File

Tetra Tech EM Inc

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

TES
CC #
KD0313 4662
2.4
10-23-03
0723

October 23, 2003

Mr Roy Crossland
START Project Officer
U S Environmental Protection Agency Region 7
901 North 5th Street
Kansas City, Kansas 66101

Subject **Removal Action Report**
Chemical Commodities Incorporated, Olathe, Kansas
U S EPA Region 7 START, Contract No 68-S7-01-41, Task Order No 0141
Task Monitor Paul E Doherty, On-Scene Coordinator

Dear Mr Crossland

Tetra Tech EM Inc is submitting the attached Removal Action Report for activities at the Chemical Commodities Incorporated site in Olathe Kansas If you have any questions or comments please contact Mr Nicholas Godfrey the START Project Manager at (913) 495 3962

Sincerely,

Nicholas M Godfrey
START Project Manager

Hieu Q Vu PE CHMM
START Program Manager

Enclosures

40115809
SUPERFUND RECORDS

RECEIVED
OCT 23 2003
SUPERFUND DIVISION

contains recycled fiber and is recyclable

REMOVAL ACTION REPORT

CHEMICAL COMMODITIES INCORPORATED, OLATHE, KANSAS

Superfund Technical Assessment and Response Team (START) Contract

Contract No 68 S7-01-41, Task Order 0141

Prepared For

U S Environmental Protection Agency
Region 7
Superfund Division
901 North 5th Street
Kansas City Kansas 66101

October 23, 2003

Prepared By

Tetra Tech EM Inc
8030 Flint Street
Lenexa, Kansas 66214
913 894 2600

CONTENTS

1 0 INTRODUCTION

The Tetra Tech EM Inc (Tetra Tech) Superfund Technical Assessment and Response Team (START) was tasked by the U S Environmental Protection Agency (EPA) Region 7 Superfund Division to provide assistance to EPA with sample collection along with oversight documentation and field screening activities during a removal action at the Chemical Commodities Incorporated (CCI) site, located at 300 320 S Blake Street in Olathe Kansas (Appendix A Figure 1) The project was assigned under START Contract No 68 S7 01 41, Task Order No 0141 00

CCI operated a brokerage business which engaged in the resale of various chemicals from 1951 to 1989 EPA completed a removal assessment at CCI in March 1989 Several hazardous conditions were identified from the assessment Subsequently, EPA initiated a fund lead time critical removal action that was conducted in three phases Phase I consisted of an assessment and inventory of the chemicals remaining on site Phase II covered the packaging, transportation, and disposal of the chemicals and Phase III consisted of structure decontamination surface soil excavation and disposal and subsurface remediation

The general objectives of the follow up removal action conducted in 2003 were to remove stockpiled soil remaining from the Phase III removal action and to demolish the main warehouse building

The Tetra Tech START project manager for the removal activities was Nicholas Godfrey from team subcontractor TN and Associates, Inc (TN&A), who conducted oversight, sampling field screening and written documentation from June 10 2003 to October 13 2003 In addition, site restoration and security monitoring will be conducted by Tetra Tech START until the end of the modified task order (December 17, 2004) Paul E Doherty served as the EPA task monitor for the project

2 0 BACKGROUND

2 1 Site Location and Description

The CCI site is located in Johnson County, Kansas Mr Jerald Gershon is the current owner of the property The approximate population of the city of Olathe is 92,962 The site is classified on city zoning records as an industrial property but is listed as residential property on city maps The future zoning of this site following the completion of remedial actions is not known The north and west sides of the property are bordered by residential housing an active railroad line is located to the east and a

vacant lot is to the south Approximate geographic coordinates for the center portion of the site are 38° 52' 40 north latitude and 94° 48' 20 west longitude

2 2 Site History

Chemical Commodities Inc (CCI) operated a chemical brokerage business at this site from 1951 to 1989 The company engaged in the resale of chemicals which were surplus off specification recycled or had exceeded their specified shelf life Various materials in many types of containers were stored in sheds and trailers throughout the site and in a warehouse that was about 50 by 100 feet Chemical substances, consisting primarily of chlorinated solvents, were detected in soils and groundwater on site and immediately off site Contamination of these environmental media was a direct result of numerous chemical spills from poorly maintained containers housed in inadequate storage facilities

EPA completed a removal assessment at CCI in March 1989 Several hazardous conditions were identified from the assessment, including incompatible chemicals being stored together, extensive leakage from numerous containers unlabeled containers of chemicals, and many deteriorated containers Subsequently EPA initiated a fund lead, time critical removal action in July 1989 to address surface soil contamination shallow subsurface contamination and threats of additional releases of bulk chemicals

The EPA removal action was conducted in three phases Phase I consisted of an assessment and inventory of the chemicals remaining on site Phase II covered the packaging, transportation, and disposal of the chemicals, and Phase III consisted of structure decontamination and demolition surface soil excavation and disposal and subsurface remediation During Phase III all the structures on the CCI site were decontaminated, and most were demolished

Phases I and II were completed in 1991 Subsurface contaminants, consisting of a host of volatile organic compounds (VOC), were addressed in Phase III using an interceptor trench for collecting shallow groundwater and treating it with an on site air stripping apparatus

Phase III also included the removal of about 300 tons of contaminated soil and the on site stockpiling of an additional 1 200 tons of contaminated soil Because of budgetary constraints that limited Phase III clean up actions the contaminated soil was consolidated with debris from the demolished storage structures in an area approximately 50 feet by 80 feet in the south portion of the property Plastic sheeting was placed above and below the stockpile which was covered with approximately 2 feet (ft) of

clean soil and then vegetated

EPA has conducted several indoor air sampling events inside homes adjacent to the site The first and second events occurred in 1989 and 1997 respectively Air samples from these events were collected from the crawlspaces of the residences The Agency for Toxic Substances and Disease Registry (ATSDR) reviewed the results from monitoring did not represent either an imminent or long term health hazard but recommended that periodic sampling of indoor air be conducted The third air monitoring event was conducted in the fall of 2000 Several additional air monitoring events have been conducted since May 2001

In recent years, the main warehouse building had become structurally unsound The building roof was torn and had collapsed in several places Exterior walls had begun to crack and sag Vandals had broken down doors and walls to gain access to the building s interior The city of Olathe had responded to numerous trespassing incidents and several fire complaints concerning the main warehouse

Portions of the contaminated soil stock pile had become visible due to erosion In addition continued tree and shrub growth on and around the plastic sheeting further threatened its structural integrity

3 0 REMOVAL ACTIVITIES

Demolition and removal activities for this project were conducted by the EPA Region 7 Emergency and Rapid Response Services (ERRS) contractor, Environmental Restoration (ER) A photolog of the field activities is available in Appendix B, and a copy of the site logbook is provided in Appendix C
On June 10 2003, ER began the demolition of the main warehouse on the north side of the building ER began the demolition process by removing an office addition from the main building ERRS contractors utilized water from a nearby hydrant to suppress dust and particulates during those activities Demolition of the original structure began on the southwestern exterior wall Interior piping and steel roof supports were segregated with a track hoe The eastern exterior wall was then removed, and the track hoe demolished the remaining facility by collapsing the roof upon itself and pulling the remaining walls toward the interior of the building The demolition of the main warehouse building was completed at the end of the work day on June 10 2003

On June 11 to 13 and June 16, 2003, ER continued to segregate piping steel supports, and assorted recyclable materials from the brick and wooden structural material from the warehouse debris R

Vickers trucking company was contracted to transport the demolition debris to the Deffenbaugh landfill located in Shawnee, Kansas In total R Vickers transported 55 truck loads of demolition debris comprising approximately 1 077 tons The debris was disposed of as a "special waste "

Metro Recycling of Kansas City, Missouri, was contracted to transport and process the segregated metal and associated recyclable materials On June 16 2003 the contractor removed an abandoned 40 foot trailer from the northern portion of the property An aluminum shed used to house the facility's natural gas lines was also removed, compacted, and recycled In all, Metro Recycling filled four 20 foot trailers and one 40 foot trailer with segregated materials which were transported to their processing center

The removal of the stockpile of contaminated soil was initiated on June 16 2003 Initially, 2 feet of topsoil were excavated, and a Bobcat® was used to spread the topsoil across the property After the removal of the underlying contaminated soil on June 17, 2003, ER contractors penetrated the sheeting below the soil and noted a strong chemical odor and discolored soil EPA directed Tetra Tech START to collect soil samples from that area before continuing the removal (see Section 3 2) Upon the completion of sampling activities by Tetra Tech START, clean fill was delivered by R Vickers trucking company for site restoration purposes ER leveled the remaining soil to cover the plot containing the backfill soil The excavated and demolished areas were covered with hay and seeded with a mixed blend of native grasses Water hoses were attached to municipal hydrant, and sprinkler systems were used for irrigation purposes ERRS contractors completed project specific activities and departed the site at approximately 1 545 hours on June 18 2003

3 1 Air Monitoring

Real time air monitoring was performed by Tetra Tech START with a DataRam® particulate monitor and a TVA 1000® dual photoionization/flame ionization detector before, during, and after site activities on June 10 to 13 and June 16 to 18 2003 Air monitoring was conducted to determine if any imminent threats to human health or the environment existed due to the presence of airborne VOCs and particulates associated with the demolition of the warehouse building and the removal of stockpiled contaminated soil In order to ensure screening accuracy, the DataRam® was referenced to an internal standard and the TVA 1000® was referenced to 100 parts per million of isobutylene calibration gas prior to site activities each day

Tetra Tech START utilized the screening instruments to conduct air monitoring downwind from

demolition excavation and removal activities conducted by ER on June 10 to 13 and June 16 to 18, 2003 A concentration of 5 ppm above background was used as the health and safety action level for non analyte specific VOCs detected by the TVA 1000® (Appendix D, Table 1) The EPA National Ambient Air Quality Standard (NAAQS) of 150 micrograms per cubic meter ($\mu g/m^3$) for non analyte specific particulates was used as the action level for the DataRam® monitor (Appendix D Table 2)

Upon ER's removal of the contaminated soil pile readings of 6 ppm and 8 8 ppm were noted on June 16 2003 On June 17 2003 air monitoring results peaked at 38 ppm within the area of excavation and 10 ppm around the site perimeter Air monitoring conducted outside of the site perimeter indicated peak results between background (0 ppm) and 1 ppm All readings and results exceeding the health and safety action level were noted in the log book and reported to OSC Doherty

None of the particulate monitoring results surpassed the NAAQS of 150 $\mu g/m^3$ The highest observed reading of 41 0 $\mu g/m^3$ was recorded during the first day of demolition/excavation on June 10, 2003

3 2 Soil Sampling

Three soil samples were collected on June 17 2003 from an area comprising approximately 10 square feet within the contaminated soil pile on the southern side of the property A map is provided as Appendix A, Figure 2 to identify where the samples were collected by Tetra Tech START

The samples were labeled S 1 S 2 and S 3 Soil aliquots were collected from material retrieved by ER with an excavator from a depth of 2 to 3 inches (in) bgs, using a stainless steel spoon and disposable pie pan The aliquots were homogenized and transferred to the appropriate sample containers (except for the sample to be analyzed for VOCs, which was not homogenized) The samples were stored in a cooler pending submittal to AML Laboratories in Overland Park, Kansas, on June 17 2003, for analysis of volatile organic compounds semi volatile organic compounds pesticides and herbicides A soil sample summary is available in Appendix D, Table 3 A chain of custody form is provided in Appendix E Pertinent data, including sample time, analyses to be performed, and exact sample locations were included on the field sheets provided in Appendix F

3 3 Air Sampling

Air samples were collected using Summa canisters on June 16 to 18, 2003 Five canisters were collected continuously for 8 hours (±10%) during each sampling event These samples were labeled A 1 to A 15 An air sampling summary is located in Appendix D Table 4 The Summas were positioned at locations near the removal site to determine if a release of airborne VOCs due to excavation activities trucking/transportation, and/or stockpiling of contaminated soils during the removal activities had occurred Summa canisters were placed in general cardinal directions around the excavation areas based on judgement of the on site EPA personnel and Tetra Tech START Each sample was collected from the breathing zone at a height of approximately 6 feet above the ground level In total fifteen Summa canisters were submitted to Columbia Analytical Services laboratory located in Simi Valley California for analysis of VOCs Pertinent data, including sample time analyses to be performed and exact sample locations were included on the field sheets (Appendix F) Chain of custody forms are provided in Appendix E

4 0 ANALYTICAL RESULTS

4 1 Soil Samples

On June 19, 2003, the laboratory data for soil samples (S 1, S 2 and S 3) were transmitted to Tetra Tech START and are provided in Appendix G Concentrations for detected analytes are summarized in Appendix D, Table 5 These samples were compared to the EPA Region 9 preliminary remediation goals (PRGs) for residential and industrial soils and to the Kansas Department of Health and Environment (KDHE) soil standards for residential and industrial pathways Analytical results for those samples indicated concentrations of several VOCs and SVOCs exceeded KDHE standards and Region 9 PRGs and one pesticide analyte exceeded Region 9 PRGs

Soil sample results for VOCs (Sample S 1) included trichloroethene (TCE) at 216 000 micrograms per kilogram (µg/kg), vinyl chloride at 15 300 µg/kg, and 1,1,2,2 tetrachloroethane at 35 300 µg/kg These concentrations exceed the KDHE standards for residential soil pathways of 62 000 µg/kg for TCE 340 µg/kg for vinyl chloride, and 7 100 µg/kg for 1 1 2 2 tetrachloroethane The following KDHE industrial soil pathway standards were also exceeded For those compounds at 98,000 µg/kg for TCE, 540 µg/kg for vinyl chloride and 12 000 µg/kg for 1 1 2 2, tetrachloroethane VOC analytes 1 2 dichloroethane, 1,4 dichlorobenzene, and tetrachloroethene exceeded Region 9 PRGs but did not exceed KDHE standards while benzene concentrations were detected above the KDHE residential soil limit but

below the industrial soil pathway standard The analytes 1 2 4 and 1 3 5 trimethyl benzene and cis 1 2 dichloroethene were detected above KDHE standards but below the Region 9 PRGs

In total, six SVOC analytes exceeded both Region 9 PRGs and KDHE risk based standards in soil sample S 3 benzo (a) anthracene at 310 000 µg/kg benzo (b) fluoranthene at 474,000 µg/kg benzo (k) fluoranthene at 184,000 µg/kg, benzo (a) pyrene at 335 000 µg/kg chrysene at 381 000 µg/kg, and indeno (1,2 3 cd) pyrene at 189,000 µg/kg Sample S 3 also contained anthracene, fluoranthene, and pyrene above KDHE residential and non residential standards and carbazole above the Region 9 PRG for residential soil

Soil sample S 2 was analyzed for pesticides Results indicated p,p' DDD at 12,120 µg/kg, exceeding the Region 9 PRG for residential soil of 2 400 µg/kg and the Region 9 PRG for industrial soil of 10 000 µg/kg

4 2 Air Samples

On July 3, 2003 laboratory data for air samples A 1 to A 10 were transmitted to Tetra Tech START Data for air samples A 11 to A 15 were transmitted to Tetra Tech START on July 7, 2003 (Appendix G) Analytical data received from Columbia Analytical were compared to the Region 9 PRGs and the Occupational Safety and Health Administration (OSHA) permissible exposure limit (PEL) for ambient air In total ten analytes exceeded their respective PRGs Six of the ten analytes detected above Region 9 PRGs in the air samples were also detected in soil samples collected from the site above Region 9 PRGs for both residential and industrial scenarios Of the three days that summa sampling was conducted the highest concentrations were detected on June 17, 2003, (A 08) during the initial penetration of soil underneath the lower plastic sheeting Results for sample A 08 included TCE at 160 µg/m^3 tetrachloroethene (PCE) at 90 µg/m^3 and vinyl chloride at 9 1 µg/m^3 These results all exceeded their respective Region 9 PRGs TCE at 0 17 µg/m^3, PCE at 0 67 µg/m^3 and vinyl chloride at 0 11 µg/m^3 (based on protection for long term residential exposure) However, none of the analytes detected exceeded their respective PELs (based on protection for worker exposure) Concentrations for detected analytes PRGs and PELs are summarized in Appendix D Table 6

5 0 SUMMARY

Tetra Tech START conducted sampling, field screening, and documentation activities at the Chemical Commodities Incorporated site located in Olathe, Kansas where removal action was conducted between

June 11 18 2003 Real time air monitoring was performed and air and subsurface soil samples were collected during soil excavation and the demolition of the former warehouse building

The results from air sampling indicated that contaminants found during subsurface soil sampling were also detected in air samples In total, six analytes were detected within both medias

Subsurface soils remaining in the area of the excavated soil pile exhibited concentrations of several contaminants exceeding state and federal standards Results from air monitoring and air sampling indicated the highest observed readings and results on June 17 2003 upon unearthing the aforementioned contaminated soil However, air monitoring conducted after clean fill was used to cover the excavated areas displayed readings ranging from background (0 ppm) to 1 ppm indicating that a ongoing release of VOCs to the air pathway is unlikely

5 1 Pre-Remedial Considerations

Pre remedial issues concerning the Chemical Commodities Incorporated site have been addressed in previous preliminary assessment (PA) and site inspection (SI) reports The site was added to the National Priorities List (NPL) in 1994 Ongoing well sampling and vapor intrusion studies within surrounding residential homes are being performed under the direction of EPA

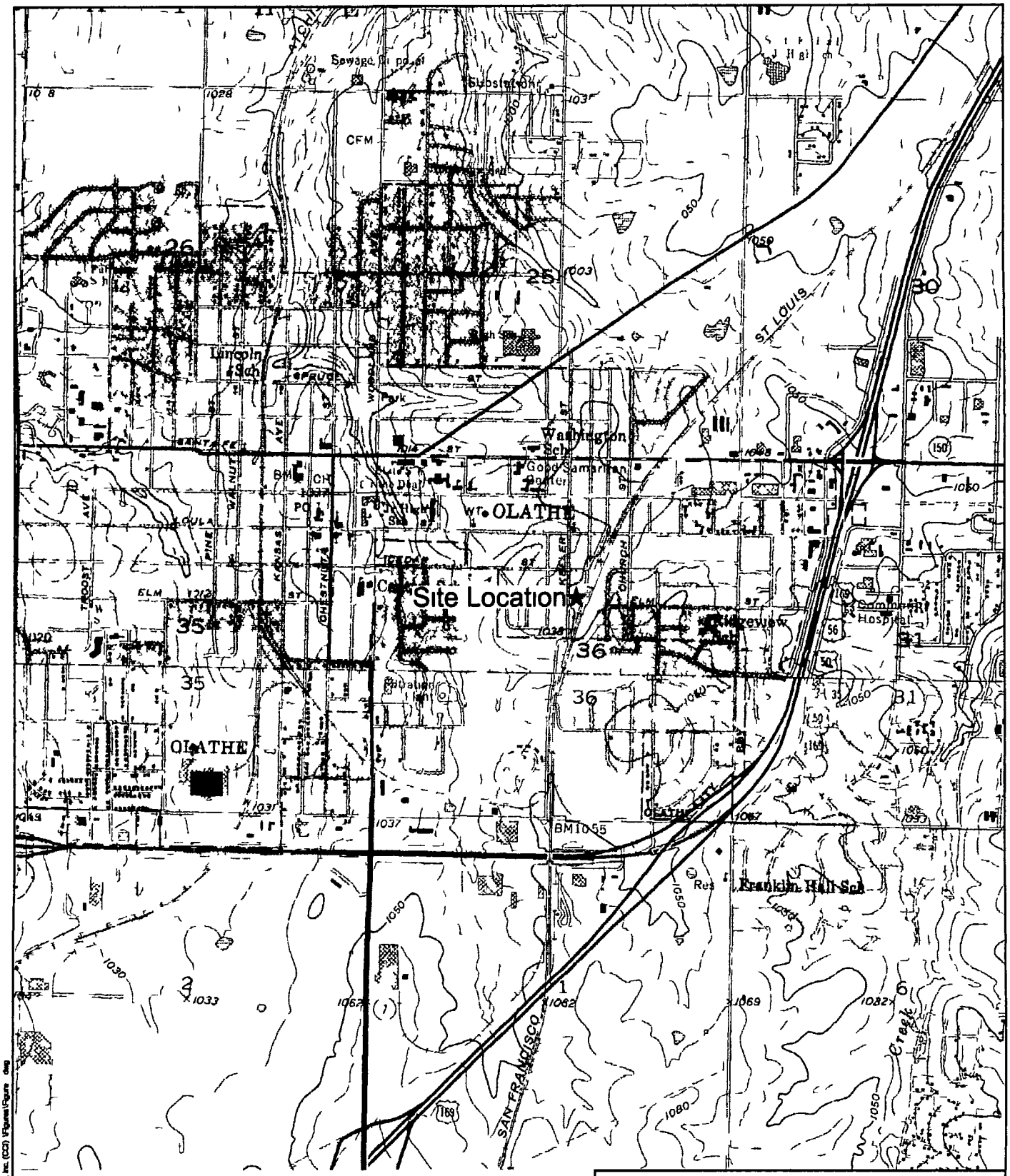
5 2 Removal Considerations

Restoration and site security monitoring activities will be performed by Tetra Tech START for the duration of modified task order 0141 Results from soil sampling activities indicate that contamination remains within subsurface soils located on site that may warrant additional removal or remedial activities in the future

APPENDIX A

FIGURES

(Two Pages)



Source USGS Ocheltree KS 7 5 Min te Topo Quad 1956 PR 1970 and 1975
USGS Olathe KS 7 5 Mi te Topo Q ad 1956 PR 1970 and 1975

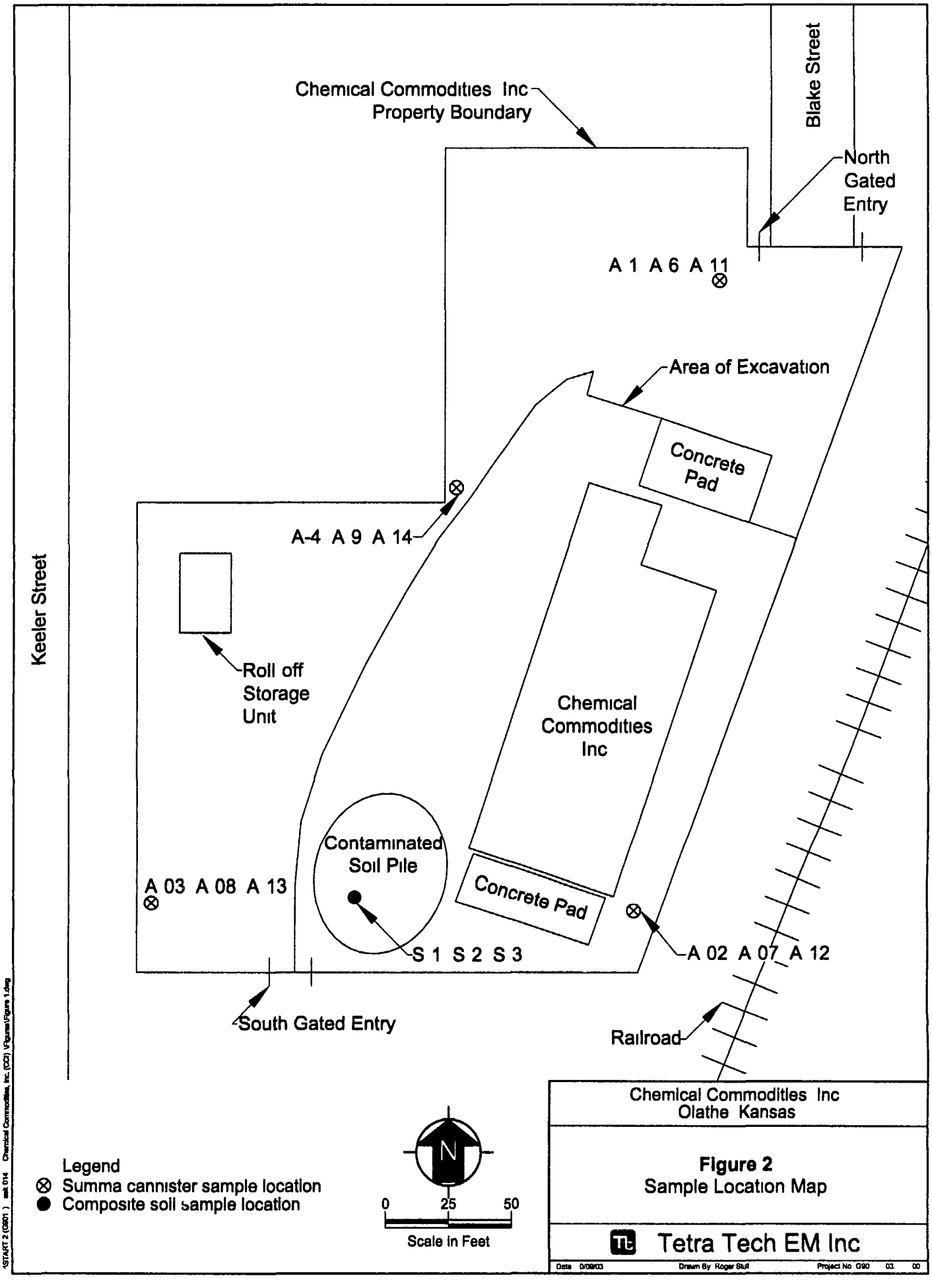
Chemical Commodities Inc
Olathe Kansas

Figure 1
Site Location Map

Tetra Tech EM Inc

Date 0/09/03 | Drawn By: Roger Stoll | Project No G9011 L 03 01 00

V:\START (G9011) ast 014 Chemical Commodities, Inc (CCI) \Figures\Figure dwg


Chemical Commodities Inc
Property Boundary
Blake Street
North
Gated
Entry
A 1 A 6 A 11
Area of Excavation
Concrete
Pad
A-4 A 9 A 14
Keeler Street
Roll off
Storage
Unit
Chemical
Commodities
Inc
Contaminated
Soil Pile
Concrete Pad
A 03 A 08 A 13
S 1 S 2 S 3
A 02 A 07 A 12
South Gated Entry
Railroad
Legend
Summa cannister sample location
Composite soil sample location
N
0
25
50
Scale in Feet
Chemical Commodities Inc
Olathe Kansas
Figure 2
Sample Location Map
Tetra Tech EM Inc
Date 0/09/03
Drawn By Roger Sull
Project No G90 03 00

APPENDIX B

PHOTOGRAPHIC LOG

(21 Pages)

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows the Chemical Commodities Incorporated (CCI) facility This picture was taken previous to demolition activities	1
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction S	PHOTOGRAPHER	Nicholas Godfrey	6/10/2003

