POLREP #1
Washington Compressed Steel
271 West Berks Street
Philadelphia, PA 19122

N 39.98019
W 75.13938

EVENT: Removal Assessment initiated.

ATTN: RRC

I. SITUATION (4/10/03)

A. The OSC has determined that a removal assessment of this site is needed. A letter was received from the City of Philadelphia requesting that this property be investigated for environmental conditions. Oil staining was observed on the sidewalk outside the fence on one side of the property.

II. ACTIONS TAKEN

A. A removal assessment for this site was initiated. On October 28, 2002 a site reconnaissance was conducted. Consent for access was granted by the property owner on November 4, 2002. Sampling occurred onsite on November 21, 2002.

B. This site is the location of a scrap metal recovery operation.

III. FUTURE ACTIONS

A. Completion of a removal assessment at this site. The final report should be completed within several weeks.

_____

Gregory Ham, OSC
US EPA Region III
Philadelphia, PA

POLREP #2 & Final
Washington Compressed Steel
271 West Berks Street
Philadelphia, PA 19122

N 39.98019
W 75.13938

EVENT: Removal Assessment Closeout

ATTN: RRC

I. SITUATION (3/25/04)

A. A letter was received from the City of Philadelphia requesting that this property be investigated for environmental conditions. This site is the location of a scrap metal recovery operation. Oil staining was observed on the sidewalk outside the fence on one side of the property. The OSC determined that a removal assessment of this site is needed. This Polrep presents the results of this assessment.

II. ACTIONS TAKEN

A. A removal assessment for this site was initiated. On October 28, 2002 a site reconnaissance was conducted. Consent for access was granted by the property owner on November 4, 2002. Sampling occurred onsite on November 21, 2002.

B. The results of this sampling indicated that one sample location onsite had a significantly elevated level of lead (65,000 ppm), other lead levels onsite ranged from 798 ppm to 12,200 ppm, and one sample on the sidewalk nearby had slightly elevated levels of lead (800 ppm). Other than lead, no sample results exceeded removal action levels. ATSDR recommended additional offsite sampling to ensure that offsite migration is not occurring.

C. On Friday March 5, 2004, the OSC and START returned to the site and collected three additional soils samples to determine if offsite migration was occurring. Two samples on residential properties had lead levels well below 400 parts per million (ppm) (126 and 66 ppm). One sample composited from a nearby playground had a lead level of 697 ppm.

D. On March 24, 2004, the OSC had a phone conversation with Lora Werner and Joe Little, ATSDR. The OSC presented the nature of the site, the playground (mostly paved), and the playground sample (soil collected from cracks/depressions in the pavement). Based on these conditions, ATSDR did not believe that any additional work was required on the offsite properties.

E. On June 2, 2004, the OSC notified the property owner and the City of Philadelphia of the results of this assessment. If the use of the property changes, the contamination levels onsite will need to be addressed.

III. FUTURE ACTIONS

A. No further EPA actions are needed at this site.

_____

Gregory Ham, OSC
US EPA Region III
Philadelphia, PA

TRIP REPORT
FOR THE
WASHINGTON COMPRESSED STEEL SITE
PHILADELPHIA, PHILADELPHIA COUNTY, PENNSYLVANIA

Prepared for

U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103

Prepared by

Tetra Tech EM Inc.
709 Chelsea Parkway
Boothwyn, PA 19061

EPA Contract No. 68-S3-00-02

Technical Direction Document No. SE3-02-10-004
Document Tracking No. 1855

February 28, 2003

Prepared by

(b) (4)
Project Manager

Approved by

(b) (4)
START Program Manager

CONTENTS

Section | Page

1.0 INTRODUCTION 1

2.0 BACKGROUND 1
- 2.1 SITE LOCATION 1
- 2.2 SITE DESCRIPTION 2
- 2.3 SITE HISTORY 2
- 2.4 PREVIOUS INVESTIGATION ACTIVITIES 5

3.0 SITE ACTIVITIES 6

4.0 SAMPLE HANDLING 8

5.0 ANALYTICAL RESULTS 9

6.0 INVESTIGATION-DERIVED WASTE DISPOSAL 10

7.0 FUTURE ACTIONS 10

REFERENCES 11

Appendix

A FIELD LOGBOOK NOTES

B PHOTOGRAPHIC DOCUMENTATION LOG

C TABLES
- 1 Sample Summary C-1
- 2 Summary of Sample Depths C-2
- 3 Summary of Analytical Parameters C-3
- 4 Summary of Inorganic Analytical Results C-4
- 5 Summary of Organic Analytical Results C-6

Attachments

A Inorganic Data Validation Report

B Organic Data Validation Report

FIGURES

Figure Page

1 SITE LOCATION MAP 3

2 SITE LAYOUT MAP 4

3 SAMPLING LOCATION MAP 7

1.0 INTRODUCTION

Under Eastern Area Superfund Technical Assessment and Response Team (START) Contract No. 68-S3-00-02, Technical Direction Document (TDD) No. SE3-02-10-004, U.S. Environmental Protection Agency (EPA) Region 3 On-Scene Coordinator (OSC) Greg Ham tasked Tetra Tech EM Inc. (Tetra Tech) to conduct a removal site assessment at the Washington Compressed Steel (WCS) site to determine whether the site posed an immediate or potential threat to human health or the environment. The WCS site is an active scrap yard and recycling facility located in Philadelphia, Philadelphia County, Pennsylvania. During the assessment, Tetra Tech collected 10 surface soil samples from inside and around the facility, including one quality assurance and quality control (QA/QC) sample. The data collected from this assessment will be used to determine whether a removal action or any other action is necessary.

This trip report provides site background information in Section 2.0; describes site activities, sample handling, sample analytical results, and investigation-derived waste disposal in Sections 3.0, 4.0, 5.0, and 6.0 respectively; and summarizes future actions in Section 7.0. All references cited in this report are listed after the text.

2.0 BACKGROUND

This section describes site location, site layout, and history and summarizes previous investigation activities.

2.1 SITE LOCATION

The WCS site is located at 271 West Berks Street in Philadelphia, Pennsylvania, as shown in Figure 1, Site Location Map (U. S. Geological Survey [USGS] 1967, 1967). The geographic coordinates of the site are 39.98019° north latitude and 75.13938° west longitude. The site is bordered by West Norris Street to the north, American Street to the east, Berks Street to the south, and 3rd Street to the west (Tetra Tech 2002).

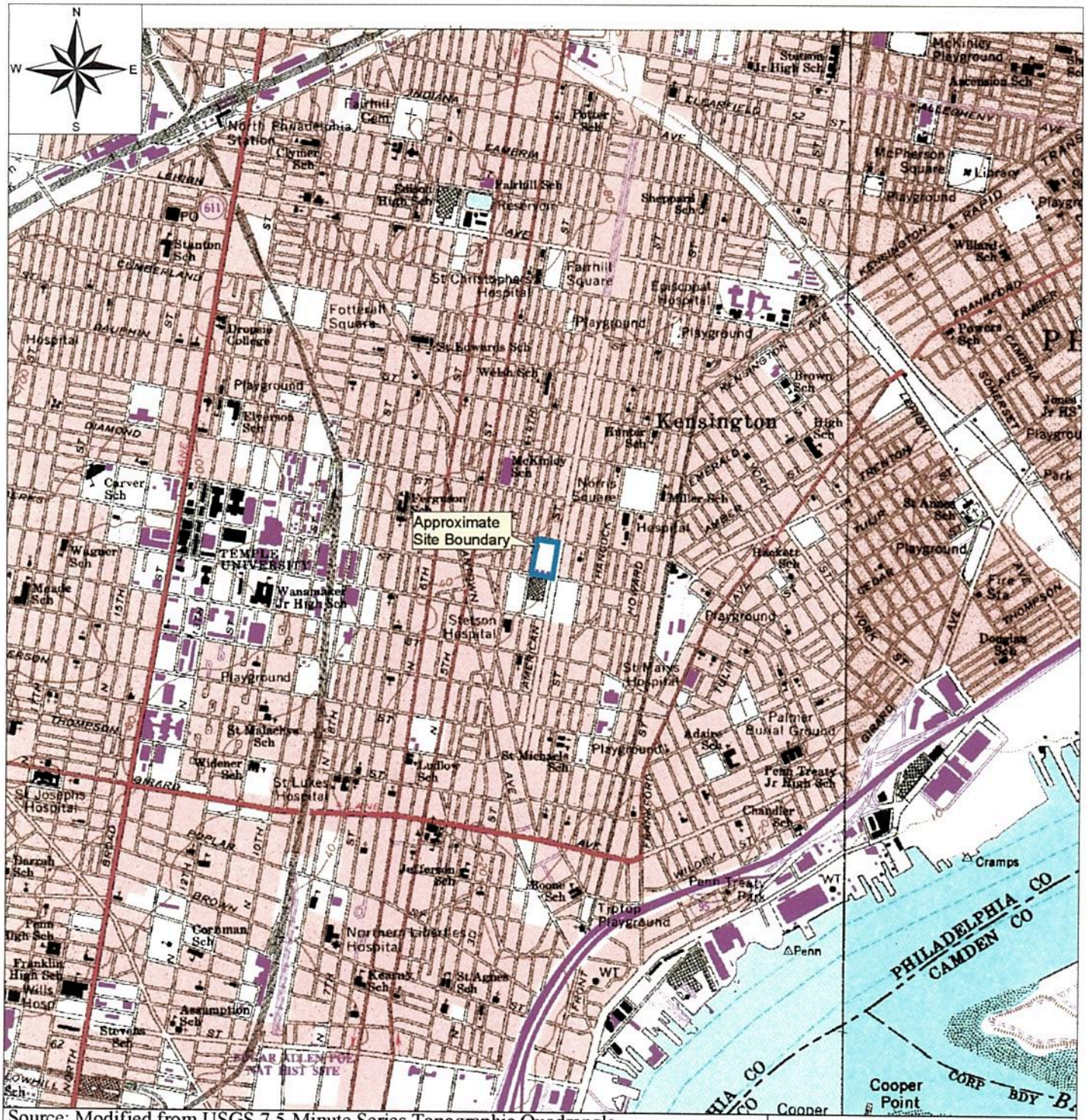
2.2 SITE DESCRIPTION

The WCS site is an active scrap yard located on the northwest corner of American and Berks Streets. The site covers one city block (3.174 acres) and is situated in a mixed industrial, commercial, and residential area along the American Street Industrial Corridor of Philadelphia. The area surrounding the site is developed and is comprised mainly of commercial and industrial properties. On the western side of the property along 3rd Street, there are several occupied and abandoned row homes and a park used by local residents. There are two buildings, a crusher unit, and a shearer unit located on the property. One building located on the site is the former scale building and the other building is used as the office for the scrap yard. The crusher and shearer units are used by the scrap yard to recycle and process the metal. The rest of the site is covered with scrap metal waiting to be recycled and processed for shipment (Tetra Tech 2002). Figure 2, Site Layout Map, shows the features of the scrap yard.

A fence secures the property, and the facility uses security guards at night. All truck traffic access to the scrap yard is controlled. All incoming trucks are weighed, and the facility screens the incoming trucks for radioactive materials using a radiation detection system (Tetra Tech 2002).

2.3 SITE HISTORY

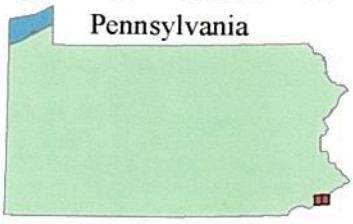
The WCS Company property has been in operation at the site for approximately 70 years and is currently being used as a metal scrap yard. The WCS Company owns the property and Morris Iron and Steel Co., Inc., operates the scrap yard. Morris Iron and Steel Co., Inc., has leased the property from WCS Company for the past 6 years. Morris Iron and Steel Co., Inc., continues to recycle and process metal. All of the processed metal is shipped to other facilities to be converted to steel. The scrap yard processes 1,200 tons of ferrous metal per month. There are 11 employees working at the scrap yard (Tetra Tech 2002).



