

# Final Quarter 10 Memorandum Outdoor Ambient Air Study

Operable Unit Number 7 of the  
Libby Asbestos Superfund Site



Prepared for:

**Montana Department of Environmental Quality**  
Helena, Montana

Prepared by:

**Tetra Tech**  
Helena, Montana

**July 2013**

**FINAL  
QUARTER 10 MEMORANDUM  
OUTDOOR AMBIENT AIR STUDY**

**Operable Unit Number 7  
of the Libby Asbestos Superfund Site**

July 2013

Prepared for:

**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**Remediation Division**  
P.O. Box 200901  
Helena, Montana 59620

Contract Number 407026  
Task Order Number 110

Prepared by:

**TETRA TECH EM INC.**  
Power Block Building, Suite 612  
7 West 6<sup>th</sup> Avenue  
Helena, Montana 59601  
(406) 442-5588

## CONTENTS

<u>Section</u>	<u>Page</u>
LIST OF ACRONYMS AND ABBREVIATIONS.....	ii
1.0 INTRODUCTION .....	1
2.0 QUARTER 10 AMBIENT AIR MONITORING PLAN IMPLEMENTATION .....	1
2.1 QUARTER 10 SAMPLING SCHEDULE .....	2
2.2 MODIFICATIONS, ISSUES, AND RESOLUTIONS.....	4
2.2.1 Modifications to Ambient Air Sampling Protocol .....	4
2.2.2 Pump Failures and Repairs .....	4
3.0 OUTDOOR AMBIENT AIR MONITORING DATA .....	4
3.1 DATA VERIFICATION PROCEDURES AND FINDINGS .....	5
3.1.1 Selection of TEM Records for Review .....	5
3.1.2 Consistency Review of Laboratory Bench Sheets .....	5
3.1.3 Verification of Data Transfer from Bench Sheet to Database .....	6
3.1.4 Review of Field and Laboratory Quality Control Sample Results.....	7
3.2 AMBIENT AIR LA ASBESTOS DETECTIONS.....	8
4.0 REFERENCES .....	9

### Appendices (Provided on the attached CD)

A	QUARTER 10 OU7 OUTDOOR AMBIENT AIR FIELD SAMPLING DATA SHEETS (FSDS) AUGUST 8, 2012 THROUGH OCTOBER 31, 2012
B	OU7 OUTDOOR AMBIENT AIR SAMPLING MODIFICATION (TFO-00005)
C	YEAR 1 THROUGH YEAR 3 CUMULATIVE AMBIENT AIR MONITORING VALIDATED ANALYTICAL RESULTS

### TABLES

<u>Table</u>	<u>Page</u>
2-1 Year 3 OU7 Outdoor Ambient Air Sampling Locations .....	2
2-2 OU7 Outdoor Ambient Air Sampling Quarter 10 Sample Period Dates .....	4

### FIGURE

<u>Figure</u>	<u>Page</u>
2-1 Year 3 OU7 Outdoor Ambient Air Sampling Station Locations .....	3

## LIST OF ACRONYMS AND ABBREVIATIONS

COC	Chain-of-custody
DEQ	Montana Department of Environmental Quality
EDD	Electronic data deliverables
ESAT	Environmental Services Assistance Team
FSDS	Field sampling data sheets
ISO	International Organization for Standardization
LA	Libby amphibole
OU7	Operable Unit Number 7
QC	Quality control
SOP	Standard operating procedure
SRC	Syracuse Research Corporation
TEM	Transmission electron microscopy
TFO	Troy Field Office
Tetra Tech	Tetra Tech EM Inc.

## **1.0 INTRODUCTION**

As part of the remedial investigation in Operable Unit Number 7 (OU7) of the Libby Asbestos Superfund Site, Tetra Tech EM Inc. (Tetra Tech) continued to monitor outdoor ambient air for the Montana Department of Environmental Quality (DEQ) to evaluate the presence of Libby Amphibole (LA) asbestos in outdoor ambient air throughout residential and commercial areas in and around Troy, Montana.

The outdoor ambient air monitoring program Tetra Tech implemented is based on the Remedial Investigation Work Plan, Outdoor Ambient Air Study (Tetra Tech 2009a) and the associated health and safety plan (Tetra Tech 2009b) and includes monitoring of ambient air in four distinct “air zones” across OU7. After taking into account variable wind patterns, Tetra Tech established seven initial monitoring station locations in the four air zones during year 1 to evaluate human health exposure scenarios throughout OU7. Year 1 began on October 30, 2009 and ended on October 27, 2010. Monitoring was reported by quarter (1 through 4) with nine sampling periods per quarter. As the ambient air monitoring continued into year 2, six of the seven station locations from year 1 were relocated to further support data collection efforts for the OU7 human health risk assessment. For year 3, the number of stations was reduced to four, and locations were returned to four of the original year 1 locations.

This Quarter 10 Memorandum summarizes activities related to placement of monitoring stations; maintenance performed; monitoring activities; issues encountered, and resolutions from August 8, 2012 through October 31, 2012; and provides a summary of quarter 10 validated ambient air data. Sampling data from periods 82 through 90 were validated during quarter 10 using methods described in Section 3.1 and the results are provided in Section 3.2.

## **2.0 QUARTER 10 AMBIENT AIR MONITORING PLAN IMPLEMENTATION**

Quarter 10 OU7 ambient air monitoring was initiated on August 8, 2012 and was the second quarter of year 3 monitoring. Initial field activities, such as selection of site monitoring stations and assembly and installation of monitoring equipment, are described in the Quarter 1 Memorandum (Tetra Tech 2010). At the start of quarter 10, the four monitoring stations remained at their same locations from quarter 9 to collect further data in support of the OU7 human health risk assessment. Figure 2-1 shows the year 3 monitoring station locations and Table 2-1 provides the general and detailed locations and rationale for the four year 3 station locations.

**TABLE 2-1  
YEAR 3 OU7 OUTDOOR AMBIENT AIR SAMPLING LOCATIONS**

Station Number	Location*	Purpose
T21	Upwind and downwind site near the northern border of OU7	This site is used to evaluate LA concentrations at the small community area near the northernmost boundary of OU7 and confirm if any LA is entering or leaving OU7 through Air Zone 1
T22	City of Troy population exposure site	This site is used to evaluate LA concentrations in the Troy community (specifically in the population center) of Air Zone 2
T23	City of Troy southern site	This site is used to evaluate LA concentration south of the Troy community in Air Zone 3
T24	SE upwind and downwind site	This site is used to evaluate LA concentrations at the southeastern boundary of OU7 and confirm if any LA is entering or leaving OU7 through Air Zone 4
TXXQC	Rotating co-located sampling station to each of the four sampling locations	Co-located sampling station to evaluate analytical variability at each of the four station locations

Notes:

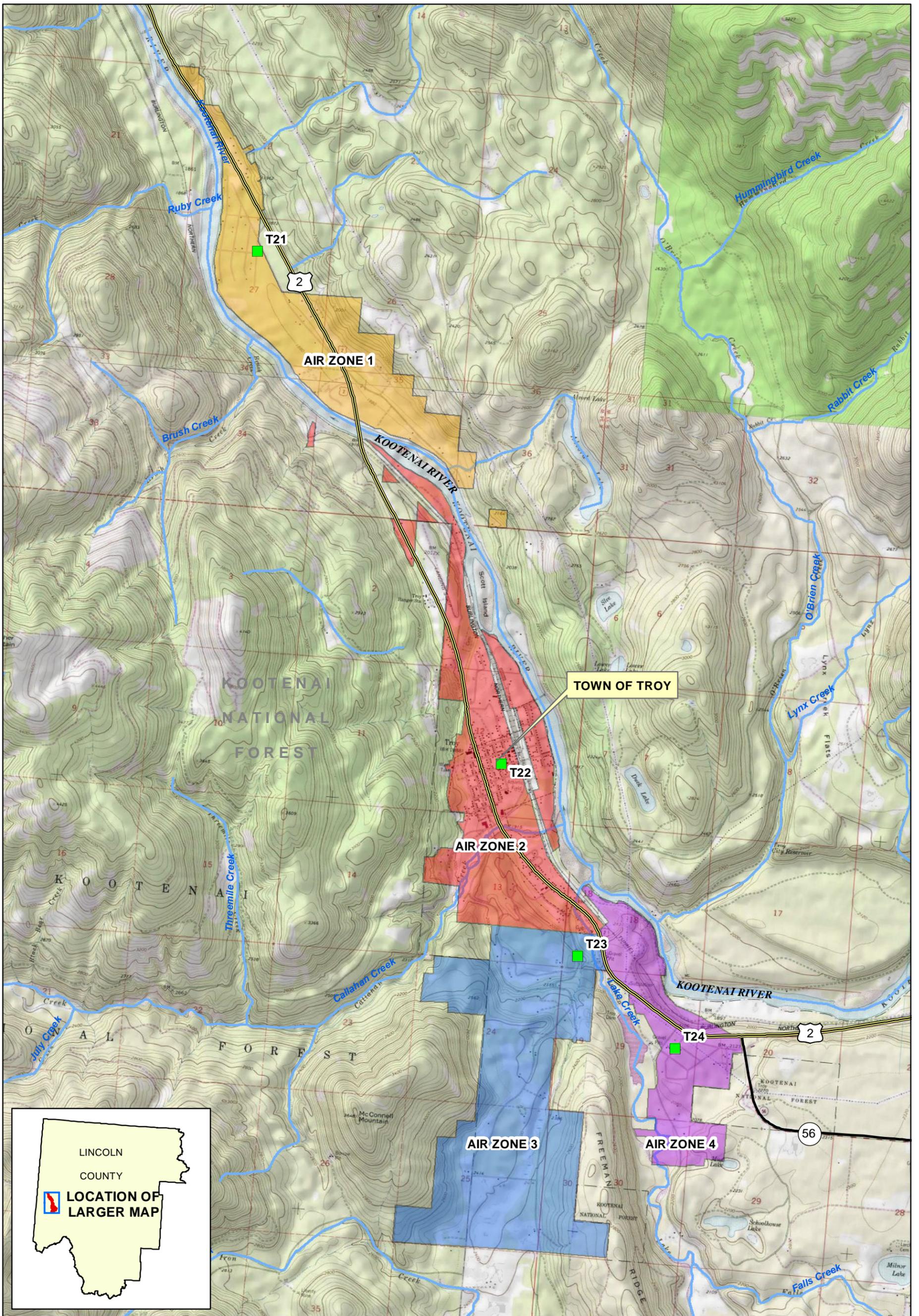
LA Libby Amphibole                      XX Station Location Number  
 OU Operable Unit                        QC Quality Control

\* Predominant winds in the area blow from the southeast and northwest. Stations near the northern and southern boundaries of OU7 act as upwind and downwind receptors depending on wind direction. A summary of historical meteorological conditions is in Section 4.4.1. of the Ambient Air RI Work Plan (Tetra Tech 2009a).

During quarter 10 monitoring, none of the four fixed monitoring stations needed to be moved for property owner activities or overloading issues. Section 2.1 provides the quarter 10 sampling schedule and Section 2.2 presents a summary of issues encountered and resolutions to those issues.

**2.1 QUARTER 10 SAMPLING SCHEDULE**

Quarter 10 ambient air sampling consisted of nine 5-day sampling periods generally separated by 5 off days between periods. Between some periods, the 5 days were modified by 1 or 2 days to adjust for weather or scheduling issues; the overall sampling schedule was not impacted. Quarter 10 sampling began with period 82 on August 8, 2012 and ended with period 90 on October 31, 2012. Table 2-2 provides a summary of sampling dates for periods 82 through 90.



- LEGEND**
- 2012 (Year 3) AMBIENT AIR SAMPLE STATION
  - AMBIENT AIR ZONES**
  - ZONE 1
  - ZONE 2
  - ZONE 3
  - ZONE 4

0 1 Miles



LIBBY ASBESTOS SUPERFUND SITE

**FIGURE 2-1**  
**YEAR 3 OPERABLE UNIT 7**  
**OUTDOOR AMBIENT AIR STUDY**  
**SAMPLING STATION LOCATIONS**

**TABLE 2-2  
OU7 OUTDOOR AMBIENT AIR SAMPLING  
QUARTER 10 SAMPLE PERIOD DATES**

<b>QUARTER 10 SAMPLE PERIODS</b>	
<b>Sample Period 82</b>	August 8, 2012 through August 12, 2012
<b>Sample Period 83</b>	August 18, 2012 through August 22, 2012
<b>Sample Period 84</b>	August 28, 2012 through September 1, 2012
<b>Sample Period 85</b>	September 7, 2012 through September 11, 2012
<b>Sample Period 86</b>	September 17, 2012 through September 21, 2012
<b>Sample Period 87</b>	September 27, 2012 through October 1, 2012
<b>Sample Period 88</b>	October 7, 2012 through October 11, 2012
<b>Sample Period 89</b>	October 17, 2012 through October 21, 2012
<b>Sample Period 90</b>	October 27, 2012 through October 31, 2012

## **2.2 MODIFICATIONS, ISSUES, AND RESOLUTIONS**

The following sections present a summary of year 3 Troy Field Office (TFO) modifications implemented and a discussion of ambient air sampling issues and resolutions.

### **2.2.1 Modifications to Ambient Air Sampling Protocol**

Prior to initiating quarter 9 sampling, TFO-00005 (Ambient Air Station Locations) was implemented. TFO-00005 called for reducing the number of ambient air monitoring stations from 7 to 4 and relocating stations for the year 3 sampling so that the four “air zones” in OU7 were covered. This modification was implemented to provide additional data to support the ambient air exposure human health risk analysis. Year 3 monitoring station locations are shown on Figure 2-1 and are described in Table 2-1. TFO-00005 is provided in Appendix B.

### **2.2.2 Pump Failures and Repairs**

No issues with pump faults or failures were noted during quarter 10 ambient air monitoring. Pumps recently purchased and placed into the sampling rotation during quarter 9 continued to operate properly. The Field Sampling Data Sheets (FSDS) were used to record all pump performance. No monitoring locations had voided samples from pump faults or failures during quarter 10.

## **3.0 OUTDOOR AMBIENT AIR MONITORING DATA**

Quarter 10 samples (sample periods 82 through 90) were submitted to the Environmental Services Assistance Team (ESAT) laboratory for transmission electron microscopy (TEM) analyses. All sample

filter cassettes were shipped under chain-of-custody (COC) protocol to the ESAT Laboratory in Golden, Colorado, where the samples were stored in desiccators to prevent the growth of mold prior to analysis.

The analytical data for the quarter 10 samples underwent data review and verification in April 2013. The following sections provide a description of the data verification procedures, data verification findings, and a summary of LA detections for the quarter 10 samples.

### **3.1 DATA VERIFICATION PROCEDURES AND FINDINGS**

Tetra Tech conducted data review and data entry verification of the quarter 10 analytical data (sample periods 82 through 90) in accordance with standard operating procedure (SOP) EPA-LIBBY-09, Revision 2 (CDM 2012b) with minor deviations for OU7. Approximately 10 percent of the quarter 10 data records were reviewed and verified. The records were selected in accordance with the SOP process for selecting TEM records for review and verification.

Tetra Tech's verification process has three steps: (1) the selection of data records for review and verification, (2) a review of the original laboratory bench sheets, and (3) verification of the transfer of results from the bench sheets onto the electronic data deliverables (EDD) and verification that the electronic data were uploaded properly to the LibbyTTOU7Field database. Tetra Tech reviewed field quality control (QC) sample results for adherence to minimum frequency requirements and procedures and the QC limits specified in the ambient air study work plan (Tetra Tech 2009a). The data review and verification process is described in detail in the subsections below.

#### **3.1.1 Selection of TEM Records for Review**

SOP EPA-LIBBY-09 specifies review and verification of a minimum of 10 percent of the sample records. Tetra Tech reviewed 10 percent of the quarter 10 sample records. The records were queried from the LibbyTTOU7Field database using applicable selection criteria specified in SOP EPA-LIBBY-09, Revision 2 (CDM 2012b). The criteria are used to select a representative subset of the sample records for review and verification based on analytical laboratory, analyst, and detected and non-detected results. The record selection process is described in detail in SOP EPA-LIBBY-09, Revision 2 (CDM 2012b).

#### **3.1.2 Consistency Review of Laboratory Bench Sheets**

Tetra Tech inspected the information recorded on the original hand-written laboratory bench sheets in accordance with the consistency review of laboratory bench sheets procedure outlined in Section 5 of SOP EPA-LIBBY-09, Revision 2 (CDM 2012b), with minor modifications for OU7. The bench sheets

were reviewed to identify any data omissions, apparent inconsistencies, or potential errors in structure identification. The review included determining whether the raw structure data were recorded in accordance with International Organization for Standardization (ISO) 10312 counting rules (as modified by all applicable Libby laboratory modifications).

**Corrective Action** – Tetra Tech summarized all apparent inconsistencies, omissions, and suspected errors, and provided them to ESAT. ESAT is in charge of forwarding them to the appropriate party for response. One inconsistency identified during the quarter 10 data review and verification could affect the outcome of interest to the investigation (i.e., the number of LA structures or the concentration of LA). Tetra Tech anticipates the analytical laboratories may submit revised bench sheets to ESAT. If this occurs, Tetra Tech will download the revised documents provided by ESAT, review them, and replace the previous ones as appropriate.

### **3.1.3 Verification of Data Transfer from Bench Sheet to Database**

To ensure that data from laboratory bench sheets are transferred, through the EDD, into the LibbyTTOU7Field database without error or omission, Tetra Tech compared selected analysis-specific information in the laboratory bench sheets to that in the EDD. Tetra Tech followed the verification of data transfer procedure outlined in Section 6.0 of SOP EPA-LIBBY-09, Revision 2 (CDM 2012b), modified as needed for OU7. The bench sheets include the laboratory COC form, sample check-in form, preparation log, and hand-written data record sheets. This process compared analysis-specific information in the EDD to the original laboratory job documentation (e.g., internal laboratory COC, preparation logs, bench sheets, etc.) and included verifying (by recalculation) the reported air sensitivities for amphibole and chrysotile; the area analyzed; and for indirect preparations, the indirect preparation dilution factor. Using the bench sheets, Tetra Tech recounted the countable LA structures across all grid openings evaluated and compared this number (and the calculated concentrations) to the total number of LA structures in the EDD.

The final step in the process was to verify that the data were loaded into the LibbyTTOU7Field database without error or omission.

**Corrective Action** – Tetra Tech summarized all apparent inconsistencies, omissions, and suspected errors, and provided them to ESAT, which forwarded them to the appropriate laboratories for response. Tetra Tech will review all bench sheet, EDD, and database revisions when received. One inconsistency identified during the data review and verification process could affect the outcome of interest to the investigation (i.e., the number of LA structures or the concentration of LA). It involves sample TA-

20417. ESAT was notified about the inconsistency and Tetra Tech manually corrected the table of detections provided in Appendix C.

### **3.1.4 Review of Field and Laboratory Quality Control Sample Results**

Review of field and laboratory QC sample results, including implementation of corrective actions, is ongoing and is completed as QC sample data are successfully loaded into the LibbyTTOU7Field database.

Tetra Tech reviews field QC samples (including co-located samples and field blanks) and the laboratories review laboratory QC samples for adherence to the minimum frequency requirements set forth in the work plan (Tetra Tech 2009a), and in project-specific SOP LB-000029C (CDM 2012a), and for conformance with the QC limits specified in SOP LB-000029C (CDM 2012a).

For the co-located field samples, Tetra Tech uses the same statistical comparison test used for the Libby ambient air study (SRC 2009). Each co-located sample pair is compared using a statistical comparison of two poisson rates (Nelson 1982), included as Attachment 3 to SOP LB-000029C (CDM 2012a), to determine whether the results are statistically different at the 95 percent confidence level. The Poisson Rate Test is suitable for this analysis because fiber counts on TEM grids are considered independent and random.

**Corrective Action** – For laboratory QC sample exceptions to QC criteria, the appropriate corrective actions are described in detail in LB-000029b (CDM 2012a). For co-located field sample pairs, Tetra Tech reviews the Poisson Rate Test results and investigates the basis for any statistical differences and the need for any appropriate corrective actions. Poisson Rate Test results at the 95 percent confidence interval indicate the co-located samples are considered to have good similarity. Test results in the 90 to 95 percent confidence interval are considered acceptable, and test results that fall below the 90 percent interval are considered poor for similarity. If test results are below the 90 percent interval, Tetra Tech will investigate the basis for the discrepancy and take corrective action in sampling and analysis of the samples.

Tetra Tech has reviewed and will continue to review the results for all field blanks for adherence to the QC limits specified in SOP LB-000029C (CDM 2012a). All of the field blank results to date are within QC limits.

