QUALITY ASSURANCE AUDIT REPORT

North Texas Commission
Ambient Air and Meteorological Monitoring

Prepared for:

North Texas Commission

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EXECUTIVE SUMMARY

On November 9th – 11th and December 5th - 9th, an audit team from the AECOM ambient air group in Austin, Texas conducted performance and technical system audits of the North Texas Commission (NTC) ambient air monitoring network. The audits provide an independent assessment of the monitoring program.

The monitoring program at NTC consists of continuous gas chromatographs (GC), volatile organic compound (VOC) canister collection systems, and meteorological sensors including wind speed, wind direction, and temperature.

The performance audit results indicate acceptable responses for measurement systems with the exceptions summarized below.

The wind direction sensor at Decatur was outside of audit guidance for alignment and maximum total error. The sensor had an alignment error of 5.2°, resulting in a maximum total error of 6.6°. The wind direction sensor was realigned, resulting in an alignment error of 0.5°and a maximum total error of 6.6°.

The wind direction sensor at Rushing was outside of audit guidance for alignment and maximum total error. The sensor had an alignment error of -4.1°, resulting in a maximum total error of -5.2°. The wind direction sensor was realigned, resulting in an alignment error of -1.9° and a maximum total error of 3. °.

The wind direction sensor at Mansfield was outside of audit guidance for linearity. The sensor had a maximum linearity error of -4.1°, resulting in a maximum total error of 4.4°. The wind direction sensor was replaced by the site operator the following the audit.

The wind direction sensor at Godley was outside of audit parameters for linearity. The linearity error between 150 to 360° ranged from 7.1° to 23.8°. There were no values reported between 60-120°. Upon our arrival, it was noticed that the wind direction sensor's sleeve was slid down allowing moisture to enter the inside of the sensor. Moisture from the rain event on 12/07/22 likely damaged the sensor. The site operator replaced the sensor on 12/9/22. Alignment was not performed as the wind direction sensor's value could not be verified.

Out of the 48 compounds being analyzed, thirteen compounds (Ethane, Ethylene, Propylene, Acetylene, m/p-Xylene, Styrene, Isopropylbenzene, n-Propylbenzene, 1,3,5-Trimethylbenzene, 1,2,4-Trimethylbenzene, n-Decane, 1,2,3-Trimethylbenzene, and n-Undecane) were found to be outside of the audit objective of 70% - 130% recovery at several sites. In addition, the Benbrook and Elm Fork sites had the following GC compound recoveries outside of the audit specification:

Locations	**Compounds**
Flower Mound	Isoprene
Decatur	2-Methylhexane ethylbenzene

These network GC audit results are comparable historically to other AECOM auto-GC audits. The GC audit results are contained in table ES-1. Technical systems audit results demonstrate satisfactory operational procedures for collecting valid data.

A performance evaluation (PE) sample is prepared by the AECOM QA group on a quarterly basis and submitted to the VOC laboratory for analysis. This performance evaluation sample contained known (spiked) concentrations of the target VOCs. A review of the sample recoveries for the spiked target VOCs shows that three out of the forty-five compounds were not within the range of expected values (70-130%).

- 1,2,4-Trimethylbenzene (69.4%)
- Ethane (24.4%)
- Ethene (0.0%)

AECOM QA staff shared the performance evaluation results with the VOC laboratory, and no other corrective action was taken. We will continue to evaluate these compounds in our PE samples and work with the lab to resolve these discrepancies. GD Air's most recent performance evaluation canister results for the fourth quarter of 2022 are contained below in Table ES-2.