Source: Modified from USGS 7.5-Minute Series Topographic Quadrangle,
Camden, New Jersey-Pennsylvania, 1967, Revised 1994
Philadelphia, Pennsylvania-New Jersey, 1967, Revised 1994

0 0.25 0.5 Miles

Quadrangle Location = ■

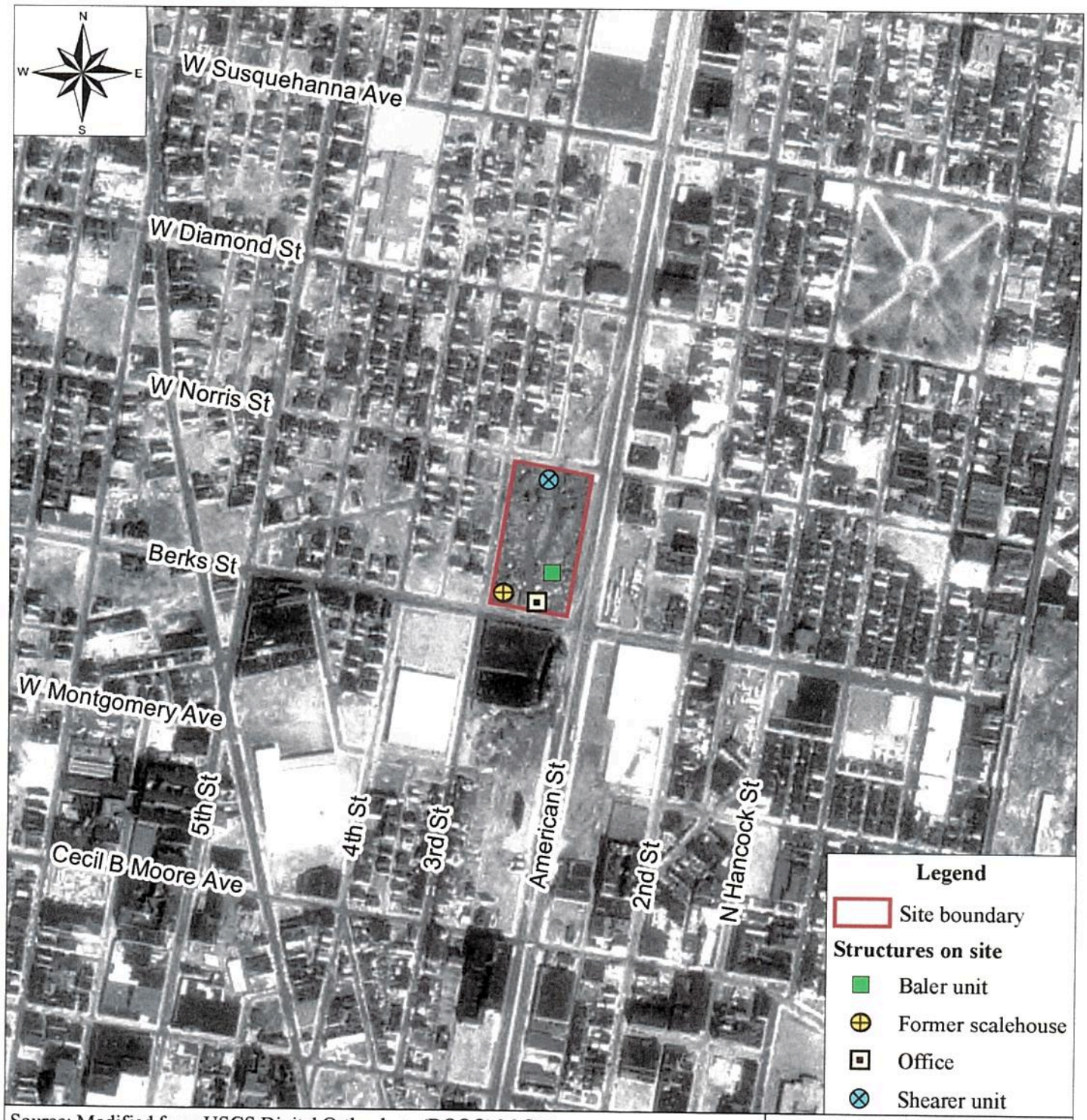


Washington Compressed Steel Site
Philadelphia, Pennsylvania

Figure 1
Site Location Map

TDD No. SE3-02-10-004
EPA Contract No. 68-S3-00-02

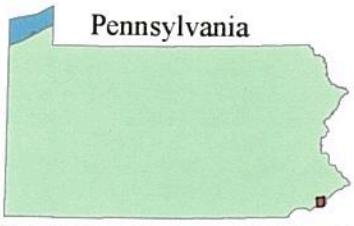
Tetra Tech EM Inc.



Source: Modified from USGS Digital Orthophoto (DOQQ) MrSID Mosaic for Philadelphia, Pennsylvania Quadrangle (NAPP II, 1993-1995)

0 250 500 Feet

Approximate Site Location =



Washington Compressed Steel Site
Philadelphia, Pennsylvania

Figure 2
Site Layout Map

TDD No. SE3-02-10-004
EPA Contract No. 68-S3-00-02

Tetra Tech EM Inc.

2.4 PREVIOUS INVESTIGATION ACTIVITIES

On September 21, 2001, the City of Philadelphia Solicitor sent a letter to EPA Region 3 requesting that they assess this site to determine what contamination exists on the site. The city reported the appearance of oil-stained soil on the property and outside of the property. The city is concerned that this oil comes from the crusher unit and is a potential source of significant contamination (Tetra Tech 2002).

On October 28, 2002, OSC Ham and Tetra Tech project manager **(b) (4)** met with two officials from the scrap yard operator (Morris Iron and Steel Co., Inc.) and conducted a site reconnaissance. OSC Ham explained the purpose of the site reconnaissance to the scrap yard operator. During the site reconnaissance, the officials from Morris Iron and Steel Co., Inc., informed OSC Ham that Morris Iron and Steel Co., Inc., leases the property from WCS and is planning to relocate in about 1 year (Tetra Tech 2002).

During the site reconnaissance, Tetra Tech performed a radiation survey using a micro R instrument. The readings ranged from 10 to 12 micro Roentgen (μR) inside the scrap yard and 5 to 8 μR outside the scrap yard (Tetra Tech 2002).

During the site reconnaissance, EPA and Tetra Tech observed the following:

- No scrap vehicles, batteries, transformers, motors, drums, old appliances, or gas cylinders
- No monitoring wells or sump pumps on the site
- Sparse vegetation on site
- Some oil-stained soil by the crusher and shearer units
- Large piles of scrap metal throughout the property
- Fill material and gravel covering most of the site
- Several concrete pads located along the fence line

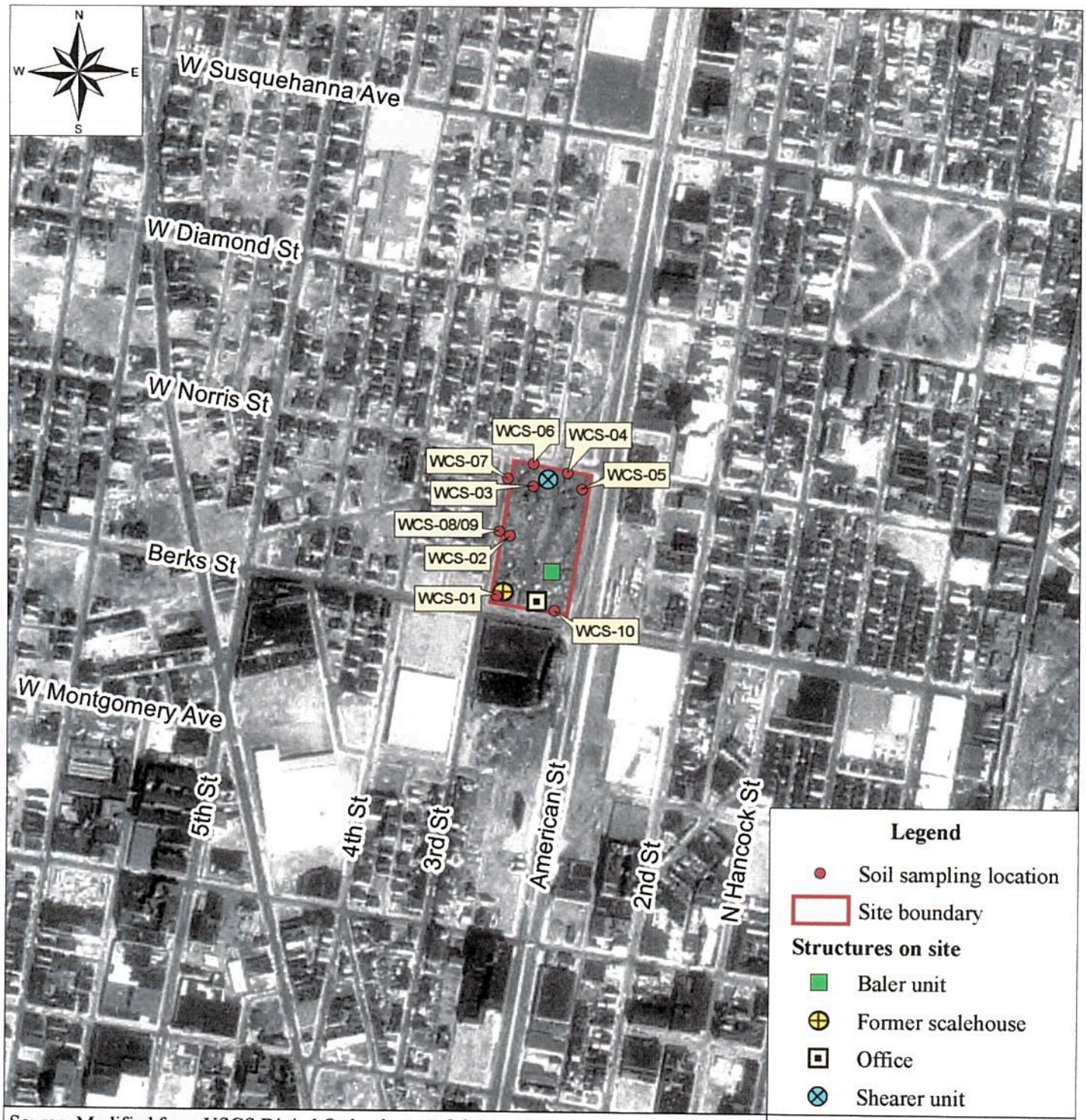
During the week of November 17, 2002, OSC Ham had secured site access for the soil sampling of the scrap yard. The soil sampling event was scheduled for November 21, 2002 (Tetra Tech 2002).

3.0 SITE ACTIVITIES

On November 21, 2002, Tetra Tech START sampling team personnel (b) (4) and (b) (4) were on site to collect soil samples from the WCS site. The Tetra Tech sampling team met with Morris Iron and Steel Co., Inc., and initiated the soil sampling of the property. Representatives from Morris Iron and Steel Co., Inc., were originally going to split the soil samples with Tetra Tech but reconsidered their decision and did not split the soil samples collected during the removal site assessment. Tetra Tech collected a total of 10 soil samples, including one field duplicate sample. Each soil sample was homogenized in a dedicated, disposable, aluminum tray using a dedicated, disposable, plastic spatula. All rocks and extraneous matter were removed from the samples collected. Samples analyzed for target analyte list (TAL) metals, cyanide, target compound list (TCL) semivolatile organics, pesticides, and polychlorinated biphenyls (PCB) were transferred from the aluminum tray into two 8-ounce, clear wide-mouth glass jars. Samples analyzed for TCL volatile organics were collected using EN Core® samplers (Tetra Tech 2002).

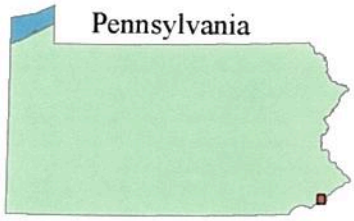
Sampling locations were electronically recorded using a global positioning system (GPS) instrument. Figure 3, Sampling Location Map, shows approximate sampling locations.

Dedicated sampling equipment (a disposable plastic scoop and an aluminum baking pan) and personal protective equipment (nitrile gloves only) were used at each sampling location (Tetra Tech 2002). Sampling activities were recorded in a field logbook in accordance with Tetra Tech



Source: Modified from USGS Digital Orthophoto (DOQQ) MrSID Mosaic for Philadelphia, Pennsylvania Quadrangle (NAPP II, 1993-1995)

Approximate Site Location =



Washington Compressed Steel Site
Philadelphia, Pennsylvania

Figure 3
Sampling Location Map

TDD No. SE3-02-10-004
EPA Contract No. 68-S3-00-02

Tetra Tech EM Inc.

Standard Operating Procedures (SOP) 024, "Recording of Notes in Field Logbook" (Tetra Tech 1999); copies of Tetra Tech's field logbook notes are provided in Appendix A. Copies of Tetra Tech's photographic documentation of site activities are included in Appendix B.

Table 1 in Appendix C presents a summary of the soil samples Tetra Tech collected on November 21, 2002. Table 1 summarizes the sample identifiers, collection dates and times, sampling locations, geographic coordinates of each sampling location obtained using the GPS, and QA/QC descriptions. Table 2 in Appendix C shows the actual depths from which the soil samples were collected.

