Tetra Tech EM Inc.

8030 Flint Street ♦ Lenexa, Kansas 66214 ♦ (913) 894 2600 ♦ FAX (913) 894 6295

July 22 2003

Site CCI 2 ...
ID # KSD 9 ...
Break ...
Other ...

Mr Paul Doherty
START 2 On Sceen Coordinator
U S Environmental Protection Agency Region 7
901 North 5th Street
Kansas City Kansas 66101

Subject **Transmittal of Analytical Data for Air Samples**
Chemical Commodities Inc (CCI), Olathe, Kansas
U S EPA Region 7 START 2, Contract No 68-S7-01-41, Task Order No 0141

Dear Mr Doherty

Tetra Tech EM Inc is submitting the attached analytical data and associated data validation report for the Chemical Commodities Inc (CCI) site This transmittal includes analytical results for air samples A 1 to A 15 All samples were analyzed for volatile organic compounds Several analytes in various samples were qualified as non detect due to the presence of these compounds in either field or method blank samples Contaminants reported in the blank samples included acetone 2 butanone, carbon disulfide, chloroform and vinyl acetate Please refer to the attached data validation report for a more detailed description of the data qualifiers and the reasons why they were applied All other data were of acceptable quality If you have any questions or comments please contact the project manager at (913) 495 3962

Sincerely,

Nicholas Godfrey
START 2 Project Manager

for Hieu Q Vu PE CHMM
START 2 Program Manager

Enclosures

40118049

SUPERFUND RECORDS

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ATTACHMENT A

ANALYTICAL DATA VALIDATION REPORT

(Four Pages)

Tetra Tech EM Inc.
DATA VALIDATION REPORT
LEVEL II

Site	Chemical Commodities Inc Site
Laboratory	Columbia Analytical Services (Simi Valley)
Data Reviewer	David Hickey, Tetra Tech EM Inc (Tetra Tech)
Review Date	July 10 2003
Sample Delivery Group (SDG)	P2301170, P2301178, P2301197
Sample Numbers	A 1 to A-15
Matrix / Number of Samples	15 airs

The data were qualified according to the U S Environmental Protection Agency (EPA) Region 7 documents entitled ' Contract Laboratory Program Data Review Functional Guidelines for Evaluating Organic (VOA BNA, Pesticide/PCB) Analytical Data" (2430 3D, November 2000) and Contract Laboratory Program Data Validation Functional Guidelines for Evaluating Inorganic Analytical Data (2430 4C, March 1995) In addition the Tetra Tech document Review of Data Packages from Subcontracted Laboratories' (February 2002) was used along with other criteria specified in the applicable EPA Solid Waste (SW)-846 methods

The review was intended to identify problems and quality control (QC) deficiencies that were readily apparent from the summary data package The following sections discuss any problems or deficiencies that were found, and data qualifications applied because of non compliant QC The data review was limited to the available field and laboratory QC information submitted with the project specific data package

I, David Hickey certify that all data validation criteria outlined in the above referenced documents were assessed and any qualifications made to the data were in accordance with those documents

Certified by David Hickey, Chemist

7/10/03
Date

DATA VALIDATION QUALIFIERS

U	—	The analyte was analyzed for but was not detected above the reported sample quantitation limit
J	—	The analyte was positively identified the associated numerical value is the approximate concentration of the analyte in the sample
R	—	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria The presence or absence of the analyte cannot be verified

DATA ASSESSMENT

Sample delivery groups (SDG) P2301170, P2301178, and P2301197 included fifteen (15) air environmental samples All samples were analyzed by SW 846 methodologies One (1) field blank was associated with each SDG There were no field duplicates trip blanks, rinsate blanks or performance evaluation samples associated with these SDGs

I Holding Time and Chain of Custody (COC) Requirements

All samples were received by the laboratory and processed within established holding times No anomalies were found with the COC with the exception that sample A 10 (SDG P2301178) was not identified on the COC as a field blank

II Sample Preparation

All samples were properly digested and analyzed according to the approved laboratory procedures Sample preparation procedures were documented appropriately No anomalies were found with the sample preparation documentation

III Blanks

Method blanks associated with these SDGs were found to contain acetone and carbon disulfide Field blanks associated with these SDGs were found to contain acetone, carbon disulfide, vinyl acetate, chloroform, and 2 butanone (MEK)

Acetone, carbon disulfide, and 2 butanone (MEK) are common laboratory contaminants therefore, the following sample results were qualified (U) as nondetect because they were less than ten times the amount found in the blanks A-1 to A 4, A 6 to A-9, and A 11 to A 14 for acetone A-1 to A-4, A-6 to A-9 and A-11, A 12, and A-14 for 2 butanone, and A-6 to A 8 A 12 and A-13 for carbon disulfide

The following sample results for vinyl acetate and chloroform were qualified (U) as nondetect because they were less than five times the amount found in the blanks A 3 A-4 and A-11 for vinyl acetate and A 1 and A-2 for chloroform

IV Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

Percent recoveries and relative percent differences (RPDs) for all LCS/LCSD analyses were within established control limits No data were qualified

V Surrogates

All surrogate recoveries were within the established control limits No data were qualified

VI Laboratory Duplicates

There was a laboratory duplicate associated with the analyses for SDG P2301170 Sample A-1Dup was a laboratory duplicate of sample A 1 Relative percent differences (RPDs) between the sample and its laboratory duplicate ranged from 0 0 to 19 2, with a median RPD values of 0 0 and 1 2 Acceptable precision with a laboratory duplicate has not been defined by Region VII EPA for organic analyses however, precision as measured by a duplicate value less than three times the sample value, or vice-versa, has historically been acceptable Using this criteria the precision of all detected analytes was acceptable with no anomalies present between the two samples No data were qualified

VII Comments

There are no additional comments on this SDG

VIII Overall Assessment of Data

Overall data quality is acceptable with qualifications as noted above All data are usable for their intended purposes

ATTACHMENT B

ANALYTICAL DATA PACKAGES

(66 Pages)

Columbia Analytical Services INC
An Employee Owned Company

LABORATORY REPORT

RECEIVED JUL 3 2003

Client	TETRA TECH EM INC	Date of Report	07/02/03
Address	8030 Flint Street	Date Received	06/17/03
	Lenexa, KS 66214	CAS Project No	P2301170
Contact	Ms Angela Suarez	Purchase Order	Verbal

Client Project ID Chemical Commodities Incorporated/69011 /E/ 03 0141 00

Five (5) Stainless Steel Summa Canisters labeled 'A-1 through A-5

The samples were received at the laboratory under chain of custody on June 17 2003 The samples were received intact Please refer to the sample acceptance check form for additional information The results reported herein are applicable only to the condition of the samples at the time that they were received at the laboratory

Volatile Organic Compound Analysis

The samples were analyzed by combined gas chromatography/mass spectrometry (GC/MS) for volatile organic compounds The analyses were performed according to the methodology outlined in EPA Method TO-15 The analyses were performed by gas chromatography/mass spectrometry, utilizing a direct cryogenic trapping technique The analytical system used was comprised of a Hewlett Packard Model 5972 GC/MS/DS interfaced to a Tekmar AutoCan Elite whole air inlet system/cryogenic concentrator A 100% Dimethylpolysiloxane capillary column (RT_x 1 Restek Corporation, Bellefonte, PA) was used to achieve chromatographic separation

Any result below the method reporting limit is considered estimated and may be biased high if the value is below the Summa canister cleaning quality control (QC) requirement of 0 2 ppbv for a given analyte

The results of analyses are given on the attached data sheets All results are intended to be considered in their entirety and Columbia Analytical Services, Inc (CAS) is not responsible for utilization of less than the complete report.

Reviewed and Approved

Michelle H Sakamoto

Michelle Sakamoto
Analytical Chemist
Air Quality Laboratory

Reviewed and Approved

Chris Parnell
GCMS-VOA Team Leader
Air Quality Laboratory

NELAC Accredited
2665 Park Center Drive, Suite D • Simi Valley, California 93065
(805) 526-7161 1-800-695-7222 x13 Fax (805) 526-7270
ACIL Seal of Excellence Laboratory

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client	**Tetra Tech EM Inc**		
Client Sample ID	**A 1**	CAS Project ID	P2301170
Client Project ID	**Chemical Commodities, Incorporated/69011 /E/ 03 0141 00**	CAS Sample ID	P2301170 001

Test Code	EPA TO 15	Date Collected	6/16/03
Instrument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/17/03
Analyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
Sampling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
Test Notes			
Container ID	AC00223		

Pi 1 = 1 1 Pf 1 = 3 5

D F = 1 34

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	**0 80**	1 3	**0 39**	0 65	J
75 01 4	Vinyl Chloride	ND	1 3	ND	0 52	
74 83 9	Bromomethane	ND	1 3	ND	0 35	
75 00 3	Chloroethane	ND	1 3	ND	0 51	
67 64 1	Acetone	**16**	6 7	**6 8**	2 8	U ~~B~~
75 69 4	Trichlorofluoromethane	**1 4**	1 3	**0 25**	0 24	
75 35 4	1 1 Dichloroethene	ND	1 3	ND	0 34	
75 09 2	Methylene chloride	**0 56**	1 3	**0 16**	0 39	J
76 13 1	Trichlorotrifluoroethane	**0 59**	1 3	**0 077**	0 17	J
75 15 0	Carbon Disulfide	**0 50**	1 3	**0 16**	0 43	J
156 60 5	trans 1 2 Dichloroethene	ND	1 3	ND	0 34	
75 34 3	1 1 Dichloroethane	ND	1 3	ND	0 33	
1634 04 4	Methyl tert Butyl Ether	**0 28**	1 3	**0 078**	0 37	J
108 05 4	Vinyl Acetate	**4 9**	1 3	**1 4**	0 38	
78 93 3	2 Butanone (MEK)	**2 1**	1 3	**0 70**	0 45	U
156 59 2	cis 1 2 Dichloroethene	**1 5**	1 3	**0 39**	0 34	
67 66 3	Chloroform	**0 29**	1 3	**0 060**	0 27	U ~~J~~
107 06 2	1 2 Dichloroethane	ND	1 3	ND	0 33	
71 55 6	1 1 1 Trichloroethane	**0 34**	1 3	**0 061**	0 25	J
71 43 2	Benzene	**1 3**	1 3	**0 41**	0 42	J
56 23 5	Carbon Tetrachloride	**3 1**	1 3	**0 50**	0 21	
78 87 5	1 2 Dichloropropane	ND	1 3	ND	0 29	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**

MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

B = Analyte found in method blank

J = The analyte was positively identified below the method reporting limit

the associated numerical value is considered estimated

2

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 1** CAS Project ID P2301170
Client Project ID **Chemical Commodities, Incorporated/69011 /E/ 03 0141 00** CAS Sample ID P2301170 001

Test Code EPA TO 15 Date Collected 6/16/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/17/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/26/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes
Container ID AC00223

Pi 1 = 1 1 Pf 1 = 3 5

D F = 1 34

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 3	ND	0 20	
79 01 6	Trichloroethene	**8 3**	1 3	**1 5**	0 25	
10061 01 5	cis 1 3 Dichloropropene	ND	1 3	ND	0 30	
108 10 1	4 Methyl 2 pentanone	ND	1 3	ND	0 33	
10061 02 6	trans 1,3 Dichloropropene	ND	1 3	ND	0 30	
79 00 5	1 1 2 Trichloroethane	ND	1 3	ND	0 25	
108 88 3	Toluene	**6 4**	1 3	**1 7**	0 36	
591 78 6	2 Hexanone	ND	1 3	ND	0 33	
124 48 1	Dibromochloromethane	ND	1 3	ND	0 16	
106 93 4	1 2 Dibromoethane	ND	1 3	ND	0 17	
127 18 4	Tetrachloroethene	**2 6**	1 3	**0 39**	0 20	
108 90 7	Chlorobenzene	ND	1 3	ND	0 29	
100 41 4	Ethylbenzene	**0 67**	1 3	**0 15**	0 31	J
136777 61 2	*m p* Xylenes	**1 7**	1 3	**0 39**	0 31	
75 25 2	Bromoform	ND	1 3	ND	0 13	
100 42 5	Styrene	ND	1 3	ND	0 31	
95 47 6	o Xylene	**0 66**	1 3	**0 15**	0 31	J
79 34 5	1 1 2 2 Tetrachloroethane	ND	1 3	ND	0 20	
541 73 1	1 3 Dichlorobenzene	ND	1 3	ND	0 22	
106-46 7	1 4 Dichlorobenzene	ND	1 3	ND	0 22	
95 50 1	1 2 Dichlorobenzene	ND	1 3	ND	0 22	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By KMH Date 07/01/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 1** CAS Project ID P2301170
Client Project ID **Chemical Commodities Incorporated/69011 /E/ 03 0141 00** CAS Sample ID P2301170 001DUP

Test Code EPA TO 15 Date Collected 6/16/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/17/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/26/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes
Container ID AC00223

Pi 1 = 1 1 Pf 1 = 3 5

D F = 1 34

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	**0 66**	1 3	**0 32**	0 65	J
75 01 4	Vinyl Chloride	ND	1 3	ND	0 52	
74 83 9	Bromomethane	ND	1 3	ND	0 35	
75 00 3	Chloroethane	ND	1 3	ND	0 51	
67 64 1	Acetone	**16**	6 7	**6 8**	2 8	U ~~B~~
75 69 4	Trichlorofluoromethane	**1 3**	1 3	**0 23**	0 24	J
75 35-4	1 1 Dichloroethene	ND	1 3	ND	0 34	
75 09 2	Methylene chloride	**0 54**	1 3	**0 15**	0 39	J
76 13 1	Trichlorotrifluoroethane	**0 56**	1 3	**0 07**	0 17	J
75 15 0	Carbon Disulfide	**0 47**	1 3	**0 15**	0 43	J
156 60 5	trans 1 2 Dichloroethene	ND	1 3	ND	0 34	
75 34 3	1 1 Dichloroethane	ND	1 3	ND	0 33	
1634 04 4	Methyl tert Butyl Ether	**0 28**	1 3	**0 078**	0 37	J
108 05 4	Vinyl Acetate	**4 7**	1 3	**1.3**	0 38	
78 93 3	2 Butanone (MEK)	**2 5**	1 3	**0 83**	0 45	U
156 59 2	cis 1 2 Dichloroethene	**1 5**	1 3	**0 39**	0 34	
67 66 3	Chloroform	**0 29**	1 3	**0 060**	0 27	U ~~J~~
107 06 2	1 2 Dichloroethane	ND	1 3	ND	0 33	
71 55 6	1 1 1 Trichloroethane	**0 35**	1 3	**0 064**	0 25	J
71 43 2	Benzene	**1 3**	1 3	**0 42**	0 42	
56 23 5	Carbon Tetrachloride	**3 1**	1 3	**0 49**	0 21	
78 87 5	1 2 Dichloropropane	ND	1 3	ND	0 29	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
B = Analyte found in method blank
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 1** CAS Project ID P2301170
Client Project ID **Chemical Commodities, Incorporated/69011 /E/ 03 0141 00** CAS Sample ID P2301170 001DUP

Test Code EPA TO 15 Date Collected 6/16/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/17/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/26/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes
Container ID AC00223

Pi 1 = 1 1 Pf 1 = 3 5

D F = 1 34

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 3	ND	0 20	
79 01 6	Trichloroethene	**8 4**	1 3	**1 6**	0 25	
10061 01 5	cis 1 3 Dichloropropene	ND	1 3	ND	0 30	
108 10 1	4 Methyl 2 pentanone	ND	1 3	ND	0 33	
10061 02 6	trans 1 3 Dichloropropene	ND	1 3	ND	0 30	
79 00 5	1 1 2 Trichloroethane	ND	1 3	ND	0 25	
108 88 3	Toluene	**6 4**	1 3	**1 7**	0 36	
591 78 6	2 Hexanone	ND	1 3	ND	0 33	
124-48 1	Dibromochloromethane	ND	1 3	ND	0 16	
106 93 4	1 2 Dibromoethane	ND	1 3	ND	0 17	
127 18 4	Tetrachloroethene	**2 6**	1 3	**0 39**	0 20	
108 90 7	Chlorobenzene	ND	1 3	ND	0 29	
100 41 4	Ethylbenzene	**0 67**	1 3	**0 15**	0 31	J
136777 61 2	*m p* Xylenes	**1 8**	1 3	**0 41**	0 31	
75 25 2	Bromoform	ND	1 3	ND	0 13	
100 42 5	Styrene	ND	1 3	ND	0 31	
95 47 6	o Xylene	**0 66**	1 3	**0 15**	0 31	J
79 34 5	1 1 2 2 Tetrachloroethane	ND	1 3	ND	0 20	
541 73 1	1 3 Dichlorobenzene	ND	1 3	ND	0 22	
106 46 7	1 4 Dichlorobenzene	ND	1 3	ND	0 22	
95 50 1	1 2 Dichlorobenzene	ND	1 3	ND	0 22	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By KMH Date 07/01/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client	**Tetra Tech EM Inc**		
Client Sample ID	**A 2**	CAS Project ID	P2301170
Client Project ID	**Chemical Commodities, Incorporated/69011 /E/ 03 0141 00**	CAS Sample ID	P2301170 002

Test Code	EPA TO 15	Date Collected	6/16/03
Instrument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/17/03
Analyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
Sampling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
Test Notes			
Container ID	AC00323		

Pi 1 = 4 2 Pf 1 = 3 5

D F = 1 73

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	**0 85**	1 7	**0 41**	0 84	J
75 01 4	Vinyl Chloride	ND	1 7	ND	0 68	
74 83 9	Bromomethane	ND	1 7	ND	0 45	
75 00 3	Chloroethane	ND	1 7	ND	0 66	
67 64 1	Acetone	**11**	8 7	**4 8**	3 6	U ~~B~~
75 69 4	Trichlorofluoromethane	**1 4**	1 7	**0 24**	0 31	J
75 35 4	1 1 Dichloroethene	ND	1 7	ND	0 44	
75 09 2	Methylene chloride	**0 59**	1 7	**0 17**	0 50	J
76 13 1	Trichlorotrifluoroethane	**0 59**	1 7	**0 077**	0 23	J
75 15 0	Carbon Disulfide	**0 36**	1 7	**0 12**	0 56	J
156 60 5	trans 1 2 Dichloroethene	ND	1 7	ND	0 44	
75 34 3	1 1 Dichloroethane	ND	1 7	ND	0 43	
1634 04 4	Methyl tert Butyl Ether	ND	1 7	ND	0 48	
108 05 4	Vinyl Acetate	ND	1 7	ND	0 49	
78 93 3	2 Butanone (MEK)	**1 9**	1 7	**0 65**	0 59	U
156 59 2	cis 1 2 Dichloroethene	**1 2**	1 7	**0 31**	0 44	J
67 66 3	Chloroform	**0 21**	1 7	**0 043**	0 35	U ~~J~~
107 06 2	1 2 Dichloroethane	ND	1 7	ND	0 43	
71 55 6	1 1 1 Trichloroethane	ND	1 7	ND	0 32	
71 43 2	Benzene	**0 95**	1 7	**0 30**	0 54	J
56 23 5	Carbon Tetrachloride	**0 64**	1 7	**0 10**	0 28	J
78 87 5	1 2 Dichloropropane	ND	1 7	ND	0 37	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**

MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

B = Analyte found in method blank

J = The analyte was positively identified below the method reporting limit

the associated numerical value is considered estimated

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A-2** CAS Project ID P2301170
Client Project ID **Chemical Commodities, Incorporated/69011./E/ 03 0141 00** CAS Sample ID P2301170 002

Test Code EPA TO 15 Date Collected 6/16/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/17/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/26/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes
Container ID AC00323

Pi 1 = -4 2 Pf 1 = 3 5

D F = 1 73

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 7	ND	0 26	
79 01 6	Trichloroethene	**4 5**	1 7	**0 85**	0 32	
10061 01 5	cis 1 3 Dichloropropene	ND	1 7	ND	0 38	
108 10 1	4 Methyl 2 pentanone	ND	1 7	ND	0 42	
10061 02 6	trans 1 3 Dichloropropene	ND	1 7	ND	0 38	
79 00 5	1 1 2 Trichloroethane	ND	1 7	ND	0 32	
108 88 3	Toluene	**3 7**	1 7	**0 97**	0 46	
591 78 6	2 Hexanone	ND	1 7	ND	0 42	
124 48 1	Dibromochloromethane	ND	1 7	ND	0 20	
106 93 4	1 2 Dibromoethane	ND	1 7	ND	0 23	
127 18 4	Tetrachloroethene	**1 4**	1 7	**0 21**	0 26	J
108 90 7	Chlorobenzene	ND	1 7	ND	0 38	
100-41 4	Ethylbenzene	**0 50**	1 7	**0 12**	0 40	J
136777 61 2	*m p* Xylenes	**1 2**	1 7	**0 28**	0 40	J
75 25 2	Bromoform	ND	1 7	ND	0 17	
100 42 5	Styrene	ND	1 7	ND	0 41	
95 47 6	o Xylene	**0 50**	1 7	**0 12**	0 40	J
79 34 5	1 1 2 2 Tetrachloroethane	**0 52**	1 7	**0 076**	0 25	J
541 73 1	1 3 Dichlorobenzene	ND	1 7	ND	0 29	
106 46 7	1 4 Dichlorobenzene	ND	1 7	ND	0 29	
95 50 1	1 2 Dichlorobenzene	ND	1 7	ND	0 29	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By KMH Date 07/01/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A-3** CAS Project ID P2301170
Client Project ID **Chemical Commodities Incorporated/69011 /E/ 03 0141 00** CAS Sample ID P2301170 003

Test Code EPA TO 15 Date Collected 6/16/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/17/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/26/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes
Container ID AC00411

Pi 1 = 4 5 Pf 1 = 3 5

D F = 1 78

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	**0 78**	1 8	**0.38**	0 86	**J**
75 01 4	Vinyl Chloride	**2 2**	1 8	**0 87**	0 70	
74 83 9	Bromomethane	ND	1 8	ND	0 46	
75 00 3	Chloroethane	ND	1 8	ND	0 67	
67 64 1	Acetone	**15**	8 9	**6 5**	3 7	U ~~B~~
75 69 4	Trichlorofluoromethane	**1 3**	1 8	**0 23**	0 32	**J**
75 35 4	1 1 Dichloroethene	ND	1 8	ND	0 45	
75 09 2	Methylene chloride	**0 57**	1 8	**0 16**	0 51	**J**
76 13 1	Trichlorotrifluoroethane	**0 64**	1 8	**0 084**	0 23	**J**
75 15 0	Carbon Disulfide	**1 2**	1 8	**0 37**	0 57	**J**
156 60 5	trans 1 2 Dichloroethene	**0 55**	1 8	**0 14**	0 45	**J**
75 34 3	1 1 Dichloroethane	**0 46**	1 8	**0 11**	0 44	**J**
1634 04 4	Methyl tert Butyl Ether	ND	1 8	ND	0 49	
108 05 4	Vinyl Acetate	**3 4**	1 8	**0 98**	0 51	U
78 93 3	2 Butanone (MEK)	**2 6**	1 8	**0 89**	0 60	U
156 59 2	cis 1 2 Dichloroethene	**19**	1 8	**4 8**	0 45	
67 66 3	Chloroform	ND	1 8	ND	0 36	
107 06 2	1 2 Dichloroethane	ND	1 8	ND	0 44	
71 55 6	1 1 1 Trichloroethane	**1 1**	1 8	**0 21**	0 33	**J**
71 43 2	Benzene	**1 8**	1 8	**0 57**	0 56	
56 23 5	Carbon Tetrachloride	**0 55**	1 8	**0 088**	0 28	**J**
78 87 5	1 2 Dichloropropane	ND	1 8	ND	0 39	

ND = Compound was analyzed for, but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
B = Analyte found in method blank
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A-3** CAS Project ID P2301170
Client Project ID **Chemical Commodities, Incorporated/69011 /E/ 03 0141 00** CAS Sample ID P2301170 003

Test Code EPA TO 15 Date Collected 6/16/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/17/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/26/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes
Container ID AC00411

Pi 1 = 4 5 Pf 1 = 3 5

D F = 1 78

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 8	ND	0 27	
79 01 6	Trichloroethene	**11**	1 8	**2 0**	0 33	
10061 01 5	cis 1 3 Dichloropropene	ND	1 8	ND	0 39	
108 10 1	4 Methyl 2 pentanone	ND	1 8	ND	0 43	
10061 02 6	trans 1 3 Dichloropropene	ND	1 8	ND	0 39	
79 00 5	1 1 2 Trichloroethane	ND	1 8	ND	0 33	
108 88 3	Toluene	**6 2**	1 8	**1 6**	0 47	
591 78 6	2 Hexanone	ND	1 8	ND	0 43	
124 48 1	Dibromochloromethane	ND	1 8	ND	0 21	
106 93 4	1 2 Dibromoethane	ND	1 8	ND	0 23	
127 18-4	Tetrachloroethene	**10**	1 8	**1 5**	0 26	
108 90 7	Chlorobenzene	**0 41**	1 8	**0 089**	0 39	J
100-41-4	Ethylbenzene	**0 71**	1 8	**0 16**	0 41	J
136777 61 2	*m p* Xylenes	**1 9**	1 8	**0 43**	0 41	
75 25 2	Bromoform	ND	1 8	ND	0 17	
100 42 5	Styrene	ND	1 8	ND	0 42	
95 47 6	o Xylene	**0 69**	1 8	**0 16**	0 41	J
79 34 5	1 1 2 2 Tetrachloroethane	ND	1 8	ND	0 26	
541 73 1	1 3 Dichlorobenzene	ND	1 8	ND	0 30	
106-46 7	1 4 Dichlorobenzene	**0 28**	1 8	**0 047**	0 30	J
95 50 1	1 2 Dichlorobenzene	**1 8**	1 8	**0 31**	0 30	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By KMH Date 07/01/03

9

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A-4** CAS Project ID P2301170
Client Project ID **Chemical Commodities, Incorporated/69011 /E/ 03 0141 00** CAS Sample ID P2301170 004

Test Code EPA TO 15 Date Collected 6/16/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/17/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/26/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes
Container ID AC00291

Pi 1 = 5 0 Pf 1 = 3 5

D F = 1 88

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	**0 83**	1 9	**0 40**	0 91	**J**
75 01 4	Vinyl Chloride	ND	1 9	ND	0 74	
74 83 9	Bromomethane	ND	1 9	ND	0 48	
75 00 3	Chloroethane	ND	1 9	ND	0 71	
67 64 1	Acetone	**18**	9 4	**7 4**	4 0	U ~~B~~
75 69 4	Trichlorofluoromethane	**1 4**	1 9	**0 24**	0 33	**J**
75 35 4	1 1 Dichloroethene	ND	1 9	ND	0 47	
75 09 2	Methylene chloride	**0 62**	1 9	**0 18**	0 54	**J**
76 13 1	Trichlorotrifluoroethane	**0 56**	1 9	**0 074**	0 25	**J**
75 15 0	Carbon Disulfide	**0 41**	1 9	**0 13**	0 60	**J**
156 60 5	trans 1 2 Dichloroethene	ND	1 9	ND	0 47	
75 34 3	1 1 Dichloroethane	ND	1 9	ND	0 46	
1634 04 4	Methyl tert Butyl Ether	ND	1 9	ND	0 52	
108 05 4	Vinyl Acetate	**3 4**	1 9	**0 96**	0 53	U
78 93 3	2 Butanone (MEK)	**2 7**	1 9	**0 91**	0 64	U
156 59 2	cis 1 2 Dichloroethene	**1 7**	1 9	**0 43**	0 47	**J**
67 66 3	Chloroform	ND	1 9	ND	0 39	
107 06 2	1 2 Dichloroethane	ND	1 9	ND	0 46	
71 55 6	1 1 1 Trichloroethane	ND	1 9	ND	0 34	
71-43 2	Benzene	**1 1**	1 9	**0 34**	0 59	**J**
56 23 5	Carbon Tetrachloride	**0 66**	1 9	**0 10**	0 30	**J**
78 87 5	1 2 Dichloropropane	ND	1 9	ND	0 41	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
B = Analyte found in method blank
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A-4** CAS Project ID P2301170
Client Project ID **Chemical Commodities, Incorporated/69011 /E/ 03 0141 00** CAS Sample ID P2301170 004

Test Code EPA TO 15 Date Collected 6/16/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/17/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/26/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes
Container ID AC00291

Pi 1 = 5 0 Pf 1 = 3 5

D F = 1 88

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 9	ND	0 28	
79 01 6	Trichloroethene	**2 2**	1 9	**0 40**	0 35	
10061 01 5	cis 1 3 Dichloropropene	ND	1 9	ND	0 41	
108 10 1	4 Methyl 2 pentanone	ND	1 9	ND	0 46	
10061 02 6	trans 1 3 Dichloropropene	ND	1 9	ND	0 41	
79 00 5	1 1 2 Trichloroethane	ND	1 9	ND	0 34	
108 88 3	Toluene	**5 9**	1 9	**1 6**	0 50	
591 78 6	2 Hexanone	ND	1 9	ND	0 46	
124 48 1	Dibromochloromethane	ND	1 9	ND	0 22	
106 93-4	1 2 Dibromoethane	ND	1 9	ND	0 24	
127 18 4	Tetrachloroethene	**1 9**	1 9	**0 29**	0 28	
108 90 7	Chlorobenzene	ND	1 9	ND	0 41	
100 41-4	Ethylbenzene	**0 51**	1 9	**0 12**	0 43	J
136777 61 2	*m p* Xylenes	**1.3**	1 9	**0.31**	0 43	J
75 25 2	Bromoform	ND	1 9	ND	0 18	
100-42 5	Styrene	ND	1 9	ND	0 44	
95-47 6	o Xylene	**0 51**	1 9	**0 12**	0 43	J
79 34 5	1 1 2 2 Tetrachloroethane	ND	1 9	ND	0 27	
541 73 1	1 3 Dichlorobenzene	ND	1 9	ND	0 31	
106 46 7	1 4 Dichlorobenzene	ND	1 9	ND	0 31	
95 50 1	1 2 Dichlorobenzene	ND	1 9	ND	0 31	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was postively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By KHH Date 07/01/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client	**Tetra Tech EM Inc**		
Client Sample ID	**A 5**	CAS Project ID	P2301170
Client Project ID	**Chemical Commodities, Incorporated/69011./E/ 03 0141 00**	CAS Sample ID	P2301170 005

Test Code	EPA TO 15	Date Collected	6/16/03
Instrument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/17/03
Analyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
Sampling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
Test Notes			
Container ID	AC00153		

Pi 1 = 14 1 Pf 1 = 3 5

D F = NA

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	ND	1 0	ND	0 48	
75 01 4	Vinyl Chloride	ND	1 0	ND	0 39	
74 83 9	Bromomethane	ND	1 0	ND	0 26	
75 00 3	Chloroethane	ND	1 0	ND	0 38	
67 64 1	Acetone	**2 6**	5 0	**1 1**	2 1	**J B**
75 69 4	Trichlorofluoromethane	ND	1 0	ND	0 18	
75 35 4	1 1 Dichloroethene	ND	1 0	ND	0 25	
75 09 2	Methylene chloride	ND	1 0	ND	0 29	
76 13 1	Trichlorotrifluoroethane	ND	1 0	ND	0 13	
75 15 0	Carbon Disulfide	ND	1 0	ND	0 32	
156 60 5	trans 1 2 Dichloroethene	ND	1 0	ND	0 25	
75 34 3	1 1 Dichloroethane	ND	1 0	ND	0 25	
1634 04-4	Methyl tert Butyl Ether	ND	1 0	ND	0 28	
108 05-4	Vinyl Acetate	**0 73**	1 0	**0 21**	0 28	**J**
78 93 3	2 Butanone (MEK)	**0 43**	1 0	**0 15**	0 34	**J**
156 59 2	cis 1 2 Dichloroethene	ND	1 0	ND	0 25	
67 66 3	Chloroform	**0 27**	1 0	**0 055**	0 20	**J**
107 06 2	1 2 Dichloroethane	ND	1 0	ND	0 25	
71 55 6	1 1 1 Trichloroethane	ND	1 0	ND	0 18	
71 43 2	Benzene	ND	1 0	ND	0 31	
56 23 5	Carbon Tetrachloride	ND	1 0	ND	0 16	
78 87 5	1 2 Dichloropropane	ND	1 0	ND	0 22	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**

MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

B = Analyte found in method blank

J = The analyte was positively identified below the method reporting limit

the associated numerical value is considered estimated

Verified By EMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A-5** CAS Project ID P2301170
Client Project ID **Chemical Commodities, Incorporated/69011 /E/ 03 0141 00** CAS Sample ID P2301170 005

Test Code EPA TO 15 Date Collected 6/16/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/17/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/26/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes
Container ID AC00153

Pi 1 = 14 1 Pf 1 = 3 5

D F = NA

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 0	ND	0 15	
79 01 6	Trichloroethene	ND	1 0	ND	0 19	
10061 01 5	cis 1 3 Dichloropropene	ND	1 0	ND	0 22	
108 10 1	4 Methyl 2 pentanone	ND	1 0	ND	0 24	
10061 02 6	trans 1 3 Dichloropropene	ND	1 0	ND	0 22	
79 00 5	1 1 2 Trichloroethane	ND	1 0	ND	0 18	
108 88 3	Toluene	ND	1 0	ND	0 27	
591 78 6	2 Hexanone	ND	1 0	ND	0 24	
124 48 1	Dibromochloromethane	ND	1 0	ND	0 12	
106 93 4	1 2 Dibromoethane	ND	1 0	ND	0 13	
127 18 4	Tetrachloroethene	ND	1 0	ND	0 15	
108 90 7	Chlorobenzene	ND	1 0	ND	0 22	
100 41 4	Ethylbenzene	ND	1 0	ND	0 23	
136777 61 2	*m p* Xylenes	ND	1 0	ND	0 23	
75 25 2	Bromoform	ND	1 0	ND	0 097	
100 42 5	Styrene	ND	1 0	ND	0 23	
95 47 6	o Xylene	ND	1 0	ND	0 23	
79 34 5	1 1 2 2 Tetrachloroethane	ND	1 0	ND	0 15	
541 73 1	1 3 Dichlorobenzene	ND	1 0	ND	0 17	
106 46 7	1 4 Dichlorobenzene	ND	1 0	ND	0 17	
95 50 1	1 2 Dichlorobenzene	ND	1 0	ND	0 17	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

Verified By KHH Date 07/01/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client	**Tetra Tech EM Inc**		
Client Sample ID	**Method Blank**	CAS Project ID	P2301170
Client Project ID	**Chemical Commodities, Incorporated/69011 /E/ 03 0141 00**	CAS Sample ID	P030626 MB

Test Code	EPA TO 15	Date Collected	NA
Instrument ID	HP5972/Tekmar AUTOCan Elite	Date Received	NA
Analyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
Sampling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
Test Notes			

D F = 1 00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	ND	1 0	ND	0 48	
75 01 4	Vinyl Chloride	ND	1 0	ND	0 39	
74 83 9	Bromomethane	ND	1 0	ND	0 26	
75 00 3	Chloroethane	ND	1 0	ND	0 38	
67 64 1	Acetone	**0 38**	5 0	**0 16**	2 1	**J**
75 69 4	Trichlorofluoromethane	ND	1 0	ND	0 18	
75 35 4	1 1 Dichloroethene	ND	1 0	ND	0 25	
75 09 2	Methylene chloride	ND	1 0	ND	0 29	
76 13 1	Trichlorotrifluoroethane	ND	1 0	ND	0 13	
75 15 0	Carbon Disulfide	ND	1 0	ND	0 32	
156 60 5	trans 1 2 Dichloroethene	ND	1 0	ND	0 25	
75 34 3	1 1 Dichloroethane	ND	1 0	ND	0 25	
1634 04 4	Methyl tert Butyl Ether	ND	1 0	ND	0 28	
108 05 4	Vinyl Acetate	ND	1 0	ND	0 28	
78 93 3	2 Butanone (MEK)	ND	1 0	ND	0 34	
156 59 2	cis 1 2 Dichloroethene	ND	1 0	ND	0 25	
67 66 3	Chloroform	ND	1 0	ND	0 20	
107 06 2	1 2 Dichloroethane	ND	1 0	ND	0 25	
71 55 6	1 1 1 Trichloroethane	ND	1 0	ND	0 18	
71-43 2	Benzene	ND	1 0	ND	0 31	
56 23 5	Carbon Tetrachloride	ND	1 0	ND	0 16	
78 87 5	1 2 Dichloropropane	ND	1 0	ND	0 22	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**

MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

J = The analyte was positively identified below the method reporting limit

the associated numerical value is considered estimated

Verified By KMH Date 07/01/03

14

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Method Blank** CAS Project ID P2301170
Client Project ID **Chemical Commodities, Incorporated/69011./E/ 03 0141 00** CAS Sample ID P030626 MB

Test Code EPA TO 15 Date Collected NA
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received NA
Analyst Michelle Sakamoto Date(s) Analyzed 6/26/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes

