

Final Quarter 9 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:

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Helena, Montana

July 2013

**Final
QUARTER 9 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

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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 sheet
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 conduct outdoor ambient air monitoring 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 implemented by Tetra Tech 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 moved to different locations 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 station locations were moved back to four of the original year 1 locations.

This Quarter 9 Memorandum summarizes activities of the outdoor ambient air monitoring program related to placement of monitoring stations, maintenance performed, monitoring activities, issues encountered, and resolutions from May 10, 2012 through August 2, 2012. This report also provides a summary of quarter 9 validated ambient air data. Sampling data from periods 73 through 81 were validated during quarter 9 using methods described in Section 3.1 and the results are provided in Section 3.2.

2.0 QUARTER 9 AMBIENT AIR MONITORING PLAN IMPLEMENTATION

Quarter 9 OU7 ambient air monitoring was initiated on May 10, 2012 and was the first 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 9 (beginning of year 3), four monitoring stations were placed at their new locations to collect further data in support of the OU7 human health risk assessment. The year 3 station locations

were chosen from year 1 locations. 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

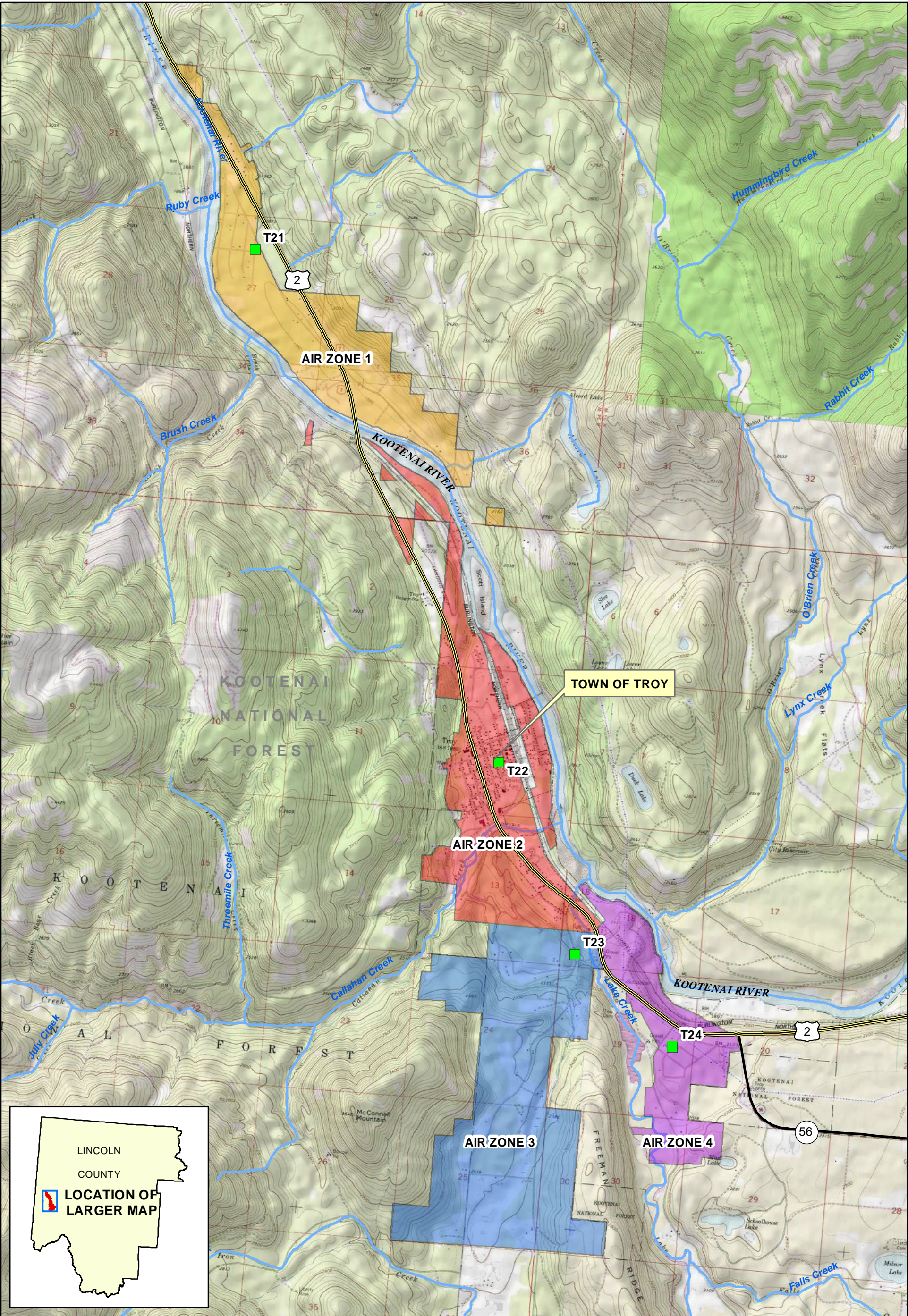
Station Number	Location*	Purpose
T21	Upwind and downwind site near the northern border of OU7	This site is used to evaluate LA concentrations at the small community area near the northernmost boundary of OU7 and confirm if any LA is entering or leaving OU7 through Air Zone 1
T22	City of Troy population 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 9 monitoring, none of the four fixed monitoring stations needed to be moved for property owner activities or overloading issues; however, some mechanical issues were encountered related to pump faults and pump failures. Section 2.1 provides the quarter 9 sampling schedule and Section 2.2 presents a summary of issues encountered and resolutions to those issues.



- 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

2.1 QUARTER 9 SAMPLING SCHEDULE

Quarter 9 ambient air sampling consisted of nine 5-day sampling periods generally separated by five off days between each period. Between some sampling 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 9 sampling began with period 73 on May 10, 2012 and ended with period 81 on August 2, 2012. Table 2-2 provides a summary of sampling dates for periods 73 through 81.

**TABLE 2-2
OU7 OUTDOOR AMBIENT AIR SAMPLING
QUARTER 9 SAMPLE PERIOD DATES**

QUARTER 5 SAMPLE PERIODS	
Sample Period 73	May 10, 2012 through May 14, 2012
Sample Period 74	May 20, 2012 through May 24, 2012
Sample Period 75	May 30, 2012 through June 3, 2012
Sample Period 76	June 9, 2012 through June 13, 2012
Sample Period 77	June 19, 2012 through June 23, 2012
Sample Period 78	June 29, 2012 through July 3, 2012
Sample Period 79	July 9, 2012 through July 13, 2012
Sample Period 80	July 19, 2012 through July 23, 2012
Sample Period 81	July 29, 2012 through August 2, 2012

2.2 MODIFICATIONS, ISSUES, AND RESOLUTIONS

Prior to quarter 9 sampling, one modification to field data collection was implemented (Troy Field Office [TFO]-00005). There were several mechanical (pump) issues. Section 2.2.1 presents a summary of the TFO modifications implemented and Section 2.2.2 provides a discussion of quarter 9 issues and the 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 a reduction in the number of ambient air monitoring stations (from 7 to 4) and for the stations to be relocated for the year 3 sampling so that the four “air zones” identified in OU7 were covered. This modification was implemented to provide additional data to support the human health risk analysis related to ambient air exposure. 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

The primary issue noted during quarter 9 monitoring was four pump failures that were attributed to pump faults related to software. When failures were identified, Tetra Tech attempted to minimize data loss by reprogramming or replacing the pumps and re-starting sample collection. The Field Sampling Data Sheets (FSDS) were used to record these activities. As each of the four locations where pumps experienced further pump faults, the pumps collected insufficient volume for proper analysis so samples were voided. Monitoring locations with voided samples included: (1) Station T22 during period 73, (2) Station T24QC during period 76, (3) Station T23 during period 79, and (4) Station T23QC during period 79.

During this reporting period, two new pumps were purchased from SKC and were placed in the sampling rotation as replacements for the malfunctioning pumps. No further pump failures were noted during quarter 9.

3.0 OUTDOOR AMBIENT AIR MONITORING DATA

During this reporting period, samples from Periods 73 through 81 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.

During quarter 9, sample results for Periods 73 through 81 were also validated. The following sections provide a description of the data validation procedures, data validation findings, and a summary of LA detections for the Period 73 to 81 samples.

3.1 DATA VALIDATION PROCEDURES AND FINDINGS

During quarter 9, Tetra Tech conducted data review and data entry verification of the TEM data from sampling Periods 73 through 81 in accordance with standard operating procedure (SOP) EPA-LIBBY-09, Revision 2 (CDM 2012b). Tetra Tech followed the data review and verification procedures outlined in this SOP, with minor deviations for OU7. Approximately 25 percent of the Period 73 through 81 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 and validation 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 also 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 verification and validation 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 25 percent of the sample records for Periods 73 through 81. 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, which forwarded them to the appropriate laboratories for response. The ESAT laboratory determined which items were authentic errors requiring correction. None of the inconsistencies, omissions, or suspected errors identified during the quarter 9 data review and verification affected 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. This was done for the records reviewed for Periods 73 through 81.

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. The ESAT laboratory determined which items were authentic errors requiring correction. None of the inconsistencies, omissions, or suspected errors identified during the data review and verification affected 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 and EDDs to ESAT. If this occurs, Tetra Tech will download the revised documents provided by ESAT, review them, and replace the previous ones as appropriate.

3.1.4 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 range 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 73, Period 75, and Period 78. It was also detected in two Period 81 samples. Table B-1 (Appendix B) presents a summary of LA asbestos detections for all sampling periods through quarter 9. LA detections by station for Periods 73 through 81 are summarized below:

Station T21 (located near the fire station in Kootenai Vista):

One LA asbestos fiber in the sample from Period 81 (concentration of 3.47E-05)

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

One LA asbestos fiber in the sample from Period 73 (concentration of 4.00E-05)

Three LA asbestos fibers in the sample from Period 81 (concentration of 1.08E-04)

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

Two LA asbestos fibers in the sample from Period 75 (concentration of 7.99E-05)

Station T23 (located at the Troy Water Tower):

One LA asbestos fiber in the sample from Period 78 (concentration of 4.00E-05)

The remaining samples collected during Periods 73 to 81 had no detectable LA asbestos. Complete analytical results and a summary of validation findings for sample Periods 73 to 81 are provided in Appendix B.

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 9 OU7 OUTDOOR AMBIENT AIR
FIELD SAMPLING DATA SHEETS (FSDS)
MAY 8, 2012, THROUGH AUGUST 2, 2012**

Period 73

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S

TA-20329

Station Location: T-21 (Fire Station)
Field Technician: JP
Pump Type/Model: SKC AirChek 2000
Pump Number: 36424
Sampling Period: 73

Sample ID #: _____
Filter Lot #: 21989-07
Sample Type: TEM
Sample Parent ID #: _____

PUMP SETUP DAY

Date: 5-9-12
Time: 0904

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

PUMP RETRIEVAL DAY

Date: 5-15-12
Time: 12:49

Timer Ending Date/Time: 5-15-12/2400
Ending Flow Rate (L/min): 2
Total Sample Volume (L): 0.520
Total Sample Time (min): 7200
Atmospheric Pressure (INS): 29.54
Temperature inside station unit (°F): 76.2
Box Temp. 80

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

SIGNATURE: DATE: 5-15-12

TETRA TECH EM INC.

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

TA-20329

Station Location: T-21 (Fire Station)
Field Technician: JA
Pump Type/Model: SKC AirChek 2000
Pump Number: 36424Sample ID #: _____
Filter Lot #: 21989-07

DAILY CHECK (For each station visit)

(Field Tech Initials) _____
Date: 5-10-12 (JA)
Time: 9:42 ()
PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 1165
Cumulative Sample Time (min): 582
Atmospheric Pressure (INS): 27.53
Temperature inside station unit (°F): 65.4
Battery voltage reading (volts): -Box Temp 60

DAILY CHECK (For each station visit)

(Field Tech Initials) _____
Date: 5-11-12 (JA)
Time: 10:57 ()
PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 4195
Cumulative Sample Time (min): 2097
Atmospheric Pressure (INS): 27.69
Temperature inside station unit (°F): 63.4
Battery voltage reading (volts): -Box Temp = 58

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 Real Time Monitor

File Tools

Serial Number 36424

May 18, 2012
12:51 PM

Pump Real-Time Monitor

Pump Status

Hold

Flow

2000

Volume

14400.13

Run Time

5d 0:00:04

Total Time

284d 0:23:22

Battery

-

+

Flow Calibrate

Approx Correction
+50.0 ml/min

Down

Reset

Up

☐ Multiple Pumps

Pump Controls

Run

Hold

Set Flow

Reset Volume, Temp
Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
44.3	102.8	70.5	65.1

Pressure (in-Hg)

27.25	27.81	27.61	27.48
-------	-------	-------	-------

Units Selection

☒ Fahrenheit
 ☐ Celsius

☒ in-Hg
 ☐ millibar
 ☐ mm-Hg

Fault Options

Time to Fault (sec)

15

Number of Tries

10

Set Fault Options

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20333

Station Location: T-21QC(Fire Station)

Sample ID #:

Field Technician: JD

Filter Lot #: 21989-07

Pump Type/Model: SKC AirChek 2000

Sample Type: TEM

Pump Number: ~~33124~~ 36442

Sample Parent ID #:

Sampling Period: 73

TA-20329

PUMP SETUP DAY

Date: 5-9-12Time: 0900Timer Beginning Date/Time: 5-10-12/2400Beginning Flow Rate (L/min): 2Pump Programmed (Yes / No): Yes

Bios Calibration Within 10 mL (Yes / No):

PUMP RETRIEVAL DAY

Date: 5-15-12Time: 12:48Timer Ending Date/Time: 5-15-12/2400Ending Flow Rate (L/min): 2Total Sample Volume (L): 0FL0Total Sample Time (min): 7200Atmospheric Pressure (INS): 28.00Temperature inside station unit (°F): 74.2

Box Temp - 80

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

SIGNATURE: [Signature]DATE: 5-15-12

TETRA TECH EM INC.

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

TA-20333

Station Location: T-21QC(Fire Station)
Field Technician: QA
Pump Type/Model: SKC AirChek 2000
Pump Number: ~~36424~~ 36442Sample ID #:
Filter Lot #: 21989-07

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): NO
Date: 5-10-12 (QA) Flow Rate (L/min): 2
Time: 9:42 () Cumulative Sample Volume (L): 1162
Cumulative Sample Time (min): 581
Atmospheric Pressure (INS): 27.96
Temperature inside station unit (°F): 66.7
Battery voltage reading (volts): —

Box Temp - 60

DAILY CHECK (For each station visit)

(Field Tech Initials) PUMP FAULT (Yes / No): NO
Date: 5-11-12 (QA) Flow Rate (L/min): 2
Time: 10:56 () Cumulative Sample Volume (L): 4193
Cumulative Sample Time (min): 2096
Atmospheric Pressure (INS): 28.14
Temperature inside station unit (°F): 64.0
Battery voltage reading (volts): —

Box Temp - 58

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):

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S

TA-20330

Station Location: T-22 (Troy Office)
Field Technician: GA
Pump Type/Model: SKC AirChek 2000
Pump Number: 36446
Sampling Period: 73

Sample ID #: _____
Filter Lot #: 21989-07
Sample Type: TEM
Sample Parent ID #: —

PUMP SETUP DAY

Date: 5-9-12
Time: 0903

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

PUMP RETRIEVAL DAY

Date: 5-15-12
Time: 1300

Timer Ending Date/Time: 5-15-12/2400
Ending Flow Rate (L/min): 2
Total Sample Volume (L): 3988
Total Sample Time (min): 1994
Atmospheric Pressure (INS): 28.28
Temperature inside station unit (°F): 76.0
BOX TEMP - 80

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

Pump faultSIGNATURE: DATE: 5-15-12

TETRA TECH EM INC.

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

TA-20330

Station Location: T-22 (Troy Office)
Field Technician: ST
Pump Type/Model: SKC AirChek 2000
Pump Number: 36446

Sample ID #:
Filter Lot #: 21989-07

DAILY CHECK (For each station visit)

(Field Tech Initials)
Date: 5-10-11 (ST)
Time: 8:23 (AM, ES)
PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 1005
Cumulative Sample Time (min): 501
Atmospheric Pressure (INS): 27.87
Temperature inside station unit (°F): 72.7
Battery voltage reading (volts): -
Box Temp = 50

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: _____ () ST
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 Real Time Monitor

File Tools

Serial Number 36446

May 18, 2012
12:46 PM

Pump Real-Time Monitor

Pump Status

Hold

Flow

2000

Volume

3988.67

Run Time

1d 9:14:20

Total Time

110d 0:12:37

Battery

-

+

Flow Calibrate

Approx Correction
+60.0 ml/min

Down

Reset

Up

☐ Multiple Pumps

Pump Controls

Run

Hold

Set Flow

Reset Volume, Temp
Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
56.1	92.5	74.5	61.6

Pressure (in-Hg)

27.65	28.22	27.94	28.27
-------	-------	-------	-------

Units Selection

☒ Fahrenheit
 ☐ Celsius

☒ in-Hg
 ☐ millibar
 ☐ mm-Hg

Fault Options

Time to Fault (sec)

15

Number of Tries

10

Set Fault Options

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20331

Station Location: T-23 (Iron Creek)

Sample ID #

Field Technician: JDFilter Lot #: 21989-07Pump Type/Model: SKC AirChek 2000Sample Type: TEMPump Number: 36428Sample Parent ID #: —Sampling Period: 73

PUMP SETUP DAY

Date: 5-9-12Time: 0902Timer Beginning Date/Time: 5-10-12/2400Beginning Flow Rate (L/min): 2Pump Programmed (Yes / No): YesBios Calibration Within 10 mL (Yes / No): Yes

PUMP RETRIEVAL DAY

Date: 5-15-12Time: 12:19Timer Ending Date/Time: 5-15-12/2400Ending Flow Rate (L/min): 2Total Sample Volume (L): 0.510Total Sample Time (min): 7200Atmospheric Pressure (INS): 27.68Temperature inside station unit (°F): 75.9Box Temp - 64

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

SIGNATURE: [Signature]DATE: 5-15-12

TETRA TECH EM INC.

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

TA-20331

Station Location: T-23 (Iron Creek)

Sample ID #:

Field Technician: QAFilter Lot #: 21989-07

Pump Type/Model: SKC AirChek 2000

Pump Number: 36428

DAILY CHECK (For each station visit)

Date: 5-10-12 (QA)
Time: 9:54 ()PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 1188
Cumulative Sample Time (min): 594
Atmospheric Pressure (INS): 27.58
Temperature inside station unit (°F): 63.1
Battery voltage reading (volts): -
Box Temp = 60

DAILY CHECK (For each station visit)

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)

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)

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)

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 Real Time Monitor

File Tools

Serial Number 36428

May 18, 2012
12:54 PM

Pump Real-Time Monitor

Pump Status

Hold

Flow

2000

Volume

14400.10

Run Time

5d 0:00:03

Total Time

352d 9:47:17

Battery

-

+

Flow Calibrate

Approx Correction

-30.0 ml/min

Down

Reset

Up

☐ Multiple Pumps

Pump Controls

Run

Hold

Set Flow

Reset Volume, Temp
Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
50.8	103.5	73.7	62.9

Pressure (in-Hg)

27.33	27.82	27.65	27.83
-------	-------	-------	-------

Units Selection

☒ Fahrenheit
 ☐ Celsius

☒ in-Hg
 ☐ millibar
 ☐ mm-Hg

Fault Options

Time to Fault (sec)

15

Number of Tries

10

Set Fault Options

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S

TA-20332

Station Location: T-24 (Jordan)

Sample ID #:

Field Technician: JD

Filter Lot #: 21989-07

Pump Type/Model: SKC AirChek 2000

Sample Type: TEM

Pump Number: 36422

Sample Parent ID #: —

Sampling Period: 73

PUMP SETUP DAY

Date: 5-9-12

Timer Beginning Date/Time: 5-10-12/2400

Time: 0901

Beginning Flow Rate (L/min): 2

Pump Programmed (Yes / No): YES

Bios Calibration Within 10 mL (Yes / No): YES

PUMP RETRIEVAL DAY

Date: 5-15-12

Timer Ending Date/Time: 5-15-12/2400

Time: 11:15

Ending Flow Rate (L/min): 2

Total Sample Volume (L): 0 FLO

Total Sample Time (min): 7200

Atmospheric Pressure (INS) 27.49

Temperature inside station unit (°F): 63.1

Box Temp - 54

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

SIGNATURE: JD

DATE: 5-15-12

TETRA TECH EM INC.

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

TA-20332

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

Sample ID #: _____
Filter Lot #: 21989-07

DAILY CHECK (For each station visit)

(Field Tech Initials) _____
Date: 5-10-12 (GP)
Time: 10:00 ()
PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 1201
Cumulative Sample Time (min): 600
Atmospheric Pressure (INS): 27.41
Temperature inside station unit (°F): 55.5
Battery voltage reading (volts): —
BOX Temp 50.