4.0 SAMPLE HANDLING

Soil samples for TAL metals and cyanide analysis were shipped via Federal Express to Liberty Analytical in Cary, North Carolina, on November 21, 2002, under Contract Laboratory Program (CLP) Case No. 31206. Soil samples for TCL organics, pesticides, and PCB analysis were shipped via Federal Express to Ceimic Corporation in Narragansett, Rhode Island, on November 21, 2002, under CLP Case No. 31206.

Nine surface soil samples were analyzed for TCL volatile and semivolatile organics, pesticides, and PCBs using CLP method OLM04.2; one sample (WCS-01) was not analyzed for these parameters by the CLP laboratory because the sample jar was broken during shipment of the samples.) Ten surface soil samples were analyzed for TAL metals and cyanide using CLP method ILM04.1.

Table 3 in Appendix C presents a summary of the analytical parameters, matrices, methods, number of samples submitted for each analytical parameter, sample containers, preservatives, and analytical laboratories used for the WCS site removal assessment.

5.0 ANALYTICAL RESULTS

In Appendix C, Tables 4 and 5 summarize the inorganic and organic analytical results, respectively. Inorganic and Organic Data Validation Reports from the laboratories are included as Attachments A and B to this document, respectively. When applicable, Tables 4 and 5 include EPA's risk-based concentrations (RBC) and emergency removal guidelines (ERG). The ERGs and RBCs used in this report are from EPA's industrial soil lists. No organic compounds (including TCL volatile and semivolatile organics, pesticides, and PCBs), TAL metals, or cyanide exceeded any ERGs on the industrial soil lists. None of the 10 soil samples collected during the WCS removal assessment were above any RBCs for TCL volatile organics. Although additional organic compounds (including TCL volatile organics, TCL semivolatile organics, pesticides, and PCBs), TAL metals and cyanide were detected in soil samples, the analytical results summarized in this section were the only compounds detected at concentrations above their corresponding industrial soil ERG and RBCs.

Arsenic concentrations were detected in all surface soil samples above the RBC (3.8 milligrams per kilogram [mg/kg]) and ranged from 8.1 to 103 mg/kg. Soil samples WCS-02 (1,330 mg/kg) and WCS-10 (90.7 mg/kg) contained antimony above the RBC (82 mg/kg). Sample WCS-10 contained nickel (6,620 mg/kg) and chromium (8,070 mg/kg) above the RBCs; the RBC for nickel is 4,100 mg/kg and for chromium is 610 mg/kg.

All of the surface soil samples (WCS-01 through WCS-10) revealed lead concentrations ranging from 798 to 65,000 mg/kg. Although no RBC or ERG has been determined for lead in surface soils at industrial or residential sites, EPA has used 1,000 mg/kg lead as the removal action level for industrial sites at other EPA removal sites.

All of the surface soil samples collected (WCS-01 through WCS-10) revealed benzo(a)pyrene concentrations ranging from 1,600 to 12,000 micrograms per kilogram (µg/kg). The RBC for benzo(a)pyrene is 780 µg/kg. Soil samples WCS-02 (7,900 µg/kg) and WCS-04 (15,000 µg/kg) contained benzo(b)fluoranthene above the RBC (7,800 µg/kg). Sample WCS-04 contained indeno(1,2,3,-cd) pyrene (12,000 µg/kg) above the RBC (7,800 µg/kg).

Four of the 10 surface soil samples collected (WCS-02, WCS-03, WCS-04, and WCS-10) revealed aldrin concentrations ranging from 610 to 1,300 µg/kg. The RBC for aldrin is 340 µg/kg. Sample WCS-02 contained 4,4'DDD (49,000 µg/kg) above the RBC (24,000 µg/kg).

Five of the 10 surface soil sample surface soil samples collected (WCS-02, WCS-03, WCS-04, WCS-05, and WCS-10) revealed Aroclor-1248 concentrations ranging from 5,500 J to 33,000 J µg/kg. The RBC for Aroclor-1248 is 2,900 µg/kg. Five of the 10 surface soil samples collected (WCS-03, WCS-04, WCS-05, WCS-06, and WCS-10) revealed Aroclor-1254 concentrations ranging from 3,200 to 27,000 µg/kg. The RBC for Aroclor-1254 is 2,900 µg/kg.

6.0 INVESTIGATION-DERIVED WASTE DISPOSAL

All solid waste generated on site during the removal assessment was disposed of as nonhazardous, municipal waste.

7.0 FUTURE ACTIONS

The EPA OSC will evaluate the analytical results and use the data to determine whether any future actions are necessary.

REFERENCES

Tetra Tech EMI Inc. (Tetra Tech). 1999. "Recording of Notes in Field Logbook." Tetra Tech Standard Operating Procedures (SOP) 024. November.

Tetra Tech. 2002. Field Logbook Notes Taken During the Removal Site Assessment at the Washington Compressed Steel Site. Prepared by (b) (4) Environmental Scientist. November.

U.S. Geological Survey (USGS). 1967, Revised 1994. 7.5-Minute Series Topographic Map of Camden, New Jersey-Pennsylvania, Quadrangle.

USGS. 1967, Revised 1994. 7.5-Minute Series Topographic Map of Philadelphia, Pennsylvania-New Jersey, Quadrangle.

USGS. Digital Orthophoto NAPP II, 993-1995.

U.S. Environmental Protection Agency (EPA). 2002. "EPA Region 3 Risk-Based Concentration (RBC) Table." October.

APPENDIX A

FIELD LOGBOOK NOTES

(13 Pages)

Location _____ Date _____

Project / Client _____

15 OCT 2002 (TUESDAY)
CALLED OSC GREG HAM
ABOUT WASHINGTON
COMPRESSED STEEL.
SE 3-02-10-004
SITE IS IN PHILADELPHIA
NOT A LOT OF INFO.
SET RECONN DATE AND
SAMPLING DATE.
CITY OF PHILADELPHIA
WANTS EPA TO CHECK OUT
THE FACILTY.
ACTIVE SCRAP YARD.

OSC HAM WANTS 10-12
SOIL SAMPLES COLLECTED
(ONSITE AND OFFSITE) [redacted]
WILL USE CLP FOR LAB
ANALYSIS.
WILL ANALYZE FOR PCB/PESTS
TAL METALS, TCL ORGANICS
AND SVOC

TASKED TO CONDUCT ~~AT~~ A

Location _____ Date _____

Project / Client _____

STANDARD REMOVAL
ASSESSMENT AT SCRAP
YARD.
NO SEDIMENT / DRUM
SAMPLES OR WATER SAMPLE
WILL BE COLLECTED.

ON SEPT 21, 2001 THE
CITY OF PHILADELPHIA
SENT A LETTER (FROM
CITY SOLICITOR -
KENNETH I. TRUJILLO)
TO EPA TO INVESTIGATE
WASHINGTON COMPRESSED
STEEL. (1900 NORTH
AMERICA STREET 19112

FACILITY IS AN ACTIVE
SCRAP YARD AT THE
NORTHWEST CORNER OF
AMERICAN AND BERKS STREETS.

CITY SAID THERE APPEARED
TO BE OIL STAIN SOIL

Location _____ Date _____

Project / Client _____

ON THE SITE.

22 OCT 2002 (TUESDAY)
CALLED OSC HAM
(215) 519-0882 ABOUT
SITE STATUS.
THE RECORD IS SET.
TIME OF RECORD IS
~~28~~ MONDAY 28 OCT 2002
AT 0930 AM.
WILL MEET PROPERTY
OWNER'S WITH EPA TEAM
FOR SITE RECORD.
WILL CONDUCT A RAD
SURVEY THEN.

28 OCTOBER 2002 (MONDAY)
0920 ARRIVE ON SITE
0925 MET OSC HAM.
0929 START (b) (4) AND OSC
HAM MEET WITH FACILITY
OPERATION'S.
0930 RAD BACKGROUND READING
OUT SIDE FACILITY

Location _____ Date _____

Project / Client _____

5-8 UR
USE MICRO R INSTRUMENT)

OSC DISCUSSES PURPOSE OF
SITE RECORD WITH
MR RONALD W. GRECLIER
AND MR MIKE PALLOTTI
THEY TELL OSC HAM THAT
THEY LEASE THE PROPERTY
THE MORRIS IRON ~~AND~~ & AND
STEEL CO. INC. HAS USED
THE PROPERTY FOR THE
PAST 6 YRS. MR. PALLOTTI
SAID THAT THEY WILL BE
~~OUT~~ OFF THE PROPERTY IN
ABOUT A YR. THEY ARE
GOING TO RELOCATE THE
FACILITY ELSEWHERE.
THE PROPERTY IS OWNED
BY WASHINGTON COMPRESSED
STEEL. THE PROPERTY HAS
BEEN USED AS A SCRAP
YARD FOR 60-70 YEARS.

Location _____ Date _____

Project / Client _____

THE FACILITY SCREENS ALL INCOMING TRUCKS WITH A RAD DETECTION SYSTEM BY THE WEIGHT SCALES.

THERE ARE 11 EMPLOYEES

THEY PROCESS 1,200 TONS OF FERROUS METAL / MONTH

THEY PROCESS VERY LITTLE NON FERROUS METALS.

NO CANS, BATTERIES, TRANSFORMERS, GAS CYLINDERS, OR DRUMS OBSERVED ON SITE.
NO MOTORS ALSO.

FACILITY USES A SHEARER AND A BALER.

ALL PROCESSED METAL IS SHIPPED OUT.

Date _____

Project / Client _____

NO MONITORING WELL ON SITE
NOT HOOKED UP TO CITY SEWER SYSTEMS

FACILITY IS LOCATED IN AN INDUSTRIAL / COMMERICAL AREA. RESIDENTIAL HOMES ARE LOCATED NEARBY.

ACTIVE SCRAP YARD NOT A JUNK YARD.

OWNER IS MR SAM BROWN

EPA WILL CONTACT MR BROWN FOR ACCESS TO SAMPLE PROPERTY.

TOOK A FEW PICTURES OF OPERATIONS.

WEATHER:
PARTLY CAST, TEMP IN LOW 50'S

Location _____ Date _____

Project / Client _____

FACILITY MAY WANT TO SPLIT SAMPLES.

SCRAP YARD APPEARS TO BE A CLEAN, ORGANIZED FACILITY.

SOME OIL STAINING BY BALER AND SHEARER.

SURFACE WATER RUNOFF GOES TO STREET AND INTO SEWER SYSTEM.

FACILITY IS SECURED WITH FENCE AND A SECURITY GUARD AT NIGHT.
ACCESS IS CONTROLLED

LITTLE VEGETATION ON PARCEL

GRAVEL/MUD COVERS MOST OF FACILITY AREA.
SEVERAL CONCRETE PADS

Date _____

ARE LOCATED ~~ALONG~~ ALONG THE FENCE LINE.

WILL SAMPLE ALONG THE FENCE LINE ON PROPERTY AND OUTSIDE THE FENCE LINE. THE SAMPLES WILL BE ~~LOCATIONS~~ ~~WERE~~ COLLECTED.