Table ES-1. Audit Standard Results for all Network GCs

		Benbrook		Decatur		Dish		Eagle Mountain Lake		Elm Fork	
Compound Name	Audit Conc (ppbc)	Post Processed ppbc	Percent Recovery	Post Processed ppbc	Percent Recovery	Post Processed ppbc	Percent Recovery	Post Processed ppbc	Percent Recovery	Post Processed ppbc	Percent Recovery
Ethane	51.80	44.7	86.2%	35.3	**68.1%**	43.3	83.6%	41.7	80.5%	42.9	82.9%
Ethylene	17.37	9.0	**51.9%**	14.1	81.0%	13.9	80.0%	11.0	**63.6%**	12.0	**69.2%**
Propane	12.36	12.9	104.5%	11.2	90.9%	11.0	89.0%	11.0	88.9%	11.1	90.2%
Propylene	13.09	11.0	84.4%	9.4	72.1%	10.6	81.2%	9.7	74.3%	10.2	77.6%
Iso-Butane	16.97	20.2	119.3%	16.2	95.7%	16.1	95.0%	15.6	91.7%	16.9	99.6%
N-Butane	17.13	22.2	129.5%	18.5	107.7%	16.9	98.4%	16.6	96.9%	17.3	101.1%
Acetylene	8.73	5.5	**62.5%**	6.8	77.7%	5.6	**64.1%**	7.2	82.0%	6.2	71.6%
Trans-2-Butene	16.65	19.7	118.1%	17.9	107.3%	16.4	98.8%	15.6	93.8%	16.8	100.9%
1-Butene	16.65	19.6	117.5%	16.5	99.4%	16.6	99.8%	15.1	91.0%	16.4	98.6%
Cis-2-Butene	17.62	20.7	117.5%	18.4	104.4%	17.1	97.2%	16.3	92.2%	17.4	98.8%
Cyclopentane	21.21	25.0	117.7%	22.1	104.1%	20.3	95.9%	20.5	96.8%	21.1	99.5%
Iso-Pentane	21.62	26.1	120.7%	22.8	105.4%	21.2	98.1%	20.4	94.3%	21.7	100.2%
N-Pentane	21.62	26.3	121.6%	22.7	105.2%	21.1	97.7%	21.3	98.6%	21.7	100.4%
1,3-Butadiene	16.65	18.9	113.4%	17.2	103.4%	15.1	90.9%	15.3	91.7%	16.5	99.1%
Trans-2-Pentene	21.82	24.8	113.6%	21.3	97.8%	19.8	90.8%	19.5	89.6%	21.7	99.5%
1-Pentene	21.82	22.8	104.6%	20.3	93.1%	18.6	85.3%	17.9	81.9%	21.3	97.8%
Cis-2-Pentene	19.80	20.1	101.5%	18.0	91.1%	13.9	70.1%	15.5	78.5%	18.7	94.3%
2,2-Dimethylbutane	25.45	27.9	109.6%	25.3	99.5%	23.4	92.1%	22.7	89.2%	25.3	99.6%
2-Methylpentane	24.97	27.7	111.1%	23.5	94.3%	22.8	91.2%	22.3	89.2%	24.7	99.0%
Isoprene	21.01	18.0	85.7%	15.8	75.2%	15.2	72.3%	14.8	70.3%	16.5	78.4%
n-Hexane	26.18	27.9	106.6%	24.8	94.8%	22.7	86.8%	26.5	101.2%	23.2	88.5%
Methylcyclopentane	25.70	26.1	101.5%	22.4	87.0%	18.7	72.9%	20.3	78.8%	22.0	85.7%
2,4-Dimethylpentane	30.83	33.4	108.5%	25.9	83.9%	27.8	90.3%	30.1	97.7%	28.5	92.4%