DAILY CHECK (For each station visit)

(Field Tech Initials) _____
Date: 5-11-12 (GP)
Time: 11:25 ()
PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 4251
Cumulative Sample Time (min): 2125
Atmospheric Pressure (INS): 27.54
Temperature inside station unit (°F): 50.2
Battery voltage reading (volts): —
BOX Temp: 42

DAILY CHECK (For each station visit)

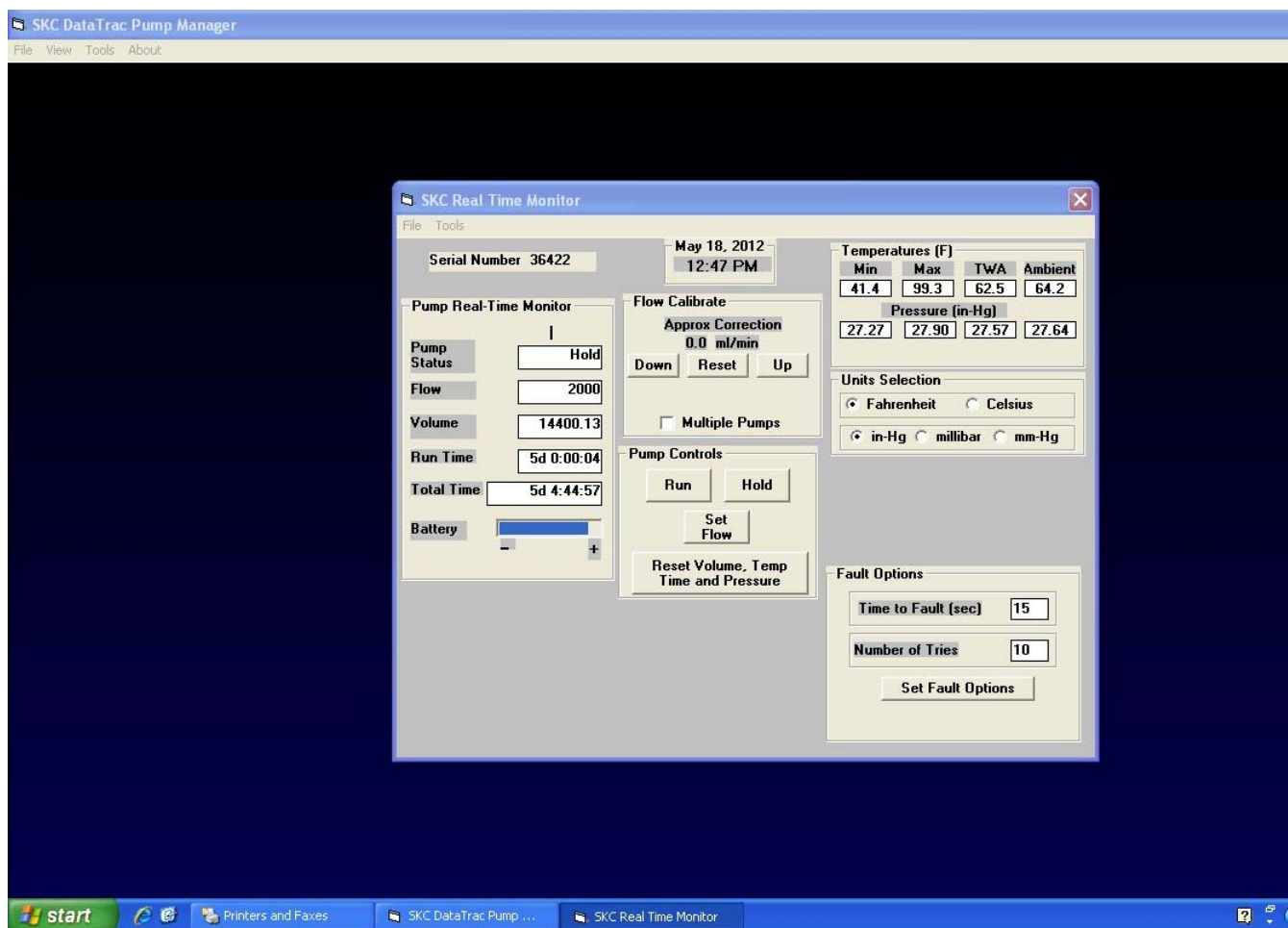
(Field Tech Initials) _____
Date: _____ ()
Time: _____ ()
PUMP FAULT (Yes / No): _____
Flow Rate (L/min): _____
Cumulative Sample Volume (L): _____
Cumulative Sample Time (min): _____
Atmospheric pressure (INS): _____
Temperature inside station unit (°F): _____
Battery voltage reading (volts): _____

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): _____



Period 74

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20335

Station Location: T-21 (Fire Station)

Sample ID #: _____

Field Technician: jjFilter Lot #: 23171-01Pump Type/Model: SKC AirChek 2000Sample Type: TEMPump Number: 36424

Sample Parent ID #: _____

Sampling Period: 74

PUMP SETUP DAY

Date: 5/18/2012Timer Beginning Date/Time: 5/20/12-2400Time: 11:25Beginning Flow Rate (L/min): 2Pump Programmed (Yes / No): yesBios Calibration Within 10 mL (Yes / No) yes

PUMP RETRIEVAL DAY

Date: 5-25-12Timer Ending Date/Time: 5/25/12-2400Time: 0856Ending Flow Rate (L/min): 2Total Sample Volume (L): 0 FLOTotal Sample Time (min): 6198Atmospheric Pressure (INS) 27.36Temperature inside station unit (°F): 56.7Box Temp - 48

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

SIGNATURE: Jim JordanDATE: 5-25-12

TETRA TECH EM INC.

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

TA-20335

Station Location: T-21 (Fire Station)		Sample ID #:
Field Technician: jj		Filter Lot #: 23171-01
Pump Type/Model: SKC AirChek 2000		
Pump Number: 36424		

DAILY CHECK (For each station visit)		PUMP FAULT (Yes / No):
(Field Tech Initials)		
Date: 5-21-12 (jj)	Flow Rate (L/min):	NO
Time: 1431	Cumulative Sample Volume (L):	2
Scattered rain	Cumulative Sample Time (min):	4622
	Atmospheric Pressure (INS):	23.11
	Temperature inside station unit (°F):	27.26
	Battery voltage reading (volts):	72.7
		12.70
		Box Temp - 60

DAILY CHECK (For each station visit)		PUMP FAULT (Yes / No):
(Field Tech Initials)		
Date: 5-22-12 (98)	Flow Rate (L/min):	Yes
Time: 1620	Cumulative Sample Volume (L):	2
restarted pump	Cumulative Sample Time (min):	5716
Scattered rain	Atmospheric Pressure (INS):	2858
	Temperature inside station unit (°F):	27.27
	Battery voltage reading (volts):	66.2
		12.76
		Box Temp 64

DAILY CHECK (For each station visit)		PUMP FAULT (Yes / No):
(Field Tech Initials)		
Date: 5-23-12 (jj)	Flow Rate (L/min):	NO
Time: 0943	Cumulative Sample Volume (L):	2
Scattered rain	Cumulative Sample Time (min):	7802
windy	Atmospheric Pressure (INS):	3901
	Temperature inside station unit (°F):	27.11
	Battery voltage reading (volts):	61.5
		12.59
		Box Temp - 52

DAILY CHECK (For each station visit)		PUMP FAULT (Yes / No):
(Field Tech Initials)		
Date: 5-24-12 (98)	Flow Rate (L/min):	NO
Time: 0917	Cumulative Sample Volume (L):	2
cloudy	Cumulative Sample Time (min):	0 FLO
	Atmospheric Pressure (INS):	5314
	Temperature inside station unit (°F):	27.11
	Battery voltage reading (volts):	59.6
		12.50
		Box Temp - 50

DAILY CHECK (For each station visit)		PUMP FAULT (Yes / No):
(Field Tech Initials)		
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 36424****Date Printed: Friday, May 25, 2012 12:46 PM****Min Temp 52.1F****Max Temp 87.2F****TWA Temp 69.3F****Min Pressure 26.9 In-Hg****Max Pressure 27.6 In-Hg****TWA Pressure 27.2 In-Hg****Flow Correction Approximately +50.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Flow Adjust		Wed May 9 2012 11:25 AM			0:04
Prog (Hold)		Wed May 9 2012 11:25 AM			5:06
Sleep		Wed May 9 2012 11:30 AM			12:29:27
Prog (Run)	2000	Thu May 10 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Tue May 15 2012 12:00 AM			4:59
Sleep		Tue May 15 2012 12:05 AM			12:44:37
Hold		Tue May 15 2012 12:49 PM			5:20
Sleep		Tue May 15 2012 12:54 PM			1d 11:05:02
Hold		Thu May 17 2012 12:00 AM			4:58
Sleep		Thu May 17 2012 12:04 AM			10:15:22
Hold		Thu May 17 2012 10:20 AM			6:01
Sleep		Thu May 17 2012 10:26 AM			1d 2:22:42
Hold		Fri May 18 2012 12:49 PM			8:02
Sleep		Fri May 18 2012 12:57 PM			3:59
Hold		Fri May 18 2012 1:01 PM			0:03
Flow	2000	Fri May 18 2012 1:01 PM	0.033	14400	0:01
User Setup		Fri May 18 2012 1:01 PM			5:45
Prog (Hold)		Fri May 18 2012 1:06 PM			5:04
Sleep		Fri May 18 2012 1:11 PM			1d 10:48:03
Prog (Run)	2000	Sun May 20 2012 12:00 AM	5717	20117	1d 23:38:22
Low Bat		Mon May 21 2012 11:38 PM			0:10
Sleep		Mon May 21 2012 11:38 PM			16:41:16
Prog (Hold)		Tue May 22 2012 4:19 PM			0:35
Prog (Run)	2000	Tue May 22 2012 4:20 PM	6679	26796	2d 7:39:39
Hold		Fri May 25 2012 12:00 AM			4:59
Sleep		Fri May 25 2012 12:05 AM			8:50:36
Hold		Fri May 25 2012 8:55 AM			5:34
Sleep		Fri May 25 2012 9:01 AM			2:39:16
Hold		Fri May 25 2012 11:40 AM			1:05:33+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S

TA-20336

Station Location: T-22 (Troy Office) Sample ID #: _____
Field Technician: jj Filter Lot #: 21989-07
Pump Type/Model: SKC AirChek 2000 Sample Type: TEM
Pump Number: 36444 Sample Parent ID #: _____
Sampling Period: 74

PUMP SETUP DAY

Date: 5/18/2012 Timer Beginning Date/Time: 5/20/12-2400
Time: 11:20 Beginning Flow Rate (L/min): 2
Pump Programmed (Yes / No): yes
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 5-25-12 Timer Ending Date/Time: 5/25/12-2400
Time: 0910 Ending Flow Rate (L/min): 2
Total Sample Volume (L): 0.960
Total Sample Time (min): 7200
Atmospheric Pressure (INS): 27.80
Temperature inside station unit (°F): 58.3

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

SIGNATURE: Jim JacobDATE: 5-25-12

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

ADDITIONAL DAILY CHECK RECORDS

TA-20336

Station Location: T-22 (Troy Office)

Sample ID #:

Field Technician: jj

Filter Lot #: 21989-07

Pump Type/Model: SKC AirChek 2000

Pump Number: 36444

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-21-12 (jj)

Time: 7:40 ()

scattered rain

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 4639

Cumulative Sample Time (min): 23.9

Atmospheric Pressure (INS): 27.77

Temperature inside station unit (F): 70.7

Battery voltage reading (volts): 12.58

Box Temp: 60

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-22-12 (jj)

Time: 1608 ()

scattered rain

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 7696

Cumulative Sample Time (min): 38.48

Atmospheric Pressure (INS): 27.71

Temperature inside station unit (F): 70.6

Battery voltage reading (volts): 12.54

Box Temp: 60

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-23-12 (jj)

Time: 0951 ()

scattered rain

windy

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 9823

Cumulative Sample Time (min): 49.11

Atmospheric Pressure (INS): 27.64

Temperature inside station unit (F): 60.0

Battery voltage reading (volts): 12.50

Box Temp: 51

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-24-12 (jj)

Time: 0822 ()

cloudy

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 0 FLO

Cumulative Sample Time (min): 62.63

Atmospheric Pressure (INS): 27.61

Temperature inside station unit (F): 59.6

Battery voltage reading (volts): 12.46

Box Temp: 50

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: Friday, May 25, 2012 1:11 PM****Min Temp 55.5F****Max Temp 83.4F****TWA Temp 67.2F****Min Pressure 27.6 In-Hg****Max Pressure 28.0 In-Hg****TWA Pressure 27.8 In-Hg****Flow Correction Approximately +60.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Reset		Fri May 18 2012 12:58 PM			0:01
Flow	2000	Fri May 18 2012 12:58 PM	0.833	0.833	0:25
Hold		Fri May 18 2012 12:59 PM			0:05
Flow	2000	Fri May 18 2012 12:59 PM	0.033	0.866	0:01
Flow Adjust		Fri May 18 2012 12:59 PM			5:41
Prog (Hold)		Fri May 18 2012 1:04 PM			5:11
Sleep		Fri May 18 2012 1:10 PM			1d 10:49:50
Prog (Run)	2000	Sun May 20 2012 12:00 AM	14400	14401	5d 0:00:02
Hold		Fri May 25 2012 12:00 AM			4:59
Sleep		Fri May 25 2012 12:05 AM			9:05:02
Hold		Fri May 25 2012 9:10 AM			5:36
Sleep		Fri May 25 2012 9:15 AM			2:56:03
Hold		Fri May 25 2012 12:11 PM			59:18+

SKC Real Time Monitor

File Tools

Serial Number 36444

May 25, 2012
12:23 PM

Pump Real-Time Monitor


Pump Status: Hold

Flow: 2000

Volume: 14400.13

Run Time: 5d 0:00:04

Total Time: 292d 15:58:21

Battery: 

Flow Calibrate

Approx Correction
+60.0 ml/min

Down Reset Up

☐ Multiple Pumps

Pump Controls

Run Hold

Set Flow

Reset Volume, Temp
Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
55.5	83.4	67.2	59.0

Pressure (in-Hg)

27.59	28.03	27.76	27.88
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Units Selection

☒ Fahrenheit ☐ Celsius

☒ in-Hg ☐ millibar ☐ mm-Hg

Fault Options

Time to Fault (sec): 15

Number of Tries: 10

Set Fault Options

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA :

TA-20337

Station Location: T-22QC(troy Office)
Field Technician: jj
Pump Type/Model: SKC AirChek 2000
Pump Number: 36442
Sampling Period: 74

Sample ID #: _____
Filter Lot #: 21989-07
Sample Type: TEM
Sample Parent ID #

TA-20336

PUMP SETUP DAY

Date: 5/18/2012
Time: 11:28

Timer Beginning Date/Time: 5/20/12-2400
Beginning Flow Rate (L/min): 2
Pump Programmed (Yes / No): yes
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 5-25-12
Time: 0909

Timer Ending Date/Time: 5/25/12-2400
Ending Flow Rate (L/min): 2
Total Sample Volume (L): 0 FL
Total Sample Time (min): 7200
Atmospheric Pressure (INS) 27.77
Temperature inside station unit (°F): 60.8

BoxTemp- 52

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

SIGNATURE: DATE: 5-25-12

TETRA TECH EM INC.

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

TA-20337

Station Location: T-22QC(troy Office)

Sample ID #:

Field Technician: jj

Filter Lot #: 21989-07

Pump Type/Model: SKC AirChek 2000

Pump Number: 36442

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-21-12 (jj)

Time: 1442 ()

Scattered rain

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 4644

Cumulative Sample Time (min): 2321

Atmospheric Pressure (INS): 27.72

Temperature inside station unit (°F): 72.6

Battery voltage reading (volts): 12.67

Box Temp: 60

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-22-12 (jj)

Time: 1610 ()

Scattered rain

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 7700

Cumulative Sample Time (min): 3850

Atmospheric Pressure (INS): 27.67

Temperature inside station unit (°F): 72.4

Battery voltage reading (volts): 12.60

Box Temp: 60

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-23-12 (jj)

Time: 0953 ()

scattered rain
windy

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 9828

Cumulative Sample Time (min): 4914

Atmospheric Pressure (INS): 27.58

Temperature inside station unit (°F): 62.2

Battery voltage reading (volts): 12.55

Box Temp: 51

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-24-12 (jj)

Time: 0824 ()

cloudy

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 0860

Cumulative Sample Time (min): 6264

Atmospheric Pressure (INS): 27.56

Temperature inside station unit (°F): 62.7

Battery voltage reading (volts): 12.46

Box Temp: 50

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 36442****Date Printed: Friday, May 25, 2012 1:12 PM****Min Temp 56.0F****Max Temp 83.9F****TWA Temp 69.4F****Min Pressure 27.5 In-Hg****Max Pressure 28.1 In-Hg****TWA Pressure 27.7 In-Hg****Flow Correction Approximately -60.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
User Setup		Wed May 9 2012 11:25 AM			0:15
Prog (Hold)		Wed May 9 2012 11:26 AM			5:13
Sleep		Wed May 9 2012 11:31 AM			12:28:36
Prog (Run)	2000	Thu May 10 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Tue May 15 2012 12:00 AM			4:59
Sleep		Tue May 15 2012 12:05 AM			12:44:08
Hold		Tue May 15 2012 12:49 PM			5:04
Sleep		Tue May 15 2012 12:54 PM			1:49:08
Hold		Tue May 15 2012 2:43 PM			14:40
Sleep		Tue May 15 2012 2:58 PM			1d 9:01:59
Hold		Thu May 17 2012 12:00 AM			4:58
Sleep		Thu May 17 2012 12:04 AM			10:02:16
Hold		Thu May 17 2012 10:07 AM			12:26
Reset		Thu May 17 2012 10:19 AM			0:02
Hold		Thu May 17 2012 10:19 AM			4:58
Sleep		Thu May 17 2012 10:24 AM			23:46:07
Hold		Fri May 18 2012 10:10 AM			10:45
Sleep		Fri May 18 2012 10:21 AM			2:19:41
Hold		Fri May 18 2012 12:41 PM			6:24
Sleep		Fri May 18 2012 12:47 PM			7:18
Hold		Fri May 18 2012 12:54 PM			5:45
Flow	2000	Fri May 18 2012 1:00 PM	0.067	14400	0:02
User Setup		Fri May 18 2012 1:00 PM			3:39
Prog (Hold)		Fri May 18 2012 1:04 PM			5:29
Sleep		Fri May 18 2012 1:09 PM			1d 10:50:10
Prog (Run)	2000	Sun May 20 2012 12:00 AM	14400	28800	5d 0:00:02
Hold		Fri May 25 2012 12:00 AM			4:59
Sleep		Fri May 25 2012 12:05 AM			9:05:36
Hold		Fri May 25 2012 9:10 AM			5:19
Sleep		Fri May 25 2012 9:15 AM			2:57:38
Hold		Fri May 25 2012 12:13 PM			58:26+

SKC Real Time Monitor

File Tools

Serial Number 36442

May 25, 2012
12:27 PM

Pump Real-Time Monitor


Pump Status: Hold

Flow: 2000

Volume: 14400.13

Run Time: 5d 0:00:04

Total Time: 144d 13:43:20

Battery: 

Flow Calibrate

Approx Correction: -60.0 ml/min

Down Reset Up

☐ Multiple Pumps

Pump Controls

Run Hold

Set Flow

Reset Volume, Temp Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
56.0	83.9	69.4	58.2

Pressure (in-Hg)

27.54	28.07	27.70	27.89
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Units Selection

☒ Fahrenheit ☐ Celsius

☒ in-Hg ☐ millibar ☐ mm-Hg

Fault Options

Time to Fault (sec): 15

Number of Tries: 10

Set Fault Options

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20338

Station Location: T-23 (Iron Creek) Sample ID #: _____
Field Technician: jj Filter Lot #: 23171-01
Pump Type/Model: SKC AirChek 2000 Sample Type: TEM
Pump Number: 36428 Sample Parent ID #: _____
Sampling Period: 74

PUMP SETUP DAY

Date: 5/18/2012 Timer Beginning Date/Time: 5/20/12-2400
Time: 11:32 Beginning Flow Rate (L/min): 2
Pump Programmed (Yes / No): yes
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 5-25-12 Timer Ending Date/Time: 5/25/12-2400
Time: 0835 Ending Flow Rate (L/min): 2
Total Sample Volume (L): 0FL0
Total Sample Time (min): 7200
Atmospheric Pressure (INS): 27.54
Temperature inside station unit (°F): 65.7

Box Temp - 44

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

SIGNATURE: [Signature]DATE: 5-25-12

TETRA TECH EM INC.