NO SUMP PUMPS ON SITE.
0950 END SITE RECONN
0955 OSC HAM AND STAUT (b) (4) WALK AROUND THE OUTSIDE OF FACILITY.
MR GRELLER AND PALLOTTI ALSO WALK AROUND SITE WITH OSC HAM AND STAUT (b) (4)

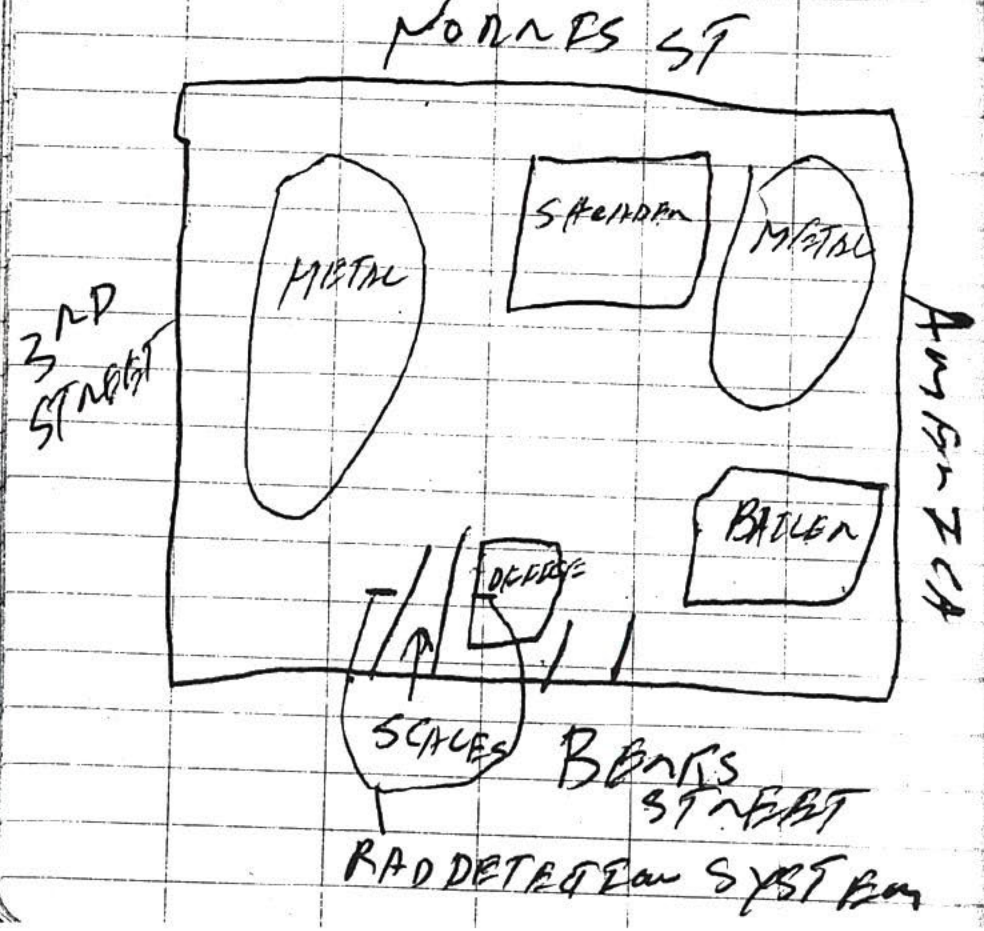
NOTE: RAD READINGS
INSIDE FACILITY
10-12 UR
OUTSIDE - 5-8 UR
FACILITY PERIMETER

- MIRROR

Location _____ Date _____

Project / Client _____

1008 END OUT SIDE
FACILITY RECOWN
1016 OFF SITE.
OSCHAM WILL GET
BACK TO START (b) (4)
IF SAMPLING WILL BE
CONDUCTED ON WEDNESDAY
30 OCT 2002.



Date _____

Client _____

CASE # 31115

AS CASE # CT1533 CT1534

WASHINGTON COMPRESSED
STEEL

RSCC REGION 3

BETTY ANN JEFFERY

SHIP WK - 10/28/02

MULTI ORGANICS
OLM04.2

15 SAMPLE - SOIL
14 DAY TURNAROUND TIME
VOA/BNA/PEST/PCB
CEIMIC CORP (CEIMIC)
10 DEAN KNAUSS DRIVE
NARRAGANSETT, RI
(401) 782-8900 02882
ATTN: (b) (4)(b) (4)(b) (4)(b) (4)(b) (4)

Location _____ Date _____

Project / Client _____

MULTI INORGANICS
ILM04.1

15 SAMPLES - SOIL
TM / CN

TURNAROUND TIME
14 DAYS

LIBERTY ANALYTICAL (LIBRTY)
501 MADISON AVENUE
CARY, NC 27513
(919) 379-4100
ATTN: (b) (4)(b) (4)

NOV 11, 2002 MONDAY
DUE TO LACK OF ACCESS
CLP LAB TO BE RESUBMITTED
SAMPLING SCHEDULED FOR
21 NOV 2002

Date _____

NOVEMBER 21, 2002
(THURSDAY)

0900 LEAVE OFFICE HEAD
TO WASHINGTON
COMPRESSED STEEL IN
PHILADELPHIA, PA.
0926 ARRIVE ON SITE
WEATHER - OVER CAST / RAIN
TEMP - 50'S
0930 MEET WITH OFFICIALS
FROM WASHINGTON COMPRESSED
STEEL.
ON SITE TO SAMPLE:
(b) (4) - TTEMI
- T TEMI
WASHINGTON COMPRESSED STEEL
ROB - GELLER
MIKE PALLOTTI
DID ~~NOT~~ WANT TO SPLIT
SAMPLES ~~BUT~~ AND WELL OBSERVE
SAMPLING AND WHERE SAMPLES
WERE COLLECTED.
TTEMI DISCUSSES SAMPLING

Lo Location _____ Date _____

Pn Project / Client _____

MC WITH REPS
I 0956 START TO COLLECT
WCS 01
15 DIG HOLE 4.5" DEEP.
COLLECT SOIL SAMPLES
2 - 8-OZ WIDE MOUTH GLASS JARS
TC 3 - ENCORE SAMPLES
SAMPLED FOR TAL METALS
AND CN⁻
LI AND SAMPLED FOR SEMI-VOA
5 VOA, AND BEST / PCB'S
TRIED TO GET SOIL NOT FILL
C A LOT OF GRAVEL AND FILL AROUND
FACILITY.
1ST SAMPLE COLLECT FROM BY
NO A BUILDING LOCATED ON THE
D WESTERN CORNER OF PROPERTY
C (OLD SCALE BUILDING)
COLLECTED MS/MSD SAMPLES
Here.
1015 SAMPLE WCS01 COLLECTED
PROCHANGED MIND DOES NOT
WANT TO SPLIT SAMPLES
MIKE PALLOTTI WILL

Location _____ Date _____

Project / Client _____

ITEM I
STAY WITH SAMPLE TEAM
TO OBSERVE SAMPLING AND
SAMPLE LOCATIONS.
MR GELLER DEPARTS.
1023 MOVE TO NEXT SAMPLE
LOCATION.
1026 START TO DIG HOLE. FOR
SAMPLE WCS02.
SAMPLE LOCATION MIDDLE
OF PROPERY ON WEST SIDE
(3RD STREET)
1033 DIG HOLE 4.5" DEEP
COLLECT SOIL SAMPLE
WCS-02
SAMPLE COLLECTED NEAR
FENCE LINE ON WESTERN
SIDE OF FACITILY ALONG
3RD STREET.
CPB POSITION IN
COLLECT SAME NUMBER OF
SAMPLES AS WCS01
ANALYZED FOR SAME
PERMETERS. (TAL, TCL)

Location _____ Date _____

Project / Client _____

1048 START TO COLLECT WCS03

1055 COLLECT WSC-03

DIG HOLE 4 INCHES DEEP

~~H03~~ FILL SAME AMOUNT OF JARS AS WCS-01

ANALYZED FOR TAL METALS AND CN^-, TCL ORGANICS PCB/PEST.

1103 START TO COLLECT WCS-04

DIG HOLE 5 INCHES DEEP. METAL AND FILL MATERIAL ALL OVER DIFFICULT TO GO DEEPER.

ALL SAMPLES ARE SURFACE SAMPLES 1-6 INCHES DEEP.

1108 SAMPLE WCS-04

1117 DIG HOLE 4.5 INCHES DEEP. START TO COLLECT WCS-05

1122 COLLECT SAMPLE WCS-05

Location _____ Date _____

Project / Client _____

1133 START TO COLLECT WCS-06

SAMPLE COLLECTED OUTSIDE SCRAP YARD ON NORRIS ST THE NORTHERN SIDE OF SCRAP YARD.

FIND A DIRT AREA TO SAMPLE. ALMOST ALL CONCRETE NO SOIL.

DIG HOLE 4 INCHES DEEP

1135 COLLECT SAMPLE WCS-06.

1148 START TO ~~SAMPLE~~ COLLECT WCS-07

SAMPLE LOCATED OUTSIDE FACILITY ON 3RD ST. WEST SIDE OF SCRAP YARD.

1153 DIG HOLE 4.5 INCHES DEEP. COLLECT SAMPLE WCS07

1159 START TO COLLECT WCS-08 / WCS 09

WCS09 IS A DUP OF WCS08

Location _____ Date _____

Project / Client _____

USED 1234 AS TIME
COLLECT FOR DUP WCS-09
DIG HOLE 5.5 INCHES
DEEP.
SAMLE LOCATE ON OTHER
SIDE OF WCS-02.
WCS-08/WCS-09 COLLECT OUT
SIDE SCRAP YARD
LOCATED ON 3RD STREET.
1205 SAMPLES COLLECTED
WCS-08 AND DUP
WCS09.
1222 START TO SAMPLE WCS10
SAMPLE LOCATED INSIDE
FACILITY ON EASTERN
SIDE OF SCRAPYARD.
BY CORNER OF BERKS ST
AND AMERICA AVE
1228 DIG HOLE ~~4.0~~ INCHES
DEEP 4.0
COLLECT SAMPLE
WCS-10.
NO OTHER SAMPLES
COLLECTED

Location _____ Date _____

Project / Client _____

1240 OFF FACILITY
1245 HEAD BACK TO OFFICE

SAMPLES

WCS-01
WCS-02
WCS 03
WCS 04
WCS 05
WCS 10

} COLLECTED ON SITE

WCS 06
WCS 07
WCS 08/09

} COLLECT OUTSIDE SITE

SAMPLE COLLECT OUTSIDE
FACILITY ON MORRIS
AND 3RD STREETS ONLY
NO AREAS TO COLLECT SAMPLES
ALONG BERKS OR AMERICA
OUTSIDE FACILITY.

INSIDE	OUTSIDE
WCS-03 -	WCS06, WCS07
WCS-02 -	WCS08/WCS09

Location _____ Date _____

Project / Client _____

~~SAMPLERS~~

ALL POSITIONS WERE GPS IN AND PUT ON A SAMPLE LOCATION MAP.

SITE LOCATION
39.98019 N
75.13938 W

SIZE OF FACILITY
3.174 ACRES

Location _____ Date _____

Project / Client _____

Location _____ Date _____

Project / Client _____

Location _____ Date _____

Project / Client _____

MORRIS IRON & STEEL CO., INC.
7345 Milnor Street • Philadelphia, PA 19136

Ronald W. Greller

(215) 624-6526
Fax (215) 624-8667

MORRIS IRON & STEEL CO., INC.
7345 Milnor Street • Philadelphia, PA 19136

Mike Pallotti

(215) 624-6526
Fax (215) 624-8667
Mobil (215) 694-7932

APPENDIX B

PHOTOGRAPHIC DOCUMENTATION LOG

(8 Pages)

Photographic Documentation

Client: U.S. Environmental Protection Agency Region 3
Site Name: Washington Compressed Steel Site
Location: Philadelphia, Pennsylvania

Prepared by: Tetra Tech EM Inc.
Photographer: (b) (4)
TDD Number: SE3-02-10-004

Photograph No. 1

Photograph Date: November 21, 2002

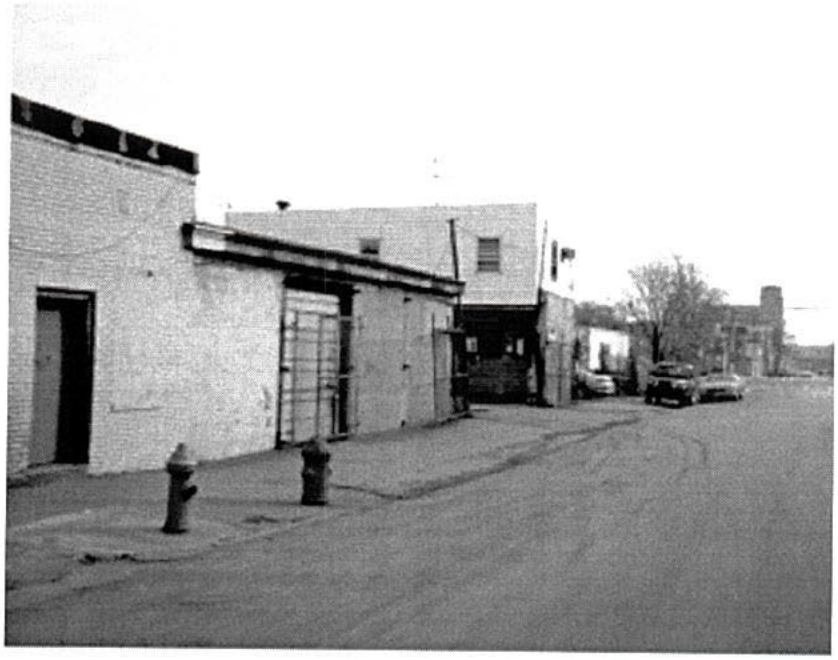
Orientation: Southwest

Description: Old scale building located at the front of facility at the intersection of 3rd and Berks Streets; sample WCS-01 was collected along side the scale building inside the scrap yard.