Benzene	25.94	23.7	91.3%	23.6	91.1%	20.8	80.4%	23.6	91.0%	21.7	83.7%
Cyclohexane	26.18	28.7	109.6%	24.4	93.2%	22.8	87.2%	25.5	97.4%	23.3	88.8%
2-Methylhexane	30.55	26.6	87.2%	21.1	**69.1%**	21.8	71.3%	22.6	74.0%	24.1	78.8%
2,3-Dimethylpentane	29.70	34.5	116.3%	30.6	103.0%	28.8	96.9%	32.4	109.1%	28.6	96.3%
3-Methylhexane	30.55	30.9	101.0%	26.9	87.9%	26.2	85.7%	29.3	95.9%	26.9	88.1%
2,2,4-Trimethylpentane	35.23	34.1	96.7%	28.8	81.7%	28.4	80.7%	32.4	92.0%	30.5	86.5%
n-Heptane	30.55	29.9	98.0%	25.1	82.0%	24.7	80.7%	28.6	93.7%	26.8	87.9%
Methylcyclohexane	30.26	30.7	101.4%	24.8	81.8%	25.1	83.0%	26.6	87.8%	26.8	88.5%
2,3,4-Trimethylpentane	33.94	33.9	99.8%	28.4	83.6%	28.8	84.8%	31.6	93.1%	30.6	90.2%
Toluene	30.26	28.1	92.8%	26.1	86.1%	24.6	81.2%	27.6	91.2%	26.1	86.4%
2-Methylheptane	34.26	32.30	94.3%	28.3	82.6%	27.8	81.1%	31.8	92.9%	29.4	85.9%
3-Methylheptane	34.59	32.46	93.9%	29.9	86.4%	28.1	81.3%	33.7	97.5%	30.2	87.4%
n-Octane	34.26	32.03	93.5%	28.1	81.9%	28.0	81.8%	31.9	93.0%	29.8	86.8%
Ethylbenzene	34.26	29.59	86.4%	23.4	**68.4%**	27.0	78.7%	27.5	80.1%	27.8	81.1%
M&P-Xylene	67.88	55.66	82.0%	45.0	**66.3%**	52.3	77.1%	53.2	78.4%	52.9	77.9%
Styrene	32.00	21.60	**67.5%**	22.5	70.4%	22.7	70.8%	25.8	80.7%	21.8	**68.3%**
O-Xylene	33.62	30.84	91.8%	24.5	72.8%	27.7	82.5%	28.5	84.7%	27.9	83.1%
N-Nonane	37.09	32.66	88.1%	28.6	77.0%	31.0	83.7%	34.7	93.5%	31.3	84.4%
Isopropylbenzene	36.36	31.91	87.7%	22.7	**62.3%**	30.0	82.5%	28.7	78.8%	29.3	80.5%
n-Propylbenzene	34.91	29.17	83.6%	23.7	**68.0%**	28.3	81.1%	28.7	82.3%	27.8	79.6%
1,3,5-Trimethylbenzene	37.82	30.09	79.6%	23.2	**61.2%**	29.1	77.0%	29.2	77.1%	26.3	**69.7%**
1,2,4-Trimethylbenzene	38.55	28.59	74.2%	26.5	**68.7%**	29.2	75.6%	32.2	83.4%	26.5	**68.7%**
n-Decane	42.83	30.30	70.7%	24.9	**58.2%**	31.6	73.7%	34.5	80.4%	29.1	**67.9%**
1,2,3-Trimethylbenzene	39.64	26.00	**65.6%**	20.9	**52.7%**	27.2	**68.6%**	25.6	**64.6%**	23.3	**58.7%**
n-Undecane	46.22	28.17	**60.9%**	25.6	**55.5%**	28.6	**61.9%**	35.6	77.0%	26.6	**57.5%**