D F = 1 00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27-4	Bromodichloromethane	ND	1 0	ND	0 15	
79 01 6	Trichloroethene	ND	1 0	ND	0 19	
10061 01 5	cis 1,3 Dichloropropene	ND	1 0	ND	0 22	
108 10 1	4 Methyl 2 pentanone	ND	1 0	ND	0 24	
10061 02 6	trans 1 3 Dichloropropene	ND	1 0	ND	0 22	
79 00 5	1 1 2 Trichloroethane	ND	1 0	ND	0 18	
108 88 3	Toluene	ND	1 0	ND	0 27	
591 78 6	2 Hexanone	ND	1 0	ND	0 24	
124 48 1	Dibromochloromethane	ND	1 0	ND	0 12	
106 93-4	1 2 Dibromoethane	ND	1 0	ND	0 13	
127 18 4	Tetrachloroethene	ND	1 0	ND	0 15	
108 90 7	Chlorobenzene	ND	1 0	ND	0 22	
100 41-4	Ethylbenzene	ND	1 0	ND	0 23	
136777 61 2	*m p* Xylenes	ND	1 0	ND	0 23	
75 25 2	Bromoform	ND	1 0	ND	0 097	
100 42 5	Styrene	ND	1 0	ND	0 23	
95 47 6	o Xylene	ND	1 0	ND	0 23	
79 34 5	1 1 2 2 Tetrachloroethane	ND	1 0	ND	0 15	
541 73 1	1 3 Dichlorobenzene	ND	1 0	ND	0 17	
106 46 7	1 4 Dichlorobenzene	ND	1 0	ND	0 17	
95 50 1	1 2 Dichlorobenzene	ND	1 0	ND	0 17	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

Verified By KMH Date 07/01/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Project ID **Chemical Commodities Incorporated/69011./E/ 03 0141 00** CAS Project ID P2301170

Surrogate Spike Recovery Results

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister(s)
Test Notes

Date Collected 6/16/03
Date Received 6/17/03
Date Analyzed 6/26/03

Client Sample ID	CAS Sample ID	1,2 Dichloroethane d4		Toluene d8		Bromofluorobenzene		Data Qualifier
		% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	
Method Blank	P030626 MB	**96 8**	70 140	**99 4**	70 140	**106**	70 140	
Lab Control Sample	P030626 LCS	**99 4**	70 140	**95 1**	70 140	**104**	70 140	
Duplicate Lab Control Sample	P030626 DLCS	**101**	70 140	**93 0**	70 140	**101**	70 140	
A 1	P2301170 001	**97 7**	70 140	**99 2**	70 140	**107**	70 140	
A 1	P2301170 001DUP	**95 5**	70 140	**99 4**	70 140	**107**	70 140	
A 2	P2301170 002	**96 2**	70 140	**102**	70 140	**109**	70 140	
A 3	P2301170 003	**95 9**	70 140	**101**	70 140	**109**	70 140	
A 4	P2301170 004	**96 5**	70 140	**101**	70 140	**108**	70 140	
A 5	P2301170 005	**97 2**	70 140	**101**	70 140	**108**	70 140	

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COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Duplicate Lab Control Sample**
Client Project ID **Chemical Commodities, Incorporated/69011 /E/ 03 0141 00**

CAS Project ID P2301170
CAS Sample ID P030626 LCS
P030626 DLCS

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes

Date Collected NA
Date Received NA
Date Analyzed 6/26/03
Volume(s) Analyzed NA

Compound	Spike Amount LCS ng	Spike Amount DLCS ng	Result LCS ng	Result DLCS ng	% Recovery LCS	% Recovery DLCS	CAS Acceptance Limits	Relative Percent Difference	RPD Limit %
Chloromethane	19 4	19 4	16 6	16 3	**85 4**	**84 1**	70 3 122	1 5	25
Vinyl Chloride	26 4	26 4	25 9	22 7	**98 1**	**86 1**	69 8 133	13	25
Bromomethane	38 9	38 9	35 9	31 6	**92 2**	**81 2**	73 2 135	13	25
Chloroethane	28 9	28 9	27 1	23 3	**93 6**	**80 4**	64 4 134	15	25
Acetone	25 0	25 0	24 1	20 7	**96 4**	**82 8**	50 3 131	15	25
Trichlorofluoromethane	48 5	48 5	46 1	42 0	**95 1**	**86 6**	60 8 146	9 4	25
1 1 Dichloroethene	25 0	25 0	29 5	25 3	**118**	**101**	60 2 120	16	25
Methylene chloride	25 0	25 0	26 0	22 4	**104**	**89 5**	64 0 115	15	25
Trichlorotrifluoroethane	30 7	30 7	30 3	29 6	**98 6**	**96 4**	65 5 130	2 3	25
Carbon Disulfide	25 0	25 0	27 3	23 0	**109**	**92 1**	60 2 126	17	25
trans 1 2 Dichloroethene	25 0	25 0	29 4	25 0	**118**	**100**	70 7 129	17	25
1 1 Dichloroethane	25 0	25 0	25 7	21 9	**103**	**87 8**	65 7 120	16	25
Methyl tert Butyl Ether	25 0	25 0	24 8	24 4	**99 4**	**97 8**	59 9 131	1 6	25
Vinyl Acetate	25 0	25 0	23 5	21 2	**94 0**	**84 8**	48 8 150	10	25
2 Butanone (MEK)	25 0	25 0	27 6	24 2	**110**	**96 7**	63 3 131	13	25
cis 1 2 Dichloroethene	25 0	25 0	27 2	23 2	**109**	**93 0**	66 8 123	16	25
Chloroform	25 0	25 0	27 8	23 8	**111**	**95 2**	67 4 129	15	25
1 2 Dichloroethane	25 0	25 0	27 8	24 2	**111**	**96 8**	64 2 132	14	25
1 1 1 Trichloroethane	25 0	25 0	26 9	26 3	**107**	**105**	65 6 125	1 9	25
Benzene	25 0	25 0	24 3	21 2	**97 3**	**85 0**	71 1 120	13	25
Carbon Tetrachloride	25 0	25 0	26 8	25 7	**107**	**103**	60 5 140	3 8	25
1 2 Dichloropropane	25 0	25 0	24 8	22 3	**99 3**	**89 1**	66 2 123	11	25

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client
Client Sample ID
Client Project ID

CAS Project ID P2301170
CAS Sample ID P030626 LCS
P030626 DLCS

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes

Date Collected NA
Date Received NA
Date Analyzed 6/26/03
Volume(s) Analyzed NA

Compound	Spike Amount LCS	Spike Amount DLCS	Result LCS	Result DLCS	% Recovery LCS	% Recovery DLCS	CAS Acceptance Limits	Relative Percent Difference	RPD Limit %
Bromodichloromethane	25 0	25 0	29 3	26 3	**117**	**105**	68 5 131	11	25
Trichloroethene	25 0	25 0	28 3	24 6	**113**	**98 4**	68 3 121	14	25
cis 1 3 Dichloropropene	25 0	25 0	29 1	25 9	**116**	**104**	69 1 128	11	25
4 Methyl 2 Pentanone	25 0	25 0	27 2	23 4	**109**	**93 4**	61 8 130	15	25
trans 1 3 Dichloropropene	25 0	25 0	26 0	23 4	**104**	**93 7**	55 9 118	10	25
1 1 2 Trichloroethane	25 0	25 0	26 8	24 1	**107**	**96 4**	67 8 134	10	25
Toluene	25 0	25 0	25 4	21 2	**102**	**85 0**	59 0 127	18	25
2 Hexanone	25 0	25 0	26 9	23 2	**108**	**92 9**	52 6 132	15	25
Dibromochloromethane	25 0	25 0	26 6	23 8	**106**	**95 2**	65 7 148	11	25
1 2 Dibromoethane	25 0	25 0	27 2	23 9	**109**	**95 6**	50 1 150	13	25
Tetrachloroethene	25 0	25 0	28 7	24 0	**115**	**95 9**	66 0 144	18	25
Chlorobenzene	25 0	25 0	28 3	24 0	**113**	**96 0**	65 7 141	16	25
Ethylbenzene	25 0	25 0	26 9	22 9	**107**	**91 8**	56 4 130	15	25
m,p Xylenes	25 0	25 0	28 9	24 8	**116**	**99 2**	65 6 133	16	25
Bromoform	25 0	25 0	27 8	24 5	**111**	**97 8**	59 7 158	13	25
Styrene	25 0	25 0	27 8	23 8	**111**	**95 2**	46 9 141	15	25
o Xylene	25 0	25 0	27 9	24 0	**112**	**95 8**	57 7 125	16	25
1 1 2 2 Tetrachloroethane	25 0	25 0	26 1	21 9	**104**	**87 6**	63 6 128	17	25
1 3 Dichlorobenzene	25 0	25 0	28 7	24 6	**115**	**98 4**	64 9 146	16	25
1 4 Dichlorobenzene	25 0	25 0	27 8	24 1	**111**	**96 4**	55 5 146	14	25
1 2 Dichlorobenzene	25 0	25 0	29 4	25 3	**118**	**101**	54 8 148	16	25

Verified By RMH Date 07/02/03

Columbia Analytical Services, Inc
Sample Acceptance Check Form

Client Tetra Tech EM Inc Work order P2301170
Project Chemical Commodities, Incorporated/69011 /E/ 03 0141 00
Sample(s) received on 6/17/03 Date opened 6/17/03 by SM

Note This form is used for all samples received by CAS The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity Thermal preservation and pH will only be evaluated either at the request of the client or as required by the method/SOP

		Yes	No	N/A
1	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
2	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Were **chain of-custody** papers used and filled out?	☒	☐	☐
5	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
6	Was **sample volume** received adequate for analysis?	☒	☐	☐
7	Are samples within specified holding times?	☒	☐	☐
8	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
	Cooler Temperature NA °C			
	Blank Temperature NA °C			
9	Is pH (acid) **preservation** necessary, according to method/SOP or Client specified information?	☐	☒	☐
	Is there a client indication that the submitted samples are **pH** (acid) preserved?	☐	☐	☒
	Were **VOA vials** checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
11	**Badges** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Sample Number	Required pH	pH (received, adjusted)	VOA Headspace (Present/Absent)	Receipt Preservation Comments
P2301170 001			NA	
P2301170 002			NA	
P2301170 003			NA	
P2301170 004			NA	
P2301170 005			NA	

Explain any discrepancies (include lab sample ID numbers)

Columbia Analytical Services INC.
An Employee Owned Company

Air Quality Laboratory
2665 Park Center Drive, Suite D
Simi Valley California 93065
Phone (805) 526-7161
Fax (805) 526 7270

Chain of Custody Record
Analytical Service Request

Client/Address: TetraTech EMI / TN & Associates, Inc
8030 Flint Street
Lenexa, Kansas 66214

Project Name: Chemical Commodities, Incorporated

Project Number: 69011/E/03 0141.00

Sampling Location: 320 South Blake Street

PO #/Billing Information:

CAS Project No:

Phone: 913-495-3900 Fax:

Email: godfrey4tna@hotmail.com

Contact: Nicholas Godfrey

Sampler (Signature): Nicholas M Godfrey

Analysis

Cooler / Blank Temp.

Expected Turnaround Time: 24 Hr 48Hr 3Day 4Day 5Day Standard (10 Business Days)

Client Sample ID	Date Collected	Time Collected	Lab Sample No	Type of Sample	Container ID (Serial #)	Flow Controller (Serial #)	Sample Volume (Liters)	Volatile Organic Compounds (VOCs) (Standard list)					Comments (e g preservative or specific instructions)
A-1	6/16/03	0750-1550	AC00223	Air-Summa	AC00223	FC00278		X					
A-2	6/16/03	0750-1550	AC00323	Air Summa	AC00323	FC00235		X					
A-3	6/16/03	0750-1550	AC00411	Air-Summa	AC00411	FC00274		X					
A-4	6/16/03	0750-1550	AC00291	Air-Summa	AC00291	FC00277		X					
A-5	6/16/03	N/A	AC00153	AirSUMMA	AC00153	N/A		X					Field Blank

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Nicholas M Godfrey	6/16/03	1630	Sharon Malone	6/17/03	12 30
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time

Additional Comments

20

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Columbia Analytical Services INC
An Employee Owned Company

RECEIVED
JUL 3 2003

LABORATORY REPORT

Client	TETRA TECH EM INC	Date of Report	07/02/03
Address	8030 Flint Street	Date Received	06/18/03
	Lenexa, KS 66214	CAS Project No	P2301178
Contact	Ms Angela Suarez	Purchase Order	Verbal

Client Project ID Chemical Commodities Incorporated/69011 E 03 0141 00

Five (5) Stainless Steel Summa Canisters labeled "A-6 through 'A-10

The samples were received at the laboratory under chain of custody on June 18, 2003 The samples were received intact Please refer to the sample acceptance check form for additional information The results reported herein are applicable only to the condition of the samples at the time that they were received at the laboratory

Volatile Organic Compound Analysis

The samples were analyzed by combined gas chromatography/mass spectrometry (GC/MS) for volatile organic compounds The analyses were performed according to the methodology outlined in EPA Method TO-15 The analyses were performed by gas chromatography/mass spectrometry utilizing a direct cryogenic trapping technique The analytical system used was comprised of a Hewlett Packard Model 5972 GC/MS/DS interfaced to a Tekmar AutoCan Elite whole air inlet system/cryogenic concentrator A 100% Dimethylpolysiloxane capillary column (RT_x-1, Restek Corporation, Bellefonte, PA) was used to achieve chromatographic separation

Any result below the method reporting limit is considered estimated and may be biased high if the value is below the Summa canister cleaning quality control (QC) requirement of 0 2 ppbv for a given analyte

---

Reviewed and Approved

Michelle H Sakamoto

Michelle Sakamoto
Analytical Chemist
Air Quality Laboratory

Reviewed and Approved

Chris Parnell

Chris Parnell
GCMS-VOA Team Leader
Air Quality Laboratory

NELAC Accredited
2665 Park Center Drive, Suite D • Simi Valley, California 93065
(805) 526-7161 1 800-695-7222 x13 Fax (805) 526-7270
ACIL Seal of Excellence Laboratory

Columbia Analytical Services INC
An Employee Owned Company

CAS Project No P2301178

The results of analyses are given on the attached data sheets All results are intended to be considered in their entirety and Columbia Analytical Services, Inc (CAS) is not responsible for utilization of less than the complete report

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2665 Park Center Drive, Suite D • Simi Valley, California 93065
(805) 526-7161 1-800-695 7222 x13 Fax (805) 526-7270
ACIL Seal of Excellence Laboratory

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 6** CAS Project ID P2301178
Client Project ID **Chemical Commodities Incorporated/69011 E 03 0141 00** CAS Sample ID P2301178 001

Test Code EPA TO 15 Date Collected 6/17/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/18/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/27/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes
Container ID AC00030

Pi 1 = 4 4 Pf 1 = 3 5

D F = 1 77

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	**0 87**	1 8	**0 42**	0 86	J
75 01 4	Vinyl Chloride	**0 21**	1 8	**0 083**	0 69	J
74 83 9	Bromomethane	ND	1 8	ND	0 46	
75 00 3	Chloroethane	ND	1 8	ND	0 67	
67 64 1	Acetone	**18**	8 9	**7 5**	3 7	U ~~B~~
75 69-4	Trichlorofluoromethane	**1 4**	1 8	**0 25**	0 32	J
75 35 4	1 1 Dichloroethene	ND	1 8	ND	0 45	
75 09 2	Methylene chloride	**0 92**	1 8	**0 27**	0 51	J
76 13 1	Trichlorotrifluoroethane	**0 57**	1 8	**0 074**	0 23	J
75 15 0	Carbon Disulfide	**0 35**	1 8	**0 11**	0 57	U ~~J~~
156 60 5	trans 1 2 Dichloroethene	ND	1 8	ND	0 45	
75 34 3	1 1 Dichloroethane	ND	1 8	ND	0 44	
1634 04 4	Methyl tert Butyl Ether	**0 28**	1 8	**0 079**	0 49	J
108 05-4	Vinyl Acetate	**4 2**	1 8	**1 2**	0 50	
78 93 3	2 Butanone (MEK)	**2 5**	1 8	**0 83**	0 60	U
156 59 2	cis 1 2 Dichloroethene	**2 3**	1 8	**0 59**	0 45	
67 66 3	Chloroform	**0 25**	1 8	**0 05**	0 36	J
107 06 2	1 2 Dichloroethane	ND	1 8	ND	0 44	
71 55 6	1 1 1 Trichloroethane	**0 53**	1 8	**0 097**	0 32	J
71 43 2	Benzene	**1 3**	1 8	**0 42**	0 55	J
56 23 5	Carbon Tetrachloride	**2 8**	1 8	**0 44**	0 28	
78 87 5	1 2 Dichloropropane	ND	1 8	ND	0 38	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
B = Analyte found in method blank
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By KHH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 6** CAS Project ID P2301178
Client Project ID **Chemical Commodities Incorporated/69011 E 03 0141 00** CAS Sample ID P2301178 001

Test Code EPA TO 15 Date Collected 6/17/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/18/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/27/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes
Container ID AC00030

Pi 1 = 4 4 Pf 1 = 3 5

D F = 1 77

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 8	ND	0 26	
79 01 6	Trichloroethene	**9 2**	1 8	**1 7**	0 33	
10061 01 5	cis 1 3 Dichloropropene	ND	1 8	ND	0 39	
108 10 1	4 Methyl 2 pentanone	**0 44**	1 8	**0 11**	0 43	J
10061 02 6	trans 1 3 Dichloropropene	ND	1 8	ND	0 39	
79 00 5	1 1 2 Trichloroethane	ND	1 8	ND	0 32	
108 88 3	Toluene	**8 4**	1 8	**2 2**	0 47	
591 78 6	2 Hexanone	ND	1 8	ND	0 43	
124 48 1	Dibromochloromethane	ND	1 8	ND	0 21	
106 93 4	1 2 Dibromoethane	ND	1 8	ND	0 23	
127 18 4	Tetrachloroethene	**3 9**	1 8	**0 57**	0 26	
108 90 7	Chlorobenzene	ND	1 8	ND	0 38	
100 41 4	Ethylbenzene	**0 73**	1 8	**0 17**	0 41	J
136777 61 2	*m p* Xylenes	**2 0**	1 8	**0 45**	0 41	
75 25 2	Bromoform	ND	1 8	ND	0 17	
100 42 5	Styrene	ND	1 8	ND	0 42	
95 47 6	o Xylene	**0 73**	1 8	**0 17**	0 41	J
79 34 5	1 1 2 2 Tetrachloroethane	ND	1 8	ND	0 26	
541 73 1	1 3 Dichlorobenzene	ND	1 8	ND	0 29	
106 46 7	1 4 Dichlorobenzene	ND	1 8	ND	0 29	
95 50 1	1 2 Dichlorobenzene	**0 51**	1 8	**0 085**	0 29	J