### **3.2 AMBIENT AIR LA ASBESTOS DETECTIONS**

LA asbestos was detected in one sample from Period 82, in two samples from Period 85, two samples from Period 87, and in a single sample from Period 89. Table C-1 (Appendix C) presents a summary of LA asbestos detections for all sampling periods through quarter 10. LA detections by station for Periods 82 through 90 are summarized below:

#### **Station 21QC (co-located sample near fire station in Kootenai Vista):**

One LA asbestos fiber in the sample from Period 85 (concentration of 3.97E-05)

#### **Station T22 (located at the Troy DEQ Information Center):**

One LA asbestos fiber in the sample from Period 85 (concentration of 3.97E-05)

Two LA asbestos fibers in the sample from Period 89 (concentration of 7.98E-05)

#### **Station 22QC (co-located at the Troy DEQ Information Center)**

One LA asbestos fiber in the sample from Period 82 (concentration of 3.91E-05)

#### **Station T23 (located at the Troy Water Tower):**

One LA asbestos fiber in the sample from Period 87 (concentration of 3.99E-05)

#### **Station T24 (located at the Jordan residence):**

One LA asbestos fiber in the sample from Period 87 (concentration of 3.99E-05)

The remaining samples collected during Periods 82 to 90 had no detectable LA asbestos. Complete analytical results and a summary of verification findings for Periods 82 to 80 are provided in Appendix C.

#### 4.0 REFERENCES

- CDM, Smith (CDM). 2012a. Request for Modification to Laboratory Activities (LB-000029C). May 4.
- CDM. 2012b. Standard Operating Procedure for TEM Data Review and Data Entry Verification. Revision 2. September 4.
- Nelson, WB. 1982. Applied Life Data Analysis. John Wiley and Sons. Hoboken, NJ.
- SRC. 2009. Summary of Outdoor Ambient Air Monitoring For Asbestos at the Libby Asbestos Superfund Site (October 2006 to June 2008). February.
- Tetra Tech EM Inc. (Tetra Tech). 2009a. Remedial Investigation Work Plan, Outdoor Ambient Air Study, Operable Unit 7 of the Libby Asbestos Superfund Site. October.
- Tetra Tech. 2009b. Operable Unit 7 Ambient Air Study Health and Safety Plan. October.
- Tetra Tech. 2010. First Quarter Memorandum, Outdoor Ambient Air Study, Operable Unit 7 of the Libby Asbestos Superfund Site. February.

**APPENDIX A**

**QUARTER 10 OU7 OUTDOOR AMBIENT AIR  
FIELD SAMPLING DATA SHEETS (FSDS)  
AUGUST 8, 2012, THROUGH OCTOBER 31, 2012**

**Period 82**



**SKC Pump History**

**SN 36484**

**Date Printed: Monday, August 13, 2012 1:24 PM**

**Min Temp 66.6F**

**Max Temp 112.2F**

**TWA Temp 90.3F**

**Min Pressure 27.7 In-Hg**

**Max Pressure 28.0 In-Hg**

**TWA Pressure 27.8 In-Hg**

**No Flow Correction**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Aug 6 2012 12:47 PM			5:02
Sleep		Mon Aug 6 2012 12:52 PM			1d 11:07:30
Prog (Run)	2000	Wed Aug 8 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Mon Aug 13 2012 12:00 AM			4:59
Sleep		Mon Aug 13 2012 12:05 AM			12:28:57
Hold		Mon Aug 13 2012 12:33 PM			5:24
Sleep		Mon Aug 13 2012 12:39 PM			42:49
Hold		Mon Aug 13 2012 1:22 PM			1:49+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

**TA-20384**

Station Location: T-21 (Fire Station) Sample ID #: \_\_\_\_\_  
Field Technician: jj Filter Lot #: 23171-02  
Pump Type/Model: SKC AirChek 2000 Sample Type: TEM  
Pump Number: 36484 Sample Parent ID #: \_\_\_\_\_  
Sampling Period: 82

PUMP SETUP DAY

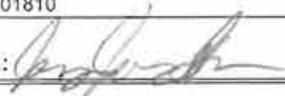
Date: 8/7/2012 Timer Beginning Date/Time: 8/8/2012 2400  
Time: 12:00 Beginning Flow Rate (L/min): 2  
Pump Programmed (Yes / No): yes  
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 8-13-12 Timer Ending Date/Time: 8/13/2012 2400  
Time: 1234 Ending Flow Rate (L/min): 2  
Total Sample Volume (L): 0F40  
Total Sample Time (min): 7200  
Atmospheric Pressure (INS): 27.96  
Temperature inside station unit (°F): 83.1  
Sunny Box Temp ~ 82

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Event ID TAA-101810

SIGNATURE: 

DATE: 8-13-12

TETRA TECH EM INC.	
<b>OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA &amp; ADDITIONAL DAILY CHECK RECORDS</b>	
<b>TA-20384</b>	
Station Location: <u>T-21 (Fire Station)</u>	Sample ID #: _____
Field Technician: <u>jj</u>	Filter Lot #: <u>23171-02</u>
Pump Type/Model: <u>SKC AirChek 2000</u>	
Pump Number: <u>36484</u>	
<b>DAILY CHECK (For each station visit)</b>	
(Field Tech Initials)	PUMP FAULT (Yes / No): <u>NO</u>
Date: <u>9-9-12</u> ( <u>99</u> )	Flow Rate (L/min): <u>2</u>
Time: <u>0915</u> ( )	Cumulative Sample Volume (L): <u>3989</u>
Sunny	Cumulative Sample Time (min): <u>1994</u>
	Atmospheric Pressure (INS): <u>27.85</u>
	Temperature inside station unit (F): <u>77.3</u>
	Battery voltage reading (volts): <u>12.71</u>
	<u>Box Temp: 53</u>
<b>DAILY CHECK (For each station visit)</b>	
(Field Tech Initials)	PUMP FAULT (Yes / No): _____
Date: _____ ( )	Flow Rate (L/min): _____
Time: _____ ( )	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (F): _____
	Battery voltage reading (volts): _____
<b>DAILY CHECK (For each station visit)</b>	
(Field Tech Initials)	PUMP FAULT (Yes / No): _____
Date: _____ ( )	Flow Rate (L/min): _____
Time: _____ ( )	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (F): _____
	Battery voltage reading (volts): _____
<b>DAILY CHECK (For each station visit)</b>	
(Field Tech Initials)	PUMP FAULT (Yes / No): _____
Date: _____ ( )	Flow Rate (L/min): _____
Time: _____ ( )	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (F): _____
	Battery voltage reading (volts): _____
<b>DAILY CHECK (For each station visit)</b>	
(Field Tech Initials)	PUMP FAULT (Yes / No): _____
Date: _____ ( )	Flow Rate (L/min): _____
Time: _____ ( )	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (F): _____
	Battery voltage reading (volts): _____

**SKC Pump History**

**SN 36444**

**Date Printed: Monday, August 13, 2012 1:26 PM**

**Min Temp 66.5F**

**Max Temp 105.5F**

**TWA Temp 85.5F**

**Min Pressure 27.7 In-Hg**

**Max Pressure 28.0 In-Hg**

**TWA Pressure 27.9 In-Hg**

**Flow Correction Approximately +40.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Aug 6 2012 12:47 PM			5:01
Sleep		Mon Aug 6 2012 12:52 PM			1d 11:07:10
Prog (Run)	2000	Wed Aug 8 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Mon Aug 13 2012 12:00 AM			4:59
Sleep		Mon Aug 13 2012 12:05 AM			13:12:23
Hold		Mon Aug 13 2012 1:17 PM			8:36+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S

TA-20385

Station Location: T-22 (Troy Office) Sample ID #: \_\_\_\_\_  
Field Technician: jj Filter Lot #: 23171-02  
Pump Type/Model: SKC AirChek 2000 Sample Type: TEM  
Pump Number: 36444 Sample Parent ID #: \_\_\_\_\_  
Sampling Period: 82

PUMP SETUP DAY

Date: 8/7/2012 Timer Beginning Date/Time: 8/8/2012 2400  
Time: 12:00 Beginning Flow Rate (L/min): 2  
Pump Programmed (Yes / No): yes  
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 8-13-12 Timer Ending Date/Time: 8/13/2012 2400  
Time: 1318 Ending Flow Rate (L/min): 2  
Total Sample Volume (L): 0.420  
Total Sample Time (min): 7200  
Atmospheric Pressure (INS) 27.89  
Temperature inside station unit (°F): 82.7  
Sunny  
Box Temp - 81

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Event ID TAA-101810

SIGNATURE: [Signature]

DATE: 8-3-12

TETRA TECH EM INC.	
<b>OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET</b> <b>ADDITIONAL DAILY CHECK RECORDS</b>	
Station Location: <u>T-22 (Troy Office)</u> Field Technician: <u>jj</u> Pump Type/Model: <u>SKC AirChek 2000</u> Pump Number: <u>36444</u>	Sample ID #: _____ Filter Lot #: <u>23171-02</u>
TA-20385	
<b>DAILY CHECK (For each station visit)</b> (Field Tech Initials)	
Date: <u>8-9-12</u> ( <u>jj</u> ) Time: <u>0924</u> ( )  Sunny	PUMP FAULT (Yes / No): <u>NO</u> Flow Rate (L/min): <u>2</u> Cumulative Sample Volume (L): <u>400%</u> Cumulative Sample Time (min): <u>2003</u> Atmospheric Pressure (INS): <u>27.96</u> Temperature inside station unit (°F): <u>74.6</u> Battery voltage reading (volts): <u>12.68</u> Box Temp - <u>68</u>
<b>DAILY CHECK (For each station visit)</b> (Field Tech Initials)	
Date: _____ ( ) Time: _____ ( )	PUMP FAULT (Yes / No): _____ Flow Rate (L/min): _____ Cumulative Sample Volume (L): _____ Cumulative Sample Time (min): _____ Atmospheric Pressure (INS): _____ Temperature inside station unit (°F): _____ Battery voltage reading (volts): _____
<b>DAILY CHECK (For each station visit)</b> (Field Tech Initials)	
Date: _____ ( ) Time: _____ ( )	PUMP FAULT (Yes / No): _____ Flow Rate (L/min): _____ Cumulative Sample Volume (L): _____ Cumulative Sample Time (min): _____ Atmospheric Pressure (INS): _____ Temperature inside station unit (°F): _____ Battery voltage reading (volts): _____
<b>DAILY CHECK (For each station visit)</b> (Field Tech Initials)	
Date: _____ ( ) Time: _____ ( )	PUMP FAULT (Yes / No): _____ Flow Rate (L/min): _____ Cumulative Sample Volume (L): _____ Cumulative Sample Time (min): _____ Atmospheric Pressure (INS): _____ Temperature inside station unit (°F): _____ Battery voltage reading (volts): _____
<b>DAILY CHECK (For each station visit)</b> (Field Tech Initials)	
Date: _____ ( ) Time: _____ ( )	PUMP FAULT (Yes / No): _____ Flow Rate (L/min): _____ Cumulative Sample Volume (L): _____ Cumulative Sample Time (min): _____ Atmospheric Pressure (INS): _____ Temperature inside station unit (°F): _____ Battery voltage reading (volts): _____

**SKC Pump History**

**SN 4469**

**Date Printed: Monday, August 13, 2012 1:28 PM**

**Min Temp 67.4F**

**Max Temp 105.8F**

**TWA Temp 85.5F**

**Min Pressure 27.9 In-Hg**

**Max Pressure 28.2 In-Hg**

**TWA Pressure 28.1 In-Hg**

**No Flow Correction**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Aug 6 2012 12:49 PM			5:04
Sleep		Mon Aug 6 2012 12:54 PM			1d 11:05:52
Prog (Run)	2000	Wed Aug 8 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Mon Aug 13 2012 12:00 AM			4:59
Sleep		Mon Aug 13 2012 12:05 AM			13:11:52
Hold		Mon Aug 13 2012 1:16 PM			5:18
Sleep		Mon Aug 13 2012 1:22 PM			3:06
Hold		Mon Aug 13 2012 1:25 PM			2:43+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S

TA-20386

Station Location: T-22QC(Troy Office)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 4469  
Sampling Period: 82

Sample ID #: \_\_\_\_\_  
Filter Lot #: 23171-02  
Sample Type: TEM  
Sample Parent ID \_\_\_\_\_

TA-20385

PUMP SETUP DAY

Date: 8/7/2012 Timer Beginning Date/Time: 8/8/2012 2400  
Time: 12:00 Beginning Flow Rate (L/min): \_\_\_\_\_ 2  
Pump Programmed (Yes / No): \_\_\_\_\_ yes  
Bios Calibration Within 10 mL (Yes / No) \_\_\_\_\_ yes

PUMP RETRIEVAL DAY

Date: 8-13-12 Timer Ending Date/Time: 8/13/2012 2400  
Time: 1317 Ending Flow Rate (L/min): \_\_\_\_\_ 2  
Total Sample Volume (L): 0940  
Total Sample Time (min): 7200  
Atmospheric Pressure (INS) 28.11  
Temperature inside station unit (°F): 83.0  
Box Temp - 81

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Event ID TAA-101810

SIGNATURE: [Signature]

DATE: 8-13-12

TETRA TECH EM INC.	
OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET	
ADDITIONAL DAILY CHECK RECORDS	
Station Location: <u>T-22QC(Troy Office)</u> Field Technician: <u>jj</u> Pump Type/Model: <u>SKC AirChek 2000</u> Pump Number: <u>4469</u>	Sample ID #: _____ Filter Lot #: <u>23171-02</u>
TA-20386	
<b>DAILY CHECK (For each station visit)</b> (Field Tech Initials) _____	
Date: <u>8-9-12</u> ( <u>jj</u> ) Time: <u>0931</u> ( )	PUMP FAULT (Yes / No): <u>NO</u> Flow Rate (L/min): <u>2</u> Cumulative Sample Volume (L): <u>4022</u> Cumulative Sample Time (min): <u>2011</u> Atmospheric Pressure (INS): <u>29.16</u> Temperature inside station unit (°F): <u>75.4</u> Battery voltage reading (volts): <u>12.71</u> Box Temp: <u>69</u>
Sunny	
<b>DAILY CHECK (For each station visit)</b> (Field Tech Initials) _____	
Date: _____ ( ) Time: _____ ( )	PUMP FAULT (Yes / No): _____ Flow Rate (L/min): _____ Cumulative Sample Volume (L): _____ Cumulative Sample Time (min): _____ Atmospheric Pressure (INS): _____ Temperature inside station unit (°F): _____ Battery voltage reading (volts): _____
<b>DAILY CHECK (For each station visit)</b> (Field Tech Initials) _____	
Date: _____ ( ) Time: _____ ( )	PUMP FAULT (Yes / No): _____ Flow Rate (L/min): _____ Cumulative Sample Volume (L): _____ Cumulative Sample Time (min): _____ Atmospheric Pressure (INS): _____ Temperature inside station unit (°F): _____ Battery voltage reading (volts): _____
<b>DAILY CHECK (For each station visit)</b> (Field Tech Initials) _____	
Date: _____ ( ) Time: _____ ( )	PUMP FAULT (Yes / No): _____ Flow Rate (L/min): _____ Cumulative Sample Volume (L): _____ Cumulative Sample Time (min): _____ Atmospheric Pressure (INS): _____ Temperature inside station unit (°F): _____ Battery voltage reading (volts): _____
<b>DAILY CHECK (For each station visit)</b> (Field Tech Initials) _____	
Date: _____ ( ) Time: _____ ( )	PUMP FAULT (Yes / No): _____ Flow Rate (L/min): _____ Cumulative Sample Volume (L): _____ Cumulative Sample Time (min): _____ Atmospheric Pressure (INS): _____ Temperature inside station unit (°F): _____ Battery voltage reading (volts): _____

**SKC Pump History**

**SN 4470**

**Date Printed: Monday, August 13, 2012 1:31 PM**

**Min Temp 65.4F**

**Max Temp 104.4F**

**TWA Temp 83.9F**

**Min Pressure 27.8 In-Hg**

**Max Pressure 28.1 In-Hg**

**TWA Pressure 28.0 In-Hg**

**No Flow Correction**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Aug 6 2012 12:48 PM			5:02
Sleep		Mon Aug 6 2012 12:53 PM			1d 11:06:49
Prog (Run)	2000	Wed Aug 8 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Mon Aug 13 2012 12:00 AM			4:59
Sleep		Mon Aug 13 2012 12:05 AM			13:03:28
Hold		Mon Aug 13 2012 1:08 PM			5:24
Sleep		Mon Aug 13 2012 1:13 PM			13:25
Hold		Mon Aug 13 2012 1:27 PM			3:42+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

TA-20387

Station Location: T-23 (Iron Creek) Sample ID #: \_\_\_\_\_  
Field Technician: jj Filter Lot #: 23171-02  
Pump Type/Model: SKC AirChek 2000 Sample Type: TEM  
Pump Number: 4470 Sample Parent ID #: \_\_\_\_\_  
Sampling Period: 82

PUMP SETUP DAY

Date: 8/7/2012 Timer Beginning Date/Time: 8/8/2012 2400  
Time: 12:00 Beginning Flow Rate (L/min): 2  
Pump Programmed (Yes / No): yes  
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 8-13-12 Timer Ending Date/Time: 8/13/2012 2400  
Time: 1308 Ending Flow Rate (L/min): 2  
Total Sample Volume (L): 0 FLO  
Total Sample Time (min): 7200  
Atmospheric Pressure (INS): 28.01  
Temperature inside station unit (°F): 80.1  
Sunny  
Box Temp = 66

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Event ID TAA-101810

SIGNATURE: [Signature]

DATE: 8-13-12

TETRA TECH EM INC.	
OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA & ADDITIONAL DAILY CHECK RECORDS	
TA-20387	
Station Location: <u>T-23 (Iron Creek)</u>	Sample ID #: _____
Field Technician: <u>jj</u>	Filter Lot #: <u>23171-02</u>
Pump Type/Model: <u>SKC AirChek 2000</u>	
Pump Number: <u>4470</u>	
<b>DAILY CHECK (For each station visit)</b>	
(Field Tech Initials)	PUMP FAULT (Yes / No): <u>NO</u>
Date: <u>8-9-12</u> ( <u>jj</u> )	Flow Rate (L/min): <u>2</u>
Time: <u>0901</u> ( )	Cumulative Sample Volume (L): <u>3963</u>
	Cumulative Sample Time (min): <u>1981</u>
	Atmospheric Pressure (INS): <u>27.99</u>
	Temperature inside station unit (°F): <u>69.5</u>
	Battery voltage reading (volts): <u>12.84</u>
<u>Sunny</u>	<u>BOX T + P - 58</u>
<b>DAILY CHECK (For each station visit)</b>	
(Field Tech Initials)	PUMP FAULT (Yes / No): _____
Date: _____ ( )	Flow Rate (L/min): _____
Time: _____ ( )	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____
<b>DAILY CHECK (For each station visit)</b>	
(Field Tech Initials)	PUMP FAULT (Yes / No): _____
Date: _____ ( )	Flow Rate (L/min): _____
Time: _____ ( )	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____
<b>DAILY CHECK (For each station visit)</b>	
(Field Tech Initials)	PUMP FAULT (Yes / No): _____
Date: _____ ( )	Flow Rate (L/min): _____
Time: _____ ( )	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____
<b>DAILY CHECK (For each station visit)</b>	
(Field Tech Initials)	PUMP FAULT (Yes / No): _____
Date: _____ ( )	Flow Rate (L/min): _____
Time: _____ ( )	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____

**SKC Pump History**

**SN 36422**

**Date Printed: Monday, August 13, 2012 1:32 PM**

**Min Temp 61.6F**

**Max Temp 105.2F**

**TWA Temp 78.4F**

**Min Pressure 27.3 In-Hg**

**Max Pressure 27.8 In-Hg**

**TWA Pressure 27.6 In-Hg**

**No Flow Correction**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Aug 6 2012 12:48 PM			5:02
Sleep		Mon Aug 6 2012 12:53 PM			1d 11:06:23
Prog (Run)	2000	Wed Aug 8 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Mon Aug 13 2012 12:00 AM			4:59
Sleep		Mon Aug 13 2012 12:05 AM			12:08:26
Hold		Mon Aug 13 2012 12:13 PM			5:30
Sleep		Mon Aug 13 2012 12:18 PM			1:11:17
Hold		Mon Aug 13 2012 1:30 PM			1:46+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S

TA-20388

Station Location: T-24 (Jordan) Sample ID #: \_\_\_\_\_  
Field Technician: jj Filter Lot #: 23171-02  
Pump Type/Model: SKC AirChek 2000 Sample Type: TEM  
Pump Number: 36422 Sample Parent ID #: \_\_\_\_\_  
Sampling Period: 82

PUMP SETUP DAY

Date: 8/7/2012 Timer Beginning Date/Time: 8/8/2012 2400  
Time: 12:00 Beginning Flow Rate (L/min): 2  
Pump Programmed (Yes / No): yes  
Bios Calibration Within 10 mL (Yes / No) yes

PUMP RETRIEVAL DAY

Date: 8-13-12 Timer Ending Date/Time: 8/13/2012 2400  
Time: 1213 Ending Flow Rate (L/min): 2  
Total Sample Volume (L): 0.510  
Total Sample Time (min): 7200  
Atmospheric Pressure (INS) 27.79  
Temperature inside station unit (°F): 64.2  
Sunny  
Box Temp - 64