[a] Compound order based on elution time.

Table ES-1. (Continued) Audit Standard Results for all Network GCs

		Everman		Flower Mound		Godley		Kennedale		Mansfield	
Compound Name	Audit Conc (ppbc)	Post Processed ppbc	Percent Recovery	Post Processed ppbc	Percent Recovery	Post Processed ppbc	Percent Recovery	Post Processed ppbc	Percent Recovery	Post Processed ppbc	Percent Recovery
Ethane	51.80	51.2	98.8%	41.6	80.2%	50.6	97.6%	49.3	95.1%	38.9	75.2%
Ethylene	17.37	16.7	96.0%	11.7	**67.6%**	16.5	95.2%	14.9	85.7%	9.9	**57.0%**
Propane	12.36	12.4	100.4%	10.4	84.5%	12.3	99.4%	12.6	101.6%	10.5	84.8%
Propylene	13.09	12.8	97.9%	9.1	**69.8%**	11.0	83.8%	10.2	77.6%	9.0	**69.0%**
Iso-Butane	16.97	17.8	105.0%	15.4	90.7%	17.4	102.6%	18.6	109.6%	16.8	98.8%
N-Butane	17.13	18.7	109.3%	16.0	93.4%	18.2	106.4%	19.2	111.9%	17.6	102.6%
Acetylene	8.73	7.8	89.4%	6.7	76.7%	7.7	87.7%	8.8	100.7%	5.5	**63.6%**
Trans-2-Butene	16.65	17.9	107.5%	15.6	93.6%	17.8	107.2%	18.6	111.5%	16.6	99.8%
1-Butene	16.65	18.3	110.1%	15.4	92.6%	17.6	105.6%	18.2	109.5%	16.4	98.5%
Cis-2-Butene	17.62	18.4	104.5%	16.4	92.9%	18.5	105.2%	19.3	109.3%	17.4	98.6%
Cyclopentane	21.21	22.4	105.5%	19.6	92.4%	22.0	103.8%	23.1	108.9%	21.1	99.3%
Iso-Pentane	21.62	23.6	109.3%	19.5	90.0%	22.8	105.6%	23.9	110.6%	21.5	99.3%
N-Pentane	21.62	23.7	109.5%	20.3	94.0%	22.9	105.7%	23.7	109.7%	21.8	100.9%
1,3-Butadiene	16.65	17.7	106.3%	14.4	86.4%	17.3	103.7%	18.1	108.5%	15.6	93.5%
Trans-2-Pentene	21.82	23.2	106.2%	19.5	89.4%	22.6	103.5%	23.5	107.7%	20.7	94.9%
1-Pentene	21.82	23.0	105.5%	17.7	81.0%	22.5	103.1%	23.6	108.2%	18.9	86.7%
Cis-2-Pentene	19.80	20.3	102.7%	16.2	82.1%	19.9	100.4%	21.2	107.1%	17.7	89.6%
2,2-Dimethylbutane	25.45	27.0	106.1%	23.0	90.5%	26.2	102.8%	27.8	109.2%	24.8	97.4%
2-Methylpentane	24.97	26.1	104.7%	22.9	91.9%	25.6	102.7%	23.4	93.7%	24.6	98.5%
Isoprene	21.01	19.6	93.2%	14.3	**68.3%**	17.9	85.3%	20.3	96.6%	16.4	77.9%
n-Hexane	26.18	31.2	119.0%	23.2	88.6%	26.0	99.1%	24.8	94.6%	21.7	82.8%
Methylcyclopentane	25.70	24.5	95.3%	19.4	75.6%	25.1	97.8%	24.9	97.0%	21.1	82.2%
2,4-Dimethylpentane	30.83	33.1	107.5%	28.9	93.8%	31.8	103.3%	29.2	94.9%	25.6	83.0%
Benzene	25.94	25.9	99.8%	20.9	80.5%	24.3	93.7%	25.6	98.6%	20.3	78.2%
Cyclohexane	26.18	27.8	106.2%	22.3	85.2%	25.5	97.3%	26.4	100.7%	22.0	83.9%
2-Methylhexane	30.55	27.0	88.3%	22.3	73.0%	27.5	90.0%	28.8	94.2%	23.5	76.8%
2,3-Dimethylpentane	29.70	33.5	112.9%	28.1	94.5%	31.4	105.7%	30.1	101.3%	24.9	83.8%
3-Methylhexane	30.55	30.7	100.6%	25.6	83.8%	30.2	99.0%	30.1	98.7%	24.7	80.8%
2,2,4-Trimethylpentane	35.23	34.7	98.4%	29.8	84.5%	33.9	96.2%	34.2	97.1%	27.4	77.6%
n-Heptane	30.55	30.8	100.8%	25.7	84.2%	30.2	98.7%	31.4	102.7%	24.6	80.5%
Methylcyclohexane	30.26	29.1	96.3%	25.5	84.3%	30.1	99.5%	31.0	102.5%	24.6	81.2%
2,3,4-Trimethylpentane	33.94	34.4	101.3%	29.9	88.2%	34.7	102.3%	35.2	103.6%	27.4	80.8%
Toluene	30.26	29.9	98.9%	24.9	82.3%	29.2	96.6%	30.3	100.0%	23.6	77.9%
2-Methylheptane	34.26	33.4	97.4%	28.7	83.8%	33.7	98.5%	35.3	103.0%	26.4	77.2%
3-Methylheptane	34.59	32.6	94.2%	29.3	84.6%	34.1	98.5%	35.4	102.4%	27.0	78.0%
n-Octane	34.26	34.9	101.9%	28.7	83.8%	34.7	101.3%	35.6	103.9%	26.4	77.1%
Ethylbenzene	34.26	31.9	93.0%	26.5	77.4%	31.7	92.6%	33.7	98.4%	24.9	72.7%
M&P-Xylene	67.88	62.6	92.2%	50.3	74.0%	60.7	89.4%	65.6	96.6%	47.1	**69.4%**
Styrene	32.00	26.8	83.8%	20.8	**64.9%**	27.3	85.3%	29.3	91.6%	20.6	**64.5%**
O-Xylene	33.62	33.5	99.7%	26.5	78.7%	33.0	98.0%	32.0	95.1%	24.3	72.4%
N-Nonane	37.09	38.5	103.9%	30.5	82.2%	37.8	102.0%	38.4	103.6%	27.2	73.3%
Isopropylbenzene	36.36	36.5	100.5%	27.6	76.0%	35.3	97.1%	36.3	99.7%	26.0	71.5%
n-Propylbenzene	34.91	34.6	99.3%	26.8	76.6%	34.2	97.8%	35.2	100.8%	24.8	71.1%
1,3,5-Trimethylbenzene	37.82	34.9	92.2%	25.0	**66.1%**	35.3	93.3%	33.4	88.3%	22.8	**60.4%**
1,2,4-Trimethylbenzene	38.55	35.3	91.6%	26.3	**68.2%**	35.7	92.6%	36.7	95.2%	24.5	**63.6%**
n-Decane	42.83	37.7	88.1%	28.5	**66.5%**	39.5	92.1%	38.6	90.0%	25.9	**60.5%**
1,2,3-Trimethylbenzene	39.64	32.5	82.0%	22.9	**57.9%**	30.4	76.8%	31.6	79.8%	22.1	**55.6%**
n-Undecane	46.22	35.6	77.1%	26.7	**57.7%**	32.6	70.5%	35.4	76.5%	25.5	**55.2%**