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

TA-20338

Station Location: T-23 (Iron Creek)
Field Technician: jj
Pump Type/Model: SKC AirChek 2000
Pump Number: 36428Sample ID #
Filter Lot #: 23171-01

DAILY CHECK (For each station visit)

(Field Tech Initials)
Date: 5-21-12 (jj)
Time: 1419 ()

scattered rain

PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 4597
Cumulative Sample Time (min): 2298
Atmospheric Pressure (INS): 27.34
Temperature inside station unit (°F): 78.5
Battery voltage reading (volts): 12.61
Box Temp - 59

DAILY CHECK (For each station visit)

(Field Tech Initials)
Date: 5-22-12 (jj)
Time: 1632 ()

Scattered rain

PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 7745
Cumulative Sample Time (min): 3872
Atmospheric Pressure (INS): 27.22
Temperature inside station unit (°F): 81.6
Battery voltage reading (volts): 12.47
Box Temp - 60

DAILY CHECK (For each station visit)

(Field Tech Initials)
Date: 5-23-11 (jj)
Time: 0929 ()Scattered rain
windyPUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 9779
Cumulative Sample Time (min): 4889
Atmospheric Pressure (INS): 27.14
Temperature inside station unit (°F): 50.7
Battery voltage reading (volts): 12.38
Box Temp - 50

DAILY CHECK (For each station visit)

(Field Tech Initials)
Date: 5-24-12 (jj)
Time: 0817 ()

cloudy

PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 0810
Cumulative Sample Time (min): 6257
Atmospheric Pressure (INS): 27.18
Temperature inside station unit (°F): 69.3
Battery voltage reading (volts): 12.21
Box Temp - 49

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 36428****Date Printed: Friday, May 25, 2012 1:12 PM****Min Temp 54.1F****Max Temp 91.8F****TWA Temp 77.1F****Min Pressure 27.1 In-Hg****Max Pressure 27.8 In-Hg****TWA Pressure 27.3 In-Hg****Flow Correction Approximately -30.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Flow Adjust		Wed May 9 2012 11:22 AM			0:23
Prog (Hold)		Wed May 9 2012 11:22 AM			5:04
Sleep		Wed May 9 2012 11:27 AM			12:32:16
Prog (Run)	2000	Thu May 10 2012 12:00 AM	14400	14400	5d 0:00:01
Hold		Tue May 15 2012 12:00 AM			4:59
Sleep		Tue May 15 2012 12:05 AM			12:14:04
Hold		Tue May 15 2012 12:19 PM			5:22
Sleep		Tue May 15 2012 12:24 PM			1d 11:35:35
Hold		Thu May 17 2012 12:00 AM			4:57
Sleep		Thu May 17 2012 12:04 AM			10:02:02
Hold		Thu May 17 2012 10:07 AM			4:58
Sleep		Thu May 17 2012 10:11 AM			7:20
Hold		Thu May 17 2012 10:19 AM			5:57
Sleep		Thu May 17 2012 10:25 AM			1d 2:17:28
Hold		Fri May 18 2012 12:42 PM			6:54
Sleep		Fri May 18 2012 12:49 PM			4:05
Hold		Fri May 18 2012 12:53 PM			6:16
Sleep		Fri May 18 2012 12:59 PM			0:36
Hold		Fri May 18 2012 1:00 PM			0:03
Flow	2000	Fri May 18 2012 1:00 PM	0.067	14400	0:02
User Setup		Fri May 18 2012 1:00 PM			4:37
Prog (Hold)		Fri May 18 2012 1:05 PM			5:08
Sleep		Fri May 18 2012 1:10 PM			1d 10:49:36
Prog (Run)	2000	Sun May 20 2012 12:00 AM	14400	28800	5d 0:00:02
Hold		Fri May 25 2012 12:00 AM			4:59
Sleep		Fri May 25 2012 12:05 AM			8:29:41
Hold		Fri May 25 2012 8:34 AM			5:31
Sleep		Fri May 25 2012 8:40 AM			3:34:06
Hold		Fri May 25 2012 12:14 PM			58:41+

SKC Real Time Monitor

File Tools

Serial Number 36428

May 25, 2012
12:28 PM

Pump Real-Time Monitor

Pump Status

Hold

Flow

2000

Volume

14400.13

Run Time

5d 0:00:04

Total Time

357d 9:52:01

Battery

-

+

Flow Calibrate

Approx Correction
-30.0 ml/min

Down

Reset

Up

☐ Multiple Pumps

Pump Controls

Run

Hold

Set Flow

Reset Volume, Temp
Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
54.1	91.8	77.1	58.9

Pressure (in-Hg)

27.09	27.82	27.30	27.80
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Units Selection

☒ Fahrenheit ☐ Celsius

☒ in-Hg ☐ millibar ☐ mm-Hg

Fault Options

Time to Fault (sec)

15

Number of Tries

10

Set Fault Options

start

Life's Been Good - Jo...

SKC DataTrac Pump ...

SKC Real Time Monitor

1:26 PM

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20339

Station Location: T-24 (Jordan)

Sample ID #:

Field Technician: jjFilter Lot #: 23171-01Pump Type/Model: SKC AirChek 2000Sample Type: TEMPump Number: 36422Sample Parent ID #: -Sampling Period: 74

PUMP SETUP DAY

Date: 5/18/2012Timer Beginning Date/Time: 5/20/12-2400Time: 11:35Beginning Flow Rate (L/min): 2Pump Programmed (Yes / No): yesBios Calibration Within 10 mL (Yes / No) yes

PUMP RETRIEVAL DAY

Date: 5-25-12Timer Ending Date/Time: 5/25/12-2400Time: 0826Ending Flow Rate (L/min): 2Total Sample Volume (L): 0 FL0Total Sample Time (min): 7200Atmospheric Pressure (INS) 27.29Temperature inside station unit (°F): 46.0Box Temp - 42

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

SIGNATURE: Jay FordDATE: 5-25-12

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA :

ADDITIONAL DAILY CHECK RECORDS

TA-20339

Station Location: T-24 (Jordan)

Sample ID #

Field Technician: jj

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 36422

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-21-12 (jj)

Time: 1359 ()

scattered rain

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 4558

Cumulative Sample Time (min): 2272

Atmospheric Pressure (INS): 27.29

Temperature inside station unit (°F): 64.6

Battery voltage reading (volts): 12.71

Box Temp - 56

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-22-12 (jj)

Time: 1638 ()

scattered rain

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 7756

Cumulative Sample Time (min): 3878

Atmospheric Pressure (INS): 27.20

Temperature inside station unit (°F): 66.3

Battery voltage reading (volts): 12.67

Box Temp - 59

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-23-12 (jj)

Time: 0922 ()

windy

scattered rain

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 9764

Cumulative Sample Time (min): 4881

Atmospheric pressure (INS): 27.09

Temperature inside station unit (°F): 55.5

Battery voltage reading (volts): 12.61

Box Temp - 48

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-24-12 (jj)

Time: 0812 ()

cloudy

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 0840

Cumulative Sample Time (min): 6251

Atmospheric Pressure (INS): 27.12

Temperature inside station unit (°F): 55.9

Battery voltage reading (volts): 12.58

Box Temp - 48

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: Friday, May 25, 2012 1:13 PM****Min Temp 50.5F****Max Temp 76.6F****TWA Temp 62.7F****Min Pressure 27.0 In-Hg****Max Pressure 27.6 In-Hg****TWA Pressure 27.2 In-Hg****No Flow Correction**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
User Setup		Wed May 9 2012 11:24 AM			0:14
Prog (Hold)		Wed May 9 2012 11:24 AM			5:23
Sleep		Wed May 9 2012 11:29 AM			12:30:15
Prog (Run)	2000	Thu May 10 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Tue May 15 2012 12:00 AM			4:59
Sleep		Tue May 15 2012 12:05 AM			11:09:49
Hold		Tue May 15 2012 11:14 AM			6:00
Sleep		Tue May 15 2012 11:20 AM			1d 12:39:10
Hold		Thu May 17 2012 12:00 AM			4:58
Sleep		Thu May 17 2012 12:04 AM			10:15:19
Hold		Thu May 17 2012 10:20 AM			6:59
Sleep		Thu May 17 2012 10:27 AM			1d 2:20:17
Hold		Fri May 18 2012 12:47 PM			6:23
Sleep		Fri May 18 2012 12:53 PM			6:58
Hold		Fri May 18 2012 1:00 PM			0:04
Flow	2000	Fri May 18 2012 1:00 PM	0.067	14400	0:02
User Setup		Fri May 18 2012 1:01 PM			6:21
Prog (Hold)		Fri May 18 2012 1:07 PM			5:05
Sleep		Fri May 18 2012 1:12 PM			1d 10:47:35
Prog (Run)	2000	Sun May 20 2012 12:00 AM	14400	28800	5d 0:00:01
Hold		Fri May 25 2012 12:00 AM			4:59
Sleep		Fri May 25 2012 12:05 AM			8:21:01
Hold		Fri May 25 2012 8:26 AM			5:25
Sleep		Fri May 25 2012 8:31 AM			3:43:40
Hold		Fri May 25 2012 12:15 PM			57:53+

SKC Real Time Monitor

File Tools

Serial Number 36422

May 25, 2012
12:33 PM

Pump Real-Time Monitor


Pump Status: Hold

Flow: 2000

Volume: 14400.13

Run Time: 5d 0:00:04

Total Time: 10d 4:51:25

Battery: 

Flow Calibrate

Approx Correction: 0.0 ml/min

Down Reset Up

☐ Multiple Pumps

Pump Controls

Run Hold

Set Flow

Reset Volume, Temp Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
50.5	76.6	62.7	59.4

Pressure (in-Hg)

27.03	27.59	27.25	27.64
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Units Selection

☒ Fahrenheit ☐ Celsius

☒ in-Hg ☐ millibar ☐ mm-Hg

Fault Options

Time to Fault (sec): 15

Number of Tries: 10

Set Fault Options

Period 75

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20341

Station Location: T-21 (Fire Station)
Field Technician: jj
Pump Type/Model: SKC AirChek 2000
Pump Number: 36484
Sampling Period: 75

Sample ID #: _____
Filter Lot #: 23171-01
Sample Type: TEM
Sample Parent ID #: —

PUMP SETUP DAY

Date: 5/29/2012
Time: 11:25
0904

Timer Beginning Date/Time: 5/30/12-2400
Beginning Flow Rate (L/min): 2
Pump Programmed (Yes / No): yes
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 6-4-12
Time: 1541
Sunny

Timer Ending Date/Time: 6/04/12-2400
Ending Flow Rate (L/min): 2
Total Sample Volume (L): 0.40
Total Sample Time (min): 7200
Atmospheric Pressure (INS): 27.80
Temperature inside station unit (°F): 76.5
Box Temp - 82

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

SIGNATURE: GreggDATE: 6-4-12

TETRA TECH EM INC.

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

TA-20341

Station Location: T-21 (Fire Station)

Sample ID #

Field Technician: jj

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 36484

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-31-12 (jj)

Time: 0755 ()

PUMP FAULT (Yes / No): No

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 3830

Cumulative Sample Time (min): 1915

Atmospheric Pressure (INS): 27.76

Temperature inside station unit (°F): 68.3

Battery voltage reading (volts): 12.67

cloudy

Box Temp - 55

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: Tuesday, June 5, 2012 12:39 PM****Min Temp 53.0F****Max Temp 91.3F****TWA Temp 77.1F****Min Pressure 27.4 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)		Tue May 29 2012 8:54 AM			5:07
Sleep		Tue May 29 2012 9:00 AM			14:59:58
Prog (Run)	2000	Wed May 30 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Mon Jun 4 2012 12:00 AM			4:59
Sleep		Mon Jun 4 2012 12:05 AM			15:36:25
Hold		Mon Jun 4 2012 3:41 PM			5:20
Sleep		Mon Jun 4 2012 3:46 PM			20:30:52
Hold		Tue Jun 5 2012 12:17 PM			21:22+

SKC Real Time Monitor

File Tools

Serial Number 36484

Jun 6, 2012
1:29 PM

Pump Real-Time Monitor


Pump Status: Hold

Flow: 2000

Volume: 14400.13

Run Time: 5d 0:00:04

Total Time: 218d 19:46:31

Battery: 

Flow Calibrate

Approx Correction: -60.0 ml/min

Down Reset Up

☐ Multiple Pumps

Pump Controls

Run Hold

Set Flow

Reset Volume, Temp Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
53.0	91.3	77.1	47.3

Pressure (in-Hg)

27.37	28.04	27.69	27.86
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Units Selection

☒ Fahrenheit ☐ Celsius

☒ in-Hg ☐ millibar ☐ mm-Hg

Fault Options

Time to Fault (sec): 15

Number of Tries: 10

Set Fault Options

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20342

Station Location: T-22 (Troy Office) Sample ID #: _____
Field Technician: jj Filter Lot #: 23171-01
Pump Type/Model: SKC AirChek 2000 Sample Type: TEM
Pump Number: 36444 Sample Parent ID #: _____
Sampling Period: 75

PUMP SETUP DAY

Date: 5/29/2012 Timer Beginning Date/Time: 5/30/12-2400
Time: 0903 Beginning Flow Rate (L/min): 2
Pump Programmed (Yes / No): yes
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 6-4-12 Timer Ending Date/Time: 6/04/12-2400
Time: 1553 Ending Flow Rate (L/min): 2
Total Sample Volume (L): 0FL0
Total Sample Time (min): 7200
Atmospheric Pressure (INS): 27.81
Temperature inside station unit (°F): 70.6

5 sunny
Box Temp - 82
COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)

SIGNATURE: DATE: 6-4-12

TETRA TECH EM INC.

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

TA-20342

Station Location: T-22 (Troy Office)

Sample ID #:

Field Technician: JJ

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 36444

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-31-12 (JJ)

Time: 0803 ()

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 3846

Cumulative Sample Time (min): 1923

Atmospheric Pressure (INS): 27.91

Temperature inside station unit (°F): 63.1

Battery voltage reading (volts): 12.62

cloudy

Box Temp - 55

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, June 5, 2012 12:46 PM****Min Temp 55.5F****Max Temp 86.7F****TWA Temp 71.1F****Min Pressure 27.5 In-Hg****Max Pressure 28.1 In-Hg****TWA Pressure 27.8 In-Hg****Flow Correction Approximately +60.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Tue May 29 2012 8:55 AM			5:10
Sleep		Tue May 29 2012 9:00 AM			14:59:17
Prog (Run)	2000	Wed May 30 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Mon Jun 4 2012 12:00 AM			4:59
Sleep		Mon Jun 4 2012 12:05 AM			15:48:07
Hold		Mon Jun 4 2012 3:53 PM			5:20
Sleep		Mon Jun 4 2012 3:58 PM			20:47:04
Hold		Tue Jun 5 2012 12:45 PM			0:28+

SKC Real Time Monitor

File Tools

Serial Number 36444

Jun 6, 2012
1:32 PM

Pump Real-Time Monitor


Pump Status: Hold

Flow: 2000

Volume: 14400.13

Run Time: 5d 0:00:04

Total Time: 297d 16:08:40

Battery: 

Flow Calibrate

Approx Correction
+60.0 ml/min

Down Reset Up

☐ Multiple Pumps

Pump Controls

Run Hold

Set Flow

Reset Volume, Temp
Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
55.5	86.7	71.1	49.1

Pressure (in-Hg)

27.52	28.11	27.85	27.87
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Units Selection

☒ Fahrenheit ☐ Celsius

☒ in-Hg ☐ millibar ☐ mm-Hg

Fault Options

Time to Fault (sec): 15

Number of Tries: 10

Set Fault Options

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20343

Station Location: T-23 (Iron Creek) Sample ID #: _____
Field Technician: jj Filter Lot #: 23171-01
Pump Type/Model: SKC AirChek 2000 Sample Type: TEM
Pump Number: 36428 Sample Parent ID #: —
Sampling Period: 75

PUMP SETUP DAY

Date: 5/29/2012 Timer Beginning Date/Time: 5/30/12-2400
Time: 0902 Beginning Flow Rate (L/min): 2
Pump Programmed (Yes / No): yes
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 6-4-12 Timer Ending Date/Time: 6/04/12-2400
Time: 1525 Ending Flow Rate (L/min): 2
Total Sample Volume (L): 0FL0
Total Sample Time (min): 7200
Atmospheric Pressure (INS): 27.56
Temperature inside station unit (°F): 81.6

Sunny

Box Temp - 74

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

SIGNATURE: [Signature]DATE: 6-4-12

TETRA TECH EM INC.

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

TA-20343

Station Location: T-23 (Iron Creek)

Sample ID #:

Field Technician: jj

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 36428

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-31-12 (jj)

Time: 0742 ()

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 3805

Cumulative Sample Time (min): 1902

Atmospheric Pressure (INS): 27.48

Temperature inside station unit (°F): 77.6

Battery voltage reading (volts): 12.65

cloudy

Box Temp - 55

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 36428****Date Printed: Tuesday, June 5, 2012 12:44 PM****Min Temp 54.7F****Max Temp 96.3F****TWA Temp 83.8F****Min Pressure 27.1 In-Hg****Max Pressure 27.8 In-Hg****TWA Pressure 27.4 In-Hg****Flow Correction Approximately -30.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Tue May 29 2012 8:57 AM			5:05
Sleep		Tue May 29 2012 9:02 AM			14:57:11
Prog (Run)	2000	Wed May 30 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Mon Jun 4 2012 12:00 AM			4:59
Sleep		Mon Jun 4 2012 12:05 AM			15:20:02
Hold		Mon Jun 4 2012 3:25 PM			5:28
Sleep		Mon Jun 4 2012 3:30 PM			21:10:38
Hold		Tue Jun 5 2012 12:41 PM			2:51+

SKC Real Time Monitor

File Tools

Serial Number 36428

Jun 6, 2012
1:31 PM

Pump Real-Time Monitor


Pump Status: Hold

Flow: 2000

Volume: 14400.13

Run Time: 5d 0:00:04

Total Time: 362d 10:04:22

Battery: 

Flow Calibrate

Approx Correction: -30.0 ml/min

Down Reset Up

☐ Multiple Pumps

Pump Controls

Run Hold

Set Flow

Reset Volume, Temp Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
54.7	96.3	83.8	52.4

Pressure (in-Hg)

27.09	27.82	27.38	27.76
-------	-------	-------	-------

Units Selection

☒ Fahrenheit ☐ Celsius

☒ in-Hg ☐ millibar ☐ mm-Hg

Fault Options

Time to Fault (sec): 15

Number of Tries: 10

Set Fault Options

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S

TA-20344

Station Location: T-23QC(Iron Creek)
Field Technician: jj
Pump Type/Model: SKC AirChek 2000
Pump Number: 36442
Sampling Period: 75

Sample ID #: _____
Filter Lot #: 23171-01
Sample Type: TEM
Sample Parent ID #: TA-20343

PUMP SETUP DAY

Date: 5/29/2012 Timer Beginning Date/Time: 5/30/12-2400
Time: 0901 Beginning Flow Rate (L/min): 2
Pump Programmed (Yes / No): yes
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 6-4-12 Timer Ending Date/Time: 6/04/12-2400
Time: 1526 Ending Flow Rate (L/min): 2
Total Sample Volume (L): 0560
Total Sample Time (min): 7200
Atmospheric Pressure (INS): 27.71
Temperature inside station unit (°F): 73.3

Sunny

Box Temp - 74

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

SIGNATURE: [Signature]DATE: 6-4-12

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

TA-20344

Station Location: T-23QC(Iron Creek)
Field Technician: jj
Pump Type/Model: SKC AirChek 2000
Pump Number: 36442

Sample ID #: _____
Filter Lot #: 23171-01

DAILY CHECK (For each station visit)

(Field Tech Initials)
Date: 5-31-12 (gg)
Time: 0743 ()

PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 3807
Cumulative Sample Time (min): 1903
Atmospheric Pressure (INS): 22.75
Temperature inside station unit (°F): 68.5
Battery voltage reading (volts): _____

cloudy

Box Temp: 55

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 36442****Date Printed: Tuesday, June 5, 2012 12:50 PM****Min Temp N/A****Max Temp N/A****TWA N/A****Min Pressure N/A****Max Pressure N/A****TWA Pressure N/A****Flow Correction Approximately -60.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Tue May 29 2012 8:56 AM			5:09
Sleep		Tue May 29 2012 9:01 AM			14:58:43
Prog (Run)	2000	Wed May 30 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Mon Jun 4 2012 12:00 AM			4:59
Sleep		Mon Jun 4 2012 12:05 AM			15:21:16
Hold		Mon Jun 4 2012 3:26 PM			5:04
Sleep		Mon Jun 4 2012 3:31 PM			
Reset		Sat Jan 1 2000 12:00 AM			
Hold		Sat Jan 1 2000 12:00 AM			0:02
Reset		Sat Jan 1 2000 12:00 AM			
Hold		Sat Jan 1 2000 12:00 AM			4539d 12:49:58+

SKC Real Time Monitor

File Tools

Serial Number 36442

Jan 2, 2000
12:47 AM

Pump Real-Time Monitor


Pump Status: Hold

Flow: 2000

Volume: 0.00

Run Time: 0:00

Total Time: 149d 13:54:15

Battery: 

Flow Calibrate

Approx Correction: -60.0 ml/min

Down Reset Up

☐ Multiple Pumps

Pump Controls

Run Hold

Set Flow

Reset Volume, Temp
Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
N/A	N/A	N/A	47.4

Pressure (in-Hg)

Min	Max	TWA	Ambient
N/A	N/A	N/A	27.91

Units Selection

☒ Fahrenheit ☐ Celsius

☒ in-Hg ☐ millibar ☐ mm-Hg

Fault Options

Time to Fault (sec): 15

Number of Tries: 10

Set Fault Options

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20345

Station Location: T-24 (Jordan)
Field Technician: jj
Pump Type/Model: SKC AirChek 2000
Pump Number: 36422
Sampling Period: 75

Sample ID #: _____
Filter Lot #: 23171-01
Sample Type: TEM
Sample Parent ID #:

PUMP SETUP DAY

Date: 5/29/2012 Timer Beginning Date/Time: 5/30/12-2400
Time: 0900 Beginning Flow Rate (L/min): 2
Pump Programmed (Yes / No): yes
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 6-4-12 Timer Ending Date/Time: 6/04/12-2400
Time: 1511 Ending Flow Rate (L/min): 2
Total Sample Volume (L): 0 FLO
Total Sample Time (min): 7200
Atmospheric Pressure (INS): 27.28
Temperature inside station unit (°F): 65.6
sunny Box Temp - 70