Photograph No. 2

Photograph Date: November 21, 2002

Orientation: Southeast



Description: Front of facility along Berks Street; no areas to collect samples from the outside of the scrap yard

Client: U.S. Environmental Protection Agency Region 3
Site Name: Washington Compressed Steel Site
Location: Philadelphia, Pennsylvania

Prepared by: Tetra Tech EM Inc.
Photographer: (b) (4)
TDD Number: SE3-02-10-004

Photograph No. 3

Photograph Date: November 21, 2002

Orientation: East

Description: Scrap yard along American Street; no areas to collect samples from the outside of the scrap yard

Photograph No. 4

Photograph Date: November 21, 2002

Orientation: North

Description: Washington Compressed Steel Company shearer unit activities inside the fence line of the scrap yard

Photographic Documentation

Client: U.S. Environmental Protection Agency Region 3
Site Name: Washington Compressed Steel Site
Location: Philadelphia, Pennsylvania

Prepared by: Tetra Tech EM Inc.
Photographer: (b) (4)(b) (4)
TDD Number: SE3-02-10-004

Photograph No. 5

Photograph Date: November 21, 2002

Orientation: East

Description: Washington Compressed Steel Company activities inside the fence line of the scrap yard

Photograph No. 6

Photograph Date: November 21, 2002

Orientation: West

Description: Washington Compressed Steel Company activities inside the fence line of the scrap yard

Client: U.S. Environmental Protection Agency Region 3
Site Name: Washington Compressed Steel Site
Location: Philadelphia, Pennsylvania

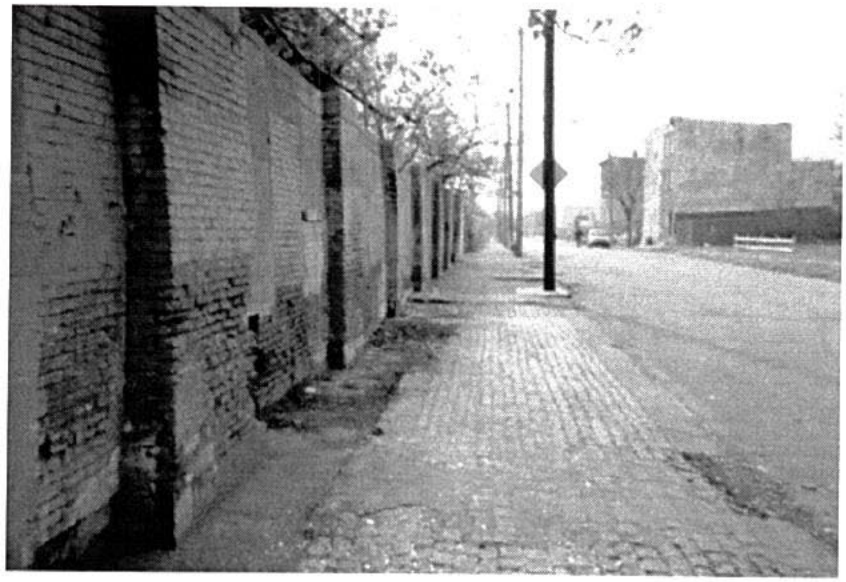
Prepared by: Tetra Tech EM Inc.
Photographer: (b) (4)
TDD Number: SE3-02-10-004

Photograph No. 7

Photograph Date: November 21, 2002

Orientation: Southwest

Description: Outside the scrap yard along 3rd Street

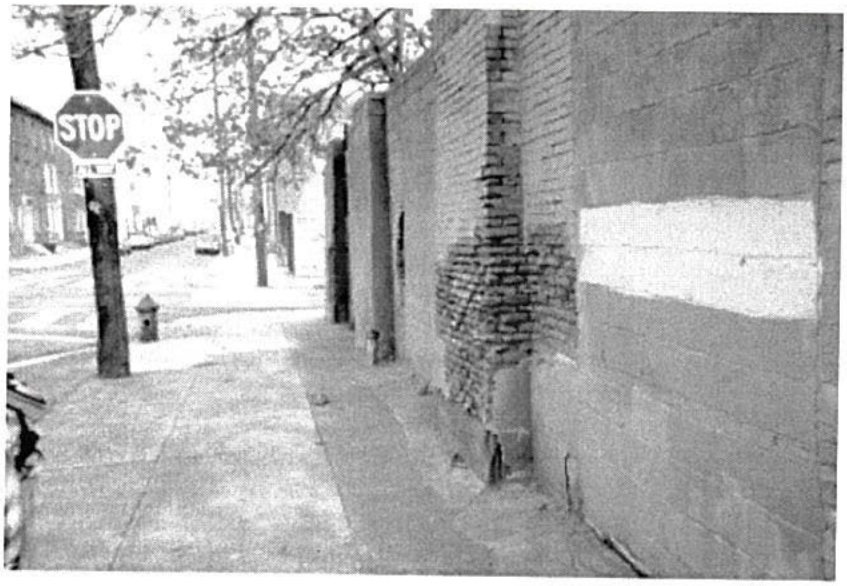


Photograph No. 8

Photograph Date: November 21, 2002

Orientation: Northwest

Description: Outside the scrap yard along 3rd Street



Photographic Documentation

Client: U.S. Environmental Protection Agency Region 3
Site Name: Washington Compressed Steel Site
Location: Philadelphia, Pennsylvania

Prepared by: Tetra Tech EM Inc.
Photographer: (b) (4)
TDD Number: SE3-02-10-004

Photograph No. 9

Photograph Date: November 21, 2002

Orientation: West

Description: Sampling location WCS-02 inside the scrap yard

Photograph No. 10

Photograph Date: November 21, 2002

Orientation: East

Description: View of scrap yard inside the fence line along American Street

Photographic Documentation

Client: U.S. Environmental Protection Agency Region 3
Site Name: Washington Compressed Steel Site
Location: Philadelphia, Pennsylvania

Prepared by: Tetra Tech EM Inc.
Photographer: (b) (4)
TDD Number: SE3-02-10-004

Photograph No. 11

Photograph Date: November 21, 2002

Orientation: North

Description: Sampling location WCS-04 inside the fence line of the site

Photograph No. 12

Photograph Date: November 21, 2002

Orientation: Northeast

Description: Sampling location WCS-10 inside the fence line of the site

Photographic Documentation

Client: U.S. Environmental Protection Agency Region 3
Site Name: Washington Compressed Steel Site
Location: Philadelphia, Pennsylvania

Prepared by: Tetra Tech EM Inc.
Photographer: (b) (4)
TDD Number: SE3-02-10-004

Photograph No. 13

Photograph Date: November 21, 2002

Orientation: South

Description: Scrap yard inside the fence line along Berks Street

Photograph No. 14

Photograph Date: November 21, 2002

Orientation: Northwest

Description: Sampling location WCS-07 outside the fence line along 3rd Street

Photographic Documentation

Client: U.S. Environmental Protection Agency Region 3
Site Name: Washington Compressed Steel Site
Location: Philadelphia, Pennsylvania

Prepared by: Tetra Tech EM Inc.
Photographer: (b) (4)
TDD Number: SE3-02-10-004

Photograph No. 15

Photograph Date: November 21, 2002

Orientation: West

Description: Sampling location WCS-03 inside the fence line of the site

Photograph No. 16

Photograph Date: November 21, 2002

Orientation: Southwest

Description: Sampling location WCS-03 inside the fence line of the site

APPENDIX C

TABLES

(Seven Pages)

Table		Page
1	Sample Summary	C-1
2	Summary of Sample Depths	C-2
3	Summary of Analytical Parameters	C-3
4	Summary of Inorganic Analytical Results	C-4
5	Summary of Organic Analytical Results	C-6

TABLE 1

SAMPLE SUMMARY

Sample ID	Date Collected	Time Collected	Sampling Location	Latitude	Longitude	QA/QC Designation
WCS-01	11/21/02	1015	Inside fence line by the corner of old scale building on west side of the scrap yard	75.139811883°	39.979651063°	NA
WCS-02	11/21/02	1033	Inside fence line on western side of scrap yard along 3rd Street	75.139649160°	39.980229325°	NA
WCS-03	11/21/02	1055	Inside fence line on northern side of scrap yard along Norris Street	75.139371570°	39.980693706°	NA
WCS-04	11/21/02	1108	Inside fence line on northern side of scrap yard along Norris Street	75.138954341°	39.980819379°	NA
WCS-05	11/21/02	1122	Inside fence line on eastern side of scrap yard along American Street	75.138777438°	39.980666972°	NA
WCS-06	11/21/02	1135	Outside fence line on northern side of scrap yard along Norris Street	75.139369165°	39.980903440°	NA
WCS-07	11/21/02	1153	Outside fence line on western side of scrap yard along 3rd Street	75.139680230°	39.980765424°	NA
WCS-08	11/21/02	1205	Outside fence line on western side of scrap yard along 3rd Street	75.139781923°	39.980271689°	NA
WCS-09	11/21/02	1234	Outside fence line on western side of scrap yard along 3rd Street	75.139781923°	39.980271689°	Duplicate of WCS-08
WCS-10	11/21/02	1228	Inside fence line on southern side of scrap yard along Berks Street	75.139105674°	39.979507674°	NA

Notes:

NA	Not applicable
QA/QC	quality assurance/quality control
WCS	Washington Compressed Steel

TABLE 2

SUMMARY OF SAMPLE DEPTHS

Sample ID	Sample Depth (inches)
WCS-01	4.5
WCS-02	4.5
WCS-03	4
WCS-04	5
WCS-05	4.5
WCS-06	4
WCS-07	4.5
WCS-08	5.5
WCS-09	5.5
WCS-10	4

Notes:
WCS Washington Compressed Steel

TABLE 3
SUMMARY OF ANALYTICAL PARAMETERS

Analytical Parameter	Matrix	Analytical Method	Number of Samples	Container	Detection Limit	Preservative	Laboratory
TAL metals and cyanide	Soil	ILM04.1	10	One 8-ounce CWM, glass jar with Teflon-lined lid	CRDL	Ice	Liberty Analytical Laboratory
TCL semivolatiles, pesticides, and PCBs	Soil	OLM04.2	10	One 8-ounce CWM, glass jar with Teflon-lined lid	CRQL	Ice	Ceimic Corp.
TCL volatile organics	Soil	OLM04.2	10	Three En Core® samplers with one 2-ounce CWM glass jar with Teflon-lined lid	CRQL	Ice	Ceimic Corp.

Notes:

CWM	Clear, wide-mouth
CRDL	Contract-required detection limit
CRQL	Contract-required quantitation limit
ILM	Inorganic low to medium
OLM	Organic low to medium
PCB	Polychlorinated biphenyl
TAL	Target analyte list
TCL	Target compound list

TABLE 5
WASHINGTON COMPRESSED STEEL SITE
SUMMARY OF ORGANIC ANALYTICAL RESULTS
SURFACE SOIL SAMPLES COLLECTED FROM INSIDE THE FACILITY AREA
NOVEMBER 2002