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

4

Verified By KHH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 7** CAS Project ID P2301178
Client Project ID **Chemical Commodities Incorporated/69011 E 03 0141 00** CAS Sample ID P2301178 002

Test Code EPA TO 15 Date Collected 6/17/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/18/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/27/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes
Container ID AC00372

Pi 1 = 4 3 Pf 1 = 3 5

D F = 1 75

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	**0 96**	1 8	**0 47**	0 85	J
75 01-4	Vinyl Chloride	ND	1 8	ND	0 68	
74 83 9	Bromomethane	ND	1 8	ND	0 45	
75 00 3	Chloroethane	ND	1 8	ND	0 66	
67 64 1	Acetone	**13**	8 8	**5 7**	3 7	U ~~B~~
75 69 4	Trichlorofluoromethane	**1 3**	1 8	**0 24**	0 31	J
75 35 4	1 1 Dichloroethene	ND	1 8	ND	0 44	
75 09 2	Methylene chloride	**0 72**	1 8	**0 21**	0 50	J
76 13 1	Trichlorotrifluoroethane	**0 63**	1 8	**0 082**	0 23	J
75 15 0	Carbon Disulfide	**0 47**	1 8	**0 15**	0 56	U ~~J~~
156 60 5	trans 1 2 Dichloroethene	ND	1 8	ND	0 44	
75 34 3	1 1 Dichloroethane	ND	1 8	ND	0 43	
1634 04 4	Methyl tert Butyl Ether	ND	1 8	ND	0 49	
108 05 4	Vinyl Acetate	**2 7**	1 8	**0 77**	0 50	
78 93 3	2 Butanone (MEK)	**2 4**	1 8	**0 80**	0 59	U
156 59 2	cis 1 2 Dichloroethene	**1 5**	1 8	**0.38**	0 44	J
67 66 3	Chloroform	ND	1 8	ND	0 36	
107 06 2	1 2 Dichloroethane	ND	1 8	ND	0 43	
71 55 6	1 1 1 Trichloroethane	**0 49**	1 8	**0 090**	0 32	J
71 43 2	Benzene	**1 1**	1 8	**0 33**	0 55	J
56 23 5	Carbon Tetrachloride	**0 58**	1 8	**0 092**	0 28	J
78 87 5	1 2 Dichloropropane	ND	1 8	ND	0 38	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
B = Analyte found in method blank
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 7** CAS Project ID P2301178
Client Project ID **Chemical Commodities Incorporated/69011 E 03 0141 00** CAS Sample ID P2301178 002

Test Code EPA TO 15 Date Collected 6/17/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/18/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/27/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes
Container ID AC00372

Pi 1 = 4 3 Pf 1 = 3 5

D F = 1 75

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 8	ND	0 26	
79 01 6	Trichloroethene	**5 3**	1 8	**0 99**	0 33	
10061 01 5	cis 1 3 Dichloropropene	ND	1 8	ND	0 39	
108 10 1	4 Methyl 2 pentanone	ND	1 8	ND	0 43	
10061 02 6	trans 1 3 Dichloropropene	ND	1 8	ND	0 39	
79 00 5	1 1 2 Trichloroethane	ND	1 8	ND	0 32	
108 88 3	Toluene	**4 7**	1 8	**1 2**	0 46	
591 78 6	2 Hexanone	**0 44**	1 8	**0 11**	0 43	J
124 48 1	Dibromochloromethane	ND	1 8	ND	0 21	
106 93 4	1 2 Dibromoethane	ND	1 8	ND	0 23	
127 18 4	Tetrachloroethene	**3 4**	1 8	**0 51**	0 26	
108 90 7	Chlorobenzene	ND	1 8	ND	0 38	
100 41 4	Ethylbenzene	**0 54**	1 8	**0 12**	0 40	J
136777 61 2	*m p* Xylenes	**1 6**	1 8	**0 36**	0 40	J
75 25 2	Bromoform	ND	1 8	ND	0 17	
100-42 5	Styrene	ND	1 8	ND	0 41	
95 47 6	o Xylene	**0 58**	1 8	**0 13**	0 40	J
79 34 5	1 1 2 2 Tetrachloroethane	**0 46**	1 8	**0 066**	0 26	J
541 73 1	1 3 Dichlorobenzene	ND	1 8	ND	0 29	
106 46 7	1 4 Dichlorobenzene	ND	1 8	ND	0 29	
95 50 1	1 2 Dichlorobenzene	**0 79**	1 8	**0 13**	0 29	J

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
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J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

6

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 8** CAS Project ID P2301178
Client Project ID **Chemical Commodities Incorporated/69011 E 03 0141 00** CAS Sample ID P2301178 003

Test Code EPA TO 15 Date Collected 6/17/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/18/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/27/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes 0 20 Liter(s)
Container ID AC00307

Pi 1 = 1 1 Pf 1 = 3 5

D F = 1 34

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	**0 91**	1 3	**0 44**	0 65	J
75 01-4	Vinyl Chloride	**9 1**	1 3	**3 6**	0 52	
74 83 9	Bromomethane	ND	1 3	ND	0 35	
75 00 3	Chloroethane	ND	1 3	ND	0 51	
67 64 1	Acetone	**12**	6 7	**5 2**	2 8	U ~~B~~
75 69 4	Trichlorofluoromethane	**1 4**	1 3	**0 25**	0 24	
75 35 4	1 1 Dichloroethene	**1 0**	1 3	**0 26**	0 34	J
75 09 2	Methylene chloride	**1 5**	1 3	**0 43**	0 39	
76 13 1	Trichlorotrifluoroethane	**1 1**	1 3	**0 15**	0 17	J
75 15 0	Carbon Disulfide	**2 0**	1 3	**0 65**	0 43	U
156 60 5	trans 1 2 Dichloroethene	**1 7**	1 3	**0 42**	0 34	
75 34 3	1 1 Dichloroethane	**2 3**	1 3	**0 58**	0 33	
1634 04 4	Methyl tert Butyl Ether	ND	1 3	ND	0 37	
108 05 4	Vinyl Acetate	**2 6**	1 3	**0 73**	0 38	
78 93 3	2 Butanone (MEK)	**2 1**	1 3	**0 70**	0 45	U
156 59 2	cis 1 2 Dichloroethene	**79**	1 3	**20**	0 34	
67 66 3	Chloroform	**0 40**	1 3	**0 082**	0 27	J
107 06 2	1 2 Dichloroethane	**4 7**	1 3	**1 2**	0 33	
71 55 6	1 1 1 Trichloroethane	**32**	1 3	**5 8**	0 25	
71 43 2	Benzene	**14**	1 3	**4 3**	0 42	
56 23 5	Carbon Tetrachloride	**0 63**	1 3	**0 10**	0 21	J
78 87 5	1 2 Dichloropropane	**0 50**	1 3	**0 11**	0 29	J

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
B = Analyte found in method blank
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By KLH Date 07/02/03

7

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 8** CAS Project ID P2301178
Client Project ID **Chemical Commodities Incorporated/69011 E 03 0141 00** CAS Sample ID P2301178 003

Test Code EPA TO 15 Date Collected 6/17/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/18/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/27/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes 0 20 Liter(s)
Container ID AC00307

Pi 1 = 1 1 Pf 1 = 3 5

D F = 1 34

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 3	ND	0 20	
79 01 6	Trichloroethene	**160**	1 3	**30**	0 25	
10061 01 5	cis 1 3 Dichloropropene	ND	1 3	ND	0 30	
108 10 1	4 Methyl 2 pentanone	**0 46**	1 3	**0 11**	0 33	J
10061 02 6	trans 1 3 Dichloropropene	ND	1 3	ND	0 30	
79 00 5	1,1 2 Trichloroethane	ND	1 3	ND	0 25	
108 88 3	Toluene	**8 1**	1 3	**2 2**	0 36	
591 78 6	2 Hexanone	ND	1 3	ND	0 33	
124 48 1	Dibromochloromethane	ND	1 3	ND	0 16	
106 93 4	1 2 Dibromoethane	ND	1 3	ND	0 17	
127 18 4	Tetrachloroethene	**90**	1 3	**13**	0 20	
108 90 7	Chlorobenzene	**0 74**	1 3	**0 16**	0 29	J
100 41 4	Ethylbenzene	**1 4**	1 3	**0 33**	0 31	
136777 61 2	*m p* Xylenes	**4 1**	1 3	**0 95**	0 31	
75 25 2	Bromoform	ND	1 3	ND	0 13	
100 42 5	Styrene	ND	1 3	ND	0 31	
95 47 6	o-Xylene	**1 4**	1 3	**0 33**	0 31	
79 34 5	1 1 2 2 Tetrachloroethane	**5 2**	1 3	**0 76**	0 20	
541 73 1	1 3 Dichlorobenzene	**1 7**	1 3	**0 28**	0 22	
106-46 7	1 4 Dichlorobenzene	**6 6**	1 3	**1 1**	0 22	
95 50 1	1 2 Dichlorobenzene	**61**	1 3	**10**	0 22	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

8

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client	**Tetra Tech EM Inc**		
Client Sample ID	**A-9**	CAS Project ID	P2301178
Client Project ID	**Chemical Commodities Incorporated/69011 E 03 0141 00**	CAS Sample ID	P2301178 004

Test Code	EPA TO 15	Date Collected	6/17/03
Instrument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/18/03
Analyst	Michelle Sakamoto	Date(s) Analyzed	6/27/03
Sampling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
Test Notes			
Container ID	AC00298		

Pi 1 = 4 6 Pf 1 = 3 5

D F = 1 80

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	**0 83**	1 8	**0 40**	0 87	J
75 01 4	Vinyl Chloride	**0 56**	1 8	**0 22**	0 70	J
74 83 9	Bromomethane	ND	1 8	ND	0 46	
75 00 3	Chloroethane	ND	1 8	ND	0 68	
67 64 1	Acetone	**14**	9 0	**5 9**	3 8	U ~~B~~
75 69 4	Trichlorofluoromethane	**1 4**	1 8	**0 25**	0 32	J
75 35 4	1 1 Dichloroethene	ND	1 8	ND	0 45	
75 09 2	Methylene chloride	**0 81**	1 8	**0 23**	0 52	J
76 13 1	Trichlorotrifluoroethane	**0 65**	1 8	**0 085**	0 23	J
75 15 0	Carbon Disulfide	ND	1 8	ND	0 58	
156 60 5	trans 1 2 Dichloroethene	ND	1 8	ND	0 45	
75 34 3	1 1 Dichloroethane	ND	1 8	ND	0 44	
1634 04 4	Methyl tert Butyl Ether	ND	1 8	ND	0 50	
108 05 4	Vinyl Acetate	**3 8**	1 8	**1 1**	0 51	
78 93 3	2 Butanone (MEK)	**1 7**	1 8	**0 59**	0 61	U ~~J~~
156 59 2	cis 1 2 Dichloroethene	**5 9**	1 8	**1 5**	0 45	
67 66 3	Chloroform	ND	1 8	ND	0 37	
107 06 2	1 2 Dichloroethane	ND	1 8	ND	0 44	
71 55 6	1 1 1 Trichloroethane	**1 7**	1 8	**0.32**	0 33	J
71 43 2	Benzene	**1 1**	1 8	**0 35**	0 56	J
56 23 5	Carbon Tetrachloride	**0 68**	1 8	**0 11**	0 29	J
78 87 5	1 2 Dichloropropane	ND	1 8	ND	0 39	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**

MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

B = Analyte found in method blank

J = The analyte was positively identified below the method reporting limit

the associated numerical value is considered estimated

Verified By EMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A-9** CAS Project ID P2301178
Client Project ID **Chemical Commodities Incorporated/69011 E 03 0141 00** CAS Sample ID P2301178 004

Test Code EPA TO 15 Date Collected 6/17/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/18/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/27/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes
Container ID AC00298

Pi 1 = 4 6 Pf 1 = 3 5

D F = 1 80

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27-4	Bromodichloromethane	ND	1 8	ND	0 27	
79 01 6	Trichloroethene	**13**	1 8	**2 4**	0 34	
10061 01 5	cis 1 3 Dichloropropene	ND	1 8	ND	0 40	
108 10 1	4 Methyl 2 pentanone	ND	1 8	ND	0 44	
10061 02 6	trans 1 3 Dichloropropene	ND	1 8	ND	0 40	
79 00 5	1 1 2 Trichloroethane	ND	1 8	ND	0 33	
108 88 3	Toluene	**3 9**	1 8	**1 0**	0 48	
591 78 6	2 Hexanone	ND	1 8	ND	0 44	
124 48 1	Dibromochloromethane	ND	1 8	ND	0 21	
106 93 4	1 2 Dibromoethane	ND	1 8	ND	0 23	
127 18 4	Tetrachloroethene	**7 7**	1 8	**1 1**	0 27	
108 90 7	Chlorobenzene	ND	1 8	ND	0 39	
100 41 4	Ethylbenzene	**0 61**	1 8	**0 14**	0 41	J
136777 61 2	*m p* Xylenes	**1 7**	1 8	**0 38**	0 41	J
75 25 2	Bromoform	ND	1 8	ND	0 17	
100 42 5	Styrene	ND	1 8	ND	0 42	
95 47 6	o Xylene	**0 59**	1 8	**0 14**	0 41	J
79 34 5	1 1 2 2 Tetrachloroethane	**0 67**	1 8	**0 097**	0 26	J
541 73 1	1 3 Dichlorobenzene	ND	1 8	ND	0 30	
106 46 7	1 4 Dichlorobenzene	**0 29**	1 8	**0 048**	0 30	J
95 50 1	1 2 Dichlorobenzene	**1 9**	1 8	**0 32**	0 30	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By EMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client	**Tetra Tech EM Inc**		
Client Sample ID	**A 10**	CAS Project ID	P2301178
Client Project ID	**Chemical Commodities Incorporated/69011 E 03 0141 00**	CAS Sample ID	P2301178 005

Test Code	EPA TO 15	Date Collected	6/17/03
Instrument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/18/03
Analyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
Sampling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
Test Notes			
Container ID	AC00043		

Pi 1 = 14 3 Pf 1 = 3 5

D F = NA

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	ND	1 0	ND	0 48	
75 01 4	Vinyl Chloride	ND	1 0	ND	0 39	
74 83 9	Bromomethane	ND	1 0	ND	0 26	
75 00 3	Chloroethane	ND	1 0	ND	0 38	
67 64 1	Acetone	**3 7**	5 0	**1 5**	2 1	**J, B**
75 69 4	Trichlorofluoromethane	ND	1 0	ND	0 18	
75 35 4	1 1 Dichloroethene	ND	1 0	ND	0 25	
75 09 2	Methylene chloride	ND	1 0	ND	0 29	
76 13 1	Trichlorotrifluoroethane	ND	1 0	ND	0 13	
75 15 0	Carbon Disulfide	**0 26**	1 0	**0 084**	0 32	**J**
156 60 5	trans 1 2 Dichloroethene	ND	1 0	ND	0 25	
75 34 3	1 1 Dichloroethane	ND	1 0	ND	0 25	
1634 04 4	Methyl tert Butyl Ether	ND	1 0	ND	0 28	
108 05 4	Vinyl Acetate	**0 43**	1 0	**0 12**	0 28	**J**
78 93 3	2 Butanone (MEK)	**0 90**	1 0	**0 31**	0 34	**J**
156 59 2	cis 1 2 Dichloroethene	ND	1 0	ND	0 25	
67 66 3	Chloroform	ND	1 0	ND	0 20	
107 06 2	1 2 Dichloroethane	ND	1 0	ND	0 25	
71 55 6	1 1 1 Trichloroethane	ND	1 0	ND	0 18	
71 43 2	Benzene	ND	1 0	ND	0 31	
56 23 5	Carbon Tetrachloride	ND	1 0	ND	0 16	
78 87 5	1 2 Dichloropropane	ND	1 0	ND	0 22	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**

MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

B = Analyte found in method blank

J = The analyte was positively identified below the method reporting limit

the associated numerical value is considered estimated

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 10** CAS Project ID P2301178
Client Project ID **Chemical Commodities Incorporated/69011 E 03 0141 00** CAS Sample ID P2301178 005

Test Code EPA TO 15 Date Collected 6/17/03
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received 6/18/03
Analyst Michelle Sakamoto Date(s) Analyzed 6/26/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes
Container ID AC00043

Pi 1 = 14 3 Pf 1 = 3 5

D F = NA

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 0	ND	0 15	
79 01 6	Trichloroethene	ND	1 0	ND	0 19	
10061 01 5	cis 1 3 Dichloropropene	ND	1 0	ND	0 22	
108 10 1	4 Methyl 2 pentanone	ND	1 0	ND	0 24	
10061 02 6	trans 1 3 Dichloropropene	ND	1 0	ND	0 22	
79 00 5	1 1 2 Trichloroethane	ND	1 0	ND	0 18	
108 88 3	Toluene	ND	1 0	ND	0 27	
591 78 6	2 Hexanone	ND	1 0	ND	0 24	
124 48 1	Dibromochloromethane	ND	1 0	ND	0 12	
106 93 4	1 2 Dibromoethane	ND	1 0	ND	0 13	
127 18 4	Tetrachloroethene	ND	1 0	ND	0 15	
108 90 7	Chlorobenzene	ND	1 0	ND	0 22	
100 41 4	Ethylbenzene	ND	1 0	ND	0 23	
136777 61 2	*m p* Xylenes	ND	1 0	ND	0 23	
75 25 2	Bromoform	ND	1 0	ND	0 097	
100 42 5	Styrene	ND	1 0	ND	0 23	
95 47 6	o Xylene	ND	1 0	ND	0 23	
79 34 5	1 1 2 2 Tetrachloroethane	ND	1 0	ND	0 15	
541 73 1	1 3 Dichlorobenzene	ND	1 0	ND	0 17	
106 46 7	1 4 Dichlorobenzene	ND	1 0	ND	0 17	
95 50 1	1 2 Dichlorobenzene	ND	1 0	ND	0 17	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client	**Tetra Tech EM Inc**		
Client Sample ID	**Method Blank**	CAS Project ID	P2301178
Client Project ID	**Chemical Commodities Incorporated/69011 E 03 0141 00**	CAS Sample ID	P030626 MB

Test Code	EPA TO 15	Date Collected	NA
Instrument ID	HP5972/Tekmar AUTOCan Elite	Date Received	NA
Analyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
Sampling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
Test Notes			