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

SIGNATURE: JordanDATE: 6-4-12

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

ADDITIONAL DAILY CHECK RECORDS

TA-20345

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

Sample ID #:
Filter Lot #: 23171-01

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 5-31-12 (jj)
Time: 0737 ()

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 3294

Cumulative Sample Time (min): 1896

Atmospheric Pressure (INS): 27.44

Temperature inside station unit (°F): 59.8

Battery voltage reading (volts): 12.74

Box Temp = 52

cloudy

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 2 ()
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, June 5, 2012 12:48 PM****Min Temp 54.5F****Max Temp 77.9F****TWA Temp 66.0F****Min Pressure 27.1 In-Hg****Max Pressure 27.7 In-Hg****TWA Pressure 27.4 In-Hg****No Flow Correction**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Tue May 29 2012 8:56 AM			0:35
Hold		Tue May 29 2012 8:57 AM			0:01
Prog (Hold)		Tue May 29 2012 8:57 AM			5:03
Sleep		Tue May 29 2012 9:02 AM			14:57:38
Prog (Run)	2000	Wed May 30 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Mon Jun 4 2012 12:00 AM			4:59
Sleep		Mon Jun 4 2012 12:05 AM			15:06:00
Hold		Mon Jun 4 2012 3:11 PM			5:27
Sleep		Mon Jun 4 2012 3:16 PM			21:30:17
Hold		Tue Jun 5 2012 12:46 PM			1:15+

SKC Real Time Monitor

File Tools

Serial Number 36422

Jun 6, 2012
1:34 PM

Pump Real-Time Monitor

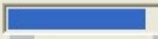
Pump Status: Hold

Flow: 2000

Volume: 14400.13

Run Time: 5d 0:00:04

Total Time: 15d 5:02:50

Battery: 

Flow Calibrate

Approx Correction: 0.0 ml/min

Down Reset Up

☐ Multiple Pumps

Pump Controls

Run Hold

Set Flow

Reset Volume, Temp Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
54.5	77.9	66.0	48.8

Pressure (in-Hg)

27.11	27.66	27.38	27.60
-------	-------	-------	-------

Units Selection

☒ Fahrenheit ☐ Celsius

☒ in-Hg ☐ millibar ☐ mm-Hg

Fault Options

Time to Fault (sec): 15

Number of Tries: 10

Set Fault Options

Period 76

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20348

Station Location: T-22 (Troy Office)

Sample ID #:

Field Technician: jj

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Sample Type: TEM

Pump Number: 36444

Sample Parent ID #:

Sampling Period: 76

PUMP SETUP DAY

Date: 6/8/2012

Timer Beginning Date/Time: 6/9/12-2400

Time: 10:56

Beginning Flow Rate (L/min): 2

Pump Programmed (Yes / No): yes

Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 6-15-12

Timer Ending Date/Time: 6/14/12-2400

Time: 0903

Ending Flow Rate (L/min): 2

Total Sample Volume (L): 0 FLO

Total Sample Time (min): 7200

Atmospheric Pressure (INS): 27.94

Temperature inside station unit (°F): 60.8

Sunnt

Box Temp - 55

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

SIGNATURE:

DATE: 6-15-12

TETRA TECH EM INC.

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

TA-20348

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

Sample ID #:
Filter Lot #: 23171-01

DAILY CHECK (For each station visit)

(Field Tech Initials)
Date: 6-9-12 (jj)
Time: 1302 ()

PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 1565
Cumulative Sample Time (min): 782
Atmospheric Pressure (INS): 27.66
Temperature inside station unit (°F): 60.9
Battery voltage reading (volts): 12.70
Box Temp - 54

cloudy, windy
scattered 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 36444****Date Printed: Friday, June 15, 2012 10:03 AM****Min Temp 53.5F****Max Temp 94.5F****TWA Temp 67.3F****Min Pressure 27.6 In-Hg****Max Pressure 28.1 In-Hg****TWA Pressure 27.8 In-Hg****Flow Correction Approximately +30.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Jun 8 2012 11:54 AM			5:10
Sleep		Fri Jun 8 2012 12:00 PM			11:59:53
Prog (Run)	2000	Sat Jun 9 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Thu Jun 14 2012 12:00 AM			4:59
Sleep		Thu Jun 14 2012 12:05 AM			1d 8:57:47
Hold		Fri Jun 15 2012 9:02 AM			5:22
Sleep		Fri Jun 15 2012 9:08 AM			54:28
Hold		Fri Jun 15 2012 10:02 AM			0:22+

SKC Real Time Monitor

File Tools

Serial Number 36444

Jun 15, 2012
10:04 AM

Pump Real-Time Monitor


Pump Status: Hold

Flow: 2000

Volume: 14400.13

Run Time: 5d 0:00:04

Total Time: 302d 16:19:51

Battery: 

Flow Calibrate

Approx Correction
+30.0 ml/min

Down Reset Up

☐ Multiple Pumps

Pump Controls

Run Hold

Set Flow

Reset Volume, Temp
Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
53.5	94.5	67.3	58.3

Pressure (in-Hg)

27.59	28.11	27.84	28.04
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Units Selection

☒ Fahrenheit ☐ Celsius

☒ in-Hg ☐ millibar ☐ mm-Hg

Fault Options

Time to Fault (sec): 15

Number of Tries: 10

Set Fault Options

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20349

Station Location: T-23 (Iron Creek) Sample ID #: _____
Field Technician: jj Filter Lot #: 23171-01
Pump Type/Model: SKC AirChek 2000 Sample Type: TEM
Pump Number: 36428 Sample Parent ID #: _____
Sampling Period: 76

PUMP SETUP DAY

Date: 6/8/2012 Timer Beginning Date/Time: 6/9/12-2400
Time: 10:55 Beginning Flow Rate (L/min): 2
Pump Programmed (Yes / No): yes
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 6-15-12 Timer Ending Date/Time: 6/14/12-2400
Time: 0838 Ending Flow Rate (L/min): 2
Total Sample Volume (L): 0.540
Total Sample Time (min): 7200
Atmospheric Pressure (INS): 27.62
Temperature inside station unit (°F): 71.7
5400Y Box Temp - 52

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

SIGNATURE: [Signature]DATE: 6-15-12

TETRA TECH EM INC.

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

TA-20349

Station Location: T-23 (Iron Creek)
Field Technician: jj
Pump Type/Model: SKC AirChek 2000
Pump Number: 36428

Sample ID #: _____
Filter Lot #: 23171-01

DAILY CHECK (For each station visit)

(Field Tech Initials)
Date: 6-9-12 (99)
Time: 1241 ()

*cloudy, windy
scattered rain*

PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 1522
Cumulative Sample Time (min): 761
Atmospheric Pressure (INS): 27.17
Temperature inside station unit (°F): 75.9
Battery voltage reading (volts): 12.76
Box Temp - 52

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 36428****Date Printed: Friday, June 15, 2012 10:05 AM****Min Temp 52.8F****Max Temp 105.4F****TWA Temp 82.1F****Min Pressure 27.1 In-Hg****Max Pressure 27.6 In-Hg****TWA Pressure 27.3 In-Hg****Flow Correction Approximately -60.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Jun 8 2012 11:56 AM			5:02
Sleep		Fri Jun 8 2012 12:01 PM			11:58:59
Prog (Run)	2000	Sat Jun 9 2012 12:00 AM	14400	14400	5d 0:00:00
Hold		Thu Jun 14 2012 12:00 AM			4:59
Sleep		Thu Jun 14 2012 12:05 AM			1d 8:32:52
Hold		Fri Jun 15 2012 8:37 AM			5:20
Sleep		Fri Jun 15 2012 8:43 AM			1:21:18
Hold		Fri Jun 15 2012 10:04 AM			0:30+

SKC Real Time Monitor

File Tools

Serial Number 36428

Jun 15, 2012
10:05 AM

Pump Real-Time Monitor


Pump Status: Hold

Flow: 2000

Volume: 14400.10

Run Time: 5d 0:00:03

Total Time: 367d 10:16:38

Battery: 

Flow Calibrate

Approx Correction: -60.0 ml/min

Down Reset Up

☐ Multiple Pumps

Pump Controls

Run Hold

Set Flow

Reset Volume, Temp
Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
52.8	105.4	82.1	56.9

Pressure (in-Hg)

27.09	27.58	27.32	27.96
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Units Selection

☒ Fahrenheit ☐ Celsius

☒ in-Hg ☐ millibar ☐ mm-Hg

Fault Options

Time to Fault (sec): 15

Number of Tries: 10

Set Fault Options

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20350

Station Location: T-24 (Jordan)
Field Technician: jj
Pump Type/Model: SKC AirChek 2000
Pump Number: 36422
Sampling Period: 76

Sample ID #: _____
Filter Lot #: 23171-01
Sample Type: TEM
Sample Parent ID #:

PUMP SETUP DAY

Date: 6/8/2012 Timer Beginning Date/Time: 6/9/12-2400
Time: 1054 Beginning Flow Rate (L/min): 2
Pump Programmed (Yes / No): yes
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 6-15-12 Timer Ending Date/Time: 6/14/12-2400
Time: 0830 Ending Flow Rate (L/min): 2
Total Sample Volume (L): 0FL0
Total Sample Time (min): 7200
Atmospheric Pressure (INS): 27.49
Temperature inside station unit (°F): 60.8
Sunny Box Temp - 56

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

SIGNATURE: Jerry JordanDATE: 6-15-12

TETRA TECH EM INC.

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

TA-20350

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

Sample ID #: _____
 Filter Lot #: 23171-01

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 6-9-12 (99)
 Time: 1230 ()

cloudy, windy
 scattered rain

PUMP FAULT (Yes / No): NOFlow Rate (L/min): 2Cumulative Sample Volume (L): 1500Cumulative Sample Time (min): 750Atmospheric Pressure (INS): 27.15Temperature inside station unit (°F): 60.1Battery voltage reading (volts): 12.68Box Temp - 51

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 6-10-12 (99)
 Time: 0945 ()

cloudy, windy
 scattered rain

PUMP FAULT (Yes / No): NOFlow Rate (L/min): 2Cumulative Sample Volume (L): 4049Cumulative Sample Time (min): 2021Atmospheric Pressure (INS): 27.29Temperature inside station unit (°F): 58.8Battery voltage reading (volts): 12.68Box Temp - 50

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 6-12-12 (99)
 Time: 0851 ()

Sunny

PUMP FAULT (Yes / No): NOFlow Rate (L/min): 2Cumulative Sample Volume (L): 9703Cumulative Sample Time (min): 4851Atmospheric pressure (INS): 27.37Temperature inside station unit (°F): 12.58Battery voltage reading (volts): 60.7Box Temp - 51

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: Friday, June 15, 2012 10:06 AM****Min Temp 53.8F****Max Temp 88.3F****TWA Temp 66.3F****Min Pressure 27.1 In-Hg****Max Pressure 27.7 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)		Fri Jun 8 2012 12:11 PM			5:21
Sleep		Fri Jun 8 2012 12:16 PM			11:43:32
Prog (Run)	2000	Sat Jun 9 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Thu Jun 14 2012 12:00 AM			4:59
Sleep		Thu Jun 14 2012 12:05 AM			1d 8:23:32
Hold		Fri Jun 15 2012 8:28 AM			5:19
Sleep		Fri Jun 15 2012 8:33 AM			1:30:47
Hold		Fri Jun 15 2012 10:04 AM			1:21+

SKC Real Time Monitor

File Tools

Serial Number 36422

Jun 15, 2012
10:07 AM

Pump Real-Time Monitor


Pump Status: Hold

Flow: 2000

Volume: 14400.13

Run Time: 5d 0:00:04

Total Time: 20d 5:30:16

Battery: 

Flow Calibrate

Approx Correction: -20.0 ml/min

Down Reset Up

☐ Multiple Pumps

Pump Controls

Run Hold

Set Flow

Reset Volume, Temp
Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
53.8	88.3	66.3	59.9

Pressure (in-Hg)

27.11	27.74	27.38	27.81
-------	-------	-------	-------

Units Selection

☒ Fahrenheit ☐ Celsius

☒ in-Hg ☐ millibar ☐ mm-Hg

Fault Options

Time to Fault (sec): 15

Number of Tries: 10

Set Fault Options

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA

TA-20351

Station Location: T-24QC(Jordan)
Field Technician: jj
Pump Type/Model: SKC AirChek 2000
Pump Number: ~~36381~~ 36381
Sampling Period: 76

Sample ID #: _____
Filter Lot #: 23171-01
Sample Type: TEM
Sample Parent ID #: _____

TA-20350

PUMP SETUP DAY

Date: 6/8/2012
Time: 1055-0:00

Timer Beginning Date/Time: 6/9/12-2400
Beginning Flow Rate (L/min): 2
Pump Programmed (Yes / No): yes
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 6-15-12
Time: 0828

Timer Ending Date/Time: 6/14/12-2400
Ending Flow Rate (L/min): 2
Total Sample Volume (L): 0FLO
Total Sample Time (min): 6452
Atmospheric Pressure (INS): 27.41
Temperature inside station unit (°F): 57.8
Box Temp - 50

Sunny

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

Pump fault on 6-9-12. Pump not running
when a back restarted. Pump continued
to run throughout rest of sample period.

SIGNATURE: Jim YahrDATE: 6-15-12

TETRA TECH EM INC.

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

TA-20351

Station Location: ~~T-2506 (Iron Creek)~~ T-24-90 Sample ID #:

Field Technician: jj

(Surdan)

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 36442

36381

DAILY CHECK (For each station visit)

(Field Tech Initials)

PUMP FAULT (Yes / No): Yes

Date: 6-9-12 (JP)

Flow Rate (L/min): 2

Time: 1231 ()

Cumulative Sample Volume (L): 8.9

Cumulative Sample Time (min): 4

Atmospheric Pressure (INS): 27.14

Temperature inside station unit (°F): 51.6

Battery voltage reading (volts): 12.93

Box Temp - 51

* Pump fault @ one minute
restarted* Cloudy, windy
scattered rain

DAILY CHECK (For each station visit)

(Field Tech Initials)

PUMP FAULT (Yes / No): NO

Date: 6-10-12 (JP)

Flow Rate (L/min): 2

Time: 0943 ()

Cumulative Sample Volume (L): 2551

Cumulative Sample Time (min): 1276

Atmospheric Pressure (INS): 27.21

Temperature inside station unit (°F): 58.2

Battery voltage reading (volts): 12.76

Box Temp - 50

DAILY CHECK (For each station visit)

(Field Tech Initials)

PUMP FAULT (Yes / No): NO

Date: 6-12-12 (JP)

Flow Rate (L/min): 2

Time: 0853 ()

Cumulative Sample Volume (L): 8211

Cumulative Sample Time (min): 4105

Atmospheric Pressure (INS): 27.26

Temperature inside station unit (°F): 60.2

Battery voltage reading (volts): 12.67

Box Temp - 51

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):

SKC Pump History**SN 36381****Date Printed: Friday, June 15, 2012 10:08 AM****Min Temp 50.7F****Max Temp 86.5F****TWA Temp 66.2F****Min Pressure 27.1 In-Hg****Max Pressure 27.6 In-Hg****TWA Pressure 27.3 In-Hg****No Flow Correction**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Fri Jun 8 2012 12:12 PM			5:07
Sleep		Fri Jun 8 2012 12:17 PM			11:42:53
Prog (Run)	2000	Sat Jun 9 2012 12:00 AM	2.567	2.567	1:17
Low Bat		Sat Jun 9 2012 12:01 AM			0:10
Sleep		Sat Jun 9 2012 12:01 AM			12:27:05
Prog (Hold)		Sat Jun 9 2012 12:28 PM			0:05
Prog (Run)	2000	Sat Jun 9 2012 12:28 PM	12903	12905	4d 11:31:24
Hold		Thu Jun 14 2012 12:00 AM			4:59
Sleep		Thu Jun 14 2012 12:05 AM			1d 8:24:56
Hold		Fri Jun 15 2012 8:29 AM			5:11
Sleep		Fri Jun 15 2012 8:35 AM			1:29:26
Hold		Fri Jun 15 2012 10:04 AM			3:26+

SKC Real Time Monitor

File Tools

Serial Number 36381

Jun 15, 2012
10:08 AM

Pump Real-Time Monitor

Pump Status:

Flow:

Volume:

Run Time:

Total Time:

Battery:

Flow Calibrate

Approx Correction
0.0 ml/min

Down Reset Up

☐ Multiple Pumps

Pump Controls

Run Hold

Set Flow

Reset Volume, Temp
Time and Pressure

Temperatures (F)

Min	Max	TWA	Ambient
50.7	86.5	66.2	60.8

Pressure (in-Hg)

27.08	27.57	27.29	27.73
-------	-------	-------	-------

Units Selection

☒ Fahrenheit ☐ Celsius

☒ in-Hg ☐ millibar ☐ mm-Hg

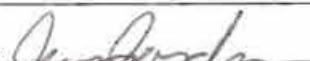
Fault Options

Time to Fault (sec)

Number of Tries

Set Fault Options

Period 77

TETRA TECH EM INC.	
OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S	
TA-20358	
Station Location: <u>Field Blank</u>	Sample ID #: _____
Field Technician: <u>jj</u>	Filter Lot #: <u>23171-01</u>
Pump Type/Model: <u> </u>	Sample Type: <u>TEM</u>
Pump Number: <u> </u>	Sample Parent ID #: <u> </u>
Sampling Period: <u> </u> <u>77</u>	
PUMP SETUP DAY	
Date: <u>6/18/2012</u>	Timer Beginning Date/Time: <u>6/19/2012</u> <u>2400</u>
Time: <u>1344</u>	Beginning Flow Rate (L/min): <u> </u>
	Pump Programmed (Yes / No): <u> </u>
	Bios Calibration Within 10 mL (Yes / No): <u> </u>
PUMP RETRIEVAL DAY	
Date: <u> </u>	Timer Ending Date/Time: <u> </u>
Time: <u> </u>	Ending Flow Rate (L/min): <u> </u>
	Total Sample Volume (L): <u> </u>
	Total Sample Time (min): <u> </u>
	Atmospheric Pressure (INS): <u> </u>
	Temperature inside station unit (°F): <u> </u>
COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)	
SIGNATURE: <u></u>	DATE: <u>6-18-12</u>

TETRA TECH EM INC.	
OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S	
TA-20353	
Station Location: <u>T-21 (Fire Station)</u>	Sample ID #: _____
Field Technician: <u>jj</u>	Filter Lot #: <u>23171-01</u>
Pump Type/Model: <u>SKC AirChek 2000</u>	Sample Type: <u>TEM</u>
Pump Number: <u>36484</u>	Sample Parent ID #: <u> </u>
Sampling Period: <u>77</u>	
PUMP SETUP DAY	
Date: <u>6/18/2012</u>	Timer Beginning Date/Time: <u>6/19/12-2400</u>
Time: <u>13:36</u>	Beginning Flow Rate (L/min): <u>2</u>
	Pump Programmed (Yes / No): <u>yes</u>
	Bios Calibration Within 10 mL (Yes / No): <u>yes</u>
PUMP RETRIEVAL DAY	
Date: <u>6-25-12</u>	Timer Ending Date/Time: <u>6/24/12-2400</u>
Time: <u>11:44</u>	Ending Flow Rate (L/min): <u>2</u>
	Total Sample Volume (L): <u>0.510</u>
	Total Sample Time (min): <u>7200</u>
	Atmospheric Pressure (INS): <u>22.71</u>
	Temperature inside station unit (°F): <u>70</u>
COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)	
SIGNATURE: <u>[Signature]</u>	DATE: <u>6-25-12</u>

TETRA TECH EM INC.

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

TA-20353

Station Location: T-21 (Fire Station)		Sample ID #:
Field Technician: jj		Filter Lot #: 23171-01
Pump Type/Model: SKC AirChek 2000		
Pump Number: 36484		

DAILY CHECK (For each station visit)		
(Field Tech Initials)		PUMP FAULT (Yes / No): NO
Date: 6-19-12 (98)		Flow Rate (L/min): 2
Time: 1030 ()		Cumulative Sample Volume (L): 1260
		Cumulative Sample Time (min): 629
		Atmospheric Pressure (INS): 27.62
		Temperature inside station unit (°F): 73.5
		Battery voltage reading (volts): 12.69
cloudy, windy		Box Temp - 59

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, June 25, 2012 12:58 PM****Min Temp 54.3F****Max Temp 103.7F****TWA Temp 83.1F****Min Pressure 27.4 In-Hg****Max Pressure 28.0 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)		Mon Jun 18 2012 3:03 PM			5:11
Sleep		Mon Jun 18 2012 3:08 PM			8:51:37
Prog (Run)	2000	Tue Jun 19 2012 12:00 AM	14400	14400	5d 0:00:01
Hold		Sun Jun 24 2012 12:00 AM			4:59
Sleep		Sun Jun 24 2012 12:05 AM			1d 11:39:20
Hold		Mon Jun 25 2012 11:44 AM			6:06
Sleep		Mon Jun 25 2012 11:50 AM			1:02:13
Hold		Mon Jun 25 2012 12:52 PM			5:20+

Adobe Reader X

FE5030,FE41...
Instruction ...