FIELD SAMPLE NUMBER				WCS-02		WCS-03		WCS-04		WCS-05		WCS-10	
LABORATORY SAMPLE NUMBER				C31Z5		C31Z6		C31Z7		C31Z8		C31Y9	
PERCENT MOISTURE				20		24		15		26		18	
UNITS				µg/kg		µg/kg		µg/kg		µg/kg		µg/kg	
Volatile Organic Compounds													
Dilution Factor				1.04		1.16		2.08		0.94		1.06	
	ERG	RBC	CRQL										
Trichlorofluoromethane	2,000,000,000	20,000,000	10	2	J	---		---		---		---	
Acetone	2,000,000,000	20,000,000	10	6	B	14	B	26	B	12	B	12	B
Methylene Chloride	76,000,000	760,000	10	12	B	15	B	22	B	17	B	12	B
Tetrachloroethene	11,000,000	110,000	10	6	J	---		---		---		---	
1,2-Dibromo-3-chloropropane	410,000	4,100	10	---	R	---	R	---	R	---	R	---	R
Semivolatile Organic Compounds													
Percent Moisture				20		22		13		26		20	
Dilution Factor				29.8		29.7		150		29.6		30	
	ERG	RBC	CRQL										
Phenanthrene	NL	NL	330	13,000		2,600	J	21,000	J	5,700	J	7,400	J
Anthracene	6,100,000,000	61,000,000	330	3,200	J	---		---		---		1,600	J
Di-n-butylphthalate	2,000,000,000	20,000,000	330	1,500	J	---		---		---		2,200	J
Carbazol	29,000,000	290,000	330	1,700	J								
Fluoroanthene	820,000,000	8,200,000	330	19,000		4,600	J	27,000	J	9,400	J	11,000	J
Pyrene	610,000,000	6,100,000	330	17,000		5,100	J	25,000	J	9,000	J	13,000	
Butylbenzylphthalate	4,100,000,000	41,000,000	330	2,100	J	14,000		6,800	J	---		1,800	J
Benzo(a)anthracene	780,000	78,000	330	10,000	J	3,100	J	14,000	J	5,300	J	6,300	J
Chrysene	78,000,000	780,000	330	11,000	J	3,400	J	15,000	J	6,100	J	7,000	J
bis(2-Ethylhexyl)phthalate	41,000,000	410,000	330	5,700	B	85,000		8,400	B	8,100	B	7,900	B
Benzo(b)fluoranthene	780,000	7,800	330	**7,900**	J	3,900	J	**15,000**	J	5,800	J	5,800	J
Benzo(k)fluoranthene	7,800,000	78,000	330	8,400	J	3,700	J	11,000	J	5,400	J	6,600	J
Benzo(a)pyrene	78000	780	330	**8,700**	J	**4,000**	J	**12,000**	J	**5,900**	J	**6,100**	J
Indeno(1,2,3-cd)pyrene	780,000	7,800	330	6,200	J	3,800	J	**12,000**	J	5,100	J	5,000	J
Benzo(g,h,I)perylene	NL	NL	330	5,800	J	3,000	J	15,000	J	4,000	J	3,900	J
Pesticide and Polychlorinated Biphenyl Compounds													
Percent Moisture				20		22		13		26		20	
Dilution Factor				98.7/987		9.9/99		9.84/98.4		9.93/99.3		9.97/99.7	
pH				6.7		6.7		6.9		6.9		6.8	
	ERG	RBC	CRQL										
beta-BHC	320,000	3,200	1.7	---		---		81	J	34		45	
delta-BHC	NL	NL	1.7	---		77	J	---		---		24	J
Heptachlor	130,000	1,300	1.7	---		600 +	J	---		---		---	
Aldrin	34,000	340	1.7	**1,100**	J	**1,300 +**	J	**740 +**	J	320	J	**610 +**	
Heptachlor epoxider	63,000	630	1.7	400	J	600 +	J	280	J	---		260	J
4,4'-DDE	1,700,000	17,000	3.3	830	J	260	J	45	J	110	J	270	J
Endrin	6,100,000	61,000	3.3	---		60	J	47	J	49		---	
4-4'-DDD	2,400,000	24,000	3.3	**49,000 +**		93		---		130		240	J
Endosulfan Sulfate	NL	NL	3.3	2,500		---		---		---		51	J
4,4'-DDT	1,700,000	17,000	3.3	2,700	J	100	J	180	J	580	J	250	J
alpha-Chlordane	NL	NL	1.7	---		31	J	61	J	---		27	J
gamma-Chlordane	NL	NL	1.7	1,000		930 +		950 +	J	290	J	520 +	
Aroclor-1248	290,000	2,900	33	**17,000**	J	**33,000**	J	**17,000 +**	J	**5,500**	J	**8,400 +**	J
Aroclor-1254	290,000	2,900	33	---		**11,000**	J	**27,000 +**		**7,100 +**	J	**6,000 +**	J

Notes:
RBCs were taken and calculated from EPA Region III risk-based concentration Table, October 2002.
ERGs were derived from EPA Region III risk-based concentration Table, October 2002.
Bolded analytical results indicate an exceedance of that RBC value.
[ ] = Value is between the IDL and CRDL.
--- = Result not detected
+ = Results reported from diluted analysis
µg/kg = micrograms per kilogram

B = Not detected substantially above the level reported in laboratory or field blanks
CRQL = Contract required quantitation limit
ERG = Emergency removal guidelines
IDL = Instrument detection level
J = Analyte present. Reported value may not be accurate or precise.
K = Value is biased high.
L = Value is biased low.
NL = Not listed
R = Unusable result. Analyte may or may not be present in the sample
RBC = Risk-based concentration

TABLE 5 (continued)
WASHINGTON COMPRESSED STEEL SITE
SUMMARY OF ORGANIC ANALYTICAL RESULTS
SURFACE SOIL SAMPLES COLLECTED FROM OUTSIDE THE FACILITY AREA
NOVEMBER 2002

FIELD SAMPLE NUMBER				WCS-06		WCS-07		WCS-08		WCS-09	
LABORATORY SAMPLE NUMBER				C31Z9		C3200		C3201		C3202	
PERCENT MOISTURE				16		17		15		15	
UNITS				µg/kg		µg/kg		µg/kg		µg/kg	
										Field duplicate of sample WCS-08	
Volatile Organic Compounds											
Dilution Factor				1.16		0.96		1.19		1.14	
	ERG	RBC	CRQL								
Trichlorofluoromethane	2,000,000,000	20,000,000	10	---		1	J	---		---	
Acetone	2,000,000,000	20,000,000	10	12	B	8	B	9	B	4	B
Methylene Chloride	76,000,000	760,000	10	14	B	15	B	14	B	11	B
1,2-Dibromo-3-chloropropane	410,000	4,100	10	---	R	---	R	---	R	---	R
Semivolatile Organic Compounds											
Percent Moisture				15		18		17		16	
Dilution Factor				29.8		29.7		29.8		29.9	
	ERG	RBC	CRQL								
Phenanthrene	NL	NL	330	4,800	J	2,300	J	8,100	J	5,000	J
Fluoranthene	820,000,000	8,200,000	330	7,800	J	3,700	J	9,800	J	5,900	J
Pyrene	610,000,000	6,100,000	330	7,200	J	2,900	J	8,600	J	5,200	J
Butylbenzylphthalate	4,100,000,000	41,000,000	330	3,700	J	---		---		---	
Benzo(a)anthracene	780,000	78,000	330	4,000	J	1,500	J	4,400	J	2,500	J
Chrysene	78,000,000	780,000	330	4,500	J	1,700	J	5,300	J	2,900	J
bis(2-Ethylhexyl)phthalate	41,000,000	410,000	330	3,800	B	2,800	B	2,100	B	1,600	B
Benzo(b)fluoranthene	780,000	7,800	330	---		1,900	J	4,700	J	3,000	J
Benzo(k)fluoranthene	7,800,000	78,000	330	---		1,500	J	3,900	J	2,400	J
Benzo(a)pyrene	78000	780	330	**4,100**	J	**1,600**	J	**3,900**	J	**2,400**	J
Indeno(1,2,3-cd)pyrene	780,000	7,800	330	2,900	J	1,300	J	3,200	J	2,000	J
Benzo(g,h,I)perylene	NL	NL	330	2,000	J	---		2,200	J	1,600	J
Pesticide and Polychlorinated Biphenyl Compounds											
Percent Moisture				15		18		17		16	
Dilution Factor				1.00/9.97		1.00/10		0.99/9.87		0.99/9.933	
pH				7.5		6.6		7.6		7.6	
	ERG	RBC	CRQL								
beta-BHC	320,000	3,200	1.7	3.7	J	---		---		---	
Heptachlor	130,000	1,300	1.7	4.8	J	---		3.3	J	2.7	J
Aldrin	34,000	340	1.7	16	J	3.6	J	31	J	53 +	J
Heptachlor epoxider	63,000	630	1.7	14	J	---	J	10	J	---	
Dieldrin	36,000	360	3.3	---		59	J	---		---	
4,4'-DDE	1,700,000	17,000	3.3	13	J	110 +		32	J	47	J
Endrin	6,100,000	61,000	3.3	7.7	J	---		7.1	J	6.5	J
4-4'-DDD	2,400,000	24,000	3.3	13	J	4.9	J	12	J	13	J
4,4'-DDT	1,700,000	17,000	3.3	46	J	130 +	J	120 +	J	110 +	J
alpha-Chlordane	NL	NL	1.7	---		15		---		---	
gamma-Chlordane	NL	NL	1.7	74 +	J	---		90 +	J	87 +	J
Aroclor-1248	290,000	2,900	33	400		---		460	J	440	J
Aroclor-1254	290,000	2,900	33	**3,200 +**		600	J	2,900 +	J	2,400 +	J

Notes:

RBCs were taken and calculated from EPA Region III risk-based concentration Table, October 2002.
ERGs were derived from EPA Region III risk-based concentration Table, October 2002.
Bolded analytical results indicate an exceedance of that RBC value.
[ ] = Value is between the IDL and CRDL.
--- = Result not detected
+ = Results reported from diluted analysis
µg/kg = micrograms per kilogram

B = Not detected substantially above the level reported in laboratory or field blanks
CRQL = Contract required quantitation limit
ERG = Emergency removal guidelines
IDL = Instrument detection level
J = Analyte present. Reported value may not be accurate or precise.
K = Value is biased high.
L = Value is biased low.
NL = Not listed
R = Unusable result. Analyte may or may not be present in the sample
RBC = Risk-based concentration

TABLE 4
WASHINGTON COMPRESSED STEEL SITE
SUMMARY OF INORGANIC ANALYTICAL RESULTS
SURFACE SOIL SAMPLES COLLECTED FROM INSIDE THE FACILITY AREA
NOVEMBER 2002

FIELD SAMPLE NUMBER				WCS-01		WCS-02		WCS-03		WCS-04		WCS-05		WCS-10	
LABORATORY SAMPLE NUMBER				MC31Y8		MC31Z5		MC31Z6		MC31Z7		MC31Z8		MC31Y9	
PERCENT SOLID				74.8		81.8		73.6		87.8		74.2		80.3	
UNITS				mg/kg		mg/kg		mg/kg		mg/kg		mg/kg		mg/kg	
Metals															
Dilution Factor				1		1/20		1/20		1/20		1/2		1/20	
	ERG	RBC	CRDL												
Aluminum	20,000,000	200,000	40	6,380	J	10,500	J	9,180	J	12,400	J	5,160	J	9,840	J
Antimony	8,200	82	12	[7.0]		**1,330**		22.1		45.8		29.8		**90.7**	
Arsenic	380	3.8	2	**15.1**		**103**		**13.7**		**38.6**		**41.4**		**30.5**	
Barium	1,400,000	14,000	40	180		786		434		872		1,160		2,070	
Beryllium	41,000	410	1	[0.37]	B	[0.49]	B	[0.54]	B	[0.59]	B	[0.38]	B	[0.72]	B
Cadmium	20,000*	100*	1	9.9		12.8		18.2		38.2		11.1		14.3	
Calcium	NL	NL	1,000	6,230		22,800		36,500		16,600		19,700		16,100	
Chromium	61,000**	610**	2	102		404		282		**752**		475		**8,070**	
Cobalt	410,000	4,100	10	18.6		21.4		16.3		43.4		24.4		33.9	
Copper	820,000	8,200	5	517	J	1,560	J	1,450	J	2,840	J	724	J	1,560	J
Iron	6,100,000	61,000	20	36,200		**128,000**	+	**113,000**	+	**158,000**	+	**132,000**	+	**192,000**	+
Lead	NL	NL	0.6	**1,510**		**65,500**	+	**3,560**		**4,410**		**12,200**	+	**6,220**	
Magnesium	NL	NL	1,000	4,440		13,700		11,500		5,280		4,140		4,700	
Manganese	2,900,000***	29,000***	3	552	J	2,030	J	1,420	J	1,770	J	1,500	J	2,250	J
Mercury	NL	NL	0.1	2.7	K	2.4	K	2.8	K	3.3	K	4.2	K	4.1	K
Nickel	410,000	4,100	8	142	J	531	J	421	J	980	J	220	J	**6,620**	J
Potassium	NL	NL	1,000	[492]		[570]		[624]		[621]		[507]		[1,150]	
Selenium	100,000	1,000	1	1.6	L	4.2		2.9		6.7		4.3		16.4	
Silver	100,000	1,000	2	[0.95]		4.5		[1.7]		4.3		[1.4]		2.7	
Sodium	NL	NL	1,000	---		---		---	+	---	+	---		---	+
Thallium	1,400	14	2	---		5.4	L	4.3	L	7.7	L	7.3	L	9.9	L
Vanadium	140,000	1,400	10	64.5		54.9		66.5		104		63.5		69	
Zinc	6,100,000	61,000	4	1,470		4,800		9,020	+	20,900	+	4,620		9,860	+
Cyanide	410,000	4,100	0.5	1.1	L	4.6	L	2	L	5.5	L	7	L	2.0	L

Notes:
RBCs were taken and calculated from EPA Region III risk-based concentration Table, October 2002.
ERGs were derived from EPA Region III risk-based concentration Table, October 2002.
Bolded analytical results indicate an exceedance of that RBC value.
[ ] = Value is between the IDL and CRDL.
--- = Result not detected
+ = Results reported from diluted analysis
* = ERG and RBC values listed are the cadmium-water value.
** = ERG and RBC values listed are the chromium VI value.
*** = ERG and RBC values are the manganese-nonfood value.