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Event ID TAA-101810

SIGNATURE: [Signature]

DATE: 8-13-12

TETRA TECH EM INC.	
<b>OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA :</b> <b>ADDITIONAL DAILY CHECK RECORDS</b>	
<b>TA-20388</b>	
Station Location: <u>T-24 (Jordan)</u>	Sample ID #: _____
Field Technician: <u>jj</u>	Filter Lot #: <u>23171-02</u>
Pump Type/Model: <u>SKC AirChek 2000</u>	
Pump Number: <u>36422</u>	
<b>DAILY CHECK (For each station visit)</b> (Field Tech Initials)	
Date: <u>8-9-12</u> ( <u>jj</u> )	PUMP FAULT (Yes / No): <u>NO</u>
Time: <u>0854</u> ( )	Flow Rate (L/min): <u>2</u>
	Cumulative Sample Volume (L): <u>3947</u>
	Cumulative Sample Time (min): <u>1973</u>
	Atmospheric Pressure (INS): <u>27.55</u>
<u>Sunny</u>	Temperature inside station unit (°F): <u>64.4</u>
	Battery voltage reading (volts): <u>—</u>
	<u>Box Temp - 56</u>
<b>DAILY CHECK (For each station visit)</b> (Field Tech Initials)	
Date: _____ ( )	PUMP FAULT (Yes / No): _____
Time: _____ ( )	Flow Rate (L/min): _____
	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____
<b>DAILY CHECK (For each station visit)</b> (Field Tech Initials)	
Date: _____ ( )	PUMP FAULT (Yes / No): _____
Time: _____ ( )	Flow Rate (L/min): _____
	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____
<b>DAILY CHECK (For each station visit)</b> (Field Tech Initials)	
Date: _____ ( )	PUMP FAULT (Yes / No): _____
Time: _____ ( )	Flow Rate (L/min): _____
	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____
<b>DAILY CHECK (For each station visit)</b> (Field Tech Initials)	
Date: _____ ( )	PUMP FAULT (Yes / No): _____
Time: _____ ( )	Flow Rate (L/min): _____
	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____

**Period 83**





TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA :  
ADDITIONAL DAILY CHECK RECORDS

TA-20389

Station Location: T-21 (Fire Station)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36484

Sample ID # \_\_\_\_\_  
Filter Lot #: 23171-02

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: 8-21-12 ( 99 )  
Time: 0836 ( )

PUMP FAULT (Yes / No): NO  
Flow Rate (L/min): 2  
Cumulative Sample Volume (L): 9692  
Cumulative Sample Time (min): 4835  
Atmospheric Pressure (INS): 27.95  
Temperature inside station unit (F): 71.4  
Battery voltage reading (volts): \_\_\_\_\_

*cloudy, smoggy*

*Box Temp - 60*

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36484**

**Date Printed: Thursday, August 23, 2012 8:55 AM**

**Min Temp 71.8F**

**Max Temp 110.9F**

**TWA Temp 88.4F**

**Min Pressure 27.4 In-Hg**

**Max Pressure 28.0 In-Hg**

**TWA Pressure 27.6 In-Hg**

**No Flow Correction**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Aug 17 2012 12:40 PM			5:02
Sleep		Fri Aug 17 2012 12:46 PM			11:14:00
Prog (Run)	2000	Sat Aug 18 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Thu Aug 23 2012 12:00 AM			4:59
Sleep		Thu Aug 23 2012 12:05 AM			7:57:55
Hold		Thu Aug 23 2012 8:02 AM			5:18
Sleep		Thu Aug 23 2012 8:08 AM			22:38
Hold		Thu Aug 23 2012 8:30 AM			24:08+



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA &  
ADDITIONAL DAILY CHECK RECORDS

TA-20390

Station Location: T-22 (Troy Office)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36444

Sample ID #: \_\_\_\_\_  
Filter Lot #: 23171-02

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: 8-21-12 ( 9 )  
Time: 0845 ( )

PUMP FAULT (Yes / No): NO  
Flow Rate (L/min): 2  
Cumulative Sample Volume (L): 9690  
Cumulative Sample Time (min): 4845  
Atmospheric Pressure (INS): 27.72  
Temperature inside station unit (°F): 70.1  
Battery voltage reading (volts): \_\_\_\_\_  
Box Temp - 63

*cloudy  
smoke*

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36444**

**Date Printed: Thursday, August 23, 2012 8:56 AM**

**Min Temp 62.6F**

**Max Temp 110.8F**

**TWA Temp 82.1F**

**Min Pressure 27.7 In-Hg**

**Max Pressure 28.0 In-Hg**

**TWA Pressure 27.8 In-Hg**

**Flow Correction Approximately +90.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
-----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Aug 17 2012 12:41 PM			5:00
Sleep		Fri Aug 17 2012 12:46 PM			11:13:40
Prog (Run)	2000	Sat Aug 18 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Thu Aug 23 2012 12:00 AM			4:59
Sleep		Thu Aug 23 2012 12:05 AM			8:23:26
Hold		Thu Aug 23 2012 8:28 AM			5:18
Sleep		Thu Aug 23 2012 8:33 AM			2:28
Hold		Thu Aug 23 2012 8:36 AM			4:57
Sleep		Thu Aug 23 2012 8:41 AM			15:07
Hold		Thu Aug 23 2012 8:56 AM+			



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA :  
 ADDITIONAL DAILY CHECK RECORDS

**TA-20391**

Station Location: T-23 (Iron Creek) Sample ID # \_\_\_\_\_  
 Field Technician: jj Filter Lot # 23171-02  
 Pump Type/Model: SKC AirChek 2000  
 Pump Number: 4470

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): NO  
 Date: 8-21-12 ( jj ) Flow Rate (L/min): 2  
 Time: 0823 ( ) Cumulative Sample Volume (L): 9647  
 Cumulative Sample Time (min): 4823  
 Atmospheric Pressure (INS) 27.53  
 Temperature inside station unit (°F): 79.8  
 Battery voltage reading (volts): \_\_\_\_\_  
*Cloudy*  
*Smoggy*  
 Box Temp: 64

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS) \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS) \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS) \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS) \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 4470**

**Date Printed: Thursday, August 23, 2012 8:58 AM**

**Min Temp 64.7F**

**Max Temp 111.6F**

**TWA Temp 84.5F**

**Min Pressure 27.9 In-Hg**

**Max Pressure 28.3 In-Hg**

**TWA Pressure 28.0 In-Hg**

**Flow Correction Approximately +60.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
-----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Aug 17 2012 12:44 PM			5:02
Sleep		Fri Aug 17 2012 12:49 PM			11:10:25
Prog (Run)	2000	Sat Aug 18 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Thu Aug 23 2012 12:00 AM			4:59
Sleep		Thu Aug 23 2012 12:05 AM			8:10:47
Hold		Thu Aug 23 2012 8:15 AM			5:19
Sleep		Thu Aug 23 2012 8:21 AM			35:55
Hold		Thu Aug 23 2012 8:57 AM			0:58+



**TETRA TECH EM INC.**  
**OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET**  
**ADDITIONAL DAILY CHECK RECORDS**

TA-20392

Station Location: T-23QC(Iron Creek)  
 Field Technician: jj  
 Pump Type/Model: SKC AirChek 2000  
 Pump Number: 4469

Sample ID #: \_\_\_\_\_  
 Filter Lot #: 23171-02

**DAILY CHECK (For each station visit)**

(Field Tech Initials)  
 Date: 8-21-12 ( jj )  
 Time: 0824 ( )

PUMP FAULT (Yes / No): NO  
 Flow Rate (L/min): 2  
 Cumulative Sample Volume (L): 9648  
 Cumulative Sample Time (min): 4824  
 Atmospheric Pressure (INS): 27.78  
 Temperature inside station unit (°F): 74.7  
 Battery voltage reading (volts): \_\_\_\_\_  
*Box Temp: 64*

*cloudy  
 sample*

**DAILY CHECK (For each station visit)**

(Field Tech Initials)  
 Date: \_\_\_\_\_ ( )  
 Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
 Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**

(Field Tech Initials)  
 Date: \_\_\_\_\_ ( )  
 Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
 Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**

(Field Tech Initials)  
 Date: \_\_\_\_\_ ( )  
 Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
 Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**

(Field Tech Initials)  
 Date: \_\_\_\_\_ ( )  
 Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
 Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 4469**

**Date Printed: Thursday, August 23, 2012 9:00 AM**

**Min Temp 68.0F**

**Max Temp 104.4F**

**TWA Temp 82.5F**

**Min Pressure 27.7 In-Hg**

**Max Pressure 28.1 In-Hg**

**TWA Pressure 27.9 In-Hg**

**Flow Correction Approximately +70.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
-----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Aug 17 2012 12:42 PM			5:02
Sleep		Fri Aug 17 2012 12:47 PM			11:12:32
Prog (Run)	2000	Sat Aug 18 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Thu Aug 23 2012 12:00 AM			4:59
Sleep		Thu Aug 23 2012 12:05 AM			7:58:19
Hold		Thu Aug 23 2012 8:03 AM			5:04
Sleep		Thu Aug 23 2012 8:08 AM			50:38
Hold		Thu Aug 23 2012 8:59 AM			0:58+



**TETRA TECH EM INC.**  
**OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA &**  
**ADDITIONAL DAILY CHECK RECORDS**

TA-20393

Station Location: T-24 (Jordan) Sample ID #: \_\_\_\_\_  
 Field Technician: jj Filter Lot #: 23171-02  
 Pump Type/Model: SKC AirChek 2000  
 Pump Number: 36422

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): NO  
 Date: 8-21-12 ( ) Flow Rate (L/min): 2  
 Time: 0812 ( ) Cumulative Sample Volume (L): 9625  
 Cumulative Sample Time (min): 4812  
 Atmospheric Pressure (INS): 27.36  
 Temperature inside station unit (°F): 68.9  
 Battery voltage reading (volts): 12.59  
*cloudy*  
*smokey*  
 BOX TEMP - 60

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36422**

**Date Printed: Thursday, August 23, 2012 9:01 AM**

**Min Temp 62.3F**

**Max Temp 107.8F**

**TWA Temp 77.7F**

**Min Pressure 27.3 In-Hg**

**Max Pressure 27.7 In-Hg**

**TWA Pressure 27.5 In-Hg**

**Flow Correction Approximately +40.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
-----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Aug 17 2012 12:44 PM			5:02
Sleep		Fri Aug 17 2012 12:49 PM			11:10:47
Prog (Run)	2000	Sat Aug 18 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Thu Aug 23 2012 12:00 AM			4:59
Sleep		Thu Aug 23 2012 12:05 AM			7:41:42
Hold		Thu Aug 23 2012 7:46 AM			5:43
Sleep		Thu Aug 23 2012 7:52 AM			1:07:19
Hold		Thu Aug 23 2012 8:59 AM			2:15+

**Period 84**



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20395

Station Location: T-21 (Fire Station)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36484  
Sampling Period: 84

Sample ID #: \_\_\_\_\_  
Filter Lot #: 23171-02  
Sample Type: TEM  
Sample Parent ID #: \_\_\_\_\_

PUMP SETUP DAY

Date: 8/27/2012  
Time: 12:00  
Timer Beginning Date/Time: 8/28/2012 2400  
Beginning Flow Rate (L/min): 2  
Pump Programmed (Yes / No): yes  
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 9-4-12  
Time: 1148  
Timer Ending Date/Time: 9/2/2012 2400  
Ending Flow Rate (L/min): 2  
Total Sample Volume (L): 0540  
Total Sample Time (min): 7200  
Atmospheric Pressure (INS): 27.95  
Temperature inside station unit (°F): 71.6  
Sunny  
BoxTemp - 50

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Event ID TAA-101810

SIGNATURE: *[Handwritten Signature]*

DATE: ~~8-28~~ 9-4-12

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA  
ADDITIONAL DAILY CHECK RECORDS

TA-20395

Station Location: T-21 (Fire Station) Sample ID #: \_\_\_\_\_  
Field Technician: jj Filter Lot #: 23171-02  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36484

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): NO  
Date: 8-28-12 ( jj ) Flow Rate (L/min): 2  
Time: 0922 ( ) Cumulative Sample Volume (L): 1125  
Cumulative Sample Time (min): 562  
Atmospheric Pressure (INS) 27.66  
Temperature inside station unit (°F): 71.4  
Battery voltage reading (volts): 12.81  
*Sunny*  
*Box Temp: 56*

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS) \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS) \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS) \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS) \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36484**

**Date Printed: Tuesday, September 4, 2012 12:17 PM**

**Min Temp 59.5F**

**Max Temp 109.6F**

**TWA Temp 84.8F**

**Min Pressure 27.5 In-Hg**

**Max Pressure 28.0 In-Hg**

**TWA Pressure 27.7 In-Hg**

**Flow Correction Approximately +40.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Aug 27 2012 3:48 PM			5:13
Sleep		Mon Aug 27 2012 3:53 PM			8:06:35
Prog (Run)	2000	Tue Aug 28 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Sun Sep 2 2012 12:00 AM			4:59
Sleep		Sun Sep 2 2012 12:05 AM			1d 23:54:59
Hold		Tue Sep 4 2012 12:00 AM			4:58
Sleep		Tue Sep 4 2012 12:04 AM			11:44:10
Hold		Tue Sep 4 2012 11:49 AM			5:03
Sleep		Tue Sep 4 2012 11:54 AM			10:30
Hold		Tue Sep 4 2012 12:04 PM			5:05
Sleep		Tue Sep 4 2012 12:09 PM			2:29
Hold		Tue Sep 4 2012 12:12 PM			4:45+



**TETRA TECH EM INC.**  
**OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET**  
**ADDITIONAL DAILY CHECK RECORDS** **TA-20396**

Station Location: T-22 (Troy Office)  
 Field Technician: jj  
 Pump Type/Model: SKC AirChek 2000  
 Pump Number: 36444

Sample ID #: \_\_\_\_\_  
 Filter Lot #: 23171-02

**DAILY CHECK (For each station visit)**

(Field Tech Initials)  
 Date: 7-27-12 ( jj )  
 Time: 0931 ( )

PUMP FAULT (Yes / No): NO  
 Flow Rate (L/min): 2  
 Cumulative Sample Volume (L): 1143  
 Cumulative Sample Time (min): 571  
 Atmospheric Pressure (INS): 27.81  
 Temperature inside station unit (°F): 64.8  
 Battery voltage reading (volts): 12.65  
 Box Temp - 57

*Snoop*

**DAILY CHECK (For each station visit)**

(Field Tech Initials)  
 Date: \_\_\_\_\_ ( )  
 Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
 Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**

(Field Tech Initials)  
 Date: \_\_\_\_\_ ( )  
 Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
 Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**

(Field Tech Initials)  
 Date: \_\_\_\_\_ ( )  
 Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
 Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**

(Field Tech Initials)  
 Date: \_\_\_\_\_ ( )  
 Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
 Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36444**

**Date Printed: Tuesday, September 4, 2012 12:18 PM**

**Min Temp 53.5F**

**Max Temp 103.6F**

**TWA Temp 77.0F**

**Min Pressure 27.6 In-Hg**

**Max Pressure 28.0 In-Hg**

**TWA Pressure 27.8 In-Hg**

**Flow Correction Approximately +90.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Aug 27 2012 3:48 PM			5:16
Sleep		Mon Aug 27 2012 3:54 PM			8:05:51
Prog (Run)	2000	Tue Aug 28 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Sun Sep 2 2012 12:00 AM			4:59
Sleep		Sun Sep 2 2012 12:05 AM			1d 23:54:59
Hold		Tue Sep 4 2012 12:00 AM			4:58
Sleep		Tue Sep 4 2012 12:04 AM			9:08:08
Hold		Tue Sep 4 2012 9:13 AM			5:18
Sleep		Tue Sep 4 2012 9:18 AM			2:59:52
Hold		Tue Sep 4 2012 12:18 PM			0:44+



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA  
ADDITIONAL DAILY CHECK RECORDS

TA-20397

Station Location: T-23 (Iron Creek)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 4470

Sample ID #: \_\_\_\_\_  
Filter Lot #: 23171-02

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: 8-28-12 ( jj )  
Time: 0910 ( )

PUMP FAULT (Yes / No): NO  
Flow Rate (L/min): 2  
Cumulative Sample Volume (L): 1101  
Cumulative Sample Time (min): 550  
Atmospheric Pressure (INS): 27.82  
Temperature inside station unit (°F): 64.4  
Battery voltage reading (volts): 12.90  
Box Temp - 52

Sunny

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 4470**

**Date Printed: Tuesday, September 4, 2012 12:20 PM**

**Min Temp 58.2F**

**Max Temp 101.8F**

**TWA Temp 78.1F**

**Min Pressure 27.7 In-Hg**

**Max Pressure 28.0 In-Hg**

**TWA Pressure 27.8 In-Hg**

**Flow Correction Approximately +40.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Aug 27 2012 3:49 PM			5:24
Sleep		Mon Aug 27 2012 3:55 PM			8:04:57
Prog (Run)	2000	Tue Aug 28 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Sun Sep 2 2012 12:00 AM			4:59
Sleep		Sun Sep 2 2012 12:05 AM			1d 23:54:59
Hold		Tue Sep 4 2012 12:00 AM			4:58
Sleep		Tue Sep 4 2012 12:04 AM			11:58:45
Hold		Tue Sep 4 2012 12:03 PM			5:17
Sleep		Tue Sep 4 2012 12:09 PM			10:48
Hold		Tue Sep 4 2012 12:19 PM			0:12+



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET  
ADDITIONAL DAILY CHECK RECORDS

TA-20398

Station Location: T-24 (Jordan)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36422

Sample ID #: \_\_\_\_\_  
Filter Lot #: 23171-02

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: 8-28-12 ( jj )  
Time: 0904 ( )

PUMP FAULT (Yes / No): NO  
Flow Rate (L/min): 2  
Cumulative Sample Volume (L): 1089  
Cumulative Sample Time (min): 544  
Atmospheric Pressure (INS): 27.42  
Temperature inside station unit (°F): 64.3  
Battery voltage reading (volts): 12.73  
5 x 0.014  
Box Temp - 54

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36422**

**Date Printed: Tuesday, September 4, 2012 12:22 PM**

**Min Temp 57.7F**

**Max Temp 97.4F**

**TWA Temp 75.8F**

**Min Pressure 27.1 In-Hg**

**Max Pressure 27.7 In-Hg**

**TWA Pressure 27.4 In-Hg**

**Flow Correction Approximately +40.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Aug 27 2012 3:50 PM			5:03
Sleep		Mon Aug 27 2012 3:55 PM			8:04:09
Prog (Run)	2000	Tue Aug 28 2012 12:00 AM	14400	14400	5d 0:00:01
Hold		Sun Sep 2 2012 12:00 AM			4:59
Sleep		Sun Sep 2 2012 12:05 AM			1d 23:54:59
Hold		Tue Sep 4 2012 12:00 AM			4:58
Sleep		Tue Sep 4 2012 12:04 AM			8:27:06
Hold		Tue Sep 4 2012 8:32 AM			5:15
Sleep		Tue Sep 4 2012 8:37 AM			3:42:30
Hold		Tue Sep 4 2012 12:19 PM			2:11+



**TETRA TECH EM INC.**  
**OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET**  
**ADDITIONAL DAILY CHECK RECORDS**

TA-20399

Station Location: T-24QC(Jordan) Sample ID #: \_\_\_\_\_  
 Field Technician: jj Filter Lot #: 23171-02  
 Pump Type/Model: SKC AirChek 2000  
 Pump Number: 4469

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials)

Date: 8-28-12 ( jj ) PUMP FAULT (Yes / No): NO  
 Time: 0905 ( ) Flow Rate (L/min): 2  
 Cumulative Sample Volume (L): 1090  
 Cumulative Sample Time (min): 545  
 Atmospheric Pressure (INS): 27.70  
 Temperature inside station unit (°F): 63.0  
 Battery voltage reading (volts): 12.83  
*5400y* Box Temp - 54

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials)

Date: \_\_\_\_\_ ( ) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials)

Date: \_\_\_\_\_ ( ) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials)

Date: \_\_\_\_\_ ( ) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials)

Date: \_\_\_\_\_ ( ) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**Period 85**





TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA &  
ADDITIONAL DAILY CHECK RECORDS

TA-20401

Station Location: T-21 (Fire Station) Sample ID #: \_\_\_\_\_  
Field Technician: jj Filter Lot #: 23171-02  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36484

**DAILY CHECK (For each station visit)**  
(Field Tech Initials) PUMP FAULT (Yes / No): NO  
Date: 9-7-12 ( jj ) Flow Rate (L/min): 2  
Time: 1524 ( ) Cumulative Sample Volume (L): 1849  
Cumulative Sample Time (min): 924  
Atmospheric Pressure (INS): 29.07  
Temperature inside station unit (F): 96.8  
Battery voltage reading (volts): 12.90  
Box Temp: 80  
*Sunny*