Microsoft Access 2010

Print Screen Deluxe

Microsoft Excel 2010

Microsoft Outlook 2010

Device Configurati...

Microsoft PowerPo...

PC200W

Microsoft Word 2010

Roxio Creator Home

Cisco AnyConn...

MSN Installer

ib

SKC Real Time Monitor

File Tools

Serial Number 36484

Jun 25, 2012
1:00 PM

Temperatures (F)

Min	Max	TWA	Ambient
54.3	103.7	83.1	65.7

Pressure (in-Hg)

27.44	27.97	27.66	27.76
-------	-------	-------	-------

Units Selection

☒ Fahrenheit
 ☐ Celsius

☒ in-Hg
 ☐ millibar
 ☐ mm-Hg

Fault Options

Time to Fault (sec) 15

Number of Tries 10

Set Fault Options

Pump Real-Time Monitor

Pump Status

Hold

Flow

2000

Volume

14400.13

Run Time

5d 0:00:04

Total Time

228d 21:31:47

Battery

-

+

Flow Calibrate

Approx Correction

-10.0 ml/min

Down

Reset

Up

☐ Multiple Pumps

Pump Controls

Run

Hold

Set Flow

Reset Volume, Temp
Time and Pressure

TETRA TECH EM INC.	
OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET	
TA-20354	
Station Location: <u>T-21QC(Fire Station)</u>	Sample ID #: _____
Field Technician: <u>jj</u>	Filter Lot #: <u>23171-01</u>
Pump Type/Model: <u>SKC AirChek 2000</u>	Sample Type: <u>TEM</u>
Pump Number: <u>36442</u>	Sample Parent ID #: _____
Sampling Period: <u>77</u>	TA-20353
PUMP SETUP DAY	
Date: <u>6/18/2012</u>	Timer Beginning Date/Time: <u>6/19/12-2400</u>
Time: <u>13:39</u>	Beginning Flow Rate (L/min): <u>2</u>
	Pump Programmed (Yes / No): <u>yes</u>
	Bios Calibration Within 10 mL (Yes / No): <u>yes</u>
PUMP RETRIEVAL DAY	
Date: <u>6-24-12</u>	Timer Ending Date/Time: <u>6/24/12-2400</u>
Time: <u>11:47</u>	Ending Flow Rate (L/min): <u>2</u>
	Total Sample Volume (L): <u>0.10</u>
	Total Sample Time (min): <u>7000</u>
	Atmospheric Pressure (INS): <u>27.4</u>
	Temperature inside station unit (°F): <u>27.2</u>
COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)	
SIGNATURE: <u>[Signature]</u>	DATE: <u>6-24-12</u>

TETRA TECH EM INC.

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

TA-20354

Station Location: T-21QC(Fire Station)
Field Technician: jj
Pump Type/Model: SKC AirChek 2000
Pump Number: 36442

Sample ID #:
Filter Lot #: 23171-01

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 6-19-12 (jj)
Time: 1031 ()

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 1262

Cumulative Sample Time (min): 630

Atmospheric Pressure (INS): 27.47

Temperature inside station unit (°F): 66.0

Battery voltage reading (volts): 12.72

Box Temp: 59

cloudy, windy

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 36381****Date Printed: Monday, June 25, 2012 1:03 PM****Min Temp 56.0F****Max Temp 96.9F****TWA Temp 76.2F****Min Pressure 27.2 In-Hg****Max Pressure 27.8 In-Hg****TWA Pressure 27.5 In-Hg****Flow Correction Approximately -10.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Jun 18 2012 3:06 PM			5:02
Sleep		Mon Jun 18 2012 3:11 PM			8:48:01
Prog (Run)	2000	Tue Jun 19 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Sun Jun 24 2012 12:00 AM			4:59
Sleep		Sun Jun 24 2012 12:05 AM			1d 11:42:07
Hold		Mon Jun 25 2012 11:47 AM			6:01
Sleep		Mon Jun 25 2012 11:53 AM			1:08:23
Hold		Mon Jun 25 2012 1:01 PM			1:28+

TETRA TECH EM INC.	
OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA	
TA-20355	
Station Location: <u>T-22 (Troy Office)</u>	Sample ID #: _____
Field Technician: <u>jj</u>	Filter Lot #: <u>23171-01</u>
Pump Type/Model: <u>SKC AirChek 2000</u>	Sample Type: <u>TEM</u>
Pump Number: <u>36444</u>	Sample Parent ID #: _____
Sampling Period: <u>77</u>	
PUMP SETUP DAY	
Date: <u>6/18/2012</u>	Timer Beginning Date/Time: <u>6/19/12-2400</u>
Time: <u>13:40</u>	Beginning Flow Rate (L/min): <u>2</u>
	Pump Programmed (Yes / No): <u>yes</u>
	Bios Calibration Within 10 mL (Yes / No): <u>yes</u>
PUMP RETRIEVAL DAY	
Date: <u>6-25-12</u>	Timer Ending Date/Time: <u>6/24/12-2400</u>
Time: <u>12:01</u>	Ending Flow Rate (L/min): <u>2</u>
	Total Sample Volume (L): <u>0.10</u>
	Total Sample Time (min): <u>7000</u>
	Atmospheric Pressure (INS): <u>27.80</u>
	Temperature inside station unit (°F): <u>70.8</u>
box Temp 67	
COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)	
SIGNATURE: <u>[Signature]</u>	DATE: <u>6-25</u>

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

TA-20355

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

Sample ID #: _____
Filter Lot #: 23171-01

DAILY CHECK (For each station visit)

(Field Tech Initials)
Date: 6-19-12 (jj)
Time: 1040 ()

PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 1280
Cumulative Sample Time (min): 640
Atmospheric Pressure (INS): 27.81
Temperature inside station unit (°F): 66.1
Battery voltage reading (volts): 12.71
Box Temp = 58

cloudy, windy

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: Monday, June 25, 2012 1:05 PM****Min Temp 55.5F****Max Temp 97.7F****TWA Temp 75.5F****Min Pressure 27.6 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)		Mon Jun 18 2012 3:04 PM			5:06
Sleep		Mon Jun 18 2012 3:09 PM			8:50:20
Prog (Run)	2000	Tue Jun 19 2012 12:00 AM	14400	14400	5d 0:00:01
Hold		Sun Jun 24 2012 12:00 AM			4:59
Sleep		Sun Jun 24 2012 12:05 AM			1d 11:56:01
Hold		Mon Jun 25 2012 12:01 PM			5:32
Sleep		Mon Jun 25 2012 12:06 PM			57:58
Hold		Mon Jun 25 2012 1:04 PM			0:28+

TETRA TECH EM INC.

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

TA-20356

Station Location: T-23 (Iron Creek)
Field Technician: jj
Pump Type/Model: SKC AirChek 2000
Pump Number: 36428

Sample ID #: _____
Filter Lot #: 23171-01

DAILY CHECK (For each station visit)

(Field Tech Initials)
Date: 6-19-12 (jj)
Time: 1018 ()

PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 1236
Cumulative Sample Time (min): 618
Atmospheric Pressure (INS): 27.28
Temperature inside station unit (°F): 82.4
Battery voltage reading (volts): 12.75
Box Temp - 57

cloudy, windy

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 36428****Date Printed: Monday, June 25, 2012 1:08 PM****Min Temp 54.1F****Max Temp 106.1F****TWA Temp 89.6F****Min Pressure 27.0 In-Hg****Max Pressure 27.7 In-Hg****TWA Pressure 27.3 In-Hg****Flow Correction Approximately -50.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Mon Jun 18 2012 3:05 PM			5:03
Sleep		Mon Jun 18 2012 3:10 PM			8:49:39
Prog (Run)	2000	Tue Jun 19 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Sun Jun 24 2012 12:00 AM			4:59
Sleep		Sun Jun 24 2012 12:05 AM			1d 11:20:02
Hold		Mon Jun 25 2012 11:25 AM			7:01
Sleep		Mon Jun 25 2012 11:32 AM			1:34:23
Hold		Mon Jun 25 2012 1:06 PM			1:33+

TETRA TECH EM INC.	
OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET	
TA-20357	
Station Location: <u>T-24 (Jordan)</u>	Sample ID #: _____
Field Technician: <u>jj - Jm</u>	Filter Lot #: <u>23171-01</u>
Pump Type/Model: <u>SKC AirChek 2000</u>	Sample Type: <u>TEM</u>
Pump Number: <u>36422</u>	Sample Parent ID #: <u>~</u>
Sampling Period: <u>77</u>	
PUMP SETUP DAY	
Date: <u>6/18/2012</u>	Timer Beginning Date/Time: <u>6/19/12-2400</u>
Time: <u>13:42</u>	Beginning Flow Rate (L/min): <u>2</u>
	Pump Programmed (Yes / No): <u>yes</u>
	Bios Calibration Within 10 mL (Yes / No): <u>yes</u>
PUMP RETRIEVAL DAY	
Date: <u>6-25-12</u>	Timer Ending Date/Time: <u>6/24/12-2400</u>
Time: <u>0903</u>	Ending Flow Rate (L/min): <u>2</u>
	Total Sample Volume (L): <u>0.640</u>
	Total Sample Time (min): <u>7200</u>
	Atmospheric Pressure (INS): <u>27.37</u>
	Temperature inside station unit (°F): <u>69.8</u>
COMMENTS: (Please note all photographs taken, major storm events, vandalism, and reason for pump fault)	
SIGNATURE: <u>[Signature]</u>	DATE: <u>6-25-12</u>

TETRA TECH EM INC.

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

TA-20357

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

Sample ID #: _____
Filter Lot #: 23171-01

DAILY CHECK (For each station visit)

(Field Tech Initials)
Date: 6-19-12 (gg)
Time: 1011 ()

PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 1223
Cumulative Sample Time (min): 611
Atmospheric Pressure (INS): 27.29
Temperature inside station unit (°F): 62.7
Battery voltage reading (volts): 12.82
Box Temp - 56

cloudy, windy

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, June 25, 2012 1:10 PM****Min Temp 55.1F****Max Temp 91.5F****TWA Temp 71.4F****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 Jun 18 2012 3:06 PM			5:08
Sleep		Mon Jun 18 2012 3:11 PM			8:48:37
Prog (Run)	2000	Tue Jun 19 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Sun Jun 24 2012 12:00 AM			4:59
Sleep		Sun Jun 24 2012 12:05 AM			1d 8:58:04
Hold		Mon Jun 25 2012 9:03 AM			5:24
Sleep		Mon Jun 25 2012 9:08 AM			4:01:05
Hold		Mon Jun 25 2012 1:09 PM			0:26+

Period 78

TETRA TECH EM INC.

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

TA-20359

Station Location: T-21 (Fire Station)

Sample ID #:

Field Technician: jj

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 36484

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 6-29-12 (jj)

Time: 11:38 (jj)

PUMP FAULT (Yes / No): NO

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 1597

Cumulative Sample Time (min): 698

Atmospheric Pressure (INS): 29.85

Temperature inside station unit (°F): 72.3

Battery voltage reading (volts): 9.3

Partly cloudy

Box Temp - 80

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: Friday, July 6, 2012 2:23 PM****Min Temp 57.5F****Max Temp 103.0F****TWA Temp 86.1F****Min Pressure 27.4 In-Hg****Max Pressure 27.9 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)		Thu Jun 28 2012 8:55 AM			5:45
Sleep		Thu Jun 28 2012 9:00 AM			14:59:03
Prog (Run)	2000	Fri Jun 29 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Wed Jul 4 2012 12:00 AM			4:59
Sleep		Wed Jul 4 2012 12:05 AM			1d 23:54:59
Hold		Fri Jul 6 2012 12:00 AM			4:58
Sleep		Fri Jul 6 2012 12:04 AM			13:11:47
Hold		Fri Jul 6 2012 1:16 PM			5:20
Sleep		Fri Jul 6 2012 1:22 PM			55:23
Hold		Fri Jul 6 2012 2:17 PM			5:32+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S

TA-20360

Station Location: T-22 (Troy Office)	Sample ID #: _____
Field Technician: jj	Filter Lot #: 23171-01
Pump Type/Model: SKC AirChek 2000	Sample Type: TEM
Pump Number: 36444	Sample Parent ID #: _____
Sampling Period: 78	

PUMP SETUP DAY

Date: 6/28/2012	Timer Beginning Date/Time: 6/29/2012 2400
Time: 8:18	Beginning Flow Rate (L/min): 2
	Pump Programmed (Yes / No): yes
	Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 7/6/12	Timer Ending Date/Time: 7/4/2012 2400
Time: 13:33	Ending Flow Rate (L/min): 2
	Total Sample Volume (L): 0.510
	Total Sample Time (min): 72.00
	Atmospheric Pressure (INS): 28.11
	Temperature inside station unit (°F): 71.3

Box Temp

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

Event ID TAA-101810

SIGNATURE: 

DATE: 7/6/12

TETRA TECH EM INC.

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

TA-20360

Station Location: T-22 (Troy Office)

Sample ID #:

Field Technician: jj

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 36444

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 6-29-12 (TM)

Time: 10:54 ()

PUMP FAULT (Yes / No): no

Flow Rate (L/min): 0

Cumulative Sample Volume (L): 14.83

Cumulative Sample Time (min): 74.1

Atmospheric Pressure (INS): 29.22

Temperature inside station unit (°F): 73.6

Battery voltage reading (volts): 12.73

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: Friday, July 6, 2012 2:26 PM****Min Temp 57.4F****Max Temp 97.7F****TWA Temp 80.4F****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)		Thu Jun 28 2012 9:00 AM			5:09
Sleep		Thu Jun 28 2012 9:05 AM			14:54:44
Prog (Run)	2000	Fri Jun 29 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Wed Jul 4 2012 12:00 AM			4:59
Sleep		Wed Jul 4 2012 12:05 AM			1d 23:54:59
Hold		Fri Jul 6 2012 12:00 AM			4:58
Sleep		Fri Jul 6 2012 12:04 AM			13:28:39
Hold		Fri Jul 6 2012 1:33 PM			5:18
Sleep		Fri Jul 6 2012 1:38 PM			39:16
Hold		Fri Jul 6 2012 2:18 PM			4:58
Sleep		Fri Jul 6 2012 2:23 PM			2:12
Hold		Fri Jul 6 2012 2:25 PM			0:39+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S

TA-20361

Station Location: T-22QC(troyoffice)
 Field Technician: jj
 Pump Type/Model: SKC AirChek 2000
 Pump Number: 36442
 Sampling Period: 78

Sample ID #: _____
 Filter Lot #: 23171-01
 Sample Type: TEM
 Sample Parent ID: TA-20360

PUMP SETUP DAY

Date: 6/28/2012
 Time: 8:16

Timer Beginning Date/Time: 6/29/12-2400
 Beginning Flow Rate (L/min): 2
 Pump Programmed (Yes / No): yes
 Bios Calibration Within 10 mL (Yes / No) yes

PUMP RETRIEVAL DAY

Date: 7/4/12
 Time: 12:40

Timer Ending Date/Time: 7/4/2012 2400
 Ending Flow Rate (L/min): 2
 Total Sample Volume (L): 0.710
 Total Sample Time (min): 7200
 Atmospheric Pressure (INS): 27.78
 Temperature inside station unit (°F): 72

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

Event ID TAA-101810

SIGNATURE: [Signature]DATE: 7/4/12

TETRA TECH EM INC.

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

TA-20361

Station Location: T-22QC(troy office)
Field Technician: jj
Pump Type/Model: SKC AirChek 2000
Pump Number: 36442

Sample ID #:
Filter Lot #: 23171-01

DAILY CHECK (For each station visit)

(Field Tech Initials)
Date: 6-27-12 (jm)
Time: 12:30 ()

PUMP FAULT (Yes / No): no
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 1.419
Cumulative Sample Time (min): 7:11
Atmospheric Pressure (INS): 27.67
Temperature inside station unit (°F): 66.8
Battery voltage reading (volts): 12.83

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 36381****Date Printed: Friday, July 6, 2012 2:34 PM****Min Temp 57.3F****Max Temp 98.9F****TWA Temp 82.3F****Min Pressure 27.3 In-Hg****Max Pressure 27.7 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)		Thu Jun 28 2012 8:59 AM			5:03
Sleep		Thu Jun 28 2012 9:04 AM			14:55:35
Prog (Run)	2000	Fri Jun 29 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Wed Jul 4 2012 12:00 AM			4:59
Sleep		Wed Jul 4 2012 12:05 AM			1d 23:54:59
Hold		Fri Jul 6 2012 12:00 AM			4:58
Sleep		Fri Jul 6 2012 12:04 AM			13:35:24
Hold		Fri Jul 6 2012 1:40 PM			5:21
Sleep		Fri Jul 6 2012 1:45 PM			32:50
Hold		Fri Jul 6 2012 2:18 PM			4:58
Sleep		Fri Jul 6 2012 2:23 PM			9:50
Hold		Fri Jul 6 2012 2:33 PM			0:39+

TETRA TECH EM INC.

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

TA-20362

Station Location: T-23 (Iron Creek)

Sample ID #:

Field Technician: jj

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 36428

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 6-29-12 (jm)

Time: 11:51 (jm)

PUMP FAULT (Yes / No): No

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 11/23

Cumulative Sample Time (min): 71

Atmospheric Pressure (INS): 27.50

Temperature inside station unit (°F): 90.8

Battery voltage reading (volts): 11.75

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 36428****Date Printed: Friday, July 6, 2012 2:31 PM****Min Temp 61.2F****Max Temp 109.4F****TWA Temp 91.5F****Min Pressure 27.0 In-Hg****Max Pressure 27.7 In-Hg****TWA Pressure 27.3 In-Hg****Flow Correction Approximately -50.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Thu Jun 28 2012 9:00 AM			5:05
Sleep		Thu Jun 28 2012 9:05 AM			14:54:11
Prog (Run)	2000	Fri Jun 29 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Wed Jul 4 2012 12:00 AM			4:59
Sleep		Wed Jul 4 2012 12:05 AM			1d 23:54:59
Hold		Fri Jul 6 2012 12:00 AM			4:58
Sleep		Fri Jul 6 2012 12:04 AM			12:55:37
Hold		Fri Jul 6 2012 1:00 PM			5:45
Sleep		Fri Jul 6 2012 1:06 PM			1:12:01
Hold		Fri Jul 6 2012 2:18 PM			4:57
Sleep		Fri Jul 6 2012 2:23 PM			6:25
Hold		Fri Jul 6 2012 2:29 PM			1:17+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA S

TA-20363

Station Location: T-24 (Jordan)
 Field Technician: jj
 Pump Type/Model: SKC AirChek 2000
 Pump Number: 36422
 Sampling Period: 78

Sample ID #: _____
 Filter Lot #: 23171-01
 Sample Type: TEM
 Sample Parent ID #: _____

PUMP SETUP DAY

Date: 6/28/2012
 Time: 8:19

Timer Beginning Date/Time: 6/29/2012 2400
 Beginning Flow Rate (L/min): 2
 Pump Programmed (Yes / No): yes
 Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 7/4/12
 Time: 12:17

Timer Ending Date/Time: 7/4/2012 2400
 Ending Flow Rate (L/min): 2
 Total Sample Volume (L): 21.10
 Total Sample Time (min): 7300
 Atmospheric Pressure (INS): 27.63
 Temperature inside station unit (°F): 68

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

Event ID TAA-101810

SIGNATURE: [Signature]DATE: 7/4/12

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

TA-20363

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

Sample ID #: _____
Filter Lot #: 23171-01

DAILY CHECK (For each station visit)

(Field Tech Initials)
Date: 6-29-12 (Tm) ()
Time: 1110 ()

PUMP FAULT (Yes / No): NO
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 1340
Cumulative Sample Time (min): 670
Atmospheric Pressure (INS): 27.52
Temperature inside station unit (°F): 75.6
Battery voltage reading (volts): 12.85

Partly cloudy

Box Temp = 64

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: Friday, July 6, 2012 2:33 PM****Min Temp 57.1F****Max Temp 92.8F****TWA Temp 74.9F****Min Pressure 27.2 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)		Thu Jun 28 2012 9:01 AM			5:12
Sleep		Thu Jun 28 2012 9:06 AM			14:53:34
Prog (Run)	2000	Fri Jun 29 2012 12:00 AM	14400	14400	5d 0:00:01
Hold		Wed Jul 4 2012 12:00 AM			4:59
Sleep		Wed Jul 4 2012 12:05 AM			1d 23:55:00
Hold		Fri Jul 6 2012 12:00 AM			4:57
Sleep		Fri Jul 6 2012 12:04 AM			12:42:13
Hold		Fri Jul 6 2012 12:47 PM			5:44
Sleep		Fri Jul 6 2012 12:52 PM			1:25:38
Hold		Fri Jul 6 2012 2:18 PM			5:02
Sleep		Fri Jul 6 2012 2:23 PM			8:42
Hold		Fri Jul 6 2012 2:32 PM			0:43+

[illegible]