[a] Compound order based on elution time.

Table ES-1. (Continued) Audit Standard Results for all Network GCs

		Rhome		Rushing		UTA		Decatur (Re-Audit)		Flower Mound (Re-Audit)	
Compound Name	Audit Conc (ppbc)	Post Processed ppbc	Percent Recovery	Post Processed ppbc	Percent Recovery	Post Processed ppbc	Percent Recovery	Post Processed ppbc	Percent Recovery	Post Processed ppbc	Percent Recovery
Ethane	51.80	50.9	98.3%	47.9	92.4%	49.4	95.3%	33.8	**65.3%**	42.4	81.9%
Ethylene	17.37	16.2	93.2%	11.4	**65.5%**	16.4	94.2%	13.2	75.9%	11.8	**68.0%**
Propane	12.36	12.0	97.4%	11.9	96.1%	12.0	97.3%	12.1	98.2%	10.8	87.2%
Propylene	13.09	10.8	82.3%	9.7	74.1%	10.5	80.1%	9.1	**69.6%**	9.2	70.6%
Iso-Butane	16.97	17.8	105.1%	19.0	111.7%	17.3	101.9%	16.8	99.2%	15.7	92.5%
N-Butane	17.13	18.2	106.4%	19.7	115.0%	17.8	104.0%	19.1	111.4%	16.7	97.7%
Acetylene	8.73	7.8	89.5%	6.0	**68.9%**	7.5	86.5%	6.6	75.8%	6.7	76.7%
Trans-2-Butene	16.65	17.8	107.0%	18.7	112.4%	17.0	101.9%	18.0	108.4%	16.3	97.8%
1-Butene	16.65	17.8	107.1%	18.8	112.7%	17.1	102.9%	17.4	104.6%	15.9	95.6%
Cis-2-Butene	17.62	18.3	103.9%	19.1	108.6%	17.6	99.9%	18.6	105.7%	17.0	96.4%
Cyclopentane	21.21	22.2	104.8%	23.4	110.4%	21.6	101.7%	21.9	103.1%	19.9	93.9%
Iso-Pentane	21.62	23.1	106.9%	24.3	112.5%	22.4	103.6%	22.9	105.9%	20.5	95.0%
N-Pentane	21.62	23.0	106.6%	24.0	111.2%	22.2	102.6%	23.2	107.2%	20.9	96.5%
1,3-Butadiene	16.65	16.8	100.8%	18.2	109.6%	16.4	98.4%	17.3	103.8%	14.9	89.3%
Trans-2-Pentene	21.82	21.3	97.6%	23.7	108.8%	21.0	96.2%	21.5	98.5%	20.3	93.0%
1-Pentene	21.82	21.1	96.8%	23.4	107.4%	19.6	89.6%	20.5	94.1%	18.7	85.7%
Cis-2-Pentene	19.80	14.6	73.7%	20.5	103.7%	17.4	87.6%	18.1	91.5%	17.3	87.3%
2,2-Dimethylbutane	25.45	26.7	104.7%	26.5	104.1%	24.3	95.3%	25.0	98.1%	23.9	93.7%
2-Methylpentane	24.97	26.0	104.3%	26.4	105.7%	24.4	97.9%	23.5	94.0%	23.1	92.7%
Isoprene	21.01	17.8	84.7%	23.8	113.4%	15.7	74.8%	16.2	76.9%	15.7	74.6%
n-Hexane	26.18	31.5	120.2%	26.5	101.2%	26.2	99.9%	25.6	97.6%	22.1	84.4%
Methylcyclopentane	25.70	21.6	84.1%	24.8	96.3%	24.0	93.4%	22.2	86.5%	20.1	78.2%