**DAILY CHECK (For each station visit)**  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36484**

**Date Printed: Wednesday, September 12, 2012 4:45 PM**

**Min Temp 56.2F**

**Max Temp 104.3F**

**TWA Temp 79.1F**

**Min Pressure 27.4 In-Hg**

**Max Pressure 28.1 In-Hg**

**TWA Pressure 27.8 In-Hg**

**Flow Correction Approximately +40.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Thu Sep 6 2012 1:03 PM			5:03
Sleep		Thu Sep 6 2012 1:08 PM			10:51:38
Prog (Run)	2000	Fri Sep 7 2012 12:00 AM	14400	14400	5d 0:00:00
Hold		Wed Sep 12 2012 12:00 AM			4:59
Sleep		Wed Sep 12 2012 12:05 AM			16:29:51
Hold		Wed Sep 12 2012 4:34 PM			5:09
Sleep		Wed Sep 12 2012 4:40 PM			3:20
Hold		Wed Sep 12 2012 4:43 PM			1:40+



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA :  
ADDITIONAL DAILY CHECK RECORDS

TA-20402

Station Location: T-21QC(Firestation) Sample ID #: \_\_\_\_\_  
Field Technician: jj Filter Lot #: 23171-02  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 4469

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): NO  
Date: 9-7-12 ( jj ) Flow Rate (L/min): 2  
Time: 1525 ( ) Cumulative Sample Volume (L): 1851  
Cumulative Sample Time (min): 925  
Atmospheric Pressure (INS): 28.39  
Temperature inside station unit (°F): 90.5  
Battery voltage reading (volts): 12.90  
Sunny  
Box Temp = 80

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 4469**

**Date Printed: Wednesday, September 12, 2012 4:47 PM**

**Min Temp 53.1F**

**Max Temp 98.6F**

**TWA Temp 73.1F**

**Min Pressure 27.7 In-Hg**

**Max Pressure 28.4 In-Hg**

**TWA Pressure 28.1 In-Hg**

**Flow Correction Approximately +80.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Thu Sep 6 2012 1:04 PM			5:15
Sleep		Thu Sep 6 2012 1:10 PM			10:49:58
Prog (Run)	2000	Fri Sep 7 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Wed Sep 12 2012 12:00 AM			4:59
Sleep		Wed Sep 12 2012 12:05 AM			16:31:10
Hold		Wed Sep 12 2012 4:36 PM			5:16
Sleep		Wed Sep 12 2012 4:41 PM			3:49
Hold		Wed Sep 12 2012 4:45 PM			1:44+



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET  
ADDITIONAL DAILY CHECK RECORDS

TA-20403

Station Location: T-22 (Troy Office) Sample ID #: \_\_\_\_\_  
Field Technician: jj Filter Lot #: 23171-02  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36444

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): NO  
Date: 9-7-12 ( 98 ) Flow Rate (L/min): 2  
Time: 1535 ( ) Cumulative Sample Volume (L): 1870  
Cumulative Sample Time (min): 935  
Atmospheric Pressure (INS): 28.16  
Temperature inside station unit (°F): 92.9  
Battery voltage reading (volts): 12.70  
Box Temp: 82  
Sunny

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36444**

**Date Printed: Wednesday, September 12, 2012 4:49 PM**

**Min Temp 50.2F**

**Max Temp 99.7F**

**TWA Temp 71.0F**

**Min Pressure 27.5 In-Hg**

**Max Pressure 28.2 In-Hg**

**TWA Pressure 27.9 In-Hg**

**Flow Correction Approximately +90.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
-----	-----	-----	-----	-----	-----
Prog (Hold)		Thu Sep 6 2012 1:03 PM			5:09
Sleep		Thu Sep 6 2012 1:09 PM			10:51:00
Prog (Run)	2000	Fri Sep 7 2012 12:00 AM	14400	14400	5d 0:00:01
Hold		Wed Sep 12 2012 12:00 AM			4:59
Sleep		Wed Sep 12 2012 12:05 AM			16:31:50
Hold		Wed Sep 12 2012 4:36 PM			5:06
Sleep		Wed Sep 12 2012 4:41 PM			4:57
Hold		Wed Sep 12 2012 4:46 PM			2:06+



TETRA TECH EM INC.

OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA  
 ADDITIONAL DAILY CHECK RECORDS

TA-20404

Station Location: <u>T-23 (Iron Creek)</u>	Sample ID #: _____
Field Technician: <u>JJ</u>	Filter Lot #: <u>23171-02</u>
Pump Type/Model: <u>SKC AirChek 2000</u>	
Pump Number: <u>4470</u>	

**DAILY CHECK (For each station visit)**

(Field Tech Initials)	PUMP FAULT (Yes / No): <u>NO</u>
Date: <u>9-7-12</u> ( <u>JJ</u> )	Flow Rate (L/min): <u>2</u>
Time: <u>1509</u> ( )	Cumulative Sample Volume (L): <u>1818</u>
	Cumulative Sample Time (min): <u>908</u>
	Atmospheric Pressure (INS): <u>28.22</u>
	Temperature inside station unit (°F): <u>89.1</u>
	Battery voltage reading (volts): <u>12.94</u>
	Box Temp: <u>75</u>

*34009*

**DAILY CHECK (For each station visit)**

(Field Tech Initials)	PUMP FAULT (Yes / No): _____
Date: _____ ( )	Flow Rate (L/min): _____
Time: _____ ( )	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____

**DAILY CHECK (For each station visit)**

(Field Tech Initials)	PUMP FAULT (Yes / No): _____
Date: _____ ( )	Flow Rate (L/min): _____
Time: _____ ( )	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____

**DAILY CHECK (For each station visit)**

(Field Tech Initials)	PUMP FAULT (Yes / No): _____
Date: _____ ( )	Flow Rate (L/min): _____
Time: _____ ( )	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____

**DAILY CHECK (For each station visit)**

(Field Tech Initials)	PUMP FAULT (Yes / No): _____
Date: _____ ( )	Flow Rate (L/min): _____
Time: _____ ( )	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____

**SKC Pump History**

**SN 4470**

**Date Printed: Wednesday, September 12, 2012 4:50 PM**

**Min Temp 53.0F**

**Max Temp 97.9F**

**TWA Temp 72.8F**

**Min Pressure 27.7 In-Hg**

**Max Pressure 28.3 In-Hg**

**TWA Pressure 27.9 In-Hg**

**Flow Correction Approximately +50.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Thu Sep 6 2012 1:04 PM			5:07
Sleep		Thu Sep 6 2012 1:09 PM			10:50:34
Prog (Run)	2000	Fri Sep 7 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Wed Sep 12 2012 12:00 AM			4:59
Sleep		Wed Sep 12 2012 12:05 AM			16:32:57
Hold		Wed Sep 12 2012 4:37 PM			5:04
Sleep		Wed Sep 12 2012 4:43 PM			5:33
Hold		Wed Sep 12 2012 4:48 PM			2:25+



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA & ADDITIONAL DAILY CHECK RECORDS

TA-20405

Station Location: T-24 (Jordan) Sample ID #: \_\_\_\_\_  
Field Technician: jj Filter Lot #: 23171-02  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36422

**DAILY CHECK (For each station visit)**  
(Field Tech Initials) PUMP FAULT (Yes / No): NO  
Date: 9-7-12 ( jj ) Flow Rate (L/min): 2  
Time: 1503 ( ) Cumulative Sample Volume (L): 1806  
Cumulative Sample Time (min): 903  
Atmospheric Pressure (INS): 27.76  
Temperature inside station unit (°F): 75.5  
Battery voltage reading (volts): 12.73  
Box Temp: 62  
Sunny

**DAILY CHECK (For each station visit)**  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) jj Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36422**

**Date Printed: Wednesday, September 12, 2012 4:52 PM**

**Min Temp 49.2F**

**Max Temp 101.3F**

**TWA Temp 70.1F**

**Min Pressure 27.1 In-Hg**

**Max Pressure 27.9 In-Hg**

**TWA Pressure 27.4 In-Hg**

**Flow Correction Approximately +40.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Thu Sep 6 2012 1:05 PM			5:04
Sleep		Thu Sep 6 2012 1:10 PM			10:49:32
Prog (Run)	2000	Fri Sep 7 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Wed Sep 12 2012 12:00 AM			4:59
Sleep		Wed Sep 12 2012 12:05 AM			16:33:34
Hold		Wed Sep 12 2012 4:38 PM			5:03
Sleep		Wed Sep 12 2012 4:43 PM			6:20
Hold		Wed Sep 12 2012 4:49 PM			2:02+

**Period 86**

F-120917AFB

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20412

Station Location: Field Blank  
Field Technician: jj  
Pump Type/Model:             
Pump Number:             
Sampling Period            86

Sample ID #:             
Filter Lot #: 23171-02  
Sample Type: TEM  
Sample Parent ID #:           

PUMP SETUP DAY

Date: 9/15/2012 Timer Beginning Date/Time: 9/17/2012 2400  
Time: 12:00 Beginning Flow Rate (L/min): 2  
Pump Programmed (Yes / No):             
Bios Calibration Within 10 mL (Yes / No):           

PUMP RETRIEVAL DAY

Date:            Timer Ending Date/Time: 9/22/2012 2400  
Time:            Ending Flow Rate (L/min): 2  
Total Sample Volume (L):             
Total Sample Time (min):             
Atmospheric Pressure (INS):             
Temperature inside station unit (°F):           

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Multiple horizontal lines for handwritten notes.

Event ID TAA-101810

SIGNATURE: [Handwritten Signature]

DATE: 9-24-12



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA :  
ADDITIONAL DAILY CHECK RECORDS

TA-20407

Station Location: T-21 (Fire Station) Sample ID # \_\_\_\_\_  
Field Technician: jj Filter Lot #: 23171-02  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36484

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): NO  
Date: 9-17-12 (99) Flow Rate (L/min): 2  
Time: 1247 ( ) Cumulative Sample Volume (L): 1535  
Cumulative Sample Time (min): 767  
Atmospheric Pressure (INS): 27.95  
Temperature inside station unit (F): 89.0  
Battery voltage reading (volts): 12.79  
Box Temp: 70  
54777

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36484**

**Date Printed: Monday, September 24, 2012 12:17 PM**

**Min Temp 55.6F**

**Max Temp 106.3F**

**TWA Temp 79.1F**

**Min Pressure 27.7 In-Hg**

**Max Pressure 28.0 In-Hg**

**TWA Pressure 27.8 In-Hg**

**Flow Correction Approximately +10.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Sat Sep 15 2012 12:53 PM			5:06
Sleep		Sat Sep 15 2012 12:58 PM			1d 11:01:11
Prog (Run)	2000	Mon Sep 17 2012 12:00 AM	14400	14400	5d 0:00:01
Hold		Sat Sep 22 2012 12:00 AM			4:59
Sleep		Sat Sep 22 2012 12:05 AM			1d 23:54:59
Hold		Mon Sep 24 2012 12:00 AM			4:58
Sleep		Mon Sep 24 2012 12:04 AM			11:53:31
Hold		Mon Sep 24 2012 11:58 AM			5:15
Sleep		Mon Sep 24 2012 12:03 PM			12:05
Hold		Mon Sep 24 2012 12:15 PM			1:11+



TETRA TECH EM INC.

OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA & ADDITIONAL DAILY CHECK RECORDS

TA-20408

Station Location: T-22 (Troy Office) Sample ID #: \_\_\_\_\_  
 Field Technician: jj Filter Lot #: 23171-02  
 Pump Type/Model: SKC AirChek 2000  
 Pump Number: 36444

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): NO  
 Date: 9-17-12 ( jj ) Flow Rate (L/min): 2  
 Time: 1312 ( ) Cumulative Sample Volume (L): 1585  
 Cumulative Sample Time (min): 792  
 Atmospheric Pressure (INS): 28.03  
 Temperature inside station unit (°F): 85.0  
 Battery voltage reading (volts): 12.63  
 Box Temp: 72  
 Sunny

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36444**

**Date Printed: Monday, September 24, 2012 12:19 PM**

**Min Temp 56.1F**

**Max Temp 99.0F**

**TWA Temp 75.4F**

**Min Pressure 27.8 In-Hg**

**Max Pressure 28.1 In-Hg**

**TWA Pressure 27.9 In-Hg**

**Flow Correction Approximately +60.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Sat Sep 15 2012 12:55 PM			5:07
Sleep		Sat Sep 15 2012 1:00 PM			1d 10:59:03
Prog (Run)	2000	Mon Sep 17 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Sat Sep 22 2012 12:00 AM			4:59
Sleep		Sat Sep 22 2012 12:05 AM			1d 23:54:59
Hold		Mon Sep 24 2012 12:00 AM			4:58
Sleep		Mon Sep 24 2012 12:04 AM			12:04:57
Hold		Mon Sep 24 2012 12:09 PM			5:04
Sleep		Mon Sep 24 2012 12:14 PM			0:51
Hold		Mon Sep 24 2012 12:15 PM			3:10+



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA &  
ADDITIONAL DAILY CHECK RECORDS

TA-20409

Station Location: T-22QC(Office)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 4469

Sample ID #: \_\_\_\_\_  
Filter Lot #: 23171-02

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: 9-17-12 (98)  
Time: 1313 ( )

PUMP FAULT (Yes / No): NO  
Flow Rate (L/min): 2  
Cumulative Sample Volume (L): 1587  
Cumulative Sample Time (min): 793  
Atmospheric Pressure (INS): 28.22  
Temperature inside station unit (°F): 82.0  
Battery voltage reading (volts): 12.90  
Box Temp: 72

sunny

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 4469**

**Date Printed: Monday, September 24, 2012 12:27 PM**

**Min Temp 55.7F**

**Max Temp 96.6F**

**TWA Temp 73.5F**

**Min Pressure 27.9 In-Hg**

**Max Pressure 28.2 In-Hg**

**TWA Pressure 28.1 In-Hg**

**Flow Correction Approximately -70.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Sat Sep 15 2012 12:54 PM			5:05
Sleep		Sat Sep 15 2012 12:59 PM			1d 11:00:06
Prog (Run)	2000	Mon Sep 17 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Sat Sep 22 2012 12:00 AM			4:59
Sleep		Sat Sep 22 2012 12:05 AM			1d 23:54:59
Hold		Mon Sep 24 2012 12:00 AM			4:58
Sleep		Mon Sep 24 2012 12:04 AM			12:04:15
Hold		Mon Sep 24 2012 12:09 PM			5:19
Sleep		Mon Sep 24 2012 12:14 PM			4:13
Hold		Mon Sep 24 2012 12:18 PM			8:15+



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA  
ADDITIONAL DAILY CHECK RECORDS

TA-20410

Station Location: T-23 (Iron Creek) Sample ID # \_\_\_\_\_  
Field Technician: jj Filter Lot # 23171-02  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 4470

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): NO  
Date: 9-17-12 ( jj ) Flow Rate (L/min): 2  
Time: 1327 ( ) Cumulative Sample Volume (L): 1614  
Cumulative Sample Time (min): 806  
Atmospheric Pressure (INS): 28.07  
Temperature inside station unit (°F): 80.0  
Battery voltage reading (volts): 12.97  
Box Temp: 66  
sunny

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 4470**

**Date Printed: Monday, September 24, 2012 12:29 PM**

**Min Temp 54.3F**

**Max Temp 97.2F**

**TWA Temp 72.8F**

**Min Pressure 27.8 In-Hg**

**Max Pressure 28.1 In-Hg**

**TWA Pressure 28.0 In-Hg**

**No Flow Correction**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Sat Sep 15 2012 12:56 PM			5:07
Sleep		Sat Sep 15 2012 1:01 PM			1d 10:58:09
Prog (Run)	2000	Mon Sep 17 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Sat Sep 22 2012 12:00 AM			4:59
Sleep		Sat Sep 22 2012 12:05 AM			1d 23:54:59
Hold		Mon Sep 24 2012 12:00 AM			4:58
Sleep		Mon Sep 24 2012 12:04 AM			11:38:44
Hold		Mon Sep 24 2012 11:43 AM			5:19
Sleep		Mon Sep 24 2012 11:49 AM			31:47
Hold		Mon Sep 24 2012 12:20 PM			4:57
Sleep		Mon Sep 24 2012 12:25 PM			2:57
Hold		Mon Sep 24 2012 12:28 PM			0:18+



**TETRA TECH EM INC.**  
**OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA & TA-20411**  
**ADDITIONAL DAILY CHECK RECORDS**

Station Location: T-24 (Jordan) Sample ID #: \_\_\_\_\_  
 Field Technician: jj Filter Lot #: 23171-02  
 Pump Type/Model: SKC AirChek 2000  
 Pump Number: 36422

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials)

Date: 9-17-12 ( JB ) PUMP FAULT (Yes / No): NO  
 Time: 1333 ( ) Flow Rate (L/min): 2  
 Cumulative Sample Volume (L): 1626  
 Cumulative Sample Time (min): 813  
 Atmospheric Pressure (INS): 27.52  
 Temperature inside station unit (°F): 65.8  
 Battery voltage reading (volts): 12.67  
 Box Temp: 56

*Sunny*

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials)

Date: \_\_\_\_\_ ( ) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials)

Date: \_\_\_\_\_ ( ) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials)

Date: \_\_\_\_\_ ( ) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials)

Date: \_\_\_\_\_ ( ) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36422**

**Date Printed: Monday, September 24, 2012 12:31 PM**

**Min Temp 51.2F**

**Max Temp 101.3F**

**TWA Temp 71.9F**

**Min Pressure 27.3 In-Hg**

**Max Pressure 27.7 In-Hg**

**TWA Pressure 27.5 In-Hg**

**Flow Correction Approximately +20.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Sat Sep 15 2012 12:57 PM			5:01
Sleep		Sat Sep 15 2012 1:02 PM			1d 10:57:28
Prog (Run)	2000	Mon Sep 17 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Sat Sep 22 2012 12:00 AM			4:59
Sleep		Sat Sep 22 2012 12:05 AM			1d 23:54:59
Hold		Mon Sep 24 2012 12:00 AM			4:58
Sleep		Mon Sep 24 2012 12:04 AM			11:27:14
Hold		Mon Sep 24 2012 11:32 AM			5:18
Sleep		Mon Sep 24 2012 11:37 AM			52:58
Hold		Mon Sep 24 2012 12:30 PM			0:32+

**Period 87**



TETRA TECH EM INC.  
OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S **TA-20413**

Station Location: T-21 (Fire Station) Sample ID #: \_\_\_\_\_  
Field Technician: jj Filter Lot #: 23171-02  
Pump Type/Model: SKC AirChek 2000 Sample Type: TEM  
Pump Number: 36484 Sample Parent ID #: \_\_\_\_\_  
Sampling Period: 87

PUMP SETUP DAY

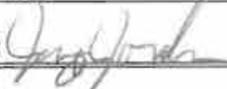
Date: 9/25/2012 Timer Beginning Date/Time: 9/27/2012 2400  
Time: 12:00 Beginning Flow Rate (L/min): 2  
Pump Programmed (Yes / No): yes  
Bios Calibration Within 10 mL (Yes / No) yes

PUMP RETRIEVAL DAY

Date: 10-3-12 Timer Ending Date/Time: 10/2/2012 2400  
Time: 0910 Ending Flow Rate (L/min): 2  
Total Sample Volume (L): 0.10  
Total Sample Time (min): 7200  
Atmospheric Pressure (INS) 27.93  
Temperature inside station unit (°F): 59.3  
BoxTemp. 40

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Event ID TAA-101810

SIGNATURE: 

DATE: 10-3-12

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S  
ADDITIONAL DAILY CHECK RECORDS

TA-20413

Station Location: T-21 (Fire Station) Sample ID #: \_\_\_\_\_  
Field Technician: jj Filter Lot #: 23171-02  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36484

DAILY CHECK (For each station visit)  
(Field Tech Initials) \_\_\_\_\_ PUMP FAULT (Yes / No): NO  
Date: 9-27-12 ( jj ) Flow Rate (L/min): 2  
Time: 1533 ( ) Cumulative Sample Volume (L): 1627  
Cumulative Sample Time (min): 813  
Atmospheric Pressure (INS): 27.90  
Temperature inside station unit (°F): 84.5  
Battery voltage reading (volts): 12.88  
Box Temp: 71  
sunny

DAILY CHECK (For each station visit)  
(Field Tech Initials) \_\_\_\_\_ PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) \_\_\_\_\_ PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) \_\_\_\_\_ PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) \_\_\_\_\_ PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36484**

**Date Printed: Wednesday, October 3, 2012 12:07 PM**

**Min Temp 50.3F**

**Max Temp 99.8F**

**TWA Temp 73.7F**

**Min Pressure 27.5 In-Hg**

**Max Pressure 28.1 In-Hg**

**TWA Pressure 27.8 In-Hg**

**Flow Correction Approximately +10.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Tue Sep 25 2012 2:27 PM			5:14
Sleep		Tue Sep 25 2012 2:32 PM			1d 9:27:42
Prog (Run)	2000	Thu Sep 27 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Tue Oct 2 2012 12:00 AM			4:59
Sleep		Tue Oct 2 2012 12:05 AM			1d 9:04:52
Hold		Wed Oct 3 2012 9:09 AM			5:17
Sleep		Wed Oct 3 2012 9:15 AM			2:43:45
Hold		Wed Oct 3 2012 11:58 AM			8:05+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S

