018	10-26-93

DATE CALIBRATED: 6/30/93

DATE DUE: 6/30/94

REMARKS: NEW - NO WP DATA SHEET IN SYSTEM

PROCEDURE NUMBER: WHC-9-LOWFLOW REV.0

AMBIENT TEMPERATURE: 22.1°C

STANDARD SCCM	UUT Avg.	CHANGE	STD. DEV.	%ERROR
971.4	1005	-	-	3
733.7	755.3	-	-	3
495.4	499.8	4.	1.7	0.9
401.5	405.3	5.5	2.1	0.9
294.5	295.3	6.	2.7	0.3
208.6	209.1	3.	1.5	0.2
90.2	88.4	5.	2.2	2
52.8	51.7	-	-	2
-39.4	37.8	-	-	4
34.5	30.4	-	-	12
22.2	21.0	-	-	6
13.6	12.0	-	-	12

APPROVED BY: DCBell 7-1-93

CALIBRATED BY:

STD 3.21

Hanford Operations and Engineering Contractor for the United States Department of Energy

Westinghouse Hanford Company Subsidiary of Westinghouse Electric Corporation Box 1970, Richland, WA 99352

PAGE 1 OF 1

APPENDIX J

SORPTION CAPACITY TEST DATA, TABLES, AND GRAPHS

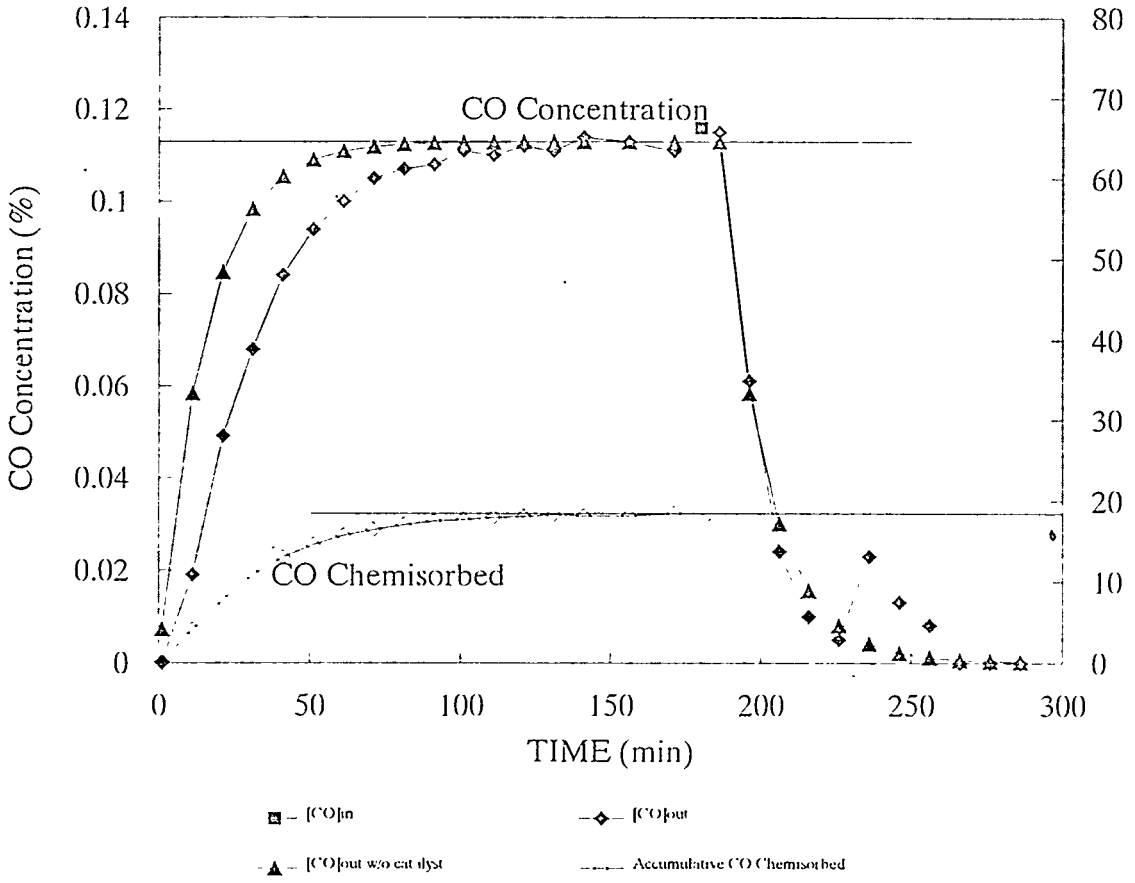
Table J-1. HRC Sorption Capacity Run 69.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	20	dW	0.1	g Cataly
		10			g Englehard Deoxo Type 184
		10			g AECL Hydrophobic Type 85-4
Volume	V	7571			mL
Time Interval	I	10	dI	0.2	min
ResTime	Tr	15.1	dTr	1.5	min
Temperature		16			°C
Pressure		1			atm
Ref Temp	T	298			K
Ref Pres	P	1			atm
R	R	8.206E-05			mL•atm/μmol/K
$X_{CO,in}$	COin	0.113	dCOin	0.001	%
CO SC	SC	18.5	dSC	2.0	μg CO/g Catalyst

Regeneration Method: Virgin Catalyst	
	L/min
	psi
	min
0	L of air, Total
0	L air/g catalyst

SAMPLE #	TIME CO INDEX (min)			$X_{CO,in}$ (%)	$dX_{CO,in}$ (%)	$X_{CO,out}$ actual (%)	$dX_{CO,out}$ actual (%)	$X_{CO,out}$ estimated (%)	$dX_{CO,out}$ estimated (%)	CO absorbed SCi μmoles H2 g Cat	Accum	Error Calculations (d-est)²	(d-act)²	(est-act)
93-227	180	180		0.116	0.000									
	-1	-1												
	250	250												
	50	50								18.5				
	400	400								18.5				
	0	1				0.000	0.000	0.007	0.000	0.1	0 1	0	0	0 0072
93-211	10	11				*0.019*	0.001	0.058	0.003	4.0	4.1	1.0E-06	9.4E-06	0.0394
93-212	20	21				0.049	0.001	0.085	0.002	3.7	7 8	1 0E-06	3.0E-06	0.0358
93-213	30	31				0.068	0.001	0.098	0.001	3.1	10.9	1.0E-06	2.1E-06	0.0304
93-214	40	41				0.084	0.001	0.105	0.001	2.2	13.1	1 0E-06	1 6E-06	0.0215
93-215	50	51				0.094	0.001	0.109	0.001	1.5	14.6	1.0E-06	1.3E-06	0.0151
93-216	60	61				0.100	0.001	0.111	0.001	1.1	15.7	1.0E-06	1.2E-06	0 0110
93-217	70	71				0.105	0.001	0.112	0.001	0.7	16.4	1.0E-06	1.1E-06	0.0070
93-218	80	81				0.107	0.001	0.112	0.001	0.6	17.0	1.0E-06	1.1E-06	0.0055
93-219	90	91				0.108	0.001	0.113	0.001	0.5	17.5	1.0E-06	1 1E-06	0.0047
93-220	100	101				0.111	0.001	0.113	0.001	0.2	17.7	1.0E-06	1.0E-06	0 0019
93-221	110	111				0.110	0.001	0.113	0.001	0.3	18.0	1.0E-06	1 1E-06	0.0029
93-222	120	121				0.112	0.001	0.113	0.001	0.1	18.1	1.0E-06	1 0E-06	0.0010
93-223	130	131				0.111	0.001	0.113	0.001	0.2	18.3	1.0E-06	1 0E-06	0.0020
93-224	140	141				0.114	0.001	0.113	0.001	-0.1	18.2	1.0E-06	9.8E-07	-0.0010
93-225	155	156				0.113	0.001	0.113	0.001	-0.0	18.2	1.0E-06	1.0E-06	-0.0000
93-226	170	171				0.111	0.001	0.113	0.001	0.3	18.5	1.0E-06	1.0E-06	0.0020
93-228	185	186	0			0.115		0.113						
93-229	195	196	10			0.061		0.058						
93-230	205	206	20			0.024		0.030						
93-231	215	216	30			0.010		0.016						
93-232	225	226	40			0.005		0.008						
93-233	235	236	50			0.023		0.004						
93-234	245	246	60			0.013		0.002						
93-235	255	256	70			0.008		0.001						
93-236	265	266	80			0.000		0.001						
93-237	275	276	90			0.000		0.000						
93-238	285	286	100			0.000		0.000						
										Summations:		1.60E-05	2.92E-05	0.186167

Figure J-1. HRC Sorption Capacity Run 69.



20 g Catalyst10 g Englehard Deoxo Type 1846710 g AECL Hydrophobic Type 85-42
Reactor Volume 7571 mL, 1 atm, 16°C
500 sccm 0.113% CO in Nitrogen
Regeneration Method: Virgin Catalyst

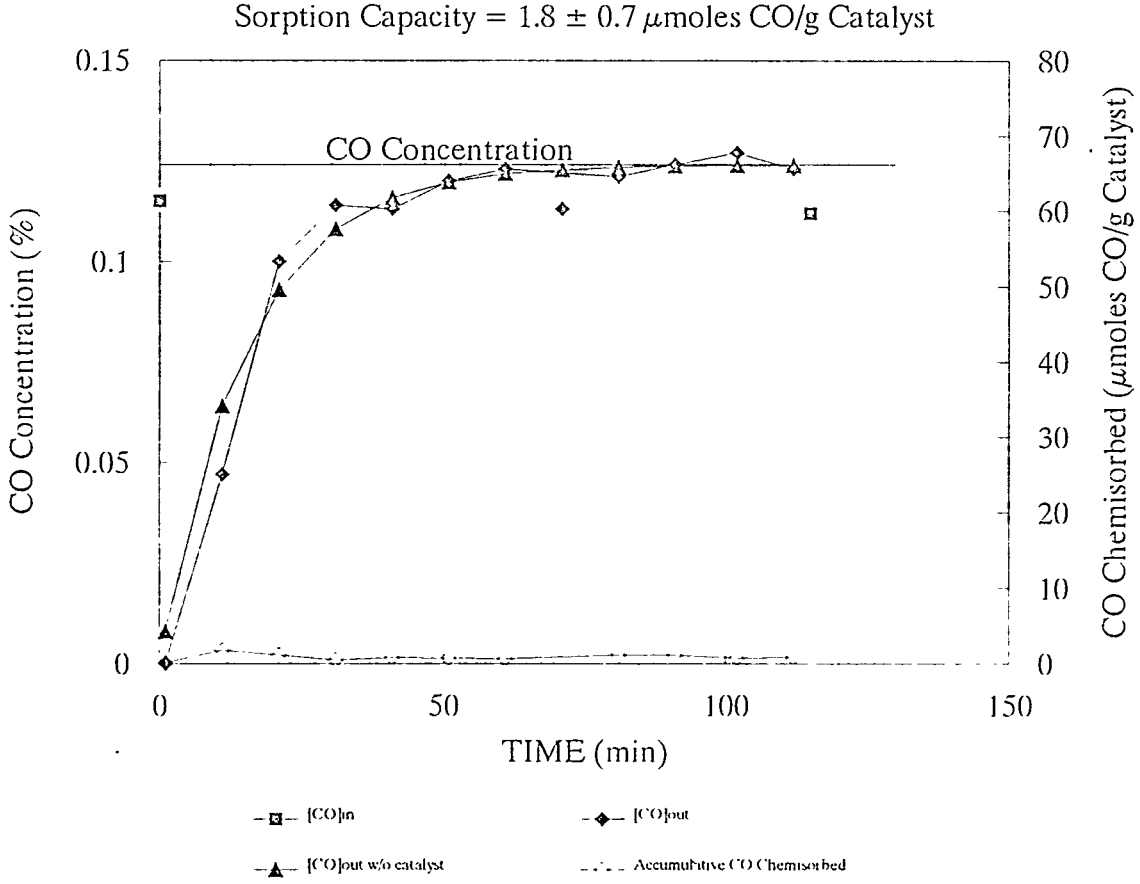
Table J-2. HRC Sorption Capacity Run 72.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	20	dW	0.1	g Catalyst
		10			g Englehard Deoxo Type 18467
		10			g AECL Hydrophobic Type 85-42
Volume	V	7571			mL
Time Interval	I	10	dI	0.2	min
ResTime	Tr	15.1	dTr	1.5	min
Temperature		18			°C
Pressure		1			atm
Ref Temp	T	298			K
Ref Pres	P	1			atm
R	R	8.206E-05			mL•atm/μmol/K
$X_{CO,in}$	COin	0.124	dCOin	0.001	%
CO SC	SC	1.8	dSC	0.7	μg CO/g Catalyst

Regeneration Method: Nitrogen	
0.5	L/min
–	psi
20	min
10	L of air, Total
0.5	L air/g catalyst

SAMPLE	TIME		$X_{CO,in}$	$dX_{CO,in}$	$X_{CO,out}$ actual	$dX_{CO,out}$ actual	$X_{CO,out}$ estimated	$dX_{CO,out}$ estimated	CO absorbed SCi Accum μmoles H_2		Error Calculations		
	CO INDEX												
#	(min)	(min)	(%)	(%)	(%)	(%)	(%)	(%)	g Cat		$(d-est)^2$	$(d-act)^2$	(est-act)
93-277	0	0	0.115	0.001									
93-290	115	115	0.112	0.001									
93-278	0	1			0.000	0.001	0.008	0.000	0.1	0.1	1.0E-06	0	0.0079
93-279	10	11			0.047	0.001	0.064	0.001	1.7	1.8	1.0E-06	1.9E-06	0.0170
93-280	20	21			0.100	0.001	0.093	0.001	-0.7	1.1	1.0E-06	8.7E-07	-0.0070
93-281	30	31			0.114	0.001	0.108	0.001	-0.6	0.5	1.0E-06	9.0E-07	-0.0060
93-282	40	41			0.113	0.001	0.116	0.001	0.3	0.8	1.0E-06	1.0E-06	0.0027
93-283	50	51			0.120	0.001	0.120	0.001	-0.0	0.7	1.0E-06	1.0E-06	-0.0003
93-284	60	61			0.123	0.001	0.122	0.001	-0.1	0.6	1.0E-06	9.8E-07	-0.0012
93-286	80	81			0.121	0.001	0.123	0.001	0.5	1.1	1.0E-06	1.0E-06	0.0024
93-287	90	91			0.124	0.001	0.124	0.001	-0.0	1.1	1.0E-06	1.0E-06	-0.0003
93-288	101	102			0.127	0.001	0.124	0.001	-0.4	0.7	1.0E-06	9.5E-07	-0.0031
93-289	111	112			0.123	0.001	0.124	0.001	0.1	0.8	1.0E-06	1.0E-06	0.0009
OUTLYING AND SUSPECT POINTS													
93-285	70	71			0.113	0.001	0.123						
										Summations:	1.10E-05	1.06E-05	0.013101

Figure J-2. HRC Sorption Capacity Run 72.