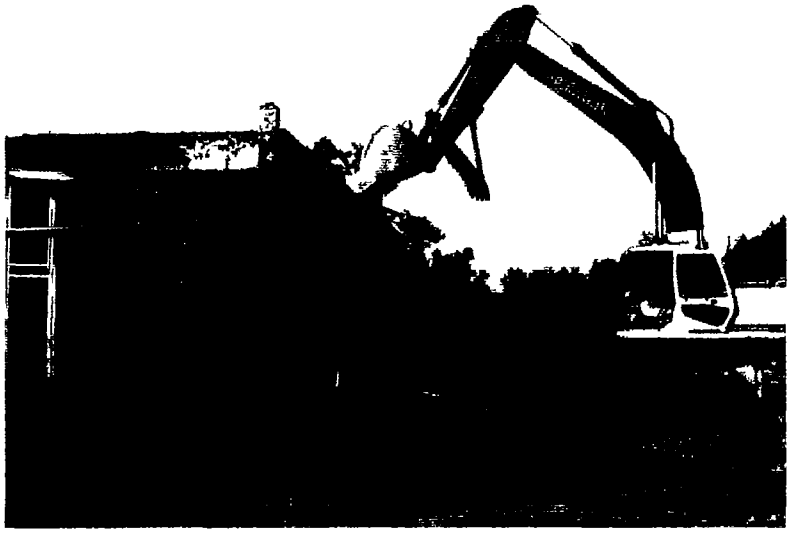
TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	Preparation for demolition activities being performed by Region 7 EPA Emergency Response and Removal Services (ERRS) contractors Environmental Restoration (ER)	2
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction S	PHOTOGRAPHER	Nicholas Godfrey	6/10/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	ER contractors spraying the exterior walls of the warehouse to reduce dust and particulate levels during demolition activities	3
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction SE	PHOTOGRAPHER	Nicholas Godfrey	6/10/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	Surrounding soils being sprayed by ER to reduce airborne particulate levels	4
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction S	PHOTOGRAPHER	Nicholas Godfrey	6/10/2003

Chemical Commodities Incorporated
Olathe, Kansas



TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	Demolition activities initiated on the northern side of the CCI warehouse	5
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction S	PHOTOGRAPHER	Nicholas Godfrey	6/10/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	ER demolishing office additions at the northern end of the warehouse	6
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction SE	PHOTOGRAPHER	Nicholas Godfrey	6/10/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows ER using water hoses to suppress dust and particulates	7
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction S	PHOTOGRAPHER	Nicholas Godfrey	6/10/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows the western exterior wall of the warehouse	8
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction SE	PHOTOGRAPHER	Nicholas Godfrey	6/10/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	ER beginning to demolish the original portion of the warehouse	9
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction S	PHOTOGRAPHER	Nicholas Godfrey	6/10/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	ER foremen Scott Allen and David Brinkmeyer observing demolition of the western exterior wall of the warehouse	10
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction SE	PHOTOGRAPHER	Nicholas Godfrey	6/10/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	The central portion of the warehouse being demolished by ER	11
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction NE	PHOTOGRAPHER	Nicholas Godfrey	6/10/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows the collapse of the warehouse	12
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction N	PHOTOGRAPHER	Nicholas Godfrey	6/10/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	Project Manager (PM) Nicholas Godfrey recording hourly particulate readings using a DataRam® particulate monitor	13
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction E	PHOTOGRAPHER	Lynn Parman	6/10/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows the ER crew demolishing the warehouse	14
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction NE	PHOTOGRAPHER	Nicholas Godfrey	6/10/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows the CCI warehouse following the completion of demolition activities	15
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction NE	PHOTOGRAPHER	Nicholas Godfrey	6/11/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	ER placing metal pieces into a 20 foot roll off storage unit	16
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction SW	PHOTOGRAPHER	Nicholas Godfrey	6/11/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	Metro Recycling Incorporated from Kansas City Missouri retrieving recyclable items from the facility	17
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction SW	PHOTOGRAPHER	Nicholas Godfrey	6/11/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows START PM Nicholas Godfrey screening the excavation site for VOCs with a TVA 1000® dual photoionization detector (PID)/ flame ionization detector (FID)	18
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction SE	PHOTOGRAPHER	Scott Allen (ER)	6/11/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	A Bobcat® forklift being used to segregate metal and other recyclable materials	19
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction E	PHOTOGRAPHER	Nicholas Godfrey	6/12/2003

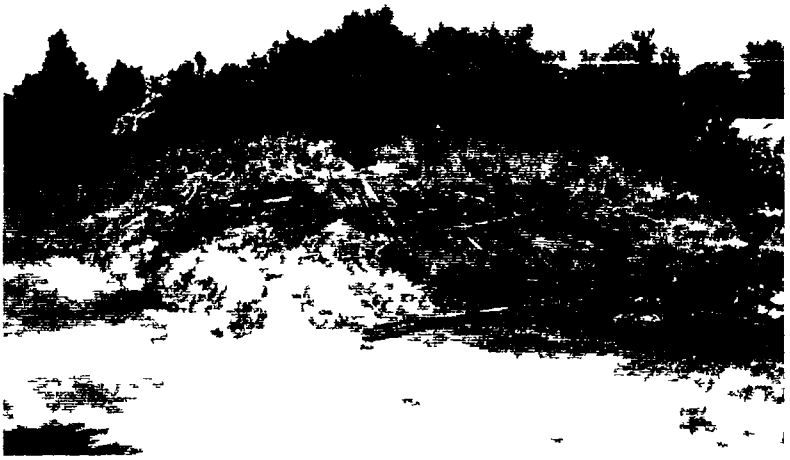
TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	R Vickers truck being loaded to haul debris to the Deffenbaugh waste disposal facility in Shawnee Kansas	20
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction SE	PHOTOGRAPHER	Nicholas Godfrey	6/12/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	ER hauling scrap metal and other recyclables to a roll off unit	21
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction S	PHOTOGRAPHER	Nicholas Godfrey	6/12/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows the DataRam® particulate monitor downwind from loading and excavation activities	22
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction SE	PHOTOGRAPHER	Nicholas Godfrey	6/12/2003

Chemical Commodities Incorporated
Olathe, Kansas



TETRA TECH PROJECT NO G9011 03 0141 00 Direction S	DESCRIPTION	This picture shows the contaminated soil pile located on the southern side of the property	23
	CLIENT	U S Environmental Protection Agency Region 7	Date
	PHOTOGRAPHER	Nicholas Godfrey	6/12/2003

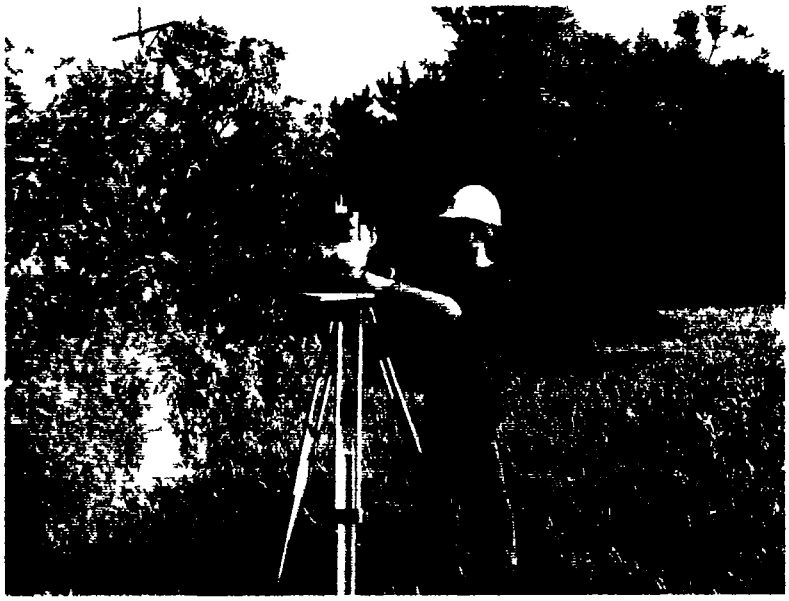
TETRA TECH PROJECT NO G9011 03 0141 00 Direction N	DESCRIPTION	This picture shows the concrete warehouse foundation following demolition and segregation activities	24
	CLIENT	U S Environmental Protection Agency Region 7	Date
	PHOTOGRAPHER	Nicholas Godfrey	6/12/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	An aluminum shed that housed the facility s natural gas line connections being removed	25
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction NE	PHOTOGRAPHER	Nicholas Godfrey	6/12/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows ER contractors cleaning the concrete surface of the warehouse foundation	26
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction SE	PHOTOGRAPHER	Nicholas Godfrey	6/13/2003

Chemical Commodities Incorporated
Olathe, Kansas



TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	PM Nicholas Godfrey assembling summa canisters for air sampling on June 16 2003	27
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction NW	PHOTOGRAPHER	Lynn Parman	6/16/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows summa air samples A 3 and A 4 located on the western border of the property	28
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction SW	PHOTOGRAPHER	Nicholas Godfrey	6/16/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows summa canister A 3	29
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction E	PHOTOGRAPHER	Nicholas Godfrey	6/16/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows summa canisters A 3 A 4 and A 1	30
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction NE	PHOTOGRAPHER	Nicholas Godfrey	6/16/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	Summa canister A 2 placed on the eastern side of the contaminated soil pile	31
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction W	PHOTOGRAPHER	Nicholas Godfrey	6/16/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	START PM Godfrey using the TVA 1000 dual PID/FID to monitor for volatile organic compounds in the air during the excavation of the contaminated soil pile	32
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction E	PHOTOGRAPHER	Nicholas Godfrey	6/16/2003

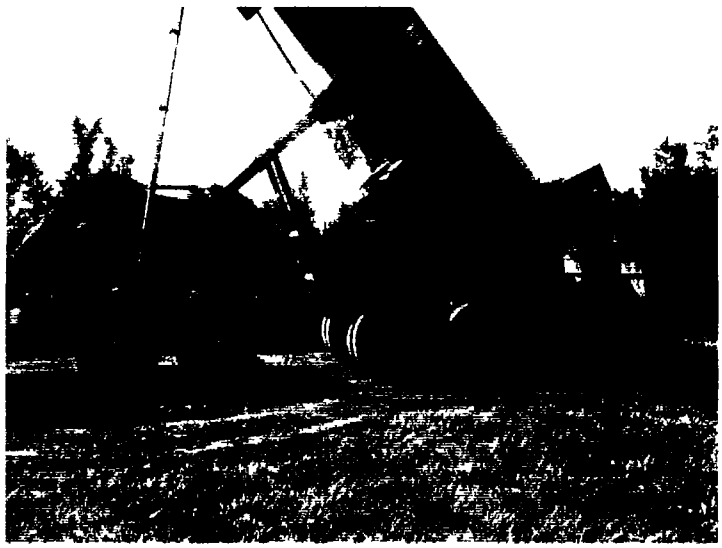
Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	Clean topsoil being removed and segregated from the contaminated pile	33
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction SE	PHOTOGRAPHER	Nicholas Godfrey	6/17/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	Tetra Tech START PM Godfrey taking composite samples underneath the second capped layer of contaminated soil Samples were labeled S 1 S 2 and S 3	34
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction E	PHOTOGRAPHER	Lynn Parman	6/17/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows Godfrey collecting samples of soil retrieved with an excavator from a depth of 2 to 3 feet below ground surface	35
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction E	PHOTOGRAPHER	Nicholas Godfrey	6/17/2003



TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	R Vickers trucking company transporting clean fill to the site assisting with site restoration activities	36
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction E	PHOTOGRAPHER	Nicholas Godfrey	6/18/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows the CCI facility following the completion of demolition and excavation activities	37
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction S	PHOTOGRAPHER	Nicholas Godfrey	6/18/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	ER contractors seeding the property with a heat tolerant grass blend	38
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction SE	PHOTOGRAPHER	Nicholas Godfrey	6/18/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	Contractors spreading hay on the excavated areas of the property	39
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction S	PHOTOGRAPHER	Nicholas Godfrey	6/18/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows ER contractors spreading hay to retain water in newly seeded areas	40
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction W	PHOTOGRAPHER	Nicholas Godfrey	6/18/2003

Chemical Commodities Incorporated
Olathe, Kansas

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	This picture shows a southern view of the site following the completion of restoration activities performed by ER	41
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction S	PHOTOGRAPHER	Nicholas Godfrey	6/19/2003

TETRA TECH PROJECT NO G9011 03 0141 00	DESCRIPTION	Site restoration and vegetation activities were performed by START This picture shows a sprinkler irrigation system used to water grass seed	42
	CLIENT	U S Environmental Protection Agency Region 7	Date
Direction E	PHOTOGRAPHER	Nicholas Godfrey	6/19/2003

APPENDIX C

FIELD LOGBOOK

(44 Pages)

KS393

Outdoor writing products for outdoor writing people"

RECYCLABLE

Rite in the Rain A unique All-Weather Writing paper created to shed water and enhance the written image It is widely used throughout the world for recording critical field data in all kinds of weather

Available in a variety of standard and custom printed case-bound field books loose leaf spiral and stapled notebooks m lti copy sets and copier paper

For best results use a pencil or an all-weather pen

a product of

J L DARLING CORPORATION
Tacoma, WA 98424-1017 USA
(253) 922 5000 FAX (253) 922 5300
www RiteintheRain com

NSN: 7530-01-433-5654

6 32281 31111 9

"Rite in the Rain"®
ALL WEATHER WRITING PAPER

LEVEL

All-Weather Notebook
No 311

Chemical Guardtree Inc
(CCI)
6/01/11 23 04 10

4 5/8 x 7" 48 Numbered Pages

"Rite in the Rain®"
ALL WEATHER WRITING PAPER

Name On Scene Coordinator - Paul E Dobert
Project Manager - Nicholas Godfrey

Address _____

_____

Phone _____

Project _____

_____

_____

_____

CONTENTS

PAGE	REFERENCE	DATE

Chemical Commodities, Inc
320 S Blake St
Olathe, Kansas

Clear Vinyl Protective Slipcovers (Item No 30) are available for this style of
Helps protect your notebook from wear & tear Contact your dealer or the J. L. Darling

 [illegible] Sunny / Humid [illegible]

6/10/03 CCI 6901//030141 00

0830 START member Nicholas Godfrey arrives on site at 320 South Blake at the Chemical Commodities Inc (CCI) site in Olathe Site personal include but are not limited to David Brinkmeyer of Environmental Restoration removal contractors (ER), EPA's On scene Coordinator Paul Doherty and Mary Peterson. The days site objectives are to perform real-time air monitoring to ensure the proper health and Safety for residents surrounding CCI during demolition and removal activities to be performed from 6/10/03 - 7/20/03 —— NG

0845 Godfrey begins preparing equipment for fieldwork START owned TVA-1000 shows a low battery warning, Godfrey takes initial screen results are as follows PID: 6-8 ppm - assumed for high humidity PID/FID Charging DATARAM particulate monitor taken and placed down wind on site

FUJI FILM
CAMERA # 2AA49882 6-10-03 NG

Nicholas Godfrey

[illegible] Sunny / Humid

6/10/03 CCI 6901//03 0141 00

0845 cont from site activities Readings will be checked on the hour by START and recorded on a spreadsheet ER employees began the excavation of the CCI facility on the north west corner and have continued demolition on the north facing side

0900 START member Godfrey sets up particulate monitor and takes first reading. Results are as follows: Concentration 373 Time Weighted Average 419 (results in micrograms per cubic meter) mg/m³. ER crew continues to excavate the north face of the building working on the second floor area hosing has continued on the northeast corner

0915 START continues to monitor excavation and shoots photography of CCI

0934 ER crews move equipment to the west side of the facility and begin to plan the demolition of the westerly wall

0954 Following the removal of the exterior western wall of the facility peak readings at 1.2 mg/m³ were noted

FUJI FILM
Camera # 2AA49882 6-10-03 NG

Nicholas Godfrey

≈ 82° HUMID / Partly Cloudy DATARAM / PID

6/10/03 CCI 69011/03 017100

1000 Particulate hourly readings were recorded on a datasheet and are as follows:
0900-1000 - Conc 65 ug/m³
TWA 53 ug/m³
ER crews begin excavation on the South facing exterior wall of the facility

1020 START member Godfrey utilizes TVA-1000 PID to screen the residual dust cloud for volatile organic compounds. Due to high humidity readings fluctuated between 5-7ppm. Environmental Restoration crews continue to excavate the west side wall of the building

1048 ER crews continue to demolish the south side of the CCI facility, into the interior of the building towards the EAST exterior wall

1100 Particulate hourly readings were recorded on a data sheet and are as follows
1000-1100 - Conc 29 ug/m³
TWA 49.4 ug/m³
ER continues to excavate the South interior

FUJI FILM 6-10-03
Camera #2AAY9882

≈ 83 Cloudy / HUMID DATARAM / PID

6/10/03 CCI 69011/03 0141

1015 Contracted removal coordinators ER begin to demolish and excavate the south sidewall of the abandoned facility

1035 Environmental Restoration crews begin excavating the interior to South East corner of the facility. Godfrey takes air survey with PID, FID readings are as follows:
PID 5-9ppm due to high humidity

1145 ER completes the demolition of the South facing exterior and interior wall

1200 START member Godfrey records particulate meter readings and are as follows: 1100-1200 Conc 30.3 ug/m³
TWA 45.2 ug/m³

1207 START returns to Tetratech, Lenexa for field supplies and to download pictures from the digital camera.

1300 START returns to site to record particulate monitor readings as follows: 1200-1300
Conc 31.7 ug/m³
TWA 42.5 ug/m³
Excavation continues on South side of facility

FUJI FILM 6-10-03
Camera #2AAY9882
Nicholas Godfrey

6/10/03 CCI 0901/03 01

1330 START takes photos of excavation at the south interior of the abandoned facility EPA and START observe demolition practices — NG

1300 ER contractors demolish the west facing wall of the abandoned facility. Approximately 1/2 of the south portion of the facility have been completely demolished — NG

1400 START member Godfrey checks and records particulate readings Conc 65.5 ug/m3 TWA 48.6 ug/m3 1300-1400 hours — Nicole G

1421 START observes ER removal contractors demolishing the east exterior sidewall of the facility. Brick and wall exterior pieces fell off of the building and into the fence bordering the property and the railroad property — NG

1500 ER contractors continue to excavate the interior of the abandoned facility. Particulate Monitor readings are as follows 1500 Conc 35 ug/m3 TWA - 45.3 ug/m3

FUJI FILM Camera # ZAA49882 6-10-03 NG

6/10/03 CCI 0901/03 01 06

1535 ER contractors complete the demolition of the abandoned facility. The North exterior of the facility was demolished from the interior. Photos of the demolition will be included in the final removal assessment (RA) report — NG

PID readings were also observed during the final demolition processes of 4-5 ppm (parts per million)

1550 ER workers begin the segregation process of the demolished material.

1600 Particulate hourly readings are recorded on a datasheet and are as follows 1500-1600 hours — NG Concentration 16 ug/m3 TWA 43.8 ug/m3

1620 Contracted restoration and removal contractors ER continue to segregate the scrap metal pieces from the rest of the demolished materials. NG

1635 ER workers repair (temporarily) the fence bordering the east side of the property where debris from the demolition had fallen at 1421. Excavation continues for segregation purposes — NG

FUJI FILM Camera # ZAA49882 6 10 03 NG Nicole Godfrey

6/10/03 CCT 3101/1350 410

1645 Excavation continues of the material from the abandoned facility. OSC Paul Doherty departs site. Activities are scheduled to resume at 3205 Blake street at 0630 hours on 6/11/03

1655 ER Foreman/director David Br[illegible] halts demolition/segregation activities for the day. ——— NB

START member Godfrey records final daily reading of the Particulate Monitor; readings are as follows, Conc 8.9 ug/m3 TWA 46.0 ug/m3

1700 Godfrey departs site for the day.
NOTE Wind direction for the day is primarily South to North. Fluctuation in wind patterns were also observed.

FUJIFILM CAMERA # ZAA49992 6-10-03 [signature]

6/11/03 CCI 6701/1337 41( )

0615 START member arrives at Tetra Tech Lenexa. Godfrey of TN & Assoc. a 1/11 team subcontractors reference the Total Volatile Analyzer (TVA) 1000 dual PID/FID to 100 ppm of Isobutylene. Referenced successful at 100 ppm per million (ppm). Battery for was noticed to be very low, even though the instrument was charged during the previous evening of the Tenth of June ——— NB

0700 Godfrey departs for Chemical Commodities Inc. (CCI) located at 320 South Blake street, Olathe, KS

0715 Godfrey arrives on site; personnel include but are not limited to US EPA coordinator Paul E Doherty, Environmental Restoration contractor David [illegible] in charge and four removal workers/technicians. Structure activities scheduled for the day include the segregation, crushing, and possible removal of steel and piping materials on-site from site demolition performed on 6/10/03

FUJIFILM CAMERA# ZAA49992 6-11-03 [signature]

≈74° HUMID/CLOUDY DATARAM/PID/FID

6/11/03 C-I 6901/05 C141

0725 START ... performs zeroing and span ... procedure for the DataRam Particulate monitor. A span value of -.002 was ... confirming a 98% value of factor specifications (±10%)

0735 Godfrey begins air monitoring with DataRam, ... results were recorded on a ... sheet and are as follows:
0730 Conc. 30 ug/m^3 TWA 39 ug

0745 START ... Godfrey opens up trailer (compact) ... electric and notes a male to male electrical three prong adaptor should be purchased to properly connect power to the compost trailer

07-9 EPA ... Royal ... arrives ... to speak with USC ...

0814 Mr Royal ... departs site to ... ER ... the segregation and removal of demolished materials at the abandoned site

0830 START ... records

FUJIFILM CAMERA
7AA4,152 6-11-03

≤77° HUMID/PARTLY ... DATARAM/PID/FID

6/11/03 CI C011/C30141

... second screening result for hourly ... results were as follows:
Conc 247 ug/m^3 TWA 29 ug/m^3
for 0730-0850 hours

0850 Godfrey conducts air monitoring ... the ... construction ... area located on the southeast corner of the property. PID/FID ... fluctuated between 0-3.7 parts per million. Note ... may be ... due to exhaust from excavation equipment

0900 START documents Emergency Response ... (ERRS) contractors ER segregating steel and piping wastes from demolished wood and brick pieces from the abandoned facility.

0910 A representative for Metro Recycling Incorporated, located at 1300 Jackson in Kansas City, Missouri (816)483-7735 will accept the Trailer Storage unit stored on site approximately 15 feet south from the entrance to the site. Disposal and acceptance costs were quoted at $2501.00

FUJIFILM
#2 AA4986Z 6-11-03

 ~76° Humidity/Partly cloudy DAILY ...

6/11/03 CCI 5701/92 0141 12

0930 START member Godfrey records particulate monitor readings on field sheet results are as follows
0830-0930 Conc 174 µg/m³ TWA 26 µg/m³
Ch 4 and 9 NBC [illegible] arrives on site to [illegible] and process for Telev's [illegible] NBC workers speak with Mary Peters of EPA SUPR program — NG

1045 START member Godfrey to camping store to purchase rope and stakes, supplies for the [illegible] the [illegible] post — NG

1022 Godfrey returns from [illegible] START [illegible] Santa Fe, [illegible], Excavation activities have progressed, ER crews continue to scrape and segregate metals and steel pieces into the [illegible] — NG

1030 Hourly particulate readings were recorded by START on a field sheet (#) and are as follows Conc. 25 µg/m³ TWA 25 µg/m³

1047 START stakes and ropes area of the on-site command post EPA Rep, + emergency Rep so vehicle, Metro Recycl arrives to remove the roll off storage

FUJI FILM CAMERA # 2AA41882 NG 6-11-03 [signature]

74° Humid/Cloudy — DETAFIM PA [illegible]

6/11 CCI 6K1, 0141 0

1047 on the western corner of the first property. ER continues to segregate, etc and compound steel and metal from 6/10/03 demolition activities [illegible]

1118 Metro Recycl continues to [illegible] the roll off and load onto their vehicle. Metro Recycl also removes the trailer storage unit on the east side of the site — NG

11[illegible] ER contractors break for lunch. START records hourly PM readings [illegible] on data sheet, results are as follows
1030-1130 Conc 33 µg/m³ TWA 27 µg/m³

1147 START departs site for [illegible]

1213 START returns from [illegible]

1211 ER contractors return [illegible] begin the planning process for [illegible] the demolition, compaction, [illegible] of and removal of demolished debris and material from the [illegible]

1230 ER contractors begin excavation activities on-site. START records hourly particulate monitor readings are as follows Conc 43 µg/m³ TWA 29 µg/m³

FUJI FILM # 2AA49882 NG 6-11-03 [signature]

~ 13 / 14 mid to Partly Sun / [illegible]

6/11/03 CCI 6/11/03

1237 Godfrey performs a [illegible], [illegible] [illegible] as of the excavat[illegible] [illegible] the central portion of the site. A toxalvesible PID/FID was used to assess the air for volatile organ[illegible] PID/FID readings did not exceed 0 [illegible] mg/kg or ppm [initials]

1315 Contracted Removal [illegible] [illegible] Restorat[illegible] continue the segregation compaction of steel/metal pieces [illegible] the central portion of the site where the building was demolished

1330 START member, Nicholas Godfrey of TN & Associates, Inc (TN&A) records hourly [illegible] readings [illegible] on datasheet, results are as follows 1230-1330 Conc 28 9 ug/m³ TWA 318 ug/m³

1336 Metro Re[illegible] of Kansas City Misso[illegible] deliver a [illegible] another rolloff for the disposal of scrapped steel and metal

1400 ER crews continue to excavate and demolish metal/scrap pieces and segregate wasted scraps to a second delivered roll-off

6/11/03 [signature]

FUJIFILM #2AA4 802

~ 80° / overcast / [illegible] [illegible] | AIA [illegible]

6/11/03 CCI 6/11/03

1421 OSC Paul D[illegible] leaves the site, EPA OSC requests START to [illegible] on 6/12 at approximately 0700 hours

1430 START records hourly part[illegible] monitor readings on a datasheet and onto the logbook, readings are as follows 1330-1430 [initials] Conc 288 ug/m³ TWA 326 ug/m³

1447 START member Godfrey begins packing equipment for the end of the day

1500 Godfrey departs site for the day and plans to return approximately 0700 on 6/12/03 [initials]

6-11-03

Nicholas Godfrey

6/11/03

FUJIFILM #2AA4 9383

≈68° / HUMID PARTLY CLOUDY DATA RAM P1D/FID

6/12/03 CCI 6901 1/03 0141 00

0711 START member Godfrey arrives on site. Personnel associated with site activities include OSC Paul E Doherty, Environmental Restoration of St Louis employees Foremen David Brockmeyer, and four assisting hired contractors. Todays activities include scavenging, and removing debris from the CCI facility that was demolished on 6/10/03

0730 START member Nicholas Godfrey of TN and Associates, Inc. Zeroes, runs a span test, and sets up the Data Ram particulate monitor A span value of 100 ppm was given indicating a 98% confidence factor to factor calibrate The hourly particulate readings were recorded with a spreadsheet/datasheet and are as follows 0730 Conc 25.2 ug/m³ TWA · 23.2 ug/m³

0745 Godfrey notes one truckload of debris was hauled off site at 0715 by Vickers trucking to Defenbaugh of Olathe KS

0800 Godfrey performs air monitoring with dual PID/FID instruments to

FUJI FILM #2AA49882

6-12-03

≈75° / HUMID / PARTLY CLOUDY DATA RAM P1D/FID 17

6/12/03 CCI 6901 1/03 0141 00

0800 cont detect VOC's potentially associated with site activities PID/FID readings were recorded on a data sheet and are as follows PID/FID Range 1-4 ppm

0808 Vickers trucking arrives on site to haul demolished soil and fill, debris to Defenbaugh. START member Godfrey notes a change in wind direction The particulate monitor will be moved to the western portion of the site

0815 Vickers trucking departs site #6

0821 The third Vickers trucking load arrives to haul debris from the demolished building located at 3205 Blake, Olathe KS

0825 Defenbaugh disposal and waste services of Shawnee KS, has transport service Vickers trucking arrive on-site with another truck. All debris and demolished material will be shipped to Defenbaugh for disposal as a non-hazardous, non-contaminated waste

0830 START records the second hourly particulate monitor reading for 0730-0830 results are as follows, Conc 22.8 ug/m³

FUJI FILM #2AA49882

6-12-03

≈74 HUMID/CLOUDY DATARAM

6/12/03 CCI 6901//03 0141 v

0830 cont. TWA 23 $\mu g/m^3$ Note Data Ram particulate monitor was moved to the sixth western portion of the site, wind direction was fluctuating East to West of Excavation, loading activities. Particulate Monitor location approximately 12' southeast of rolled in vable storage container. [initials]

0900 Metro Recycling Inc of Kansas City, MO arrives on site to remove the staged overhead containing scrap metal and piping pieces

0915 Metro Recycling removes the rolloff and delivers an empty rolloff that was staged on the west side of the demolished material from the building

0924 Vickers transport arrives with the seventh truck for the loading of debris

0926 Greg Bennett of the EPA Garage arrives on-site at CCI in Olathe, KS

0930 Amiber is loaded onto the EPA vehicle. The eighth truckload by Vickers was arrived to remove debris from demolition activities. Godfrey moves particulate monitor back to original position approximately ≈ 20ft Southwest of mobile command post for noted wind change. Hourly particulate

FUJIFILM
#2AA49882

[signature]

≈70° HUMID/CLOUDY

6/12/03 CCI 6901//03 0141 v0

0930 cont. readings are as follows Conc 23 $\mu g/m^3$ TWA 24.6 $\mu g/m^3$ [initials]

0937 Test START to purchase batteries for site documentation activities [initials]

1000 START return to site with batteries. Excavation of soil and debris and segregation of metal and steel pieces still continues by ER

1020 ER continues to excavate and segregate materials for later removal by Vickers Trucking and Metro Recycling [initials]

1030 Hourly DataRam particulate readings were recorded by START are as follows: Conc 21.6 $\mu g/m^3$ TWA 22.8 $\mu g/m^3$

1045 START observes wind, and humidity. Clouds have moved from East to west. The DataRam should be moved to the corner of the north side of site property

1100 START member Godfrey notes another truck arriving on site assumed to be the ninth load from the removed debris and demolished material [initials]

1120 EPA and ERRS contractors depart site for lunch. START stays on site to collect observed particulate readings at 1130

FUJIFILM
#2AA49882

[signature]

1130 START reviews Godfrey takes hourly particulate monitor readings they are as follows 1030-1130 [illegible] 22 [illegible] (TWA) [illegible]

1145 START [illegible] Godfrey [illegible] for lunch but [illegible] Godfrey decide to [illegible] particulate [illegible]

1215 Godfrey utilizes the TVA-1000 to detect for organic VOCs. [illegible] ranged from no detect to [illegible]

1225 Godfrey [illegible] to [illegible] on the south east side of the facility at approximately 12[illegible] hours.

1230 Godfrey records hourly particulate monitor readings as follows 1130-1230 [illegible] 90 [illegible] TWA 21 [illegible]

12[illegible] R Vickers truck [illegible] arrives on site to remove excavated debris [illegible] loaded from the demolished building

1235 START leaves for lunch

[illegible]

1317 START returns to the [illegible] observe [illegible]

1320 R Vickers truck [illegible] on site to haul [illegible] Sims [illegible] to [illegible] waste disposal [illegible]

1330 START records hourly particulate monitor readings, as follows 1230-13[illegible] Cox 7 [illegible] TWA 20 [illegible] R Vickers departs site another [illegible] total for hauled loads, 17

1345 START member Godfrey shoots photos of one [illegible] of [illegible] demolishing [illegible] concrete block structure at the northeast portion of the site.