D F = 1 00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	ND	1 0	ND	0 48	
75 01 4	Vinyl Chloride	ND	1 0	ND	0 39	
74 83 9	Bromomethane	ND	1 0	ND	0 26	
75 00 3	Chloroethane	ND	1 0	ND	0 38	
67 64 1	Acetone	**0 38**	5 0	**0 16**	2 1	**J**
75 69 4	Trichlorofluoromethane	ND	1 0	ND	0 18	
75 35 4	1 1 Dichloroethene	ND	1 0	ND	0 25	
75 09 2	Methylene chloride	ND	1 0	ND	0 29	
76 13 1	Trichlorotrifluoroethane	ND	1 0	ND	0 13	
75 15 0	Carbon Disulfide	ND	1 0	ND	0 32	
156 60 5	trans 1 2 Dichloroethene	ND	1 0	ND	0 25	
75 34 3	1 1 Dichloroethane	ND	1 0	ND	0 25	
1634 04 4	Methyl tert Butyl Ether	ND	1 0	ND	0 28	
108 05 4	Vinyl Acetate	ND	1 0	ND	0 28	
78 93 3	2 Butanone (MEK)	ND	1 0	ND	0 34	
156 59 2	cis 1 2 Dichloroethene	ND	1 0	ND	0 25	
67 66 3	Chloroform	ND	1 0	ND	0 20	
107 06 2	1 2 Dichloroethane	ND	1 0	ND	0 25	
71 55 6	1 1 1 Trichloroethane	ND	1 0	ND	0 18	
71 43 2	Benzene	ND	1 0	ND	0 31	
56 23 5	Carbon Tetrachloride	ND	1 0	ND	0 16	
78 87 5	1 2 Dichloropropane	ND	1 0	ND	0 22	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**

MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

J = The analyte was positively identified below the method reporting limit

the associated numerical value is considered estimated

13

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Method Blank** CAS Project ID P2301178
Client Project ID **Chemical Commodities Incorporated/69011 E 03 0141 00** CAS Sample ID P030626 MB

Test Code EPA TO 15 Date Collected NA
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received NA
Analyst Michelle Sakamoto Date(s) Analyzed 6/26/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes

D F = 1 00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 0	ND	0 15	
79 01 6	Trichloroethene	ND	1 0	ND	0 19	
10061 01 5	cis 1 3 Dichloropropene	ND	1 0	ND	0 22	
108 10 1	4 Methyl 2 pentanone	ND	1 0	ND	0 24	
10061 02 6	trans 1 3 Dichloropropene	ND	1 0	ND	0 22	
79 00 5	1 1 2 Trichloroethane	ND	1 0	ND	0 18	
108 88 3	Toluene	ND	1 0	ND	0 27	
591 78 6	2 Hexanone	ND	1 0	ND	0 24	
124 48 1	Dibromochloromethane	ND	1 0	ND	0 12	
106 93 4	1 2 Dibromoethane	ND	1 0	ND	0 13	
127 18 4	Tetrachloroethene	ND	1 0	ND	0 15	
108 90 7	Chlorobenzene	ND	1 0	ND	0 22	
100 41 4	Ethylbenzene	ND	1 0	ND	0 23	
136777 61 2	*m p* Xylenes	ND	1 0	ND	0 23	
75 25 2	Bromoform	ND	1 0	ND	0 097	
100 42 5	Styrene	ND	1 0	ND	0 23	
95 47 6	o Xylene	ND	1 0	ND	0 23	
79 34 5	1 1 2 2 Tetrachloroethane	ND	1 0	ND	0 15	
541 73 1	1 3 Dichlorobenzene	ND	1 0	ND	0 17	
106 46 7	1 4 Dichlorobenzene	ND	1 0	ND	0 17	
95 50 1	1 2 Dichlorobenzene	ND	1 0	ND	0 17	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

14

Verified By KLH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client	**Tetra Tech EM Inc**		
Client Sample ID	**Method Blank**	CAS Project ID	P2301178
Client Project ID	**Chemical Commodities Incorporated/69011 E 03 0141 00**	CAS Sample ID	P030627 MB

Test Code	EPA TO 15	Date Collected	NA
Instrument ID	HP5972/Tekmar AUTOCan Elite	Date Received	NA
Analyst	Michelle Sakamoto	Date(s) Analyzed	6/27/03
Sampling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
Test Notes			

D F = 1 00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	ND	1 0	ND	0 48	
75 01 4	Vinyl Chloride	ND	1 0	ND	0 39	
74 83 9	Bromomethane	ND	1 0	ND	0 26	
75 00 3	Chloroethane	ND	1 0	ND	0 38	
67 64 1	Acetone	**0 52**	5 0	**0 22**	2 1	**J**
75 69 4	Trichlorofluoromethane	ND	1 0	ND	0 18	
75 35 4	1 1 Dichloroethene	ND	1 0	ND	0 25	
75 09 2	Methylene chloride	ND	1 0	ND	0 29	
76 13 1	Trichlorotrifluoroethane	ND	1 0	ND	0 13	
75 15 0	Carbon Disulfide	**0 23**	1 0	**0 07**	0 32	**J**
156 60 5	trans 1 2 Dichloroethene	ND	1 0	ND	0 25	
75 34 3	1 1 Dichloroethane	ND	1 0	ND	0 25	
1634 04 4	Methyl tert Butyl Ether	ND	1 0	ND	0 28	
108 05 4	Vinyl Acetate	ND	1 0	ND	0 28	
78 93 3	2 Butanone (MEK)	ND	1 0	ND	0 34	
156 59 2	cis 1 2 Dichloroethene	ND	1 0	ND	0 25	
67 66 3	Chloroform	ND	1 0	ND	0 20	
107 06 2	1 2 Dichloroethane	ND	1 0	ND	0 25	
71 55 6	1 1 1 Trichloroethane	ND	1 0	ND	0 18	
71 43 2	Benzene	ND	1 0	ND	0 31	
56 23 5	Carbon Tetrachloride	ND	1 0	ND	0 16	
78 87 5	1 2 Dichloropropane	ND	1 0	ND	0 22	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**

MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

J = The analyte was positively identified below the method reporting limit

the associated numerical value is considered estimated

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Method Blank** CAS Project ID P2301178
Client Project ID **Chemical Commodities Incorporated/69011 E 03 0141 00** CAS Sample ID P030627 MB

Test Code EPA TO 15 Date Collected NA
Instrument ID HP5972/Tekmar AUTOCan Elite Date Received NA
Analyst Michelle Sakamoto Date(s) Analyzed 6/27/03
Sampling Media Summa Canister Volume(s) Analyzed 1 00 Liter(s)
Test Notes

D F = 1 00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 0	ND	0 15	
79 01 6	Trichloroethene	ND	1 0	ND	0 19	
10061 01 5	cis 1 3 Dichloropropene	ND	1 0	ND	0 22	
108 10 1	4 Methyl 2 pentanone	ND	1 0	ND	0 24	
10061 02 6	trans 1 3 Dichloropropene	ND	1 0	ND	0 22	
79 00 5	1 1 2 Trichloroethane	ND	1 0	ND	0 18	
108 88 3	Toluene	ND	1 0	ND	0 27	
591 78 6	2 Hexanone	ND	1 0	ND	0 24	
124 48 1	Dibromochloromethane	ND	1 0	ND	0 12	
106 93 4	1 2 Dibromoethane	ND	1 0	ND	0 13	
127 18 4	Tetrachloroethene	ND	1 0	ND	0 15	
108 90 7	Chlorobenzene	ND	1 0	ND	0 22	
100-41 4	Ethylbenzene	ND	1 0	ND	0 23	
136777 61 2	*m p* Xylenes	ND	1 0	ND	0 23	
75 25 2	Bromoform	ND	1 0	ND	0 097	
100 42 5	Styrene	ND	1 0	ND	0 23	
95 47 6	o Xylene	ND	1 0	ND	0 23	
79 34 5	1 1 2 2 Tetrachloroethane	ND	1 0	ND	0 15	
541 73 1	1 3 Dichlorobenzene	ND	1 0	ND	0 17	
106 46 7	1 4 Dichlorobenzene	ND	1 0	ND	0 17	
95 50 1	1 2 Dichlorobenzene	ND	1 0	ND	0 17	

ND = Compound was analyzed for but not detected above the **laboratory reporting limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Project ID **Chemical Commodities Incorporated/69011 E 03 0141 00** CAS Project ID P2301178

Surrogate Spike Recovery Results

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister(s)
Test Notes

Date Collected 6/17/03
Date Received 6/18/03
Date Analyzed 6/26 6/27/03

Client Sample ID	CAS Sample ID	1 2-Dichloroethane d4		Toluene-d8		Bromofluorobenzene		Data Qualifier
		% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	
Method Blank	P030626 MB	96 8	70 140	99 4	70 140	106	70 140	
Method Blank	P030627 MB	93 9	70 140	100	70 140	104	70 140	
Lab Control Sample	P030626 LCS	99 4	70 140	95 1	70 140	104	70 140	
Lab Control Sample	P030627 LCS	98 8	70 140	93 9	70 140	102	70 140	
Duplicate Lab Control Sample	P030626 DLCS	101	70 140	93 0	70 140	101	70 140	
Duplicate Lab Control Sample	P030627 DLCS	108	70 140	89 1	70 140	97 9	70 140	
A 6	P2301178 001	96 9	70 140	102	70 140	107	70 140	
A 7	P2301178 002	95 7	70 140	101	70 140	108	70 140	
A 8	P2301178 003	97 4	70 140	102	70 140	107	70 140	
A 9	P2301178 004	96 3	70 140	103	70 140	107	70 140	
A 10	P2301178 005	99 6	70 140	100	70 140	108	70 140	

Verified By EMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Duplicate Lab Control Sample**
Client Project ID **Chemical Commodities Incorporated/69011 E 03 0141 00**

CAS Project ID P2301178
CAS Sample ID P030626 LCS
P030626 DLCS

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes

Date Collected NA
Date Received NA
Date Analyzed 6/26/03
Volume(s) Analyzed NA

Compound	Spike Amount LCS ng	Spike Amount DLCS ng	Result LCS ng	Result DLCS ng	% Recovery LCS	% Recovery DLCS	CAS Acceptance Limits	Relative Percent Difference	RPD Limit %
Chloromethane	19 4	19 4	16 6	16 3	**85 4**	**84 1**	70 3 122	1 5	25
Vinyl Chloride	26 4	26 4	25 9	22 7	**98 1**	**86 1**	69 8 133	13	25
Bromomethane	38 9	38 9	35 9	31 6	**92 2**	**81 2**	73 2 135	13	25
Chloroethane	28 9	28 9	27 1	23 3	**93 6**	**80 4**	64 4 134	15	25
Acetone	25 0	25 0	24 1	20 7	**96 4**	**82 8**	50 3 131	15	25
Trichlorofluoromethane	48 5	48 5	46 1	42 0	**95 1**	**86 6**	60 8 146	9 4	25
1 1 Dichloroethene	25 0	25 0	29 5	25 3	**118**	**101**	60 2 120	16	25
Methylene chloride	25 0	25 0	26 0	22 4	**104**	**89 5**	64 0 115	15	25
Trichlorotrifluoroethane	30 7	30 7	30 3	29 6	**98 6**	**96 4**	65 5 130	2 3	25
Carbon Disulfide	25 0	25 0	27 3	23 0	**109**	**92 1**	60 2 126	17	25
trans 1 2 Dichloroethene	25 0	25 0	29 4	25 0	**118**	**100**	70 7 129	17	25
1 1 Dichloroethane	25 0	25 0	25 7	21 9	**103**	**87 8**	65 7 120	16	25
Methyl tert Butyl Ether	25 0	25 0	24 8	24 4	**99 4**	**97 8**	59 9 131	1 6	25
Vinyl Acetate	25 0	25 0	23 5	21 2	**94 0**	**84 8**	48 8 150	10	25
2 Butanone (MEK)	25 0	25 0	27 6	24 2	**110**	**96 7**	63 3 131	13	25
cis 1 2 Dichloroethene	25 0	25 0	27 2	23 2	**109**	**93 0**	66 8 123	16	25
Chloroform	25 0	25 0	27 8	23 8	**111**	**95 2**	67 4 129	15	25
1 2 Dichloroethane	25 0	25 0	27 8	24 2	**111**	**96 8**	64 2 132	14	25
1 1 1 Trichloroethane	25 0	25 0	26 9	26 3	**107**	**105**	65 6 125	1 9	25
Benzene	25 0	25 0	24 3	21 2	**97 3**	**85 0**	71 1 120	13	25
Carbon Tetrachloride	25 0	25 0	26 8	25 7	**107**	**103**	60 5 140	3 8	25
1 2 Dichloropropane	25 0	25 0	24 8	22 3	**99 3**	**89 1**	66 2 123	11	25

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Duplicate Lab Control Sample**
Client Project ID **Chemical Commodities Incorporated/69011 E 03 0141 00**

CAS Project ID P2301178
CAS Sample ID P030626 LCS
P030626 DLCS

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes

Date Collected NA
Date Received NA
Date Analyzed 6/26/03
Volume(s) Analyzed NA

Compound	Spike Amount LCS	Spike Amount DLCS	Result LCS	Result DLCS	% Recovery LCS	% Recovery DLCS	CAS Acceptance Limits	Relative Percent Difference	RPD Limit %
Bromodichloromethane	25 0	25 0	29 3	26 3	**117**	**105**	68 5 131	11	25
Trichloroethene	25 0	25 0	28 3	24 6	**113**	**98 4**	68 3 121	14	25
cis 1 3 Dichloropropene	25 0	25 0	29 1	25 9	**116**	**104**	69 1 128	11	25
4 Methyl 2 Pentanone	25 0	25 0	27 2	23 4	**109**	**93 4**	61 8 130	15	25
trans 1 3 Dichloropropene	25 0	25 0	26 0	23 4	**104**	**93 7**	55 9 118	10	25
1 1 2 Trichloroethane	25 0	25 0	26 8	24 1	**107**	**96 4**	67 8 134	10	25
Toluene	25 0	25 0	25 4	21 2	**102**	**85 0**	59 0 127	18	25
2 Hexanone	25 0	25 0	26 9	23 2	**108**	**92 9**	52 6 132	15	25
Dibromochloromethane	25 0	25 0	26 6	23 8	**106**	**95 2**	65 7 148	11	25
1 2 Dibromoethane	25 0	25 0	27 2	23 9	**109**	**95 6**	50 1 150	13	25
Tetrachloroethene	25 0	25 0	28 7	24 0	**115**	**95 9**	66 0 144	18	25
Chlorobenzene	25 0	25 0	28 3	24 0	**113**	**96 0**	65 7 141	16	25
Ethylbenzene	25 0	25 0	26 9	22 9	**107**	**91 8**	56 4 130	15	25
m p Xylenes	25 0	25 0	28 9	24 8	**116**	**99 2**	65 6 133	16	25
Bromoform	25 0	25 0	27 8	24 5	**111**	**97 8**	59 7 158	13	25
Styrene	25 0	25 0	27 8	23 8	**111**	**95 2**	46 9 141	15	25
o Xylene	25 0	25 0	27 9	24 0	**112**	**95 8**	57 7 125	16	25
1 1 2 2 Tetrachloroethane	25 0	25 0	26 1	21 9	**104**	**87 6**	63 6 128	17	25
1 3 Dichlorobenzene	25 0	25 0	28 7	24 6	**115**	**98 4**	64 9 146	16	25
1 4 Dichlorobenzene	25 0	25 0	27 8	24 1	**111**	**96 4**	55 5 146	14	25
1 2 Dichlorobenzene	25 0	25 0	29 4	25 3	**118**	**101**	54 8 148	16	25

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Duplicate Lab Control Sample**
Client Project ID **Chemical Commodities Incorporated/69011 E 03 0141 00**

CAS Project ID P2301178
CAS Sample ID P030627 LCS
P030627 DLCS

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes

Date Collected NA
Date Received NA
Date Analyzed 6/27/03
Volume(s) Analyzed NA

Compound	Spike Amount LCS ng	Spike Amount DLCS ng	Result LCS ng	Result DLCS ng	% Recovery LCS	% Recovery DLCS	CAS Acceptance Limits	Relative Percent Difference	RPD Limit %
Chloromethane	19 4	19 4	16 3	16 0	**84 1**	**82 3**	70 3 122	2 2	25
Vinyl Chloride	26 4	26 4	25 9	22 1	**98 0**	**83 8**	69 8 133	16	25
Bromomethane	38 9	38 9	34 7	30 8	**89 2**	**79 1**	73 2 135	12	25
Chloroethane	28 9	28 9	26 8	22 6	**92 8**	**78 3**	64 4 134	17	25
Acetone	25 0	25 0	23 7	20 9	**94 9**	**83 7**	50 3 131	13	25
Trichlorofluoromethane	48 5	48 5	44 1	45 5	**90 9**	**93 9**	60 8 146	3 2	25
1 1 Dichloroethene	25 0	25 0	29 1	25 8	**116**	**103**	60 2 120	12	25
Methylene chloride	25 0	25 0	25 8	21 9	**103**	**87 6**	64 0 115	16	25
Trichlorotrifluoroethane	30 7	30 7	29 4	29 4	**95 9**	**95 7**	65 5 130	0 2	25
Carbon Disulfide	25 0	25 0	27 1	22 6	**108**	**90 4**	60 2 126	18	25
trans 1 2 Dichloroethene	25 0	25 0	28 9	25 2	**115**	**101**	70 7 129	13	25
1 1 Dichloroethane	25 0	25 0	25 0	22 6	**99 8**	**90 5**	65 7 120	9 8	25
Methyl tert Butyl Ether	25 0	25 0	24 1	24 8	**96 3**	**99 2**	59 9 131	3 0	25
Vinyl Acetate	25 0	25 0	21 8	20 3	**87 1**	**81 2**	48 8 150	7 0	25
2 Butanone (MEK)	25 0	25 0	27 1	23 3	**109**	**93 3**	63 3 131	16	25
cis 1 2 Dichloroethene	25 0	25 0	27 2	23 9	**109**	**95 6**	66 8 123	13	25
Chloroform	25 0	25 0	27 1	24 9	**108**	**99 7**	67 4 129	8 0	25
1 2 Dichloroethane	25 0	25 0	26 8	25 6	**107**	**102**	64 2 132	4 8	25
1 1 1 Trichloroethane	25 0	25 0	26 0	29 2	**104**	**117**	65 6 125	12	25
Benzene	25 0	25 0	23 6	21 3	**94 4**	**85 3**	71 1 120	10	25
Carbon Tetrachloride	25 0	25 0	25 6	28 5	**102**	**114**	60 5 140	11	25
1 2 Dichloropropane	25 0	25 0	24 2	22 9	**96 6**	**91 6**	66 2 123	5 3	25

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Duplicate Lab Control Sample**
Client Project ID **Chemical Commodities Incorporated/69011 E 03 0141 00**