2,4-Dimethylpentane	30.83	33.6	109.1%	29.8	96.6%	33.0	107.1%	26.4	85.8%	29.3	94.9%
Benzene	25.94	25.9	99.8%	24.4	93.9%	24.6	95.0%	23.2	89.6%	21.8	84.0%
Cyclohexane	26.18	28.4	108.3%	26.3	100.3%	26.2	99.9%	24.3	92.8%	22.9	87.5%
2-Methylhexane	30.55	25.7	84.0%	25.7	84.0%	26.8	87.8%	23.0	75.4%	23.0	75.4%
2,3-Dimethylpentane	29.70	35.2	118.4%	30.1	101.3%	32.4	109.3%	29.5	99.3%	28.3	95.3%
3-Methylhexane	30.55	31.8	104.0%	28.3	92.6%	30.1	98.5%	27.4	89.8%	26.4	86.5%
2,2,4-Trimethylpentane	35.23	34.6	98.3%	32.0	90.8%	34.3	97.4%	30.0	85.2%	30.2	85.6%
n-Heptane	30.55	30.5	99.8%	28.7	93.9%	30.7	100.6%	27.1	88.6%	26.4	86.6%
Methylcyclohexane	30.26	29.9	98.7%	28.8	95.2%	30.4	100.4%	25.2	83.2%	26.2	86.6%
2,3,4-Trimethylpentane	33.94	34.6	101.9%	32.2	94.8%	34.5	101.6%	28.4	83.6%	30.7	90.5%
Toluene	30.26	30.9	102.0%	27.7	91.4%	29.4	97.2%	25.8	85.3%	26.0	86.1%
2-Methylheptane	34.26	34.5	100.7%	31.5	91.8%	34.0	99.4%	27.6	80.5%	29.3	85.6%
3-Methylheptane	34.59	35.3	102.0%	31.9	92.3%	34.8	100.5%	28.5	82.5%	29.9	86.4%
n-Octane	34.26	34.3	100.1%	32.4	94.6%	35.4	103.3%	28.6	83.4%	29.4	85.9%
Ethylbenzene	34.26	31.2	91.0%	29.7	86.7%	31.9	93.0%	24.7	72.2%	27.2	79.4%
M&P-Xylene	67.88	61.8	91.0%	58.0	85.5%	62.9	92.7%	47.5	**69.9%**	52.1	76.7%
Styrene	32.00	26.5	82.8%	25.9	80.8%	28.2	88.3%	22.7	70.8%	22.2	**69.4%**
O-Xylene	33.62	33.2	98.9%	30.7	91.3%	33.3	98.9%	25.4	75.7%	27.4	81.6%
N-Nonane	37.09	39.0	105.0%	35.0	94.5%	39.1	105.5%	29.9	80.5%	31.6	85.3%
Isopropylbenzene	36.36	35.4	97.3%	33.8	92.8%	35.6	98.0%	25.3	**69.7%**	29.5	81.1%
n-Propylbenzene	34.91	34.0	97.4%	31.9	91.3%	34.5	98.7%	25.4	72.8%	27.5	78.7%
1,3,5-Trimethylbenzene	37.82	37.0	97.7%	34.0	90.0%	35.4	93.6%	25.4	**67.1%**	26.0	**68.8%**
1,2,4-Trimethylbenzene	38.55	37.5	97.3%	35.0	90.9%	35.6	92.4%	36.6	94.9%	25.8	**66.9%**
n-Decane	42.83	38.7	90.4%	35.5	82.9%	39.8	92.9%	27.3	**63.8%**	29.4	**68.7%**
1,2,3-Trimethylbenzene	39.64	31.2	78.7%	31.2	78.6%	30.8	77.8%	22.5	**56.8%**	23.0	**58.0%**
n-Undecane	46.22	35.6	77.1%	37.2	80.5%	34.2	74.0%	29.3	**63.3%**	26.9	**58.2%**