1400 START observes [illegible] operator [illegible] to separate [illegible] and metals from other demolished material

1410 R Vickers transport service arrives on site to remove demolished rock, load 18

1430 Godfrey records hourly particulate monitor readings [illegible] and TWA 19 [illegible] readings are in micrograms per cubic meter

Gas workers arrive on site to shut gas off from [illegible]

FUJI FILM
#2AA49882

78° ... partly sunny
DATARAM
PILOT [illegible]

6/12/03 CCI

1430 ...a shed located on the south end of the property. The gas company M Kunz was involved in this work. R Vickers trucking arrives on site to remove soil/debris load, load # 19 [initials]

1505 Godfrey returns from utilizing TVA-1000 dual FID/PID to asses air for VOCs surrounding and within the excavation area

1525 R Vickers trucking arrives to haul load 20. Note FID/PID readings ranged from Non-detect/background to 4ppm (assumed from excavator vehicle exhaust) [initials]

1530 START records final DataRAM reading completing the eight hour cycle. Readings are as follows Conc 96 ug/m3 and final TWA - 19.1 ug/m3 [initials]

1545 START closes down mobile command post and prepares to depart site. Godfrey to arrive on site at 0700 approximately on 6/13/03. In total 23 loads were removed from the site. Godfrey to Tetra Tech START to prepare equipment and charge for next days activities [initials]

FUJIFILM #2AA49882

6/12/03 [initials] [signature]

68 ... 23

6/13/03 C-T ...

0700 START member ... G... on site and sets up air monitoring equipment for ... of particulates. Site ... include Scott Allen ... ER, all ... 6/12/2003. Godfrey ... R Vickers transporting load number 2...

0715 R Vickers truck 2 transporting load 24 has arrived on site

0730 Particulate monitor readings are as follows
0730 Conc 30 ug/m3, TWA 36 ug/m3
... value of .002 was associated with the ... to the ... [initials]

0745 ER continues to load fill material and demolished pieces into the ... service and transport units [initials]

0800 Scott Allen to resolve problem with Coscal loading equipment a system failure has caused the equipment to be inoperable. Load 25 arrives from R Vickers trucking service

FUJIFILM #2AA49882 (NG) 6/13/03

6/13/03 [initials] [signature]

6/13/03 | CCT | 6901/03,0141.00

0817 START, CR and EPA continue to wait for loads from R Vickers trucking. ER operators continue to segregate and demolish wastes from the demolished warehouse

0830 Hourly particulate monitor readings were taken by START readings are as follows.
0730 0830 Conc 31 ug/m³ TWA 29 3ug/m

0833 KC Bobcat arrives on site to repair the stalled out loading equipment.

0835 START views load number 28 RB

0844 Godfrey goes to purchase batteries and stress/refreshment drinks for the project

0911 Metro Recycling drives an approximate 40ft trailer to remove segregated steel and metal pieces from the site

0914 Godfrey returns to the site and notes trucks arrival and loading. RB

0930 START takes hourly particulate monitor readings they are as follows. 11 ug/m³ Conc and 22.7 ug/m³ for TWA at 0930

0939 Metro Recycling leaves with the 40ft truck containing the remainder of the segregated metals and steel RB

0955 Trucks 31 and 32 transport loads

FUJIFILM
#21A49882

6-13-03
[signature]

6/13/03 | CCT | 6901/03,0141.00

0955 Sent to Defubaz/Arenaly

1015 START Garage Records manager Mark Zipf arrives on site to deliver SUMA canisters to Project Manager Godfrey. Godfrey checks the delivery included are the required SUMA canisters (20) in total. OSC Doherty requested the use of five canisters per day for four total days of sampling. Sample ID tags, Chain-of-custody sheets and SUMA regulators were included in the shipment. Mr Zipf also delivered a new TVA-1000 provided by Eagle instruments, including a zero gas and regulator 1.0 LPM (liters per minute)

1030 START takes hourly particulate readings of Conc 13.3 ug/m³ and 20.2 ug/m³

1055 START notes ER crews continuing to segregate materials from the work pile

1110 START notes R. Vickers arriving on-site to haul wastes R Vickers load number 33

1130 Hourly particulate readings are as follows
1030 1130 Conc 17.3 ug/m³ TWA 20.3 ug/m³

1145 START, EPA + ER break for lunch RB

FUJIFILM
#21A49882

6-13-03
[signature]

87° Humid/Sunny DataRam

6/13/03 CCI 69011/03 0141 00

1200 START member Godfrey notes E.R crews continue to segregate while vicinity to east

1235 DataRam hourly readings were taken by START readings are as follows

1130-1230 Conc. 8 6ug/m³ TWA 21 ug/m³

1255 R Vickers trucking arrives on-site at CCI to haul load number (37)

1300 Godfrey to the store for stress drinks-

1320 Godfrey returns with 3 packs of twelve water bottles for START EPA and ER

1330 START member Godfrey takes hourly particulate readings and are as follows

1230-1330 Conc 17 8 ug/m³ TWA 19 ug/m³

1335 Load number (38) arrives from Defonts ... land fill R. Vickers trucking performed the transport

1345 START and EPA assist ER with the breakdown and removal of concrete pieces from the CCI foundation

1430 Godfrey breaks from removal work to take hourly particulate monitor readings Load (39) arrives

Readings are as follows 1330-1430

4.0ug/m³, 18.3ug/m³

FUJIFILM
#2AA49882

6-13-03

Nicholas Godfrey

93° Humid/Sunny DataRam

6/13/03 CCI 69011/03 0141 00

1455 ER crews begin removing debris and trees surrounding the south side of the site. The objective to remove the aluminum gas shed

1510 R Vickers trucking service arrives to haul load 18 for the day

1520 R Vickers arrives on site two more times the total loads carried today 6/13/02 = (20). The total hauled loads for 6/12/03 - 6/13/03 is (43) total.

1530 Godfrey collects and records particulate monitor readings for 1430-1530

Readings are as follows.

Conc 4.0ug/m³ TWA 16 4ug/m³

1530 cont NBC arrives on site to shoot photography of the site located on 302 pk

1549 START loads equipment and leaves the site for the day

Nicholas Godfrey

6-13-03

FUJIFILM
#20A49882

 ≈76° Humid/Sunny TVA/SUMMA TVA 1000

6/16/03 CCI 69011/03 0141 00

0700 Start members Godfrey & Peterson arrive on site, Peterson calibrates data ram - 0022

0705 Mark Zipf of Tetra Tech START arrives on-site to assist START with prepping SUMA Canister setup. OSC Paul Doherty resides on site with Environmental Restoration (ER) Foreman Scott Allen. Peterson, Godfrey and Zipf construct the SUMA setup to approximately 6' (feet) for breathing zone collection.

0730 Hourly particulate readings using the Data Ram particulate meter are as follows:
0730 Conc 213 ug/m³ TWA 346 ug/m³

0750 START places one Summa cannister in the NE corner of the site, one in the northwest portion downwind from the ~~[illegible]~~ waste contaminated soil pile. One Summa cannister was placed in the southwest corner between the soil pile and residents homes. The final SUMMA was placed to the East of the soil pile.

0810 Godfrey utilizes the TVA-1000 to take background readings before

FUJIFILM
#2AA49882
6-16-03 [signature]

≈78 Humid/Sunny PM/SUMMA/TVA 1000

6/16/03 CCI 69011/03/0141 00

0810 cont ER crews excavate into the contaminated soil load. Readings were as follows PID/FID Total fluctuation Background to 3 ppm (parts per million) [initials]
TVA-1000 calibrated successfully to 100ppm isobutylene gas. [initials]
Wind direction was noted at South to North.

0830 Hourly particulate readings were taken by Godfrey and are as follows. Conc 59 ug/m³ 29.6 ug/m³ (TWA) [initials]

0845 ER continues to remove the top soil layer of the contaminated pile [initials]

0855 R Urdahl trucking arrives to transport debris and soil from the demolished building.

0917 Godfrey attaches "eye" screws to SUMA boards and attaches "bungee" cords for SUMA's [initials]

0930 Hourly Particulate monitoring was performed by START, results are as follows
0830-0930 Conc 21.8 ug/m³
TWA: 26.2 ug/m³ [initials]

0941 ER continues to excavate and remove debris from the soil pile and demolition pieces from the building

FUJIFILM
#2AA49882
[initials] 6-16-03 [signature]

6/16/03 CCI 6901/03/0141 v00

0955 R Vickers arrives on site to pick up load number Nine. [initials]

1017 R Vickers departs site an a 2nd final load will be removed completing the total removal of the demolished building debris and fill material [initials]

1030 Hourly particulate readings were recorded by Godfrey and are as follow

1030-Conc 12.0 µg/m³ TWA 24.7 µg/m³

1045 Godfrey takes VOCs readings around soil pile readings remain constant at Background zero to 2 ppm. [initials]

1115 Godfrey views ER crews loading the potentially final load of fill material and debris from the demolished building

1130 START takes hourly particulate monitor readings results are as follows 1030-1130 Conc 58.4 µg/m³ TWA 22.9 µg/m³

1145 ER completes the removal of soil load from the abandoned demolished building the total loads taken to Detenbaugh Disposal services is 54 [initials]

1200 ER workers continue to level soil at the facility and pull away the

FUJIFILM #2A4498F2 [initials] 6-16-03 [signature]

6/16/03 CCI 6901/03 0141 v0

1200 cont Soil layer along the western portion of the contaminated soil pile. The plastic sheeting was layed down and is currently visible START takes TVA-1000 and utilizes it around the plastic sheeting and fill segregation area. Readings are as follows Background to 3 ppm

1220 Godfrey notes R Vickers trucking services arrived on-site to remove fill material / START member Godfrey utilizes TVA-1000 during the initial removal of the contaminated soil load. A visible discoloration at the soil was noted by START to a darker black/brown. PID/FID readings ranged from 0-8.8 ppm An odor of petroleum/waste oil was also noted. Readings were taken in the breathing zone 4-6 ft approximately from the area of excavation

1230 START records hourly particulate readings they are as follows 1130-1230 Conc 12.8 µg/m³ TWA 23.2 µg/m³

1250 R Vickers departs for Detenbaugh with contaminated load

FUJIFILM #2A4498F2 [initials] 6-16-03 [signature]

6/16/03 CCT 6901/03 0141 00

1250 cont. waste-manifest will be delivered to the driver upon ER crew members return from lunch

1255 START departs site for lunch

1315 START returns to site and utilizes TVA-1000 Dual PID/FID. Readings along the fenceline surrounding the contaminated pile are as follows: background 0-5ppm

1350 START member Godfrey takes hourly reading for particulates. They are as follows Conc 26.6 ug/m³ TWA: 22 6ug/m³

1420 Godfrey utilizes TVA-1000 readings around the breathing zone are as follows, 0-4 ppm. A perimeter along the fence was walked by START

1430 Hourly particulate results were recorded by Godfrey results are as follows. Conc 33 ug/m³ TWA. 22 5 ug/m³

1450 ER Foreman Scott Allen arrives on-site with fencing material to replace the broken down fence located at the central portion of the fenceline on the East side

1520 Godfrey utilizes the TVA-1000

FUJIFILM
#2AA498F2

6/16/03

6/16/03 CCI 6901/03 0141 00

1520 cont. to monitor for volatile compounds in the breathing zone. No such compounds were identified above 10 parts per million. A maximum reading of 6 ppm was identified

1530 Hourly particulate readings were recorded by START and are as follows 1430-1530 Conc 14.1 ug/m³ TWA 22.8 ug/m³

1550 Godfrey collects SUMMA canisters for laboratory analysis. The samples were labeled, A-1, A-2, A-3, A-4 and A-5 (FB), all samples will be submitted to Columbia Analytical Services for analysis of Volatile Organic compounds

1607 START member Godfrey departs site for the day to TetraTech START.

Nicholas Godfrey
6/16/03

FUJIFILM
#2AA498F2

6/17/03 — CCI — 69011/03 0141 00

0700 START member Nicholas Godfrey arrives on-site at Chemical Commodities, Inc in Olathe, Kansas. Personnel on site include EPA OSC - Paul E Doherty, Scott Allen of Environmental Restoration and three contracted removal Specialists from ER

0710 Godfrey sets up SUMMA canisters at locations NE, NW, SE, SW

0730 Godfrey turns on SUMMA canisters to begin the 8 hour collection period for volatile organic compounds. Hourly particulate readings are as follows 0730 Conc 501, TWA 69.1 (readings were listed in ug/m³ (micrograms per cubic meter). SUMMA collection will be completed for samples A-6, A-7, A-8, A-9, and A-10

0750 START notes ER crews departing for the local agricultural supply store to purchase hay bales for the coverage of the soil and to promote seed growth

0800 Godfrey takes TVA 1000 screens around the contaminated pile, results are as follows BZ approximately 3 feet west of pile

FUJIFILM #21149882

6-17-03 Nicholas Godfrey

6/17/03 — CCI — 69011/03 0141 00

0800cont From background zero to 6 ppm

Readings in the breathing zone along the west fenceline were noted from zero to 4ppm although fluctuations were frequent 0-6ppm

0817 Two trackloads from R Vickers transport service arrive to remove contaminated soil from the soil pile located on the southern portion of the CCI site

0830 Hourly particulate readings were recorded by START and are as follows 0730-0830 Conc 165 ug/m³, TWA 354 ug/m³

0855 ER workers continue to segregate clean fill from contaminated soils on site

0900 START takes second ready reading TVA-1000 Readings were from zero to 4ppm

0930 Particulate Readings were recorded by START and are as follows = 0830-0930 Conc 18.1 ug/m³ TWA = 29.9 ug/m³

0947 R. Vickers arrives on-site to transport the soil load to Deerfield

1000 START utilizes TVA-1000 Readings are as follows Background to 3 ppm

1030 Hourly particulate readings were recorded by START are as follows: Conc. Still up TWA 27.3 ug/m³

FUJIFILM #21149882

6-17-03 Nicholas Godfrey

~62 Sunny — Summit TVA 1000 Portable

6/17/03	CCI	6901/03 0141 00
1043	ER crews repair fence on eastern boundary of the site. Sequence of soil contours	
1100	START member Nicholas Godfrey of TVA utilizes TVA-1000 around the contaminated soil pile. Readings are as follows: Background to 5 ppm. ER continues excavation on the southern portion of the site.	
1130	START takes hourly particulate monitor readings. They are as follows 1030-1130 Conc. 6.3 ug/m³ TWA 26 ug/m³	
1200	START utilizes TVA-1000 for indication of VOCs readings were 0-6 ppm	
1230	START takes hourly reading for Particulates readings were as follows. 1130-1230 Conc. 8.8 ug/m³ TWA 23 ug/m³	
1247	EPA and ER return from lunch time backhoe loaded onto site to remove the contaminated soil load	
1300	ER, EPA and START note bluish the lowest assumed soil cap. the area of noted soil discolorants was analyzed for VOC's. The detection of the TVA-1000 was noted at 38 ppm EPA requests START to don level C"	

FUJIFILM #ZAA49882

N6 6-17-03

~77 Sunny

6/17/03	CCI	6901/03 0141 00
1300 cont	PPE and respirator to take one composite sample for collection of VOC's, SVOC's, herbicides and pesticides. Godfrey contacts START Manager and requests sample analysis information and for the coordination of an qualified outside laboratory.	
1330	Godfrey records one hour particulate readings and are as follows. Conc 17 ug/m³ TWA. 23 ug/m³	
1400	Godfrey prepares for initial entry to the contaminated pile.	
1430	Hourly particulate readings are as follows 1330-1430 Conc 15.9, TWA 24.9 ug/m³	
1445	Godfrey performs initial entry in level "C" PPE. Start member Carmen Santos on-site to assist Godfrey and shoot photography.	
1526	Godfrey packages labels and prepares samples for delivery to AML Laboratories. of 01 the Sample concentration expected to be high due to scent and appearance.	
1530	Hourly particulate readings are as follows 1430-1530 Conc 32.3 ug/m³ TWA 23 ug/m³ Godfrey collects SUMA canisters	

FUJIFILM #ZAA49882

6-17-03

≈ 85 - SUNNY SUMMA, TVA-1000 DATARAM

6/17/03 CCI 6901 03 014/.00

1530 For the daily 8 hour collection - Samples were packaged/sealed and a chain-of-custody form was prepared by START.

1600 ER crews continue to excavate and level soils, soils to be leveled on property were taken from segregated clean fill material.

1630 Hourly particulate readings were taken by START and are as follows:
1530-1630 Crucible TVA. 235

1647 START leaves site to Tetra Tech, Lenexa

NOTE: Air monitoring for VOC's were performed by START outside of the fenced area. Results are listed on a map drawn on site. Readings were below 2 ppm along the sidewalk approx 40 ft west of site. NG 6/17/03

(ppm) TVA 1000	(Approximate) Location
0800	0-6 Perimeter of soil pile
0900	0-4 Perimeter of soil pile
1000	0-3 Site perimeter
1100	0-5 Perimeter of Soil Pile
1200	0-6 " "
1300	0-4 Site perimeter
1400	0-5 Perimeter of Soil Pile

NOTE: Readings taken upon ER crews operating 2nd later peaked at 40 ppm. NG 6/17/03

6/17/03

FUJIFILM
#ZAA49882

6-17-03 Nick Godfrey

≈ 80 SUNNY

6/18/03 CCI 6901 03 014/.00

0710 START member Nicholas Godfrey arrives on-site to chemical commodities in Olathe, Kansas. Personnel on site include but are not limited to, EPA OSC Paul Doherty, Scott Allen the foreman for ER and three contracted removal specialists also from ER. Godfrey sets up dataram particulate monitor and SUMMA air canisters. Samples A-11 (NE), A-12 (SE), A-13 (SW), A-14 (NW) and A-15 (FB) were placed on site. Field sheets were completed by START. The day's objectives include continued monitoring of particulates and VOCs to ensure site safety and health concerns to the site are addressed. Godfrey calibrates the PID/FID to 100 ppm Isobutylene and to zero gas. The dual PID/FID calibrated successfully but upon removing the calibration tubing from the nozzle readings remained at +/- 210 ppm, indicating inaccuracy. Godfrey decides to allow the instrument an attempt again within an hour. NG

0730 Hourly particulate readings are as follows

FUJIFILM
#ZAA49882

6-18-03 Nicholas Godfrey

6/18/03 CCI 69011.03.014100

0730 cont. Conc 62 ug/m3 TWA 56 ug/m3

0755 ER begins to spread seed on the East side of the property

0830 START takes hourly particulate readings Readings are as follows. Conc: 27.3 ug/m3 TWA 40 ug/m3

0850 R Vickers hauling service arrives on site with a clean fill soil load, the fill material will be used to cover the enclosed pit of contamination.

0915 R Vickers arrives on-site with the second soil load of clean fill.

0930 Hourly particulate readings were taken by START member Godfrey and are as follows. Conc: 22.6 ug/m3 TWA: 35.7 ug/m3

0945 START leaves site to purchase batteries

0957 START returns with batteries and electrolyte drinks for ER workers and employees

1015 ER workers begin to scrape the top layer of soil from the NWestern portion of the site — [initials]

Godfrey notes earlier TVA-1000 readings taken on-top of, and surrounding the perimeter using the TVA-1000 recalibrated w/ FID lamp with readings ranged from

FUJIFILM #24449882

6-18-03 [signature]

6/18/03 CCI 69011/03 014100

1015 cont background to 2.3 parts per million, following the fill cover and the leveling of the soil, readings were below 2 at a fluctuating 1.4 ppm to non-detect

1030 Hourly readings for particulates were noted by START and are as follows: Concentration 18.4 ug/m3 Time Weighted Average: 43.3 ug/m3 — [initials]

1050 ER crews continue to level the soil surrounding the site excavation area

1110 Environmental Restoration workers continue to clean the cement pad of dirt and debris

1130 START records hourly particulate readings for the Data Ram. Conc: 31.2 ug/m3 TWA: 39.4 ug/m3

1203 ER seeds excavated area and proceeds to hay the area as well. The estimated area of excavation and haying 200 square feet by 125 square feet. Wind direction was estimated a South to NORTH with cross winds from East to West.

1230 START collects hourly particulate readings and are as follows: Conc. 12.1 ug/m3 TWA 35.2 ug/m3

1240 START leaves site for lunch — [initials]

FUJIFILM #24449882

6-18-03 [signature]

= 84 sunny

6/18/03 CCI 69011/03.0141

1315 START returns from lunch to resume site related activities at the CCI facility

1330 Hourly readings for particulates were recorded by START and are as follows: Conc: 11.7 TWA: 32 ug/m3

1337 START assists ER with the spraying of hay on the facility property

1430 START records hourly particulate readings: Conc 16.4 ug/m3 TWA: 29.5 ug/m3

1530 Godfrey records particulate readings TWA: 28.3 ug/m3 Conc: 20.9 ug Godfrey collects SUMMAS for analysis of VOC's SUMMA's A-11, A-12, A-13 A-14 and A-15 (FB) - ER crews and START spread water hoses and attach sprinkler system to water hayed and seeded grasses and soils to

1545 ER crews depart site finishing excavation demolition and restoration activities on site. Scott Allen, ER foreman for the site reported total tonnage for excavation activities would be completed and available later into the next week - Cell number 314-280-4156.

PUTSERN
#2404 4882

Michael Godfrey 6-18-03

~ 80 - sunny/partly cloudy

6/19/03 CCI 69011/03 0141 00

0900 START arrives on-site with EPA OSC Paul E Doherty, activities for the day include the watering of soils and grasses for restoration purposes

NOTE: Between approximately 1530-1600 the piping wrench to adjust fire hydrant water pressure was used by START and then stolen from site by an unknown party. START uses a monkey wrench to shut off the water

1000 START alters position of sprinkler systems, to NWest positions

1200 START moves positions of irrigation sprinklers to promote site restoration activities at CCI in the

1300 Godfrey moves sprinkler position

1400 Godfrey moves sprinkler positions on site.

1500 Godfrey receives call from Angela Sweeney Analytical Coordinator for CCI site. Explaining sample results for CCI would be available for review later that evening. Godfrey departs site for the day.

6-19-03

≈ 70° Degrees

6/20/03 CCT 6901/03 0141 00

0910 Godfrey arrives on site OSC Paul Doherty is on site, the Excavator was removed from the property at approximately 0830 that day Godfrey turns water on and waves sprinklers position on site. Sample results were also given to Paul Doherty

1015 Godfrey moves sprinklers position on site

1100 Godfrey moves sprinkler to the west side of the property. AB

1155 Godfrey to the store to copy keys for the command post. AB

1210 START member Godfrey to store for lunch Godfrey purchases supplies and returns back to the site

1300 Doherty returns to site with green polyurethane containers AB

1320 Godfrey begins to fill green polys OSC Doherty regards Godfrey to Filling of 190 gallon Tank. AB

1345 OSC Doherty departs site.

1422 Godfrey turns water off and records estimated time of tank filled at 5 hours

1455 Godfrey departs site for the day.

6-20-03 Michele Godfrey

6/21/03 CCT 6901/03 0141

0800 START member Godfrey arrives on-site to turn sprinkler system on.

1451 Godfrey notes glass grass on site START member Godfrey notes glass grass look similar to glass below the lowest layer of soil; soil sample S-2 was taken within this interval, which currently sits 1-2 ft bgs. AB

1523 Godfrey moves sprinkler positions

1620 Godfrey notes one of the four sprinklers is not operating properly. AB

1735 START member Godfrey moves sprinklers to new positions and notes the running of the Command post's pulling/steering away from the vehicle.