TA-20414

Station Location: T-22 (Troy Office)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36444  
Sampling Period: 87

Sample ID #: \_\_\_\_\_  
Filter Lot #: 23171-02  
Sample Type: TEM  
Sample Parent ID #: \_\_\_\_\_

PUMP SETUP DAY

Date: 9/25/2012  
Time: 12:00  
Timer Beginning Date/Time: 9/27/2012 2400  
Beginning Flow Rate (L/min): 2  
Pump Programmed (Yes / No): yes  
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 10-3-12  
Time: 0919  
Timer Ending Date/Time: 10/2/2012 2400  
Ending Flow Rate (L/min): 2  
Total Sample Volume (L): 0FLO  
Total Sample Time (min): 1200  
Atmospheric Pressure (INS): 27.96  
Temperature inside station unit (°F): 55.6  
Box Temp: 43

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Event ID TAA-101810

SIGNATURE: 

DATE: 10-3-12

**TETRA TECH EM INC.**  
**OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S**  
**ADDITIONAL DAILY CHECK RECORDS**

TA-20414

Station Location: <u>T-22 (Troy Office)</u>	Sample ID #: _____
Field Technician: <u>jj</u>	Filter Lot #: <u>23171-02</u>
Pump Type/Model: <u>SKC AirChek 2000</u>	
Pump Number: <u>36444</u>	

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) \_\_\_\_\_

Date: <u>9-27-12</u> ( <u>jj</u> )	PUMP FAULT (Yes / No): <u>NO</u>
Time: <u>1750</u> ( )	Flow Rate (L/min): <u>2</u>
	Cumulative Sample Volume (L): <u>2141</u>
	Cumulative Sample Time (min): <u>1070</u>
	Atmospheric Pressure (INS): <u>27.93</u>
	Temperature inside station unit (°F): <u>89.5</u>
	Battery voltage reading (volts): <u>12.71</u>
	Box Temp: <u>76</u>

*sunny*

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) \_\_\_\_\_

Date: _____ ( )	PUMP FAULT (Yes / No): _____
Time: _____ ( )	Flow Rate (L/min): _____
	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) \_\_\_\_\_

Date: _____ ( )	PUMP FAULT (Yes / No): _____
Time: _____ ( )	Flow Rate (L/min): _____
	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) \_\_\_\_\_

Date: _____ ( )	PUMP FAULT (Yes / No): _____
Time: _____ ( )	Flow Rate (L/min): _____
	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) \_\_\_\_\_

Date: _____ ( )	PUMP FAULT (Yes / No): _____
Time: _____ ( )	Flow Rate (L/min): _____
	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____

**SKC Pump History**

**SN 36444**

**Date Printed: Wednesday, October 3, 2012 12:09 PM**

**Min Temp 50.9F**

**Max Temp 95.8F**

**TWA Temp 70.7F**

**Min Pressure 27.6 In-Hg**

**Max Pressure 28.2 In-Hg**

**TWA Pressure 27.9 In-Hg**

**Flow Correction Approximately +60.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Tue Sep 25 2012 2:29 PM			5:02
Sleep		Tue Sep 25 2012 2:34 PM			1d 9:25:57
Prog (Run)	2000	Thu Sep 27 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Tue Oct 2 2012 12:00 AM			4:59
Sleep		Tue Oct 2 2012 12:05 AM			1d 9:14:07
Hold		Wed Oct 3 2012 9:19 AM			5:28
Sleep		Wed Oct 3 2012 9:24 AM			2:42:50
Hold		Wed Oct 3 2012 12:07 PM			1:34+



**TETRA TECH EM INC.**  
**OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA & ADDITIONAL DAILY CHECK RECORDS** **TA-20415**

Station Location: T-23 (Iron Creek) Sample ID #: \_\_\_\_\_  
 Field Technician: jj Filter Lot #: 23171-02  
 Pump Type/Model: SKC AirChek 2000  
 Pump Number: 4470

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): NO  
 Date: 9-27-12 ( 98 ) Flow Rate (L/min): 2  
 Time: 1758 ( ) Cumulative Sample Volume (L): 2156  
 Cumulative Sample Time (min): 1077  
 Atmospheric Pressure (INS): 27.97  
 Temperature inside station unit (°F): 86.3  
 Battery voltage reading (volts): 13.01  
 Box Temp: 71  
*54004*

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 4470**

**Date Printed: Wednesday, October 3, 2012 12:13 PM**

**Min Temp 55.6F**

**Max Temp 90.7F**

**TWA Temp 71.9F**

**Min Pressure 27.7 In-Hg**

**Max Pressure 28.2 In-Hg**

**TWA Pressure 28.0 In-Hg**

**Flow Correction Approximately +20.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Tue Sep 25 2012 2:30 PM			5:04
Sleep		Tue Sep 25 2012 2:35 PM			1d 9:24:38
Prog (Run)	2000	Thu Sep 27 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Tue Oct 2 2012 12:00 AM			4:59
Sleep		Tue Oct 2 2012 12:05 AM			1d 8:52:09
Hold		Wed Oct 3 2012 8:57 AM			5:23
Sleep		Wed Oct 3 2012 9:02 AM			3:07:59
Hold		Wed Oct 3 2012 12:10 PM			2:28+



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA &  
ADDITIONAL DAILY CHECK RECORDS

TA-20416

Station Location: T-23QC(iron Creek)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 4469

Sample ID #: \_\_\_\_\_  
Filter Lot #: 23171-02

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: 9-27-12 ( jj )  
Time: 1800 ( )

PUMP FAULT (Yes / No): NO  
Flow Rate (L/min): 2  
Cumulative Sample Volume (L): 2159  
Cumulative Sample Time (min): 27.98  
Atmospheric Pressure (INS): 1079  
Temperature inside station unit (°F): 85.7  
Battery voltage reading (volts): 12.94  
Box Temp: 71

sunny

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 4469**

**Date Printed: Wednesday, October 3, 2012 12:17 PM**

**Min Temp 54.4F**

**Max Temp 90.1F**

**TWA Temp 70.9F**

**Min Pressure 27.7 In-Hg**

**Max Pressure 28.2 In-Hg**

**TWA Pressure 27.9 In-Hg**

**Flow Correction Approximately -40.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Tue Sep 25 2012 2:29 PM			5:02
Sleep		Tue Sep 25 2012 2:34 PM			1d 9:25:37
Prog (Run)	2000	Thu Sep 27 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Tue Oct 2 2012 12:00 AM			4:59
Sleep		Tue Oct 2 2012 12:05 AM			1d 8:52:58
Hold		Wed Oct 3 2012 8:57 AM			5:19
Sleep		Wed Oct 3 2012 9:03 AM			3:07:07
Hold		Wed Oct 3 2012 12:10 PM			4:57
Sleep		Wed Oct 3 2012 12:15 PM			0:20
Hold		Wed Oct 3 2012 12:15 PM			1:18+



**TETRA TECH EM INC.**  
**OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA &**  
**ADDITIONAL DAILY CHECK RECORDS**

**TA-20417**

Station Location: T-24 (Jordan) Sample ID #: \_\_\_\_\_  
 Field Technician: jj Filter Lot #: 23171-02  
 Pump Type/Model: SKC AirChek 2000  
 Pump Number: 36422

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): NO  
 Date: 9-27-12 ( jj ) Flow Rate (L/min): 2  
 Time: 1318 ( ) Cumulative Sample Volume (L): 1596  
 Cumulative Sample Time (min): 797  
 Atmospheric Pressure (INS) 27.39  
 Temperature inside station unit (°F): 71.0  
 Battery voltage reading (volts): 12.61  
 Box Temp: 55  
*Sunny*

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS) \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS) \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS) \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36422**

**Date Printed: Wednesday, October 3, 2012 12:14 PM**

**Min Temp 55.8F**

**Max Temp 95.4F**

**TWA Temp 73.1F**

**Min Pressure 27.2 In-Hg**

**Max Pressure 27.8 In-Hg**

**TWA Pressure 27.4 In-Hg**

**Flow Correction Approximately +20.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Tue Sep 25 2012 2:31 PM			5:03
Sleep		Tue Sep 25 2012 2:36 PM			1d 9:23:35
Prog (Run)	2000	Thu Sep 27 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Tue Oct 2 2012 12:00 AM			4:59
Sleep		Tue Oct 2 2012 12:05 AM			1d 8:44:48
Hold		Wed Oct 3 2012 8:49 AM			5:21
Sleep		Wed Oct 3 2012 8:55 AM			3:15:21
Hold		Wed Oct 3 2012 12:10 PM			3:29+

**Period 88**



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20419

Station Location: T-21 (Fire Station)

Sample ID #

Field Technician: jj

Filter Lot #: 23171-02

Pump Type/Model: SKC AirChek 2000

Sample Type: TEM

Pump Number: 36484

Sample Parent ID #:                     

Sampling Period: 88

PUMP SETUP DAY

Date: 10/5/2012

Time: 12:00

Timer Beginning Date/Time: 10/7/2012 2400

Beginning Flow Rate (L/min): 2

Pump Programmed (Yes / No): yes

Bios Calibration Within 10 mL (Yes / No) yes

PUMP RETRIEVAL DAY

Date: 10-12-12

Time: 12:16

Timer Ending Date/Time: 10/12/2012 2400

Ending Flow Rate (L/min): 2

Total Sample Volume (L): 0.540

Total Sample Time (min): 7200

Atmospheric Pressure (INS) 27.64

Temperature inside station unit (°F) 52.6

BoxTemp: 46

sunny

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Event ID TAA-101810

SIGNATURE: [Signature]

DATE: 10-12-12

TETRA TECH EM INC.  
OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA  
ADDITIONAL DAILY CHECK RECORDS

TA-20419

Station Location: T-21 (Fire Station) Sample ID #  
Field Technician: jj Filter Lot #: 23171-02  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36484

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): NO  
Date: 10-10-12 ( jj ) Flow Rate (L/min): 2  
Time: 0942 ( ) Cumulative Sample Volume (L): 9804  
Cumulative Sample Time (min): 4902  
Atmospheric Pressure (INS): 27.60  
Temperature inside station unit (°F): 48.8  
Battery voltage reading (volts): 12.44  
Box Temp: 38

*Sunny*  
DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36484**

**Date Printed: Friday, October 12, 2012 1:27 PM**

**Min Temp 36.0F**

**Max Temp 90.0F**

**TWA Temp 62.3F**

**Min Pressure 27.4 In-Hg**

**Max Pressure 28.1 In-Hg**

**TWA Pressure 27.7 In-Hg**

**Flow Correction Approximately +10.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Oct 5 2012 10:27 AM			5:13
Sleep		Fri Oct 5 2012 10:33 AM			1d 13:27:00
Prog (Run)	2000	Sun Oct 7 2012 12:00 AM	14400	14400	5d 0:00:00
Hold		Fri Oct 12 2012 12:00 AM			4:59
Sleep		Fri Oct 12 2012 12:05 AM			12:11:36
Hold		Fri Oct 12 2012 12:16 PM			5:18
Sleep		Fri Oct 12 2012 12:21 PM			1:03:34
Hold		Fri Oct 12 2012 1:25 PM			1:32+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20420

Station Location: T-22 (Troy Office)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36444  
Sampling Period: 88

Sample ID #: \_\_\_\_\_  
Filter Lot #: 23171-02  
Sample Type: TEM  
Sample Parent ID #: \_\_\_\_\_

PUMP SETUP DAY

Date: 10/5/2012  
Time: 12:00  
Timer Beginning Date/Time: 10/7/2012 2400  
Beginning Flow Rate (L/min): 2  
Pump Programmed (Yes / No): yes  
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 10-12-12  
Time: 1228  
Timer Ending Date/Time: 10/12/2012 2400  
Ending Flow Rate (L/min): 2  
Total Sample Volume (L): 0.520  
Total Sample Time (min): 7200  
Atmospheric Pressure (INS): 29.60  
Temperature inside station unit (°F): 51.4  
Box Temp: 50

5400Y  
COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Event ID TAA-101810

SIGNATURE: *[Handwritten Signature]*

DATE: 10-12-12

**TETRA TECH EM INC.**  
**OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA &**  
**ADDITIONAL DAILY CHECK RECORDS**

**TA-20420**

Station Location: T-22 (Troy Office) Sample ID #: \_\_\_\_\_  
 Field Technician: jj Filter Lot #: 23171-02  
 Pump Type/Model: SKC AirChek 2000  
 Pump Number: 36444

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): NO  
 Date: 10-10-12 (jj) Flow Rate (L/min): 2  
 Time: 0952 ( ) Cumulative Sample Volume (L): 9825  
 Cumulative Sample Time (min): 4912  
 Atmospheric Pressure (INS) 27.66  
 Temperature inside station unit (°F): 46.0  
 Battery voltage reading (volts): 12.36  
 Box Temp: 39  
 sunny

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS) \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS) \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS) \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
 Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
 Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS) \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36444**

**Date Printed: Friday, October 12, 2012 1:31 PM**

**Min Temp 38.5F**

**Max Temp 84.1F**

**TWA Temp 57.8F**

**Min Pressure 27.5 In-Hg**

**Max Pressure 28.1 In-Hg**

**TWA Pressure 27.7 In-Hg**

**Flow Correction Approximately -50.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
-----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Oct 5 2012 10:29 AM			5:11
Sleep		Fri Oct 5 2012 10:34 AM			1d 13:25:42
Prog (Run)	2000	Sun Oct 7 2012 12:00 AM	14400	14400	5d 0:00:00
Hold		Fri Oct 12 2012 12:00 AM			4:59
Sleep		Fri Oct 12 2012 12:05 AM			12:22:52
Hold		Fri Oct 12 2012 12:27 PM			5:44
Sleep		Fri Oct 12 2012 12:33 PM			55:09
Hold		Fri Oct 12 2012 1:28 PM			2:15+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20421

Station Location: T-23 (Iron Creek)
Field Technician: jj
Pump Type/Model: SKC AirChek 2000
Pump Number: 4470
Sampling Period: 88

Sample ID #:
Filter Lot #: 23171-02
Sample Type: TEM
Sample Parent ID #:

PUMP SETUP DAY

Date: 10/5/2012
Time: 12:00
Timer Beginning Date/Time: 10/7/2012 2400
Beginning Flow Rate (L/min): 2
Pump Programmed (Yes / No): yes
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 10-12-12
Time: 1156
Timer Ending Date/Time: 10/12/2012 2400
Ending Flow Rate (L/min): 2
Total Sample Volume (L): 0920
Total Sample Time (min): 7200
Atmospheric Pressure (INS): 27.74
Temperature inside station unit (°F): 53.5
Box Temp: 43

SUNNY

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Event ID TAA-101810

SIGNATURE: [Handwritten Signature]

DATE: 10-12-12

TETRA TECH EM INC.  
OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA  
ADDITIONAL DAILY CHECK RECORDS

TA-20421

Station Location: T-23 (Iron Creek)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 4470

Sample ID # \_\_\_\_\_  
Filter Lot #: 23171-02

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: 10-10-12 ( jj )  
Time: 1131 ( )

PUMP FAULT (Yes / No): NO  
Flow Rate (L/min): 2  
Cumulative Sample Volume (L): 0F40  
Cumulative Sample Time (min): 5011  
Atmospheric Pressure (INS): 27.76  
Temperature inside station unit (°F): 55.9  
Battery voltage reading (volts): 12.68  
Box Temp: 43

SUNNY

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 4470**

**Date Printed: Friday, October 12, 2012 1:33 PM**

**Min Temp 40.0F**

**Max Temp 84.2F**

**TWA Temp 60.9F**

**Min Pressure 27.6 In-Hg**

**Max Pressure 28.2 In-Hg**

**TWA Pressure 27.8 In-Hg**

**Flow Correction Approximately +150.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Oct 5 2012 10:30 AM			5:08
Sleep		Fri Oct 5 2012 10:35 AM			1d 13:24:42
Prog (Run)	2000	Sun Oct 7 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Fri Oct 12 2012 12:00 AM			4:59
Sleep		Fri Oct 12 2012 12:05 AM			11:51:22
Hold		Fri Oct 12 2012 11:56 AM			5:26
Sleep		Fri Oct 12 2012 12:01 PM			1:28:55
Hold		Fri Oct 12 2012 1:30 PM			2:16+



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA &  
ADDITIONAL DAILY CHECK RECORDS

TA-20422

Station Location: T-24 (Jordan) Sample ID #: \_\_\_\_\_  
Field Technician: jj Filter Lot #: 23171-02  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36422

**DAILY CHECK (For each station visit)**  
(Field Tech Initials) PUMP FAULT (Yes / No): NO  
Date: 10-10-12 ( jj ) Flow Rate (L/min): 2  
Time: 1147 ( ) Cumulative Sample Volume (L): 0.9 L  
Cumulative Sample Time (min): 5027  
Atmospheric Pressure (INS): 27.10  
Temperature inside station unit (°F): 55.5  
Battery voltage reading (volts): 12.25  
Box Temp: 42

*Sunny*  
**DAILY CHECK (For each station visit)**  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**  
(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36422**

**Date Printed: Friday, October 12, 2012 1:34 PM**

**Min Temp 39.5F**

**Max Temp 82.4F**

**TWA Temp 62.0F**

**Min Pressure 27.0 In-Hg**

**Max Pressure 27.6 In-Hg**

**TWA Pressure 27.2 In-Hg**

**Flow Correction Approximately +20.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
-----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Oct 5 2012 10:30 AM			5:08
Sleep		Fri Oct 5 2012 10:35 AM			1d 13:24:12
Prog (Run)	2000	Sun Oct 7 2012 12:00 AM	14400	14400	5d 0:00:01
Hold		Fri Oct 12 2012 12:00 AM			4:59
Sleep		Fri Oct 12 2012 12:05 AM			11:16:52
Hold		Fri Oct 12 2012 11:21 AM			5:32
Sleep		Fri Oct 12 2012 11:27 AM			2:05:01
Hold		Fri Oct 12 2012 1:32 PM			1:34+

TETRA TECH EM INC.

OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20423

Station Location: T-24QC(Jordan)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 4469  
Sampling Period: 88

Sample ID #  
Filter Lot #: 23171-02  
Sample Type: TEM  
Sample Parent ID #: TA-20422

PUMP SETUP DAY

Date: 10/5/2012  
Time: 12:00  
Timer Beginning Date/Time: 10/7/2012 2400  
Beginning Flow Rate (L/min): 2  
Pump Programmed (Yes / No): yes  
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 10-12-12  
Time: 1123  
Timer Ending Date/Time: 10/12/2012 2400  
Ending Flow Rate (L/min): 2  
Total Sample Volume (L): 0 FLO  
Total Sample Time (min): 7200  
Atmospheric Pressure (INS): 27.53  
Temperature inside station unit (°F): 55.3  
Box Temp: 39

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Event ID TAA-101810

SIGNATURE: [Handwritten Signature]

DATE: 10-12-12

**TETRA TECH EM INC.**  
**OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA &**  
**ADDITIONAL DAILY CHECK RECORDS**

TA-20423

Station Location: <u>T-24QC(Jordan)</u>	Sample ID #: _____
Field Technician: <u>jj</u>	Filter Lot #: <u>23171-02</u>
Pump Type/Model: <u>SKC AirChek 2000</u>	
Pump Number: <u>4469</u>	

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials)

Date: <u>10-10-12</u> ( <u>99</u> )	PUMP FAULT (Yes / No): <u>NO</u>
Time: <u>1148</u> ( )	Flow Rate (L/min): <u>2</u>
	Cumulative Sample Volume (L): <u>0 FL0</u>
	Cumulative Sample Time (min): <u>5028</u>
	Atmospheric Pressure (INS): <u>27.53</u>
	Temperature inside station unit (°F): <u>48.8</u>
	Battery voltage reading (volts): <u>1262</u>
	Box Temp: <u>42</u>

*Sunny*

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials)

Date: _____ ( )	PUMP FAULT (Yes / No): _____
Time: _____ ( )	Flow Rate (L/min): _____
	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials)

Date: _____ ( )	PUMP FAULT (Yes / No): _____
Time: _____ ( )	Flow Rate (L/min): _____
	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials)

Date: _____ ( )	PUMP FAULT (Yes / No): _____
Time: _____ ( )	Flow Rate (L/min): _____
	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____

**DAILY CHECK (For each station visit)**  
 (Field Tech Initials)

Date: _____ ( )	PUMP FAULT (Yes / No): _____
Time: _____ ( )	Flow Rate (L/min): _____
	Cumulative Sample Volume (L): _____
	Cumulative Sample Time (min): _____
	Atmospheric Pressure (INS): _____
	Temperature inside station unit (°F): _____
	Battery voltage reading (volts): _____

**SKC Pump History**

**SN 4469**

**Date Printed: Friday, October 12, 2012 1:29 PM**

**Min Temp 39.4F**

**Max Temp 74.5F**

**TWA Temp 54.9F**

**Min Pressure 27.5 In-Hg**

**Max Pressure 27.9 In-Hg**

**TWA Pressure 27.6 In-Hg**

**Flow Correction Approximately -280.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
-----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Oct 5 2012 10:31 AM			5:06
Sleep		Fri Oct 5 2012 10:37 AM			1d 13:22:56
Prog (Run)	2000	Sun Oct 7 2012 12:00 AM	14400	14400	5d 0:00:01
Hold		Fri Oct 12 2012 12:00 AM			4:59
Sleep		Fri Oct 12 2012 12:05 AM			11:18:06
Hold		Fri Oct 12 2012 11:23 AM			5:04
Sleep		Fri Oct 12 2012 11:28 AM			1:59:37
Hold		Fri Oct 12 2012 1:27 PM			1:12+

**Period 89**

F-121017AFB

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA :

TA-20430

Station Location: Field Blank  
Field Technician: jj  
Pump Type/Model:                       
Pump Number:                       
Sampling Period: 89

Sample ID #:                       
Filter Lot #: 23171-04  
Sample Type: TEM  
Sample Parent ID #:                     

PUMP SETUP DAY

Date: 10/15/2012 Timer Beginning Date/Time: 10/17/2012 2400  
Time: 12:00 Beginning Flow Rate (L/min): 2  
Pump Programmed (Yes / No):                       
Bios Calibration Within 10 mL (Yes / No):                     

PUMP RETRIEVAL DAY

Date:                      Timer Ending Date/Time: 10/22/2012 2400  
Time:                      Ending Flow Rate (L/min): 2  
Total Sample Volume (L):                       
Total Sample Time (min):                       
Atmospheric Pressure (INS):                       
Temperature inside station unit (°F):                     

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Multiple horizontal lines for handwritten notes.