Period 79

TETRA TECH EM INC. OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET (FSDS) ADDITIONAL DAILY CHECK RECORDS	
Station Location: Field Blank Field Technician: _____ Pump Type/Model: _____ Pump Number: _____	Sample ID #: TA- Filter Lot #: _____
DAILY CHECK (For each station visit) <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> (Field Tech Initials) Date: _____ () Time: _____ () </div> <div style="width: 50%;"> 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): _____ </div> </div>	
DAILY CHECK (For each station visit) <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> (Field Tech Initials) Date: _____ () Time: _____ () </div> <div style="width: 50%;"> 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): _____ </div> </div>	
DAILY CHECK (For each station visit) <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> (Field Tech Initials) Date: _____ () Time: _____ () </div> <div style="width: 50%;"> 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): _____ </div> </div>	
DAILY CHECK (For each station visit) <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> (Field Tech Initials) Date: _____ () Time: _____ () </div> <div style="width: 50%;"> 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): _____ </div> </div>	
DAILY CHECK (For each station visit) <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> (Field Tech Initials) Date: _____ () Time: _____ () </div> <div style="width: 50%;"> 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): _____ </div> </div>	

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

TA-20365

Station Location: T-21 (Fire Station)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Sample Type: TEM

Pump Number: 36484

Sample Parent ID #:

Sampling Period: 79

PUMP SETUP DAY

Date: 7/9/2012

Time: 12:00

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

Beginning Flow Rate (L/min): 2

Pump Programmed (Yes / No): yes

Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 7/13/12

Time: 11:23

Timer Ending Date/Time: 7/14/2012 2400

Ending Flow Rate (L/min): 2

Total Sample Volume (L): 5.10

Total Sample Time (min): 7200

Atmospheric Pressure (INS): 27.77

Temperature inside station unit (°F): 87.0

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

Event ID TAA-101810

SIGNATURE: Kenneth M. Up

DATE:

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

TA-20365

ADDITIONAL DAILY CHECK RECORDS

Station Location: T-21 (Fire Station)

Sample ID #: TA-

Field Technician: JJ

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 36484

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/10/12 (JJ)

Time: 8:08 ()

Sunny

PUMP FAULT (Yes / No): No

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 1015

Cumulative Sample Time (min): 507

Atmospheric Pressure (INS): 27.82

Temperature inside station unit (°F): 70.6

Battery voltage reading (volts): 12.76

bore temp 70

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/11/12 (JJ)

Time: 9:41 ()

Sunny

PUMP FAULT (Yes / No): No

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 1041

Cumulative Sample Time (min): 2020

Atmospheric Pressure (INS): 27.81

Temperature inside station unit (°F): 72.1

Battery voltage reading (volts): 12.64

bore temp 85

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/13/12 (JJ)

Time: 2:12 ()

Sunny

PUMP FAULT (Yes / No): No

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 9771

Cumulative Sample Time (min): 4785

Atmospheric Pressure (INS): 27.77

Temperature inside station unit (°F): 70.3

Battery voltage reading (volts): 12.43

bore temp 70

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: Tuesday, July 17, 2012 8:27 AM****Min Temp 73.8F****Max Temp 116.1F****TWA Temp 96.3F****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)		Thu Jun 28 2012 8:55 AM			5:45
Sleep		Thu Jun 28 2012 9:00 AM			14:59:03
Prog (Run)	2000	Fri Jun 29 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Wed Jul 4 2012 12:00 AM			4:59
Sleep		Wed Jul 4 2012 12:05 AM			1d 23:54:59
Hold		Fri Jul 6 2012 12:00 AM			4:58
Sleep		Fri Jul 6 2012 12:04 AM			13:11:47
Hold		Fri Jul 6 2012 1:16 PM			5:20
Sleep		Fri Jul 6 2012 1:22 PM			55:23
Hold		Fri Jul 6 2012 2:17 PM			12:20
Sleep		Fri Jul 6 2012 2:29 PM			2d 19:54:31
Hold		Mon Jul 9 2012 10:24 AM			1:51
Flow	2000	Mon Jul 9 2012 10:26 AM	2.100	14402	1:03
Hold		Mon Jul 9 2012 10:27 AM			2:27
Flow	2000	Mon Jul 9 2012 10:29 AM	2.933	14405	1:28
Hold		Mon Jul 9 2012 10:31 AM			6:37
Flow	2000	Mon Jul 9 2012 10:37 AM	8.600	14414	4:18
Prog (Hold)		Mon Jul 9 2012 10:42 AM			5:05
Sleep		Mon Jul 9 2012 10:47 AM			13:12:52
Prog (Run)	2000	Tue Jul 10 2012 12:00 AM	14400	28814	5d 0:00:02
Hold		Sun Jul 15 2012 12:00 AM			4:59
Sleep		Sun Jul 15 2012 12:05 AM			1d 11:20:23
Hold		Mon Jul 16 2012 11:25 AM			5:26
Sleep		Mon Jul 16 2012 11:30 AM			12:29:10
Hold		Tue Jul 17 2012 12:00 AM			4:58
Sleep		Tue Jul 17 2012 12:04 AM			8:16:30
Hold		Tue Jul 17 2012 8:21 AM			5:32+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

TA-20366

Station Location: T-22 (Troy Office)
Field Technician: TM
Pump Type/Model: SKC AirChek 2000
Pump Number: 36444
Sampling Period: 79

Sample ID #: TA-
Filter Lot #: 23171-01
Sample Type: TEM
Sample Parent ID #:

PUMP SETUP DAY

Date: 7/9/2012
Time: 12:00

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

PUMP RETRIEVAL DAY

Date: 7/10/12
Time: 12:00

Timer Ending Date/Time: 7/14/2012 2400
Ending Flow Rate (L/min): 2
Total Sample Volume (L): 0.510
Total Sample Time (min): 7200
Atmospheric Pressure (INS): 27.73
Temperature inside station unit (°F): 81.8

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

Event ID TAA-101810

SIGNATURE: [Signature]DATE: 7/17/12

TETRA TECH EM INC. OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET (FSDS) ADDITIONAL DAILY CHECK RECORDS			
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 #: <u>TA-</u> Filter Lot #: <u>23171-01</u>	
DAILY CHECK (For each station visit)			
(Field Tech Initials) Date: <u>7/10/12</u> (<u>mm</u>) Time: <u>11:00</u> ()		PUMP FAULT (Yes / No): <u>no</u> Flow Rate (L/min): <u>2</u> Cumulative Sample Volume (L): <u>111</u> Cumulative Sample Time (min): <u>555</u> Atmospheric Pressure (INS): <u>29.78</u> Temperature inside station unit (°F): <u>70.5</u> Battery voltage reading (volts): <u>12.27</u>	
DAILY CHECK (For each station visit)			
(Field Tech Initials) Date: <u>7/12/12</u> (<u>mm</u>) Time: <u>11:01</u> ()		PUMP FAULT (Yes / No): <u>no</u> Flow Rate (L/min): <u>2</u> Cumulative Sample Volume (L): <u>112</u> Cumulative Sample Time (min): <u>557</u> Atmospheric Pressure (INS): <u>29.78</u> Temperature inside station unit (°F): <u>70.5</u> Battery voltage reading (volts): <u>12.31</u>	
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, July 17, 2012 8:32 AM****Min Temp 70.4F****Max Temp 111.4F****TWA Temp 91.0F****Min Pressure 27.8 In-Hg****Max Pressure 28.1 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)		Thu Jun 28 2012 9:00 AM			5:09
Sleep		Thu Jun 28 2012 9:05 AM			14:54:44
Prog (Run)	2000	Fri Jun 29 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Wed Jul 4 2012 12:00 AM			4:59
Sleep		Wed Jul 4 2012 12:05 AM			1d 23:54:59
Hold		Fri Jul 6 2012 12:00 AM			4:58
Sleep		Fri Jul 6 2012 12:04 AM			13:28:39
Hold		Fri Jul 6 2012 1:33 PM			5:18
Sleep		Fri Jul 6 2012 1:38 PM			39:16
Hold		Fri Jul 6 2012 2:18 PM			4:58
Sleep		Fri Jul 6 2012 2:23 PM			2:12
Hold		Fri Jul 6 2012 2:25 PM			8:49
Sleep		Fri Jul 6 2012 2:34 PM			2d 19:52:51
Hold		Mon Jul 9 2012 10:27 AM			0:06
Flow	2000	Mon Jul 9 2012 10:27 AM	12.37	14412	6:11
Hold		Mon Jul 9 2012 10:33 AM			3:45
Flow	2000	Mon Jul 9 2012 10:37 AM	0.333	14413	0:10
Hold		Mon Jul 9 2012 10:37 AM			4:58
Flow	2000	Mon Jul 9 2012 10:42 AM	1.900	14415	0:57
Prog (Hold)		Mon Jul 9 2012 10:43 AM			5:04
Sleep		Mon Jul 9 2012 10:48 AM			13:11:49
Prog (Run)	2000	Tue Jul 10 2012 12:00 AM	14400	28815	5d 0:00:01
Hold		Sun Jul 15 2012 12:00 AM			4:59
Sleep		Sun Jul 15 2012 12:05 AM			1d 11:58:33
Hold		Mon Jul 16 2012 12:03 PM			5:25
Sleep		Mon Jul 16 2012 12:08 PM			11:51:01
Hold		Tue Jul 17 2012 12:00 AM			4:58
Sleep		Tue Jul 17 2012 12:04 AM			8:25:32
Hold		Tue Jul 17 2012 8:30 AM			1:30+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

TA-20367

Station Location: T-23 (Iron Creek)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Sample Type: TEM

Pump Number: 36428

Sample Parent ID #:

Sampling Period: 79

PUMP SETUP DAY

Date: 7/9/2012

Timer Beginning Date/Time: 7/10/2012 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: 7/10/12

Timer Ending Date/Time: 7/14/2012 2400

Time: 12:00

Ending Flow Rate (L/min): 2

Total Sample Volume (L):

Total Sample Time (min):

Atmospheric Pressure (INS): 27.67

Temperature inside station unit (°F): 37.3

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

tried to restart pump but after a few min it would
 turn it off

Event ID TAA-101810

SIGNATURE: *[Signature]*

DATE: 7/10/12

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

ADDITIONAL DAILY CHECK RECORDS

TA-20367

Station Location: T-23 (Iron Creek)

Sample ID #: TA-

Field Technician: JJ

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 36428

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/19/12 (JJ)

Time: ()

Did not turn on

PUMP FAULT (Yes / No): Yes

Flow Rate (L/min): 2

Cumulative Sample Volume (L):

Cumulative Sample Time (min):

Atmospheric Pressure (INS)

Temperature inside station unit (°F):

Battery voltage reading (volts):

Box temp 87

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/19/12 (JJ)

Time: ()

Did not stay on

PUMP FAULT (Yes / No): Yes

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 87

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 36428****Date Printed: Tuesday, July 17, 2012 8:34 AM****Min Temp N/A****Max Temp N/A****TWA N/A****Min Pressure N/A****Max Pressure N/A****TWA Pressure N/A****Flow Correction Approximately -50.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Flow	2000	Tue Jul 10 2012 9:47 AM	0.067	0.067	0:02
Reset		Tue Jul 10 2012 9:48 AM			0:01
Flow	2000	Tue Jul 10 2012 9:48 AM	0.000	0.067	
Reset		Tue Jul 10 2012 9:48 AM			0:01
Flow	2000	Tue Jul 10 2012 9:48 AM	0.033	0.100	0:01
Reset		Tue Jul 10 2012 9:48 AM			0:01
Flow	2000	Tue Jul 10 2012 9:48 AM	0.033	0.133	0:01
Reset		Tue Jul 10 2012 9:48 AM			
Flow	2000	Tue Jul 10 2012 9:48 AM	0.033	0.166	0:01
Reset		Tue Jul 10 2012 9:48 AM			0:01
Flow	2000	Tue Jul 10 2012 9:48 AM	0.033	0.199	0:01
Reset		Tue Jul 10 2012 9:48 AM			0:01
Flow	2000	Tue Jul 10 2012 9:48 AM	0.033	0.232	0:01
Reset		Tue Jul 10 2012 9:48 AM			0:01
Flow	2000	Tue Jul 10 2012 9:48 AM	0.000	0.232	
Reset		Tue Jul 10 2012 9:48 AM			0:01
Flow	2000	Tue Jul 10 2012 9:48 AM	0.033	0.265	0:01
Reset		Tue Jul 10 2012 9:48 AM			0:03
Hold		Tue Jul 10 2012 9:48 AM			4:57
Sleep		Tue Jul 10 2012 9:53 AM			1d 0:01:04
Hold		Wed Jul 11 2012 9:54 AM			0:02
Flow	2000	Wed Jul 11 2012 9:54 AM	0.467	0.732	0:14
Low Bat		Wed Jul 11 2012 9:54 AM			0:10
Sleep		Wed Jul 11 2012 9:54 AM			0:02
Hold		Wed Jul 11 2012 9:54 AM			0:08
Flow	2000	Wed Jul 11 2012 9:54 AM	1.233	1.965	0:37
Reset		Wed Jul 11 2012 9:55 AM			0:01
Flow	2000	Wed Jul 11 2012 9:55 AM	0.033	1.998	0:01
Reset		Wed Jul 11 2012 9:55 AM			0:01
Flow	2000	Wed Jul 11 2012 9:55 AM	0.033	2.031	0:01
Reset		Wed Jul 11 2012 9:55 AM			0:01
Flow	2000	Wed Jul 11 2012 9:55 AM	0.000	2.031	
Reset		Wed Jul 11 2012 9:55 AM			0:01
Flow	2000	Wed Jul 11 2012 9:55 AM	0.067	2.098	0:02
Reset		Wed Jul 11 2012 9:55 AM			0:03
Hold		Wed Jul 11 2012 9:55 AM			4:57
Sleep		Wed Jul 11 2012 10:00 AM			5d 1:39:09
Hold		Mon Jul 16 2012 11:39 AM			5:40
Sleep		Mon Jul 16 2012 11:45 AM			20:47:05
Hold		Tue Jul 17 2012 8:32 AM			1:28+

TETRA TECH EM INC.

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

TA-20368

Station Location: T-23QC(IronCreek)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Sample Type: TEM

Pump Number: 36442

Sample Parent ID #: TA-20367

Sampling Period: 79

PUMP SETUP DAY

Date: 7/9/2012

Time: 12:00

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

Beginning Flow Rate (L/min): 2

Pump Programmed (Yes / No): yes

Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 7/10/12

Time: 11:40

Timer Ending Date/Time: 7/14/2012 2400

Ending Flow Rate (L/min): 2

Total Sample Volume (L):

Total Sample Time (min): 1700

Atmospheric Pressure (INS): 27.45

Temperature inside station unit (°F): 75.1

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

tried to turn pump on but it stopped after a few min.

Event ID TAA-101810

SIGNATURE: *[Signature]*

DATE: 7/10/12

TETRA TECH EM INC.

OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

TA-20368

ADDITIONAL DAILY CHECK RECORDS

Station Location: T-22QC(troy office)		Sample ID #: TA-
Field Technician: JJ		Filter Lot #: 23171-01
Pump Type/Model: SKC AirChek 2000		
Pump Number: 36442		

DAILY CHECK (For each station visit)		
(Field Tech Initials)		PUMP FAULT (Yes / No):
Date: 7/10/12	(JJ)	Flow Rate (L/min):
Time: 8:42	()	Cumulative Sample Volume (L):
Sunny, partly cloudy		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: 7/10/12	(JJ)	Flow Rate (L/min):
Time: 9:52	()	Cumulative Sample Volume (L):
Sunny		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: 7/10/12	(JJ)	Flow Rate (L/min):
Time: 10:24	()	Cumulative Sample Volume (L):
pump stopped		Cumulative Sample Time (min):
Sunny		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 36381****Date Printed: Tuesday, July 17, 2012 8:39 AM****Min Temp 73.5F****Max Temp 106.7F****TWA Temp 89.3F****Min Pressure 27.4 In-Hg****Max Pressure 27.7 In-Hg****TWA Pressure 27.5 In-Hg****No Flow Correction**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Prog (Hold)		Thu Jun 28 2012 8:59 AM			5:03
Sleep		Thu Jun 28 2012 9:04 AM			14:55:35
Prog (Run)	2000	Fri Jun 29 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Wed Jul 4 2012 12:00 AM			4:59
Sleep		Wed Jul 4 2012 12:05 AM			1d 23:54:59
Hold		Fri Jul 6 2012 12:00 AM			4:58
Sleep		Fri Jul 6 2012 12:04 AM			13:35:24
Hold		Fri Jul 6 2012 1:40 PM			5:21
Sleep		Fri Jul 6 2012 1:45 PM			32:50
Hold		Fri Jul 6 2012 2:18 PM			4:58
Sleep		Fri Jul 6 2012 2:23 PM			9:50
Hold		Fri Jul 6 2012 2:33 PM			6:14
Sleep		Fri Jul 6 2012 2:39 PM			2d 19:47:39
Hold		Mon Jul 9 2012 10:27 AM			0:04
Flow	2000	Mon Jul 9 2012 10:27 AM	11.60	14412	5:48
Hold		Mon Jul 9 2012 10:33 AM			2:15
Flow	2000	Mon Jul 9 2012 10:35 AM	0.333	14412	0:10
Flow Adjust		Mon Jul 9 2012 10:35 AM			1:09
Flow	2030	Mon Jul 9 2012 10:36 AM	0.068	14412	0:02
Hold		Mon Jul 9 2012 10:36 AM			4:59
Sleep		Mon Jul 9 2012 10:41 AM			2:27
Hold		Mon Jul 9 2012 10:44 AM			0:08
Flow	2030	Mon Jul 9 2012 10:44 AM	0.203	14412	0:06
Prog (Hold)		Mon Jul 9 2012 10:44 AM			5:04
Sleep		Mon Jul 9 2012 10:49 AM			13:10:34
Prog (Run)	2000	Tue Jul 10 2012 12:00 AM	8673	23085	3d 0:16:32
Low Bat		Fri Jul 13 2012 12:16 AM			0:09
Sleep		Fri Jul 13 2012 12:16 AM			10:19:08
Prog (Hold)		Fri Jul 13 2012 10:35 AM			0:01
Prog (Run)	2000	Fri Jul 13 2012 10:35 AM	738.6	23824	6:09:19
Low Bat		Fri Jul 13 2012 4:45 PM			0:10
Sleep		Fri Jul 13 2012 4:45 PM			2d 18:55:08
Hold		Mon Jul 16 2012 11:40 AM			5:40
Sleep		Mon Jul 16 2012 11:46 AM			12:13:54
Hold		Tue Jul 17 2012 12:00 AM			4:57
Sleep		Tue Jul 17 2012 12:04 AM			8:32:36
Hold		Tue Jul 17 2012 8:37 AM			1:26+

TETRA TECH EM INC.