1555 Godfrey turns off sprinkler system and departs the site for the day

6-21-03

Michele Godfrey

≈84° Humid Hot

6/24/03 CCI 6904.E.03.0141

1215 START member Nicholas Godfrey arrives on-site and begins to water property.

1314 Godfrey goes off-site for lunch supplies

1327 START member returns and changes sprinkler system. Note, Tarpolin/awning for the command post has begun to wrap approximately 5 ft from passenger side front

1417 While moving sprinkler systems START member Godfrey notes one fully intact [illegible] on the west side of the old building concrete pad approximately 60 ft from the south perimeter of the site [initials]

1455 Godfrey moves sprinkler systems on-site to new locations. Note one piping fixture was noted ≈20 ft North of area of previous contaminated soil pile.

1515 Boeing PRP arrives on-site to view progress on site activities — [initials]

1530 Boeing questions the trench stationed on-site, wondering about its removal. START reports the EPA would make all directives known as site activities continue. START moves sprinkler positions — [initials]

≈88° Hot Humid

CCI 6904.E03.0141

1546 START moves sprinkler positions and begins to load items staged on the side of the site, wood crate, blankets, assorted trash sacks ([illegible] [illegible])

1608 START turns off water and departs the site for the day [initials]

Note: Before leaving site START views dead mouse on-site, fully intact. To date, this is the sixth dead mouse found in the same condition since the beginning of this Removal Assessment — [initials]

[signature]

9/11 Cloudy/Rain

CCI B901[illegible]/03 0141 00

1250 START member Godfrey arrives on site and sets up hoses and turns on water system. New task order arrives today dated for final completion at the end of fiscal year 4.

1320 EPA Command Post awning tears in half due to strong winds and rain, START retreats to minivan and turns water off. START will wait for lightning to cease before closing and leaving the site. Godfrey [illegible] to disconnect electrical connections without standing in [illegible] water —

1350 Lightning and Rain ceases. Godfrey decides to wrap the awning around the frame and to secure with "bungee" style cords.

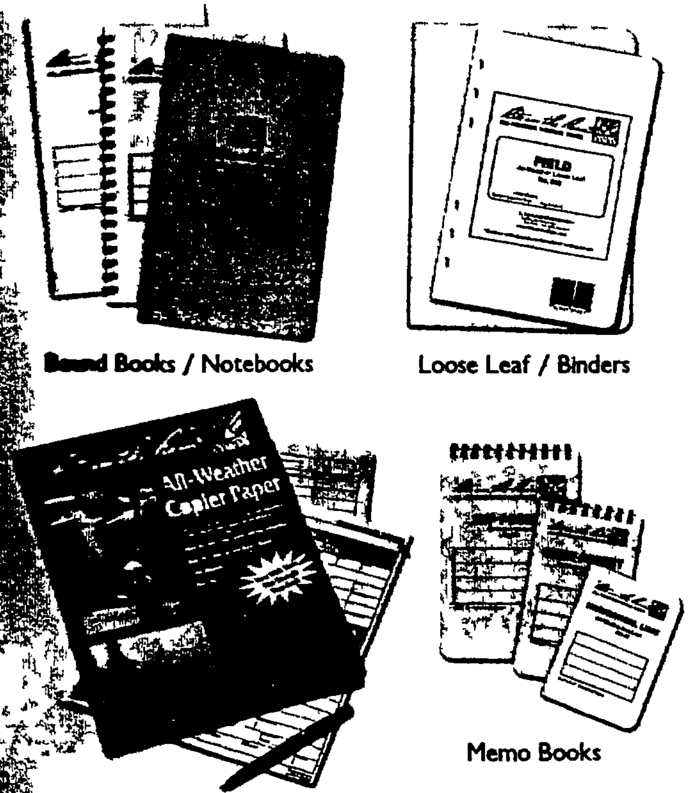
1400 START member Godfrey walks site boundary with a measurement wheel. Perimeter measures N–S ≈ 149 ft. W–E ≈ 141 ft. Note, site has pockets of excavated and seeded areas, to be excluded or included in the total square footage of the excavated area.

1135 Godfrey leaves site for the day — [initials]

[signature]

"Rite in the Rain"®
ALL-WEATHER WRITING PAPER

"Outdoor writing products.
for outdoor writing people"



Bound Books / Notebooks
Loose Leaf / Binders
Copier Paper / All-Weather Pens
Memo Books

www.RiteintheRain.com

KS398

Outdoor writing products for outdoor writing people.

RECYCLABLE

Rite in the Rain A unique All Weather Writing paper created to shed water and enhance the written image It is widely used throughout the world for recording critical field data in all kinds of weather

Available in a variety of standard and custom printed case-bound field books, loose leaf *spiral* and stapled notebooks multi copy sets and copier paper

For best results use a pencil or an all-weather pen.

a product of

J L. DARLING CORPORATION
Tacoma WA 98424-1017 USA
(253) 922 5000 FAX (253) 922 5300
www RiteintheRain.com

NSN 7530-01-433-5654

6 32281 31111 9

"Rite in the Rain"®
ALL-WEATHER WRITING PAPER

LEVEL

All-Weather Notebook
No 311

Chemical Commodities
Inc
(CCI)
G9011 03 0141 00

4 5/8 x 7" 48 Numbered Pages

"Rite in the Rain®"
ALL WEATHER WRITING PAPER

Name _____

_____

Address _____

_____

Phone _____

Project _____

_____

_____

_____

Clear Vinyl Protective Slipcovers (Item No 30) are available for this style of notebook.
Helps protect your notebook from wear & tear. Contact your dealer or the J. L. Darling Corporation.

CONTENTS

PAGE	REFERENCE	DATE

~90°, Hot, Humid

6/27/03 CCI 69011-E-03 CR

1100 START member arrives on-site to assess site conditions at CCI.

1215 START member Rachel Treanor writes OSC Doherty on site and returns to Tetra Tech/Lewis, NJ.

6-27-03

[signature]

~94° Partly Cloudy

7/01/03 CCI 69011-E-03 CR

1500 START member meeting at TN & Associates (TN&A) arrive on site to perform on-site and restoration/vegetation activities.

1507 Gratings [illegible] from previous days [illegible] depicts the site after completing [illegible] ensuring the security of the site.

7/1/03

[signature]

~91 HOT

7/1/[illegible] CCI [illegible]

1247 START member Godfrey arrives to perform vegetation activities at 3000 3[illegible] S Pl[illegible] Ct, Olathe

1255 Godfrey notes patches of unsel[illegible] to the South of the concrete along the western perimeter of [illegible] res[illegible] and restoration [illegible] performed by [illegible]

13[illegible] START changes sprinkler position

1420 START change sprinkler position [illegible] [illegible] [illegible] and [illegible] [illegible] many areas [illegible] to be [illegible] [illegible] with water from [illegible] [illegible] system

15[illegible] START member Godfrey speaks [illegible] Doherty about seeding the area on 7/5/03 [illegible] Doherty [illegible] said he will take the [illegible] after the 7/[illegible] [illegible] on 7/5/03 [illegible]

Godfrey rotates sprinkler position

1627 Godfrey contacts [illegible] about seed supplier for the site

John [illegible] START team member [illegible]

1700 START member departs site for [illegible]

[illegible] 7/1/03

7/3/03 CCI [illegible]

1211 START member Godfrey [illegible] [illegible] [illegible] dry soil in [illegible] [illegible] Godfrey connects water system to the hydrant located North of the property

1258 Godfrey moves sprinkler position

13[illegible] START alternates water system

1324 Nicholas Godfrey moves position of water sprinklers on site

1400 Godfrey moves position of watersprinkler

1430 Godfrey notes many areas of dry soil

1521 START member Nicholas Godfrey rotates the sprinkler system

Godfrey departs site for the day

Nicholas Godfrey

7/3/03

Hot, Humid, windy
7/7/03 sunny CCI 91° F
Monday

1200 START team member Rachel Treanor arrives on site to perform vegetation restoration activities at 300-320 South Blake, Olathe KS
12 15 START member Treanor visually assess site and begin to assemble Watering mechanisms
1220 Water began to flow to Sprinklers on the far South/west corner of the CCI site Treanor did not move watering system on the first position - START started watering where we ended last event
Very dry conditions on site
1330 START R Treanor moved sprinkler positions continue to water South west side of one sprinkler South of concrete slab
1420 START R Treanor walks Site looking for driest areas

1430 START R Treanor moves sprinkler position
1435 R Treanor tried to increase water pressure at hydrant
15 20 R Treanor moves Sprinkler positions continues to water driest areas areas on the far East and west seem driest
1600 START R Treanor moves sprinkler positions
1600 Wind picks up noticeably
1620 Start R Treanor moves sprinkler positions
1645 Start R Treanor moves Sprinkler positions
1700 START R Treanor begins to disassemble Watering system
1705 Hydrant is turned off
1706 Site is walked in its entirety by START R Treanor

1710 START R Treanor secures mobile command post and leaves the site
1710 - Front gate locked & closed.

RT 7/9/03

CONTENTS

PAGE	REFERENCE	DATE

Page Skipped Intentionally
PM [signature]
START TEAM
7/8/03

~92° Hot, w

7/8/03 CCI 69011/03 0141

1215 START member Nicholas Godfrey arrives on site to perform restoration and vegetation activities. Godfrey notes soil is dry and decides to purchase sprinkler system

1324 START member Emily Fentress arrives on site to train for next weeks restoration activities. — NG

1414 START moves sprinkler positions several times and departs for Ace Hardware to purchase sprinklers — NG

1433 START returns to site and moves sprinkler systems — NG

1523 Godfrey departs site after showing Fentress the hydrant system — NG

1545 Fentress moves sprinkler positions

1615 Fentress moves sprinkler positions

1635 Fentress moves sprinkler positions

1655 Fentress shuts water off, brings in hoses, and puts sprinklers away

710 Fentress puts chairs away and leaves locking fence and post
Emily Fentress 7/8/03

~96° Hot, Humid, Windy

7/9/03 CCI 69011 03 0141 00

1400 START member Emily Fentress arrives on site to perform restoration of vegitation. Fentress drags out hoses, places sprinklers, and turns on fire hydrant

1425 Fentress checks soil around sprinklers still hard. Fentress decides not to move sprinklers for ten more minutes

1500 Fentress decides to move sprinklers every 30 minutes

1505 Fentress moves sprinkler position

1535 Fentress moves sprinkler position

1605 Fentress moves sprinkler position

1635 Fentress moves sprinkler position and walks around site. The ground is visibly dry. Nicholas Godfrey calls START

7/9/03

phone to check on site and make arrangments for Fentress to water the morning of 7/10/03

1705 Fentress moves spnnkler position

1735 Fentress moves spnnkler positon

1805 Fentress moves Spnnkler position to driest areas for additional water

1823 The wind is picking up and the sky is turning gray Fentress decides to stop watering Fentress shuts of the fire hydrant and hauls the hoses inside the gate.

1834 Fentress locks command post

1839 Fentress leaves locking the gate

Emily Fentress 6/9/03

~81 not humid

7/10/03 CCI 69011 03 0191 10

1338 START number EmilyFentriss arrives on site to check for errosion after last night's rain storm

1353 No signs of errosion The top layer is already dry and cracking

1357 Fentress locks gate and leaves

Emily Fentress 7/10/03

2½ F hours

7/14/03 CCI

705 START Member Emily Fentress arrives on site to perform vegitation restoration Fentress connects hose and turns hydrant on Two new sprinklers have replaced the original four The new Sprinklers move back and forth rather than in a circle

745 Fentress moves Sprinkler positions

805 Fentress Moves Sprinkler positions

825 Fentress moves Sprinkler positions

845 Fentress moves Sprinkler positions

905 Fentress moves sprinkler positions

925 Fentress moves sprinkler positions

940 Fentress moves sprinkler positions

955 Fentress moves Sprinkler positions

1010 Fentress moves sprinkler positions

1025 Fentress moves Sprinkler positions

1040 Fentress moves Sprinkler positions

1055 Fentress moves sprinkler positions

1110 Fentress moves Sprinkler positions

1125 Fentress moves Sprinkler positions

1140 Fentress moves sprinkler positions

1155 Fentress moves sprinkler positions and walks around site

1210 Fentress turns off hydrant, drags in hoses, and locks command post

1215 Fentress locks gates and leaves

Emily Fentress 7/14/03

82°F Humid

7/15/03 CC1

0655 START member Emily Fentress arrives on site to perform vegitation restoration Fentress connects hose and turns hydrant on

0725 Fentress moves sprinkler positions

0770 Fentress moves Sprinkler positions

0755 Fentress moves sprinkler positions

0810 Fentress moves Sprinkler positions

0825 Fentress moves Sprinkler positions

0845 Fentress moves sprinkler positions

0900 Fentress moves Sprinkler positions

0915 Fentress moves Sprinkler positions

0930 Fentress moves Sprinkler positions

0945 Fentress moves sprinkler positions

1000 Fentress moves Sprinkler positions

1015 Fentress moves Sprinkler positions Maryruth Rivas from Haley and Aldridge Stopped by to take pictures

1030 Fentress moves Sprinkler positions Quan Do and Jeff Pritchard come to remove tanks, sump pumps, and trash

1045 Fentress moves sprinkler positions

1100 Fentress moves Sprinkler positions The temperature has increased into the 90s and a light breeze has picked up

1115 Fentress moves Sprinklers

1130 Fentress moves Sprinkler positions

1145 Fentress turns off hydrant unhooks hose and brings hose inside gate

1154 Fentress locks command post locks the gate and leaves

Emily Fentress 7/15/03

7/16/03 CC1

757 START member Emily Fentress arrives on site to perform vegitation restoration Fentress connects the hose to the hydrant and turns the hydrant on
725 Fentress moves the Sprinkler positions
741 Fentress moves the sprinkler positions
755 Fentress moves the sprinkler positions
810 Fentress moves the sprinkler positions
825 Fentress moves the sprinkler positions
840 Fentress moves the sprinkler positions
855 Fentress moves the sprinkler positions
910 Fentress moves the Sprinkler positions
925 Fentress moves the sprinkler positions
940 Fentress moves the Sprinkler positions
955 Fentress moves the sprinkler positions A man came to mow the mature grass on the edges of the site
1010 Fentress moves the sprinkler positions
1025 Fentress moves the sprinkler positions
1040 Fentress moves the Sprinkler positions The lawn mower leaves
1055 Fentress moves the Sprinkler positions and walk around the site

1110 Fentress moves the sprinkler positions
1125 Fentress moves the sprinkler positions
1140 Fentress moves the sprinkler positions
1155 Fentress turns off the hydrant and brings the hose with in the fence
1203 Fentress lock command post and gate and leaves

Emily Fentress
7/16/03

82°F Humid
CC1

9/17/03

0647 START Member Emily Fentress arrives on site to perform vegitation restoration
0715 Fentress moves Sprinkler positions
0730 Fentress moves sprinkler positions
0745 Fentress moves Sprinkler positions
0800 Fentress moves Sprinkler positions
0815 Fentress moves sprinkler positions
0830 Fentress moves sprinkler positions
0845 Fentress moves Sprinkler positions
0900 Fentress moves sprinkler positions
0915 Fentress moves sprinkler positions
0930 Fentress moves Sprinkler positions
0945 Fentress moves Sprinkler positions
1000 Fentress moves sprinkler positions
1015 Fentress moves sprinkler positions
1030 Fentress moves Sprinkler positions
1045 Fentress moves Sprinkler positions
1100 Fentress moves sprinkler positions
1115 Fentress moves sprinkler positions
1135 Fentress moves sprinkler positions
1155 Fentress moves sprinkler positions
Turns off the water and drags the hose inside the gate

1208 Fentress locks command post and gate and leaves

Emily Fentress
9/17/03

82 + Burning

7/18/03 CCI

0744 START member Fentress arrives on scene, to perform vegitation restoration Fentress drags new three inch hose out to hydrant with new three in connection. Fentress add another "Y" connection to 5/8 garden hose to make 4 total garden hoses with 4 Sprinklers Fentress turns the hydrant on

710 Fentress positions the 4 Sprinklers noticing the greatly improved water pressure

735 Fentress moves sprinkler positions

740 Jeff Pritchard arrives on site to change the split connecting the 2" hose to the 5/8 hose The water is shut off for 20 minutes

820 Fentress moves sprinkler positions

850 Fentress moves sprinkler positions

920 Fentress moves sprinkler positions

935 Jeff Pritchard and Quan Do arrive at site Do turns water off Pritchard and Do add 'T' connection four hoses and two more sprinklers

1005 Water turned back on, New Sprinklers positions among original four Sprinklers

1015 Fentress moves sprinklers

1045 Fentress moves sprinklers

1115 Fentress turns off hydrant, rolls 4 three inch hoses and stores them in the command post With the meter Fentress drags the garden hose inside the fence

1132 Fentress locks command post and gate and leaves

Photos Quan Gardens

62 F Humid

7/21/03 CC1

0944 START member Emily Fentress arrives on site to perform vegitation restoration Fentress connects hoses and meter

1008 Fentress positions sprinklers and turns on water

1038 Fentress moves sprinkler positions

1108 Fentress moves sprinkler positions

1138 Fentress moves sprinkler positions

1208 Fentress moves sprinkler positions Nicholas Godfrey arrives on site

1241 Fentress and Godfrey roll up hoses, shutoff hydrant, and remove meter

1459 Fentress and Godfrey lock Command post and gate and leave

Emily Fentress

7/23/03 CC1

1454 START member Fentress arrives on site to perform vegitation restoration Fentress connects meter and hoses to hydrant

1510 Fentress positions sprinklers and turns hydrant on

1540 Fentress moves sprinkler positions and walks around the entire site

1610 Fentress moves sprinkler positions

1640 Fentress moves sprinkler positions

1710 Fentress moves sprinkler positions

1730 Fentress turns hydrant off, and brings hoses and meter in

1741 Fentress locks command post and gate and leaves

Emily Fentress
7/23/03

8/4/13 CCI

1000 START member Godfrey unlocks on site and activates hoses for irrigation/vegetation purposes

1022 Godfrey moves sprinkler post #1 and walks site perimeter

1100 Godfrey moves sprinkler positions

1125 START member Mitch for Godfrey at TWR Associates (TWR) moves sprinkler positions to the west side of property

1145 START member Godfrey moves sprinklers for the final irrigation cycle

1200 Godfrey turns hydrants off and rolls up hoses on site

1215 Godfrey returns hoses and meets to Command Post vehicle and departs site

Charles Godfrey

10/4/13 CLI

0700 Godfrey conducts site walk to prepare placement of hoses for irrigation purposes

0920 Sprinklers and hoses are in position START member Godfrey turns on hose system and sets up / prepares site related analytical monitoring

0957 START member Godfrey moves sprinkler positions to the eastern portion of the site

1010 Godfrey moves sprinkler positions

1024 Godfrey moves position of water flow on 'rainfall sprinklers

1037 START member receives call from OSC Gurney for other sustenance related site work. Godfrey moves positions and drives to local gas station to use the payphone

1100 Godfrey returns and moves sprinklers, one more cycle is anticipated.

1120 Godfrey moves last irrigation cycle START turns off hydrants, rolls hoses and closes down the Command Post

8/9/03 CCI

0960 START member Godfrey arrives on site at 0920 to perform irrigation/reclamation activities.

0940 Godfrey attaches hoses and hydrant flow system to the hydrant and turns on water cycle

1021 Godfrey moves sprinkler position

1037 Godfrey departs site for refreshments drinks.

1100 Godfrey returns to site and moves sprinkler positions on site

1120 START member Godfrey moves sprinkler position to the left side of the previous

1150 Godfrey moves sprinkler position for the final time

1215 Godfrey shuts off hydrant rolls up hoses and closes and locks Region 7 ERT Command Post

1233 Godfrey departs CCI for day

8/12/03 CCI

0945 Godfrey wakes up on the morning of the 12th and notes rain had fallen overnight and opts not to perform irrigation activities on site at the chemical commodities facility

8/12-03

Michele Godfrey

88° Hot/Humid

8/15/03 CCI

0845 START member Nicholas Godfrey arrives on site to perform site vegetation activities.

0910 Godfrey completes set-up of irrigation hoses and connects hydrant nozzles

0915 Godfrey leaves site to obtain water for stress relief

0930 Godfrey returns and moves sprinkler portions

0955 Godfrey moves sprinkler position

1021 STM Godfrey moves sprinkler positions to cover areas of browning dead grass. Godfrey decides to allow sprinklers to run for extra time

1040 Godfrey moves sprinkler positions to East side of property at CCI site.

1123 Godfrey moves sprinkler positions for the final time -

1145 Godfrey turns off water and rolls up hoses

1200 Godfrey departs site for the day

25140 cubic feet
Meter 1.5

8-15-03

96°

8/15/03 CCI

[illegible] START member Godfrey arrives on site at the CCI for lite, [illegible] hoses and [illegible] water meter to hydrant

[illegible] Godfrey moves sprinkler positions [illegible] temperatures for today are 101°–107° Fahrenheit

0937 Sprinklers moved [illegible]

1005 STM Godfrey alters sprinkler positions to the southern portion of the property, [illegible]

1021 Godfrey moves sprinkler pos[illegible]

1048 Sprinkler positions moved again [illegible]

1115 Irrigation positions were moved [illegible]

1146 START member Godfrey moves sprinkler positions to East side of the site property

1200 Godfrey moves sprinkler position for the final time.

[illegible] Godfrey shuts off water, rolls up hoses and removes hydrant meter

[illegible] Godfrey departs site for the day

Nicholas [illegible]

8-15-03

8/22/03 CCI

0930 Start member Godfrey arrives on-site
0945 Godfrey sets up sprinklers and meter to hydrant Sprinkler positions
1015 START member Godfrey alters sprinkler positions and walks site perimeter
1036 Sprinkler positions altered by Godfrey to the northern portion of the site
1055 START member Godfrey alters irrigation system and departs site for stress discs
1104 Godfrey returns and alters sprinkler positions
1121 Sprinklers altered in positions Godfrey calls electrical cords.
1139 Sprinkler positions are moved again Godfrey assesses site perimeter conditions
1215 Sprinkler positions moved again for what is assumed as the final time period. Sprinklers moved to west
1245 Godfrey uses the monkey wrench to turn off hydrant Hoses were rolled START member Godfrey departs the site for the day

8/22/03

9/15/03 CCI

1035 START member Godfrey and Di[illegible] leave Tetra Tech EMI to go to CCI
1050 START members arrive at CCI to jump the engine and return the awning to its original position
1130 START continues to wait for hoses to the Command Post [illegible]
1145 Dc and Godfrey successfully start command post engine and return vehicle to the Tetra Tech START office in Lenexa, KS

9/15/03

APPENDIX D

TABLES

(14 Pages)

Tables

TABLE 1

AIR MONITORING RESULTS – TVA 1000 DUAL PID/FID

CHEMICAL COMMODITIES INCORPORATED

OLATHE, KANSAS

Date	Time	Location	Results in ppm
6/10/2003	0845	demolition area	0 to 2
6/10/2003	0845	site perimeter	ND
6/10/2003	1020	demolition area	0 to 2 2
6/10/2003	1020	site perimeter	ND
6/10/2003	1135	demolition area	0 to 2
6/10/2003	1135	site perimeter	ND
6/11/2003	0850	demolition area	0 to 3 7
6/11/2003	0850	site perimeter	ND
6/11/2003	1237	demolition area	0 to 2 6
6/11/2003	1237	site perimeter	ND
6/12/2003	0800	demolition area	1 to 4
6/12/2003	0800	site perimeter	ND
6/12/2003	1215	demolition area	0 to 3
6/12/2003	1215	site perimeter	ND
6/12/2003	1525	demolition/excavation area	0 to 4
6/12/2003	1525	site perimeter	ND
6/16/2003	0810	contaminated soil pile	0 to 3
6/16/2003	0810	site perimeter	ND
6/16/2003	1045	contaminated soil pile	0 to 2
6/16/2003	1045	site perimeter	ND
6/16/2003	1200	contaminated soil pile	0 to 3
6/16/2003	1220	contaminated soil pile	0 to 8 8
6/16/2003	1315	contaminated soil pile	0 to 5
6/16/2003	1520	contaminated soil pile	0 to 6
6/16/2003	1520	site perimeter	ND
6/17/2003	0800	contaminated soil pile	0 to 6

TABLE 1 (Continued)

AIR MONITORING RESULTS – TVA 1000 DUAL PID/FID

CHEMICAL COMMODITIES INCORPORATED

OLATHE, KANSAS

Date	Time	Location	Results in ppm
6/17/2003	0800	western fence perimeter	0 to 1
6/17/2003	1000	contaminated soil pile	0 to 3
6/17/2003	1000	site perimeter	ND
6/17/2003	1100	contaminated soil pile	0 to 5
6/17/2003	1100	site perimeter	ND
6/17/2003	1200	contaminated soil pile	0 to 6
6/17/2003	1200	site perimeter	ND to 1
6/17/2003	1300	contaminated soil pile	0 to 38
6/17/2003	1305	western site perimeter	0 to 10 peak
6/17/2003	1310	southern site perimeter	0 to 10 peak
6/17/2003	1321	approximately 40 feet south of site perimeter	0 to 4
6/17/2003	1330	approximately 40 feet west of site perimeter	0 to 1
6/18/2003	1000	contaminated soil pile	0 to 2 3
6/18/2003	1015	soil pile area following restoration activities	ND to 1 4

Note

ND Non detect
ppm Parts per million

TABLE 2

AIR MONITORING RESULTS – PARTICULATES

DATARAM® PARTICULATE MONITOR

CHEMICAL COMMODITIES INCORPORATED

OLATHE, KANSAS

Date	Time	Results in $\mu g/m^3$ (TWA)
6/10/2003	0900	41 9
6/10/2003	1000	53 1
6/10/2003	1100	49 1
6/10/2003	1200	45 2
6/10/2003	1300	42 5
6/10/2003	1400	48 1
6/10/2003	1500	45 3
6/10/2003	1600	43 8
6/10/2003	1700	41 0
6/11/2003	0730	39 8
6/11/2003	0830	29 7
6/11/2003	0930	26 9
6/11/2003	1030	25 6
6/11/2003	1130	27 4
6/11/2003	1230	29 1
6/11/2003	1330	31 8
6/11/2003	1430	32 0
6/12/2003	0730	23 2
6/12/2003	0830	23 8
6/12/2003	0930	24 6
6/12/2003	1030	22 8
6/12/2003	1130	22 2
6/12/2003	1230	21 2
6/12/2003	1330	20 4
6/12/2003	1430	19 6
6/12/2003	1530	19 1

TABLE 2 (Continued)