20 g Catalyst (10 g Englehard Deoxo Type 18467, 10 g AECL Hydrophobic Type 85-42)
Reactor Volume 7571 mL, 1 atm, 18°C
500 sccm 0.124% CO in Nitrogen
Regeneration Method: Nitrogen
0.5 L/min for 20 min
10 L of air, Total
0.5 L air/g catalyst

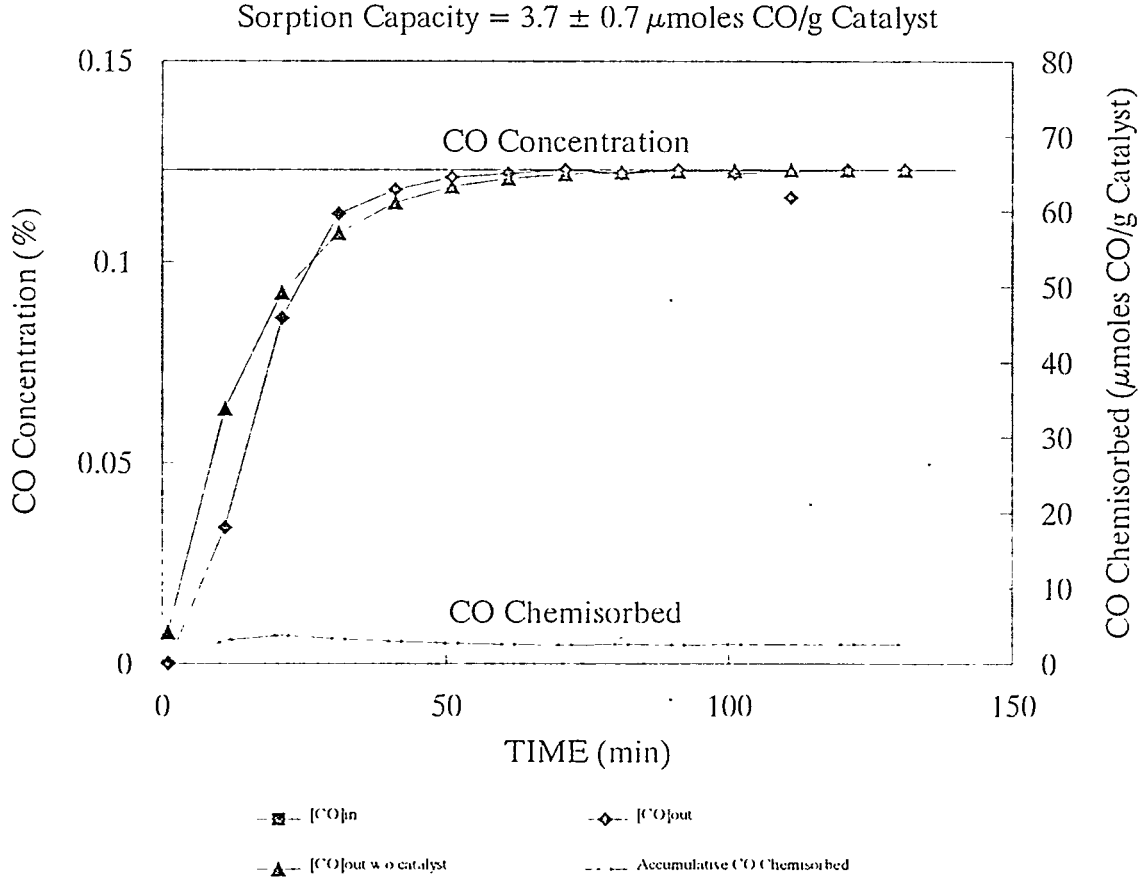
Table J-3. HRC Sorption Capacity Run 73.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	20	dW	0.1	g Catalyst
		10			g Englehard Deoxo Type 18467
		10			g AECL Hydrophobic Type 85-42
Volume	V	7571			mL
Time Interval	I	10	dI	0.2	min
ResTime	Tr	15.1	dTr	1.5	min
Temperature		14			°C
Pressure		1			atm
Ref Temp	T	298			K
Ref Pres	P	1			atm
R	R	8.206E-05			mL•atm/μmol/K
$X_{CO,in}$	COin	0.123	dCOin	0.001	%
CO SC	SC	3.7	dSC	0.7	μg CO/g Catalyst

Regeneration Method: Nitrogen Flush	
0.5	L/min
–	psi
984	min
492	L of air, Total
24.6	L air/g catalyst

SAMPLE	TIME	CO INDEX	$X_{CO,in}$	$dX_{CO,in}$	$X_{CO,out}$ actual	$dX_{CO,out}$ actual	$X_{CO,out}$ estimated	$dX_{CO,out}$ estimated	CO absorbed SCi	CO absorbed Accum	Error Calculations (d-est)²	(d-act)²	(est-act)
#	(min)	(min)	(%)	(%)	(%)	(%)	(%)	(%)	μmoles H₂ g Cat				
93-299	0		0.123	0.001									
93-300	0	1			0.000	0.000	0.008	0.000	0.1	0.1	0	0	0.0079
93-301	10	11			0.034	0.001	0.064	0.002	3.0	3.1	1.0E-06	3.5E-06	0.0295
93-302	20	21			0.086	0.001	0.092	0.001	0.6	3.7	1.0E-06	1.2E-06	0.0063
93-303	30	31			0.112	0.001	0.107	0.001	-0.5	3.2	1.0E-06	9.1E-07	-0.0049
93-304	40	41			0.118	0.001	0.115	0.001	-0.3	2.9	1.0E-06	9.5E-07	-0.0032
93-305	50	51			0.121	0.001	0.119	0.001	-0.2	2.7	1.0E-06	9.6E-07	-0.0022
93-306	60	61			0.122	0.001	0.121	0.001	-0.1	2.6	1.0E-06	9.8E-07	-0.0012
93-307	70	71			0.123	0.001	0.122	0.001	-0.1	2.4	1.0E-06	9.8E-07	-0.0011
93-308	80	81			0.122	0.001	0.122	0.001	0.0	2.5	1.0E-06	1.0E-06	0.0004
93-309	90	91			0.123	0.001	0.123	0.001	-0.0	2.5	1.0E-06	1.0E-06	-0.0003
93-310	100	101			0.122	0.001	0.123	0.001	0.1	2.5	1.0E-06	1.0E-06	0.0008
93-312	120	121			0.123	0.001	0.123	0.001	-0.0	2.5	1.0E-06	1.0E-06	-0.0000
93-313	130	131			0.123	0.001	0.123	0.001	-0.0	2.5	1.0E-06	1.0E-06	-0.0000
OUTLYING AND SUSPECT POINTS													
93-311	110	111			0.116		0.123						
									Summations		1.20E-05	1.44E-05	0.031899

Figure J-3. HRC Sorption Capacity Run 73.



20 g Catalyst (10 g Englehard Deoxo Type 18467, 10 g AECL Hydrophobic Type 85-42)
Reactor Volume 7571 mL, 1 atm, 14°C
500 sccm 0.123% CO in Nitrogen
Regeneration Method: Nitrogen Flush
0.5 L/min for 984 min
492 L of air, Total
24.6 L air/g catalyst

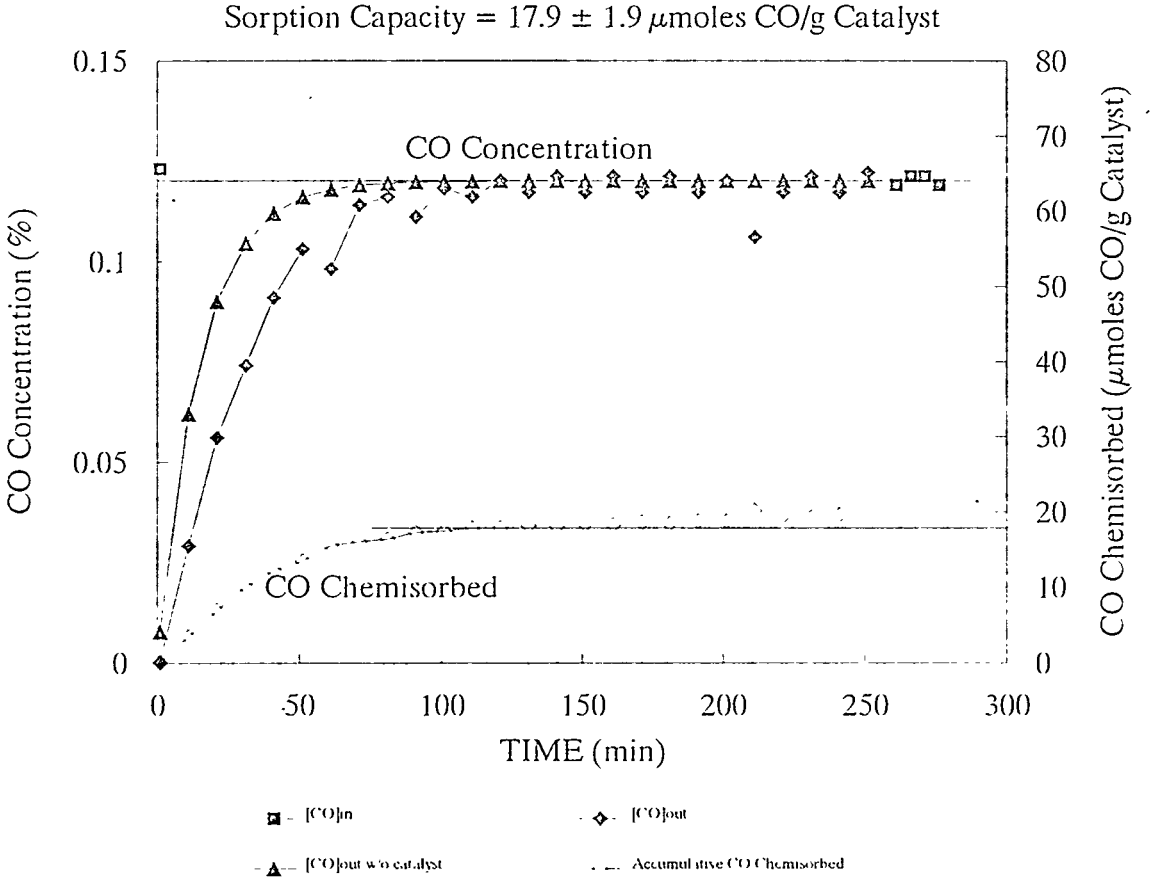
Table J-4. HRC Sorption Capacity Run 74.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	20	dW	0.1	g Catalyst
		10			g Englehard Deoxo Type 18467
		10			g AECL Hydrophobic Type 85-42
Volume	V	7571			mL
Time Interval	I	10	dI	0.2	min
ResTime	Tr	15.1	dTr	1.5	min
Temperature		17			°C
Pressure		1			atm
Ref Temp	T	298			K
Ref Pres	P	1			atm
R	R	8.206E-05			mL•atm/μmol/K
$X_{CO,in}$	COin	0.120	dCOin	0.001	%
CO SC	SC	17.9	dSC	1.9	μg CO/g Catalyst

Regeneration Method: Virgin Catalyst	
	L/min
	psi
	min
0	L of air, Total
0	L air/g catalyst

SAMPLE	TIME		$X_{CO,in}$	$dX_{CO,in}$	$X_{CO,out}$ actual	$dX_{CO,out}$ actual	$X_{CO,out}$ estimated	$dX_{CO,out}$ estimated	CO absorbed SCi	CO absorbed Accum	Error Calculations		
	CO INDEX								μmoles H_2				
#	(min)	(min)	(%)	(%)	(%)	(%)	(%)	(%)	g Cat		(d-est)²	(d-act)²	(est-act)
93-314	0	1	0.123	0.002									
93-341	260	261	0.119	0.001									
93-342	265	266	0.121	0.000									
93-343	270	271	0.121	0.001									
93-344	275	276	0.119	0.001									
93-315	0	1			0.000	0.000	0.008	0.000	0.1	0.1	0	0	0.0077
93-316	10	11			0.029	0.001	0.062	0.002	3.4	3.4	1.0E-06	4.6E-06	0.0330
93-317	20	21			0.056	0.000	0.090	0.000	3.5	6.9	0	0	0.0340
93-318	30	31			0.074	0.001	0.105	0.001	3.1	10.0	1.0E-06	2.0E-06	0.0305
93-319	40	41			0.091	0.000	0.112	0.000	2.1	12.2	0	0	0.0210
93-320	50	51			0.103	0.001	0.116	0.001	1.3	13.5	1.0E-06	1.3E-06	0.0129
93-321	60	61			0.098	0.001	0.118	0.001	2.0	15.5	1.0E-06	1.4E-06	0.0199
93-322	70	71			0.114	0.001	0.119	0.001	0.5	16.0	1.0E-06	1.1E-06	0.0049
93-323	80	81			0.116	0.000	0.119	0.000	0.4	16.4	0	0	0.0034
93-324	90	91			0.111	0.000	0.120	0.000	0.9	17.3	0	0	0.0087
93-325	100	101			0.118	0.001	0.120	0.001	0.2	17.5	1.0E-06	1.0E-06	0.0018
93-326	110	111			0.116	0.001	0.120	0.001	0.4	17.9	1.0E-06	1.1E-06	0.0039
93-327	120	121			0.120	0.000	0.120	0.000	-0.0	17.9	0	0	-0.0000
93-328	130	131			0.117	0.000	0.120	0.000	0.3	18.2			
93-329	140	141			0.121	0.000	0.120	0.000	-0.1	18.1			
93-330	150	151			0.117	0.000	0.120	0.000	0.3	18.4			
93-331	160	161			0.121	0.001	0.120	0.001	-0.1	18.3			
93-332	170	171			0.117	0.001	0.120	0.001	0.3	18.6			
93-333	180	181			0.121	0.000	0.120	0.000	-0.1	18.5			
93-334	190	191			0.117	0.000	0.120	0.000	0.3	18.8			
93-335	200	201			0.120	0.001	0.120	0.001	-0.0	18.8			
93-337	220	221			0.117	0.001	0.120	0.001	0.6	19.4			
93-338	230	231			0.121	0.000	0.120	0.000	-0.1	19.3			
93-339	240	241			0.117	0.001	0.120	0.001	0.3	19.6			
93-340	250	251			0.122	0.001	0.120	0.001	-0.2	19.4			
OUTLYING AND SUSPECT POINTS													
93-336	210	211			0.106	0.001	0.120		1.4	20.2			
										Summations	7.00E-06	1.25E-05	0.181649

Figure J-4. HRC Sorption Capacity Run 74.



20 g Catalyst (10 g Englehard Deoxo Type 18467, 10 g AECL Hydrophobic Type 85-42)
Reactor Volume 7571 mL, 1 atm, 17°C
500 sccm 0.120% CO in Nitrogen
Regeneration Method: Virgin Catalyst

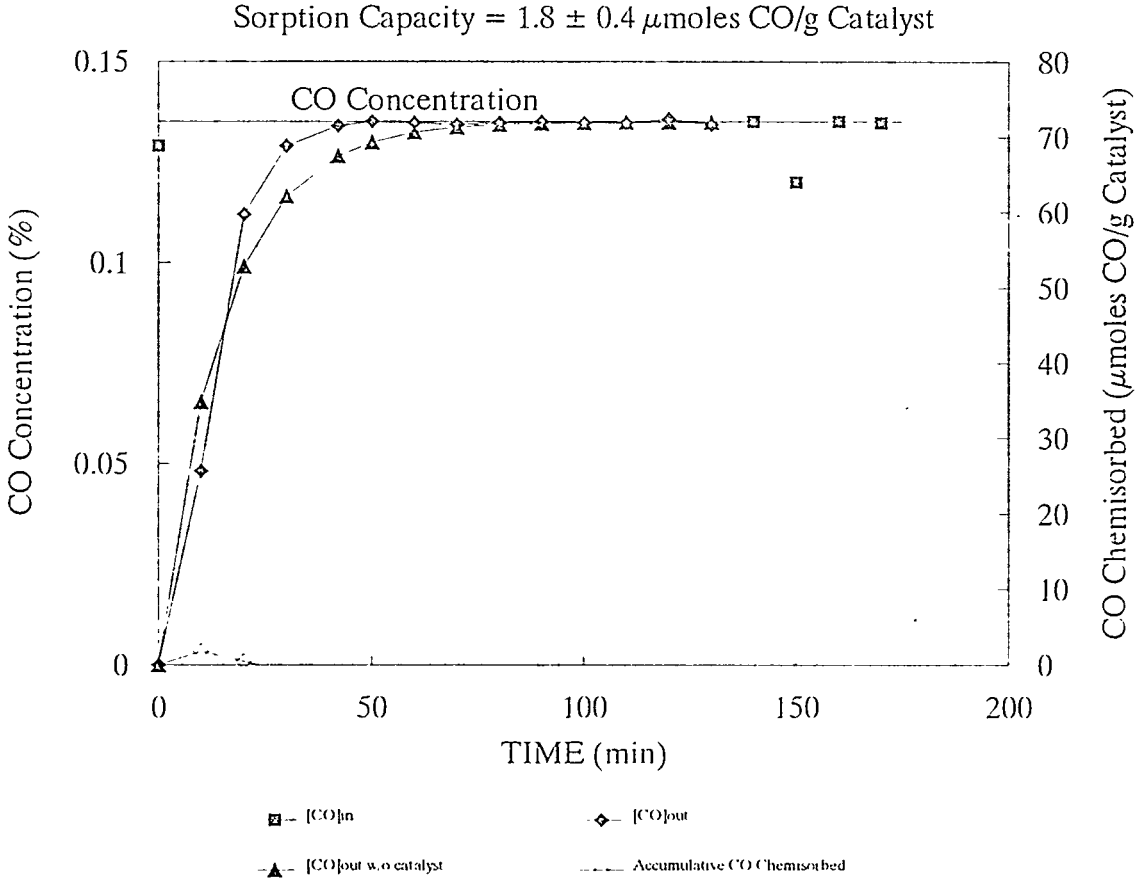
Table J-5. HRC Sorption Capacity Run 75.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	20	dW	0.1	g Catalyst
		10			g Englehard Deoxo Type 18467
		10			g AECL Hydrophobic Type 85-42
Volume	V	7571			mL
Time Interval	I	10	dI	0.2	min
ResTime	Tr	15.1	dTr	1.5	min
Temperature		14.5			°C
Pressure		1			atm
Ref Temp	T	287.5	298		K
Ref Pres	P	1			atm
R	R	8.206E-05			mL•atm/μmol/K
$X_{CO,in}$	COin	0.135	dCOin	0.000	%
CO SC	SC	1.8	dSC	0.4	μg CO/g Catalyst