Event ID TAA-101810

SIGNATURE: Yung J. Ford

DATE: 10-22-12



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA & ADDITIONAL DAILY CHECK RECORDS

TA-20425

Station Location: T-21 (Fire Station)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36484

Sample ID #: \_\_\_\_\_  
Filter Lot #: 23171-02

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: 10/17/12 ( mm )  
Time: 11:07 ( )

PUMP FAULT (Yes / No): no  
Flow Rate (L/min): 2  
Cumulative Sample Volume (L): 1677  
Cumulative Sample Time (min): 847  
Atmospheric Pressure (INS): 27.79  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): 12.76  
Box Temp: 130

*sunny partly cloudy*

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36484**

**Date Printed: Monday, October 22, 2012 11:40 AM**

**Min Temp 39.3F**

**Max Temp 79.0F**

**TWA Temp 59.2F**

**Min Pressure 27.2 In-Hg**

**Max Pressure 28.0 In-Hg**

**TWA Pressure 27.6 In-Hg**

**Flow Correction Approximately +10.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Oct 15 2012 12:25 PM			5:02
Sleep		Mon Oct 15 2012 12:30 PM			1d 11:29:38
Prog (Run)	2000	Wed Oct 17 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Mon Oct 22 2012 12:00 AM			4:59
Sleep		Mon Oct 22 2012 12:05 AM			11:11:10
Hold		Mon Oct 22 2012 11:16 AM			5:21
Sleep		Mon Oct 22 2012 11:21 AM			16:11
Hold		Mon Oct 22 2012 11:37 AM			2:17+



**TETRA TECH EM INC.**  
**OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET (FSDS)**  
**ADDITIONAL DAILY CHECK RECORDS**

Station Location: T-21QC(FireStation)  
 Field Technician: jj  
 Pump Type/Model: SKC AirChek 2000  
 Pump Number: 4469

Sample ID #: TA-  
 Filter Lot #: 23171-02

**DAILY CHECK (For each station visit)**

(Field Tech Initials)  
 Date: 10/17/12 ( )  
 Time: 14:31 ( )

PUMP FAULT (Yes / No): no  
 Flow Rate (L/min): 0  
 Cumulative Sample Volume (L): 1703  
 Cumulative Sample Time (min): 851  
 Atmospheric Pressure (INS): 29.07  
 Temperature inside station unit (°F): 68.3  
 Battery voltage reading (volts): 12.85  
 Box Temp: 62

*Sunny, part cloudy*

**DAILY CHECK (For each station visit)**

(Field Tech Initials)  
 Date: \_\_\_\_\_ ( )  
 Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
 Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**

(Field Tech Initials)  
 Date: \_\_\_\_\_ ( )  
 Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
 Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**

(Field Tech Initials)  
 Date: \_\_\_\_\_ ( )  
 Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
 Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**DAILY CHECK (For each station visit)**

(Field Tech Initials)  
 Date: \_\_\_\_\_ ( )  
 Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
 Flow Rate (L/min): \_\_\_\_\_  
 Cumulative Sample Volume (L): \_\_\_\_\_  
 Cumulative Sample Time (min): \_\_\_\_\_  
 Atmospheric Pressure (INS): \_\_\_\_\_  
 Temperature inside station unit (°F): \_\_\_\_\_  
 Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 4469**

**Date Printed: Monday, October 22, 2012 11:42 AM**

**Min Temp 41.3F**

**Max Temp 73.9F**

**TWA Temp 54.8F**

**Min Pressure 27.4 In-Hg**

**Max Pressure 28.2 In-Hg**

**TWA Pressure 27.8 In-Hg**

**Flow Correction Approximately -110.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Oct 15 2012 12:27 PM			5:08
Sleep		Mon Oct 15 2012 12:32 PM			1d 11:27:43
Prog (Run)	2000	Wed Oct 17 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Mon Oct 22 2012 12:00 AM			4:59
Sleep		Mon Oct 22 2012 12:05 AM			11:11:35
Hold		Mon Oct 22 2012 11:16 AM			5:05
Sleep		Mon Oct 22 2012 11:21 AM			20:11
Hold		Mon Oct 22 2012 11:41 AM			0:08+



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA :  
ADDITIONAL DAILY CHECK RECORDS

TA-20427

Station Location: T-22 (Troy Office)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36444

Sample ID #: \_\_\_\_\_  
Filter Lot #: 23171-04

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): no  
Date: 10/17/12 ( ) Flow Rate (L/min): 2  
Time: 10:55 ( ) Cumulative Sample Volume (L): 1780  
Cumulative Sample Time (min): 891  
Atmospheric Pressure (INS): 27.95  
Temperature inside station unit (°F): 70.0  
Battery voltage reading (volts): 12.20  
Box Temp: 62

*2011 pump daily*

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): \_\_\_\_\_  
Date: \_\_\_\_\_ ( ) Flow Rate (L/min): \_\_\_\_\_  
Time: \_\_\_\_\_ ( ) Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36444**

**Date Printed: Monday, October 22, 2012 11:44 AM**

**Min Temp 40.5F**

**Max Temp 73.7F**

**TWA Temp 53.7F**

**Min Pressure 27.2 In-Hg**

**Max Pressure 28.0 In-Hg**

**TWA Pressure 27.6 In-Hg**

**Flow Correction Approximately +30.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Oct 15 2012 12:28 PM			5:02
Sleep		Mon Oct 15 2012 12:33 PM			1d 11:26:56
Prog (Run)	2000	Wed Oct 17 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Mon Oct 22 2012 12:00 AM			4:59
Sleep		Mon Oct 22 2012 12:05 AM			11:27:20
Hold		Mon Oct 22 2012 11:32 AM			11:39+



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA :  
ADDITIONAL DAILY CHECK RECORDS

TA-20428

Station Location: T-23 (Iron Creek)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 4470

Sample ID # \_\_\_\_\_  
Filter Lot #: 23171-04

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: 10/17/12 (mm)  
Time: 14:30 ( )

PUMP FAULT (Yes / No): No  
Flow Rate (L/min): 2  
Cumulative Sample Volume (L): 1733  
Cumulative Sample Time (min): 766  
Atmospheric Pressure (INS): 27.99  
Temperature inside station unit (°F): 69.5  
Battery voltage reading (volts): 18.75  
Box Temp: 60

sunny partly cloudy

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 4470**

**Date Printed: Monday, October 22, 2012 11:46 AM**

**Min Temp 40.6F**

**Max Temp 72.5F**

**TWA Temp 56.4F**

**Min Pressure 27.3 In-Hg**

**Max Pressure 28.1 In-Hg**

**TWA Pressure 27.7 In-Hg**

**Flow Correction Approximately +30.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Oct 15 2012 12:29 PM			4:58
Sleep		Mon Oct 15 2012 12:34 PM			1d 11:25:34
Prog (Run)	2000	Wed Oct 17 2012 12:00 AM	14400	14400	5d 0:00:01
Hold		Mon Oct 22 2012 12:00 AM			4:59
Sleep		Mon Oct 22 2012 12:05 AM			10:25:00
Hold		Mon Oct 22 2012 10:30 AM			5:19
Sleep		Mon Oct 22 2012 10:35 AM			1:08:16
Hold		Mon Oct 22 2012 11:43 AM			2:24+



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA :  
ADDITIONAL DAILY CHECK RECORDS

TA-20429

Station Location: T-24 (Jordan)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36422

Sample ID # \_\_\_\_\_  
Filter Lot #: 23171-04

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: 10/17/12 ( 10 )  
Time: 14:41 ( 14 )

PUMP FAULT (Yes / No): no  
Flow Rate (L/min): 2  
Cumulative Sample Volume (L): 176  
Cumulative Sample Time (min): 281  
Atmospheric Pressure (INS): 27.40  
Temperature inside station unit (°F): 67.3  
Battery voltage reading (volts): 12.52  
Box Temp: 53

*sunny partly cloudy*

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36422**

**Date Printed: Monday, October 22, 2012 11:48 AM**

**Min Temp 44.0F**

**Max Temp 75.9F**

**TWA Temp 60.7F**

**Min Pressure 26.7 In-Hg**

**Max Pressure 27.6 In-Hg**

**TWA Pressure 27.1 In-Hg**

**Flow Correction Approximately -10.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Oct 15 2012 12:30 PM			5:02
Sleep		Mon Oct 15 2012 12:35 PM			1d 11:24:42
Prog (Run)	2000	Wed Oct 17 2012 12:00 AM	14400	14400	5d 0:00:01
Hold		Mon Oct 22 2012 12:00 AM			4:59
Sleep		Mon Oct 22 2012 12:05 AM			10:31:34
Hold		Mon Oct 22 2012 10:36 AM			5:17
Sleep		Mon Oct 22 2012 10:41 AM			1:01:44
Hold		Mon Oct 22 2012 11:43 AM			4:25+

**Period 90**

F-121027AFB

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET (ESS)

TA-20436

Station Location: Field Blank  
Field Technician: jj  
Pump Type/Model:                       
Pump Number:                       
Sampling Period:                      90

Sample ID #:                       
Filter Lot #: 23171-04  
Sample Type: TEM  
Sample Parent ID #:                     

PUMP SETUP DAY

Date: 10/26/2012  
Time: 12:00

Timer Beginning Date/Time: 10/27/2012 2400  
Beginning Flow Rate (L/min): 2  
Pump Programmed (Yes / No):                       
Bios Calibration Within 10 mL (Yes / No):                     

PUMP RETRIEVAL DAY

Date:                       
Time:                     

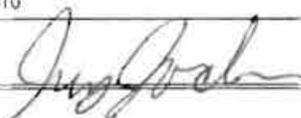
Timer Ending Date/Time: 11/01/2012 2400  
Ending Flow Rate (L/min): 2  
Total Sample Volume (L):                       
Total Sample Time (min):                       
Atmospheric Pressure (INS):                       
Temperature inside station unit (°F):                     

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Heavy rain throughout sample period

Event ID TAA-101810

SIGNATURE:



DATE: 11-1-12

F-121027A21

TETRA TECH EM INC.  
OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET (ESDS)

TA-20431

Station Location: T-21 (Fire Station)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36484  
Sampling Period: 90

Sample ID # \_\_\_\_\_  
Filter Lot #: 23171-04  
Sample Type: TEM  
Sample Parent ID #: \_\_\_\_\_

PUMP SETUP DAY

Date: 10/26/2012  
Time: 12:00

Timer Beginning Date/Time: 10/27/2012 2400  
Beginning Flow Rate (L/min): 2  
Pump Programmed (Yes / No): yes  
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 11-1-12  
Time: 0935

Timer Ending Date/Time: 11/1/2012 2400  
Ending Flow Rate (L/min): 2  
Total Sample Volume (L): 0FL0  
Total Sample Time (min): 7200  
Atmospheric Pressure (INS) 27.69  
Temperature inside station unit (°F): 57.1  
BoxTemp: 50

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Heavy rain throughout sample period.

Did not open

Event ID TAA-101810

SIGNATURE: [Signature]

DATE: 11-1-12

TETRA TECH EM INC.

OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET  
ADDITIONAL DAILY CHECK RECORDS

TA-20431

Station Location: T-21 (Fire Station)

Sample ID #: \_\_\_\_\_

Field Technician: JJ

Filter Lot #: 23171-04

Pump Type/Model: SKC AirChek 2000

Pump Number: 36484

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 10-29-12 (JJ)  
Time: 1245 ( )

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_  
Box Temp: \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_

Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_

Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_

Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_

Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36484**

**Date Printed: Thursday, November 1, 2012 11:18 AM**

**Min Temp 38.0F**

**Max Temp 76.4F**

**TWA Temp 61.4F**

**Min Pressure 27.4 In-Hg**

**Max Pressure 28.0 In-Hg**

**TWA Pressure 27.6 In-Hg**

**Flow Correction Approximately -60.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Oct 26 2012 1:49 PM			5:09
Sleep		Fri Oct 26 2012 1:54 PM			10:05:25
Prog (Run)	2000	Sat Oct 27 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Thu Nov 1 2012 12:00 AM			4:59
Sleep		Thu Nov 1 2012 12:05 AM			9:26:35
Hold		Thu Nov 1 2012 9:31 AM			5:04
Sleep		Thu Nov 1 2012 9:36 AM			1:39:16
Hold		Thu Nov 1 2012 11:15 AM			2:04+

F-121027A22

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET (EPA)

TA-20432

Station Location: T-22 (Troy Office)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 36444  
Sampling Period: 90

Sample ID #: \_\_\_\_\_  
Filter Lot #: 23171-04  
Sample Type: TEM  
Sample Parent ID #: \_\_\_\_\_

PUMP SETUP DAY

Date: 10/26/2012  
Time: 12:00  
Timer Beginning Date/Time: 10/27/2012 2400  
Beginning Flow Rate (L/min): 2  
Pump Programmed (Yes / No): yes  
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 11-1-12  
Time: 0942  
Timer Ending Date/Time: 11/1/2012 2400  
Ending Flow Rate (L/min): 2  
Total Sample Volume (L): 0510  
Total Sample Time (min): 7200  
Atmospheric Pressure (INS): 27.62  
Temperature inside station unit (°F): 58.9  
Box Temp: 50

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Heavy rain throughout sample period.

Did not open boxes when checked on 10-29-12

Event ID TAA-101810

SIGNATURE: *[Signature]*

DATE: 11-1-12

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET (FORM)

ADDITIONAL DAILY CHECK RECORDS

TA-20432

Station Location: T-22 (Troy Office)

Sample ID #:

Field Technician: JJ

Filter Lot # 23171-04

Pump Type/Model: SKC AirChek 2000

Pump Number: 36444

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 10-29-12 (JJ)  
Time: 1250 ( )

PUMP FAULT (Yes / No): NO

Flow Rate (L/min):  
Cumulative Sample Volume (L):  
Cumulative Sample Time (min):  
Atmospheric Pressure (INS):  
Temperature inside station unit (°F):  
Battery voltage reading (volts):  
Box Temp:

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: ( )  
Time: ( )

PUMP FAULT (Yes / No):

Flow Rate (L/min):  
Cumulative Sample Volume (L):  
Cumulative Sample Time (min):  
Atmospheric Pressure (INS):  
Temperature inside station unit (°F):  
Battery voltage reading (volts):

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: ( )  
Time: ( )

PUMP FAULT (Yes / No):

Flow Rate (L/min):  
Cumulative Sample Volume (L):  
Cumulative Sample Time (min):  
Atmospheric Pressure (INS):  
Temperature inside station unit (°F):  
Battery voltage reading (volts):

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: ( )  
Time: ( )

PUMP FAULT (Yes / No):

Flow Rate (L/min):  
Cumulative Sample Volume (L):  
Cumulative Sample Time (min):  
Atmospheric Pressure (INS):  
Temperature inside station unit (°F):  
Battery voltage reading (volts):

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: ( )  
Time: ( )

PUMP FAULT (Yes / No):

Flow Rate (L/min):  
Cumulative Sample Volume (L):  
Cumulative Sample Time (min):  
Atmospheric Pressure (INS):  
Temperature inside station unit (°F):  
Battery voltage reading (volts):

**SKC Pump History**

**SN 36444**

**Date Printed: Thursday, November 1, 2012 11:21 AM**

**Min Temp 40.5F**

**Max Temp 67.8F**

**TWA Temp 55.1F**

**Min Pressure 27.5 In-Hg**

**Max Pressure 28.0 In-Hg**

**TWA Pressure 27.6 In-Hg**

**Flow Correction Approximately -60.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
-----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Oct 26 2012 1:50 PM			5:13
Sleep		Fri Oct 26 2012 1:55 PM			10:04:09
Prog (Run)	2000	Sat Oct 27 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Thu Nov 1 2012 12:00 AM			4:59
Sleep		Thu Nov 1 2012 12:05 AM			9:37:16
Hold		Thu Nov 1 2012 9:42 AM			5:18
Sleep		Thu Nov 1 2012 9:47 AM			1:32:44
Hold		Thu Nov 1 2012 11:20 AM			0:41+



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET  
ADDITIONAL DAILY CHECK RECORDS

TA-20433

Station Location: T-22QC(Troy office)  
Field Technician: jj  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 4469

Sample ID #:  
Filter Lot #: 23171-04

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: 10-29-12 ( )  
Time: 1251 ( )

PUMP FAULT (Yes / No): NO  
Flow Rate (L/min):  
Cumulative Sample Volume (L):  
Cumulative Sample Time (min):  
Atmospheric Pressure (INS)  
Temperature inside station unit (°F):  
Battery voltage reading (volts):  
Box Temp:

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: ( )  
Time: ( )

PUMP FAULT (Yes / No):  
Flow Rate (L/min):  
Cumulative Sample Volume (L):  
Cumulative Sample Time (min):  
Atmospheric Pressure (INS)  
Temperature inside station unit (°F):  
Battery voltage reading (volts):

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: ( )  
Time: ( )

PUMP FAULT (Yes / No):  
Flow Rate (L/min):  
Cumulative Sample Volume (L):  
Cumulative Sample Time (min):  
Atmospheric Pressure (INS)  
Temperature inside station unit (°F):  
Battery voltage reading (volts):

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: ( )  
Time: ( )

PUMP FAULT (Yes / No):  
Flow Rate (L/min):  
Cumulative Sample Volume (L):  
Cumulative Sample Time (min):  
Atmospheric Pressure (INS)  
Temperature inside station unit (°F):  
Battery voltage reading (volts):

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: ( )  
Time: ( )

PUMP FAULT (Yes / No):  
Flow Rate (L/min):  
Cumulative Sample Volume (L):  
Cumulative Sample Time (min):  
Atmospheric Pressure (INS)  
Temperature inside station unit (°F):  
Battery voltage reading (volts):

**SKC Pump History**

**SN 4469**

**Date Printed: Thursday, November 1, 2012 11:24 AM**

**Min Temp 40.7F**

**Max Temp 68.7F**

**TWA Temp 56.1F**

**Min Pressure 27.6 In-Hg**

**Max Pressure 28.0 In-Hg**

**TWA Pressure 27.8 In-Hg**

**Flow Correction Approximately -270.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Oct 26 2012 1:52 PM			5:07
Sleep		Fri Oct 26 2012 1:57 PM			10:02:25
Prog (Run)	2000	Sat Oct 27 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Thu Nov 1 2012 12:00 AM			4:59
Sleep		Thu Nov 1 2012 12:05 AM			9:38:09
Hold		Thu Nov 1 2012 9:43 AM			5:23
Sleep		Thu Nov 1 2012 9:48 AM			1:34:02
Hold		Thu Nov 1 2012 11:22 AM			1:25+



TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET  
ADDITIONAL DAILY CHECK RECORDS

TA-20434

Station Location: T-23 (Iron Creek)

Sample ID #:

Field Technician: JJ

Filter Lot #: 23171-04

Pump Type/Model: SKC AirChek 2000

Pump Number: 4470

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 10-29-12 (JJ)  
Time: 1300 ( )

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2  
Cumulative Sample Volume (L): 7320  
Cumulative Sample Time (min): 3660  
Atmospheric Pressure (INS): 27.61  
Temperature inside station unit (°F): 56.6  
Battery voltage reading (volts): 12.63  
Box Temp: 74

Rain

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: ( )  
Time: ( )

PUMP FAULT (Yes / No):

Flow Rate (L/min):  
Cumulative Sample Volume (L):  
Cumulative Sample Time (min):  
Atmospheric Pressure (INS):  
Temperature inside station unit (°F):  
Battery voltage reading (volts):

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: ( )  
Time: ( )

PUMP FAULT (Yes / No):

Flow Rate (L/min):  
Cumulative Sample Volume (L):  
Cumulative Sample Time (min):  
Atmospheric Pressure (INS):  
Temperature inside station unit (°F):  
Battery voltage reading (volts):

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: ( )  
Time: ( )

PUMP FAULT (Yes / No):

Flow Rate (L/min):  
Cumulative Sample Volume (L):  
Cumulative Sample Time (min):  
Atmospheric Pressure (INS):  
Temperature inside station unit (°F):  
Battery voltage reading (volts):

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: ( )  
Time: ( )

PUMP FAULT (Yes / No):

Flow Rate (L/min):  
Cumulative Sample Volume (L):  
Cumulative Sample Time (min):  
Atmospheric Pressure (INS):  
Temperature inside station unit (°F):  
Battery voltage reading (volts):

**SKC Pump History**

**SN 4470**

**Date Printed: Thursday, November 1, 2012 11:27 AM**

**Min Temp 38.7F**

**Max Temp 68.6F**

**TWA Temp 57.6F**

**Min Pressure 27.5 In-Hg**

**Max Pressure 28.0 In-Hg**

**TWA Pressure 27.7 In-Hg**

**Flow Correction Approximately +60.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Oct 26 2012 1:53 PM			5:09
Sleep		Fri Oct 26 2012 1:58 PM			10:01:39
Prog (Run)	2000	Sat Oct 27 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Thu Nov 1 2012 12:00 AM			4:59
Sleep		Thu Nov 1 2012 12:05 AM			9:11:55
Hold		Thu Nov 1 2012 9:16 AM			5:19
Sleep		Thu Nov 1 2012 9:22 AM			2:00:30
Hold		Thu Nov 1 2012 11:22 AM			4:15+

F-121027A24

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET (EPA)

TA-20435

Station Location: T-24 (Jordan) Sample ID #: \_\_\_\_\_  
Field Technician: jj Filter Lot #: 23171-04  
Pump Type/Model: SKC AirChek 2000 Sample Type: TEM  
Pump Number: 36422 Sample Parent ID #: \_\_\_\_\_  
Sampling Period: 90

PUMP SETUP DAY

Date: 10/26/2012 Timer Beginning Date/Time: 10/27/2012 2400  
Time: 12:00 Beginning Flow Rate (L/min): 2  
Pump Programmed (Yes / No): yes  
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 11-1-12 Timer Ending Date/Time: 11/1/2012 2400  
Time: 0901 Ending Flow Rate (L/min): 2  
Total Sample Volume (L): 0.920  
Total Sample Time (min): 7200  
Atmospheric Pressure (INS): 27.23  
Temperature inside station unit (°F): 63.3  
Box Temp: 48

COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

Heavy rain throughout sample period.