AIR MONITORING RESULTS – PARTICULATES

DATARAM® PARTICULATE MONITOR

CHEMICAL COMMODITIES INCORPORATED

OLATHE, KANSAS

Date	Time	Results in $\mu g/m^3$ (TWA)
6/13/2003	0730	36 4
6/13/2003	0830	29 3
6/13/2003	0930	22 7
6/13/2003	1030	20 7
6/13/2003	1130	20 3
6/13/2003	1230	21 1
6/13/2003	1330	19 8
6/13/2003	1430	18 3
6/13/2003	1530	16 8
6/16/2003	0730	34 6
6/16/2003	0830	29 6
6/16/2003	0930	26 2
6/16/2003	1030	24 7
6/16/2003	1130	22 9
6/16/2003	1230	23 2
6/16/2003	1330	22 6
6/16/2003	1430	22 5
6/16/2003	1530	22 8
6/17/2003	0730	69 1
6/17/2003	0830	35 4
6/17/2003	0930	29 9
6/17/2003	1030	27 3
6/17/2003	1130	26 4
6/17/2003	1230	23 2
6/17/2003	1330	23 6
6/17/2003	1430	24 9

TABLE 2 (Continued)

AIR MONITORING RESULTS – PARTICULATES

DATARAM® PARTICULATE MONITOR

CHEMICAL COMMODITIES INCORPORATED

OLATHE, KANSAS

Date	Time	Results in $\mu g/m^3$ (TWA)
6/17/2003	1530	23 6
6/18/2003	0730	56 1
6/18/2003	0830	40 1
6/18/2003	0930	35 7
6/18/2003	1030	43 3
6/18/2003	1130	39 4
6/18/2003	1230	35 2
6/18/2003	1330	32 0
6/18/2003	1430	29 5
6/18/2003	1550	28 3

Note

$\mu g/m^3$	Micrograms per cubic meter
TWA	Time weighted average

TABLE 3

SOIL SAMPLE SUMMARY

CHEMICAL COMMODITIES INCORPORATED

OLATHE, KANSAS

Sample ID	Analysis Type	Sample Date	Sample Time	Sampling Location
S 1	VOCs	6/17/2003	1445	southern side of property contaminated soil pile underneath second capped soil layer approximately 15 ft from the southern fence line of property (2 to 3 ft. bgs)
S 2	herbicides pesticides	6/17/2003	1447	southern side of property contaminated soil pile underneath second capped soil layer approximately 15 ft from the southern fence line of property (2 to 3 ft. bgs)
S 3	SVOCs	6/17/2003	1449	southern side of property contaminated soil pile underneath second capped soil layer approximately 15 ft from the southern fence line of property (2 to 3 ft. bgs)

Notes

bgs	Below ground surface
ft	Feet
SVOC	Semivolatile organic compound
VOC	Volatile organic compound

TABLE 4

AIR SAMPLE SUMMARY

CHEMICAL COMMODITIES INCORPORATED

OLATHE, KANSAS

Sample ID	Analysis Type	Sample Date	Sample Time	Sampling Location
A-01	VOCs	6/16/2003	0750 1550	north of contaminated soil pile approximately 5 ft from the gated entrance to the property
A-02	VOCs	6/16/2003	0750-1550	east of contaminated soil pile approximately 5 ft from the eastern fence line of the property
A-03	VOCs	6/16/2003	0750-1550	west of contaminated soil pile approximately 5 ft from the western fence line of the property
A 04	VOCs	6/16/2003	0750 1550	north of the contaminated soil pile approximately 5 ft from the western fence line adjacent to residential homes bordering the property
A-05/FB	VOCs	6/16/2003	0750 1550	NA
A-06	VOCs	6/17/2003	0730 1530	north of contaminated soil pile approximately 5 ft from the gated entrance to the property
A-07	VOCs	6/17/2003	0730 1530	east of contaminated soil pile approximately 5 ft from the eastern fence line of the property
A-08	VOCs	6/17/2003	0730 1530	west of contaminated soil pile approximately 5 ft from the western fence line of the property
A 09	VOCs	6/17/2003	0730 1530	north of the contaminated soil pile approximately 5 ft from the western fence line adjacent to residential homes bordering the property
A 10/FB	VOCs	6/17/2003	0730 1530	NA
A 11	VOCs	6/18/2003	0730-1530	north of contaminated soil pile approximately 5 ft from the gated entrance to the property
A 12	VOCs	6/18/2003	0730 1530	east of contaminated soil pile approximately 5 ft from the eastern fence line of the property
A 13	VOCs	6/18/2003	0730 1530	west of contaminated soil pile approximately 5 ft from the western fence line of the property

TABLE 4 (Continued)

AIR SAMPLE SUMMARY

CHEMICAL COMMODITIES INCORPORATED

OLATHE, KANSAS

Sample ID	Analysis Type	Sample Date	Sample Time	Sampling Location
A 14	VOCs	6/18/2003	0730 1530	north of the contaminated soil pile approximately 5 ft from the western fence line adjacent to residential homes bordering the property
A 15/FB	VOCs	6/18/2003	0730-1530	NA

Notes

FB	Field blank
ft	Feet
NA	Not applicable
VOC	Volatile organic compound

TABLE 5

SUMMARY OF ANALYTICAL DATA FOR SOIL SAMPLES

CHEMICAL COMMODITIES INC

Compounds	Sample Number/Lab Identification Number (concentrations in µg/kg)			Region 9 PRG Residential Soil (µg/kg)	Region 9 PRG Industrial Soil (µg/kg)	KDHE Residential Soil Pathway (mg/kg)	KDHE Non Residential Soil Pathway (mg/kg)
	S-1 335401	S-2 /335402	S-3 /335403				
VOCs							
1 1- Dichloroethane	4 760	NT	NT	510 000	1 700 000	660	2 100
1 2 -Dichlorobenzene	80 000	NT	NT	370 000	370 000	990	990
1 2 Dichlorethane	2,820	NT	NT	280	600	4 7	7 3
1 3 Dichlorobenzene	1 500	NT	NT	16 000	63 000	-	
1 4-Dichlorobenzene	6,100	NT	NT	3,400	7,900	57	92
1,1 1–Trichloroethane	19 300	NT	NT	1 200 000	1,200 000	880	1 800
1 1 2 2-Tetrachloroethane	35,300	NT	NT	410	930	7 1	12
1,2 4 Trimethyl Benzene	17,100	NT	NT	52 000	170 000	9 7	9 7
1 3 5-Trimethyl Benzene	5 500	NT	NT	21 000	70 000	2 5	69 4
Benzene	958	NT	NT	600	1 300	9 8	17
n Butyl Benzene	1 130	NT	NT	240 000	240 000	140	395
VOCs (Continued)							
Chlorobenzene	8,030	NT	NT	150 000	530 000	78	240
Chloroform	2 600	NT	NT	3 600	12 000	3 9	6 0

TABLE 5 (Continued)

SUMMARY OF ANALYTICAL DATA FOR SOIL SAMPLES

CHEMICAL COMMODITIES INC

Compounds	Sample Number/Lab Identification Number (concentrations in µg/kg)			Region 9 PRG Residential Soil (µg/kg)	Region 9 PRG Industrial Soil (µg/kg)	KDHE Residential Soil Pathway (mg/kg)	KDHE Non-Residential Soil Pathway (mg/kg)
	S-1 /335401	S-2 /335402	S-3 /335403				
cis 1 2-D chloroethene	291,000	NT	NT	120,000	410 000	57	180
Ethyl Benzene	712	NT	NT	8 900	20 000	650	650
Naphthalene	9 810	NT	NT	56,000	190 000	100	320
n Propyl Benzene	1 500	NT	NT	240 000	240,000	140	400
p Isopropyl Toluene	923	NT	NT	-		-	-
Tetrachloroethene	22 100	NT	NT	1,500	3,400	79	140
Toluene	2 670	NT	NT	520 000	520,000	930	1,000
trans-1,2-Dichloroethene	2 190	NT	NT	69 000	230 000	94	290
Trichloroethene	216 000	NT	NT	53	110	62	98
Vinyl Chloride	15,300	NT	NT	79	750	0.34	0 54
m/p Xylene	3 140	NT	NT	270 000	420 000	700	700
o Xylene	1 780	NT	NT	270 000	420,000	700	700
PESTICIDES/HERBICIDES							
p,p DDD	NT	12,120	NT	2,400	10,000	35	79
p,p -DDE	NT	772	NT	1 700	7 000	25	56

TABLE 5 (Continued)

SUMMARY OF ANALYTICAL DATA FOR SOIL SAMPLES

CHEMICAL COMMODITIES INC

Compounds	Sample Number Lab Identification Number (concentrations in µg kg)			Region 9 PRG Residential Soil (µg/kg)	Region 9 PRG Industrial Soil (µg/kg)	KDHE Residential Soil Pathway (mg/kg)	KDHE Non-Residential Soil Pathway (mg/kg)
	S-1 /335401	S-2 335402	S-3 /335403				
p p -DDT	NT	191	NT	1 700	7 000	25	56
SVOCs							
1 2 Dichlorobenzene	NT	NT	162 000	370 000	370 000	990	990
Acenaphthene	NT	NT	38 300	3 700 000	29 000 000	300	300
Anthracene	NT	NT	104,000	22 000 000	100 000	13	13
Benzo (a) Anthracene	NT	NT	310 000	620	2,100	12	26
Benzo (a,h) Anthracene	NT	NT	69 900			-	
Benzo (b) Fluoranthene	NT	NT	474,000	620	2,100	12	19
Benzo (k) Fluoranthene	NT	NT	184 000	6,200	21,000	10	10
Benzo (a) Pyrene	NT	NT	335 000	62	210	1 2	2 6
Benzo (g,h,i) Perylene	NT	NT	199 000		-	-	-
Carbazole	NT	NT	84 400	24,000	86 000	250	250
Chrysene	NT	NT	381,000	62,000	210,000	6 4	6 4
Dibenzofuran	NT	NT	36,100	290 000	3 100 000	252	1 351

TABLE 5 (Continued)

SUMMARY OF ANALYTICAL DATA FOR SOIL SAMPLES

CHEMICAL COMMODITIES INC

Compounds	Sample Number/Lab Identification Number (concentrations in µg/kg)			Region 9 PRG Residential Soil (µg/kg)	Region 9 PRG Industrial Soil (µg/kg)	KDHE Residential Soil Pathway (mg/kg)	KDHE Non-Residential Soil Pathway (mg/kg)
	S-1 /335401	S-2 /335402	S-3 /335403				
SVOCs (Continued)							
Fluoranthene	NT	NT	642,000	2 300 000	22 000 000	**220**	**220**
Fluorene	NT	NT	68 000	2 700 000	26 000 000	270	270
Indeno (1 2 3-cd) Pyrene	NT	NT	189,000	**620**	**2,100**	**0 76**	**0 76**
2 Methylnaphthalene	NT	NT	105 000	-	-	-	-
Naphthalene	NT	NT	48 800	56 000	190 000	100	320
Phenanthrene	NT	NT	454,000	-		-	-
Pyrene	NT	NT	467,000	2 300 000	29 000 000	**140**	**140**

Note Only analytes that were reported above detection limits are included in this table
Concentrations in bold face type and shaded exceed one or more of the listed health based standards

µg/kg	Micrograms per kilogram
KDHE	Kansas Department of Health and Environment
mg/kg	Milligrams per kilogram
NT	Not tested for the indicated analyte
PRG	Preliminary remediation goal (EPA Region 9)
SVOC	Semi volatile organic compound
VOC	Volatile organic compound

TABLE 6

SUMMARY OF ANALYTICAL DATA FOR AIR SAMPLES
CHEMICAL COMMODITIES INC

Compounds	Sample Number / Lab Identification Number (concentrations in µg/m³)															Region 9 Preliminary Remediation Goal (µg/m³)	OSHA PEL (µg/m³)
	A 01/ P2301170-001	A-02/ P2301170 002	A-03/ P2301170-003	A-04/ P2301170 004	A-05/FB P2301170 005	A-06/ P2301170-006	A-07/ P2301170 007	A 08/ P2301170-008	A-09/ P2301170-009	A 10/FB P2301170 010	A 11/ P2301170-011	A 12/ P2301170 012	A 13/ P2301170-013	A 14/ P2301170 014	A 15/FB P2301170 015		
Acetone	16	11	15	18	2 6	18	13	12	14	3 7	19	14	21	16	2 7	370	2 400 000
Benzene	**1 3**	**0 9**	**1 8**	**1 1**	**0 43**	**1.3**	**1 1**	**14**	**1 1**	ND (1 0)	**1 2**	**1 1**	**1 9**	**1.5**	ND (1 0)	**0 23**	3 190
2 Butanone	2 1	1 9	2 6	2 7	ND (1 0)	2 5	2 4	2 1	1 7	0 90	3 7	2 1	4 0	2 2	0 39	1 000	590 000
Carbon Tetrachloride	**3 1**	**0 64**	**0.55**	**0 66**	ND (1 0)	**2 8**	**0 58**	**0 63**	**0 68**	ND (1 0)	**2 0**	**1 0**	**0.55**	**0 61**	ND (1 0)	**0 13**	62 900
Carbon Disulfide	0 50	0 36	1 2	0 41	ND (1 0)	0 35	0 47	2 0	ND (1 8)	0 26	ND (1 9)	0 35	1 7	ND (2 0)	ND (1 0)	730	62 200
Chlorobenzene	ND (1 3)	ND (1 7)	0 41	ND (1 9)	ND (1 0)	ND (1 8)	ND (1 8)	0 74	ND (1 8)	ND (1 0)	ND (1 9)	0 89	0 60	ND (2 0)	ND (1 0)	62	350 000
Chloroform	0 29	0 21	ND (1 8)	ND (1 9)	0 27	0 25	ND (1 8)	0 40	ND (1 8)	ND (1 0)	0 24	0 44	0 31	0 22	ND (1 0)	3 1	240 000
Chloromethane	0 80	0 85	0 78	0 83	ND (1 0)	0 87	0 96	0 91	0 83	ND (1 0)	0 86	0 81	0 96	0 80	ND (1 0)	1 1	207 000
1 2 Dichlorobenzene	ND (1 3)	ND (1 7)	1 8	ND (1 9)	ND (1 0)	0 51	0 79	61	1 9	ND (1 0)	0 41	2 7	1 3	1 0	ND (1 0)	210	300 000
1 3 Dichlorobenzene	ND (1 3)	ND (1 7)	ND (1 8)	ND (1 9)	ND (1 0)	ND (1 8)	ND (1 8)	1 7	ND (1 8)	ND (1 0)	ND (1 9)	ND (1 3)	ND (1 8)	ND (2 0)	ND (1 0)	3 3	NL
1 4 Dichlorobenzene	ND (1 3)	ND (1 7)	0 28	ND (1 9)	ND (1 0)	ND (1 8)	ND (1 8)	**6 6**	0 29	ND (1 0)	ND (1 9)	**0.32**	**0.31**	ND (2 0)	ND (1 0)	**0.31**	450 000
cis 1 2 Dichloroethene	1 5	1 2	19	1 2	ND (1 0)	2 3	1 5	**79**	5 9	ND (1 0)	3 1	15	5 9	4 1	ND (1 0)	**37**	790 000
trans 1 2 Dichloroethene	ND (1 3)	ND (1 7)	0 55	ND (1 9)	ND (1 0)	ND (1 8)	ND (1 8)	1 7	ND (1 8)	ND (1 0)	ND (1 9)	0 36	ND (1 8)	ND (2 0)	ND (1 0)	73	790 000
1 1 Dichloroethane	ND (1 3)	ND (1 7)	0 46	ND (1 9)	ND (1 0)	ND (1 8)	ND (1 8)	2 3	ND (1 8)	ND (1 0)	ND (1 9)	0 85	0 46	0 31	ND (1 0)	520	400 000
1 1 Dichloroethene	ND (1 3)	ND (1 7)	ND (1 8)	ND (1 9)	ND (1 0)	ND (1 8)	ND (1 8)	1 0	ND (1 8)	ND (1 0)	ND (1 9)	0 28	ND (1 8)	ND (2 0)	ND (1 0)	210	NL
1 2 Dichloroethane	ND (1 3)	ND (1 7)	ND (1 8)	ND (1 9)	ND (1 0)	ND (1 8)	ND (1 8)	**4 7**	ND (1 8)	ND (1 0)	ND (1 9)	**0 47**	ND (1 8)	ND (2 0)	ND (1 0)	0 074	202 500
1 2 Dichloropropane	ND (1 3	ND (1 7)	ND (1 8)	ND (1 9)	ND (1 0)	ND (1 8)	ND (1 8)	**0.50**	ND (1 8)	ND (1 0)	ND (1 9)	ND (1 3)	ND (1 8)	ND (2 0)	ND (1 0)	0 099	350 000
Ethylbenzene	ND (1 3)	0 50	0 71	0 51	ND (1 0)	0 73	0 54	1 4	0 61	ND (1 0)	0 63	0 65	1 0	0 84	ND (1 0)	1 7	435 000
2 Hexanone	ND (1 3)	ND (1 7)	ND (1 8)	ND (1 9)	ND (1 0	ND (1 8)	0 44	ND (1 3)	ND (1 8)	ND (1 0)	0 76	ND (1 3)	1 9	ND (2 0)	ND (1 0)	210	410 000
Methylene Chloride	0 56	0 59	0 57	0 62	ND (1 0)	0 92	0 72	1 5	0 81	ND (1 0)	0 65	0 51	0 96	0 57	ND (1 0)	4 1	86 750
Methyl tert Butyl Ether	0 28	ND (1 7)	ND (1 8)	ND (1 9)	ND (1 0)	0 28	ND (1 8)	ND (1 3)	ND (1 8)	ND (1 0)	0 32	ND (1 3)	ND (1 8)	ND (2 0)	ND (1 0)	19	NL
4-Methyl 2 pentanone	ND (1 3)	ND (1 7)	ND (1 8)	ND (1 9)	ND (1 0)	0 44	ND (1 8)	0 46	ND (1 8)	ND (1 0)	ND (1 9)	ND (1 3)	0 84	ND (2 0)	ND (1 0)	NA	NL
Tetrachloroethene	**2 6**	**1 4**	**10**	**1 9**	ND (1 0)	**3 9**	**3 4**	**90**	**7 7**	ND (1 0)	**6 6**	**54**	**11**	**9 7**	ND (1 0)	**0 67**	678 000
1 1 2 2 Tetrachloroethane	ND (1 3)	**0.52**	ND (1 8)	ND (1 9)	ND (1 0)	ND (1 8)	**0 46**	**5 2**	**0 67**	ND (1 0)	ND (1 9)	**2 6**	**0 80**	0 67	ND (1 0)	**0 033**	35 000
Toluene	6 4	3 7	6 2	5 9	ND (1 0)	8 4	4 7	8 1	3 9	ND (1 0)	6 6	4 9	6 2	8 0	ND (1 0)	400	754 000
1 1 1 Trichloroethane	0 34	ND (1 7)	1 1	ND (1 9)	ND (1 0)	0 53	0 49	32	1 7	ND (1 0)	1 8	14	8 0	5 9	ND (1 0)	2 300	1 900 000
Trichloroethene	**8.3**	**4.5**	**11**	**2.2**	ND (1 0)	**9.2**	**5.3**	**160**	**13**	ND (1 0)	**10**	**71**	**21**	**17**	ND (1 0)	**0 017**	537 000
Trichlorofluoromethane	1 4	1 4	1 3	1 4	ND (1 0)	1 4	1 3	1 4	1 4	ND (1 0)	1 3	1 3	1 4	1 3	ND (1 0)	730	1 000
Trichlorotrifluoroethane	0 59	0 59	0 64	0 56	ND (1 0)	0 57	0 63	1 1	0 65	ND (1 0)	0 61	1 3	0 71	1 3	ND (1 0)	NA	1 000

TABLE 6 (Continued)

SUMMARY OF ANALYTICAL DATA FOR AIR SAMPLES
CHEMICAL COMMODITIES INC

Compounds	Sample Number / Lab Identification Number (concentrations in µg/m³)																
	A-01/ P2301170 001	A-02/ P2301170 002	A-03/ P2301170- 003	A-04/ P2301170- 004	A-05/FB P2301170- 005	A-06/ P2301170- 006	A-07/ P2301170 007	A-08/ P2301170- 008	A-09/ P2301170- 009	A 10/FB P2301170 010	A 11/ P2301170 011	A 12/ P2301170 012	A 13/ P2301170- 013	A 14/ P2301170- 014	A 15/FB P2301170 015	Region 9 Preliminary Remediation Goal (µg/m³)	OSHA PEL (µg/m³)
Vinyl Acetate	4 9	ND (1 7)	3 4	3 4	0 73	4 2	2 7	2 6	3 8	0 43	2 6	4 0	4 1	4 7	0 54	210	NL
Vinyl Chloride	ND (1 3)	ND (1 7)	**2.2**	ND (1 9)	ND (1 0)	**0 21**	ND (1 8)	**9 1**	**0 56**	ND (1 0)	ND (1 9)	**0 43**	ND (1 8)	ND (2 0)	ND (1 0)	**0 11**	25 600
m,p Xylenes	ND (1 3)	1 2	1 9	1 3	ND (1 0)	2 0	1 6	4 1	1 7	ND (1 0)	1 8	1 8	3 0	2 4	ND (1 0)	110	435 000
o- Xylene	ND (1 3)	0 50	0 69	0 51	ND (1 0)	0 73	0 58	1 4	0 59	ND (1 0)	0 63	0 68	1 1	0 88	ND (1 0)	110	435 000

Notes

Only analytes that were reported above detection limits are included in this table
Concentrations in bold face type and shaded exceed the EPA Region 9 preliminary remediation goal for that compound

ND (#) Not detected (method detection limit)
NL Not listed for the detected analyte
OSHA Occupational safety and health administration
PEL Permissible exposure limit
µg/m³ Micrograms per cubic meter

APPENDIX E

CHAIN-OF-CUSTODY FORMS

(Four Pages)

AML
Management Laboratories, Inc.
15130 B South Keeler
Olathe Kansas 66062
Phone (913) 829-0101
Fax (913) 829-1181

23021

Page 1 of 1

Chain of Custody Record / Request for Analysis

Client Contact Name: Nicholas Godfrey
Company Name: TetraTech EMI (START)
Address: 8030 Flint St
City State Zip: Lenexa KS 66214
Phone #: (913) 495-3962
Fax #: (913) 894-6295

Project Name: Chemical Commodities Inc
Project Number: G9A1.E.03 0141.005
Purchase Order Number: same as above ↑
Project Due Date: 6/19/03
Project Comments:
Sampler's Signature: D. Griffing for Nick Godfrey

Analyses/Method to be Performed (Check all that apply)

Lab ID	Sample Description	Date	Time	Matrix	Total # Containers	Preservative: HCl	HNO_3	NaOH	H_2SO_4	Unpreserved	4 C	TPH Diesel	TPH Gasoline	BTEX	MTBE	Volatiles (VOCs)	BNAs (SVOCs)	Pesticides/PCBs	PCBs	RCRA8 Metals	Lead	Flash Point	Paint Filter	pH	Ignitables					Comments
1	S-1	6/17/03	1525	S	2											X														High Conc.
2	S-2	"	1530	S	1													X							X					High Conc
3	S-3	"	1533	S	1												X													High Conc.
4																														
5																														
6																														
7																														
8																														
9																														
10																														

Please include any information that may be useful in the analysis of the sample.
Example high concentration

CUSTODY							
Relinquished By	D. Griffing	6/17/03 Date/Time	1625	Received By		Date/Time	6 17 03 1626
Relinquished By		Date/Time		Received By		Date/Time	

By signing the request (chain of custody) you are ordering work from Analytical Management Laboratories Inc. which constitutes the acceptance of the terms and conditions on the back of this form

Delivery Method	Courier Seals	Coolant: Ice / Blue Ice	Cooler Temp. °C / Temp. Blank	Receiving Comments

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	Analysis	CAS Project No
Phone: 913-495-3900 Fax	Project Number: 69011/E/03 0141.00		Cooler / Blank Temp_____
Email: godfrey4tna@hotmail.com	Sampling Location: 320 South Blake Street		
Contact: Nicholas Godfrey	PO #/Billing Information		Comments (e.g preservative or specific instructions)
	Sampler (Signature): Nicholas Godfrey		

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 (VOC's Standard List)				Expected Turnaround Time 24 Hr 48Hr 3Day 4Day 5Day Standard (10 Business Days)	Comments
A-1	6/16/03	0750-1550	AC00223	Air-Summa	AC00223	FC00279		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

	Date	Time	Received by (Signature)	Date:	Time	Additional Comments
Relinquished by (Signature): Nicholas 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	

White Copy Accompanies Samples — Yellow Copy Retained by Client

20

Columbia Analytical Services, Inc.
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

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

Project Name: Chemical Commodities Incorporated
Project Number: 69011 E 03 0141 00
Sampling Location: 3205 Blake Street
PO #/Billing Information:

CAS Project No: P2301178

e 913 495-3900 Fax
ll ngodfrey@tnainc.com
act: Nicholas Godfrey
Sampler (Signature): Nicholas Godfrey

Analysis: Volatile Organic Compounds (Standard List) VOCs

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

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	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 Godfrey	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

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	6 / 18 / 03	1 of 1

CONTENTS OF SHIPMENT Chain # 69011 c 03 0141 00

SAMPLE NUMBER	TYPE OF CONTAINERS: SUMA CONTAINER	BOTTLE	BOTTLE	BOTTLE	VOA SET (2 VIALS EA)	SAMPLED MEDIA: water	soil	sediment	dust	other (specify)	RECEIVING LABORATORY REMARKS/OTHER INFORMATION (condition of samples upon receipt, other sample numbers, etc.)	Flow Cent
	NUMBERS OF CONTAINERS PER SAMPLE NUMBER											
A-11	1									X	VOC's	FC00274
A-12	1									X	VOC's	FC00278
A-13	1									X	VOC's	FC00275
A-14	1									X	VOC's	FC00281
A-15	1									X	VOC's (FB)	N/A

Nicholas Godfrey 6-18-03

DESCRIPTION OF SHIPMENT	MODE OF SHIPMENT
5 PIECE(S) CONSISTING OF 2 BOX(ES)	___ COMMERCIAL CARRIER
N/A ICE CHEST(S) OTHER	___ COURIER
	___ SAMPLER CONVEYED (SHIPPING DOCUMENT NUMBER)

PERSONNEL CUSTODY RECORD

RELINQUISHED BY (SAMPLER)	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUSTO
Nicholas Godfrey	6/18/03	1730-1530	Sharon Malone 6-19-03 11:00	Lab Analysis for VOC's
☒ SEALED ☐ UNSEALED			☐ SEALED ☐ UNSEALED	
RELINQUISHED BY	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUSTO
☐ SEALED ☐ UNSEALED			☐ SEALED ☐ UNSEALED	
RELINQUISHED BY	DATE	TIME	RECEIVED BY	REASON FOR CHANGE OF CUST
			☐ SEALED ☐ UNSEALED	

APPENDIX F

FIELD SHEETS

(18 Pages)

FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCI
Location Contaminated Soil Pile 300-320 S Blake

Activity # 69011/03 0141 00 ASR # Sample # S-1
Project Leader Site ID 07ZZ
Sample Date 6/17/03 Sample Time 1525 Sampler NG
Expected Concentration Low (Medium) (High)