Regeneration Method: Virgin Catalyst	
12	L/min
	psi
17	min
204	L of air, Total
10.2	L air/g catalyst

SAMPLE	TIME	CO INDEX	$X_{CO,in}$	$dX_{CO,in}$	$X_{CO,out}$ actual	$dX_{CO,out}$ actual	$X_{CO\ out}$ estimated	$dX_{CO\ out}$ estimated	CO absorbed SCi	CO absorbed Accum μmoles H_2 / g Cat	Error Calculations $(d-est)^2$	Error Calculations $(d-act)^2$	Error Calculations (est-act)
#	(min)	(min)	(%)	(%)	(%)	(%)	(%)	(%)					
93-345	0	0	0.129	0.002									
93-360	140	140	0.135	0.000									
93-362	160	160	0.135	0.000									
93-363	170	170	0.135	0.001									
93-361	150	150	0.120	0.000									
93-346	0	0			0.000	0.000	0.000	0.000	0.0	0.0	0	0	0 0000
93-347	10	10			0.048	0.001	0.065	0.001	1.8	1.8	1.0E-06	1.8E-06	0.0173
93-348	20	20			0.112	0.000	0.099	0.000	-1.4	0.4	0	0	-0.0130
93-349	30	30			0.129	0.000	0.116	0.000	-1.3	-0.9	0	0	-0.0126
93-350	42	42			0.134	0.000	0.127	0.000	-0.9	-1.8	0	0	-0.0074
93-351	50	50			0.135	0.002	0.130	0.002	-0.4	-2.3	4.0E-06	3.7E-06	-0.0050
93-352	60	60			0.135	0.001	0.132	0.001	-0.2	-2.5	1.0E-06	9.7E-07	-0.0023
93-353	70	70			0.134	0.001	0.134	0.001	-0.1	-2.6	1.0E-06	9.9E-07	-0.0006
93-354	80	80			0.135	0.001	0.134	0.001	-0.0	-2.6	1.0E-06	9.9E-07	-0.0004
93-355	90	90			0.135	0.001	0.135	0.001	-0.0	-2.6	1.0E-06	9.9E-07	-0.0004
93-356	100	100			0.135	0.001	0.135	0.001	0.0	-2.6	1.0E-06	1.0E-06	0.0001
93-357	110	110			0.135	0.001	0.135	0.001	0.0	-2.6	1.0E-06	1.0E-06	0.0002
93-358	120	120			0.136	0.001	0.135	0.001	-0.1	-2.7	1.0E-06	9.9E-07	-0.0007
93-359	130	130			0.134	0.001	0.135	0.001	0.1	-2.6	1.0E-06	1.0E-06	0.0007
									Summations		1.30E-05	1.35E-05	-0.02418

Figure J-5. HRC Sorption Capacity Run 75.



20 g Catalyst (10 g Englehard Deoxo Type 18467, 10 g AECL Hydrophobic Type 85-42)
Reactor Volume 757 mL, 1 atm, 15°C
500 sccm 0.135% CO in Nitrogen
Regeneration Method: Virgin Catalyst
12 L/min for 17 min
204 L of air, Total
10.2 L air/g catalyst

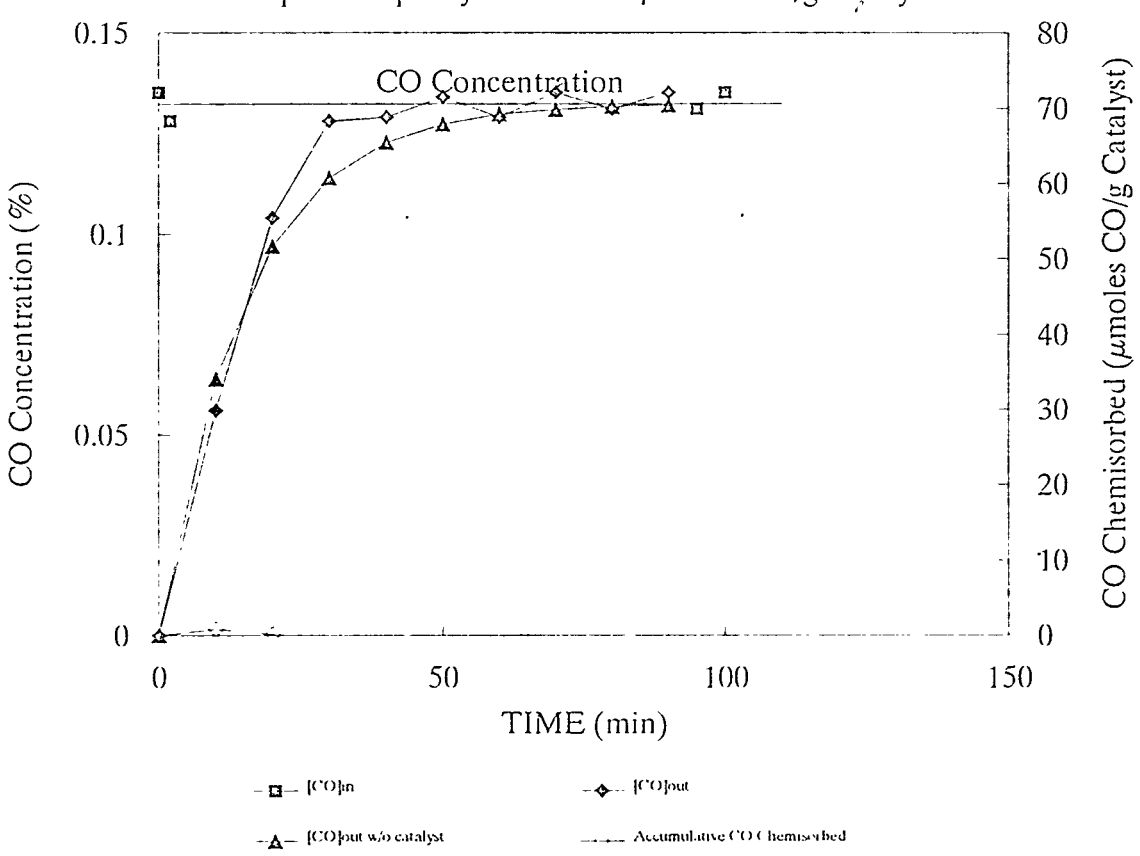
Table J-6. HRC Sorption Capacity Run 76.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	20	dW	0.1	g Catalyst
		10			g Englehard Deoxo Type 18467
		10			g AECL Hydrophobic Type 85-42
Volume	V	7571			mL
Time Interval	I	10	dI	0.2	min
ResTime	Tr	15.1	dTr	1.5	min
Temperature		14			°C
Pressure		1			atm
Ref Temp	T	298			K
Ref Pres	P	1			atm
R	R	8.206E-05			mL•atm/μmol/K
$X_{CO,in}$	COin	0.132	dCOin	0.004	%
CO SC	SC	0.8	dSC	0.1	μg CO/g Catalyst

Regeneration Method: Nitrogen Flush	
30	L/min
10	psi
20	min
600	L of air, Total
30	L air/g catalyst

SAMPLE	TIME	CO INDEX	$X_{CO,in}$	$dX_{CO,in}$	$X_{CO,out}$ actual	$dX_{CO,out}$ actual	$X_{CO,out}$ estimated	$dX_{CO,out}$ estimated	CO absorbed SCi μmoles H_2/g Cat	Accum	Error Calculations (d-est)²	(d-act)²	(est-act)
#	(min)	(min)	(%)	(%)	(%)	(%)	(%)	(%)					
93-364	0	0	0.135	0.000									
93-365	2	2	0.128	0.001									
93-375	95	95	0.131	0.014									
93-376	100	100	0.135	0.000									
	0	0			0.000	0.000	0.000	0.000	0.0	0.0	0	0	0.0000
93-366	10	10			0.056	0.001	0.064	0.001	0.8	0.8	1.0E-06	1.3E-06	0.0079
93-367	20	20			0.104	0.001	0.097	0.001	-0.7	0.1	1.0E-06	8.7E-07	-0.0070
93-368	30	30			0.128	0.000	0.114	0.000	-1.4	-1.3	0	0	-0.0140
93-369	40	40			0.129	0.000	0.123	0.000	-0.6	-2.0	0	0	-0.0062
93-370	50	50			0.134	0.001	0.127	0.001	-0.7	-2.6	1.0E-06	9.0E-07	-0.0066
93-371	60	60			0.129	0.001	0.130	0.001	0.1	-2.6	1.0E-06	1.0E-06	0.0007
93-372	70	70			0.135	0.001	0.131	0.001	-0.4	-3.0	1.0E-06	9.4E-07	-0.0040
93-373	80	80			0.131	0.001	0.132	0.001	0.1	-2.9	1.0E-06	1.0E-06	0.0006
93-374	90	90			0.135	0.000	0.132	0.000	-0.3	-3.2	0	0	-0.0031
									Summations		6.00E-06	6.04E-06	-3.17E-02

Figure J-6. HRC Sorption Capacity Run 76.



20 g Catalyst (10 g Englehard Deoxo Type 18467, 10 g AECL Hydrophobic Type 85-42)
Reactor Volume 757 mL, 1 atm, 14 C
500 sccm 0.132% CO in Nitrogen
Regeneration Method: Nitrogen Flush
30 L/min @ 10 psi for 20 min
600 L of air, Total
30.0 L air/g catalyst

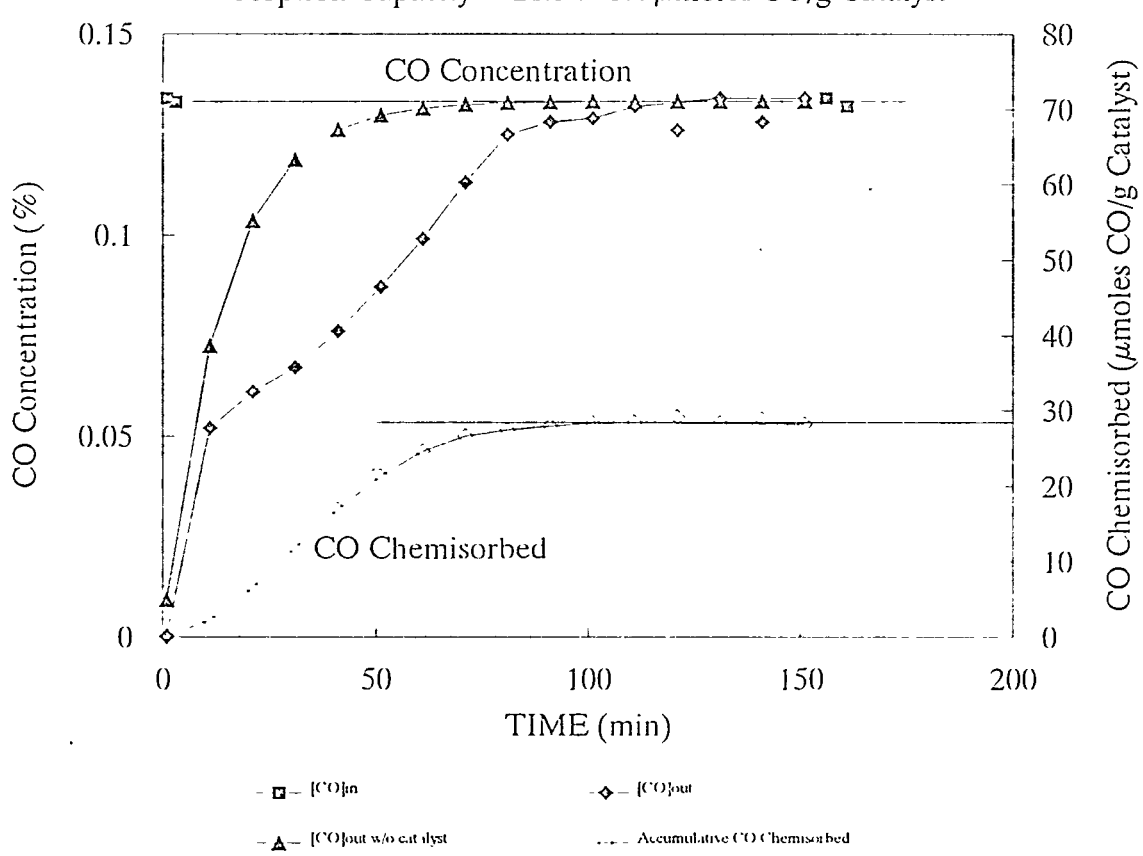
Table J-7. HRC Sorption Capacity Run 77.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	20	dW	0.1	g Catalyst
		10			g Englehard Deoxo Type 18467
		10			g AECL Hydrophobic Type 85-42
Volume	V	7571			mL
Time Interval	I	10	dI	0.2	min
ResTime	Tr	14.0	dTr	1.5	min
Temperature		17			°C
Pressure		1			atm
Ref Temp	T	298			K
Ref Pres	P	1			atm
R	R	8.206E-05			mL•atm/μmol/K
$X_{CO,in}$	COin	0.133	dCOin	0.001	%
CO SC	SC	28.5	dSC	3.0	μg CO/g Catalyst

Regeneration Method: Air Flush	
30	L/min
10	psi
15	min
450	L of air, Total
22.5	L air/g catalyst

SAMPLE	TIME	CO INDEX	$X_{CO,in}$	$dX_{CO,in}$	$X_{CO,out}$ actual	$dX_{CO\,out}$ actual	$X_{CO,out}$ estimated	$dX_{CO,out}$ estimated	CO absorbed SCi	CO absorbed Accum	Error Calculations		
									μmoles H_2				
#	(min)	(min)	(%)	(%)	(%)	(%)	(%)	(%)	g Cat		$(d-est)^2$	$(d-act)^2$	(est-act)
93-378	0	1	0.134	0.001									
93-379	2	3	0.133	0.001									
93-395	155	156	0.134	0.001									
93-396	160	161	0.132	0.001									
	0	1			0.000	0.000	0.009	0.000	0.1	0.1	0	0	0.0092
93-380	10	11			0.052	0.001	0.073	0.001	2.1	2.2	1.0E-06	1.9E-06	0.0205
93-381	20	21			0.061	0.000	0.104	0.000	4.3	6.5	0	0	0.0425
93-382	30	31			0.067	0.000	0.119	0.000	5.3	11.8	0	0	0.0517
93-383	40	41			0.076	0.001	0.126	0.002	5.1	16.9	1.0E-06	2.8E-06	0.0501
93-384	50	51			0.087	0.001	0.130	0.001	4.4	21.3	1.0E-06	2.2E-06	0.0428
93-385	60	61			0.099	0.001	0.132	0.001	3.3	24.6	1.0E-06	1.8E-06	0.0325
93-386	70	71			0.113	0.001	0.132	0.001	2.0	26.6	1.0E-06	1.4E-06	0.0194
93-387	80	81			0.125	0.001	0.133	0.001	0.8	27.4	1.0E-06	1.1E-06	0.0078
93-388	90	91			0.128	0.001	0.133	0.001	0.5	27.9	1.0E-06	1.1E-06	0.0050
93-389	100	101			0.129	0.001	0.133	0.001	0.4	28.4	1.0E-06	1.1E-06	0.0042
93-390	110	111			0.132	0.001	0.133	0.001	0.1	28.5	1.0E-06	1.0E-06	0.0012
93-392	130	131			0.134	0.000	0.133	0.000	-0.2	28.3	0	0	-0.0008
93-394	150	151			0.134	0.001	0.133	0.001	-0.2	28.2	1.0E-06	9.9E-07	-0.0008
OUTLYING AND SUSPECT POINTS													
93-391	120	121			0.126	0.000	0.133	0.000	0.7	29.2			
93-393	140	141			0.128	0.000	0.133	0.000	0.5	28.9			
										Summations	1.00E-05	1.53E-05	2.85E-01

Figure J-7. HRC Sorption Capacity Run 77.