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

TA-20369

Station Location: T-24 (Jordan)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Sample Type: TEM

Pump Number: 36422

Sample Parent ID #:

Sampling Period: 79

PUMP SETUP DAY

Date: 7/9/2012

Time: 12:00

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

Beginning Flow Rate (L/min): 2

Pump Programmed (Yes / No): yes

Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 7/10/12

Time: 11:50

Timer Ending Date/Time: 7/14/2012 2400

Ending Flow Rate (L/min): 2

Total Sample Volume (L): 0.510

Total Sample Time (min): 7200

Atmospheric Pressure (INS): 27.45

Temperature inside station unit (°F): 72.1

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

Event ID TAA-101810

SIGNATURE: *[Signature]*

DATE: 7/10/12

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET '0000'

ADDITIONAL DAILY CHECK RECORDS

TA-20369

Station Location: T-24 (Jordan)

Sample ID #: TA

Field Technician: JJ

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 36422

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/12/12 ()
Time: 8:50 ()

PUMP FAULT (Yes / No): No

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 1059

Cumulative Sample Time (min): 53.7

Atmospheric Pressure (INS): 27.52

Temperature inside station unit (°F): 71.5

Battery voltage reading (volts): 19.76

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/11/12 ()
Time: 10:00 ()

PUMP FAULT (Yes / No): No

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 107

Cumulative Sample Time (min): 204.3

Atmospheric Pressure (INS): 27.52

Temperature inside station unit (°F): 73.7

Battery voltage reading (volts): 18.26

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/12/12 ()
Time: 10:45 ()

PUMP FAULT (Yes / No): No

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 73.0

Cumulative Sample Time (min): 17.62

Atmospheric pressure (INS): 27.52

Temperature inside station unit (°F): 77.5

Battery voltage reading (volts): 19.96

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, July 17, 2012 8:37 AM****Min Temp 68.8F****Max Temp 106.5F****TWA Temp 84.5F****Min Pressure 27.4 In-Hg****Max Pressure 27.7 In-Hg****TWA Pressure 27.6 In-Hg****No Flow Correction**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Hold		Fri Jul 6 2012 12:47 PM			5:44
Sleep		Fri Jul 6 2012 12:52 PM			1:25:38
Hold		Fri Jul 6 2012 2:18 PM			5:02
Sleep		Fri Jul 6 2012 2:23 PM			8:42
Hold		Fri Jul 6 2012 2:32 PM			6:08
Sleep		Fri Jul 6 2012 2:38 PM			2d 19:47:57
Hold		Mon Jul 9 2012 10:26 AM			0:02
Flow	2000	Mon Jul 9 2012 10:26 AM	0.133	0.133	0:04
Hold		Mon Jul 9 2012 10:26 AM			0:03
Flow	2000	Mon Jul 9 2012 10:26 AM	0.933	1.066	0:28
Hold		Mon Jul 9 2012 10:26 AM			0:05
Flow	2000	Mon Jul 9 2012 10:27 AM	0.167	1.233	0:05
Hold		Mon Jul 9 2012 10:27 AM			0:08
Flow	2000	Mon Jul 9 2012 10:27 AM	11.70	12.93	5:51
Hold		Mon Jul 9 2012 10:33 AM			0:01
Flow	2000	Mon Jul 9 2012 10:33 AM	0.333	13.27	0:10
Hold		Mon Jul 9 2012 10:33 AM			0:01
Flow	2000	Mon Jul 9 2012 10:33 AM	0.800	14.07	0:24
Hold		Mon Jul 9 2012 10:33 AM			0:03
Flow	2000	Mon Jul 9 2012 10:33 AM	0.133	14.20	0:04
Hold		Mon Jul 9 2012 10:33 AM			0:06
Flow	2000	Mon Jul 9 2012 10:33 AM	0.133	14.33	0:04
Hold		Mon Jul 9 2012 10:34 AM			0:05
Flow	2000	Mon Jul 9 2012 10:34 AM	0.100	14.43	0:03
Flow Adjust		Mon Jul 9 2012 10:34 AM			1:06
Flow Adjust		Mon Jul 9 2012 10:35 AM			0:09
Hold		Mon Jul 9 2012 10:35 AM			4:59
Sleep		Mon Jul 9 2012 10:40 AM			3:38
Hold		Mon Jul 9 2012 10:44 AM			0:01
Flow	2010	Mon Jul 9 2012 10:44 AM	0.234	14.67	0:07
Prog (Hold)		Mon Jul 9 2012 10:44 AM			5:03
Sleep		Mon Jul 9 2012 10:49 AM			13:10:48
Prog (Run)	2000	Tue Jul 10 2012 12:00 AM	14400	14415	5d 0:00:02
Hold		Sun Jul 15 2012 12:00 AM			4:59
Sleep		Sun Jul 15 2012 12:05 AM			1d 11:45:06
Hold		Mon Jul 16 2012 11:50 AM			5:29
Sleep		Mon Jul 16 2012 11:55 AM			12:04:24
Hold		Tue Jul 17 2012 12:00 AM			4:58
Sleep		Tue Jul 17 2012 12:04 AM			8:30:49
Hold		Tue Jul 17 2012 8:35 AM			1:13+

Period 80

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

TA-20376

Station Location: Field BlankSample ID #: TA-Field Technician: TMFilter Lot #: 23171-01

Pump Type/Model: _____

Sample Type: TEM

Pump Number: _____

Sample Parent ID #: _____

Sampling Period: 80

PUMP SETUP DAY

Date: 7/18/2012

Time: _____

Timer Beginning Date/Time: 7/19/2012 2400

Beginning Flow Rate (L/min): _____

Pump Programmed (Yes / No): _____

Bios Calibration Within 10 mL (Yes / No): _____

PUMP RETRIEVAL DAY

Date: _____

Time: _____

Timer Ending Date/Time: 7/23/2012 2400Ending 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)

Event ID TAA-101810

SIGNATURE: TommyDATE: 7/24/12

TETRA TECH EM INC.

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

ADDITIONAL DAILY CHECK RECORDS

Station Location: Field Blank		Sample ID #: TA-
Field Technician: TM		Filter Lot #: _____
Pump Type/Model: _____		
Pump Number: _____		
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): _____
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): _____

TETRA TECH EM INC.

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

TA-20371

Station Location: T-21 (Fire Station)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Sample Type: TEM

Pump Number: 36484

Sample Parent ID #:

Sampling Period: 80

PUMP SETUP DAY

Date: 7/18/2012

Time: 12:00

Timer Beginning Date/Time: 7/19/2012 2400

Beginning Flow Rate (L/min): 2

Pump Programmed (Yes / No): yes

Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 7/24/12

Time: 10:21

sunny, partly cloudy

Timer Ending Date/Time: 7/23/2012 2400

Ending Flow Rate (L/min): 2

Total Sample Volume (L): 0.60

Total Sample Time (min): 7200

Atmospheric Pressure (INS): 27.95

Temperature inside station unit (°F): 73.2

box temp 67

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

Event ID TAA-101810

SIGNATURE: 

DATE: 7/24/12

TETRA TECH EM INC.

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

ADDITIONAL DAILY CHECK RECORDS

TA-20371

Station Location: T-21 (Fire Station)		Sample ID #: TA-	
Field Technician: TM		Filter Lot #: 23171-01	
Pump Type/Model: SKC AirChek 2000			
Pump Number: 36484			

DAILY CHECK (For each station visit)			
(Field Tech Initials)		PUMP FAULT (Yes / No):	
Date: 7/19/12	(TM)	Flow Rate (L/min): 2	
Time: 8:51	()	Cumulative Sample Volume (L): 106.4	
		Cumulative Sample Time (min): 532	
		Atmospheric Pressure (INS): 27.77	
		Temperature inside station unit (°F): 83.2	
		Battery voltage reading (volts): 12.76	
sunny		box temp: 69	

DAILY CHECK (For each station visit)			
(Field Tech Initials)		PUMP FAULT (Yes / No):	
Date: 7/23/12	(TM)	Flow Rate (L/min): 2	
Time: 11:05	()	Cumulative Sample Volume (L): 251.0	
		Cumulative Sample Time (min): 6435	
		Atmospheric Pressure (INS): 27.90	
		Temperature inside station unit (°F): 89.0	
		Battery voltage reading (volts): 12.30	
sunny, partly cloudy windy		box temp 78	

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, July 24, 2012 11:36 AM****Min Temp 69.2F****Max Temp 114.8F****TWA Temp 91.8F****Min Pressure 27.6 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)		Wed Jul 18 2012 11:35 AM			6:03
Sleep		Wed Jul 18 2012 11:41 AM			12:18:29
Prog (Run)	2000	Thu Jul 19 2012 12:00 AM	14400	14400	5d 0:00:00
Hold		Tue Jul 24 2012 12:00 AM			4:59
Sleep		Tue Jul 24 2012 12:05 AM			10:16:35
Hold		Tue Jul 24 2012 10:21 AM			5:23
Sleep		Tue Jul 24 2012 10:26 AM			1:00:48
Hold		Tue Jul 24 2012 11:27 AM			8:14+

TETRA TECH EM INC.

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

TA-20372

Station Location: T-22 (Troy Office)
 Field Technician: TM
 Pump Type/Model: SKC AirChek 2000
 Pump Number: 36444
 Sampling Period: 80

Sample ID #: TA-
 Filter Lot #: 23171-01
 Sample Type: TEM
 Sample Parent ID #:

PUMP SETUP DAY

Date: 7/18/2012 Timer Beginning Date/Time: 7/19/2012 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: 7/24/12 Timer Ending Date/Time: 7/23/2012 2400
 Time: 11:18 Ending Flow Rate (L/min): 2
 Total Sample Volume (L): 0.60
 Total Sample Time (min): 7200
 Atmospheric Pressure (INS): 27.96
 Temperature inside station unit (°F): 70.8

partly cloudy

box temp 72

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

Event ID TAA-101810

SIGNATURE: TommasoDATE: 7/24/12

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

TA-20372

ADDITIONAL DAILY CHECK RECORDS

Station Location: T-22 (Troy Office)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 36444

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/19/12
Time: 8:35()
()

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):

sunny

box temp 70

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/23/12
Time: 11:40()
()

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):

sunny, partly cloudy
windy

box temp 78

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, July 24, 2012 11:39 AM****Min Temp 63.3F****Max Temp 108.2F****TWA Temp 85.0F****Min Pressure 27.7 In-Hg****Max Pressure 28.2 In-Hg****TWA Pressure 28.0 In-Hg****Flow Correction Approximately +40.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Hold		Wed Jul 4 2012 12:00 AM			4:59
Sleep		Wed Jul 4 2012 12:05 AM			1d 23:54:59
Hold		Fri Jul 6 2012 12:00 AM			4:58
Sleep		Fri Jul 6 2012 12:04 AM			13:28:39
Hold		Fri Jul 6 2012 1:33 PM			5:18
Sleep		Fri Jul 6 2012 1:38 PM			39:16
Hold		Fri Jul 6 2012 2:18 PM			4:58
Sleep		Fri Jul 6 2012 2:23 PM			2:12
Hold		Fri Jul 6 2012 2:25 PM			8:49
Sleep		Fri Jul 6 2012 2:34 PM			2d 19:52:51
Hold		Mon Jul 9 2012 10:27 AM			0:06
Flow	2000	Mon Jul 9 2012 10:27 AM	12.37	12.37	6:11
Hold		Mon Jul 9 2012 10:33 AM			3:45
Flow	2000	Mon Jul 9 2012 10:37 AM	0.333	12.70	0:10
Hold		Mon Jul 9 2012 10:37 AM			4:58
Flow	2000	Mon Jul 9 2012 10:42 AM	1.900	14.60	0:57
Prog (Hold)		Mon Jul 9 2012 10:43 AM			5:04
Sleep		Mon Jul 9 2012 10:48 AM			13:11:49
Prog (Run)	2000	Tue Jul 10 2012 12:00 AM	14400	14415	5d 0:00:01
Hold		Sun Jul 15 2012 12:00 AM			4:59
Sleep		Sun Jul 15 2012 12:05 AM			1d 11:58:33
Hold		Mon Jul 16 2012 12:03 PM			5:25
Sleep		Mon Jul 16 2012 12:08 PM			11:51:01
Hold		Tue Jul 17 2012 12:00 AM			4:58
Sleep		Tue Jul 17 2012 12:04 AM			8:25:32
Hold		Tue Jul 17 2012 8:30 AM			7:10
Sleep		Tue Jul 17 2012 8:37 AM			1d 1:27:12
Hold		Wed Jul 18 2012 10:04 AM			4:57
Sleep		Wed Jul 18 2012 10:09 AM			1:25:00
Hold		Wed Jul 18 2012 11:34 AM			0:04
Flow	2000	Wed Jul 18 2012 11:34 AM	0.133	14415	0:04
User Setup		Wed Jul 18 2012 11:34 AM			1:51
Prog (Hold)		Wed Jul 18 2012 11:36 AM			5:07
Sleep		Wed Jul 18 2012 11:41 AM			12:18:05
Prog (Run)	2000	Thu Jul 19 2012 12:00 AM	14400	28815	5d 0:00:02
Hold		Tue Jul 24 2012 12:00 AM			4:59
Sleep		Tue Jul 24 2012 12:05 AM			11:13:37
Hold		Tue Jul 24 2012 11:18 AM			5:21
Sleep		Tue Jul 24 2012 11:23 AM			14:06
Hold		Tue Jul 24 2012 11:38 AM			0:55+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

TA-20373

Station Location: T-23 (Iron Creek)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Sample Type: TEM

Pump Number: 4470

Sample Parent ID #

Sampling Period: 80

PUMP SETUP DAY

Date: 7/18/2012

Time: 12:00

Timer Beginning Date/Time: 7/19/2012 2400

Beginning Flow Rate (L/min): 2

Pump Programmed (Yes / No): yes

Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 7/24/12

Time: 10:30

Timer Ending Date/Time: 7/23/2012 2400

Ending Flow Rate (L/min): 2

Total Sample Volume (L): 0.60

Total Sample Time (min): 7200

Atmospheric Pressure (INS): 28.00

Temperature inside station unit (°F): 69.7

sunny partly cloudy

box temp 59

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

Event ID TAA-101810

SIGNATURE: Tamara M.

DATE: 7/24/12

TETRA TECH EM INC.

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

ADDITIONAL DAILY CHECK RECORDS

TA-20373

Station Location: T-23 (Iron Creek)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 4470

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/19/12 (TM)

Time: 9:07 ()

Sunny

PUMP FAULT (Yes / No): no

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 1096

Cumulative Sample Time (min): 547

Atmospheric Pressure (INS): 27.91

Temperature inside station unit (°F): 78.7

Battery voltage reading (volts): 12.97

box temp 67

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/23/12 (TM)

Time: 11:19 ()

Sunny, partly cloudy
windy

PUMP FAULT (Yes / No): no

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 2510

Cumulative Sample Time (min): 6440

Atmospheric Pressure (INS): 28.01

Temperature inside station unit (°F): 78.1

Battery voltage reading (volts): 12.59

box temp 69

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, July 24, 2012 11:41 AM****Min Temp 66.7F****Max Temp 106.4F****TWA Temp 84.5F****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
----	-----	-----	-----	-----	-----
Flow Adjust		Wed Jul 18 2012 11:38 AM			1:25
Prog (Hold)		Wed Jul 18 2012 11:40 AM			5:15
Sleep		Wed Jul 18 2012 11:45 AM			12:14:31
Prog (Run)	2000	Thu Jul 19 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Tue Jul 24 2012 12:00 AM			4:59
Sleep		Tue Jul 24 2012 12:05 AM			10:31:33
Hold		Tue Jul 24 2012 10:36 AM			5:25
Sleep		Tue Jul 24 2012 10:41 AM			58:25
Hold		Tue Jul 24 2012 11:40 AM			0:36+

TETRA TECH EM INC.

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

TA-20374

Station Location: T-24 (Jordan)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Sample Type: TEM

Pump Number: 36422

Sample Parent ID #:

Sampling Period: 80

PUMP SETUP DAY

Date: 7/18/2012

Time: 12:00

Timer Beginning Date/Time: 7/19/2012 2400

Beginning Flow Rate (L/min): 2

Pump Programmed (Yes / No): yes

Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 7/24/12

Time: 10:40

Timer Ending Date/Time: 7/23/2012 2400

Ending Flow Rate (L/min): 2

Total Sample Volume (L): 0.50

Total Sample Time (min): 7200

Atmospheric Pressure (INS): 27.50

Temperature inside station unit (°F): 67.0

Sunny, partly cloudy

box temp 59

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

Event ID TAA-101810

SIGNATURE: 

DATE: 7/24/12

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

ADDITIONAL DAILY CHECK RECORDS

TA-20374

Station Location: T-24 (Jordan)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 36422

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/19/12 (TM)
Time: 9:16 ()

PUMP FAULT (Yes / No): no

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 1112

Cumulative Sample Time (min): 556

Atmospheric Pressure (INS): 27.52

Temperature inside station unit (°F): 75.0

Battery voltage reading (volts): 12.83

Sunny

box temp 65

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/23/12 (TM)
Time: 11:28 ()

PUMP FAULT (Yes / No): no

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 0760

Cumulative Sample Time (min): 6448

Atmospheric Pressure (INS): 27.60

Temperature inside station unit (°F): 74.2

Battery voltage reading (volts): 12.54

Sunny, partly cloudy
windy

box temp 65

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, July 24, 2012 11:42 AM****Min Temp 65.5F****Max Temp 100.6F****TWA Temp 80.1F****Min Pressure 27.4 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
----	-----	-----	-----	-----	-----
User Setup		Wed Jul 18 2012 11:41 AM			0:57
Prog (Hold)		Wed Jul 18 2012 11:42 AM			5:36
Sleep		Wed Jul 18 2012 11:48 AM			12:11:48
Prog (Run)	2000	Thu Jul 19 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Tue Jul 24 2012 12:00 AM			4:59
Sleep		Tue Jul 24 2012 12:05 AM			10:41:33
Hold		Tue Jul 24 2012 10:46 AM			5:38
Sleep		Tue Jul 24 2012 10:52 AM			49:51
Hold		Tue Jul 24 2012 11:42 AM			0:57+

TETRA TECH EM INC.

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

TA-20375

Station Location: T-24QC(Jordan)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Sample Type: TEM

Pump Number: 4469

Sample Parent ID #:

TA-20374

Sampling Period: 80

PUMP SETUP DAY

Date: 7/18/2012

Time: 12:00

Timer Beginning Date/Time: 7/19/2012 2400

Beginning Flow Rate (L/min): 2

Pump Programmed (Yes / No): yes

Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 7/24/12

Time: 10:48

Timer Ending Date/Time: 7/23/2012 2400

Ending Flow Rate (L/min): 2

Total Sample Volume (L): 0.10

Total Sample Time (min): 7200

Atmospheric Pressure (INS): 27.79

Temperature inside station unit (°F): 68.9

sunny, partly cloudy

bar temp 59

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

Event ID TAA-101810

SIGNATURE: 

DATE: 7/24/12

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

TA-20375

ADDITIONAL DAILY CHECK RECORDS

Station Location: T-24QC(Jordan)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 4469

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/19/12 (TM)
Time: 9:16 ()

sunny

PUMP FAULT (Yes / No): no

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 1114

Cumulative Sample Time (min): 557

Atmospheric Pressure (INS): 27.79

Temperature inside station unit (°F): 75.5

Battery voltage reading (volts): 12.79

box temp 65

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/23/12 (TM)
Time: 11:29 ()sunny, partly cloudy
windy

PUMP FAULT (Yes / No): no

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 0520

Cumulative Sample Time (min): 6449

Atmospheric Pressure (INS): 27.87

Temperature inside station unit (°F): 74.5

Battery voltage reading (volts): 12.57

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): _____

SKC Pump History**SN 4469****Date Printed: Tuesday, July 24, 2012 11:45 AM****Min Temp 66.1F****Max Temp 99.2F****TWA Temp 80.4F****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
----	-----	-----	-----	-----	-----
User Setup		Wed Jul 18 2012 11:44 AM			0:33
Prog (Hold)		Wed Jul 18 2012 11:44 AM			5:36
Sleep		Wed Jul 18 2012 11:50 AM			12:09:31
Prog (Run)	2000	Thu Jul 19 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Tue Jul 24 2012 12:00 AM			4:59
Sleep		Tue Jul 24 2012 12:05 AM			10:41:34
Hold		Tue Jul 24 2012 10:46 AM			7:34
Sleep		Tue Jul 24 2012 10:54 AM			49:12
Hold		Tue Jul 24 2012 11:43 AM			1:39+

Period 81


F-120802AFB

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET (CONT.)

TA-20382

Station Location: **Field Blank**
Field Technician: **TM**
Pump Type/Model: **_____**
Pump Number: **_____**
Sampling Period: **81**

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

PUMP SETUP DAY

Date: 7/27/2012
Time: _____

Timer Beginning Date/Time: 7/29/2012 2400
Beginning Flow Rate (L/min): _____
Pump Programmed (Yes / No): _____
Bios Calibration Within 10 mL (Yes / No) _____

PUMP RETRIEVAL DAY

Date:	_____	Timer Ending Date/Time:	8/3/2012	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)

Event ID TAA-101810

SIGNATURE:

DATE: 8-3-12

TETRA TECH EM INC.

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

TA-20377

Station Location: T-21 (Fire Station)	Sample ID #: TA-
Field Technician: TM	Filter Lot #: 23171-01
Pump Type/Model: SKC AirChek 2000	Sample Type: TEM
Pump Number: 36484	Sample Parent ID #: —
Sampling Period: 81	

PUMP SETUP DAY

Date: 7/27/2012	Timer Beginning Date/Time: 7/29/2012 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: 8-3-12	Timer Ending Date/Time: 8/3/2012 2400
Time: 0824	Ending Flow Rate (L/min): 2
	Total Sample Volume (L): 0.640
	Total Sample Time (min): 7200
	Atmospheric Pressure (INS): 27.95
	Temperature inside station unit (°F): 75
	Box Temp - 50

SHOY

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

Event ID TAA-101810

SIGNATURE: 

DATE: 8-3-12

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET (5000)

ADDITIONAL DAILY CHECK RECORDS

TA-20377

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

Sample ID #: TA-
Filter Lot #: 23171-01

DAILY CHECK (For each station visit)

(Field Tech Initials)
Date: 7/30/12 (TM)
Time: 9:18 ()

cloudy

PUMP FAULT (Yes / No): 00
Flow Rate (L/min): 2
Cumulative Sample Volume (L): 3997
Cumulative Sample Time (min): 1998
Atmospheric Pressure (INS): 27.88
Temperature inside station unit (°F): 67.0
Battery voltage reading (volts): 67.0m 12.77

box temp 61

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: Friday, August 3, 2012 9:12 AM****Min Temp 62.1F****Max Temp 108.9F****TWA Temp 86.0F****Min Pressure 27.7 In-Hg****Max Pressure 28.1 In-Hg****TWA Pressure 27.9 In-Hg****No Flow Correction**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
Flow Adjust		Fri Jul 27 2012 9:52 AM			1:22
Prog (Hold)		Fri Jul 27 2012 9:53 AM			5:42
Sleep		Fri Jul 27 2012 9:59 AM			1d 14:00:29
Prog (Run)	2000	Sun Jul 29 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Fri Aug 3 2012 12:00 AM			4:59
Sleep		Fri Aug 3 2012 12:05 AM			8:19:19
Hold		Fri Aug 3 2012 8:24 AM			5:24
Sleep		Fri Aug 3 2012 8:29 AM			36:33
Hold		Fri Aug 3 2012 9:06 AM			5:43+

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

TA-20378

Station Location: T-21QC(Fire Station)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Sample Type: TEM

TA-20377

Pump Number: 4469

Sample Parent ID #:

Sampling Period: 81

PUMP SETUP DAY

Date: 7/27/2012

Time: 12:00

Timer Beginning Date/Time: 7/29/2012 2400

Beginning Flow Rate (L/min): 2

Pump Programmed (Yes / No): yes

Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 8-3-12

Time: 0823

Sunny

Timer Ending Date/Time: 8/3/2012 2400

Ending Flow Rate (L/min): 2

Total Sample Volume (L): 0.500

Total Sample Time (min): 1200

Atmospheric Pressure (INS): 28.07

Temperature inside station unit (°F): 68.3

Box Temp - 50

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

Event ID TAA-101810

SIGNATURE: 

DATE: 8-3-12

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

ADDITIONAL DAILY CHECK RECORDS

TA-20378

Station Location: T-21QC(Fire Station)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 4469

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/30/12 (TM)
Time: 9:19 ()

cloudy

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):

box Temp: 61

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: Friday, August 3, 2012 9:16 AM****Min Temp 63.5F****Max Temp 103.8F****TWA Temp 82.7F****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
----	-----	-----	-----	-----	-----
Flow Adjust		Fri Jul 27 2012 10:03 AM			0:30
Prog (Hold)		Fri Jul 27 2012 10:03 AM			5:26
Sleep		Fri Jul 27 2012 10:09 AM			1d 13:50:46
Prog (Run)	2000	Sun Jul 29 2012 12:00 AM	14400	14400	5d 0:00:01
Hold		Fri Aug 3 2012 12:00 AM			4:59
Sleep		Fri Aug 3 2012 12:05 AM			8:18:33
Hold		Fri Aug 3 2012 8:23 AM			5:19
Sleep		Fri Aug 3 2012 8:28 AM			46:42
Hold		Fri Aug 3 2012 9:15 AM			0:26+

TA-20379

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET (5000)

Sample ID #:	TA-
Filter Lot #:	23171-01
Sample Type:	TEM
Sample Parent ID #:	

Date:	7/27/2012	Timer Beginning Date/Time:	7/29/2012	2400
Time:	12:00	Beginning Flow Rate (L/min):	2	
		Pump Programmed (Yes / No):	yes	
		Bios Calibration Within 10 mL (Yes / No)	yes	

Date: <u>8-3-12</u>	Timer Ending Date/Time: <u>8/3/2012</u>	<u>2400</u>
Time: <u>0835</u>	Ending Flow Rate (L/min): <u>2</u>	
	Total Sample Volume (L): <u>0.510</u>	
	Total Sample Time (min): <u>7200</u>	
	Atmospheric Pressure (INS): <u>27.84</u>	
	Temperature inside station unit (°F): <u>67.4</u>	

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

SIGNATURE: Inteja

DATE: 8-3-12

TETRA TECH EM INC.