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
2-40mls	NA		VOCs

SAMPLE DESCRIPTION

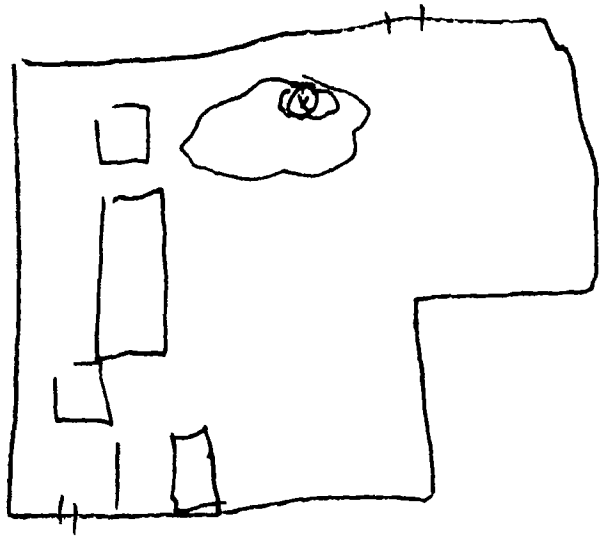
Matrix Soil Sample Depth 2-3 bgs Aliquots

Sample Location.
Southside of property, contaminated soil pile, underneath second layer of cap

Property Owner/Contact
City of Olathe

Comments (Sample description, etc.)
Composite sample

SAMPLE LOCATION MAP



FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCI
Location Contaminated Soil Pile 300-320 S Blake

ctivity # 6901/03 0141 00 | ASR # | Sample # S-2

roject Leader | Site ID 07ZZ

ample Date 6/17/03 | Sample Time 1530 | Sampler

xpected Concentration Low Medium (High)

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
2-8oz jars	NA	NA	Pesticides, Herbicides

SAMPLE DESCRIPTION

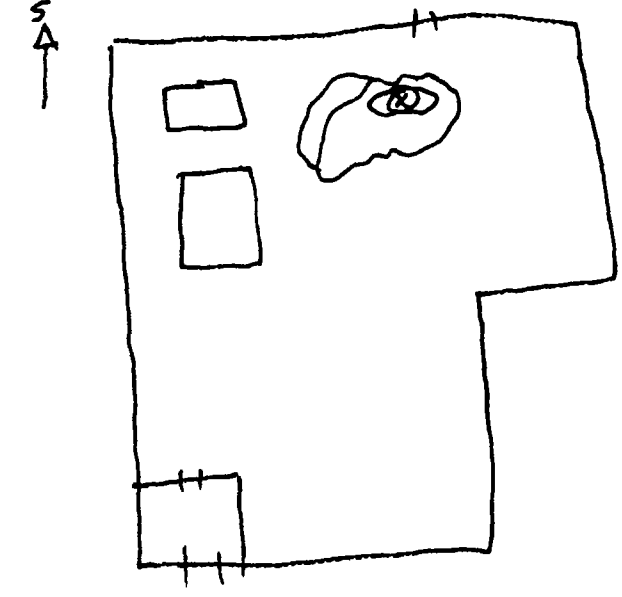
latrix Soil | Sample Depth. 2 3 bgs | Aliquots

ample Location.
South side of property /
contaminated soil pile /
underneath second layer of cap

roperty Owner/Contact
City of Olathe

omments (Sample description, etc.)
Composite Sample

SAMPLE LOCATION MAP



FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCI
Location Contaminated Soil Pile 300-320 S Blake

Activity # 6901/03 0141 00 ASR # Sample # S-3
Project Leader Site ID 07ZZ
Sample Date 6/17/03 Sample Time 1533 Sampler NG
Expected Concentration Low (Medium) (High)

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
2 8oz	NA	NA	SVOCs

SAMPLE DESCRIPTION

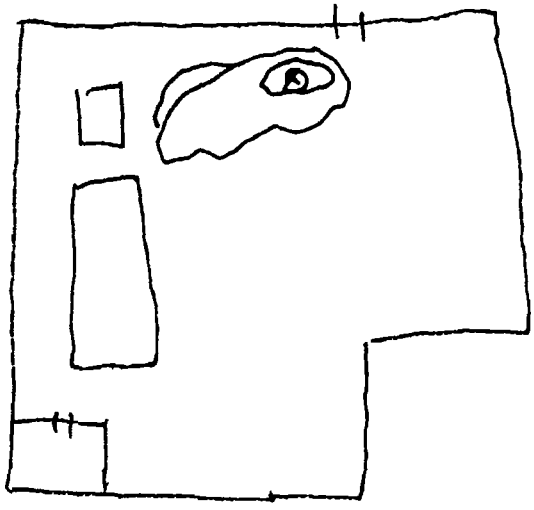
Matrix Soil Sample Depth 2-3 bgs Aliquots

Sample Location.
South side of property
Contaminated soil pile
Underneath second layer PVC cap

Property Owner/Contact
City of Olathe

Comments (Sample description, etc.)
Composite Sample

SAMPLE LOCATION MAP



FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCI
Location NE

ctivity # | ASR # | Sample # A-1

roject Leader N Godfrey | Site ID 07ZZ

ample Date | Sample Time 0750 - 0850 | Sampler N Godfrey

xpected Concentration (Low) Medium High

FC00223

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
5 [redacted]	N/A		VOC's

SAMPLE DESCRIPTION

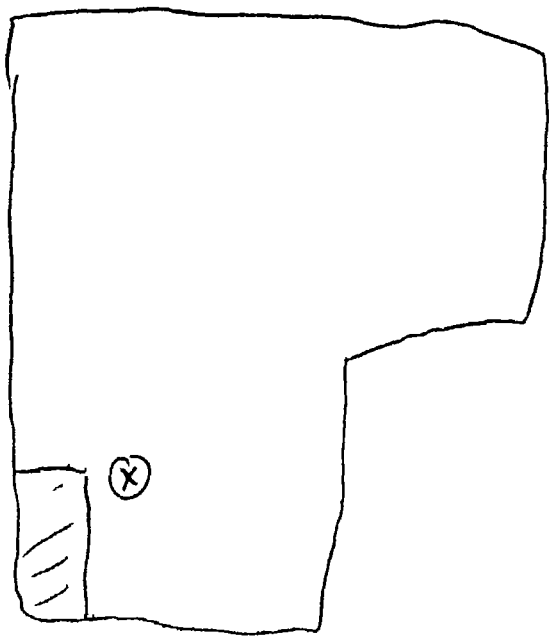
Matrix | Sample Depth. | Aliquots

ample Location. NE corner of site.

roperty Owner/Contact N/A

omments (Sample description, etc.)
(W) →
Vacuum Pressure → 28 in Hg
Reg → FC00278

SAMPLE LOCATION MAP



FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCT
Location SE(E)

Activity # | ASR # | Sample # A-2
Project Leader N Godfrey | Site ID 07ZZ
Sample Date | Sample Time 0950-1550 | Sampler N. Godfrey
Expected Concentration (Low) Medium High

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
AC00323	N/A	N/A	VOCs

SAMPLE DESCRIPTION

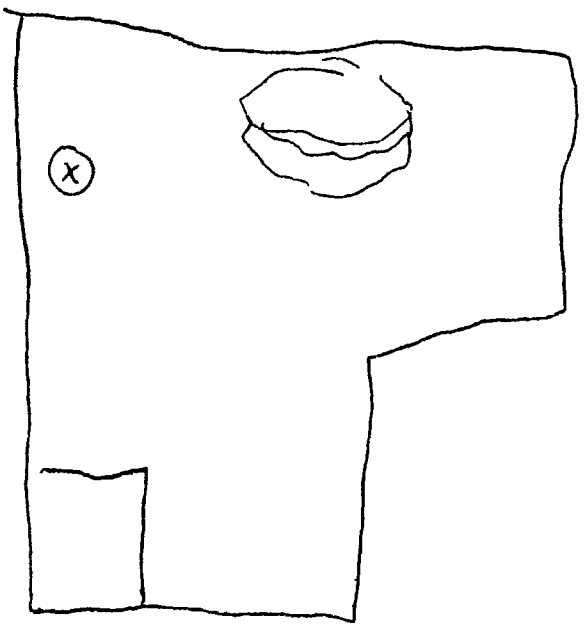
Matrix | Sample Depth | Aliquots

Sample Location
E (SE)

Property Owner/Contact
N/A
NOTE: Denied permission upon request.

Comments (Sample description, etc.)
(W) =>
Vacuum Pressure → 29 in Hg
Regulator → FC00235

SAMPLE LOCATION MAP



FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCI
Location SW

Activity # E7604/03 0141 00 | ASR # N/A | Sample # A-3
Project Leader N. Godfrey | Site ID 07ZZ
Sample Date 8/16/03 | Sample Time 0750-1550 | Sampler N Godfrey
Expected Concentration (Low) Medium High

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
AC00411	N/A	N/A	VOCs

SAMPLE DESCRIPTION

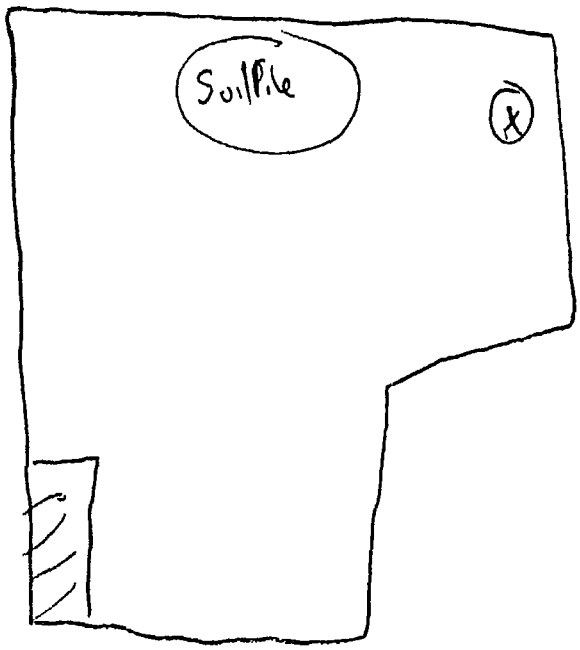
Matrix | Sample Depth | Aliquots

Sample Location. SothWest

Property Owner/Contact

Comments (Sample description, etc.) SUMA
(W) →
Vacum Presure → 28 9 inHg
Regulator → F00274

SAMPLE LOCATION MAP



FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCF
Location NW

Activity # 6901103K4100 ASR # N/A Sample # A-4

Project Leader N Godfrey Site ID 07ZZ

Sample Date 6/16/03 Sample Time 0750-1550 Sampler N Godfrey

Expected Concentration Low Medium High

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
AC00291	N/A	N/A	VOC's

SAMPLE DESCRIPTION

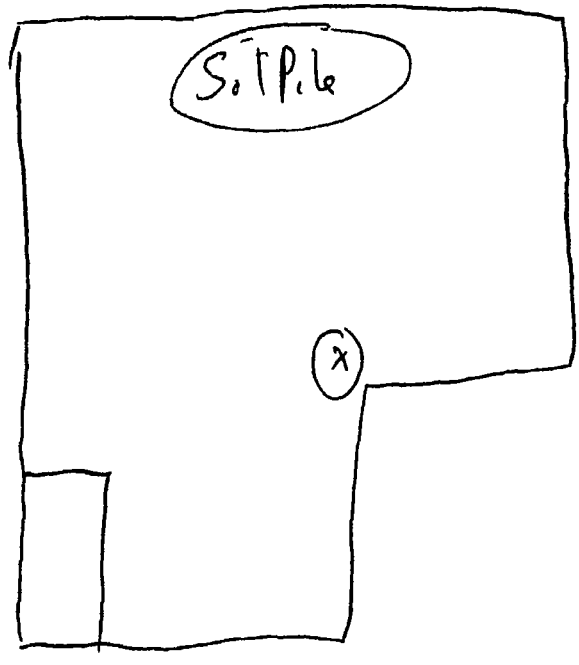
Matrix Sample Depth Aliquots

Sample Location. NW

Property Owner/Contact

Comments (Sample description, etc.) SUMA
(W) →
Vacuum Pressure - 28 in Hg
Regulator → FC00277

SAMPLE LOCATION MAP



FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCI
Location Olathe, KS (FB)

ctivity # 69011/03/10/41 00 | ASR # | Sample # A-5 (FB)
roject Leader N. Godfrey | Site ID 07ZZ
ample Date 6/16/03 | Sample Time N/A | Sampler N. Godfrey
xpected Concentration (Low) Medium High

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
AC00153	N/A	N/A	VOCs

SAMPLE DESCRIPTION

Matrix | Sample Depth | Aliquots

ample Location. N/A

SAMPLE LOCATION MAP

FB

roperty Owner/Contact

omments (Sample description, etc.)
Vacuum Pressure 28.9 in Hg

FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCI

Location Olathe (NE)

Activity # 6961 02 0141 00 **ASR #** N/A **Sample #** A-6

Project Leader Nicholas Godfrey **Site ID** 07ZZ

Sample Date 8/17/03 **Sample Time** 0730-1530 **Sampler** NG

Expected Concentration (Low) Medium High

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
AC00030	N/A	N/A	VOCs

SAMPLE DESCRIPTION

Matrix **Sample Depth** **Aliquots**

Sample Location.

NE Corner of Site

Property Owner/Contact

N/A

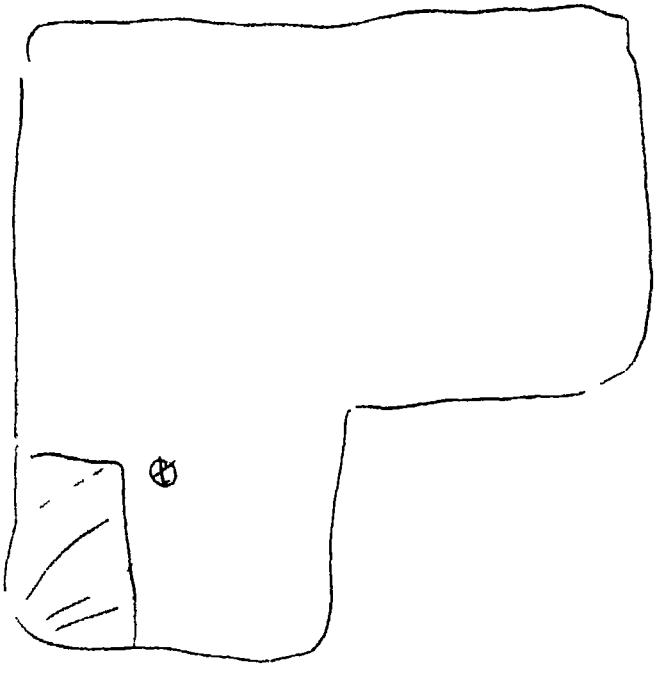
Comments (Sample description, etc.)

Vacuum Pressure 28.9 in Hg

Wind —

Req — FC00281

SAMPLE LOCATION MAP



FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCI
Location Olathe (SE, E)

Activity # 69011 E03 01171 00 ASR # Sample # A-7
Project Leader Nicholas Godfrey Site ID 07ZZ
Sample Date 6/17/03 Sample Time 0730-1530 Sampler N Godfrey
Expected Concentration (Low) Medium High

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
AC00372	N/A	N/A	VOC

SAMPLE DESCRIPTION

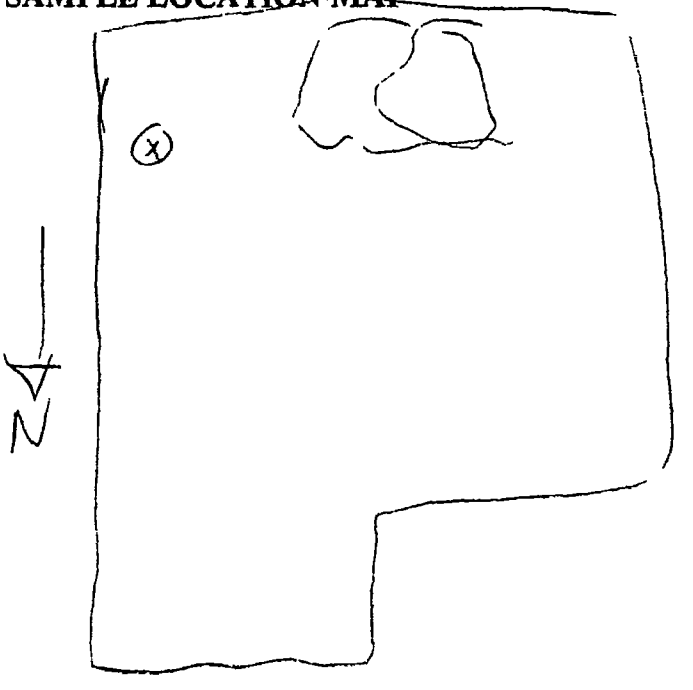
Matrix Sample Depth Aliquots

Sample Location.
SE, E

Property Owner/Contact

Comments (Sample description, etc.)
(W)-7
Vacuum Pressure, 28.4 in Hg
Regulator FC00274

SAMPLE LOCATION MAP



FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCI
Location Olathe SW

Activity # 69611/07.0141 ASR # N/A Sample # A-8
Project Leader Nicholas Godfrey Site ID 07ZZ
Sample Date 8/17/03 Sample Time 0730-1530 Sampler
Expected Concentration (Low) Medium High

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
AC00307	N/A	N/A	VOCs

SAMPLE DESCRIPTION

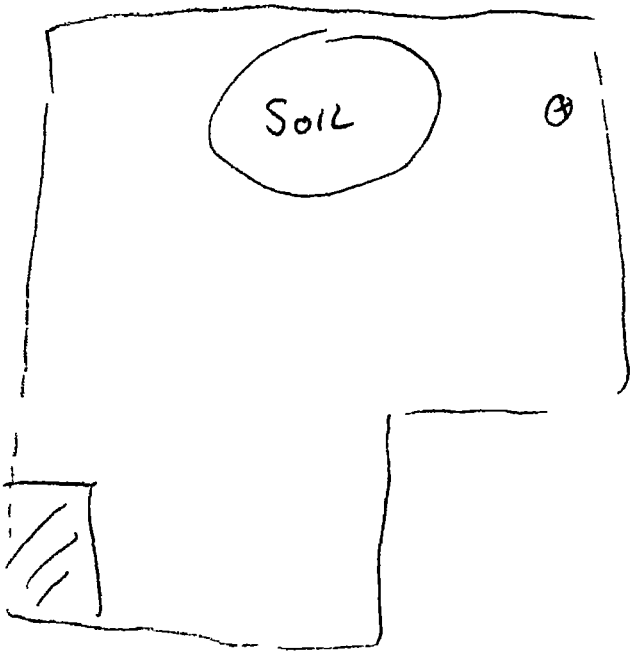
Matrix Sample Depth. Aliquots

Sample Location
SW

Property Owner/Contact

Comments (Sample description, etc.) SWMA
W →
Vacuum Pressure 28.3 in Hg
Regulator FC00278

SAMPLE LOCATION MAP



FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCI
Location Olathe (N W)

ctivity # 69011.03 014100 ASR # N/A Sample # A-9

roject Leader Nicholas Godfrey Site ID 07ZZ

ample Date 6/17/03 Sample Time 0730-1530 Sampler N Godfrey

xpected Concentration ~~Low~~ Medium High

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
Ac00298	N/A	N/A	VOC's

SAMPLE DESCRIPTION

latrix. Sample Depth Aliquots

ample Location

NW

roperty Owner/Contact

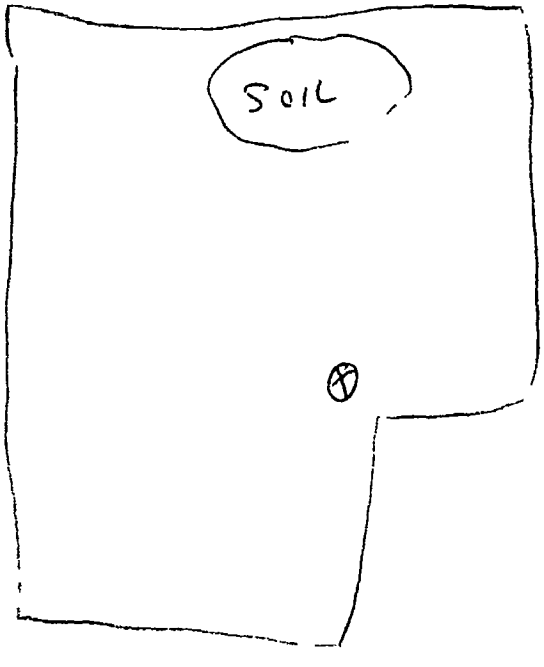
omments (Sample description, etc.) SVMA

(W) →

Vacuum Pressure 28 9 in Hg

Regulator FC08235

SAMPLE LOCATION MAP



FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCI
Location Olathe (FB)

Activity # 69011/03 0171 00 ASR # Sample # A-10
Project Leader Nicholas Godfrey Site ID 07ZZ
Sample Date 8/17/03 Sample Time 0730-1530 Sampler N6
Expected Concentration (Low) Medium High

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
	N/A	N/A	VOC's

SAMPLE DESCRIPTION

Matrix Sample Depth. Aliquots

Sample Location.

Property Owner/Contact

Comments (Sample description, etc.)
Vacuum Pressure

SAMPLE LOCATION MAP

FB

FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCI
Location Olathe, NE

Activity # 69011/03 0141 **ASR #** **Sample #** A-11
Project Leader NJ Godfrey **Site ID** 07ZZ
Sample Date 6/19/03 **Sample Time** 0730-1530 **Sampler** N Godfrey
Expected Concentration Low (Medium) High

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
AC0095	N/A		VOCs

SAMPLE DESCRIPTION

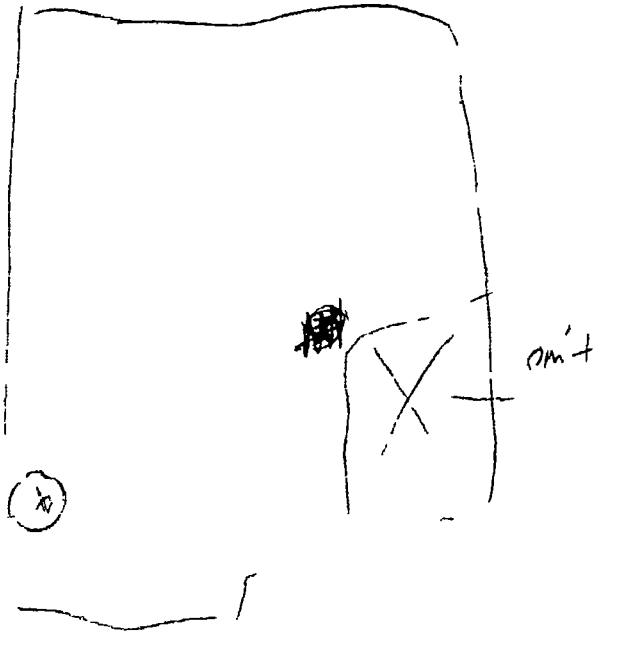
Matrix **Sample Depth** **Aliquots**

Sample Location.
NE

Property Owner/Contact
N/A

Comments (Sample description, etc.)
Wind →
Vacuum Pressure → 29 in Hg
Reg # F-00274

SAMPLE LOCATION MAP



FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCI
Location Olathe (SE)

Activity # 69011/_3 0141 00 **ASR #** **Sample #** A-12
Project Leader N Goodfriend **Site ID** 07ZZ
Sample Date 6/18/13 **Sample Time** 0730 - 1530 **Sampler** N Goodfriend
Expected Concentration Low Medium High

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
AC00149	N/A	N/A	VOC's

SAMPLE DESCRIPTION

Matrix **Sample Depth** **Aliquots**

Sample Location

SE (E)

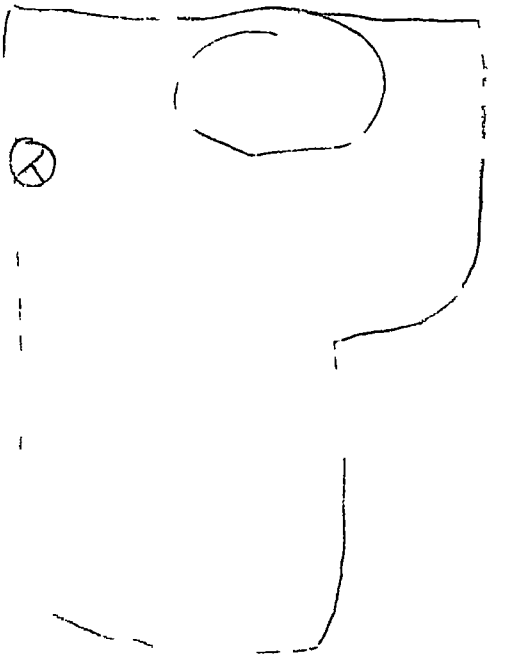
Property Owner/Contact

N/A

Comments (Sample description, etc.)

1J ND → 29 in Hg
Vacuum Pressure →
Reg → FC00278

SAMPLE LOCATION MAP



FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCT
Location Olathe (SW)

Activity # 6401/C30141 ASR # Sample # A-13
Project Leader N Godfrey Site ID 07ZZ
Sample Date 6/18/05 Sample Time 0730-1530 Sampler N Godfrey
Expected Concentration Low Medium High

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
4CC0115	N/A	N/A	VOCs

SAMPLE DESCRIPTION

Matrix Sample Depth Aliquots

Sample Location.

SW

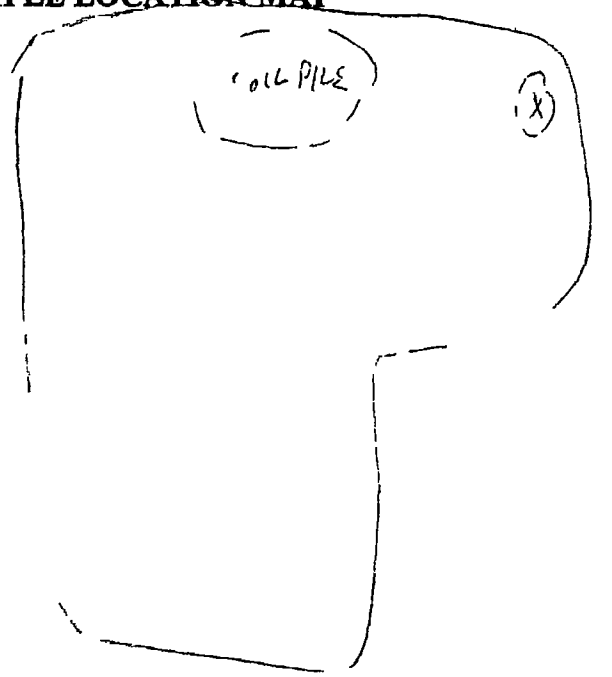
Property Owner/Contact

N/A

Comments (Sample description, etc.)

Wind →
Va " Pressure → 28.5 - Hg
Req → FC00235

SAMPLE LOCATION MAP



FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCI
Location Olathe (NW)

Activity # 69011/03 0141 00	ASR #	Sample #	A-14
Project Leader N Godfrey	Site ID 07ZZ		
Sample Date 6/16/03	Sample Time 0730 - 1530	Sampler	N Godfrey
Expected Concentration Low (Medium) High			

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
A00122	N/A	N/A	VOC's

SAMPLE DESCRIPTION

Matrix | Sample Depth. | Aliquots

Sample Location.