20 g Catalyst (10 g Englehard Deoxo Type 18467, 10 g AECL Hydrophobic Type 85-42)
Reactor Volume 7571 mL, 1 atm, 17°C
500 sccm 0.133% CO in Nitrogen
Regeneration Method: Air Flush
30 L/min @ 10 psi for 15 min
450 L of air, Total
22.5 L air/g catalyst

Note: The air was not purged from the reactor before this run, therefore the SC is artificaly high and is not used for the average SC.

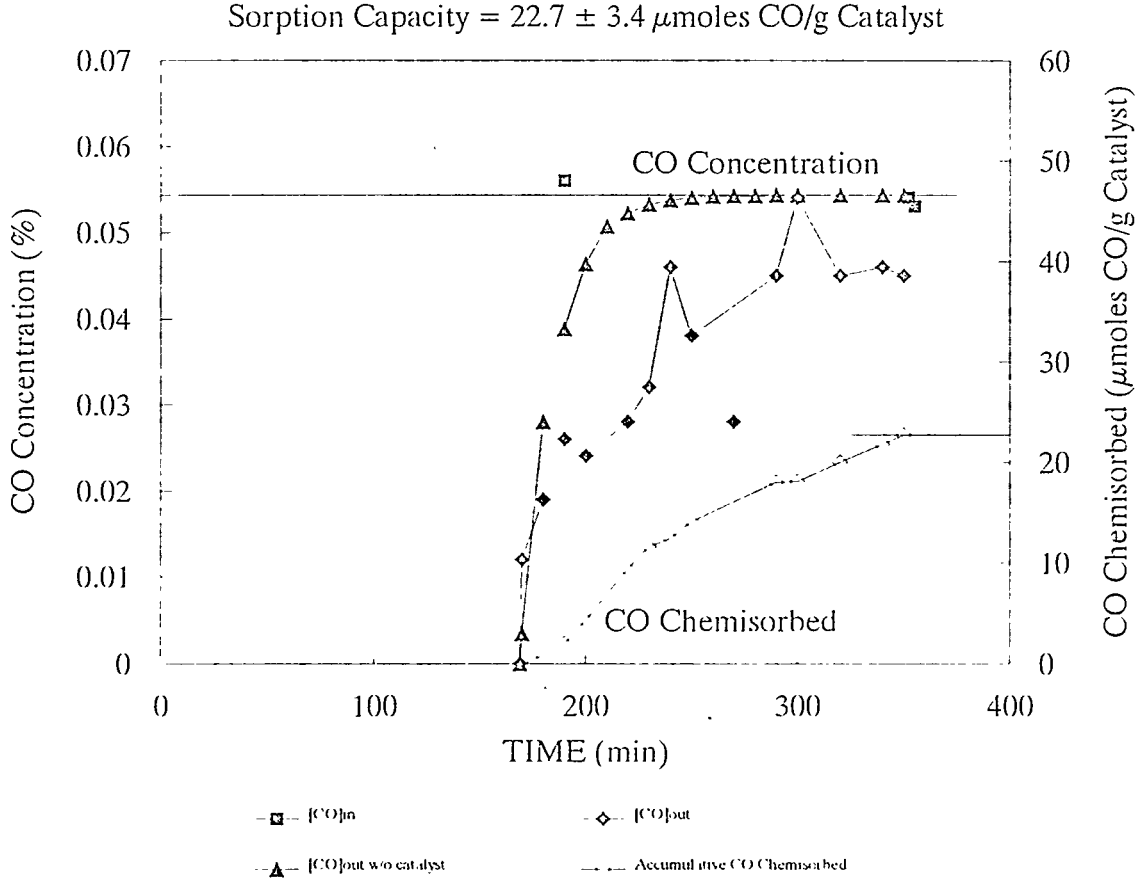
Table J-8. HRC Sorption Capacity Run 78.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	20	dW	0 1	g Catalyst (
		10			g Englehard Deoxo Type 18467,
		10			g AECL Hydrophobic Type 85–42)
Volume	V	7571			mL
Time Interval	I	10	dI	0 2	min
ResTime	Tr	15 1	dTr	1 5	min
Temperature		17			°C
Pressure		1			atm
Ref Temp	T	290			K
Ref Pres	P	1			atm
R	R	8 206E–05			mL·atm/μmol/K
$X_{CO,in}$	COin	0 054	dCOin	0 001	%
$X_{H2,in1}$	H2in1	1 774	dH2in1	0 024	%
$X_{H2,in2}$	H2in2	1 924	dH2in2		%
Reaction Rate	RR	1005 4	dRR	10 2	μg H_2/h/g Catalyst
CO SC	SC	22 7	dSC	3 4	μg CO/g Catalyst

Regeneration Method Air Flush
30 L/min
10 psi
15 min
450 L of air, Total
22 5 L air/g catalyst

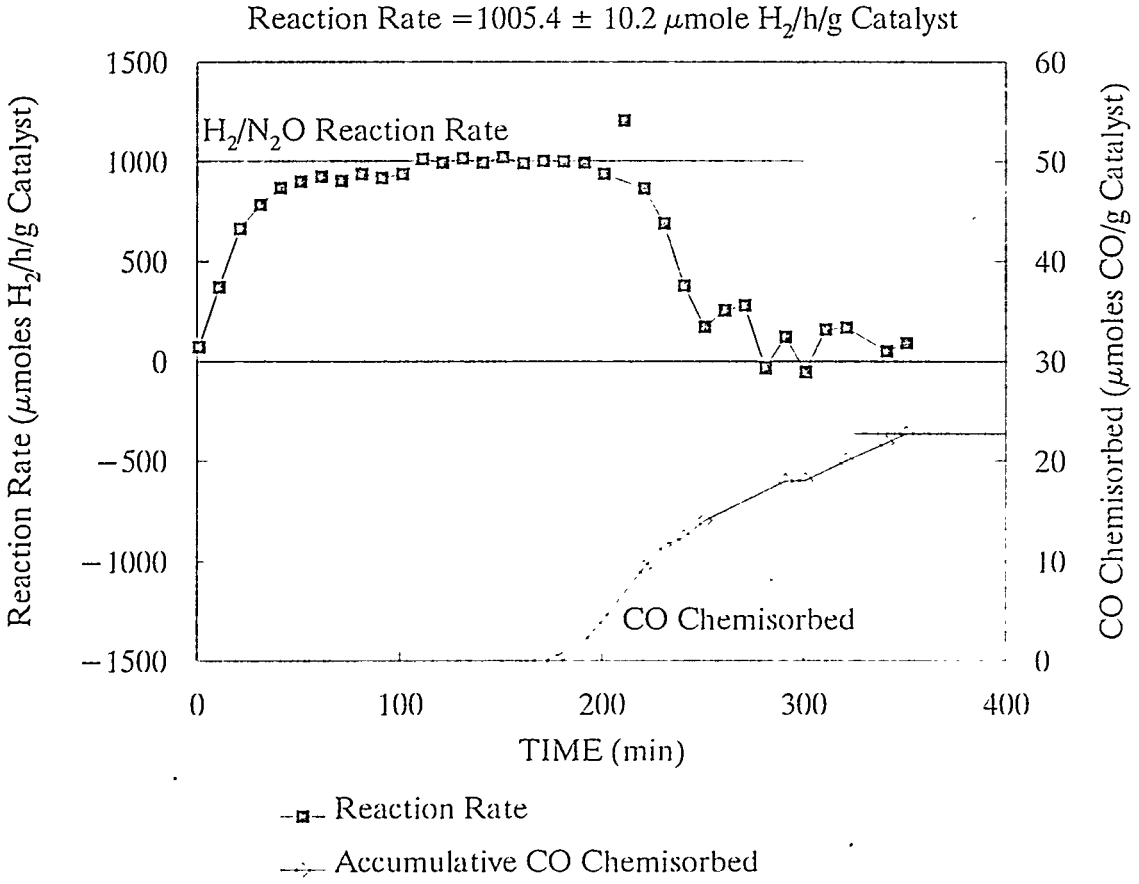
SAMPLE #	TIME INDEX H_2 (min)	TIME INDEX CO (min)	$X_{H2,in}$ (%)	$X_{H2,out}$ actual (%)	$X_{H2,out}$ estimated	RR μmol H2/h g Cat	dRR	$[CO]_{in}$ (%)	dX_{CO}	$[CO]_{out}$ (%)	dX^{CO}	$[CO]_{out}$ est (%)	dX^{CO}	CO absorbed SCI μmoles H_2 g Cat	Accum	Error Calculations $(d-est)^2$	$(d-act)^2$	(est−act)
93–400	0	1	1 757	–														
93–401	5	6	1 790	0 048														
93–420	190	191	1 925	–				0 056	0 001									
93–438	352	353	0 193	0 097				0 054	0 001									
93–439	355	356	1 923	–				0 053	0 000									
H_2 Data Points																		
	0	1		0 000		0 113	71 4	7 2										
93–402	10	11		0 326	0 004	0 916	371 8	37 2										
93–403	20	21		0 275	0 001	1 330	665 2	66 6										
93–404	30	31		0 298	0 005	1 545	785 7	78 7										
93–405	40	41		0 277	0 005	1 655	868 7	87 0										
93–406	50	51		0 283	0 001	1 712	901 0	90 2										
93–407	60	61		0 272	0 009	1 742	926 5	92 8										
93–408	70	71		0 325	0 004	1 757	902 7	90 4										
93–409	80	81		0 278	0 004	1 765	937 3	93 9										
93–410	90	91		0 312	0 007	1 769	918 5	92 0										
93–411	100	101		0 282	0 005	1 771	938 7	94 0										
93–412	110	111		0 166	0 003	1 772	1012 5	101 4										
93–413	120	121		0 194	0 003	1 773	995 2	99 6										
93–414	130	131		0 159	0 007	1 773	1017 5	101 9										
93–415	140	141		0 195	0 004	1 773	994 9	99 6										
93–416	150	151		0 151	0 003	1 773	1022 6	102 4										
93–417	160	161		0 197	0 004	1 773	993 7	99 5										
93–418	170	171	42	1	0 210	0 002	1 804	1004 7	100 6										
93–419	180	181	52	11	0 272	0 001	1 862	1002 2	100 3										
93–421	190	191	62	19	0 312	0 003	1 892	995 9	99 7										
93–422	200	201	72	29	0 417	0 009	1 907	939 5	94 1										
93–424	220	221	92	49	0 546	0 013	1 920	865 8	86 7										
93–425	230	231	102	59	0 826	0 011	1 922	690 7	69 2										
93–426	240	241	112	69	1 324	0 032	1 923	377 4	37 8										
93–427	250	251	122	79	1 650	0 048	1 923	172 3	17 3										
93–428	260	261	132	91	1 523	0 041	1 924	252 6	25 3										
93–429	270	271	142	101	1 482	0 227	1 924	278 5	27 9										
93–430	280	281	152	111	1 981	0 023	1 924	−36 0	−3 6										
93–431	290	291	162	119	1 733	0 320	1 924	120 4	12 1										
93–432	300	301	172	129	2 012	0 040	1 924	−55 5	−5 6										
93–433	310	311	182	141	1 669	0 620	1 924	160 7	16 1										
93–434	320	321	192	149	1 657	0 490	1 924	168 3	16 9										
93–436	340	341	212	169	1 848	0 096	1 924	47 9	4 8										
93–437	350	351	222	179	1 783	0 066	1 924	88 9	8 9										
CO Data Points																		
	169	170	42	0						0		0		0 0	0 0			
93–418	170	171	43	1						0 012	0 001	0 003	0 000	−0 1	−0 1	1 0E−06	8 4E−08	−0 0085
93–419	180	181	53	11						0 019	0 001	0 028	0 001	1 0	0 9	1 0E−06	2 2E−06	0 0091
93–421	190	191	63	19						0 026	0 008	0 039	0 012	1 1	1 2	0 000064	0 000143	0 0128
93–422	200	201	73	29						0 024	–	0 046	0 000	2 3	4 3	0	0	0 0223
93–424	220	221	93	49						0 028	0 000	0 052	0 000	5 1	9 4	0	0	0 0242
93–425	230	231	103	59						0 032	–	0 053	0 000	2 2	11 6	0	0	0 0212
93–426	240	241	113	69						0 046	0 000	0 054	0 000	0 8	12 4	0 0E+00	0	0 0078
93–427	250	251	123	79						0 038	0 003	0 054	0 004	1 7	14 1	9 0E−06	0 000018	0 0160
93–431	290	291	163	119						0 045		0 054	0 000	3 9	18 0	0	0	0 0093
93–432	300	301	173	129						0 054		0 054	0 000	0 0	18 0	0	0	0 0003
93–434	320	321	193	149						0 045		0 054	0 000	2 0	20 0	0	0	0 0093
93–436	340	341	213	169						0 046		0 054	0 000	1 8	21 8	0	0	0 0083
93–437	350	351	223	179						0 045		0 054	0 000	1 0	22 7	0	0	0 0093
OUTLYING AND SUSPECT POINTS																		
93–423	210	211	82	41	0 002	0 001	1 915	1206 1	120 8									
93–428	260	261	133	91														
93–429	270	271	143	101						0 028	0 012							
93–430	280	281	153	111														
93–433	310	311	183	141														
															Summations	7 50E−05	1 63E−04	1 42E−01

Figure J-8. HRC Sorption Capacity Run 78.



20 g Catalyst (10 g Englehard Deoxo Type 18467, 10 g AECL Hydrophobic Type 85–42)
Reactor Volume 757l mL, 1 atm, 17°C
500 sccm 1.924 H_2 and 0.054% CO in Nitrogen
Regeneration Method: Air Flush
30 L/min @ 10 psi for 15 min
450 L of air, Total
22.5 L air/g catalyst

Figure J-9. HRC Sorption Capacity Run 78, Declining Reaction Rate.



20 g Catalyst (10 g Englehard Deoxo Type 18467, 10 g AECL Hydrophobic Type S5−42)
Reactor Volume 7571 mL, 1 atm, 17°C
500 sccm 1.774% H_2 in Nitrogen
500 sccm 1.924 H_2 and 0.054% CO in Nitrogen
Regeneration Method: Air Flush
30 L/min @ 10 psi for 15 min
450 L of air, Total
22.5 L air/g catalyst

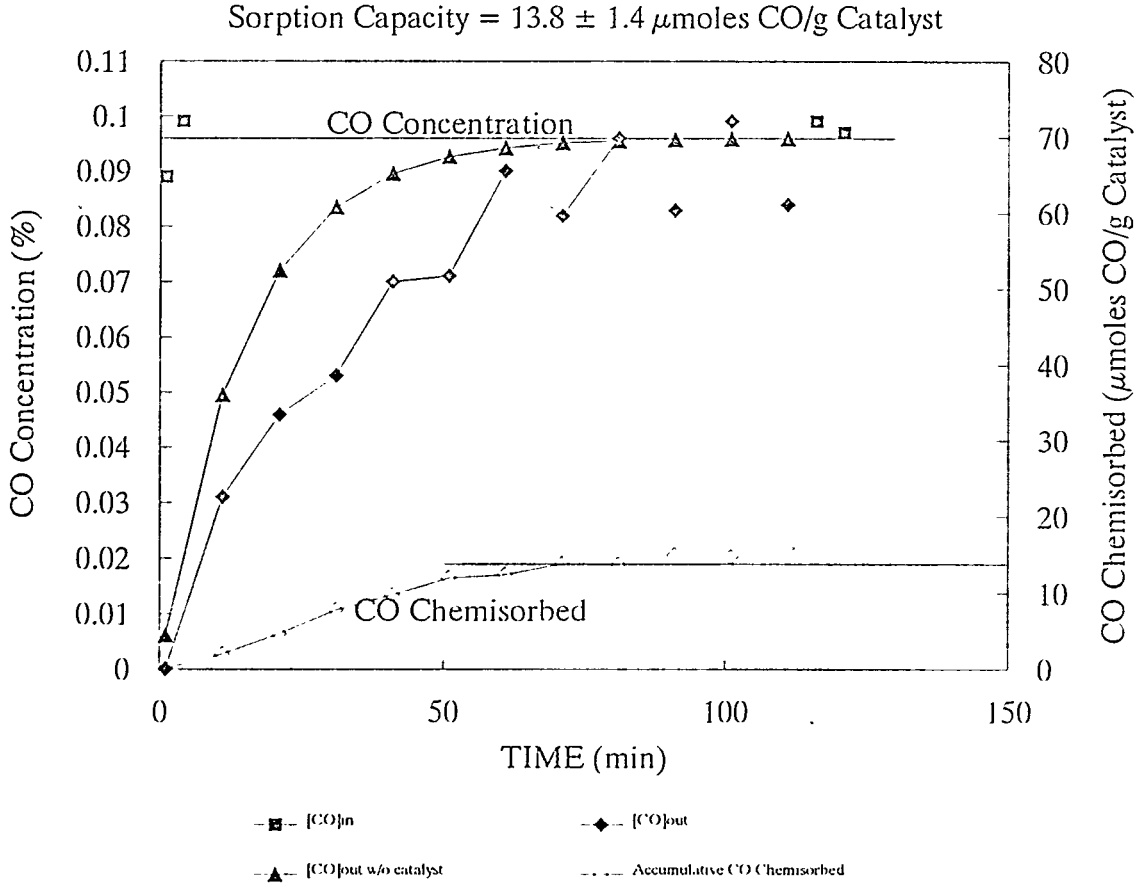
Table J-9. HRC Sorption Capacity Run 80.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	20	dW	0.1	g Catalyst
		10			g Englehard Deoxo Type 18467
		10			g AECL Hydrophobic Type 85-42
Volume	V	7571			mL
Time Interval	I	10	dI	0.2	min
ResTime	Tr	15.1	dTr	1.5	min
Temperature		16.6			°C
Pressure		1			atm
Ref Temp	T	298			K
Ref Pres	P	1			atm
R	R	8.206E-05			mL•atm/μmol/K
$X_{CO,in}$	COin	0.096	dCOin	0.001	%
CO SC	SC	13.8	dSC	1.4	μg CO/g Catalyst