CAS Project ID P2301178
CAS Sample ID P030627 LCS
P030627 DLCS

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes

Date Collected NA
Date Received NA
Date Analyzed 6/27/03
Volume(s) Analyzed NA

Compound	Spike Amount LCS	Spike Amount DLCS	Result LCS	Result DLCS	% Recovery LCS	% Recovery DLCS	CAS Acceptance Limits	Relative Percent Difference	RPD Limit %
Bromodichloromethane	25 0	25 0	28 5	28 0	**114**	**112**	68 5 131	1 8	25
Trichloroethene	25 0	25 0	27 7	24 9	**111**	**99 6**	68 3 121	11	25
cis 1 3 Dichloropropene	25 0	25 0	28 6	26 3	**114**	**105**	69 1 128	8 2	25
4 Methyl 2 Pentanone	25 0	25 0	26 6	24 0	**106**	**95 8**	61 8 130	10	25
trans 1 3 Dichloropropene	25 0	25 0	25 1	24 1	**100**	**96 4**	55 9 118	3 7	25
1 1 2 Trichloroethane	25 0	25 0	26 2	24 7	**105**	**98 7**	67 8 134	6 2	25
Toluene	25 0	25 0	24 7	20 4	**98 7**	**81 8**	59 0 127	19	25
2 Hexanone	25 0	25 0	26 0	22 1	**104**	**88 5**	52 6 132	16	25
Dibromochloromethane	25 0	25 0	25 5	23 9	**102**	**95 8**	65 7 148	6 3	25
1 2 Dibromoethane	25 0	25 0	25 9	23 1	**104**	**92 4**	50 1 150	12	25
Tetrachloroethene	25 0	25 0	27 0	23 2	**108**	**92 6**	66 0 144	15	25
Chlorobenzene	25 0	25 0	27 7	22 7	**111**	**90 8**	65 7 141	20	25
Ethylbenzene	25 0	25 0	26 1	22 3	**105**	**89 4**	56 4 130	16	25
m p Xylenes	25 0	25 0	27 9	24 2	**112**	**96 9**	65 6 133	14	25
Bromoform	25 0	25 0	25 5	24 8	**102**	**99 0**	59 7 158	3 0	25
Styrene	25 0	25 0	27 2	22 3	**109**	**89 0**	46 9 141	20	25
o Xylene	25 0	25 0	27 2	24 2	**109**	**96 8**	57 7 125	12	25
1 1 2 2 Tetrachloroethane	25 0	25 0	25 5	21 8	**102**	**87 3**	63 6 128	16	25
1 3 Dichlorobenzene	25 0	25 0	27 7	23 0	**111**	**92 0**	64 9 146	19	25
1 4 Dichlorobenzene	25 0	25 0	26 4	22 0	**106**	**87 8**	55 5 146	19	25
1 2 Dichlorobenzene	25 0	25 0	28 0	23 9	**112**	**95 4**	54 8 148	16	25

Verified By KMH Date 07/02/03

Columbia Analytical Services, Inc
Sample Acceptance Check Form

Client Tetra Tech EM Inc Work order P2301178

Project Chemical Commodities Incorporated/69011 E 03 0141 00

Sample(s) received on 6/18/03 Date opened 6/18/03 by SM

Note. This form is used for all samples received by CAS The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity Thermal preservation and pH will only be evaluated either at the request of the client or as required by the method/SOP

		Yes	No	N/A
1	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
2	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Were **chain of custody** papers used and filled out?	☒	☐	☐
5	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
6	Was **sample volume** received adequate for analysis?	☒	☐	☐
7	Are samples within specified holding times?	☒	☐	☐
8	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
	Cooler Temperature NA °C			
	Blank Temperature NA °C			
9	Is pH (acid) **preservation** necessary according to method/SOP or Client specified information?	☐	☒	☐
	Is there a client indication that the submitted samples are **pH** (acid) preserved?	☐	☐	☒
	Were VOA vials checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
11	**Badges** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	[illegible]	[illegible]	VOA Headspace [illegible]	Receipt Preservation Comments
P2301178 001			NA	
P2301178 002			NA	
P2301178 003			NA	
P2301178 004			NA	
P2301178 005			NA	

Explain any discrepancies (include lab sample ID numbers)

22

Columbia Analytical Services INC.
An Employee Owned Company

Air Quality Laboratory
2665 Park Center Drive Suite D
Simi Valley California 93065
Phone (805) 526-7161
Fax (805) 526 7270

Chain of Custody Record
Analytical Service Request

Client/Address: Tetra Tech EMI / TN & Associates, Inc
8630 Flint Street
Lenexa, Kansas 66214

Project Name: Chemical Commodities Incorporated

Project Number: 69011 E 03 0141 00

CAS Project No: P2301178

Phone: 913 495-3900 Fax:

Sampling Location: 3205 Blake Street

Email: Ngolfrey@thainc.com

PO #/Billing Information:

Contact: Nicholas Golfrey

Sampler (Signature): Nicholas Golfrey

Analysis

Cooler / Blank

Temp_____

Client Sample ID	Date Collected	Time Collected	Lab Sample No	Type of Sample	Container ID (Serial #)	Flow Controller (Serial #)	Sample Volume (Liters)	Volatile Organic Compounds (Standard List) VOCs				Expected Turnaround Time 24 Hr 48Hr 3Day 4Day 5Day (Standard 10 Business Days)	Comments (e g preservative or specific instructions)
A-6	6/17/03	0730-1530		AIR SUMMA	AC00030	FC00281		X				X	
A-7	6/17/03	0730-1530		AIR-SUMMA	AC00372	FC00274		X				X	
A-8	6/17/03	0730-1530		AIR-SUMMA	AC00307	FC00278		X				X	
A-9	6/17/03	0730-1530		AIR SUMMA	AC00298	FC00235		X				X	
A-10	6/17/03	0730-1530		AIR-SUMMA	AC00043	N/A		X				X	

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Nicholas Golfrey	6/17/03	1630	Sharon Malone	6/18/03	1000
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time

Additional Comments

23

White Copy Accompanies Samples

Yellow Copy Retained by Client

Columbia Analytical Services INC
An Employee Owned Company

LABORATORY REPORT

RECEIVED JUL / 2003

Client	TETRA TECH EM INC	Date of Report	07/03/03
Address	8030 Flint Street	Date Received	06/19/03
	Lenexa, KS 66214	CAS Project No	P2301197
Contact	Ms Angela Suarez	Purchase Order	Verbal

Five (5) Stainless Steel Summa Canisters labeled "A-11' through "A 15

The samples were received at the laboratory under chain of custody on June 19 2003 The samples were received intact Please refer to the sample acceptance check form for additional information The results reported herein are applicable only to the condition of the samples at the time that they were received at the laboratory

Volatile Organic Compound Analysis

The samples were analyzed by combined gas chromatography/mass spectrometry (GC/MS) for volatile organic compounds The analyses were performed according to the methodology outlined in EPA Method TO-15 The analyses were performed by gas chromatography/mass spectrometry utilizing a direct cryogenic trapping technique The analytical system used was comprised of a Hewlett Packard Model 5972 GC/MS/DS interfaced to a Tekmar AutoCan Elite whole air inlet system/cryogenic concentrator A 100% Dimethylpolysiloxane capillary column (RT_x-1, Restek Corporation, Bellefonte, PA) was used to achieve chromatographic separation

Any result below the method reporting limit is considered estimated and may be biased high if the value is below the Summa canister cleaning quality control (QC) requirement of 0 2 ppbv for a given analyte

Reviewed and Approved

Michelle H Sakamoto

Michelle Sakamoto
Analytical Chemist
Air Quality Laboratory

Reviewed and Approved

Chris Parnell
GCMS-VOA Team Leader
Air Quality Laboratory

NELAC Accredited
2665 Park Center Drive, Suite D • Simi Valley, California 93065
(805) 526-7161 1-800 695-7222 x13 Fax (805) 526-7270
ACIL Seal of Excellence Laboratory

Columbia Analytical Services INC
An Employee Owned Company

CAS Project No P2301197

The results of analyses are given on the attached data sheets All results are intended to be considered in their entirety, and Columbia Analytical Services Inc (CAS) is not responsible for utilization of less than the complete report

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(805) 526-7161 1-800-695 7222 x13 Fax (805) 526-7270
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COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 11**

CAS Project ID P2301197
CAS Sample ID P2301197 001

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes
Container ID AC00095

Date Collected 6/18/03
Date Received 6/19/03
Date(s) Analyzed 6/27/03
Volume(s) Analyzed 1 00 Liter(s)

Pi 1 = 4 9 Pf 1 = 3 5

D F = 1 86

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	**0 86**	1 9	**0 41**	0 90	J
75 01 4	Vinyl Chloride	ND	1 9	ND	0 73	
74 83 9	Bromomethane	ND	1 9	ND	0 48	
75 00 3	Chloroethane	ND	1 9	ND	0 71	
67 64 1	Acetone	**19**	9 3	**8 1**	3 9	U ~~B~~
75 69 4	Trichlorofluoromethane	**1 3**	1 9	**0 23**	0 33	J
75 35 4	1 1 Dichloroethene	ND	1 9	ND	0 47	
75 09 2	Methylene chloride	**0 65**	1 9	**0 19**	0 54	J
76 13 1	Trichlorotrifluoroethane	**0 61**	1 9	**0 080**	0 24	J
75 15 0	Carbon Disulfide	ND	1 9	ND	0 60	
156 60 5	trans 1 2 Dichloroethene	ND	1 9	ND	0 47	
75 34 3	1 1 Dichloroethane	ND	1 9	ND	0 46	
1634 04 4	Methyl tert Butyl Ether	**0 32**	1 9	**0 088**	0 52	J
108 05 4	Vinyl Acetate	**2 6**	1 9	**0 73**	0 53	U
78 93 3	2 Butanone (MEK)	**3 7**	1 9	**1 2**	0 63	U
156 59 2	cis 1 2 Dichloroethene	**3 1**	1 9	**0 79**	0 47	
67 66 3	Chloroform	**0 24**	1 9	**0 050**	0 38	J
107 06 2	1 2 Dichloroethane	ND	1 9	ND	0 46	
71 55 6	1 1 1 Trichloroethane	**1 8**	1 9	**0.33**	0 34	J
71 43 2	Benzene	**1 2**	1 9	**0 38**	0 58	J
56 23 5	Carbon Tetrachloride	**2 0**	1 9	**0 31**	0 30	
78 87 5	1 2 Dichloropropane	ND	1 9	ND	0 40	

ND = Compound was analyzed for but not detected above the **laboratory detection limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
B = Analyte found in method blank
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By RLS Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 11**

CAS Project ID P2301197
CAS Sample ID P2301197 001

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes
Container ID AC00095

Date Collected 6/18/03
Date Received 6/19/03
Date(s) Analyzed 6/27/03
Volume(s) Analyzed 1 00 Liter(s)

Pi 1 = 4 9 Pf 1 = 3 5

D F = 1 86

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 9	ND	0 28	
79 01 6	Trichloroethene	**10**	1 9	**1 9**	0 35	
10061 01 5	cis 1 3 Dichloropropene	ND	1 9	ND	0 41	
108 10 1	4 Methyl 2 pentanone	ND	1 9	ND	0 45	
10061 02 6	trans 1 3 Dichloropropene	ND	1 9	ND	0 41	
79 00 5	1 1 2 Trichloroethane	ND	1 9	ND	0 34	
108 88 3	Toluene	**6 6**	1 9	**1 7**	0 49	
591 78 6	2 Hexanone	**0 76**	1 9	**0 19**	0 45	J
124 48 1	Dibromochloromethane	ND	1 9	ND	0 22	
106 93 4	1 2 Dibromoethane	ND	1 9	ND	0 24	
127 18 4	Tetrachloroethene	**6 6**	1 9	**0 98**	0 27	
108 90 7	Chlorobenzene	ND	1 9	ND	0 40	
100 41 4	Ethylbenzene	**0 63**	1 9	**0 15**	0 43	J
136777 61 2	*m p* Xylenes	**1 8**	1 9	**0 41**	0 43	J
75 25 2	Bromoform	ND	1 9	ND	0 18	
100 42 5	Styrene	ND	1 9	ND	0 44	
95-47 6	o-Xylene	**0 63**	1 9	**0 15**	0 43	J
79 34 5	1 1 2 2 Tetrachloroethane	ND	1 9	ND	0 27	
541 73 1	1 3 Dichlorobenzene	ND	1 9	ND	0 31	
106 46 7	1 4 Dichlorobenzene	ND	1 9	ND	0 31	
95 50 1	1 2 Dichlorobenzene	**0 41**	1 9	**0 068**	0 31	J

ND = Compound was analyzed for but not detected above the **laboratory detection limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

4

Verified By RG Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A-12**

CAS Project ID P2301197
CAS Sample ID P2301197 002

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes
Container ID AC00149

Date Collected 6/18/03
Date Received 6/19/03
Date(s) Analyzed 6/27/03
Volume(s) Analyzed 1 00 Liter(s)

Pi 1 = 1 0 Pf 1 = 3 5

D F = 1 33

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	0 81	1 3	0 39	0 64	J
75 01 4	Vinyl Chloride	0 43	1 3	0 17	0 52	J
74 83 9	Bromomethane	ND	1 3	ND	0 34	
75 00 3	Chloroethane	ND	1 3	ND	0 50	
67 64 1	Acetone	14	6 7	6 0	2 8	U ~~B~~
75 69 4	Trichlorofluoromethane	1 3	1 3	0 23	0 24	J
75 35-4	1 1 Dichloroethene	0 28	1 3	0 070	0 34	J
75 09 2	Methylene chloride	0 51	1 3	0 15	0 38	J
76 13 1	Trichlorotrifluoroethane	1.3	1 3	0 17	0 17	
75 15 0	Carbon Disulfide	0 35	1 3	0 11	0 43	U ~~J~~
156 60 5	trans 1 2 Dichloroethene	0 36	1 3	0 091	0 34	J
75 34 3	1 1 Dichloroethane	0 85	1 3	0 21	0 33	J
1634 04 4	Methyl tert Butyl Ether	ND	1 3	ND	0 37	
108 05 4	Vinyl Acetate	4 0	1 3	1 1	0 38	
78 93 3	2 Butanone (MEK)	2 1	1 3	0 70	0 45	U
156 59 2	cis 1 2 Dichloroethene	15	1 3	3 7	0 34	
67 66 3	Chloroform	0 44	1 3	0 090	0 27	J
107 06 2	1 2 Dichloroethane	0 47	1 3	0 12	0 33	J
71 55 6	1 1 1 Trichloroethane	14	1 3	2 5	0 24	
71 43 2	Benzene	1 1	1 3	0 35	0 42	J
56 23 5	Carbon Tetrachloride	1 0	1 3	0 16	0 21	J
78 87 5	1 2 Dichloropropane	ND	1 3	ND	0 29	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
B = Analyte found in method blank
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By RG Date 7/3/03

5

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 12**

CAS Project ID P2301197
CAS Sample ID P2301197 002

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes
Container ID AC00149

Date Collected 6/18/03
Date Received 6/19/03
Date(s) Analyzed 6/27/03
Volume(s) Analyzed 1 00 Liter(s)

Pi 1 = 1 0 Pf 1 = 3 5

D F = 1 33

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 3	ND	0 20	
79 01 6	Trichloroethene	**71**	1 3	**13**	0 25	
10061 01 5	cis 1 3 Dichloropropene	ND	1 3	ND	0 29	
108 10 1	4 Methyl 2 pentanone	ND	1 3	ND	0 32	
10061 02 6	trans 1 3 Dichloropropene	ND	1 3	ND	0 29	
79 00 5	1 1 2 Trichloroethane	ND	1 3	ND	0 24	
108 88 3	Toluene	**4 9**	1 3	**1 3**	0 35	
591 78 6	2 Hexanone	ND	1 3	ND	0 32	
124 48 1	Dibromochloromethane	ND	1 3	ND	0 16	
106 93 4	1 2 Dibromoethane	ND	1 3	ND	0 17	
127 18 4	Tetrachloroethene	**54**	1 3	**7 9**	0 20	
108 90 7	Chlorobenzene	**0 89**	1 3	**0 19**	0 29	J
100 41 4	Ethylbenzene	**0 65**	1 3	**0 15**	0 31	J
136777 61 2	*m p* Xylenes	**1 8**	1 3	**0 41**	0 31	
75 25 2	Bromoform	ND	1 3	ND	0 13	
100 42 5	Styrene	ND	1 3	ND	0 31	
95 47 6	o Xylene	**0 68**	1 3	**0 16**	0 31	J
79 34 5	1 1 2 2 Tetrachloroethane	**2 6**	1 3	**0 38**	0 19	
541 73 1	1 3 Dichlorobenzene	ND	1 3	ND	0 22	
106 46 7	1 4 Dichlorobenzene	**0 32**	1 3	**0 05**	0 22	J
95 50 1	1 2 Dichlorobenzene	**2 7**	1 3	**0 44**	0 22	

ND = Compound was analyzed for, but not detected above the **laboratory detection limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By RG Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 13**

CAS Project ID P2301197
CAS Sample ID P2301197 003

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes
Container ID AC00115

Date Collected 6/18/03
Date Received 6/19/03
Date(s) Analyzed 6/27/03
Volume(s) Analyzed 1 00 Liter(s)

Pi 1 = 4 7 Pf 1 = 3 5

D F = 1 82

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	**0 96**	1 8	**0 47**	0 88	J
75 01-4	Vinyl Chloride	ND	1 8	ND	0 71	
74 83 9	Bromomethane	ND	1 8	ND	0 47	
75 00 3	Chloroethane	ND	1 8	ND	0 69	
67 64 1	Acetone	**21**	9 1	**8 7**	3 8	J ~~B~~
75 69 4	Trichlorofluoromethane	**1 4**	1 8	**0 25**	0 32	J
75 35 4	1 1 Dichloroethene	ND	1 8	ND	0 46	
75 09 2	Methylene chloride	**0 96**	1 8	**0 28**	0 52	J
76 13 1	Trichlorotrifluoroethane	**0 71**	1 8	**0 093**	0 24	J
75 15 0	Carbon Disulfide	**1 7**	1 8	**0 54**	0 58	J ~~J, B~~
156 60 5	trans 1 2 Dichloroethene	ND	1 8	ND	0 46	
75 34 3	1 1 Dichloroethane	**0 46**	1 8	**0 11**	0 45	J
1634 04 4	Methyl tert Butyl Ether	ND	1 8	ND	0 51	
108 05 4	Vinyl Acetate	**4 1**	1 8	**1 2**	0 52	
78 93 3	2 Butanone (MEK)	**4 0**	1 8	**1 4**	0 62	
156 59 2	cis 1 2 Dichloroethene	**5 9**	1 8	**1 5**	0 46	
67 66 3	Chloroform	**0 31**	1 8	**0 063**	0 37	J
107 06 2	1 2 Dichloroethane	ND	1 8	ND	0 45	
71 55 6	1 1 1 Trichloroethane	**8 0**	1 8	**1 5**	0 33	
71 43 2	Benzene	**1 9**	1 8	**0 58**	0 57	
56 23 5	Carbon Tetrachloride	**0 55**	1 8	**0 087**	0 29	J
78 87 5	1 2 Dichloropropane	ND	1 8	ND	0 39	