NW

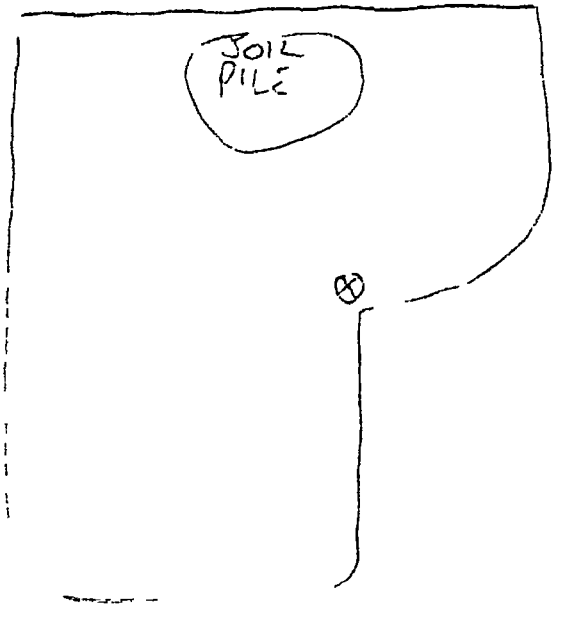
Property Owner/Contact

N/A

Comments (Sample description, etc.)

Wind →
Vacuum Pressure → 29 in Hg
Rig → FR00261

SAMPLE LOCATION MAP



FIELD SHEET
U S ENVIRONMENTAL PROTECTION AGENCY-REGION VII
Superfund Division, 901 N 5th Street, Kansas City, KS 66101

Site CCT
Location Gate (FB)

Activity # G9011/03 0141.00 ASR # Sample # A-15
Project Leader N Godfrey Site ID 07ZZ
Sample Date 6/18/03 Sample Time 0730-1530 Sampler N. Godfrey
Expected Concentration Low Medium High

ANALYSIS REQUESTED

Container	Preservative	Holding Time	Analysis
AC00406	N/A	N/A	VOC's

SAMPLE DESCRIPTION

Matrix Sample Depth Aliquots

Sample Location

N/A

Property Owner/Contact

N/A

Comments (Sample description, etc.)

~~Reg~~
Vacuum Pressure 28 9 in Hg

SAMPLE LOCATION MAP

FB

APPENDIX G

ANALYTICAL RESULTS

(75 Pages)

Analytical Management Laboratories Inc

15130 South Keeler Olathe Kansas 66062
Phone (913) 829 0101 • Fax (913) 829 1181

Certificate of Analysis

June 19, 2003

Nicholas Godfrey
TetraTech
8030 Flint
Lenexa KS 66214
Phone 913 495 3962
Fax 913 894-6295

Client Project ID Chemical Commodities Inc Lab Work Order Number 3354
Project Number G9011 E 03 0141 00

Dear Mr Godrey

Included are the analytical results for the samples received on June 17 2003 All analyses were prepared and analyzed within analytical holding time

Data qualifiers are as follows

ND = Not detected at or above the reporting limit.
B = Some level of the compound was present in the method blank
J = Compound results are an estimated concentration
E = Compound present in levels greater than the instrument calibration range

If you have any questions regarding this report, feel free to contact me at (913) 829 0101

Kendall L Lindquist MBA
Operations Manager

Analytical Management Laboratories Inc

15130 South Keeler Olathe Kansas 66062
Phone (913) 829 0101 • Fax (913) 829 1181

Certificate of Analysis

Nicholas Godfrey
TetraTech

Client Project ID	Chemical Commodities Inc	Lab Work Order Number	3354
Project Number	G9011 E 03 0141 00		

Client Sample ID	S 1	Date Collected	06/17/03
Lab Sample ID	335401	Date Received	06/17/03

Volatiles Date Analyzed 06/19/03 Analyst KLL Method 8260B

Analyte	Results	Units	Reporting Limit
Dichlorodifluoromethane	ND	µg/kg	2270
Chloromethane	ND	µg/kg	2270
Vinyl Chloride	15300	µg/kg	2270
Bromomethane	ND	µg/kg	2270
Chloroethane	ND	µg/kg	2270
Acetone	ND	µg/kg	2270
1 1 Dichloroethene	ND	µg/kg	2270
Iodomethane	ND	µg/kg	2270
Carbon Disulfide	ND	µg/kg	2270
Methylene Chloride	ND	µg/kg	2270
Methyl Tert Butyl Ether (MTBE)	ND	µg/kg	2270
trans 1 2 Dichloroethene	2190 J	µg/kg	2270
1 1 Dichloroethane	4760	µg/kg	2270
2 Butanone (MEK)	ND	µg/kg	2270
cis 1 2 Dichloroethene	291000	µg/kg	2270
2,2 Dichloropropane	ND	µg/kg	2270
Bromochloromethane	ND	µg/kg	2270
Chloroform	2600	µg/kg	2270
1,1 1 Trichloroethane	19300	µg/kg	2270
1 1 Dichloropropene	ND	µg/kg	2270
Carbon Tetrachloride	ND	µg/kg	2270
1,2 Dichloroethane	2820	µg/kg	2270
Benzene	958 J	µg/kg	2270
Trichloroethene	216000	µg/kg	2270
1 2 Dichloropropane	ND	µg/kg	2270
Dibromomethane	ND	µg/kg	2270
Bromodichloromethane	ND	µg/kg	2270
2 Chloroethyl vinyl ether	ND	µg/kg	2270
cis 1 3 Dichloropropene	ND	µg/kg	2270
4 Methyl 2 pentanone (MIBK)	ND	µg/kg	2270
Toluene	2670	µg/kg	2270
trans 1 3 Dichloropropene	ND	µg/kg	2270
1,1 2 Trichloroethane	ND	µg/kg	2270
1 3 Dichloropropane	ND	µg/kg	2270
Tetrachloroethene	22100	µg/kg	2270
2 Hexanone	ND	µg/kg	2270
Dibromochloromethane	ND	µg/kg	2270

Analytical Management Laboratories Inc

15130 South Keeler Olathe Kansas 66062
Phone (913) 829 0101 • Fax (913) 829 1181

Certificate of Analysis

~~Nicholas Godfrey~~
TetraTech

Client Project ID	Chemical Commodities Inc	Lab Work Order Number 3354
Project Number	G9011 E 03 0141 00	

Client Sample ID	S 1
Lab Sample ID	335401

Volatiles Date Analyzed 06/19/03 Analyst KLL Method 8260B

Analyte	Results	Units	Reporting Limit
1,2-Dibromoethane	ND	µg/kg	2270
Chlorobenzene	8030	µg/kg	2270
1 1 1 2 Tetrachloroethane	ND	µg/kg	2270
Ethyl Benzene	712 J	µg/kg	2270
m/p Xylene	3140	µg/kg	2270
o Xylene	1780 J	µg/kg	2270
Styrene	ND	µg/kg	2270
Bromoform	ND	µg/kg	2270
Isopropyl benzene	ND	µg/kg	2270
1 1 2 2 tetrachloroethane	35300	µg/kg	2270
Bromobenzene	ND	µg/kg	2270
1 2 3 Trichloropropane	ND	µg/kg	2270
n Propyl benzene	1500 J	µg/kg	2270
2 Chlorotoluene	ND	µg/kg	2270
1 3,5 Trimethyl benzene	5500	µg/kg	2270
4 chlorotoluene	ND	µg/kg	2270
tert Butyl benzene	ND	µg/kg	2270
1,2 4-trimethyl benzene	17100	µg/kg	2270
sec Butyl benzene	ND	µg/kg	2270
1 3 Dichlorobenzene	1500 J	µg/kg	2270
p isopropyl toluene	923 J	µg/kg	2270
1,4 Dichlorobenzene	6100	µg/kg	2270
n Butyl benzene	1130 J	µg/kg	2270
1,2 Dichlorobenzene	80000	µg/kg	2270
1,2 Dibromo 3 chloropropane	ND	µg/kg	2270
1 2 4-Trichlorobenzene	ND	µg/kg	2270
Hexachlorobutadiene	ND	µg/kg	2270
Naphthalene	9810	µg/kg	2270
1 2 3 Trichlorobenzene	ND	µg/kg	2270
Dibromofluoromethane (surrogate)	117	%	70 130
1 2 Dichloroethane d4 (surrogate)	102	%	70 130
Toluene d8 (surrogate)	116	%	70 130
4 Bromofluorobenzene (surrogate)	102	%	70 130

Analytical Management Laboratories Inc

15130 South Keeler Olathe Kansas 66062
Phone (913) 829 0101 • Fax (913) 829 1181

Certificate of Analysis

Nicholas Godfrey
TetraTech

Client Project ID	Chemical Commodities Inc	Lab Work Order Number	3354
Project Number	G9011 E 03 0141 00		

Client Sample ID	S 2	Date Collected	06/17/03
Lab Sample ID	335402	Date Received	06/17/03

Herbicides Date Analyzed 06/19/03 Analyst KLL Method 8150

Analyte	Results	Units	Reporting Limit
2 4-D	ND	µg/kg	4170
2 4-DB	ND	µg/kg	4170
2 4 5 T	ND	µg/kg	417
Silvex (2 4 5 TP)	ND	µg/kg	417
Dalapon	ND	µg/kg	1040
Dicamba	ND	µg/kg	417
Dichloroprop	ND	µg/kg	417
Dinoseb	ND	µg/kg	208
MCPA	ND	µg/kg	416700
MCPP	ND	µg/kg	416700
DCAA (surrogate)	101	%	60 140

Pesticides Date Analyzed 06/19/03 Analyst RRH Method 8081

Analyte	Results	Units	Detection Limit
Aldrin	ND	µg/kg	250
a BHC	ND	µg/kg	250
b BHC	ND	µg/kg	250
d-BHC	ND	µg/kg	250
g BHC	ND	µg/kg	250
p p DDD	12120	µg/kg	5000
p p DDE	772	µg/kg	500
p p -DDT	191	µg/kg	5000
Dieldrin	ND	µg/kg	500
Endosulfan I	ND	µg/kg	250
Endosulfan II	ND	µg/kg	500
Endosulfan Sulfate	ND	µg/kg	500
Endrin	ND	µg/kg	500
Endrin Aldehyde	ND	µg/kg	500
Endrin Ketone	ND	µg/kg	500
Heptachlor	ND	µg/kg	250
Heptachlor Epoxide	ND	µg/kg	250
Methoxychlor	ND	µg/kg	25000
Technical Chlordane	ND	µg/kg	2500
a Chlordane	ND	µg/kg	250
g Chlordane	ND	µg/kg	250
Toxaphene	ND	µg/kg	25000
DCB (surrogate)	153	%	40 160

Analytical Management Laboratories Inc.
15130 South Keeler Olathe Kansas 66062
Phone (913) 829 0101 • Fax (913) 829 1181

Certificate of Analysis

Nicholas Godfrey
TetraTech

Client Project ID	Chemical Commodities Inc	Lab Work Order Number	3354
Project Number	G9011 E 03 0141 00		

Client Sample ID	S 3	Date Collected	06/17/03
Lab Sample ID	335403	Date Received	06/17/03

BNAs Date Analyzed 06/19/03 Analyst JM Method 8270
Date Extracted 06/18/03 Analyst TM

Analyte	Results	Units	Reporting Limit
Phenol	ND	µg/kg	20000
bis (2 Chloroethyl) Ether	ND	µg/kg	20000
2 Chlorophenol	ND	µg/kg	20000
1 3 Dichlorobenzene	ND	µg/kg	20000
1 4 Dichlorobenzene	ND	µg/kg	20000
1,2 Dichlorobenzene	162000	µg/kg	20000
2 Methylphenol	ND	µg/kg	20000
bis (2-chloroisopropyl) ether	ND	µg/kg	20000
4-Methylphenol	ND	µg/kg	20000
n Nitroso di Propylamine	ND	µg/kg	20000
Hexachloroethane	ND	µg/kg	20000
Nitrobenzene	ND	µg/kg	20000
Isophorone	ND	µg/kg	20000
2 Nitrophenol	ND	µg/kg	20000
2 4 Dimethylphenol	ND	µg/kg	20000
bis (2 chloroethoxy) Methane	ND	µg/kg	20000
2 4-Dichloropehnol	ND	µg/kg	20000
1 2 4 Trichlorobenzene	ND	µg/kg	20000
Naphthalene	48800	µg/kg	20000
4 Chloroaniline	ND	µg/kg	20000
Hexachlorocyclopentadiene	ND	µg/kg	20000
2 4 6 Trichlorophenol	ND	µg/kg	20000
2 4 5 Trichlorophenol	ND	µg/kg	20000
2-Chloronaphthalene	ND	µg/kg	20000
2 Nitroaniline	ND	µg/kg	20000
Dimethylphthalate	ND	µg/kg	20000
Acenaphthylene	ND	µg/kg	20000
3 Nitroaniline	ND	µg/kg	20000
Acenaphthene	38300	µg/kg	20000
2 4-Dinitrophenol	ND	µg/kg	20000
4 Nitrophenol	ND	µg/kg	20000
Dibenzofuran	36100	µg/kg	20000
2,4 Dinitrotoluene	ND	µg/kg	20000
Diethylphthalate	ND	µg/kg	20000
4 Chlorophenyl-phenylether	ND	µg/kg	20000
Fluorene	68000	µg/kg	20000
4 Nitroaniline	ND	µg/kg	20000

Analytical Management Laboratories Inc

15130 South Keeler Olathe Kansas 66062
Phone (913) 829 0101 Fax (913) 829 1181

Certificate of Analysis

Nicholas Godfrey
TetraTech

Client Project ID	Chemical Commodities Inc	Lab Work Order Number 3354
Project Number	G9011 E 03 0141 00	

Client Sample ID	S 3
Lab Sample ID	335403

BNAs — Date Analyzed 06/19/03 — Analyst JM — Method 8270
Date Extracted 06/18/03 — Analyst TM

Analyte	Results	Units	Reporting Limit
4 6 Dinitro 2 Methylphenol	ND	µg/kg	20000
n Nitrosodiphenylamine	ND	µg/kg	20000
4 Bromophenyl-Phenylether	ND	µg/kg	20000
Hexachlorobenzene	ND	µg/kg	20000
Pentachlorophenol	ND	µg/kg	20000
Phenanthrene	454000	µg/kg	20000
Anthracene	104000	µg/kg	20000
Di n butyl Phthalate	ND	µg/kg	20000
4 Chloro-3 methyl phenol	ND	µg/kg	20000
Hexachlorobutadiene	ND	µg/kg	20000
2 6 Dinitrotoluene	ND	µg/kg	20000
2 Methylnaphthalene	105000	µg/kg	20000
Chrysene	381000	µg/kg	20000
Di octyl Phthalate	ND	µg/kg	20000
Fluoranthene	642000	µg/kg	20000
Pyrene	467000	µg/kg	20000
Butylbenzylphthalate	ND	µg/kg	20000
Benzo (a) Anthracene	310000	µg/kg	20000
bis (2 ethylhexyl) Phthalate	ND	µg/kg	20000
Benzo (b) Fluoranthene	474000	µg/kg	20000
Benzo (k) Fluoranthene	184000	µg/kg	20000
Benzo (a) Pyrene	335000	µg/kg	20000
Indeno (1 2 3 cd) Pyrene	189000	µg/kg	20000
Benzo (a,h) Anthracene	69900	µg/kg	20000
Benzo (g h i) Perylene	199000	µg/kg	20000
Carbazole	84400	µg/kg	20000
2 Fluorophenol (surrogate)	55	%	35 105
Phenol d6 (surrogate)	54	%	40 100
Nitrobenzene d5 (surrogate)	44	%	35 100
2 Fluorobiphenyl (surrogate)	66	%	45 105
2 4 6 Tribromophenol (surrogate)	53	%	35 125
Terpheyl d14 (surrogate)	61	%	30 125

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 Sakamoto
Analytical Chemist
Air Quality Laboratory

Reviewed and Approved

Chris Parnell
GCMS-VOA Team Leader
Air Quality Laboratory

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

st Code	EPA TO 15	Date Collected	6/16/03
ɜtrument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/17/03
ıalyst.	Michelle Sakamoto	Date(s) Analyzed	6/26/03
mpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
ɜst Notes			
ɔntaıner ID	AC00223		

Pı 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	J 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	J
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	J 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

Verified By KH Date 07/09/03

2

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

st Code	EPA TO 15	Date Collected	6/16/03
strument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/17/03
nalyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
mpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
st Notes			
ontainer 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 BMH Date 07/09/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

st Code	EPA TO-15	Date Collected	6/16/03
strument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/17/03
ıalyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
.mpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
st Notes			
›ntaıner ID	AC00223		

Pı 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

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

ıt Code	EPA TO 15	Date Collected	6/16/03
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/17/03
alyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
mpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
st Notes			
ntainer ID	AC00223		

Pı 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

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

st Code	EPA TO 15	Date Collected	6/16/03
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/17/03
alyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
mpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
st Notes			
ntainer 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	LJ ~~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	LJ
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	LJ ~~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

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

t Code	EPA TO 15	Date Collected	6/16/03
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/17/03
alyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
npling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
t Notes			
ntainer 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 LPO	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 postively identified below the method reporting limit

he associated numerical value is considered estimated

Verified By KMH Date 07/01/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

it Code	EPA TO 15	Date Collected	6/16/03
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/17/03
alyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
npling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
it Notes			
ntainer 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 AJ+	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 J	1 8	0 047	0 30	J
95 50 1	1 2 Dichlorobenzene	1 8 J	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 postively identified below the method reporting limit

he associated numerical value is considered estimated

Verified By KMH Date 07/01/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

it Code	EPA TO-15	Date Collected	6/16/03
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/17/03
alyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
npling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
t Notes			
ntainer 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	J 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	J
78 93 3	2 Butanone (MEK)	2 6	1 8	0 89	0 60	J
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 KHH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

₅st Code	EPA TO 15	Date Collected	6/16/03
ıstrument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/17/03
nalyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
ımpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
⁼st Notes			
ontaıner ID	AC00291		

Pı 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

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

est Code	EPA TO 15	Date Collected	6/16/03
ıstrument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/17/03
nalyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
ampling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
est Notes			
ontainer ID	AC00291		

Pı 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

11

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

st Code	EPA TO 15	Date Collected	6/16/03
ıtrument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/17/03
ıalyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
mpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
st Notes			
ıntaıner ID	AC00153		

Pı 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

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

it Code	EPA TO 15	Date Collected	6/16/03
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/17/03
alyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
npling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
it Notes			
ntainer 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 KMH Date 07/01/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

st Code	EPA TO 15	Date Collected	NA
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	NA
ıalyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
mplıng Medıa	Summa Canıster	Volume(s) Analyzed	1 00 Liter(s)
st 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

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

it Code	EPA TO 15	Date Collected	NA
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	NA
alyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
npling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
it 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

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

Surrogate Spike Recovery Results

t Code EPA TO 15
rument ID HP5972/Tekmar AUTOCan Elite Date Collected 6/16/03
ılyst Michelle Sakamoto Date Received 6/17/03
ıpling Media Summa Canister(s) Date Analyzed 6/26/03
t Notes

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

Verified By KMH Date 07/01/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

lent	**Tetra Tech EM Inc**
ıent Sample ID	**Duplicate Lab Control Sample**
ıent 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

st Code	EPA TO 15
ıtrument ID	HP5972/Tekmar AUTOCan Elite
ıalyst	Michelle Sakamoto
mpling Media	Summa Canister
st 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
rans 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
? Butanone (MEK)	25 0	25 0	27 6	24 2	110	96 7	63 3 131	13	25
is 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 EMH Date 07/09/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

lient
lient Sample ID
lient Project ID

CAS Project ID P2301170
CAS Sample ID P030626-LCS
P030626-DLCS

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary

st Code EPA TO 15
strument ID HP5972/Tekmar AUTOCan Elite
ıalyst Michelle Sakamoto
ımpling Media Summa Canister
st Notes

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

Compound	Spike Amount		Result		% Recovery		CAS Acceptance Limits	Relative Percent Difference	RPD Limit %
	LCS	DLCS	LCS	DLCS	LCS	DLCS			
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
ıs 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
rans 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
ıtyrene	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 PHH 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

(e 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 nplance 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	Required pH	pH (as received, if required)	VOA Headspace (Presence/Absence)	Receipt Preservation Comments
301170 001			NA	
301170-002			NA	
301170 003			NA	
301170 004			NA	
301170-005			NA	

xplain any discrepancies (include lab sample ID numbers) _____

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	06/18/03
	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 Sakamoto
Analytical Chemist
Air Quality Laboratory

Reviewed and Approved

Chris Parnell
GCMS-VOA Team Leader
Air Quality Laboratory

ACIL Seal of Excellence

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

IELAC 2665 Park Center Drive, Suite D • Simi Valley, California 93065 Fax (805) 526 7270 ACIL Seal of Excellence Laboratory

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

st Code	EPA TO 15	Date Collected	6/17/03
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/18/03
alyst	Michelle Sakamoto	Date(s) Analyzed	6/27/03
mpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
st Notes			
ntainer 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 KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

t Code	EPA TO 15	Date Collected	6/17/03
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/18/03
alyst	Michelle Sakamoto	Date(s) Analyzed	6/27/03
npling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
it Notes			
ntainer 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

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

st Code	EPA TO-15	Date Collected	6/17/03
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/18/03
ıalyst	Michelle Sakamoto	Date(s) Analyzed	6/27/03
mpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
st Notes			
ntaıner ID	AC00372		

Pı 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
56 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	
07 06 2	1,2 Dichloroethane	ND	1 8	ND	0 43	
1 55 6	1 1 1 Trichloroethane	0 49	1 8	0 090	0 32	J
1-43 2	Benzene	1 1	1 8	0 33	0 55	J
6 23 5	Carbon Tetrachloride	0 58	1 8	0 092	0 28	J
8 87 5	1 2 Dichloropropane	ND	1 8	ND	0 38	

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

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

= Analyte found in method blank

= The analyte was positively identified below the method reporting limit

ıe associated numerical value is considered estimated

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

st Code	EPA TO 15	Date Collected	6/17/03
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/18/03
alyst	Michelle Sakamoto	Date(s) Analyzed	6/27/03
mpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
st Notes			
ntainer 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**

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

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

st Code	EPA TO 15	Date Collected	6/17/03
ıtrument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/18/03
ıalyst	Michelle Sakamoto	Date(s) Analyzed	6/27/03
mpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
st Notes			0 20 Liter(s)
ntaıner ID	AC00307		

Pı l = 1 1 Pf l = 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	
57 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 KH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

st Code	EPA TO 15	Date Collected	6/17/03
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/18/03
ialyst	Michelle Sakamoto	Date(s) Analyzed	6/27/03
mpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
st Notes			0 20 Liter(s)
ntainer 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

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

t Code	EPA TO 15	Date Collected	6/17/03
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/18/03
alyst	Michelle Sakamoto	Date(s) Analyzed	6/27/03
npling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
it Notes			
ntainer 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

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

st Code	EPA TO 15	Date Collected	6/17/03
›trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/18/03
ıalyst	Michelle Sakamoto	Date(s) Analyzed	6/27/03
mpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
st Notes			
ıntaıner ID	AC00298		

Pı 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	Bromodıchloromethane	ND	1 8	ND	0 27	
79 01 6	Trıchloroethene	13	1 8	2 4	0 34	
10061 01 5	cıs 1,3 Dıchloropropene	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 Dıchloropropene	ND	1 8	ND	0 40	
79 00 5	1 1 2 Trıchloroethane	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	Dıbromochloromethane	ND	1 8	ND	0 21	
106 93 4	1 2 Dıbromoethane	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 Dıchlorobenzene	ND	1 8	ND	0 30	
106 46 7	1 4 Dıchlorobenzene	0 29	1 8	0 048	0 30	J
95 50 1	1,2 Dıchlorobenzene	1 9	1 8	0 32	0 30	

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

MRL = Method Reporting Lımıt The mınımum quantıty of a target analyte that can be confidently determined by the referenced method

J = The analyte was postıvely ıdentıfied below the method reportıng lımıt

the associated numerical value ıs considered estımated

Verified By EMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

st Code	EPA TO 15	Date Collected	6/17/03
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/18/03
ialyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
mpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
st Notes			
ntainer 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
56 59 2	cis 1 2 Dichloroethene	ND	1 0	ND	0 25	
67 66 3	Chloroform	ND	1 0	ND	0 20	
07 06 2	1 2 Dichloroethane	ND	1 0	ND	0 25	
1 55 6	1 1 1 Trichloroethane	ND	1 0	ND	0 18	
1-43 2	Benzene	ND	1 0	ND	0 31	
6 23 5	Carbon Tetrachloride	ND	1 0	ND	0 16	
8 87 5	1 2 Dichloropropane	ND	1 0	ND	0 22	

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

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

= Analyte found in method blank

= The analyte was positively identified below the method reporting limit

ie associated numerical value is considered estimated

Verified By EMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

t Code	EPA TO 15	Date Collected	6/17/03
rument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/18/03
ılyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
ıpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
t Notes			
ıtaıner ID	AC00043		

Pı 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

12

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

st Code	EPA TO-15	Date Collected	NA
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	NA
alyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
mpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
st 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	
8 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

= The analyte was positively identified below the method reporting limit

ue associated numerical value is considered estimated

13

Verified By KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

st Code	EPA TO 15	Date Collected	NA
ıtrument ID	HP5972/Tekmar AUTOCan Elite	Date Received	NA
ıalyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
mpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
st Notes			

DF = 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	
)5-47 6	o Xylene	ND	1 0	ND	0 23	
79 34 5	1 1 2 2 Tetrachloroethane	ND	1 0	ND	0 15	
)41 73 1	1 3 Dichlorobenzene	ND	1 0	ND	0 17	
06-46 7	1,4 Dichlorobenzene	ND	1 0	ND	0 17	
)5 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 KMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

t Code	EPA TO 15	Date Collected	NA
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	NA
alyst	Michelle Sakamoto	Date(s) Analyzed	6/27/03
npling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
it 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

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

it Code	EPA TO 15	Date Collected	NA
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	NA
alyst	Michelle Sakamoto	Date(s) Analyzed	6/27/03
npling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
t 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

16

Verified By EMH Date 07/02/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

Surrogate Spike Recovery Results

t Code EPA TO 15
rument ID HP5972/Tekmar AUTOCan Elite
ılyst Michelle Sakamoto
ıpling Media Summa Canister(s)
t Notes

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

ient Sample ID	CAS Sample ID	1,2-Dichloroethane-d4		Toluene-d8		Bromofluorobenzene		Data Qualifier
		% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	% Recovered	Acceptance Limits	
thod Blank	P030626 MB	96 8	70 140	99 4	70-140	106	70 140	
thod Blank	P030627 MB	93 9	70 140	100	70 140	104	70 140	
b Control Sample	P030626-LCS	99 4	70 140	95 1	70 140	104	70-140	
b Control Sample	P030627 LCS	98 8	70 140	93 9	70 140	102	70 140	
plicate Lab Control Sample	P030626 DLCS	101	70 140	93 0	70 140	101	70 140	
plicate Lab Control Sample	P030627 DLCS	108	70 140	89 1	70 140	97 9	70-140	
6	P2301178 001	96 9	70 140	102	70 140	107	70 140	
7	P2301178 002	95 7	70 140	101	70 140	108	70-140	
8	P2301178 003	97 4	70 140	102	70 140	107	70 140	
9	P2301178 004	96.3	70 140	103	70 140	107	70 140	
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

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

t Code	EPA TO 15
trument ID	HP5972/Tekmar AUTOCan Elite
alyst	Michelle Sakamoto
npling Media	Summa Canister
it Notes	