007 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET 'ESDS'

ADDITIONAL DAILY CHECK RECORDS

TA-20379

Station Location: T-22 (Troy Office)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 35444

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/30/12 (TM)
Time: 10:16 ()

sunny partly cloudy

PUMP FAULT (Yes / No): no

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 4113

Cumulative Sample Time (min): 2056

Atmospheric Pressure (INS): 27.83

Temperature inside station unit (°F): 74.6

Battery voltage reading (volts): 12.55

box temp 69

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: Friday, August 3, 2012 9:14 AM****Min Temp 62.6F****Max Temp 106.8F****TWA Temp 83.7F****Min Pressure 27.7 In-Hg****Max Pressure 28.1 In-Hg****TWA Pressure 27.9 In-Hg****Flow Correction Approximately +40.0 ml/min**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
User Setup		Fri Jul 27 2012 9:55 AM			0:34
Prog (Hold)		Fri Jul 27 2012 9:55 AM			5:11
Sleep		Fri Jul 27 2012 10:01 AM			1d 13:59:00
Prog (Run)	2000	Sun Jul 29 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Fri Aug 3 2012 12:00 AM			4:59
Sleep		Fri Aug 3 2012 12:05 AM			8:30:34
Hold		Fri Aug 3 2012 8:35 AM			5:17
Sleep		Fri Aug 3 2012 8:40 AM			32:48
Hold		Fri Aug 3 2012 9:13 AM			0:20+

TA-20380

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET "5222"

Sample ID #: TA-

Filter Lot #: 23171-01

Sample Type: TEM

Sample Parent ID #:

PUMP SETUP DAY

Timer Beginning Date/Time: 7/29/2012 2400

Beginning Flow Rate (L/min): 2

Pump Programmed (Yes / No): yes

Bios Calibration Within 10 mL (Yes / No)	yes
--	-----

Timer Ending Date/Time: 8/3/2012 2400

Ending Flow Rate (L/min): 2

Total Sample Volume (L): 0.540

Total Sample Time (min): 7200

Atmospheric Pressure (INS) 28.02

Temperature inside station unit (°F): 69.8

BoxTemp = 50

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

SIGNATURE: _____

DATE: 8-3-12

TETRA TECH EM INC.

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

ADDITIONAL DAILY CHECK RECORDS

TA-20380

Station Location: T-23 (Iron Creek)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-01

Pump Type/Model: SKC AirChek 2000

Pump Number: 4470

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/30/12 (TM)

Time: 9:42 ()

partly cloudy

PUMP FAULT (Yes / No): No

Flow Rate (L/min): 2

Cumulative Sample Volume (L): 4045

Cumulative Sample Time (min): 2022

Atmospheric Pressure (INS): 27.89

Temperature inside station unit (°F): 72.9

Battery voltage reading (volts): 12.76

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 4470****Date Printed: Friday, August 3, 2012 9:22 AM****Min Temp 67.3F****Max Temp 104.4F****TWA Temp 84.1F****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
----	-----	-----	-----	-----	-----
Flow	2000	Fri Jul 27 2012 9:58 AM	0.933	0.933	0:28
Prog (Hold)		Fri Jul 27 2012 9:58 AM			5:08
Sleep		Fri Jul 27 2012 10:04 AM			1d 13:55:53
Prog (Run)	2000	Sun Jul 29 2012 12:00 AM	14400	14401	5d 0:00:02
Hold		Fri Aug 3 2012 12:00 AM			4:59
Sleep		Fri Aug 3 2012 12:05 AM			8:06:56
Hold		Fri Aug 3 2012 8:11 AM			5:17
Sleep		Fri Aug 3 2012 8:17 AM			58:34
Hold		Fri Aug 3 2012 9:15 AM			4:58
Sleep		Fri Aug 3 2012 9:20 AM			0:59
Hold		Fri Aug 3 2012 9:21 AM			0:15+

F-120802A24

TETRA TECH EM INC.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

TA-20381

Station Location: T-24 (Jordan)
Field Technician: TM
Pump Type/Model: SKC AirChek 2000
Pump Number: 36422
Sampling Period: 81

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

PUMP SETUP DAY

Date: 7/27/2012
Time: 12:00
Timer Beginning Date/Time: 7/29/2012 2400
Beginning Flow Rate (L/min): 2
Pump Programmed (Yes / No): yes
Bios Calibration Within 10 mL (Yes / No): yes

PUMP RETRIEVAL DAY

Date: 8-3-12
Time: 0803
Timer Ending Date/Time: 8/3/2012 2400
Ending Flow Rate (L/min): 2
Total Sample Volume (L): 0FLO
Total Sample Time (min): 7200
Atmospheric Pressure (INS): 27.61
Temperature inside station unit (°F): 67.7

Sunny

Box Temp - 50

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.

OU7 OUTDOOR AMBIENT AIR - FIELD SAMPLE DATA SHEET

ADDITIONAL DAILY CHECK RECORDS

TA-20381

Station Location: T-24 (Jordan)

Sample ID #: TA-

Field Technician: TM

Filter Lot #: 23171-02

Pump Type/Model: SKC AirChek 2000

Pump Number: 36422

DAILY CHECK (For each station visit)

(Field Tech Initials)

Date: 7/30/12

Time: 9:50

partly cloudy

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):

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)

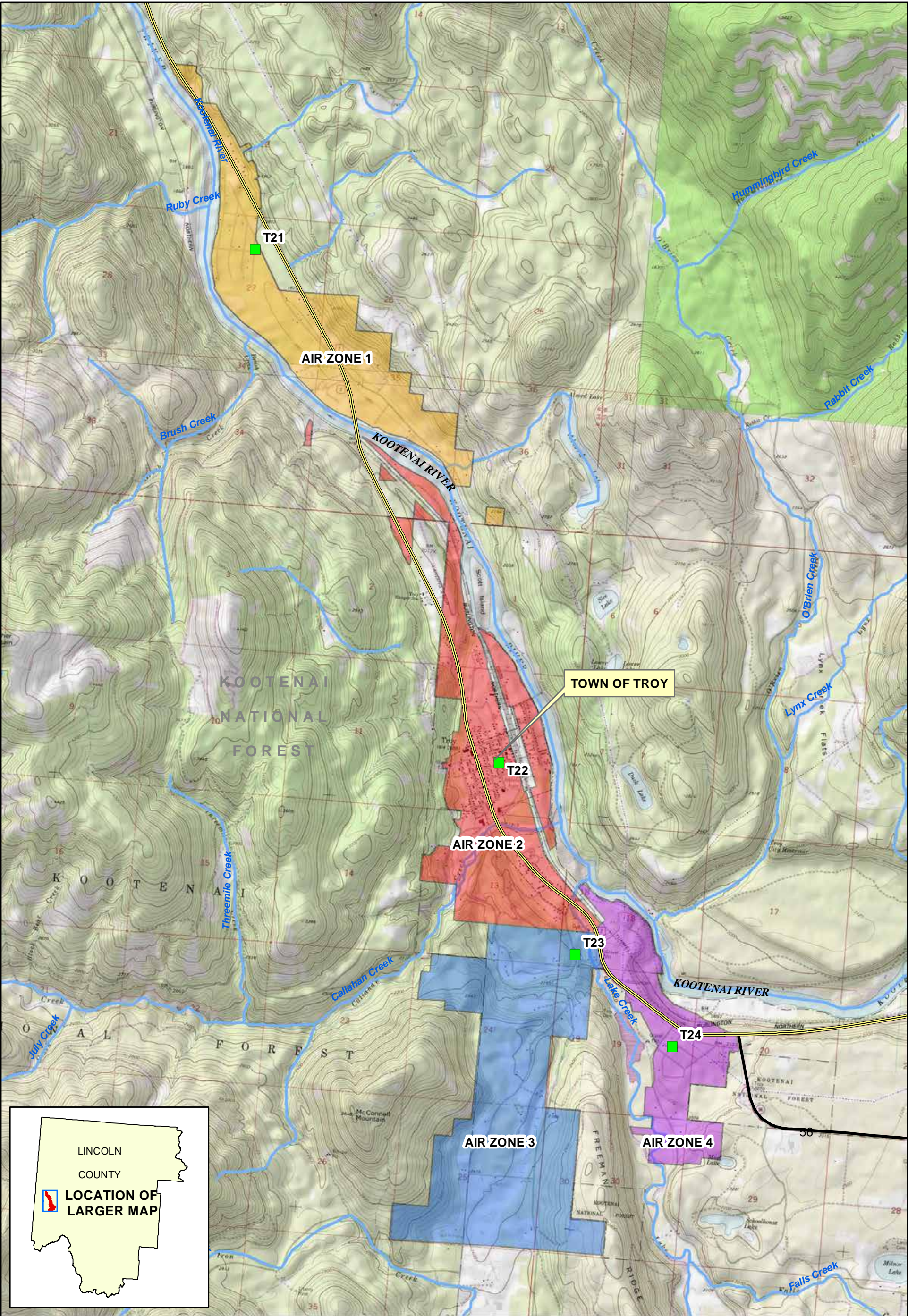
Temperature inside station unit (°F):

Battery voltage reading (volts):

SKC Pump History**SN 36422****Date Printed: Friday, August 3, 2012 9:17 AM****Min Temp 61.0F****Max Temp 101.9F****TWA Temp 76.9F****Min Pressure 27.3 In-Hg****Max Pressure 27.8 In-Hg****TWA Pressure 27.5 In-Hg****No Flow Correction**

Mode	Value	Start	Volume Liters	Accum Volume	Duration
----	-----	-----	-----	-----	-----
User Setup		Fri Jul 27 2012 10:00 AM			0:45
Prog (Hold)		Fri Jul 27 2012 10:01 AM			5:09
Sleep		Fri Jul 27 2012 10:06 AM			1d 13:53:31
Prog (Run)	2000	Sun Jul 29 2012 12:00 AM	14400	14400	5d 0:00:02
Hold		Fri Aug 3 2012 12:00 AM			4:59
Sleep		Fri Aug 3 2012 12:05 AM			7:58:08
Hold		Fri Aug 3 2012 8:03 AM			5:25
Sleep		Fri Aug 3 2012 8:08 AM			1:07:16
Hold		Fri Aug 3 2012 9:15 AM			2:10+

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



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:

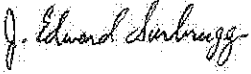
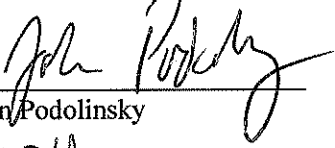


TETRA TECH EM INC.
Power Block Building, Suite 612
7 West 6th Avenue
Helena, Montana 59601
(406) 442-5588

**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

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

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 Fagan
(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: $\geq 0.5\mu\text{m}$ AR: $\geq 3:1$	Count until one is achieved: i) Target AS = 0.00004 s/cc, or ii) 50 LA found (finish GO where 50 th LA found) Chrysotile only: 50 chrysotile (finish GO where 50 th 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 ² 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 ² 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 ² 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%
Repreparation – 1%

Requirements Revision:

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

Analytical Laboratory Review Sign-off:

☒ EMSL – Libby [sign & date: R.K. Mahoney 5 April 2010]
☒ EMSL – Westmont [sign & date: Charles LaCerra April 6, 2010]
☒ EMSL – Beltsville [sign & date: Joseph M. Centifonti April 6, 2010]
☒ ESAT [sign & date: __Douglas Kent 02 April 2010__]

☒ Hygeia [sign & date: __Kyeong Corbin April 12, 2010__]
☒ RESI [sign & date: Jeanne Orr April 12, 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

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	Co-located Sample	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	Co-located Sample	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	Co-located Sample	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	Co-located Sample	TAA0081	Y	3	1.08E-04	81

Samp_No	Period	Location	SampleDate	SampleType	Volume	SampleParentID	Name Lab	Benchsheet File Name
TA-20332	73		5/10/2012	Field Sample	14400		ESAT Region 8, Golden CO	TAA0073A_ESATR8_A120254_TEM-ISO_09-12-2012_Test Report_C0
TA-20334	73		5/10/2012	Field Blank	0		ESAT Region 8, Golden CO	TAA0073A_ESATR8_A120254_TEM-ISO_09-12-2012_Test Report_C0
TA-20340	74		5/20/2012	Field Blank	0		ESAT Region 8, Golden CO	TAA0074_ESATR8_A120255_TEM-ISO_09-11-2012_Test_Report_C0
TA-20342	75		5/30/2012	Field Sample	14400		Hygeia Laboratories Inc., Sierra Madre CA	TAA_38995120047_Final Report
TA-20346	75		5/30/2012	Field Blank	0		Hygeia Laboratories Inc., Sierra Madre CA	TAA_38995120047_Final Report
TA-20349	76		6/9/2012	Field Sample	14400		Hygeia Laboratories Inc., Sierra Madre CA	TAA_38995120048_Final Report
TA-20350	76		6/9/2012	Field Sample	14400		Hygeia Laboratories Inc., Sierra Madre CA	TAA_38995120048_Final Report
TA-20354	77		6/19/2012	Field Duplicate	14400		Hygeia Laboratories Inc., Sierra Madre CA	TAA_38995120049_Final Report
TA-20358	77		6/19/2012	Field Blank	0		Hygeia Laboratories Inc., Sierra Madre CA	TAA_38995120049_Final Report
TA-20373	80		7/19/2012	Field Sample	14400		ESAT Region 8, Golden CO	TAA0080_ESATR8_A120340_TEM-ISO_09-11-2012_Test_Report_C0
TA-20375	80		7/19/2012	Field Duplicate	14400		ESAT Region 8, Golden CO	TAA0080_ESATR8_A120340_TEM-ISO_09-11-2012_Test_Report_C0
TA-20377	81		7/29/2012	Field Sample	14400		Reservoirs Environmental Services, Denver CO	RESI_241948-1_TAA0081_TEM-ISO_C0
TA-20379	81		7/29/2012	Field Sample	14400		Reservoirs Environmental Services, Denver CO	RESI_241948-1_TAA0081_TEM-ISO_C0

EDD File Name	Remarks	Validated (Y/N)	Validated By	Company	Validated Date
TA-20332_A120254-04_TEM-ISO_AR_07-12-12_D_NotQC_C0.xlsm	None	Y	D. Kutsal	Tetra Tech	10/8/2012
TA-20334_A120254-06_TEM-ISO_AR_07-13-12_D_NotQC_C0.xlsm	None	Y	D. Kutsal	Tetra Tech	10/8/2012
TA-20340_A120255-06_TEM-ISO_AR_07-17-12_D_NotQC_C0.xlsm	None	Y	D. Kutsal	Tetra Tech	10/8/2012
TA-20342_38995120047-1320482_TEM-ISO_AR_07-10-12_D_NotQC_C0.xlsm	None	Y	D. Kutsal	Tetra Tech	10/9/2012
TA-20346_38995120047-1320486_TEM-ISO_AR_07-12-12_D_NotQC_C0.xlsm	None	Y	D. Kutsal	Tetra Tech	10/9/2012
TA-20349_38995120048-1320489_TEM-ISO_AR_07-12-12_D_NotQC_C0.xlsm	None	Y	D. Kutsal	Tetra Tech	10/9/2012
TA-20350_38995120048-1320490_TEM-ISO_AR_07-13-12_D_NotQC_C0.xlsm	None	Y	D. Kutsal	Tetra Tech	10/9/2012
TA-20354_38995120049-1320494_TEM-ISO_AR_07-14-12_D_NotQC_C0.xlsm	None	Y	D. Kutsal	Tetra Tech	10/10/2012
TA-20358_38995120049-1320498_TEM-ISO_AR_07-14-12_D_NotQC_C0.xlsm	None	Y	D. Kutsal	Tetra Tech	10/10/2012
TA-20373_A120340-03_TEM-ISO_AR_08-15-12_D_NotQC_C0.xlsm	None	Y	D. Kutsal	Tetra Tech	10/10/2012
TA-20375_A120340-05_TEM-ISO_AR_08-15-12_D_NotQC_C0.xlsm	None	Y	D. Kutsal	Tetra Tech	10/10/2012
TA-20377_241948-896356_TEM-ISO_AR_08-16-12_D_NotQC_C0.xlsm	None	Y	D. Kutsal	Tetra Tech	10/10/2012
TA-20379_241948-896358_TEM-ISO_AR_08-17-12_D_NotQC_C0.xlsm	None	Y	D. Kutsal	Tetra Tech	10/10/2012

Validation Comments	QA Type	Validation Actions
1. AnalysisTargetSens entry in EDD and in database is 0; should be 0.00004.	Not QA	1. Notify OU7 Database Manager.
1. Several entries in the Detected field for StructConcHighMag are "Yes;" should be "No."	Not QA	1. Notify OU7 Database Manager.
1. Several entries in the Detected field for StructConcHighMag are "Yes;" should be "No."	Not QA	1. Notify OU7 Database Manager.
1. AnalysisTargetSens entry in EDD and in database is 0; should be 0.00004.	Not QA	1. Notify OU7 Database Manager.
1. Several entries in the Detected field for StructConcHighMag are "Yes;" should be "No."	Not QA	1. Notify OU7 Database Manager.
1. AnalysisTargetSens entry in EDD and in database is 0; should be 0.00004. 2. AnalysisGOChrysHigh entries are 30; should be 69. 3. AnalysisGOCountedHigh entries are 30; should be 69. 4. Result entries for SensitivityHighMag are 9.1877E-05; should be 3.99E-05. 5. Many of the Grid entries are missing from database.	Not QA	1. Notify OU7 Database Manager. 2. Notify OU7 Database Manager. 3. Notify OU7 Database Manager. 4. Notify OU7 Database Manager. 5. Notify OU7 Database Manager.
1. AnalysisTargetSens entry in EDD and in database is 0; should be 0.00004. 2. AnalysisGOChrysHigh entries are 30; should be 69. 3. AnalysisGOCountedHigh entries are 30; should be 69. 4. Result entries for SensitivityHighMag are 9.1877E-05; should be 3.99E-05. 5. Many of the Grid entries are missing from database.	Not QA	1. Notify OU7 Database Manager. 2. Notify OU7 Database Manager. 3. Notify OU7 Database Manager. 4. Notify OU7 Database Manager. 5. Notify OU7 Database Manager.
1. AnalysisTargetSens entry in EDD and in database is 0; should be 0.00004.	Not QA	1. Notify OU7 Database Manager.
1. Several entries in the Detected field for StructConcHighMag are "Yes;" should be "No."	Not QA	1. Notify OU7 Database Manager.
1. AnalysisTargetSens entry in EDD and in database is 0; should be 0.00004.	Not QA	1. Notify OU7 Database Manager.
1. AnalysisTargetSens entry in EDD and in database is 0; should be 0.00004.	Not QA	1. Notify OU7 Database Manager.
1. AnalysisTargetSens entry in EDD and in database is 0; should be 0.00004.	Not QA	1. Notify OU7 Database Manager.
1. AnalysisTargetSens entry in EDD and in database is 0; should be 0.00004.	Not QA	1. Notify OU7 Database Manager.