[a] Compound order based on elution time.

Table ES-2. Results of Performance Standard for Off-Site Analytical Lab

Compound Name	CAS Number	Input Concentration	Lab Results	Percent Recovery
1,1,1-Trichloroethane	71-55-6	3.6	3.1	86.4%
1,1,2,2-Tetrachloroethane	79-34-5	3.5	2.6	74.9%
1,1,2-Trichloroethane	79-00-5	3.6	3.4	95.9%
1,1-Dichloroethane	75-34-3	3.5	2.9	81.8%
1,1-Dichloroethene	75-35-4	3.5	2.9	82.0%
1,2,4-Trimethylbenzene	95-63-6	3.3	2.3	**69.4%**
1,2-Dibromoethane	106-93-4	3.5	3.4	97.5%
1,2-Dichloroethane	107-06-2	3.6	2.9	81.6%
1,2-Dichloropropane	78-87-5	3.6	3.1	85.0%
1,3,5-Trimethylbenzene	108-67-8	3.4	2.4	71.0%
1,3-Butadiene	106-99-0	7.0	6.1	86.0%
1-Butene	106-98-9	3.5	2.7	77.9%
1-Hexene	592-41-6	3.2	2.8	87.5%
1-Pentene	109-67-1	3.4	2.8	81.0%
2,2,4-Trimethylpentane	540-84-1	3.5	3.2	90.6%
4-Ethyltoluene (p-Ethyltoluene)	622-96-8	3.3	2.4	72.6%
Benzene	71-43-2	3.6	3.2	88.6%
Bromomethane	74-83-9	3.4	2.9	86.1%
c-1,3-Dichloropropene	10061-01-5	3.2	3.1	98.8%
Carbon tetrachloride	56-23-5	3.5	3.0	86.0%
Chlorobenzene	108-90-7	3.5	2.9	82.0%
Chloroform	67-66-3	3.5	3.0	87.1%
Chloromethane (Methyl Chloride)	74-87-3	3.6	2.7	75.4%
Cyclohexane	110-82-7	3.5	3.3	93.1%
Dichlorodifluoromethane (Freon-12)	75-71-8	3.5	2.8	78.9%
Ethane	74-84-0	21.2	5.2	**24.4%**
Ethene	74-85-1	7.0	0.0	**0.0%**
Ethylbenzene	100-41-4	3.5	2.7	77.1%
Methylene Chloride (Dichloromethane)	75-09-2	3.5	2.8	80.6%
m-Xylene & p-Xylene	106-42-3+108-38-3	6.9	5.4	78.2%
n-Butane	106-97-8	3.5	2.8	80.6%
n-Heptane	142-82-5	3.4	3.1	88.8%
n-Hexane	110-54-3	10.5	8.9	84.0%
n-Pentane	109-66-0	3.4	2.9	83.6%
o-Xylene	95-47-6	3.5	2.7	76.6%
Propane	74-98-6	3.4	2.6	76.6%
Propylene	115-07-1	6.9	5.0	72.4%
Styrene	100-42-5	3.4	2.5	74.4%
t-1,3-Dichloropropene	10061-02-6	3.3	2.6	79.9%
Tetrachloroethene	127-18-4	3.6	3.3	91.4%
Toluene	108-88-3	3.6	3.3	91.4%
Trichloroethene	79-01-6	3.4	3.3	96.1%
Trichlorofluoromethane (Freon-11)	75-69-4	3.6	2.9	80.5%
Vinyl Chloride	75-01-4	3.6	2.8	78.2%