B = Not detected substantially above the level reported in laboratory or field blanks
CRDL = Contract-required detection limit
ERG = Emergency removal guidelines
IDL = Instrument detection level
J = Analyte present. Reported value may not be accurate or precise.
K = Value is biased high.
L = Value is biased low.
mg/kg = milligrams per kilogram
NL = Not listed
RBC = Risk-based concentration

TABLE 4 (continued)
WASHINGTON COMPRESSED STEEL SITE
SUMMARY OF INORGANIC ANALYTICAL RESULTS
SURFACE SOIL SAMPLES COLLECTED FROM OUTSIDE THE FACILITY AREA
NOVEMBER 2002

FIELD SAMPLE NUMBER				WCS-06		WCS-07		WCS-08		WCS-09	
LABORATORY SAMPLE NUMBER				MC31Z9		MC3200		MC3201		MC3202	
PERCENT SOLID				74.2		86.3		83.6		85.6	
UNITS				mg/kg		mg/kg		mg/kg		mg/kg	
										Field duplicate of	
										sample WCS-08	
Metals											
Dilution Factor				1		1		1		1	
	ERG	RBC	CRDL								
Aluminum	20,000,000	200,000	40	6,720	J	8,770	J	6,340	J	7,290	J
Antimony	8,200	82	12	[5.7]		[2.6]		[5.5]		[4.5]	
Arsenic	380	3.8	2	**10.2**		**11.4**		**12.9**		**8.1**	
Barium	1,400,000	14,000	40	253		206		346		289	
Beryllium	41,000	410	1	[0.74]		[0.70]		[0.50]	B	[0.44]	B
Cadmium	20,000*	100*	1	3.7		2.1		9.5		15.6	
Calcium	NL	NL	1,000	14,400		4,510		21,700		20,000	
Chromium	61,000**	610**	2	64.9		51.8		131		163	
Cobalt	410,000	4,100	10	[7.3]		[5.8]		[10.6]		7.3	
Copper	820,000	8,200	5	303	J	134	J	916	J	414	J
Iron	6,100,000	61,000	20	30,900		24,700		40,400		28,500	
Lead	NL	NL	0.6	**798**		**966**		**1,820**		**1,370**	
Magnesium	NL	NL	1,000	5,220		3,160		4,550		3,760	
Manganese	2,900,000***	29,000***	3	456	J	342	J	689	J	429	J
Mercury	NL	NL	0.1	1.8	K	0.5	K	3.1	K	4.8	K
Nickel	410,000	4,100	8	66.7	J	31.7	J	512	J	128	J
Potassium	NL	NL	1,000	[1,090]		1,450		[823]		1,160	
Selenium	100,000	1,000	1	[0.96]	L	[1.1]	L	1.7	L	[0.73]	L
Silver	100,000	1,000	2	[0.46]		[0.24]		[0.86]		[0.90]	
Sodium	NL	NL	1,000								
Thallium	1,400	14	2	---	UL	---	UL	---	UL	---	UL
Vanadium	140,000	1,400	10	54.8		46		54.2		38.6	
Zinc	6,100,000	61,000	4	1,020		738		3,470		2,640	
Cyanide	410,000	4,100	0.5	0.6	L	1.2	L	2.6	L	2.6	L

Notes:
RBCs were taken and calculated from EPA Region III risk-based concentration Table, October 2002.
ERGs were derived from EPA Region III risk-based concentration Table, October 2002.
Bolded analytical results indicate an exceedance of that RBC value.
[ ] = Value is between the IDL and CRDL.
--- = Result not detected
+ = Results reported from diluted analysis
* = ERG and RBC values listed are the cadmium-water value.
** = ERG and RBC values listed are the chromium VI value.
*** = ERG and RBC values are the manganese-nonfood value.

B = Not detected substantially above the level reported in laboratory or field blanks
CRDL = Contract-required detection limit
ERG = Emergency removal guidelines
IDL = Instrument detection level
J = Analyte present. Reported value may not be accurate or precise.
K = Value is biased high.
L = Value is biased low.
mg/kg = milligrams per kilogram
NL = Not listed
RBC = Risk-based concentration
UL = Value is not detected and the quantitation limit is probably higher.
U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

ATTACHMENT A

INORGANIC DATA VALIDATION REPORT

(Eighteen Pages)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ENVIRONMENTAL SCIENCE CENTER
701 MAPES ROAD
FORT MEADE, MD 20755-5350

DATE: January 13, 2003

SUBJECT: Region III Data QA Review

FROM : Fredrick Foreman
Region III ESAT RPO (3ES20)

TO: Greg Ham
Regional Program Manager (3HS31)

Attached is the inorganic data validation report for the Washington Compressed Steel Site (Case/DAS#31206; SDG #:MC31Y8) completed by the Region III Environmental Services Assistance Team (ESAT) contractor under the direction of Region III ESD.

If you have any questions regarding this review, please call me at (410) 305-2629.

Attachment

cc: (b) (4) (Tetra Tech EMI)

TO File #: 0007 TDF #: 1236

OFFICE OF ANALYTICAL SERVICES AND QUALITY ASSURANCE

ESAT DATA VALIDATION EVALUATION CHECKLIST
Contract #68-W-01-018

Task Order #: 0007 TDF #: 1236 Revision #: 0 Case/DAS #: 31206
Site Name: Washington Compressed Steel SDG #: MC31Y8
Analysis Type: Inorganic SOW #: ILM04.1
Reviewer: (b) (4)(b) (4)
CLP Laboratory Code: LIBRTY

EPA CLP TPO: Edward Messer
EPA RPM: Greg Ham (3HS31)
cc: (b) (4)(b) (4)
Tetra Tech EMI

Region: IV

Number of hours spent on review: 16
Number of samples: 10
Validation Type: IM2

Date submitted to EPA: 1/7/03

CRITERIA	YES	NO	COMMENTS
Format according to Region III protocol	✓		
Clarity of report	✓		
Qualifiers applied correctly	✓		
Consistency between narrative and data summary form(s)	✓		
Error-free transcription	✓		

EFFICIENCY OF CONTRACTOR	YES	NO	COMMENTS
Approval recommended for current submission	✓		
Time spent on review is reasonable	✓		
Technical Evaluation	3.8		EPA Oversight

ESD OVERSIGHT

DATES	EPA	Oversight RD	ESAT
Received at EPA	1/7/03		
Oversight assigned	1/7/03		
Oversight received		RD 1/8/03	
Oversight completed			
Feedback given	1/13/03		
Mailed to RPM			1/14/03 D.H.

Lockheed Martin Environmental Services
US EPA Environmental Science Center
701 Mapes Road Ft. Meade, MD 20755-5350
Telephone 410-305-3037 Facsimile 410-305-3597

LOCKHEED MARTIN

DATE: January 7, 2003

SUBJECT: Inorganic Data Validation (IM2 Level)
Case: 31206
SDG: MC31Y8
Site: Washington Compressed Steel

FROM: (b) (4)(b) (4) — Inorganic Data Reviewer
(b) (4)(b) (4) — Senior Oversight Chemist

TO: Fredrick Foreman
ESAT Regional Project Officer

OVERVIEW

Case 31206, Sample Delivery Group (SDG) MC31Y8, consisted of ten (10) soil samples analyzed for total metals and cyanide (CN^-) by CompuChem a Division of Liberty Analytical Corporation (LIBRTY). The sample set included one (1) field duplicate pair. Samples were analyzed in accordance with Contract Laboratory Program (CLP) Statement of Work (SOW) ILM04.1 through Routine Analytical Services (RAS) program.

SUMMARY

All samples were successfully analyzed for all Target Analyte List (TAL) parameters. Areas of concern with respect to data usability are listed below.

Data in this case have been impacted by outliers present in the continuing calibration blank, matrix spike, laboratory duplicate, cooler chest temperature and Contract Required Detection Limit (CRDL) standard analyses. Details of these outliers are discussed under "Minor Problems"; specific samples affected are outlined in "Table 1A" and qualified analytical results for all samples are summarized on Data Summary Forms (DSFs).

MINOR PROBLEMS

The continuing calibration blank had a reported result greater than Instrument Detection Limit (IDL) for beryllium (Be). Positive results reported for this analyte in affected samples which are less than or equal to five times ($\leq$5X) blank concentrations may be biased high and have been qualified "B" on DSFs.

GLOSSARY OF DATA QUALIFIER CODES (INORGANIC)

CODES RELATED TO IDENTIFICATION
(confidence concerning presence or absence of analytes):

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

(NO CODE) = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unusable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

CODES RELATED TO QUANTITATION
(can be used for both positive results and sample quantitation limits):

J = Analyte Present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

[] = Analyte present. As values approach the IDL the quantitation may not be accurate.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

Q = No analytical result.

APPENDIX B

DATA SUMMARY FORMS

DATA SUMMARY FORM: INORGANIC

Case #: 31206
Site :
Lab. :

SDG : MC31Y8
WASHINGTON COMPRESSED STEEL
LIBRTY

Number of Soil Samples : 10
Number of Water Samples : 0

Sample Number :		MC31Y8		MC31Y9		MC31Z5		MC31Z6		MC31Z7	
Sampling Location :		WCS-01		WCS-010		WCS-02		WCS-03		WCS-04	
Field QC :											
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :		11/21/2002		11/21/2002		11/21/2002		11/21/2002		11/21/2002	
Time Sampled :		10:15		12:12		10:33		10:55		11:08	
%Solids :		74.8		80.3		81.8		73.6		87.8	
Dilution Factor :		1.0		1.0 / 20.0		1.0 / 20.0		1.0 / 20.0		1.0 / 20.0	
ANALYTE	CRDL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	40	6380	J	9840	J	10500	J	9180	J	12400	J
ANTIMONY	12	[7.0]		90.7		1330		22.1		45.8	
ARSENIC	2	15.1		30.5		103		13.7		38.6	
BARIUM	40	180		2070		785		434		872	
BERYLLIUM	1	[0.37]	B	[0.72]	B	[0.49]	B	[0.54]	B	[0.59]	B
CADMIUM	1	9.9		14.3		12.8		18.2		38.2	
CALCIUM	1000	6230		16100		22800		36500		16600	
CHROMIUM	2	102		8070		404		282		752	
COBALT	10	18.6		33.9		21.4		16.3		43.4	
COPPER	5	517	J	1560	J	1530	J	1450	J	2840	
IRON	20	36200		192000 +		128000 +		113000 +		158000 +	
LEAD	0.6	1510		6220 +		65000 +		3560		4410	
MAGNESIUM	1000	4440		4700		13700		11500		5280	
MANGANESE	3	552	J	2250	J	2030	J	1420	J	770	
MERCURY	0.1	2.7	K	4.1	K	2.4	K	2.8	K	3.3	K
NICKEL	8	142	J	6620	J	531	J	421	J	980	
POTASSIUM	1000	[492]		[1150]		[570]		[624]		[621]	
SELENIUM	1	1.6	L	16.4		4.2		2.9		16.7	
SILVER	2	[0.95]		2.7		4.5		[1.7]		4.3	
SODIUM	1000										
THALLIUM	2		UL	9.9	L	5.4	L	4.3	J	7.7	L
VANADIUM	10	84.5		69.0		54.9		66.5		101	
ZINC	4	1470		9860 +		4800		9020 +		20900 +	
CYANIDE	0.5	1.1	L	2.0	L	4.6	L	2.4	L	5.5	

CRDL = Contract Required Quantitation Limit

To calculate sample quantitation limits: (CRDL * Dilution Factor) / (%Solids/ 100)

+ = Result reported from diluted analysis.