Regeneration Method: Air Flush	
17	L/min
–	psi
10	min
170	L of air, Total
8.5	L air/g catalyst

SAMPLE	TIME	CO INDEX	$X_{CO,in}$	$dX_{CO,in}$	$X_{CO,out}$ actual	$dX_{CO,out}$ actual	$X_{CO,out}$ estimated	$dX_{CO,out}$ estimated	CO absorbed SCi	CO absorbed Accum	Error Calculations (d-est)²	(d-act)²	(est-act)
#	(min)	(min)	(%)	(%)	(%)	(%)	(%)	(%)	μmoles H_2 g Cat				
93-451	0	1	0.089	0.002									
93-452	3	4	0.099	0.001									
93-464	115	116	0.099	0.001									
93-465	120	121	0.097	0.001									
	0	1			0.000	0.000	0.006	0.000	0.1	0.1	0	0	0 0061
93-453	10	11			0.031	0.000	0.050	0.000	1.9	2.0	0	0	0 0186
93-454	20	21			0.046	0.001	0.072	0.002	2.7	4.6	1.0E-06	2.5E-06	0 0260
93-455	30	31			0.053	0.000	0.084	0.000	3.1	7.8	0	0	0 0306
93-456	40	41			0.070	0.000	0.090	0.000	2.0	9.8	0	0	0 0196
93-457	50	51			0.071	0.001	0.093	0.001	2.2	12.0	1.0E-06	1.7E-06	0 0217
93-458	60	61			0.090	0.001	0.094	0.001	0.4	12.4	1.0E-06	1.1E-06	0.0043
93-459	70	71			0.082	0.001	0.095	0.001	1.3	13.8	1.0E-06	1 3E-06	0 0131
93-460	80	81			0.096	0.000	0.096	0.000	-0.0	13.7	0	0	-0 0005
93-461	90	91			0.083	0.001	0.096	0.001	1.3	15.0			
93-462	100	101			0.099	0.001	0.096	0.001	-0.3	14.7			
93-463	110	111			0.084	0.001	0.096	0.001	1.2	15.9			
									Summations		4 00E-06	6.60E-06	1.40E-01

Figure J-10. HRC Sorption Capacity Run 80.



20 g Catalyst (10 g Englehard Deoxo Type 18467, 10 g AECL Hydrophobic Type 85-42)
Reactor Volume 7571 mL, 1 atm, 17°C
500 sccm 0.096% CO in Nitrogen
Regeneration Method: Air Flush
17 L/min for 10 min
170 L of air, Total
8.5 L air/g catalyst

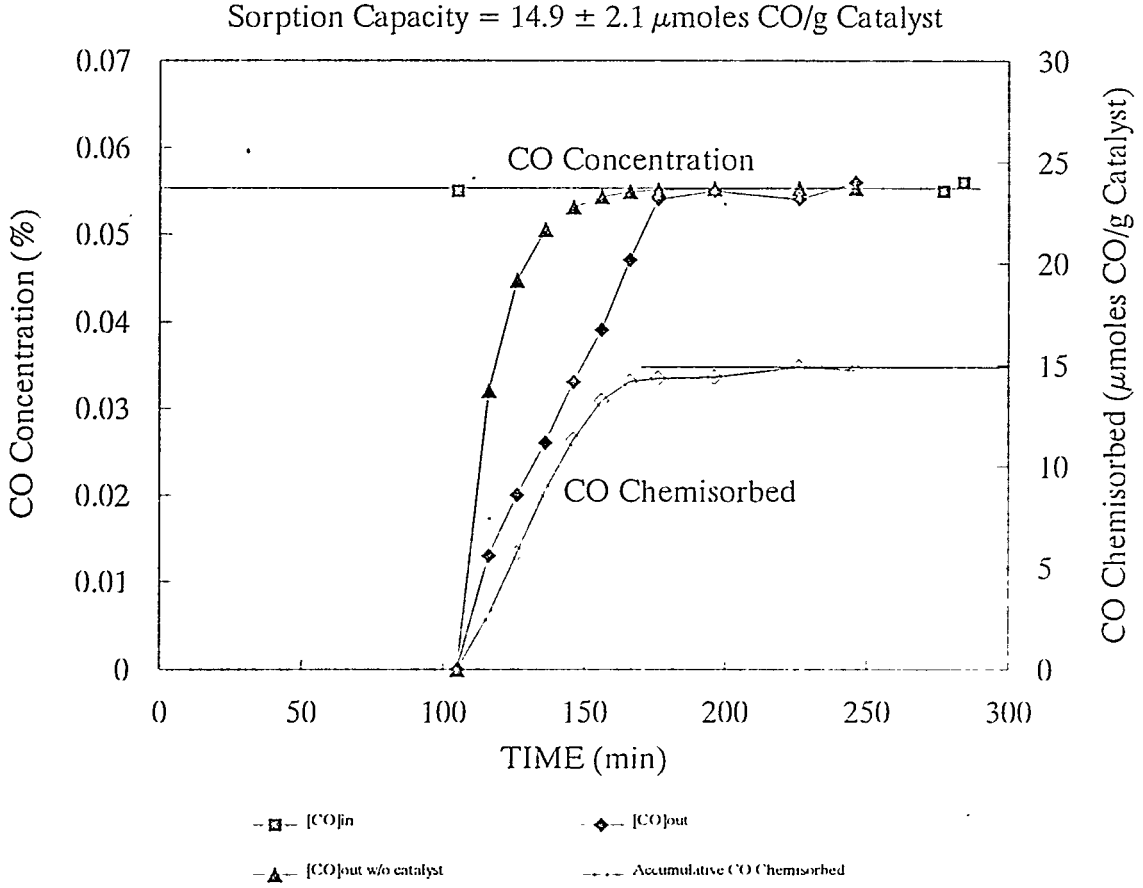
Table J-10. HRC Sorption Capacity Run 82.

Flowrate	Q	595	dQ	50	mL/min
Catalyst Mass	W	20	dW	0 1	g Catalyst (
		10			g Englehard Deoxo Type 18467
		10			g AECL Hydrophobic Type 85-42)
Volume	V	7571			mL
Time Interval	I	10	dI	0 2	min
ResTime	Tr	12 7	dTr	1 1	min
Temperature		16 8			°C
Pressure		1			atm
Ref Temp	T	290			K
Ref Pres	P	1			atm
R	R	8 206E-05			mL•atm/µmol/K
$X_{CO\,in}$	COin	0 055	dCOin	0 000	%
$X_{H2\,in1}$	H2in1	0 711	dH2in1	0 003	%
$X_{H2\,in2}$	H2in2	0 701	dH2in2	0 006	%
Reaction Rate	RR	435 8	dRR	36 8	µg H_2/h/g Catalyst
CO SC	SC	14 9	dSC	2 1	µg CO/g Catalyst

Regeneration Method Ar Flush
30 L/min
10 psi
15 min
450 L of ar, Total
22 5 L ar/g catalyst

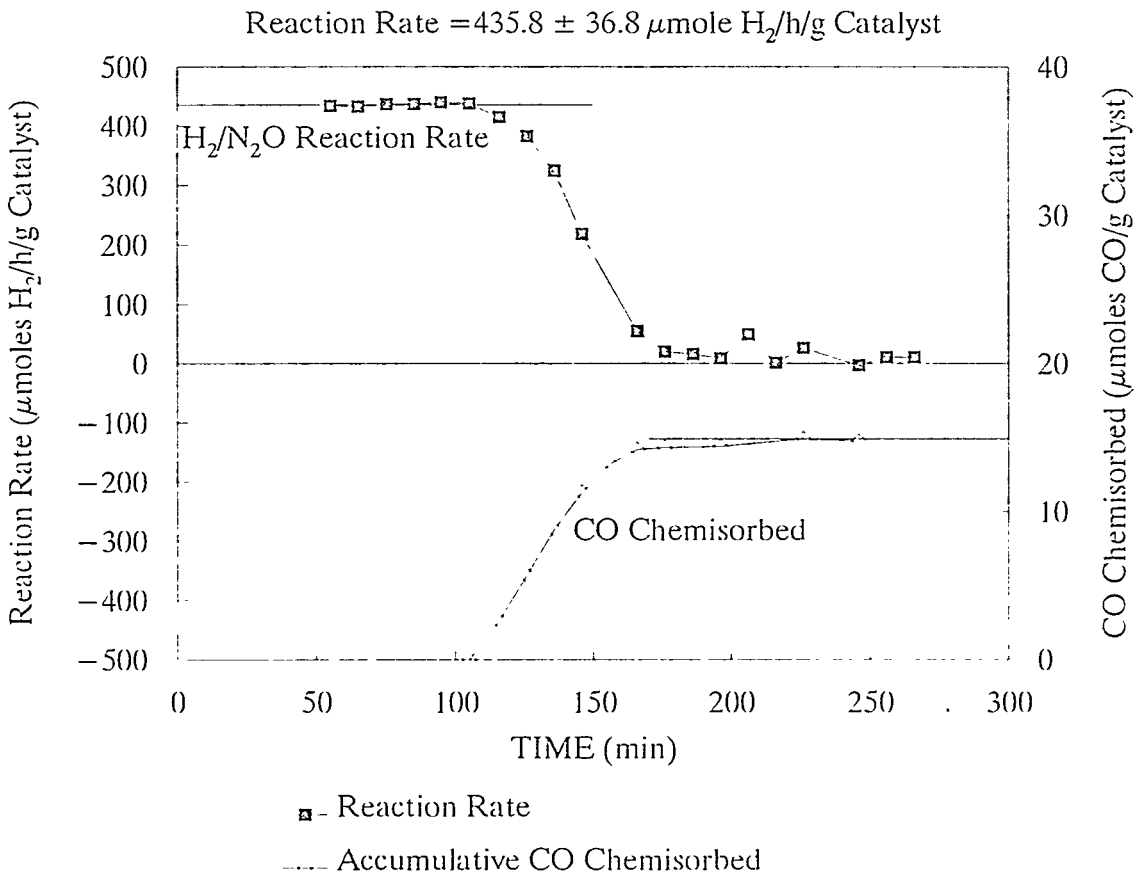
SAMPLE #	TIME INDEX H_2 (min)	TIME INDEX CO (min)	$X_{H2\,in}$ (%)	$X_{H2\,out}$ actual (%)	$X_{H2\,out}$ estimated	RR µmol H2/h g Cat	dRR µmol H2/h g Cat	$[CO]_{in}$ (%)	$dX_{CO\,in}$	$[CO]_{out}$ (%)	dX^{out}	$[CO]_{out}$ est (%)	dX^{out}	CO absorbed SCr µmoles H_2 g Cat	Accum	Error Calculations (d-est)²	(d-act)²	(est-act)
93-492	0		0 708	0 002														
93-493	5		0 714	0 004														
93-503	105		0 694	0 004				0 055	0 000									
93-517	277		0 703	0 006				0 055	0 001									
93-518	284		0 707	0 009				0 056	0 000									
H, Data Points																		
93-494	55	55		0 124	0 001	0 702	433 52	36 59										
93-495	65	65		0 130	0 002	0 707	432 87	36 56										
93-496	75	75		0 127	0 002	0 709	436 88	36 90										
93-497	85	85		0 129	0 005	0 710	436 18	37 04										
93-498	95	95		0 125	0 002	0 711	439 55	37 13										
93-499	105	105		0 128	0 002	0 711	437 46	37 27										
93-500	116	116		0 158	0 002	0 711	415 02	35 34										
93-501	126	126		0 202	0 006	0 711	382 03	32 76										
93-502	136	136		0 279	0 009	0 711	324 25	28 01										
93-504	146	146		0 420	0 009	0 711	218 42	18 74										
93-506	166	166		0 639	0 008	0 711	54 04	4 59										
93-507	176	176		0 684	0 007	0 711	20 27	1 72										
93-508	186	186		0 690	0 005	0 711	15 76	1 33										
93-509	196	196		0 700	0 008	0 711	8 26	0 70										
93-510	206	206		0 646	0 009	0 711	48 79	4 15										
93-511	216	216		0 710		0 711	0 75	0 06										
93-512	226	226		0 676	0 008	0 711	26 27	2 23										
93-514	246	246		0 715	0 005	0 711	-3 00	-0 25										
93-515	256	256		0 697		0 711	10 51	0 89										
93-516	266	266		0 697	0 006	0 711	10 51	0 89										
CO Data Points																		
93-499	105	105	0							0 000	0 000	0 000	0 000	0 0	0 0	0	0	0 0000
93-500	116	116	11							0 013	0 001	0 032	0 002	2 6	2 6	1 0E-06	6 1E-06	0 0190
93-501	126	126	21							0 020	0 001	0 045	0 002	3 1	5 7	1 0E-06	5 0E-06	0 0247
93-502	136	136	31							0 026	0 000	0 050	0 000	3 1	8 8	0	0	0 0245
93-504	146	146	41							0 033	0 001	0 053	0 002	2 5	11 3	1 0E-06	2 6E-06	0 0201
93-505	156	156	51							0 039	0 001	0 054	0 001	1 9	13 2	1 0E-06	1 9E-06	0 0153
93-506	166	166	61							0 047	0 001	0 055	0 001	1 0	14 2	1 0E-06	1 4E-06	0 0079
93-507	176	176	71							0 054	0 008	0 055	0 008	0 1	14 3	6 4E-05	0 000067	0 0011
93-509	196	196	91							0 055	0 001	0 055	0 001	0 1	14 4	1 0E-06	1 0E-06	0 0003
93-512	226	226	121							0 054	0 001	0 055	0 001	0 5	14 9	1 0E-06	1 0E-06	0 0013
93-514	246	246	141							0 056	0 001	0 055	0 001	-0 2	14 7	1 0E-06	9 8E-07	-0 0007
OUTLYING AND SUSPECT POINTS																		
93-508	186	186	81							0 04	0 001	0 055	0 001	2 2	16 5			
93-510	206	206	101							0 05	0 001	0 055	0 001	1 2	15 6			
93-511	216	216	111							0 04	0 001	0 055	0 001	2 2	17 7			
93-513	236	236	131								0 001	0 055		6 9	21 8			
93-515	256	256	151							0 02	0 001	0 055	0 003	4 4	19 2			
93-516	266	266	161							0 051	0 001	0 055	0 001	1 1	15 8			
														Summations		7 20E-05	8 67E-05	1 14E-01

Figure J-11. HRC Sorption Capacity Run 82.



20 g Catalyst (10 g Englehard Deoxo Type 18467, 10 g AECL Hydrophobic Type 85-42)
Reactor Volume 757I mL, 1 atm, 17°C
595 sccm 0.701 H_2 and 0.055% CO in Nitrogen
Regeneration Method: Air Flush
30 L/min @ 10 psi for 15 min
450 L of air, Total
22.5 L air/g catalyst

Figure J-12. HRC Sorption Capacity Run 82, Declining Reaction Rate.