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

ompound	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 %
hloromethane	19 4	19 4	16 6	16 3	85 4	84 1	70 3 122	1 5	25
inyl Chloride	26 4	26 4	25 9	22 7	98 1	86 1	69 8 133	13	25
romomethane	38 9	38 9	35 9	31 6	92 2	81.2	73 2 135	13	25
hloroethane	28 9	28 9	27 1	23 3	93 6	80 4	64 4 134	15	25
cetone	25 0	25 0	24 1	20 7	96 4	82 8	50 3 131	15	25
richlorofluoromethane	48 5	48 5	46 1	42 0	95 1	86 6	60 8 146	9 4	25
1 Dichloroethene	25 0	25 0	29 5	25 3	118	101	60 2 120	16	25
lethylene chloride	25 0	25 0	26 0	22 4	104	89 5	64 0 115	15	25
richlorotrifluoroethane	30 7	30 7	30 3	29 6	98 6	96 4	65 5 130	2 3	25
arbon Disulfide	25 0	25 0	27 3	23 0	109	92 1	60 2 126	17	25
ans 1 2 Dichloroethene	25 0	25 0	29 4	25 0	118	100	70 7 129	17	25
1 Dichloroethane	25 0	25 0	25 7	21 9	103	87 8	65 7 120	16	25
lethyl tert Butyl Ether	25 0	25 0	24 8	24 4	99 4	97 8	59 9 131	1 6	25
inyl Acetate	25 0	25 0	23 5	21 2	94 0	84 8	48 8 150	10	25
Butanone (MEK)	25 0	25 0	27 6	24 2	110	96 7	63 3 131	13	25
s 1 2 Dichloroethene	25 0	25 0	27 2	23 2	109	93 0	66 8 123	16	25
hloroform	25 0	25 0	27 8	23 8	111	95 2	67 4-129	15	25
2 Dichloroethane	25 0	25 0	27 8	24 2	111	96 8	64 2 132	14	25
1,1 Trichloroethane	25 0	25 0	26 9	26 3	107	105	65 6 125	1 9	25
enzene	25 0	25 0	24 3	21 2	97.3	85 0	71 1 120	13	25
arbon Tetrachloride	25 0	25 0	26 8	25 7	107	103	60 5 140	3 8	25
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

ıent	**Tetra Tech EM Inc**		
ent Sample ID	**Duplicate Lab Control Sample**	CAS Project ID	P2301178
ent Project ID	**Chemical Commodities Incorporated/69011 E 03 0141 00**	CAS Sample ID	P030626 LCS, P030626-DLCS

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary

ɔt Code	EPA TO-15	Date Collected	NA
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	NA
alyst	Michelle Sakamoto	Date Analyzed	6/26/03
npling Media	Summa Canister	Volume(s) Analyzed	NA
ɜt Notes			

ompound	Spike Amount		Result		% Recovery		CAS Acceptance Limits	Relative Percent Difference	RPD Limit %
	LCS	DLCS	LCS	DLCS	LCS	DLCS			
Bromodichloromethane	25 0	25 0	29 3	26 3	117	105	68 5 131	11	25
richloroethene	25 0	25 0	28 3	24 6	113	98 4	68 3-121	14	25
is-1,3 Dichloropropene	25 0	25 0	29 1	25 9	116	104	69 1-128	11	25
Methyl 2 Pentanone	25 0	25 0	27 2	23 4	109	93 4	61 8 130	15	25
rans 1 3 Dichloropropene	25 0	25 0	26 0	23 4	104	93 7	55 9 118	10	25
1,2 Trichloroethane	25 0	25 0	26 8	24 1	107	96 4	67 8-134	10	25
oluene	25 0	25 0	25 4	21 2	102	85 0	59 0 127	18	25
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
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
thylbenzene	25 0	25 0	26 9	22 9	107	91 8	56 4 130	15	25
n,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
tyrene	25 0	25 0	27 8	23 8	111	95 2	46 9 141	15	25
-Xylene	25 0	25 0	27 9	24 0	112	95 8	57 7 125	16	25
1 2 2 Tetrachloroethane	25 0	25 0	26 1	21 9	104	87 6	63 6 128	17	25
,3 Dichlorobenzene	25 0	25 0	28 7	24 6	115	98 4	64 9 146	16	25
4 Dichlorobenzene	25 0	25 0	27 8	24 1	111	96 4	55 5 146	14	25
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

lent	**Tetra Tech EM Inc.**
ıent Sample ID	**Duplicate Lab Control Sample**
ıent 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

st Code	EPA TO-15
trument ID	HP5972/Tekmar AUTOCan Elite
alyst	Michelle Sakamoto
mpling Media	Summa Canister
st Notes	

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

ompound	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 %
hloromethane	19 4	19 4	16 3	16 0	84 1	82.3	70 3 122	2 2	25
inyl Chloride	26 4	26 4	25 9	22 1	98 0	83 8	69 8 133	16	25
romomethane	38 9	38 9	34 7	30 8	89 2	79 1	73 2 135	12	25
hloroethane	28 9	28 9	26 8	22 6	92 8	78 3	64 4 134	17	25
cetone	25 0	25 0	23 7	20 9	94 9	83 7	50 3 131	13	25
richlorofluoromethane	48 5	48 5	44 1	45 5	90 9	93 9	60 8 146	3 2	25
1 Dichloroethene	25 0	25 0	29 1	25 8	116	103	60 2 120	12	25
lethylene chloride	25 0	25 0	25 8	21 9	103	87 6	64 0 115	16	25
richlorotrifluoroethane	30 7	30 7	29 4	29 4	95 9	95 7	65 5 130	0 2	25
arbon Disulfide	25 0	25 0	27 1	22 6	108	90 4	60 2 126	18	25
ans 1 2 Dichloroethene	25 0	25 0	28 9	25 2	115	101	70 7 129	13	25
,1 Dichloroethane	25 0	25 0	25 0	22 6	99 8	90 5	65 7 120	9 8	25
lethyl tert Butyl Ether	25 0	25 0	24 1	24 8	96.3	99 2	59 9 131	3 0	25
inyl Acetate	25 0	25 0	21 8	20 3	87 1	81 2	48 8 150	7 0	25
Butanone (MEK)	25 0	25 0	27 1	23 3	109	93.3	63 3 131	16	25
is 1,2 Dichloroethene	25 0	25 0	27 2	23 9	109	95 6	66 8 123	13	25
hloroform	25 0	25 0	27 1	24 9	108	99 7	67 4 129	8 0	25
2 Dichloroethane	25 0	25 0	26 8	25 6	107	102	64 2 132	4 8	25
1,1 Trichloroethane	25 0	25 0	26 0	29 2	104	117	65 6 125	12	25
enzene	25 0	25 0	23 6	21 3	94 4	85 3	71 1 120	10	25
arbon Tetrachloride	25 0	25 0	25 6	28 5	102	114	60 5 140	11	25
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

ıent	**Tetra Tech EM Inc**		
ent Sample ID	**Duplicate Lab Control Sample**	CAS Project ID	P2301178
ıent Project ID	**Chemical Commodities Incorporated/69011 E 03 0141 00**	CAS Sample ID	P030627 LCS P030627 DLCS

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary

st Code	EPA TO 15	Date Collected	NA
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	NA
ıalyst	Michelle Sakamoto	Date Analyzed	6/27/03
mpling Media	Summa Canister	Volume(s) Analyzed	NA
st Notes			

Compound	Spike Amount		Result		% Recovery		CAS Acceptance Limits	Relative Percent Difference	RPD Limit %
	LCS	DLCS	LCS	DLCS	LCS	DLCS			
Bromodichloromethane	25 0	25 0	28 5	28 0	114	112	68 5 131	1 8	25
richloroethene	25 0	25 0	27 7	24 9	111	99 6	68 3 121	11	25
is 1 3 Dichloropropene	25 0	25 0	28 6	26 3	114	105	69 1 128	8 2	25
Methyl 2 Pentanone	25 0	25 0	26 6	24 0	106	95 8	61 8 130	10	25
rans 1 3 Dichloropropene	25 0	25 0	25 1	24 1	100	96 4	55 9 118	3 7	25
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
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
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
thylbenzene	25 0	25 0	26 1	22 3	105	89 4	56 4 130	16	25
n 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
tyrene	25 0	25 0	27 2	22 3	109	89 0	46 9 141	20	25
Xylene	25 0	25 0	27 2	24 2	109	96 8	57 7 125	12	25
1 2 2 Tetrachloroethane	25 0	25 0	25 5	21 8	102	87 3	63 6-128	16	25
3 Dichlorobenzene	25 0	25 0	27 7	23 0	111	92 0	64 9 146	19	25
4 Dichlorobenzene	25 0	25 0	26 4	22 0	106	87 8	55 5 146	19	25
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

lient Tetra Tech EM Inc Work order P2301178
oject Chemical Commodities Incorporated/69011 E 03 0141 00
Sample(s) received on 6/18/03 Date opened 6/18/03 by SM

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 pliance or nonconformity Thermal preservation and pH will only be evaluated either at the request of the client or as required by the method/SOP

	Question	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	Required pH	pH as received (if required)	VOA Headspace (Presence/Absence)	Receipt/Preservation Comments
01178 001			NA	
01178 002			NA	
01178 003			NA	
01178 004			NA	
01178 005			NA	

plain any discrepancies (include lab sample ID numbers)

22

Columbia Analytical Services INC
An Employee Owned Company

LABORATORY REPORT

RECEIVED
JUL 7 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

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

2665 Park Center Drive, Suite D • Simi Valley, California 93065

ACIL
Seal of Excellence

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

ent **Tetra Tech FM Inc**
ent Sample ID **A-11**

CAS Project ID P2301197
CAS Sample ID P2301197 001

st Code EPA TO 15
trument ID HP5972/Tekmar AUTOCan Elite
alyst Michelle Sakamoto
npling Media Summa Canister
st Notes
ntainer 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
he associated numerical value is considered estimated

Verified By _____ Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

ient	**Tetra Tech EM Inc**
ent Sample ID	**A-11**
CAS Project ID	P2301197
CAS Sample ID	P2301197 001

it Code	EPA TO 15	Date Collected	6/18/03
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/19/03
alyst.	Michelle Sakamoto	Date(s) Analyzed	6/27/03
npling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
it Notes			
ntainer ID	AC00095		

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

' = The analyte was postively identified below the method reporting limit

he associated numerical value is considered estimated

Verified By RC Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

lient	**Tetra Tech EM Inc**		
lient Sample ID	**A-12**	CAS Project ID	P2301197
		CAS Sample ID	P2301197 002

st Code	EPA TO 15	Date Collected	6/18/03
strument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/19/03
nalyst	Michelle Sakamoto	Date(s) Analyzed	6/27/03
ımpling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
st Notes			
ɔntaıner ID	AC00149		

Pı 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

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

ent **Tetra Tech EM Inc**
nt Sample ID **A 12**

CAS Project ID P2301197
CAS Sample ID P2301197 002

t Code EPA TO 15
rument ID HP5972/Tekmar AUTOCan Elite
lyst Michelle Sakamoto
ıpling Media Summa Canister
t Notes
tainer 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)

Pı 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
5 27-4	Bromodichloromethane	ND	1 3	ND	0 20	
9 01 6	Trichloroethene	71	1 3	13	0 25	
0061 01 5	cis 1 3 Dichloropropene	ND	1 3	ND	0 29	
08 10 1	4 Methyl 2 pentanone	ND	1 3	ND	0 32	
0061 02 6	trans 1 3 Dichloropropene	ND	1 3	ND	0 29	
9 00-5	1,1 2 Trichloroethane	ND	1 3	ND	0 24	
08 88 3	Toluene	4 9	1 3	1 3	0 35	
91 78 6	2 Hexanone	ND	1 3	ND	0 32	
24-48 1	Dibromochloromethane	ND	1 3	ND	0 16	
06 93-4	1 2 Dibromoethane	ND	1 3	ND	0 17	
27 18-4	Tetrachloroethene	54	1 3	7 9	0 20	
08 90 7	Chlorobenzene	0 89	1 3	0 19	0 29	J
00-41-4	Ethylbenzene	0 65	1 3	0 15	0 31	J
36777 61 2	*m p* Xylenes	1 8	1 3	0 41	0 31	
5 25 2	Bromoform	ND	1 3	ND	0 13	
00-42 5	Styrene	ND	1 3	ND	0 31	
5-47 6	o Xylene	0 68	1 3	0 16	0 31	J
9 34 5	1 1,2 2 Tetrachloroethane	2 6	1 3	0.38	0 19	
41 73 1	1 3 Dichlorobenzene	ND	1 3	ND	0 22	
06-46 7	1 4 Dichlorobenzene	0 32	1 3	0 05	0 22	J
5 50 1	1 2 Dichlorobenzene	2 7	1 3	0 44	0 22	

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

Verified By RC Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

ent **Tetra Tech EM Inc**
ent Sample ID **A-13**

CAS Project ID P2301197
CAS Sample ID P2301197 003

st Code EPA TO 15
trument ID HP5972/Tekmar AUTOCan Elite
alyst Michelle Sakamoto
mpling Media Summa Canister
st Notes
ntainer 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

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

ient	**Tetra Tech EM Inc**
ent Sample ID	**A-13**

CAS Project ID P2301197
CAS Sample ID P2301197 003

it Code	EPA TO 15
trument ID	HP5972/Tekmar AUTOCan Elite
alyst	Michelle Sakamoto
npling Media	Summa Canister
it Notes	
ntainer 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
= The analyte was positively identified below the method reporting limit
he associated numerical value is considered estimated

Verified By RC Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

ent **Tetra Tech EM Inc**
ent Sample ID **A-14**

CAS Project ID P2301197
CAS Sample ID P2301197-004

st Code EPA TO 15
trument ID HP5972/Tekmar AUTOCan Elite
alyst Michelle Sakamoto
mpling Media Summa Canister
st Notes
ntainer 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 _____ Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

ient	**Tetra Tech EM Inc**
ent Sample ID	**A 14**
CAS Project ID	P2301197
CAS Sample ID	P2301197 004

t Code	EPA TO 15	Date Collected	6/18/03
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/19/03
alyst	Michelle Sakamoto	Date(s) Analyzed	6/27/03
npling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
it Notes			
ntainer ID	AC00122		

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 RC Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

CAS Project ID P2301197
CAS Sample ID P2301197-005

it Code EPA TO 15
trument ID HP5972/Tekmar AUTOCan Elite
alyst Michelle Sakamoto
npling Media Summa Canister
it Notes
ntainer 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	
57 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 postively identified below the method reporting limit
The associated numerical value is considered estimated

Verified By R Cr Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

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

CAS Project ID P2301197
CAS Sample ID P2301197-005

Code	EPA TO 15	Date Collected	6/18/03
ument ID	HP5972/Tekmar AUTOCan Elite	Date Received	6/19/03
lyst	Michelle Sakamoto	Date(s) Analyzed	6/26/03
pling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
Notes			
tainer ID	AC00406		

Pi 1 = 14 3 Pf 1 = 3 5

D F = NA

AS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
5 27-4	Bromodichloromethane	ND	1 0	ND	0 15	
9 01 6	Trichloroethene	ND	1 0	ND	0 19	
0061 01 5	cis 1 3 Dichloropropene	ND	1 0	ND	0 22	
08 10 1	4 Methyl 2 pentanone	ND	1 0	ND	0 24	
0061 02 6	trans 1 3 Dichloropropene	ND	1 0	ND	0 22	
9 00 5	1 1 2 Trichloroethane	ND	1 0	ND	0 18	
08 88 3	Toluene	ND	1 0	ND	0 27	
91 78 6	2 Hexanone	ND	1 0	ND	0 24	
24-48 1	Dibromochloromethane	ND	1 0	ND	0 12	
06 93-4	1 2 Dibromoethane	ND	1 0	ND	0 13	
27 18 4	Tetrachloroethene	ND	1 0	ND	0 15	
08 90-7	Chlorobenzene	ND	1 0	ND	0 22	
00-41-4	Ethylbenzene	ND	1 0	ND	0 23	
36777 61 2	*m p* Xylenes	ND	1 0	ND	0 23	
5 25 2	Bromoform	ND	1 0	ND	0 097	
00-42 5	Styrene	ND	1 0	ND	0 23	
5-47 6	o-Xylene	ND	1 0	ND	0 23	
9 34 5	1 1 2 2 Tetrachloroethane	ND	1 0	ND	0 15	
41 73 1	1 3 Dichlorobenzene	ND	1 0	ND	0 17	
06-46-7	1 4 Dichlorobenzene	ND	1 0	ND	0 17	
50 1	1,2 Dichlorobenzene	ND	1 0	ND	0 17	

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

Verified By _____ Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

nt	**Tetra Tech EM Inc**
nt Sample ID	**Method Blank**
CAS Project ID	P2301197
CAS Sample ID	P030626-MB

Code	EPA TO-15
ument ID	HP5972/Tekmar AUTOCan Elite
lyst	Michelle Sakamoto
pling Media	Summa Canister
Notes	
Date Collected	NA
Date Received	NA
Date(s) Analyzed	6/26/03
Volume(s) Analyzed	1 00 Liter(s)

D F = 1 00

AS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
4 87 3	Chloromethane	ND	1 0	ND	0 48	
5 01-4	Vinyl Chloride	ND	1 0	ND	0 39	
4 83 9	Bromomethane	ND	1 0	ND	0 26	
5 00 3	Chloroethane	ND	1 0	ND	0 38	
7 64 1	Acetone	0.38	5 0	0 16	2 1	J
5 69-4	Trichlorofluoromethane	ND	1 0	ND	0 18	
5 35-4	1 1 Dichloroethene	ND	1 0	ND	0 25	
5 09 2	Methylene chloride	ND	1 0	ND	0 29	
6 13 1	Trichlorotrifluoroethane	ND	1 0	ND	0 13	
5 15 0	Carbon Disulfide	ND	1 0	ND	0 32	
56 60 5	trans 1,2 Dichloroethene	ND	1 0	ND	0 25	
5 34 3	1 1 Dichloroethane	ND	1 0	ND	0 25	
634 04-4	Methyl tert Butyl Ether	ND	1 0	ND	0 28	
08 05-4	Vinyl Acetate	ND	1 0	ND	0 28	
8 93 3	2 Butanone (MEK)	ND	1 0	ND	0 34	
56 59 2	cis 1,2 Dichloroethene	ND	1 0	ND	0 25	
7 66 3	Chloroform	ND	1 0	ND	0 20	
07 06 2	1,2 Dichloroethane	ND	1 0	ND	0 25	
1 55 6	1,1 1 Trichloroethane	ND	1 0	ND	0 18	
1 43 2	Benzene	ND	1 0	ND	0 31	
5 23 5	Carbon Tetrachloride	ND	1 0	ND	0 16	
3 87 5	1,2 Dichloropropane	ND	1 0	ND	0 22	

D = Compound was analyzed for, but not detected above the **laboratory detection limit**

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

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

e associated numerical value is considered estimated

Verified By RC Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

ient	**Tetra Tech EM Inc**
ent Sample ID	**Method Blank**
CAS Project ID	P2301197
CAS Sample ID	P030626 MB

it Code	EPA TO 15
trument ID	HP5972/Tekmar AUTOCan Elite
alyst	Michelle Sakamoto
npling Media	Summa Canister
it 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	
00-42 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	
41 73 1	1 3 Dichlorobenzene	ND	1 0	ND	0 17	
06-46 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

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

CAS Project ID P2301197
CAS Sample ID P030627 MB

st Code	EPA TO 15
,trument ID	HP5972/Tekmar AUTOCan Elite
ıalyst	Michelle Sakamoto
mpling Media	Summa Canister
st 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,
he associated numerical value is considered estimated

Verified By RC Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

ent	**Tetra Tech EM Inc.**
nt Sample ID	**Method Blank**
CAS Project ID	P2301197
CAS Sample ID	P030627-MB

t Code	EPA TO 15	Date Collected	NA
rument ID	HP5972/Tekmar AUTOCan Elite	Date Received	NA
alyst	Michelle Sakamoto	Date(s) Analyzed	6/27/03
npling Media	Summa Canister	Volume(s) Analyzed	1 00 Liter(s)
t 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 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

lient **Tetra Tech EM Inc**

CAS Project ID P2301197

Surrogate Spike Recovery Results

st Code EPA TO 15
strument ID HP5972/Tekmar AUTOCan Elite
ıalyst Michelle Sakamoto
mpling Media Summa Canister(s)
st Notes

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

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

ient **Tetra Tech EM Inc**
ent 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

it Code	EPA TO 15	Date Collected	NA
trument ID	HP5972/Tekmar AUTOCan Elite	Date Received	NA
alyst	Michelle Sakamoto	Date Analyzed	6/26/03
npling Media	Summa Canister	Volume(s) Analyzed	NA
t Notes			

ompound	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 %
hloromethane	19 4	19 4	16 6	16 3	85 6	84 0	70 3 122	1 9	25
inyl Chloride	26 4	26 4	25 9	22 7	98 1	86 0	69 8 133	13	25
romomethane	38 9	38 9	35 9	31 6	92.3	81 2	73 2 135	13	25
hloroethane	28 9	28 9	27 1	23 3	93 8	80 6	64 4 134	15	25
cetone	25 0	25 0	24 1	20 7	96 4	82 8	50 3 131	15	25
richlorofluoromethane	48 5	48 5	46 1	42 0	95 1	86 6	60 8 146	9 4	25
1-Dichloroethene	25 0	25 0	29 5	25 3	118	101	60 2 120	16	25
lethylene chloride	25 0	25 0	26 0	22 4	104	89 6	64 0 115	15	25
richlorotrifluoroethane	30 7	30 7	30 3	29 6	98 7	96 4	65 5 130	2 4	25
arbon Disulfide	25 0	25 0	27 3	23 0	109	92 0	60 2 126	17	25
ans 1 2 Dichloroethene	25 0	25 0	29 4	25 0	118	100	70 7 129	17	25
1 Dichloroethane	25 0	25 0	25 7	21 9	103	87 6	65 7 120	16	25
ethyl tert Butyl Ether	25 0	25 0	24 8	24 4	99 2	97 6	59 9 131	1 6	25
inyl Acetate	25 0	25 0	23 5	21 2	94 0	84 8	48 8 150	10	25
Butanone (MEK)	25 0	25 0	27 6	24 2	110	96 8	63 3 131	13	25
1 2 Dichloroethene	25 0	25 0	27 2	23 2	109	92 8	66 8 123	16	25
loroform	25 0	25 0	27 8	23 8	111	95 2	67 4 129	15	25
2 Dichloroethane	25 0	25 0	27 8	24 2	111	96 8	64 2 132	14	25
1,1 Trichloroethane	25 0	25 0	26 9	26 3	108	105	65 6 125	2 8	25
nzene	25 0	25 0	24 3	21 2	97 2	84 8	71 1 120	14	25
rbon Tetrachloride	25 0	25 0	26 8	25 7	107	103	60 5 140	3 8	25
Dichloropropane	25 0	25 0	24 8	22 3	99 2	89 2	66 2 123	11	25

Verified By RC Date 7/3/03

COLUMBIA ANALYTICAL SERVICES, INC

RESULTS OF ANALYSIS

ent **Tetra Tech EM Inc.**
nt 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

t Code EPA TO 15
rument ID HP5972/Tekmar AUTOCan Elite
ılyst Michelle Sakamoto
ıpling Media Summa Canister
t Notes

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

ompound	Spike Amount LCS	Spike Amount DLCS	Result LCS	Result DLCS	% Recovery LCS	% Recovery DLCS	CAS Acceptance Limits	Relative Percent Difference	RPD Limit %
romodichloromethane	25 0	25 0	29 3	26 3	117	105	68 5-131	11	25
richloroethene	25 0	25 0	28 3	24 6	113	98 4	68 3 121	14	25
s 1 3 Dichloropropene	25 0	25 0	29 1	25 9	116	104	69 1-128	11	25
Methyl 2 Pentanone	25 0	25 0	27 2	23 4	109	93 6	61 8-130	15	25
ans 1 3 Dichloropropene	25 0	25 0	26 0	23 4	104	93 6	55 9-118	11	25
1 2 Trichloroethane	25 0	25 0	26 8	24 1	107	96 4	67 8-134	10	25
oluene	25 0	25 0	25 4	21 2	102	84.8	59 0 127	18	25
Hexanone	25 0	25 0	26 9	23 2	108	92 8	52 6-132	15	25
ibromochloromethane	25 0	25 0	26 6	23 8	106	95 2	65 7 148	11	25
2 Dibromoethane	25 0	25 0	27 2	23 9	109	95 6	50 1-150	13	25
-trachloroethene	25 0	25 0	28 7	24 0	115	96 0	66 0 144	18	25
hlorobenzene	25 0	25 0	28 3	24 0	113	96 0	65 7 141	16	25
thylbenzene	25 0	25 0	26 9	22 9	108	91 6	56 4-130	16	25
p Xylenes	25 0	25 0	28 9	24 8	116	99 2	65 6 133	16	25
romoform	25 0	25 0	27 8	24 5	111	98 0	59 7 158	12	25
yrene	25 0	25 0	27 8	23 8	111	95 2	46 9-141	15	25
Xylene	25 0	25 0	27 9	24 0	112	96 0	57 7 125	15	25
1 2 2 Tetrachloroethane	25 0	25 0	26 1	21 9	104	87 6	63 6 128	17	25
3 Dichlorobenzene	25 0	25 0	28 7	24 6	115	98 4	64 9 146	16	25
4 Dichlorobenzene	25 0	25 0	27 8	24 1	111	96 4	55 5 146	14	25
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

ient **Tetra Tech EM Inc**
ient 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

st Code EPA TO 15
trument ID HP5972/Tekmar AUTOCan Elite
ialyst Michelle Sakamoto
mpling Media Summa Canister
st 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 %
hloromethane	19 4	19 4	16 3	16 0	84 0	82 5	70 3 122	1 8	25
/inyl Chloride	26 4	26 4	25 9	22 1	98 1	83 7	69 8 133	16	25
3romomethane	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
richlorofluoromethane	48 5	48 5	44 1	45 5	90 9	93 8	60 8 146	3 1	25
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
rans 1 2 Dichloroethene	25 0	25 0	28 9	25 2	116	101	70 7 129	14	25
,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
/inyl Acetate	25 0	25 0	21 8	20 3	87 2	81 2	48 8 150	7 1	25
Butanone (MEK)	25 0	25 0	27 1	23 3	108	93 2	63 3 131	15	25
is 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
2 Dichloroethane	25 0	25 0	26 8	25 6	107	102	64 2 132	4 8	25
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
arbon Tetrachloride	25 0	25 0	25 6	28 5	102	114	60 5 140	11	25
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

lient **Tetra Tech EM Inc**
ient 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

st Code EPA TO 15
strument ID HP5972/Tekmar AUTOCan Elite
nalyst Michelle Sakamoto
ımpling Media Summa Canister
st 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

lient Tetra Tech EM Inc Work order P2301197

oject

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

ɑ 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 pliance 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]	Required pH [illegible]	[illegible]	VOA Headspace (Presence/Absence)	[illegible]
)1197 001			NA	
)1197 002			NA	
)1197 003			NA	
)1197 004			NA	
)1197 005			NA	

ɔlain any discrepancies (include lab sample ID numbers)

6/19/03 1 21 PM