Event ID TAA-101810

SIGNATURE: 

DATE: 11-1-12

TETRA TECH EM INC.

OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET (EPC)  
ADDITIONAL DAILY CHECK RECORDS

TA-20435

Station Location: T-24 (Jordan)  
Field Technician: JJ  
Pump Type/Model: SKC AirChek 2000  
Pump Number: 35422

Sample ID #: \_\_\_\_\_  
Filter Lot #: 23171-04

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: 10-29-12 (JJ)  
Time: 1306 ( )

PUMP FAULT (Yes / No): NO  
Flow Rate (L/min): 2  
Cumulative Sample Volume (L): 7333  
Cumulative Sample Time (min): 3666  
Atmospheric Pressure (INS): 26.99  
Temperature inside station unit (°F): 60.7  
Battery voltage reading (volts): 12.28  
Box Temp: 44

Rain

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

DAILY CHECK (For each station visit)

(Field Tech Initials)  
Date: \_\_\_\_\_ ( )  
Time: \_\_\_\_\_ ( )

PUMP FAULT (Yes / No): \_\_\_\_\_  
Flow Rate (L/min): \_\_\_\_\_  
Cumulative Sample Volume (L): \_\_\_\_\_  
Cumulative Sample Time (min): \_\_\_\_\_  
Atmospheric Pressure (INS): \_\_\_\_\_  
Temperature inside station unit (°F): \_\_\_\_\_  
Battery voltage reading (volts): \_\_\_\_\_

**SKC Pump History**

**SN 36422**

**Date Printed: Thursday, November 1, 2012 11:28 AM**

**Min Temp 39.5F**

**Max Temp 73.3F**

**TWA Temp 62.0F**

**Min Pressure 27.0 In-Hg**

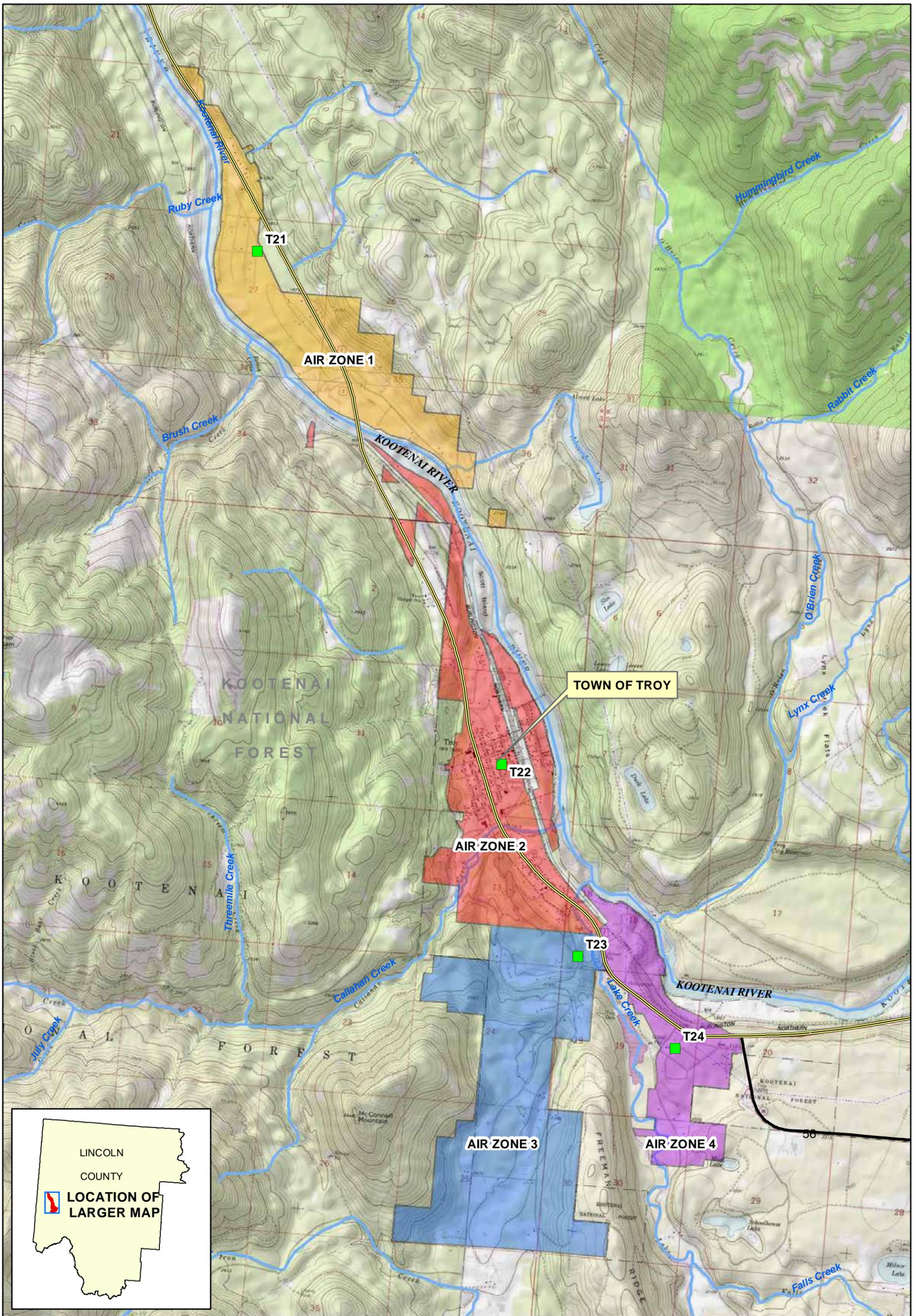
**Max Pressure 27.4 In-Hg**

**TWA Pressure 27.1 In-Hg**

**Flow Correction Approximately -30.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Oct 26 2012 1:54 PM			5:03
Sleep		Fri Oct 26 2012 1:59 PM			10:00:47
Prog (Run)	2000	Sat Oct 27 2012 12:00 AM	14400	14400	5d 0:00:01
Hold		Thu Nov 1 2012 12:00 AM			4:59
Sleep		Thu Nov 1 2012 12:05 AM			8:55:59
Hold		Thu Nov 1 2012 9:00 AM			5:24
Sleep		Thu Nov 1 2012 9:06 AM			2:16:21
Hold		Thu Nov 1 2012 11:22 AM			4:58
Sleep		Thu Nov 1 2012 11:27 AM			0:14
Hold		Thu Nov 1 2012 11:27 AM			1:04+

**APPENDIX B**  
**OU7 OUTDOOR AMBIENT AIR SAMPLING MODIFICATION**  
**(TFO-00005)**



TETRA TECH EH, INC.

- LEGEND**
- 2012 (Year 3) AMBIENT AIR SAMPLE STATION
  - AMBIENT AIR ZONES**
  - ZONE 1
  - ZONE 2
  - ZONE 3
  - ZONE 4



**LIBBY ASBESTOS SUPERFUND SITE**

**OPERABLE UNIT 7  
OUTDOOR AMBIENT AIR STUDY  
YEAR 3 STATION LOCATIONS**



TETRA TECH EM INC.

May 4, 2012

John Podolinsky  
Montana Department of Environmental Quality  
Remediation Division  
P.O. Box 200901  
Helena, MT 59620-0901

**Subject: Transmittal of TFO-00005, Year 3 Outdoor Ambient Air Study SAP, Operable Unit  
Number 7 of the Libby Asbestos Superfund Site  
DEQ Contract 407026; Task Order 96**

John:

For your review, Tetra Tech is transmitting by email a pdf file that makes up the TFO-00005 package for the Year 3 Ambient Air Work Plan/Sampling and Analysis Plan (SAP). TFO-00005 spells out the changes that were made to the Year 2 Work Plan and include: (1) a change in number and location of ambient air monitoring stations for Year 3, and (2) a Year 3 schedule. The three files being transmitted include: 1) TFO-00005, and 2) a map showing Year 3 ambient air station locations, and 3) a new SAP cover and signature pages.

If the documentation is satisfactory, please sign both the TFO and SAP signature pages and pass along to Victor for his signature, if necessary. Please let me know if you require any further changes or if you have any questions prior to signature.

Tetra Tech appreciates the opportunity to work with you and the DEQ Remediation Division on this important project. If you have any questions, please call me at 442-3461.

Sincerely,

Steve MacNeill  
Project Scientist

cc: Tetra Tech file

Attachments: via email

**FINAL  
REMEDIAL INVESTIGATION WORK PLAN  
OUTDOOR AMBIENT AIR STUDY  
(TFO-00005: YEAR 3 UPDATE)**

**Operable Unit Number 7  
of the Libby Asbestos Superfund Site**

May 4, 2012

Prepared for:

**MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY  
Remediation Division  
P.O. Box 200901  
Helena, Montana 59620**

Contract Number 407026  
Contract Task Order Number 96

Prepared by:

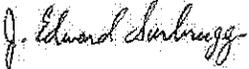
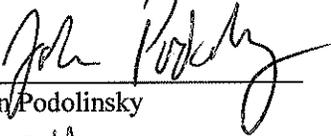
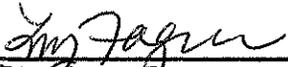
**TETRA TECH EM INC.  
Power Block Building, Suite 612  
7 West 6<sup>th</sup> Avenue  
Helena, Montana 59601  
(406) 442-5588**

**LIBBY ASBESTOS SITE OPERABLE UNIT 7 OUTDOOR AMBIENT AIR MONITORING  
WORK PLAN**

**FOR THE  
TROY ASBESTOS PROPERTY EVALUATION PROJECT**

**Prepared for:  
MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**REVIEWS AND APPROVALS**

Tetra Tech EM Inc. Project Manager:	 _____ J. Edward Surbrugg, Ph.D.	Date: <u>5/9/12</u>
DEQ Project Officer:	 _____ John Podolinsky	Date: <u>5-9-12</u>
EPA Remedial Project Manager:	 _____ Victor Ketellapper	Date: <u>5-9-12</u>
EPA Remedial Project Manager:	 _____ Elizabeth Pagen	Date: <u>5/10/12</u>



## Record of Modification

to the  
Troy Sampling and Quality Assurance Project Plan  
Field Activities  
TFO-00005

**Instructions to Requester:** Fax to contacts at bottom of form for review and approval.

File approved copy with Data Manager at the Troy Field Office (TFO).

Data Manager will maintain legible copies in a binder that can be accessed by TFO personnel.

If Modification is Temporary for a single Parcel, Data Manager will scan this and place in parcel's electronic file.

Project Work Plan/QAPP (check one):

- Outdoor Ambient Air Study Work Plan
- Other (Title and approval date): \_\_\_\_\_

Site-Specific Guidance/SOP:

Title NA

Number/Revision): NA

Requester: John Podolinsky

Title: Project Manager

Company: DEQ

Date: May 3, 2012

Description of Modification:

This modification covers two topics: 1) Year 3 ambient air station locations, and 2) Year 3 ambient air sampling schedule. The two sections from the original SAP that are impacted by these changes are provided below.

**Section 4.4.2 in the Final Remedial Investigation Work Plan Outdoor Ambient Air Study – Operable Unit Number 7 of the Libby Asbestos Superfund Site** provides a general description of proposed ambient air sampling station locations. “As previously discussed, the predominant winds in Troy tend to flow in southeast and northwest directions, following the river corridor in which Troy is located. Two sampling stations (one each) will be placed in close proximity to the northwest and southeast boundaries of OU7. This will ensure that there are upwind and downwind sample collection stations for both directions the wind is blowing. Two stations (one each) will also be located on the northwest and southeast borders of downtown Troy in order to have upwind and downwind sample stations in the area with the highest population density. One sample station will be placed at the DEQ Troy Information Center in downtown Troy to measure LA concentrations in Troy. One station will be placed in the Kootenai Vista area in the northern portion of OU7 and the last station will be placed along or near Iron Creek Road in the southwestern portion of OU7.” The ambient air monitoring stations will be relocated for the second year for more comprehensive coverage of the four “air zones” identified in OU7. This will provide additional data in support of human health risks related to ambient air exposure.

### **3.0 DATA QUALITY OBJECTIVES**

#### **STEP 4 – DEFINE THE BOUNDARIES OF THE STUDY**

**Temporal Bounds:** The program will begin in fall 2009, and is scheduled to continue for one year in order to ensure that temporal variability on the scale of days and months is adequately captured in the data set. Temporal bounds include the changing of weather patterns, particularly wind speed and direction, over time. A summary of historical meteorological conditions and impacts on placement of outdoor ambient air sampling equipment is presented in section(s) 4.4.1 and

4.4.2. If additional data is needed to improve the temporal representativeness of the data set and/or to collect data that will allow an assessment of long-term trends that may arise from any removal or remedial actions, then the program could be extended for several years. These decisions will be made by the risk managers once the data collected from the initial year are evaluated, and after consultation with EPA's scientific support team at the site.

Field Sampling Data Sheet where Modification is documented (attach associated correspondence): N/A

Potential Implications of Modifications: (1) Re-locating the ambient air sampling stations within the four "air zones" for Year 3 will further support human health risk assessment for OU7. Moving the stations will not impact analytical protocol and is not anticipated to have any impact on analytical results. (2) Performing a third year of ambient air sampling will further support human health risk assessment for OU7. The third year of sampling will not involve any changes in sampling methods or analytical protocol and will not have any impact on analytical results.

Duration of Modification (Check one):

Temporary

Date(s): \_\_\_\_\_ Station Number- \_\_\_\_\_

TA- \_\_\_\_\_

Permanent (Proposed Text Modification Section) Effective Date: May 4, 2012

Proposed Text Modifications in Associated Document: **Section 4.4.2 in the Final Remedial Investigation Work Plan Outdoor Ambient Air Study – Operable Unit Number 7 of the Libby Asbestos Superfund Site and Table 4-2:**

As previously discussed, the predominant winds in Troy flow in southeast and northwest directions, following the river corridor in which Troy is located. For year three sampling efforts, four sampling stations will be re-established at locations used during year one. One station will be located within each of the four unique "air zones" as shown on the attached figure. Two sampling stations will be re-established at locations in close proximity to the northern (T21) and southern (T24) boundaries of OU7. This will ensure that there are upwind and downwind sample collection stations for both directions the wind is blowing. One sample station (T22) will be located in the densely populated area of downtown Troy and a final station (T23) will be re-located south of Troy along the Iron Creek Road. Table 4-2 has the rationale for the ambient air monitoring locations and the attached figure shows the proposed year 3 ambient air monitoring locations.

**TABLE 4-2**

**YEAR THREE OUTDOOR AMBIENT AIR SAMPLING LOCATIONS**

<b><u>Station Number</u></b>	<b><u>Location*</u></b>	<b><u>Purpose</u></b>
T21	Upwind/downwind site near the northern border of OU7. Community exposure site located within small community area NE of the Kootenai River	This site will be used to evaluate LA concentrations at the small community near the northern boundary of OU7 and confirm if any LA is entering or leaving OU7 in Air Zone 1.
T22	City of Troy population exposure site	This site will be used to evaluate LA concentrations in the Troy community (specifically in the population center) of Air Zone 2.
T23	Upwind/downwind site on the lower reach of Iron Creek Road community exposure area.	This site will be used to evaluate LA concentrations in the southwestern area of the OU and confirm if any LA is entering or leaving OU7 in Air Zone 3.
T24	Upwind/downwind site near the SE border of OU7. Community exposure site located within small community area SW of the Kootenai River	This site will be used to evaluate LA concentrations at the small community near the southeastern boundary of OU7 and confirm if any LA is entering or leaving OU7 in Air Zone 4.
TOC	Rotating co-located sampling station to each of the four sampling locations	Co-located sampling station to evaluate analytical variability at each of the four station locations

Notes:

LA	Libby Amphibole	SE	Southeast
NE	Northeast	SW	Southwest
NW	Northwest	OU	Operable Unit

\* Predominant winds in the area blow from the southeast and northwest. Stations on the southeast and northwest boundaries of OU7 will act as upwind and downwind receptors depending on wind direction. A summary of historical meteorological conditions is presented in Section 4.4.1.

Proposed Text Modifications in Associated Document:

**3.0 DATA QUALITY OBJECTIVES**

**STEP 4 – DEFINE THE BOUNDARIES OF THE STUDY, Temporal Bounds:** The year three ambient air sampling program will begin in Spring 2012, and is scheduled to continue for one year in order to ensure that temporal variability on the scale of days and months is adequately captured in the data set.

Data Quality Indicator (circle one) – Please reference definitions on reverse side for direction on selecting data quality indicators:

Not Applicable      Reject      Low Bias      Estimate      High Bias      **No Bias**

Technical Review and Approval: \_\_\_\_\_  
(DEQ Project Manager or designate)

Date: \_\_\_\_\_

EPA Review and Approval: Jim Tagan  
(USEPA RPM or designate)

Date: 5/10/12

## DATA QUALITY INDICATOR DEFINITIONS

**Reject** – Samples associated with this modification form are not useable. The conditions outlined in the modification form adversely affect the associated sample to such a degree that the data are not reliable.

**Low Bias** – Samples associated with this modification form are useable, but results are likely to be biased low. The conditions outlined in the modification form suggest that associated sample data are reliable, but estimated low.

**Estimate** – Samples associated with this modification form are useable, but results should be considered approximations. The conditions outlined in the modification form suggest that associated sample data are reliable, but estimates.

**High Bias** – Samples associated with this modification form are useable, but results are likely to be biased high. The conditions outlined in the modification form suggest that associated sample data are reliable, but estimated high.

**No Bias** – Samples associated with this modification form are useable as reported. The conditions outlined in the modification form suggest that associated sample data are reliable as reported.