20 g Catalyst (10 g Englehard Deoxo Type 18467, 10 g AECL Hydrophobic Type 85−42)
Reactor Volume 7571 mL, 1 atm, 17°C
595 sccm 0.711% H_2 in Nitrogen
595 sccm 0.701 H_2 and 0.055% CO in Nitrogen
Regeneration Method: Air Flush
30 L/min @ 10 psi for 15 min
450 L of air, Total
22.5 L air/g catalyst

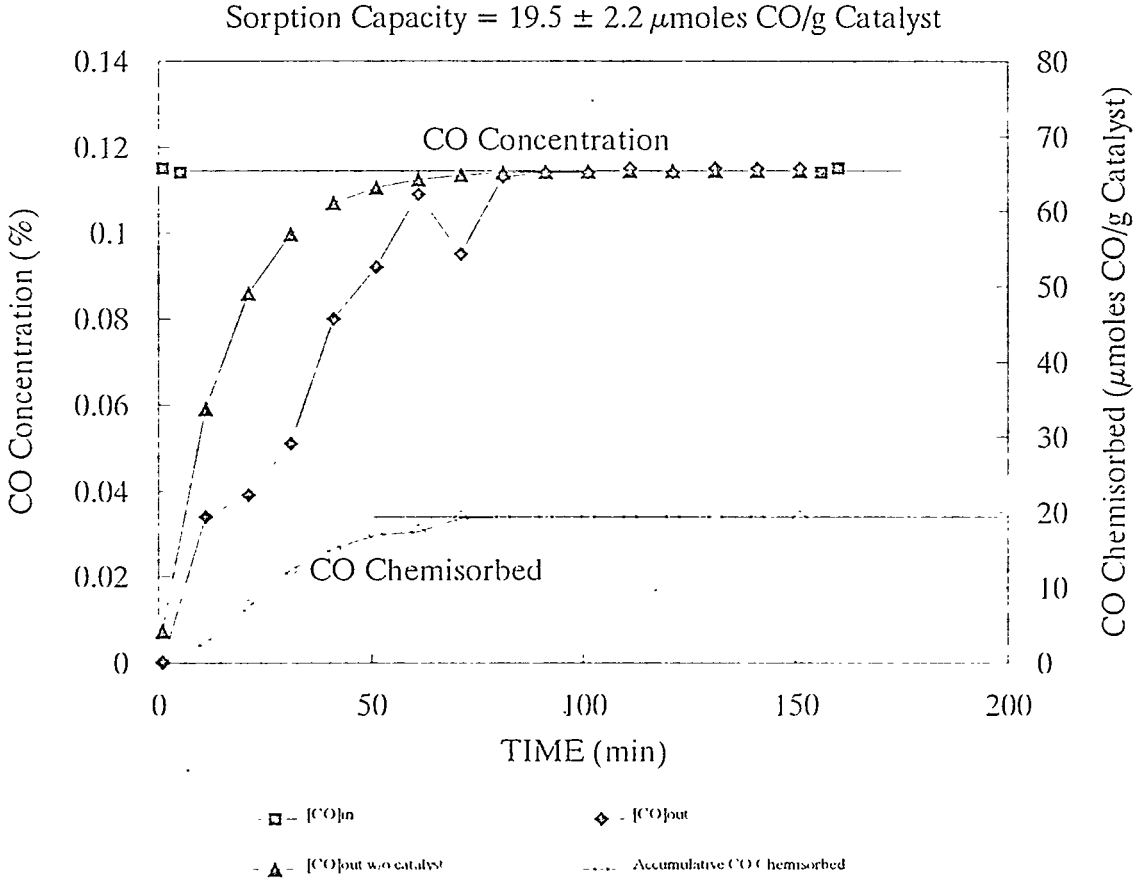
Table J-11. HRC Sorption Capacity Run 83.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	20	dW	0.1	g Catalyst
		10			g Englehard Deoxo Type 18467
		10			g AECL Hydrophobic Type 85−42
Volume	V	7571			mL
Time Interval	I	10	dI	0.2	min
ResTime	Tr	15.1	dTr	1.5	min
Temperature		15.9			°C
Pressure		1			atm
Ref Temp	T	298			K
Ref Pres	P	1			atm
R	R	8.206E−05			mL•atm/μmol/K
$X_{CO,in}$	COin	0.115	dCOin	0.001	%
CO SC	SC	19.5	dSC	2.2	μg CO/g Catalyst

Regeneration Method: Air Flush	
30	L/min
10	psi
28	min
840	L of air, Total
42	L air/g catalyst

SAMPLE	TIME		$X_{CO,in}$	$dX_{CO,in}$	$X_{CO,out}$ actual	$dX_{CO,out}$ actual	$X_{CO\ out}$ estimated	$dX_{CO\ out}$ estimated	CO absorbed SCi μmoles H_2/g Cat	CO absorbed Accum μmoles H_2/g Cat	Error Calculations (d−est)²	(d−act)²	(est−act)
#	(min)	CO INDEX (min)	(%)	(%)	(%)	(%)	(%)	(%)					
93−519	0	1	0.115	0.001									
93−520	4	5	0.114	0.001									
93−536	155	156	0.114	0.001									
93−537	159	160	0.115	0.001									
	0	1			0.000	0.000	0.007	0.000	0.1	0.1	0	0	0.0073
93−521	10	11			0.034	0.000	0.059	0.000	2.6	2.6	0	0	0.0251
93−522	20	21			0.039	0.004	0.086	0.009	4.8	7.4	0.000016	0.000078	0.0469
93−523	30	31			0.051	0.001	0.100	0.002	5.0	12.4	1.0E−06	3.8E−06	0.0487
93−524	40	41			0.080	0.000	0.107	0.000	2.7	15.2	0	0	0.0269
93−525	50	51			0.092	0.001	0.111	0.001	1.9	17.1	1.0E−06	1.4E−06	0.0186
93−526	60	61			0.109	0.000	0.112	0.000	0.4	17.4	0	0	0.0035
93−527	70	71			0.095	0.001	0.113	0.001	1.9	19.3	1.0E−06	1.4E−06	0.0184
93−528	80	81			0.113	0.001	0.114	0.001	0.1	19.4	1.0E−06	1.0E−06	0.0010
93−529	90	91			0.114	0.001	0.114	0.001	0.0	19.4	1.0E−06	1.0E−06	0.0002
93−530	100	101			0.114	0.001	0.114	0.001	0.0	19.5	1.0E−06	1.0E−06	0.0004
93−531	110	111			0.115	0.026	0.114	0.001	−0.1	19.4			
93−532	120	121			0.114	0.001	0.114	0.001	0.0	19.4			
93−533	130	131			0.115	0.001	0.114	0.001	−0.1	19.4			
93−534	140	141			0.115	0.000	0.114	0.000	−0.1	19.3			
93−535	150	151			0.115	0.000	0.114	0.000	−0.1	19.3			
									Summations		2.20E−05	8.73E−05	1.97E−01

Figure J-13. HRC Sorption Capacity Run 83.



20 g Catalyst (10 g Englehard Deoxo Type 18467, 10 g AECL Hydrophobic Type 85-42)
Reactor Volume 7571 mL, 1 atm, 16°C
500 sccm 0.115% CO in Nitrogen
Regeneration Method: Air Flush
30 L/min @ 10 psi for 28 min
840 L of air, Total
42.0 L air/g catalyst

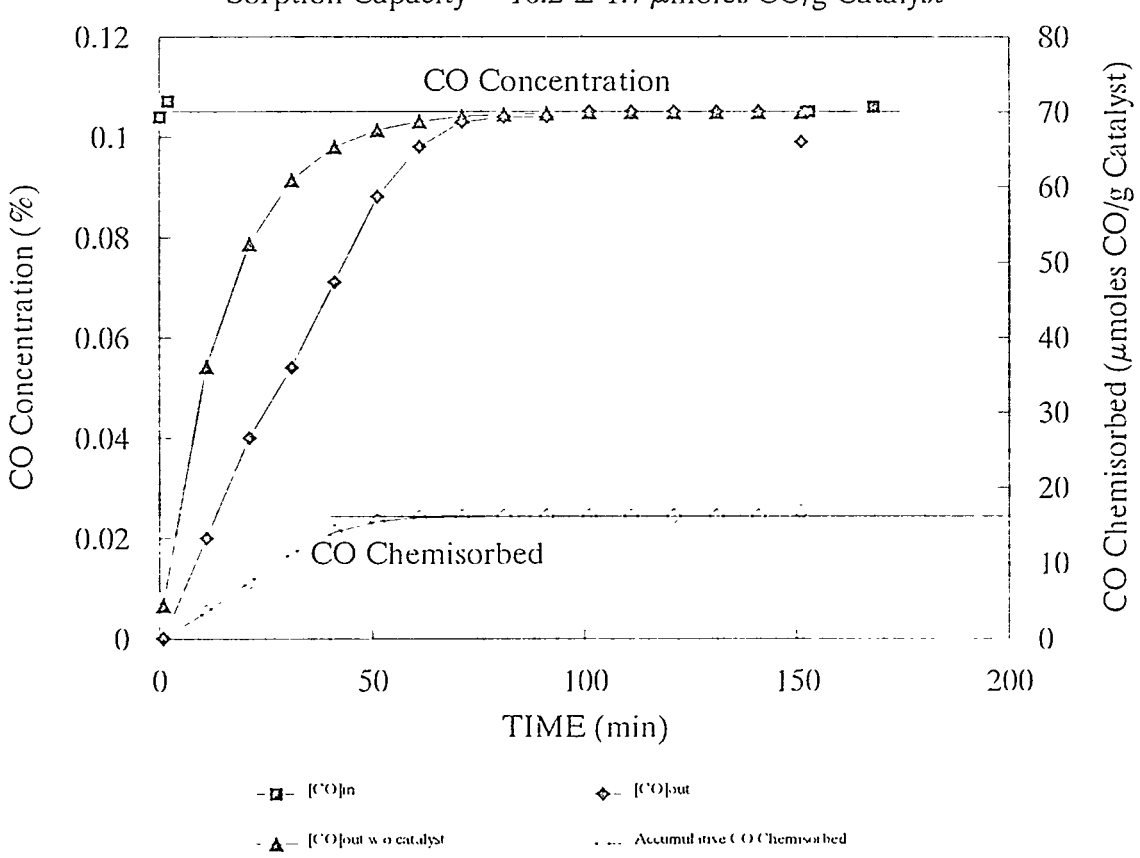
Table J-12. HRC Sorption Capacity Run 84.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	20	dW	0.1	g Catalyst
		10			g Englehard Deoxo Type 18467
		10			g AECL Hydrophobic Type 85-42
Volume	V	7571			mL
Time Interval	I	10	dI	0.2	min
ResTime	Tr	15.1	dTr	1.5	min
Temperature		16			°C
Pressure		1			atm
Ref Temp	T	298			K
Ref Pres	P	1			atm
R	R	8.206E-05			mL•atm/μmol/K
$X_{CO,in}$	COin	0.105	dCOin	0.001	%
CO SC	SC	16.2	dSC	1.7	μg CO/g Catalyst

Regeneration Method: Air Flush
30 L/min
7 psi
10 min
300 L of Air, Total
15 L air/g catayst

SAMPLE	TIME		$X_{CO,in}$	$dX_{CO,in}$	$X_{CO,out}$ actual	$dX_{CO,out}$ actual	$X_{CO,out}$ estimated	$dX_{CO,out}$ estimated	CO absorbed SCi	CO absorbed Accum	Error Calculations			
	CO INDEX								μmoles H_2					
#	(min)	(min)	(%)	(%)	(%)	(%)	(%)	(%)	g Cat		I(est-act)I	(d-est)²	(d-act)²	(est-act)
93-538	0	0	0.104	0.001										
93-539	2	2	0.107	0.000										
93-555	153	153	0.105	0.003										
93-556	168	168	0.106	0.000										
	0	1			0.000	0.000	0.007	0.000	0.1	0.1	0.0067	0.000E+00	0.000E+00	0.00671
93-540	10	11			0.020	0.001	0.054	0.003	3.5	3.6	0.3422	1.000E-06	7.349E-06	0.03422
93-541	20	21			0.040	0.001	0.079	0.002	4.0	7.5	0.3877	1.000E-06	3.877E-06	0.03877
93-542	30	31			0.054	0.001	0.091	0.002	3.8	11.4	0.3745	1.000E-06	2.868E-06	0.03745
93-543	40	41			0.071	0.001	0.098	0.001	2.8	14.1	0.2700	1.000E-06	1.905E-06	0.02700
93-544	50	51			0.088	0.001	0.101	0.001	1.4	15.5	0.1338	1.000E-06	1.327E-06	0.01338
93-545	60	61			0.098	0.001	0.103	0.001	0.5	16.0	0.0513	1.000E-06	1.107E-06	0.00513
93-546	70	71			0.103	0.001	0.104	0.001	0.1	16.1	0.0103	1.000E-06	1.020E-06	0.00103
93-547	80	81			0.104	0.001	0.105	0.001	0.1	16.2	0.0050	1.000E-06	1.010E-06	0.00050
93-548	90	91			0.104	0.000	0.105	0.000	0.1	16.2	0.0074	0.000E+00	0.000E+00	0.00074
93-549	100	101			0.105	0.000	0.105		-0.0	16.2				
93-550	110	111			0.105		0.105		-0.0	16.2				
93-551	120	121			0.105		0.105		-0.0	16.2				
93-552	130	131			0.105		0.105		-0.0	16.2				
93-553	140	141			0.105		0.105		-0.0	16.2				
OUTLYING AND SUSPECT POINTS														
93-554	150	151			0.099		0.105		0.6	16.8				
									Summations:		1.5889	8.0000E-06	2.0464E-05	0.1649

Figure J-14. HRC Sorption Capacity Run 84.



20 g Catalyst (10 g Englehard Deoxo Type 18467, 10 g AECL Hydrophobic Type 85-42)
Reactor Volume 757 mL, 1 atm, 16°C
500 sccm 0.105% CO in Nitrogen
Regeneration Method: Air Flush
30 L/min @ 7 psi for 10 min
300 L of Air, Total
15.0 L air/g catayst

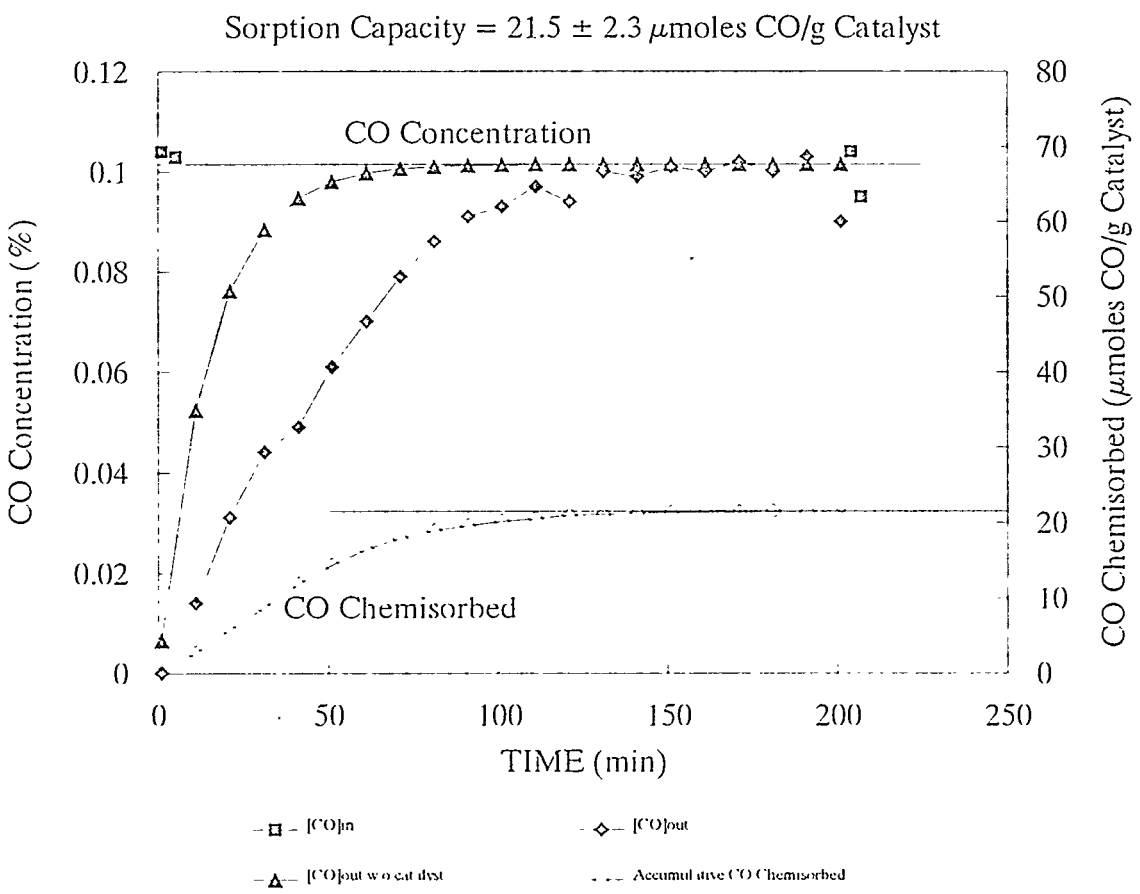
Table J-13. HRC Sorption Capacity Run 85.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	30	dW	0.1	g Catalyst
		15			g Englehard Deoxo Type 18467
		15			g AECL Hydrophobic Type 85−42
Volume	V	7571			mL
Time Interval	I	10	dI	0.2	min
ResTime	Tr	15.1	dTr	1.5	min
Temperature		14.9			°C
Pressure		1			atm
Ref Temp	T	298			K
Ref Pres	P	1			atm
R	R	8.206E−05			mL•atm/μmol/K
$X_{CO,in}$	COin	0.102	dCOin	0.001	%
CO SC	SC	21.5	dSC	2.3	μg CO/g Catalyst