ND = Compound was analyzed for but not detected above the **laboratory detection limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated
B = Analyte found in method blank

Verified By RG Date 7/3/03

01197VOA RD1 Sample (3)

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 13**

CAS Project ID P2301197
CAS Sample ID P2301197 003

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes
Container ID AC00115

Date Collected 6/18/03
Date Received 6/19/03
Date(s) Analyzed 6/27/03
Volume(s) Analyzed 1 00 Liter(s)

Pi 1 = 4 7 Pf 1 = 3 5

D F = 1 82

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 8	ND	0 27	
79 01 6	Trichloroethene	**21**	1 8	**3 8**	0 34	
10061 01 5	cis 1 3 Dichloropropene	ND	1 8	ND	0 40	
108 10 1	4 Methyl 2 pentanone	**0 84**	1 8	**0 20**	0 44	J
10061 02 6	trans 1 3 Dichloropropene	ND	1 8	ND	0 40	
79 00 5	1 1 2 Trichloroethane	ND	1 8	ND	0 33	
108 88 3	Toluene	**6 2**	1 8	**1 6**	0 48	
591 78 6	2 Hexanone	**1 9**	1 8	**0 46**	0 44	
124 48 1	Dibromochloromethane	ND	1 8	ND	0 21	
106 93 4	1 2 Dibromoethane	ND	1 8	ND	0 24	
127 18-4	Tetrachloroethene	**11**	1 8	**1 6**	0 27	
108 90 7	Chlorobenzene	**0 60**	1 8	**0 13**	0 40	J
100 41 4	Ethylbenzene	**1 0**	1 8	**0 23**	0 42	J
136777 61 2	*m p* Xylenes	**3 0**	1 8	**0 68**	0 42	
75 25 2	Bromoform	ND	1 8	ND	0 18	
100 42 5	Styrene	ND	1 8	ND	0 43	
95 47 6	o Xylene	**1 1**	1 8	**0 26**	0 42	J
79 34 5	1 1 2 2 Tetrachloroethane	**0 80**	1 8	**0 12**	0 27	J
541 73 1	1 3 Dichlorobenzene	ND	1 8	ND	0 30	
106 46 7	1 4 Dichlorobenzene	**0 31**	1 8	**0 051**	0 30	J
95 50 1	1 2 Dichlorobenzene	**1 3**	1 8	**0 21**	0 30	J

ND = Compound was analyzed for but not detected above the **laboratory detection limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By RG Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 14**

CAS Project ID P2301197
CAS Sample ID P2301197 004

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes
Container ID AC00122

Date Collected 6/18/03
Date Received 6/19/03
Date(s) Analyzed 6/27/03
Volume(s) Analyzed 1 00 Liter(s)

Pi 1 = 5 8 Pf 1 = 3 5

D F = 2 04

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	**0 80**	2 0	**0.39**	0 99	J
75 01 4	Vinyl Chloride	ND	2 0	ND	0 80	
74 83 9	Bromomethane	ND	2 0	ND	0 53	
75 00 3	Chloroethane	ND	2 0	ND	0 77	
67 64 1	Acetone	**16**	10	**6 6**	4 3	J ~~B~~
75 69 4	Trichlorofluoromethane	**1.3**	2 0	**0 24**	0 36	J
75 35 4	1 1 Dichloroethene	ND	2 0	ND	0 51	
75 09 2	Methylene chloride	**0 57**	2 0	**0 16**	0 59	J
76 13 1	Trichlorotrifluoroethane	**0 78**	2 0	**0 10**	0 27	J
75 15 0	Carbon Disulfide	ND	2 0	ND	0 66	
156 60 5	trans 1 2 Dichloroethene	ND	2 0	ND	0 51	
75 34 3	1,1 Dichloroethane	**0 31**	2 0	**0 076**	0 50	J
1634 04-4	Methyl tert Butyl Ether	ND	2 0	ND	0 57	
108 05 4	Vinyl Acetate	**4 7**	2 0	**1 3**	0 58	
78 93 3	2 Butanone (MEK)	**2 2**	2 0	**0 75**	0 69	U
156 59 2	cis 1 2 Dichloroethene	**4 1**	2 0	**1 0**	0 51	
67 66 3	Chloroform	**0 22**	2 0	**0 046**	0 42	J
107 06 2	1 2 Dichloroethane	ND	2 0	ND	0 50	
71 55 6	1 1 1 Trichloroethane	**5 9**	2 0	**1 1**	0 37	
71 43 2	Benzene	**1 5**	2 0	**0 48**	0 64	J
56 23 5	Carbon Tetrachloride	**0 61**	2 0	**0 097**	0 32	J
78 87 5	1 2 Dichloropropane	ND	2 0	ND	0 44	

ND = Compound was analyzed for but not detected above the **laboratory detection limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated
B = Analyte found in method blank

Verified By RC Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A 14**

CAS Project ID P2301197
CAS Sample ID P2301197 004

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes
Container ID AC00122

Date Collected 6/18/03
Date Received 6/19/03
Date(s) Analyzed 6/27/03
Volume(s) Analyzed 1 00 Liter(s)

Pi 1 = 5 8 Pf 1 = 3 5

D F = 2 04

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27-4	Bromodichloromethane	ND	2 0	ND	0 30	
79 01 6	Trichloroethene	**17**	2 0	**3 2**	0 38	
10061 01 5	cis 1 3 Dichloropropene	ND	2 0	ND	0 45	
108 10 1	4 Methyl 2 pentanone	ND	2 0	ND	0 50	
10061 02 6	trans 1 3 Dichloropropene	ND	2 0	ND	0 45	
79 00 5	1 1 2 Trichloroethane	ND	2 0	ND	0 37	
108 88 3	Toluene	**8 0**	2 0	**2 1**	0 54	
591 78 6	2 Hexanone	ND	2 0	ND	0 50	
124 48 1	Dibromochloromethane	ND	2 0	ND	0 24	
106 93 4	1 2 Dibromoethane	ND	2 0	ND	0 27	
127 18 4	Tetrachloroethene	**9 7**	2 0	**1 4**	0 30	
108 90 7	Chlorobenzene	ND	2 0	ND	0 44	
100 41 4	Ethylbenzene	**0 84**	2 0	**0 19**	0 47	**J**
136777 61 2	*m p* Xylenes	**2 4**	2 0	**0 55**	0 47	
75 25 2	Bromoform	ND	2 0	ND	0 20	
100 42 5	Styrene	ND	2 0	ND	0 48	
95 47 6	o Xylene	**0 88**	2 0	**0 20**	0 47	**J**
79 34 5	1 1 2 2 Tetrachloroethane	**0 67**	2 0	**0 098**	0 30	**J**
541 73 1	1 3 Dichlorobenzene	ND	2 0	ND	0 34	
106 46 7	1 4 Dichlorobenzene	ND	2 0	ND	0 34	
95 50 1	1 2 Dichlorobenzene	**1 0**	2 0	**0 17**	0 34	**J**

ND = Compound was analyzed for but not detected above the **laboratory detection limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By RG Date 7/3/03

10

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A-15**

CAS Project ID P2301197
CAS Sample ID P2301197 005

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes
Container ID AC00406

Date Collected 6/18/03
Date Received 6/19/03
Date(s) Analyzed 6/26/03
Volume(s) Analyzed 1 00 Liter(s)

Pi 1 = 14 3 Pf 1 = 3 5

D F = NA

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	ND	1 0	ND	0 48	
75 01 4	Vinyl Chloride	ND	1 0	ND	0 39	
74 83 9	Bromomethane	ND	1 0	ND	0 26	
75 00 3	Chloroethane	ND	1 0	ND	0 38	
67 64 1	Acetone	**2 7**	5 0	**1 1**	2 1	**J, B**
75 69 4	Trichlorofluoromethane	ND	1 0	ND	0 18	
75 35 4	1 1 Dichloroethene	ND	1 0	ND	0 25	
75 09 2	Methylene chloride	ND	1 0	ND	0 29	
76 13 1	Trichlorotrifluoroethane	ND	1 0	ND	0 13	
75 15 0	Carbon Disulfide	ND	1 0	ND	0 32	
156 60 5	trans 1 2 Dichloroethene	ND	1 0	ND	0 25	
75 34 3	1 1 Dichloroethane	ND	1 0	ND	0 25	
1634 04 4	Methyl tert Butyl Ether	ND	1 0	ND	0 28	
108 05 4	Vinyl Acetate	**0 54**	1 0	**0 15**	0 28	**J**
78 93 3	2 Butanone (MEK)	**0 39**	1 0	**0 13**	0 34	**J**
156 59 2	cis 1 2 Dichloroethene	ND	1 0	ND	0 25	
67 66 3	Chloroform	ND	1 0	ND	0 20	
107 06 2	1 2 Dichloroethane	ND	1 0	ND	0 25	
71 55 6	1 1 1 Trichloroethane	ND	1 0	ND	0 18	
71 43 2	Benzene	ND	1 0	ND	0 31	
56 23 5	Carbon Tetrachloride	ND	1 0	ND	0 16	
78 87 5	1 2 Dichloropropane	ND	1 0	ND	0 22	

ND = Compound was analyzed for but not detected above the **laboratory detection limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
B = Analyte found in method blank
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By RG Date 7/3/03

11

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **A-15**

CAS Project ID P2301197
CAS Sample ID P2301197 005

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes
Container ID AC00406

Date Collected 6/18/03
Date Received 6/19/03
Date(s) Analyzed 6/26/03
Volume(s) Analyzed 1 00 Liter(s)

Pi 1 = 14 3 Pf 1 = 3 5

D F = NA

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 0	ND	0 15	
79 01 6	Trichloroethene	ND	1 0	ND	0 19	
10061 01 5	cis 1 3 Dichloropropene	ND	1 0	ND	0 22	
108 10 1	4 Methyl 2 pentanone	ND	1 0	ND	0 24	
10061 02 6	trans 1 3 Dichloropropene	ND	1 0	ND	0 22	
79 00 5	1 1 2 Trichloroethane	ND	1 0	ND	0 18	
108 88 3	Toluene	ND	1 0	ND	0 27	
591 78 6	2 Hexanone	ND	1 0	ND	0 24	
124-48 1	Dibromochloromethane	ND	1 0	ND	0 12	
106 93 4	1 2 Dibromoethane	ND	1 0	ND	0 13	
127 18 4	Tetrachloroethene	ND	1 0	ND	0 15	
108 90 7	Chlorobenzene	ND	1 0	ND	0 22	
100-41 4	Ethylbenzene	ND	1 0	ND	0 23	
136777 61 2	*m p* Xylenes	ND	1 0	ND	0 23	
75 25 2	Bromoform	ND	1 0	ND	0 097	
100 42 5	Styrene	ND	1 0	ND	0 23	
95 47 6	o Xylene	ND	1 0	ND	0 23	
79 34 5	1 1 2 2 Tetrachloroethane	ND	1 0	ND	0 15	
541 73 1	1 3 Dichlorobenzene	ND	1 0	ND	0 17	
106 46 7	1 4 Dichlorobenzene	ND	1 0	ND	0 17	
95 50 1	1 2 Dichlorobenzene	ND	1 0	ND	0 17	

ND = Compound was analyzed for but not detected above the **laboratory detection limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

Verified By RG Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Method Blank**

CAS Project ID P2301197
CAS Sample ID P030626 MB

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes

Date Collected NA
Date Received NA
Date(s) Analyzed 6/26/03
Volume(s) Analyzed 1 00 Liter(s)

D F = 1 00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	ND	1 0	ND	0 48	
75 01 4	Vinyl Chloride	ND	1 0	ND	0 39	
74 83 9	Bromomethane	ND	1 0	ND	0 26	
75 00 3	Chloroethane	ND	1 0	ND	0 38	
67 64 1	Acetone	**0 38**	5 0	**0 16**	2 1	**J**
75 69 4	Trichlorofluoromethane	ND	1 0	ND	0 18	
75 35 4	1 1 Dichloroethene	ND	1 0	ND	0 25	
75 09 2	Methylene chloride	ND	1 0	ND	0 29	
76 13 1	Trichlorotrifluoroethane	ND	1 0	ND	0 13	
75 15 0	Carbon Disulfide	ND	1 0	ND	0 32	
156 60 5	trans 1 2 Dichloroethene	ND	1 0	ND	0 25	
75 34 3	1 1 Dichloroethane	ND	1 0	ND	0 25	
1634 04 4	Methyl tert Butyl Ether	ND	1 0	ND	0 28	
108 05 4	Vinyl Acetate	ND	1 0	ND	0 28	
78 93 3	2 Butanone (MEK)	ND	1 0	ND	0 34	
156 59 2	cis 1 2 Dichloroethene	ND	1 0	ND	0 25	
67 66 3	Chloroform	ND	1 0	ND	0 20	
107 06 2	1 2 Dichloroethane	ND	1 0	ND	0 25	
71 55 6	1 1 1 Trichloroethane	ND	1 0	ND	0 18	
71 43 2	Benzene	ND	1 0	ND	0 31	
56 23 5	Carbon Tetrachloride	ND	1 0	ND	0 16	
78 87 5	1 2 Dichloropropane	ND	1 0	ND	0 22	

ND = Compound was analyzed for but not detected above the **laboratory detection limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By RG Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Method Blank**

CAS Project ID P2301197
CAS Sample ID P030626 MB

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes

Date Collected NA
Date Received NA
Date(s) Analyzed 6/26/03
Volume(s) Analyzed 1 00 Liter(s)

D F = 1 00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 0	ND	0 15	
79 01 6	Trichloroethene	ND	1 0	ND	0 19	
10061 01 5	cis 1 3 Dichloropropene	ND	1 0	ND	0 22	
108 10 1	4 Methyl 2 pentanone	ND	1 0	ND	0 24	
10061 02 6	trans 1 3 Dichloropropene	ND	1 0	ND	0 22	
79 00 5	1 1 2 Trichloroethane	ND	1 0	ND	0 18	
108 88 3	Toluene	ND	1 0	ND	0 27	
591 78 6	2 Hexanone	ND	1 0	ND	0 24	
124 48 1	Dibromochloromethane	ND	1 0	ND	0 12	
106 93 4	1 2 Dibromoethane	ND	1 0	ND	0 13	
127 18 4	Tetrachloroethene	ND	1 0	ND	0 15	
108 90 7	Chlorobenzene	ND	1 0	ND	0 22	
100 41-4	Ethylbenzene	ND	1 0	ND	0 23	
136777 61 2	*m p* Xylenes	ND	1 0	ND	0 23	
75 25 2	Bromoform	ND	1 0	ND	0 097	
100 42 5	Styrene	ND	1 0	ND	0 23	
95 47 6	o Xylene	ND	1 0	ND	0 23	
79 34 5	1 1 2 2 Tetrachloroethane	ND	1 0	ND	0 15	
541 73 1	1 3 Dichlorobenzene	ND	1 0	ND	0 17	
106 46 7	1 4 Dichlorobenzene	ND	1 0	ND	0 17	
95 50 1	1 2 Dichlorobenzene	ND	1 0	ND	0 17	

ND = Compound was analyzed for but not detected above the **laboratory detection limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

Verified By RG Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Method Blank**

CAS Project ID P2301197
CAS Sample ID P030627 MB

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes

Date Collected NA
Date Received NA
Date(s) Analyzed 6/27/03
Volume(s) Analyzed 1 00 Liter(s)

D F = 1 00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
74 87 3	Chloromethane	ND	1 0	ND	0 48	
75 01-4	Vinyl Chloride	ND	1 0	ND	0 39	
74 83 9	Bromomethane	ND	1 0	ND	0 26	
75 00 3	Chloroethane	ND	1 0	ND	0 38	
67 64 1	Acetone	**0 52**	5 0	**0 22**	2 1	**J**
75 69-4	Trichlorofluoromethane	ND	1 0	ND	0 18	
75 35 4	1 1 Dichloroethene	ND	1 0	ND	0 25	
75 09 2	Methylene chloride	ND	1 0	ND	0 29	
76 13 1	Trichlorotrifluoroethane	ND	1 0	ND	0 13	
75 15 0	Carbon Disulfide	**0 23**	1 0	**0 074**	0 32	**J**
156 60 5	trans 1 2 Dichloroethene	ND	1 0	ND	0 25	
75 34 3	1 1 Dichloroethane	ND	1 0	ND	0 25	
1634 04 4	Methyl tert Butyl Ether	ND	1 0	ND	0 28	
108 05 4	Vinyl Acetate	ND	1 0	ND	0 28	
78 93 3	2 Butanone (MEK)	ND	1 0	ND	0 34	
156 59 2	cis 1 2 Dichloroethene	ND	1 0	ND	0 25	
67 66 3	Chloroform	ND	1 0	ND	0 20	
107 06 2	1 2 Dichloroethane	ND	1 0	ND	0 25	
71 55 6	1 1 1 Trichloroethane	ND	1 0	ND	0 18	
71 43 2	Benzene	ND	1 0	ND	0 31	
56 23 5	Carbon Tetrachloride	ND	1 0	ND	0 16	
78 87 5	1 2 Dichloropropane	ND	1 0	ND	0 22	

ND = Compound was analyzed for but not detected above the **laboratory detection limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method
J = The analyte was positively identified below the method reporting limit
the associated numerical value is considered estimated

Verified By RC Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Method Blank**

CAS Project ID P2301197
CAS Sample ID P030627 MB

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes

Date Collected NA
Date Received NA
Date(s) Analyzed 6/27/03
Volume(s) Analyzed 1 00 Liter(s)

D F = 1 00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
75 27 4	Bromodichloromethane	ND	1 0	ND	0 15	
79 01 6	Trichloroethene	ND	1 0	ND	0 19	
10061 01 5	cis 1 3 Dichloropropene	ND	1 0	ND	0 22	
108 10 1	4 Methyl 2 pentanone	ND	1 0	ND	0 24	
10061 02 6	trans 1 3 Dichloropropene	ND	1 0	ND	0 22	
79 00 5	1 1 2 Trichloroethane	ND	1 0	ND	0 18	
108 88 3	Toluene	ND	1 0	ND	0 27	
591 78 6	2 Hexanone	ND	1 0	ND	0 24	
124-48 1	Dibromochloromethane	ND	1 0	ND	0 12	
106 93 4	1 2 Dibromoethane	ND	1 0	ND	0 13	
127 18 4	Tetrachloroethene	ND	1 0	ND	0 15	
108 90 7	Chlorobenzene	ND	1 0	ND	0 22	
100 41 4	Ethylbenzene	ND	1 0	ND	0 23	
136777 61 2	*m p* Xylenes	ND	1 0	ND	0 23	
75 25 2	Bromoform	ND	1 0	ND	0 097	
100 42 5	Styrene	ND	1 0	ND	0 23	
95 47 6	o Xylene	ND	1 0	ND	0 23	
79 34 5	1 1 2 2 Tetrachloroethane	ND	1 0	ND	0 15	
541 73 1	1 3 Dichlorobenzene	ND	1 0	ND	0 17	
106 46 7	1 4 Dichlorobenzene	ND	1 0	ND	0 17	
95 50 1	1 2 Dichlorobenzene	ND	1 0	ND	0 17	