**SAP ANALYTICAL SUMMARY # OU7TA1009**  
**SUMMARY OF PREPARATION AND ANALYTICAL REQUIREMENTS FOR ASBESTOS**

**SAP Title:** Final Remedial Investigation Work Plan, Outdoor Ambient Air Study, Operable Unit Number 7 of the Libby Asbestos Superfund Site

**SAP Date (Revision):** October 14, 2009 (Revision 0)

**EPA Technical Advisor:** Catherine LeCours, MTDEQ (Primary, 406-841-5040, clecours@mt.gov); Nicole Bein (Alternate, 303-312-7075, Bein.Nicole@epamail.epa.gov)  
 (contact to advise on DQOs of SAP related to preparation/analytical requirements)

**Sampling Program Overview:** The purpose of the Troy Ambient Air Study is to characterize occurrence of LA fibers in the ambient air of Troy and the immediate surrounding areas over the course of a calendar year. The sampling protocol and Data Quality Objectives as described in the Troy Ambient Air Work Plan are designed: 1) to collect data of sufficient representativeness and quality to estimate human health risks associated with inhalation of LA in outdoor ambient air in and around the city of Troy; and 2) to collect data to characterize the spatial patterns and temporal trends of LA occurrence in outdoor ambient air within the study area of the Libby Superfund Site. A total of approximately 252 ambient (stationary) air field samples will be collected, all of which are expected to be analyzed. In addition to the investigative samples, approximately 78 QA/QC samples (field duplicates, field blanks, and filter lot blanks) will be collected by the field crews. Additional drying blanks may be generated by the analytical laboratories per Lab Modification LB-000055.

**Index ID Prefix:** TA-

**Medium-Specific TEM Preparation and Analytical Requirements for Field Samples:**

Medium Code	Medium, Sample Type	Preparation Details				Analysis Details			Applicable Laboratory Modifications
		Investigative ? (a)	Indirect Prep? (a,b)		Filter Archive ? (b)	Method(s)	Recording Rules	Analytical Sensitivity/ Prioritized Stopping Rules	
			With Ashing (b)	Without Ashing (b)					
A	Outdoor Ambient (Stationary) Air Samples (Includes Field Duplicates)	Yes	Yes, if >25% loading with organic material (estimate #GO's to reach target AS and contact ESAT Region 8 before proceeding with indirect analysis)	No	Yes	TEM ISO 10312	All Asbestos; L: ≥0.5µm AR: ≥3:1	Count until one is achieved: i) Target AS = 0.00004 s/cc, or ii) 50 LA found (finish GO where 50 <sup>th</sup> LA found) <b>Chrysotile only:</b> 50 chrysotile (finish GO where 50 <sup>th</sup> chrysotile found)	LB-00016a, LB-000019, LB-000028, LB-00029b, LB-000030, LB-000031a, LB-000053, LB-000055, LB-000066c, LB-000084, LB-000085

(a) See LB-000053 for additional details. (b) See most current version of EPA-LIBBY-08 for preparation details.

**TEM Preparation and Analytical Requirements for Quality Control Samples:**

Medium Code	Medium, Sample Type	Preparation Details				Analysis Details			Applicable Laboratory Modifications
		Investigative ? (a)	Indirect Prep? (a,b)		Filter Archive ? (b)	Method(s)	Recording Rules	Stopping Rules	
			With Ashing (b)	Without Ashing (b)					
B	Field Blank	No	No	No	Yes	TEM ISO 10312	All Asbestos; L: $\geq 0.5\mu\text{m}$ AR: $\geq 3:1$	Evaluate 0.1 mm <sup>2</sup> of filter area.	LB-00016a, LB-000019, LB-000028, LB-00029b, LB-000030, LB-000031a, LB-000055, LB-000066c, LB-000084, LB-000085
C	Lot Blank	No	No	No	Yes	TEM ISO 10312	All Asbestos; L: $\geq 0.5\mu\text{m}$ AR: $\geq 3:1$	Evaluate 0.1 mm <sup>2</sup> of filter area.	LB-00016a, LB-000019, LB-000028, LB-00029b, LB-000030, LB-000031a, LB-000066c, LB-000084, LB-000085
D	Drying Blank	No	No	No	Yes	TEM ISO 10312	All Asbestos; L: $\geq 0.5\mu\text{m}$ AR: $\geq 3:1$	Evaluate 0.1 mm <sup>2</sup> of filter area.	LB-00016a, LB-000019, LB-000028, LB-00029b, LB-000030, LB-000031a, LB-000066c, LB-000084, LB-000085

**PLM and PCM Preparation and Analytical Requirements: N/A**

**Laboratory Quality Control Frequencies:**

- TEM: Lab Blank – 4%  
 Recount Same – 1%  
 Recount Different – 2.5%  
 Verified Analysis – 1%  
 Re-preparation – 1%

**Requirements Revision:**

Revision #:	Effective Date:	Revision Description
0	04/02/10	N/A

-----  
Analytical Laboratory Review Sign-off:

- |                                                                                                         |                                                                                           |
|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> EMSL – Libby [sign & date: R.K. Mahoney 5 April 2010]               | <input checked="" type="checkbox"/> Hygeia [sign & date: __Kyeong Corbin April 12, 2010_] |
| <input checked="" type="checkbox"/> EMSL – Westmont [sign & date: Charles LaCerra April 6, 2010]        | <input checked="" type="checkbox"/> RESI [sign & date: Jeanne Orr April 12, 2010_____]    |
| <input checked="" type="checkbox"/> EMSL – Beltsville [sign & date: Joseph M. Centifonti April 6, 2010] |                                                                                           |
| <input checked="" type="checkbox"/> ESAT [sign & date: __Douglas Kent 02 April 2010_]                   |                                                                                           |

*[Checking the box and initialing above indicates that the laboratory has reviewed and acknowledged the preparation and analytical requirements associated with the specified SAP.]*

**APPENDIX C**

**YEAR 1 THROUGH YEAR 3 CUMULATIVE AMBIENT AIR  
MONITORING VALIDATED ANALYTICAL RESULTS**

qSummaryResults\_AA

Property ID	Location	Location Comment	Sample No.	Sample Date	Sample Type	COC	LA Detected	No Of LA Structures Counted	LA Concentration (s/cc)	Sampling Period
AD-200653	T4QC	DEQ QC	TA-0001	30-Oct-09	Field Duplicate	TAA0001	Y	3	1.20E-04	1
AD-200920	T5	State Hwy Dept/Sewer Lift Station	TA-0003	30-Oct-09	Field Sample	TAA0001	Y	5	1.75E-04	1
AD-200653	T4	DEQ	TA-0004	30-Oct-09	Field Sample	TAA0001	Y	4	1.56E-04	1
AD-201580	T2	Kootenai Vista Truck Barn #2 TRFD	TA-0078	18-Jan-10	Field Sample	TAA0009	Y	1	3.77E-05	9
AD-201580	T2	Kootenai Vista Truck Barn #2 TRFD	TA-0087	28-Jan-10	Field Sample	TAA0010	Y	1	3.81E-05	10
AD-200653	T4QC	DEQ QC	TA-0099	07-Feb-10	Field Duplicate	TAA0011	Y	4	1.58E-04	11
AD-200809	T1	Brown Rental	TA-0104	17-Feb-10	Field Sample	TAA0012	Y	2	7.37E-05	12
AD-201580	T2	Kootenai Vista Truck Barn #2 TRFD	TA-0105	17-Feb-10	Field Sample	TAA0012	Y	1	3.77E-05	12
AD-200335	T3	City Park Shop	TA-0106	17-Feb-10	Field Sample	TAA0012	Y	1	3.68E-05	12
AD-201138	T7	Jordan Residence	TA-0110	17-Feb-10	Field Sample	TAA0012	Y	1	3.63E-05	12
AD-200653	T4	DEQ	TA-0115	06-Mar-10	Field Sample	TAA0013	Y	1	3.74E-05	13
AD-200653	T4QC	DEQ QC	TA-0125	16-Mar-10	Field Duplicate	TAA0014	Y	2	7.15E-05	14
AD-201535	T6	Iron Creek Road Water Tower	TA-0127	16-Mar-10	Field Sample	TAA0014	Y	1	3.57E-05	14
AD-201138	T7	Jordan Residence	TA-0128	16-Mar-10	Field Sample	TAA0014	Y	1	3.63E-05	14
AD-201580	T2	Kootenai Vista Truck Barn #2 TRFD	TA-0131	28-Mar-10	Field Sample	TAA0015	Y	1	3.96E-05	15
AD-200809	T1	Brown Rental	TA-0148	17-Apr-10	Field Sample	TAA0017	Y	1	3.96E-05	17
AD-200653	T4	DEQ	TA-0160	27-Apr-10	Field Sample	TAA0018	Y	1	3.96E-05	18
AD-200920	T5	State Hwy Dept/Sewer Lift Station	TA-0316	14-Oct-10	Field Sample	TAA0035	Y	1	3.97E-05	35
AD-200783	T11QC	Epps Body Shop QC	TA-20068	19-Jan-11	Field Duplicate	TAA0044	Y	2	7.76E-05	44
AD-201580	T12	NW border of OU7	TA-20151	20-Apr-11	Field Sample	TAA0053	Y	1	3.97E-05	53
AD-201580	T12	NW border of OU7	TA-20204	18-Jun-11	Field Sample	TAA0059	Y	1	3.90E-05	59
AD-200381	T14	City of Troy Central Site	TA-20224	08-Jul-11	Field Sample	TAA0061	Y	1	3.99E-05	61
AD-200783	T11	Mid-OU7 Community Exposure Site	TA-20275	06-Sep-11	Field Sample	TAA0067	Y	1	3.92E-05	67
AD-201580	T12	NW border of OU7 Site	TA-20276	06-Sep-11	Field Sample	TAA0067	Y	1	3.92E-05	67
AD-200381	T14	City of Troy Central Site	TA-20279	06-Sep-11	Field Sample	TAA0067	Y	1	2.67E-04	67
AD-200381	T14	City of Troy Central Site	TA-20287	16-Sep-11	Field Sample	TAA0068	Y	2	7.96E-05	68
AD-200630	T15	City of Troy Southern Site	TA-20297	26-Sep-11	Field Sample	TAA0069	Y	1	3.85E-05	69
AD-201580	T21QC	Fire Station QC	TA-20333	5/10/2012	Field Duplicate	TAA0073A	Y	1	4.00E-05	73
AD-200653	T22	DEQ	TA-20342	5/30/2012	Field Sample	TAA0075	Y	2	7.99E-05	75
AD-201535	T23	Troy Water Tower	TA-20362	6/29/2012	Field Sample	TAA0078	Y	1	4.00E-05	78
AD-201580	T21	Fire Station	TA-20377	7/29/2012	Field Sample	TAA0081	Y	1	3.47E-05	81
AD-201580	T21QC	Fire Station QC	TA-20378	7/29/2012	Field Duplicate	TAA0081	Y	3	1.08E-04	81
AD-200653	T22QC	DEQ QC	TA-20386	8/8/2012	Field Duplicate	TAA0082	Y	1	3.91E-05	82
AD-201580	T21QC	Fire Station QC	TA-20402	9/7/2012	Field Duplicate	TAA0085	Y	1	3.97E-05	85
AD-200653	T22	DEQ	TA-20403	9/7/2012	Field Sample	TAA0085	Y	1	3.97E-05	85
AD-201535	T23	Troy Water Tower	TA-20415	9/27/2012	Field Sample	TAA0087	Y	1	3.99E-05	87
AD-201138	T24	Jordan Residence	TA-20417 <sup>a</sup>	9/27/2012	Field Sample	TAA0087	Y	1	3.99E-05	87
AD-200653	T22	DEQ	TA-20427	10/17/2012	Field Sample	TAA0089	Y	2	7.98E-05	89

Notes:

a One LA fiber was detected in sample TA-20417. However, the database entry is ND for LA. ESAT was notified of the problem on April 17, 2013. LA asbestos data for sample TA-20417 included in this table is based on the laboratory report, not on the information in the database.

LA Libby Amphibole

ND Not detected

Samp_No	Tag	Period	Location	SampleDate	SampleType	Volume	SampleParentID	Name Lab	Benchsheet File Name	EDD File Name	Remarks	Verified (Y/N)	Data Verifier (DV)	Verified Date
TA-20386	AL1	82	T22QC	8/8/2012	Field Duplicate	14400	TA-20385	EMSL22	TAA0082_EMSL22-221203143_09-06-12_C0	TA-20386_221203143-0004_TEM-ISO_AR_09-06-12_D_NotQC_C0.xlsm		Y	D. Kutsal	4/10/2013
TA-20387	AL1	82	T23	8/8/2012	Field Sample	14400		EMSL22	TAA0082_EMSL22-221203143_09-06-12_C0	TA-20387_221203143-0005_TEM-ISO_AR_09-06-12_D_NotQC_C0.xlsm		Y	D. Kutsal	4/10/2013
TA-20391	AL1	83	T23	8/18/2012	Field Sample	14400		EMSL19	TAA0083_EMSL19-191208791_ISO_9-07-12_C0	TA-20391_191208791-0003_TEM-ISO_AR_09-05-12_D_NotQC_C0.xlsm		Y	D. Kutsal	4/10/2013
TA-20393	AL1	83	T24	8/18/2012	Field Sample	14400		EMSL19	TAA0083_EMSL19-191208791_ISO_9-07-12_C0	TA-20393_191208791-0005_TEM-ISO_AR_09-06-12_D_NotQC_C0.xlsm		Y	D. Kutsal	4/10/2013
TA-20397	AL1	84	T23	8/28/2012	Field Sample	14400		EMSL22	TAA0084_EMSL22_221203320_TEM-ISO_9-12-2012	TA-20397_221203320-0003_TEM-ISO_AR_09-12-12_D_NotQC_C0.xlsm		Y	D. Kutsal	4/11/2013
TA-20402	AL1	85	T21QC	9/7/2012	Field Duplicate	14400	TA-20401	ESATR8	A120490_TAA0085_ESATR8_TEM-ISO_12-04-2012_C0	TA-20402_A120490-02_TEM-ISO_AR_09-20-12_D_NotQC_C0.xlsm		Y	D. Kutsal	4/11/2013
TA-20415	AL1	87	T23	9/27/2012	Field Sample	14400		Hygeia	38995120122_TAA0087_Hygeia_TEM-ISO_10-18-12_C0	TA-20415_38995120122-1332648_TEM-ISO_AR_10-10-12_D_NotQC_C0.xlsm		Y	D. Kutsal	4/11/2013
TA-20417	AL1	87	T24	9/27/2012	Field Sample	14400		Hygeia	38995120122_TAA0087_Hygeia_TEM-ISO_10-18-12_C0	TA-20417_38995120122-1332650_TEM-ISO_AR_10-10-12_D_NotQC_C0.xlsm		Y	D. Kutsal	4/11/2013
TA-20421	AL1	88	T23	10/7/2012	Field Sample	14400		ESATR8	A120586_TAA0088_ESATR8_TEM-ISO_11-26-2012_C0	TA-20421_A120586-03_TEM-ISO_AR_10-26-12_D_NotQC_C0.xlsm		Y	D. Kutsal	4/15/2013
TA-20427	AL1	89	T22	10/17/2012	Field Sample	14400		Hygeia	38995120137_TAA0089_Hygeia_TEM-ISO_11-06-12_C0	TA-20427_38995120137-1335317_TEM-ISO_AR_11-01-12_D_NotQC_C0.xlsm		Y	D. Kutsal	4/15/2013
TA-20428	AL1	89	T23	10/17/2012	Field Sample	14400		Hygeia	38995120137_TAA0089_Hygeia_TEM-ISO_11-06-12_C0	TA-20428_38995120137-1335318_TEM-ISO_AR_11-01-12_D_NotQC_C0.xlsm		Y	D. Kutsal	4/15/2013
TA-20434	AL1	90	T23	10/27/2012	Field Sample	14400		RESI	247061-1_TAA0090_RESI-TEM ISO_11-16-2012_C0	TA-20434_247061-903029_TEM-ISO_AR_11-07-12_D_NotQC_C0.xlsm		Y	D. Kutsal	4/15/2013

Samp_No	Verification Comments	QA Type	Verification Actions	Date Comment(s) Sent to EPA	Date Tt Confirmed Correction(s)
TA-20386	1. AnalysisTargetSensitivity in DB is 0, but BS and EDD is 0.00004. 2. AnalysisRecordMinWidthHigh in DB and EDD is 0, but BS is None. 3. Width of structure in GO D2, B10 is 0.25 on BS and EDD, but 0.3	Not QA	1. Correct rounding issue in DB so that length and width entries match BS. 2. None 3. Correct rounding issue in DB so that length and width entries match BS. 4. Correct rounding issue in DB so that length and width entries match BS.	4/22/2013	
TA-20387	1. AnalysisTargetSensitivity in DB is 0, but on BS and in EDD is 0.00004. 2. AnalysisRecordMinWidthHigh in DB and EDD is 0, but on BS is	Not QA	1. Correct rounding issue in DB so that length and width entries match BS. 2. None	4/22/2013	
TA-20391	1. AnalysisTargetSensitivity in DB is 0, but on BS and in EDD is 0.00004. 2. AnalysisRecordMinWidthHigh in DB and EDD is 0, but in BS is None	Not QA	1. Correct rounding issue in DB so that length and width entries match BS. 2. None	4/22/2013	
TA-20393	1. AnalysisTargetSensitivity in DB is 0, but on BS and in EDD is 0.00004. 2. AnalysisRecordMinWidthHigh in DB and EDD is 0, but on BS is	Not QA	1. Correct rounding issue in DB so that length and width entries match BS. 2. None	4/22/2013	
TA-20397	1. AnalysisTargetSensitivity in DB is 0, but on BS and in EDD is 0.00004 2. AnalysisRecordMinWidthHigh in DB and EDD is 0, but on BS is	Not QA	1. Correct rounding issue in DB so that length and width entries match BS. 2. None	4/22/2013	
TA-20402	1. AnalysisTargetSensitivity in DB is 0; but on BS and in EDD is 0.00004. 2. AnalysisRecordMinWidthHigh not specified on BS, but in DB and EDD is 0. 3. Length of NAM fiber in GO A10, H3-4 is 7.7 on BS and in EDD, but 8 in DB. 4. AR of NAM fiber in GO A10, H3-4 is 5.9 in EDD, but 6 in DB. 5. Length of LA fiber in GO B10, E6-4 is 2.8 on BS and in EDD; but 3 in DB	Not QA	1. Correct rounding issue in DB so that length and width entries match BS. 2. None 3. Correct rounding issue in DB so that length and width entries match BS. 4. Correct rounding issue in DB so that length and width entries match BS. 5. Correct rounding issue in DB so that length and width entries match BS. 6. Correct rounding issue in DB so that length and width entries match BS.	4/22/2013	
TA-20415	1. AnalysisRecordMinWidthHigh on BS, in EDD, and in DB is 0, should be None or blank. 2. Calculated length of LA fiber in GO E9, H4-1 is 5.6 on BS and in EDD, but is 6 in DB. 3. AR of LA fiber in GO E9, H4-1 is 7.7 in EDD, but 8 in DB.	Not QA	1. None 2. Correct rounding issue in DB so that length and width entries match BS. 3. Correct rounding issue in DB so that length and width entries match BS.	4/22/2013	
TA-20417	1. AnalysisRecordMinWidthHigh on BS, in EDD, and in DB is 0, should be None or blank. 2. For the LA fiber in GO A6, F3-4, DB entry for Result is 0 and DB entry for Detected is No. These are incorrect. 3. Calculated length of LA fiber in GO A6, F3-4 is 7.1 in EDD, but 7 in DB. 4. Calculated width of LA fiber in GO A6, F3-4 is 0.6 in EDD, but 0.55921075 in DB.	Not QA	1. None 2. Correct Result and Detected entries in DB to Result = 3.99046E-05 and Detected = Yes. 3. Correct rounding issue in DB so that length and width entries match BS. 4. Correct rounding issue in DB so that length and width entries match BS.	4/22/2013	
TA-20421	1. AnalysisRecordMinWidthHigh not specified on BS, but in DB and EDD is 0.	Not QA	1. None	4/22/2013	
TA-20427	1. AnalysisRecordMinWidthHigh on BS, in EDD, and in DB is 0, should be None or blank. 2. Calculated length of LA fiber in GO C1, E4-3 is 2.5 in EDD, but is 3 in DB. 3. Calculated width of LA fiber in GO C1, E4-3 is 0.5 in EDD, but is 0.49342125 in DB. 4. Calculated length of LA fiber in GO C1, G3-3 is 3.9 in EDD, but is 4 in DB. 5. Calculated width of LA fiber in GO C1, G3-3 is 0.8 in EDD, but is 0.82236875 in DB.	Not QA	1. None 2. None 3. Correct rounding issue in DB so that length and width entries match BS. 4. Correct rounding issue in DB so that length and width entries match BS. 5. Correct rounding issue in DB so that length and width entries match BS. 6. Correct rounding issue in DB so that length and width entries match BS.	4/22/2013	
TA-20428	1. AnalysisRecordMinWidthHigh on BS, in EDD, and in DB is 0, should be None or blank. 2. Calculated length of LA fiber in GO C1, E4-3 is 2.5 in EDD, but is	Not QA	1. None	4/22/2013	
TA-20434	None	Not QA	None	4/22/2013	