Regeneration Method: Air Flush	
30	L/min
10	psi
15	min
450	L of air, Total
15	L air/g catalyst

SAMPLE	TIME	CO INDEX	$X_{CO,in}$	$dX_{CO,in}$	$X_{CO,out}$ actual	$dX_{CO,out}$ actual	$X_{CO,out}$ estimated	$dX_{CO,out}$ estimated	CO absorbed SCi	CO absorbed Accum μmoles H₂ g Cat	Error Calculations (d−est)²	(d−act)²	(est−act)
#	(min)	(min)	(%)	(%)	(%)	(%)	(%)	(%)					
93−557	0	1	0.104	0.002									
93−558	4	5	0.103	0.001									
93−579	203	204	0.104	0.000									
93−580	206	207	0.095	0.001									
	0	1			0.000	0.000	0.006	0.000	0.0	0.0	0	0	0.0065
93−559	10	11			0.014	0.001	0.052	0.004	2.6	2.7	1.0E−06	0.000014	0.0384
93−560	20	21			0.031	0.001	0.076	0.002	3.1	5.7	1.0E−06	6.0E−06	0.0451
93−561	30	31			0.044	0.000	0.088	0.000	3.0	8.8	0	0	0.0444
93−562	40	41			0.049	0.002	0.095	0.004	3.1	11.9	4.0E−06	0.000015	0.0457
93−563	50	51			0.061	0.001	0.098	0.002	2.5	14.4	1.0E−06	2.6E−06	0.0370
93−564	60	61			0.070	0.001	0.100	0.001	2.0	16.4	1.0E−06	2.0E−06	0.0297
93−565	70	71			0.079	0.001	0.101	0.001	1.5	17.9	1.0E−06	1.6E−06	0.0216
93−566	80	81			0.086	0.001	0.101	0.001	1.0	18.9	1.0E−06	1.4E−06	0.0150
93−567	90	91			0.091	0.001	0.101	0.001	0.7	19.6	1.0E−06	1.2E−06	0.0103
93−568	100	101			0.093	0.001	0.101	0.001	0.6	20.2	1.0E−06	1.2E−06	0.0084
93−569	110	111			0.097	0.000	0.101	0.000	0.3	20.5	0	0	0.0044
93−570	120	121			0.094	0.001	0.101	0.001	0.5	21.0	1.0E−06	1.2E−06	0.0075
93−571	130	131			0.100	0.001	0.101	0.001	0.1	21.1	1.0E−06	1.0E−06	0.0015
93−572	140	141			0.099	0.002	0.101	0.002	0.2	21.3	4.0E−06	4.2E−06	0.0025
93−573	150	151			0.101	0.001	0.101	0.001	0.0	21.3	1.0E−06	1.0E−06	0.0005
93−574	160	161			0.100	0.001	0.101	0.001	0.1	21.4	1.0E−06	1.0E−06	0.0015
93−575	170	171			0.102	0.001	0.101	0.001	−0.0	21.4	1.0E−06	9.9E−07	−0.0005
93−576	180	181			0.100	0.001	0.101	0.001	0.1	21.5	1.0E−06	1.0E−06	0.0015
93−577	190	191			0.103	0.001	0.101	0.001	−0.1	21.4			
93−578	200	201			0.090	0.002	0.101	0.002	0.8	22.2			
									Summations		2.20E−05	5.55E−05	3.21E−01

Figure J-15. HRC Sorption Capacity Run 85.



30 g Catalyst (15 g Englehard Deoxo Type 18467, 15 g AECL Hydrophobic Type 85-42)
Reactor Volume 757 mL, 1 atm, 15°C
500 sccm 0.102% CO in Nitrogen
Regeneration Method: Air Flush
30 L/min @ 10 psi for 15 min
450 L of air, Total
15.0 L air/g catalyst

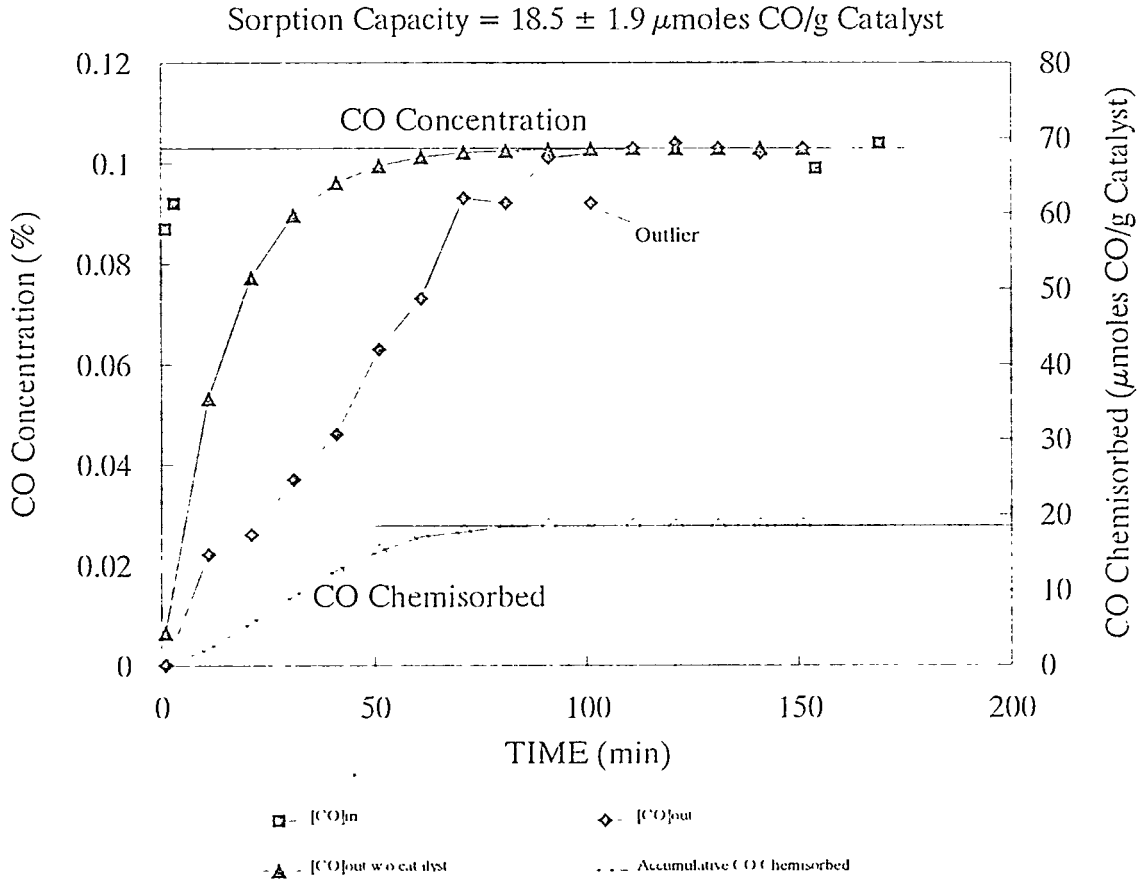
Table J-14. HRC Sorption Capacity Run 86.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	30	dW	0.1	g Catalyst
		15			g Englehard Deoxo Type 18467
		15			g AECL Hydrophobic Type 85-42
Volume	V	7571			mL
Time Interval	I	10	dI	0.2	min
ResTime	Tr	15.1	dTr	1.5	min
Temperature		14.5			°C
Pressure		1			atm
Ref Temp	T	298			K
Ref Pres	P	1			atm
R	R	8.206E-05			mL•atm/μmol/K
$X_{CO,in}$	COin	0.103	dCOin	0.001	%
CO SC	SC	18.5	dSC	1.9	μg CO/g Catalyst

Regeneration Method: Air Flush	
37.7	L/min
10	psi
20	min
754	L of air, Total
25.1	L air/g catalyst

SAMPLE	TIME	CO INDEX	$X_{CO,in}$	$dX_{CO,in}$	$X_{CO,out}$ actual	$dX_{CO,out}$ actual	$X_{CO,out}$ estimated	$dX_{CO,out}$ estimated	CO absorbed SCi	CO absorbed Accum	Error Calculations		
									μmoles H_2				
#	(min)	(min)	(%)	(%)	(%)	(%)	(%)	(%)	g Cat		$(d-est)^2$	$(d-act)^2$	(est-act)
93-581	0	1	0.087	0.005									
93-582	2	3	0.092	0.001									
93-598	153	154	0.099	0.000									
93-599	168	169	0.104	0.001									
	0	1			0.000	0.000	0.007	0.000	0.0	0.0	0	0	0.0066
93-583	10	11			0.022	0.001	0.053	0.002	2.1	2.2	1.0E-06	5.8E-06	0.0312
93-584	20	21			0.026	0.001	0.077	0.003	3.5	5.7	1.0E-06	8.8E-06	0.0513
93-585	30	31			0.037	0.001	0.090	0.002	3.6	9.3	1.0E-06	5.9E-06	0.0527
93-586	40	41			0.046	0.000	0.096	0.000	3.4	12.7	0	0	0.0501
93-587	50	51			0.063	0.000	0.099	0.000	2.5	15.2	0	0	0.0365
93-588	60	61			0.073	0.000	0.101	0.000	1.9	17.1	0	0	0.0282
93-589	70	71			0.093	0.000	0.102	0.000	0.6	17.7	0	0	0.0091
93-590	80	81			0.092	0.001	0.103	0.001	0.7	18.4	1.0E-06	1.2E-06	0 0105
93-591	90	91			0.101	0.002	0.103	0.002	0.1	18.5	4.0E-06	4.1E-06	0 0017
93-593	110	111			0.103	0.000	0.103	0.000	-0.0	18.5	0	0	-0.0001
93-594	120	121			0.104	0.001	0.103	0.001	-0.1	18.4			
93-595	130	131			0.103	0.001	0.103	0.001	-0.0	18.4			
93-596	140	141			0.102	0.001	0.103	0.001	0.1	18.5			
93-597	150	151			0.103	0.001	0.103	0.001	-0.0	18.5			
OUTLYING AND SUSPECT POINTS													
93-592	100	101			0.092	0.000	0.103	0.000	0.7	19.3			
										Summations	8.00E-06	2.59E-05	2.78E-01

Figure J-16. HRC Sorption Capacity Run 86.



30 g Catalyst (15 g Englehard Deoxo Type 18467, 15 g AECL Hydrophobic Type 85-42)
Reactor Volume 7571 mL, 1 atm, 15°C
500 sccm 0.103% CO in Nitrogen
Regeneration Method: Air Flush
37.7 L/min @ 10 psi for 20 min
754 L of air, Total
25.1 L air/g catalyst

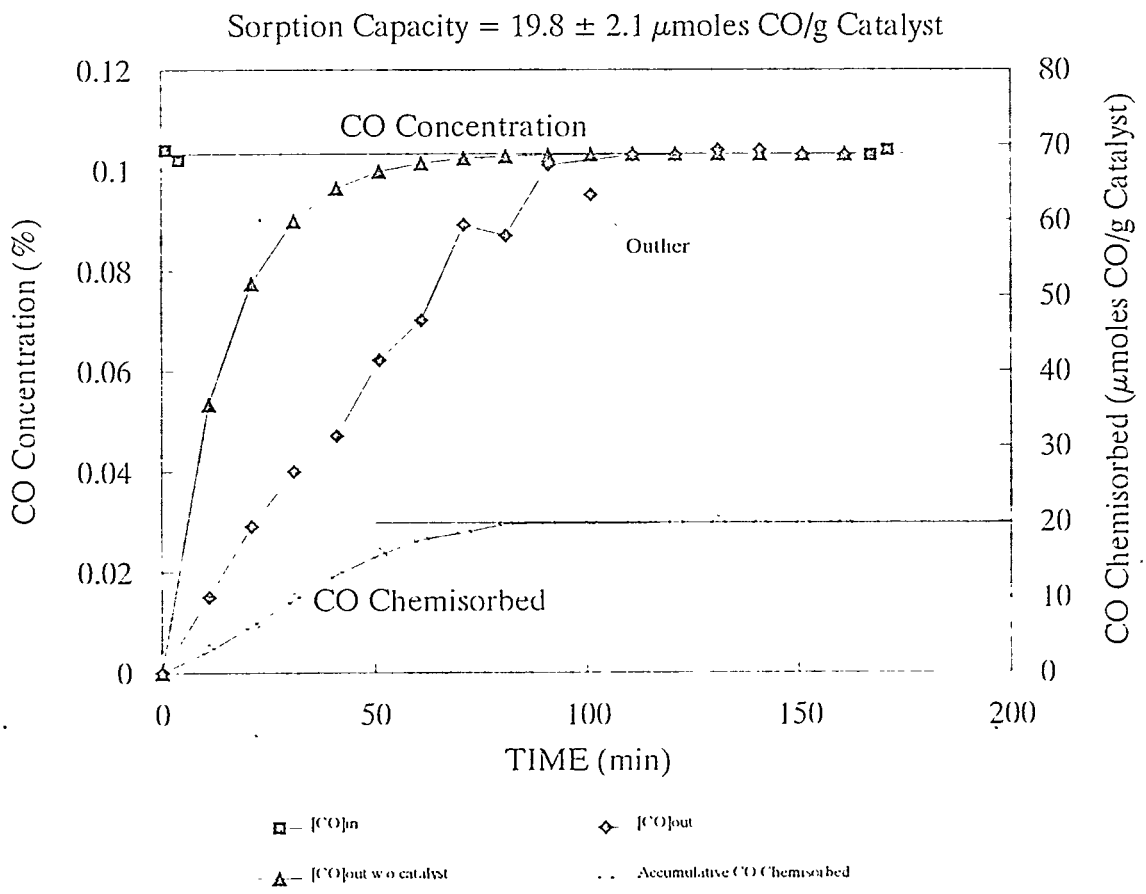
Table J-15. HRC Sorption Capacity Run 87.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	30	dW	0.1	g Catalyst
		15			g Englehard Deoxo Type 18467
		15			g AECL Hydrophobic Type 85−42
Volume	V	7571			mL
Time Interval	I	10	dI	0.2	min
ResTime	Tr	15.1	dTr	1.5	min
Temperature		16.6			°C
Pressure		1			atm
Ref Temp	T	298			K
Ref Pres	P	1			atm
R	R	8.206E−05			mL•atm/μmol/K
$X_{CO,in}$	COin	0.103	dCOin	0.001	%
CO SC	SC	19.8	dSC	2.1	μg CO/g Catalyst

Regeneration Method: Air Flush	
0.5	L/min
–	psi
900	min
450	L of air, Total
15	L air/g catalyst

SAMPLE	TIME		$X_{CO,in}$	$dX_{CO,in}$	$X_{CO,out}$ actual	$dX_{CO,out}$ actual	$X_{CO,out}$ estimated	$dX_{CO,out}$ estimated	CO absorbed SCi	CO absorbed Accum	Error Calculations		
	CO INDEX								μmoles H_2				
#	(min)	(min)	(%)	(%)	(%)	(%)	(%)	(%)	g Cat		$(d-est)^2$	$(d-act)^2$	(est−act)
93−600	0	1	0.104	0.002									
93−601	3	4	0.102	0.001									
93−618	166	167	0.103	0.001									
93−619	170	171	0.104	0.001									
	0	0			0.000	0.000	0.000	0.000	0.0	0.0	0	0	0.0000
93−602	10	11			0.015	0.000	0.053	0.000	2.9	2.9	0	0	0.0383
93−603	20	21			0.029	0.001	0.077	0.003	3.3	6.2	1.0E−06	7.1E−06	0.0485
93−604	30	31			0.040	0.001	0.090	0.002	3.4	9.6	1.0E−06	5.1E−06	0.0499
93−605	40	41			0.047	0.001	0.096	0.002	3.4	12.9	1.0E−06	4.2E−06	0 0494
93−606	50	51			0.062	0.001	0.100	0.002	2.6	15.5	1.0E−06	2.6E−06	0.0377
93−607	60	61			0.070	0.001	0.101	0.001	2.1	17.7	1.0E−06	2.1E−06	0.0314
93−608	70	71			0.089	0.003	0.102	0.003	0.9	18.6	9.0E−06	0.000012	0.0133
93−609	80	81			0.087	0.002	0.103	0.002	1.1	19.6	4.0E−06	5.6E−06	0.0158
93−610	90	91			0.101	0.001	0.103	0.001	0.1	19.8	1.0E−06	1 0E−06	0.0020
93−612	110	111			0.103	0.000	0.103	0.000	0.0	19.8	0	0	0.0002
93−613	120	121			0.103	0.001	0.103	0.001	0.0	19.8	1.0E−06	1.0E−06	0.0002
93−614	130	131			0.104	0.001	0.103	0.001	−0.1	19.8			
93−615	140	141			0.104	0.001	0.103	0.001	−0.1	19.7			
93−616	150	151			0.103	0.001	0.103	0.001	0.0	19.7			
93−617	160	161			0.103	0.001	0.103	0.001	0.0	19.7			
OUTLYING AND SUSPECT POINTS													
93−611	100	101			0.095	0.000	0.103	0.000	0.6	20.3			
									Summations		2.00E−05	4.06E−05	2.87E−01

Figure J-17. HRC Sorption Capacity Run 87.