ND = Compound was analyzed for but not detected above the **laboratory detection limit**
MRL = Method Reporting Limit The minimum quantity of a target analyte that can be confidently determined by the referenced method

Verified By RC Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**

CAS Project ID P2301197

Surrogate Spike Recovery Results

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister(s)
Test Notes

Date Collected 6/18/03
Date Received 6/19/03
Date Analyzed 6/26 6/27/03

Client Sample ID	CAS Sample ID	1,2 Dichloroethane d4		Toluene-d8		Bromofluorobenzene		Data Qualifier
		% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	
Method Blank	P030626 MB	**96 8**	70 140	**99 4**	70 140	**106**	70 140	
Method Blank	P030627 MB	**93 9**	70 140	**100**	70 140	**104**	70 140	
Lab Control Sample	P030626 LCS	**99 4**	70 140	**95 1**	70 140	**104**	70 140	
Lab Control Sample	P030627 LCS	**98 8**	70 140	**93 9**	70 140	**102**	70 140	
Duplicate Lab Control Sample	P030626 DLCS	**101**	70 140	**93 0**	70 140	**101**	70 140	
Duplicate Lab Control Sample	P030627 DLCS	**108**	70 140	**89 1**	70 140	**97 9**	70 140	
A 11	P2301197 001	**96 2**	70 140	**101**	70 140	**105**	70 140	
A 12	P2301197 002	**96 2**	70 140	**103**	70 140	**105**	70 140	
A 13	P2301197 003	**103**	70 140	**96 9**	70 140	**102**	70 140	
A 14	P2301197 004	**97 6**	70 140	**101**	70 140	**106**	70 140	
A 15	P2301197 005	**97 4**	70 140	**102**	70 140	**109**	70 140	

Verified By RG Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Duplicate Lab Control Sample**

CAS Project ID P2301197
CAS Sample ID P030626 LCS
P030626 DLCS

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes

Date Collected NA
Date Received NA
Date Analyzed 6/26/03
Volume(s) Analyzed NA

Compound	Spike Amount LCS ng	Spike Amount DLCS ng	Result LCS ng	Result DLCS ng	% Recovery LCS	% Recovery DLCS	CAS Acceptance Limits	Relative Percent Difference	RPD Limit %
Chloromethane	19 4	19 4	16 6	16 3	**85 6**	**84 0**	70 3 122	1 9	25
Vinyl Chloride	26 4	26 4	25 9	22 7	**98 1**	**86 0**	69 8 133	13	25
Bromomethane	38 9	38 9	35 9	31 6	**92 3**	**81 2**	73 2 135	13	25
Chloroethane	28 9	28 9	27 1	23 3	**93 8**	**80 6**	64 4 134	15	25
Acetone	25 0	25 0	24 1	20 7	**96 4**	**82 8**	50 3 131	15	25
Trichlorofluoromethane	48 5	48 5	46 1	42 0	**95 1**	**86 6**	60 8 146	9 4	25
1 1 Dichloroethene	25 0	25 0	29 5	25 3	**118**	**101**	60 2 120	16	25
Methylene chloride	25 0	25 0	26 0	22 4	**104**	**89 6**	64 0 115	15	25
Trichlorotrifluoroethane	30 7	30 7	30 3	29 6	**98 7**	**96 4**	65 5 130	2 4	25
Carbon Disulfide	25 0	25 0	27 3	23 0	**109**	**92 0**	60 2 126	17	25
trans 1 2 Dichloroethene	25 0	25 0	29 4	25 0	**118**	**100**	70 7 129	17	25
1 1 Dichloroethane	25 0	25 0	25 7	21 9	**103**	**87 6**	65 7 120	16	25
Methyl tert Butyl Ether	25 0	25 0	24 8	24 4	**99 2**	**97 6**	59 9 131	1 6	25
Vinyl Acetate	25 0	25 0	23 5	21 2	**94 0**	**84 8**	48 8 150	10	25
2 Butanone (MEK)	25 0	25 0	27 6	24 2	**110**	**96 8**	63 3 131	13	25
cis 1 2 Dichloroethene	25 0	25 0	27 2	23 2	**109**	**92 8**	66 8 123	16	25
Chloroform	25 0	25 0	27 8	23 8	**111**	**95 2**	67 4 129	15	25
1 2 Dichloroethane	25 0	25 0	27 8	24 2	**111**	**96 8**	64 2 132	14	25
1 1 1 Trichloroethane	25 0	25 0	26 9	26 3	**108**	**105**	65 6 125	2 8	25
Benzene	25 0	25 0	24 3	21 2	**97 2**	**84 8**	71 1 120	14	25
Carbon Tetrachloride	25 0	25 0	26 8	25 7	**107**	**103**	60 5 140	3 8	25
1 2 Dichloropropane	25 0	25 0	24 8	22 3	**99 2**	**89 2**	66 2 123	11	25

Verified By RG Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Duplicate Lab Control Sample**

CAS Project ID P2301197
CAS Sample ID P030626 LCS
P030626 DLCS

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes

Date Collected NA
Date Received NA
Date Analyzed 6/26/03
Volume(s) Analyzed NA

Compound	Spike Amount LCS	Spike Amount DLCS	Result LCS	Result DLCS	% Recovery LCS	% Recovery DLCS	CAS Acceptance Limits	Relative Percent Difference	RPD Limit %
Bromodichloromethane	25 0	25 0	29 3	26 3	**117**	**105**	68 5 131	11	25
Trichloroethene	25 0	25 0	28 3	24 6	**113**	**98 4**	68 3 121	14	25
cis 1 3 Dichloropropene	25 0	25 0	29 1	25 9	**116**	**104**	69 1 128	11	25
4 Methyl 2 Pentanone	25 0	25 0	27 2	23 4	**109**	**93 6**	61 8 130	15	25
trans 1 3 Dichloropropene	25 0	25 0	26 0	23 4	**104**	**93 6**	55 9 118	11	25
1 1 2 Trichloroethane	25 0	25 0	26 8	24 1	**107**	**96 4**	67 8 134	10	25
Toluene	25 0	25 0	25 4	21 2	**102**	**84 8**	59 0 127	18	25
2 Hexanone	25 0	25 0	26 9	23 2	**108**	**92 8**	52 6 132	15	25
Dibromochloromethane	25 0	25 0	26 6	23 8	**106**	**95 2**	65 7 148	11	25
1 2 Dibromoethane	25 0	25 0	27 2	23 9	**109**	**95 6**	50 1 150	13	25
Tetrachloroethene	25 0	25 0	28 7	24 0	**115**	**96 0**	66 0 144	18	25
Chlorobenzene	25 0	25 0	28 3	24 0	**113**	**96 0**	65 7 141	16	25
Ethylbenzene	25 0	25 0	26 9	22 9	**108**	**91 6**	56 4 130	16	25
m p Xylenes	25 0	25 0	28 9	24 8	**116**	**99 2**	65 6 133	16	25
Bromoform	25 0	25 0	27 8	24 5	**111**	**98 0**	59 7 158	12	25
Styrene	25 0	25 0	27 8	23 8	**111**	**95 2**	46 9 141	15	25
o Xylene	25 0	25 0	27 9	24 0	**112**	**96 0**	57 7 125	15	25
1 1 2 2 Tetrachloroethane	25 0	25 0	26 1	21 9	**104**	**87 6**	63 6 128	17	25
1 3 Dichlorobenzene	25 0	25 0	28 7	24 6	**115**	**98 4**	64 9 146	16	25
1 4 Dichlorobenzene	25 0	25 0	27 8	24 1	**111**	**96 4**	55 5 146	14	25
1 2 Dichlorobenzene	25 0	25 0	29 4	25 3	**118**	**101**	54 8 148	16	25

Verified By RG Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Duplicate Lab Control Sample**

CAS Project ID P2301197
CAS Sample ID P030627 LCS
P030627 DLCS

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes

Date Collected NA
Date Received NA
Date Analyzed 6/27/03
Volume(s) Analyzed NA

Compound	Spike Amount LCS ng	Spike Amount DLCS ng	Result LCS ng	Result DLCS ng	% Recovery LCS	% Recovery DLCS	CAS Acceptance Limits	Relative Percent Difference	RPD Limit %
Chloromethane	19 4	19 4	16 3	16 0	**84 0**	**82 5**	70 3 122	1 8	25
Vinyl Chloride	26 4	26 4	25 9	22 1	**98 1**	**83 7**	69 8 133	16	25
Bromomethane	38 9	38 9	34 7	30 8	**89 2**	**79 2**	73 2 135	12	25
Chloroethane	28 9	28 9	26 8	22 6	**92 7**	**78 2**	64 4 134	17	25
Acetone	25 0	25 0	23 7	20 9	**94 8**	**83 6**	50 3 131	13	25
Trichlorofluoromethane	48 5	48 5	44 1	45 5	**90 9**	**93 8**	60 8 146	3 1	25
1 1 Dichloroethene	25 0	25 0	29 1	25 8	**116**	**103**	60 2 120	12	25
Methylene chloride	25 0	25 0	25 8	21 9	**103**	**87 6**	64 0 115	16	25
Trichlorotrifluoroethane	30 7	30 7	29 4	29 4	**95 8**	**95 8**	65 5 130	0 0	25
Carbon Disulfide	25 0	25 0	27 1	22 6	**108**	**90 4**	60 2 126	18	25
trans 1 2 Dichloroethene	25 0	25 0	28 9	25 2	**116**	**101**	70 7 129	14	25
1 1 Dichloroethane	25 0	25 0	25 0	22 6	**100**	**90 4**	65 7 120	10	25
Methyl tert Butyl Ether	25 0	25 0	24 1	24 8	**96 4**	**99 2**	59 9 131	2 9	25
Vinyl Acetate	25 0	25 0	21 8	20 3	**87 2**	**81 2**	48 8 150	7 1	25
2 Butanone (MEK)	25 0	25 0	27 1	23 3	**108**	**93 2**	63 3 131	15	25
cis 1 2 Dichloroethene	25 0	25 0	27 2	23 9	**109**	**95 6**	66 8 123	13	25
Chloroform	25 0	25 0	27 1	24 9	**108**	**99 6**	67 4 129	8 1	25
1 2 Dichloroethane	25 0	25 0	26 8	25 6	**107**	**102**	64 2 132	4 8	25
1 1 1 Trichloroethane	25 0	25 0	26 0	29 2	**104**	**117**	65 6 125	12	25
Benzene	25 0	25 0	23 6	21 3	**94 4**	**85 2**	71 1 120	10	25
Carbon Tetrachloride	25 0	25 0	25 6	28 5	**102**	**114**	60 5 140	11	25
1 2 Dichloropropane	25 0	25 0	24 2	22 9	**96 8**	**91 6**	66 2 123	5 5	25

Verified By RG Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

Client **Tetra Tech EM Inc**
Client Sample ID **Duplicate Lab Control Sample**

CAS Project ID P2301197
CAS Sample ID P030627 LCS
P030627 DLCS

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary

Test Code EPA TO 15
Instrument ID HP5972/Tekmar AUTOCan Elite
Analyst Michelle Sakamoto
Sampling Media Summa Canister
Test Notes

Date Collected NA
Date Received NA
Date Analyzed 6/27/03
Volume(s) Analyzed NA

Compound	Spike Amount LCS	Spike Amount DLCS	Result LCS	Result DLCS	% Recovery LCS	% Recovery DLCS	CAS Acceptance Limits	Relative Percent Difference	RPD Limit %
Bromodichloromethane	25 0	25 0	28 5	28 0	**114**	**112**	68 5 131	1 8	25
Trichloroethene	25 0	25 0	27 7	24 9	**111**	**99 6**	68 3 121	11	25
cis 1 3 Dichloropropene	25 0	25 0	28 6	26 3	**114**	**105**	69 1 128	8 2	25
4 Methyl 2 Pentanone	25 0	25 0	26 6	24 0	**106**	**96 0**	61 8 130	9 9	25
trans 1 3 Dichloropropene	25 0	25 0	25 1	24 1	**100**	**96 4**	55 9 118	3 7	25
1 1 2 Trichloroethane	25 0	25 0	26 2	24 7	**105**	**98 8**	67 8 134	6 1	25
Toluene	25 0	25 0	24 7	20 4	**98 8**	**81 6**	59 0 127	19	25
2 Hexanone	25 0	25 0	26 0	22 1	**104**	**88 4**	52 6 132	16	25
Dibromochloromethane	25 0	25 0	25 5	23 9	**102**	**95 6**	65 7 148	6 5	25
1 2 Dibromoethane	25 0	25 0	25 9	23 1	**104**	**92 4**	50 1 150	12	25
Tetrachloroethene	25 0	25 0	27 0	23 2	**108**	**92 8**	66 0 144	15	25
Chlorobenzene	25 0	25 0	27 7	22 7	**111**	**90 8**	65 7 141	20	25
Ethylbenzene	25 0	25 0	26 1	22 3	**104**	**89 2**	56 4 130	15	25
m p Xylenes	25 0	25 0	27 9	24 2	**112**	**96 8**	65 6 133	15	25
Bromoform	25 0	25 0	25 5	24 8	**102**	**99 2**	59 7 158	2 8	25
Styrene	25 0	25 0	27 2	22 3	**109**	**89 2**	46 9 141	20	25
o Xylene	25 0	25 0	27 2	24 2	**109**	**96 8**	57 7 125	12	25
1 1 2 2 Tetrachloroethane	25 0	25 0	25 5	21 8	**102**	**87 2**	63 6 128	16	25
1 3 Dichlorobenzene	25 0	25 0	27 7	23 0	**111**	**92 0**	64 9 146	19	25
1 4 Dichlorobenzene	25 0	25 0	26 4	22 0	**106**	**88 0**	55 5 146	19	25
1 2 Dichlorobenzene	25 0	25 0	28 0	23 9	**112**	**95 6**	54 8 148	16	25

Verified By RC Date 7/3/03

Columbia Analytical Services, Inc
Sample Acceptance Check Form

Client Tetra Tech EM Inc Work order P2301197
Project

Sample(s) received on 6/19/03 Date opened 6/19/03 by SM

Note This form is used for all samples received by CAS The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity Thermal preservation and pH will only be evaluated either at the request of the client or as required by the method/SOP

		Yes	No	N/A
1	Were **custody seals** on outside of cooler/Box?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
	Were custody seals on outside of sample container?	☐	☒	☐
	Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
	Were signature and date included?	☐	☐	☒
	Were seals intact?	☐	☐	☒
2	Were **sample containers** properly marked with client sample ID?	☒	☐	☐
3	Did **sample containers** arrive in good condition?	☒	☐	☐
4	Were **chain of custody** papers used and filled out?	☒	☐	☐
5	Did **sample container labels** and/or tags agree with custody papers?	☒	☐	☐
6	Was **sample volume** received adequate for analysis?	☒	☐	☐
7	Are samples within specified holding times?	☒	☐	☐
8	Was proper **temperature** (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
	Cooler Temperature NA C			
	Blank Temperature NA °C			
9	Is pH (acid) **preservation** necessary according to method/SOP or Client specified information?	☐	☒	☐
	Is there a client indication that the submitted samples are **pH** (acid) preserved?	☐	☐	☒
	Were VOA vials checked for presence/absence of air bubbles?	☐	☐	☒
	Does the client/method/SOP require that the analyst check the sample pH and if necessary alter it?	☐	☐	☒
10	**Tubes** Are the tubes capped and intact?	☐	☐	☒
	Do they contain moisture?	☐	☐	☒
11	**Badges** Are the badges properly capped and intact?	☐	☐	☒
	Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	[illegible]	[illegible]	[illegible]	[illegible] Comments
P2301197 001			NA	
P2301197 002			NA	
P2301197 003			NA	
P2301197 004			NA	
P2301197 005			NA	

Explain any discrepancies (include lab sample ID numbers)

22

P2301197

CHAIN OF CUSTODY RECORD
ENVIRONMENTAL PROTECTION AGENCY REGION VII

ACTIVITY LEADER(Print)	NAME OF SURVEY OR ACTIVITY	DATE OF COLLECTION (DAY / MONTH / YEAR)	SHEET
NICHOLAS GODFREY	Chemical Commodities Incorporated	16 / 18 / 03	1 of 1

CONTENTS OF SHIPMENT Chrono# 69011 c 03 0143 1 C

Lab ID	SAMPLE NUMBER	TYPE OF CONTAINERS: ~~SUMA CONTAINER~~	BOTTLE	BOTTLE	BOTTLE	VOA SET (2 VIALS EA)	SAMPLED MEDIA: water	soil	sediment	dust	other (air)	RECEIVING LABORATORY REMARKS/OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)	Flow Cont
		NUMBERS OF CONTAINERS PER SAMPLE NUMBER											
00095	A-11	1									X	VOC's	FC00274
00140	A-12	1									X	VOC's	FC00275
00115	A-13	1									X	VOC's	FC00275
00122	A-14	1									X	VOC's	FC00281
00406	A-15	1									X	VOC's (FB)	N/A

Nicholas Godfrey
6-18-03

DESCRIPTION OF SHIPMENT

5 PIECE(S) CONSISTING OF 2 BOX(ES)

N/A ICE CHEST(S) OTHER _____

MODE OF SHIPMENT

____ COMMERCIAL CARRIER _____

____ COURIER

____ SAMPLER CONVEYED _____ (SHIPPING DOCUMENT NUMBER)

PERSONNEL CUSTODY RECORD

RELINQUISHED BY (SAMPLER)	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUSTODY
[signature] ☒ SEALED ☐ UNSEALED	06/18/03	0730-1300	Sharon Malone 6-19-03 11:00 ☐ SEALED ☐ UNSEALED	Lab Analysis for VOC's
RELINQUISHED BY ☐ SEALED ☐ UNSEALED	DATE	TIME	RECEIVED BY ☐ SEALED ☐ UNSEALED	REASON FOR CHANGE OF CUSTODY
RELINQUISHED BY ☐ SEALED ☐ UNSEALED	DATE	TIME	RECEIVED BY ☐ SEALED ☐ UNSEALED	REASON FOR CHANGE OF CUSTODY

7 EPA 9262 Rev. sed 5/85)