30 g Catalyst (15 g Englehard Deoxo Type 18467, 15 g AECL Hydrophobic Type 85-42)
Reactor Volume 757 mL, 1 atm, 17 °C
500 sccm 0.103% CO in Nitrogen
Regeneration Method: Air Flush
0.5 L/min for 900 min
450 L of air, Total
15.0 L air/g catalyst

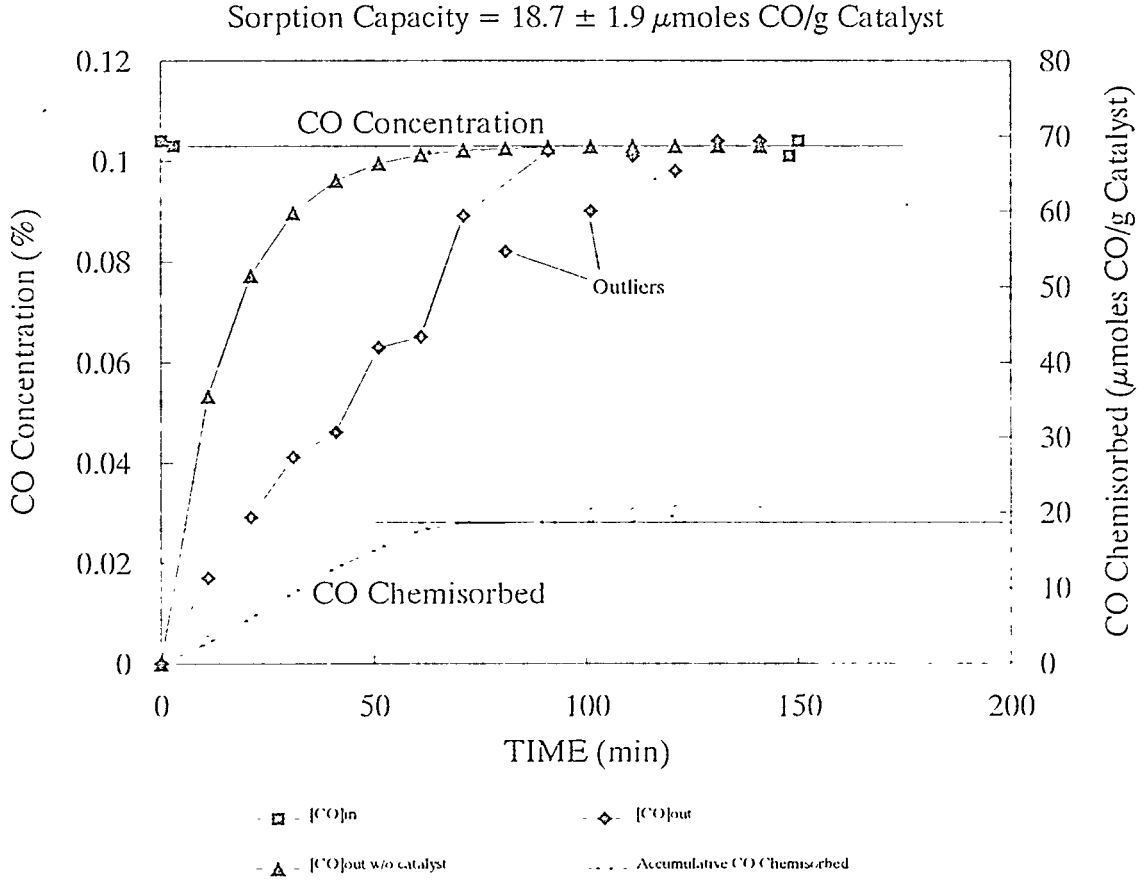
Table J-16. HRC Sorption Capacity Run 88.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	30	dW	0.1	g Catalyst
		15			g Englehard Deoxo Type 18467
		15			g AECL Hydrophobic Type 85−42
Volume	V	7571			mL
Time Interval	I	10	dI	0.2	min
ResTime	Tr	15.1	dTr	1.5	min
Temperature		15.7			°C
Pressure		1			atm
Ref Temp	T	298			K
Ref Pres	P	1			atm
R	R	8.206E−05			mL•atm/μmol/K
$X_{CO,in}$	COin	0.103	dCOin	0.001	%
CO SC	SC	18.7	dSC	1.9	μg CO/g Catalyst

Regeneration Method: Air Flush	
0.577	L/min
–	psi
418	min
241.186	L of air, Total
8.04	L air/g catalyst

SAMPLE	TIME	CO INDEX	$X_{CO,in}$	$dX_{CO,in}$	$X_{CO,out}$ actual	$dX_{CO\,out}$ actual	$X_{CO,out}$ estimated	$dX_{CO,out}$ estimated	CO absorbed SCi μmoles H_2/g Cat	Accum	Error Calculations (d−est)²	(d−act)²	(est−act)
#	(min)	(min)	(%)	(%)	(%)	(%)	(%)	(%)					
93−620	0	0	0.104	0.001									
93−621	3	3	0.103	0.001									
93−636	148	148	0.101	0.001									
93−637	150	150	0.104	0.000									
	0	0			0.000	0.000	0.000	0.000	0.0	0.0	0	0	0.0000
93−622	10	11			0.017	0.000	0.053	0.000	2.7	2.7	0	0	0.0362
93−623	20	21			0.029	0.000	0.077	0.000	3.3	6.0	0	0	0.0483
93−624	30	31			0.041	0.001	0.090	0.002	3.3	9.3	1.0E−06	4.8E−06	0 0487
93−625	40	41			0.046	0.001	0.096	0.002	3.4	12.7	1.0E−06	4.4E−06	0.0501
93−626	50	51			0.063	0.001	0.099	0.002	2.5	15.2	1.0E−06	2.5E−06	0.0365
93−627	60	61			0.065	0.001	0.101	0.002	2.5	17.7	1.0E−06	2.4E−06	0.0362
93−628	70	71			0.089	0.001	0.102	0.001	0.9	18.6	1.0E−06	1.3E−06	0.0131
93−630	90	91			0.102	0.001	0.103	0.001	0.1	18.7	1.0E−06	1.0E−06	0 0007
93−631	100	101			0.090	0.001	0.103	0.001	0.9	19.6			
93−632	110	111			0.101	0.003	0.103	0.003	0.1	19.7			
93−633	120	121			0.098	0.000	0.103	0.000	0.3	20.0			
93−634	130	131			0.104	0.001	0.103	0.001	−0.1	20.0			
93−635	140	141			0.104	0.001	0.103	0.001	−0.1	19.9			
OUTLYING AND SUSPECT POINTS													
93−629	80	81			0.082	0.001	0.103	0.001	1.4	20.0			
									Summations		6.00E−06	1.64E−05	2.70E−01

Figure J-18. HRC Sorption Capacity Run 88.



30 g Catalyst (15 g Englehard Deoxo Type 18467, 15 g AECL Hydrophobic Type 85-42)
Reactor Volume 757 mL, 1 atm, 16°C
500 sccm 0.103% CO in Nitrogen
Regeneration Method: Air Flush
0.58 L/min for 418 min
241 L of air, Total
8.0 L air/g catalyst

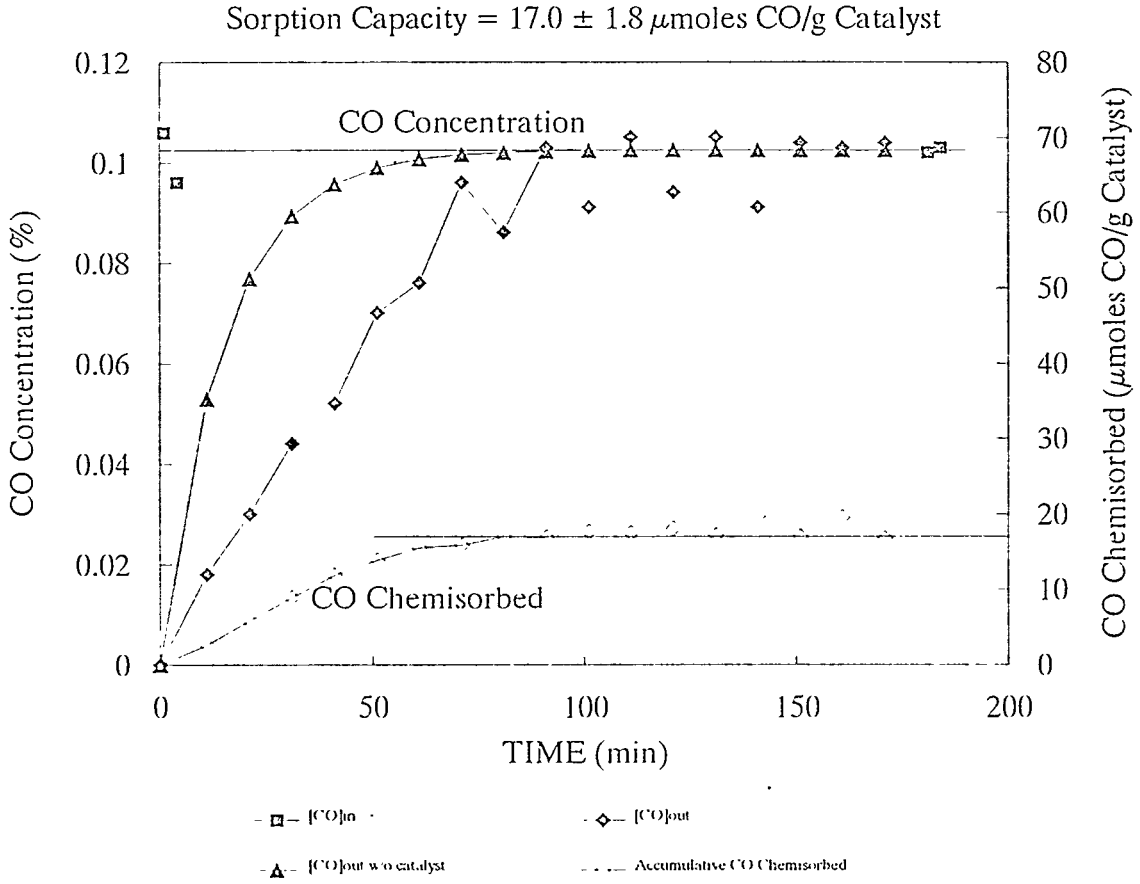
Table J-17. HRC Sorption Capacity Run 89.

Flowrate	Q	500	dQ	50	mL/min
Catalyst Mass	W	30	dW	0.1	g Catalyst
		15			g Englehard Deoxo Type 18467
		15			g AECL Hydrophobic Type 85−42
Volume	V	7571			mL
Time Interval	I	10	dI	0.2	min
ResTime	Tr	15.1	dTr	1.5	min
Temperature		15.9			°C
Pressure		1			atm
Ref Temp	T	298			K
Ref Pres	P	1			atm
R	R	8.206E−05			mL•atm/μmol/K
$X_{CO,in}$	COin	0.103	dCOin	0.001	%
CO SC	SC	17.0	dSC	1.8	μg CO/g Catalyst

Regeneration Method: Air Flush	
0.5	L/min
–	psi
60	min
30	L of air, Total
1.0	L air/g catalyst

SAMPLE	TIME		$X_{CO,in}$	$dX_{CO,in}$	$X_{CO,out}$ actual	$dX_{CO,out}$ actual	$X_{CO,out}$ estimated	$dX_{CO,out}$ estimated	CO absorbed SCi	CO absorbed Accum	Error Calculations		
	CO INDEX								μmoles H_2				
#	(min)	(min)	(%)	(%)	(%)	(%)	(%)	(%)	g Cat		$(d-est)^2$	$(d-act)^2$	(est−act)
93−638	0	1	0.106	0.001									
93−639	3	4	0.096	0.000									
93−657	180	181	0.102	0.001									
93−658	183	184	0.103	0.001									
	0	0			0.000	0.000	0.000	0.000	0.0	0.0	0	0	0.0000
93−640	10	11			0.018	0.001	0.053	0.003	2.6	2.6	1.0E−06	8.6E−06	0.0349
93−641	20	21			0.030	0.001	0.077	0.003	3.2	5.8	1.0E−06	6.6E−06	0.0469
93−642	30	31			0.044	0.000	0.089	0.000	3.1	8.9	0	0	0.0453
93−643	40	41			0.052	0.000	0.096	0.000	3.0	11.9	0	0	0.0437
93−644	50	51			0.070	0.001	0.099	0.001	2.0	13.9	1.0E−06	2.0E−06	0.0290
93−645	60	61			0.076	0.001	0.101	0.001	1.7	15.5	1.0E−06	1.8E−06	0.0247
93−646	70	71			0.096	0.001	0.102	0.001	0.4	15.9	1.0E−06	1.1E−06	0.0056
93−647	80	81			0.086	0.002	0.102	0.002	1.1	17.0	4.0E−06	5.6E−06	0.0160
93−648	90	91			0.103	0.000	0.102	0.000	−0.1	17.0	0	0	−0.0008
93−649	100	101			0.091	0.001	0.102	0.001	0.8	17.7			
93−650	110	111			0.105	0.001	0.102	0.001	−0.2	17.6			
93−651	120	121			0.094	0.001	0.102	0.001	0.6	18.1			
93−652	130	131			0.105	0.001	0.102	0.001	−0.3	17.2			
93−653	140	141			0.091	0.000	0.102	0.000	1.6	19.7			
93−654	150	151			0.104	0.001	0.102	0.001	−0.2	17.0			
93−655	160	161			0.103	0.001	0.102	0.001	−0.1	19.6			
93−656	170	171			0.104	0.001	0.102	0.001	−0.2	16.8			
									Summations		9.00E−06	2.57E−05	2.45E−01

Figure J-19. HRC Sorption Capacity Run 89.



30 g Catalyst (15 g Englehard Deoxo Type 18467, 15 g Al2O3 Hydrophobic Type 85-42)
Reactor Volume 757 mL, 1 atm, 16°C
500 sccm 0.103% CO in Nitrogen
Regeneration Method: Air Flush
0.5 L/min for 60 min
30 L of air, Total
1.0 L air/g catalyst