SEE NARRATIVE FOR CODE DEFINITIONS

Revised 09/99

DATA SUMMARY FORM: INORGANIC

Case #: 31206
Site :
Lab. :

SDG : MC31Y8
WASHINGTON COMPRESSED STEEL
LIBRTY

Sample Number :		MC31Z8		MC31Z9		MC3200		MC3201		MC3202	
Sampling Location :		WCS-05		WCS-06		WCS-07		WCS-08		WCS-09	
Field QC :								Field Dup of MC3202		Field Dup of MC3201	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :		11/21/2002		11/21/2002		11/21/2002		11/21/2002		11/21/2002	
Time Sampled :		11:22		11:35		11:53		12:05		12:34	
%Solids :		74.2		86.3		81.8		83.6		85.6	
Dilution Factor :		1.0 / 2.0		1.0		1.0		1.0		1.0	
ANALYTE	CRDL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	40	5160	J	6720	J	8770	J	6430	J	7290	J
ANTIMONY	12	29.8		[5.7]		12.6		[5.5]		[4.5]	
ARSENIC	2	41.4		10.2		11.4		12.9		8.1	
BARIUM	40	160		253		206		346		289	
BERYLLIUM	1	[0.38]	B	[0.74]		[0.70]		[0.50]	B	[0.44]	B
CADMIUM	1	1.6		3.7		2.1		9.5		15.8	
CALCIUM	1000	19700		14400		4510		21700		20000	
CHROMIUM	2	47.5		64.9		5.8		131		165	
COBALT	10	24.4		[7.3]		[5.8]		[10.6]		[7.3]	
COPPER	5	724		2303	J	134	J	915		414	
IRON	20	132000 +		30900		24700		40400		28500	
LEAD	0.6	1260		798		966		1820		1870	
MAGNESIUM	1000	4140		5220		3160		4550		3760	
MANGANESE	3	1500		456	J	34	J	689		429	
MERCURY	0.1	4.2	K	1.8	K	0.52	K	3.1	K	4.8	K
NICKEL	10	220		667	J	31	J	512		128	
POTASSIUM	1000	[507]		[1090]		1450		[823]		1160	
SELENIUM	2.5	43		[0.96]	L	[1.1]	L	17	L	[0.73]	L
SILVER	2	[1.4]		[0.46]		[0.24]		[0.86]		[0.90]	
SODIUM	1000										
THALLIUM	2	7.3	L		UL		UL		UL		UL
VANADIUM	10	63.5		54.8		46.0		542		38.6	
ZINC	4	4620		1020		738		3470		2630	
CYANIDE	0.5	170	L	0.63	L	1.2	L	2.6	L	2.6	L

CRDL = Contract Required Quantitation Limit

To calculate sample quantitation limits: (CRDL * Dilution Factor) / (%Solids/ 100)

+ = Result reported from diluted analysis.

SEE NARRATIVE FOR CODE DEFINITIONS

Revised 09/99

APPENDIX C

CHAIN-OF-CUSTODY RECORDS

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 31206
DAS No:
R

Region: 3	Date Shipped: 11/21/2002	Chain of Custody Record	Sampler Signature: (b) (4)
Project Code:	Carrier Name: FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:	Airbill: 838267719546	1 (b) (4) 11/21/02 1542	
CERCLIS ID:	Shipped to: Liberty Analytical 501 Madison Avenue Cary NC 27513 (919) 379-4080	2	
Spill ID:		3	
Site Name/State: Washington Compressed Steel/PA		4	
Project Leader: (b) (4)			
Action: Removal Action			
Sampling Co: Tetra Tech Em Inc			

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MC31Y8	Soil (0"-12")/ (b) (4)(b) (4)	L/G	TM/CN (14)	794 (Ice Only) (1)	WCS-01	S: 11/21/2002 10:15	C31Y8	–
MC31Y9	Soil (0"-12")/ (b) (4)	L/G	TM/CN (14)	799 (Ice Only) (1)	WCS-010	S: 11/21/2002 ~~12:22~~ 12:12	C31Y9	(D.V.) 1/6/03 Per memo-to file
MC31Z5	Soil (0"-12")/ (b) (4)(b) (4)	L/G	TM/CN (14)	832 (Ice Only) (1)	WCS-02	S: 11/21/2002 10:33	C31Z5	–
MC31Z6	Soil (0"-12")/ (b) (4)	L/G	TM/CN (14)	838 (Ice Only) (1)	WCS-03	S: 11/21/2002 10:55	C31Z6	DEC 2002 RECEIVED
MC31Z7	Soil (0"-12")/ (b) (4)(b) (4)	L/G	TM/CN (14)	844 (Ice Only) (1)	WCS-04	S: 11/21/2002 11:08	C31Z7	
MC31Z8	Soil (0"-12")/ (b) (4)(b) (4)	L/G	TM/CN (14)	850 (Ice Only) (1)	WCS-05	S: 11/21/2002 11:22	C31Z8	–
MC31Z9	Soil (0"-12")/ (b) (4)(b) (4)(b) (4)	L/G	TM/CN (14)	856 (Ice Only) (1)	WCS-06	S: 11/21/2002 11:35	C31Z9	–
MC3200	Soil (0"-12")/ (b) (4)(b) (4)	L/G	TM/CN (14)	862 (Ice Only) (1)	WCS-07	S: 11/21/2002 11:53	C3200	–
MC3201	Soil (0"-12")/ (b) (4)(b) (4)	L/G	TM/CN (14)	868 (Ice Only) (1)	WCS-08	S: 11/21/2002 12:05	C3201	–
MC3202	Soil (0"-12")/ (b) (4)(b) (4)	L/G	TM/CN (14)	874 (Ice Only) (1)	WCS-09	S: 11/21/2002 12:34	C3202	Dup of ~~C3201~~ MC3201

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC: MC31Y8	Additional Sampler Signature(s): (b) (4)(b) (4)	Chain of Custody Seal Number:
Analysis Key: TM/CN = CLP TAL Total Metals and Cyanide	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?

REGION COPY

TR Number: 3-373675543-112102-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 703/264-9348 Fax 703/264-9222

U.S. EPA Region III Sample Scheduling Request Form

STS

RAS CASE No: CT1574 31206	DAS No:	NSF No:
Date: November 11, 2002	Data Validation Level: M2, I M2	EPA Lab Reply:
Site Name: Washington Compressed Steel		Cost:
Address: 1900 N. American Street	City: Philadelphia	State: PA
Latitude:	Longitude:	Anal +Val Data TAT:35 days
Program: Superfund	CERCLIS No: NONE	Activity: RS Removal Evaluation
Account No: 03T03N50102DA3T5LS00	Operable Unit:	Spill ID:
Preparer: (b) (4) 610-364-(b) (4)	RPM/PO:Greg Ham (3HS31)	Site Leader: (b) (4)
Phone: 610-364-(b) (4)	Phone: 215-814-3194	Phone: 610-364-(b) (4)
FAX: 610-485-8587	FAX: 215-814-3254	FAX: 610-485-8587
E-mail:(b) (4)(b) (4)@ttemi.com	E-mail: ham.greg@epa,gov	E-mail: (b) (4) @ttemi.com
EPA CO: Deborah Eble	Contract Type: START 3 Eastern Area / Prime: Tetra Tech EM Inc.	Sub:
Lab Assignment Date:	Analytical TAT: 14 days	Ship Date From: November 21, 2002
Organic Lab: X CEIMIC		Ship Date To: Nove3mber 22, 2002
Inorganic Lab: 14 days LIBRTY		Carrier:

SAMPLES	METHOD	PARAMETER	MATRIX
15	ILM04.1	TAL Metals & Cyanide	Soil
15	OLM04.2	TCL Organics	Soil
			OSC needs verbal result faxed to him at above number when recieved at RSCC.

NOTE: Data validation levels M3 & IM2 require justification. QC field samples must be included as part of total number of samples.

1. Special Instructions: OSC needs verbal result faxed to him at above number when recieved at RSCC. Please arrange for a Saturday delivery incase the samplers cannot get the samples out on Thursday. Thursday is the only day they have access to the facility.
2. Objectives / Project Plan ID / Permit ID: Site characterization.
3. Program / Project / Permit Reporting Limits As per method
4. DQO (QC Requirements)

VALIDATOR'S COPY

Tetra Tech EM Inc.

709 Chelsea Parkway ◆ Boothwyn, PA 19061 ◆ (610) 485-6410 ◆ FAX (610) 485-8587

December 20, 2002

MEMO TO FILE
CASE 31206
Washington Compressed Steel

RSCC
U.S. EPA Region III OAS/QA
Environmental Science Center
701 Mapes Road
Ft. Meade, MD 20755

Dear Ms. Jeffery:

This memo is written to correct the sampling time on the Inorganic Traffic Report Chain of Custody Record numbers 3-373675543-112102-0001 for sample MC31Y9. The correct sampling time is 12:12. This memo is further written to correct the sampling time on the Organic Traffic Report Chain of Custody Record numbers 3-373675543-112102-0003 for sample C31Y9. The correct sampling time is 12:12. The tag number 798 was omitted from the tag for the moisture jar for sample C31Y9. Tag number 878 was omitted from the tag for the moisture jar sample C3202.

Please note these changes.

Sincerely,

(b) (4)

For Sampler (b) (4)(b) (4)

cc: EPA OSC Greg Ham (3HS31)
START 3 TDD Files

contains recycled fiber and is recyclable

APPENDIX D

LABORATORY CASE NARRATIVE

U. S. EPA - CLP

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

› Name: COMPUCHEM Contract: 68W00082

› Code: LIBRTY Case No.: 31206 SAS No.: _____ SDG No.: MC31Y8

V No.: ILM04.1

EPA Sample No.	Lab Sample ID.
MC31Y8	MC31Y8-1
MC31Y8D	WG21598-2
MC31Y8S	WG21598-1
MC31Y9	MC31Y8-2
MC31Z5	MC31Y8-3
MC31Z6	MC31Y8-4
MC31Z7	MC31Y8-5
MC31Z8	MC31Y8-6
MC31Z9	MC31Y8-7
MC3200	MC31Y8-8
MC3201	MC31Y8-9
MC3202	MC31Y8-10

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: [redacted] (b) (4) Name: [redacted] (b) (4)

Date: December 3, 2002 Title: Data Reviewer II 3

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue Cary, NC 27513

SDG NARRATIVE
CASE # 31206 SDG # MC31Y8
CONTRACT # 68W00082

The indicated Sample Delivery Group (SDG) consisting of ten (10) soil samples was received into the laboratory information management system (LIMS) on November 22, 2002; intact and in good condition with Chains of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The samples were analyzed, in accordance with EPA - CLP Statement of Work (SOW) document ILM04.1 for CLP TAL total metals and cyanide.

The correlation coefficients for the mercury and cyanide analytical runs are confirmed to be $\geq$ 0.9950.

The cooler temperature bottle was present with samples received on November 22, 2002; and sample temperature was 7.3 degrees Celsius.

The samples were analyzed, in accordance with EPA - CLP Statement of Work (SOW) document ILM04.1 for CLP TAL total metals and cyanide.

The correlation coefficients for the cyanide and mercury analytical runs are confirmed to be $\geq$ 0.9950.

Analyte results qualified by a "C" flag on the raw data indicates a saturated condition that is remedied by dilution. Analyte results qualified by a "K" flag on the raw data indicates an interference condition that requires a dilution.

EQUATIONS FOR SOLID SAMPLE CALCULATIONS:

Client sample MC31Y8 is used for illustration.
Any sample result that is < the instrument detection limit (IDL) will be entered at the IDL for that analyte.
ICP Equation:
Equation for obtaining metals sample results in mg/Kg as presented on FORM I data sheets from ICP instrument acquired results in ug/L (ppb).

$$\text{Concentration (\% solids) (mg/Kg)} \quad \frac{C \times D \times V}{W \times S}$$

Where
C = concentration (ug/L)
D = dilution factor
V = final volume in liters after sample preparation
W = weight in grams of wet sample
S = % solids/100

Example: aluminum result ug/L to mg/Kg.

$$\frac{23852.93 \text{ ug/L (C)} \times 1 \text{ (D)} \times 0.2 \text{ L (V)}}{1.0 \text{ g (W)} \times 0.748 \text{ (S)}} = 6377.8 \text{ mg/Kg reported as 6380 mg/Kg}$$

Mercury Equation:

Equation for obtaining mercury sample results in mg/Kg as presented on FORM I data sheets from instrument acquired results in ug/L (ppb).

$$\frac{A \times D \times F}{B \times E}$$

Where

A = ug/L Hg
B = wet weight of sample
D = dilution factor to bring sample into analysis range
E = % solids/100
F = final volume in liters (0.1 L)

Example: mercury result ug/L to mg/Kg

$$\frac{4.004 \text{ ug/L (A)} \times 1 \text{ (D)} \times 0.1 \text{ (F)}}{0.2 \text{ g (B)} \times 0.748 \text{ (E)}} = 2.68 \text{ mg/Kg reported as } 2.7 \text{ mg/Kg}$$

Cyanide Equation:

Equation for obtaining cyanide sample results in mg/Kg as presented on FORM I data sheets from instrument acquired results in ug/L (ppb).

$$\frac{A \times D \times F}{B \times E}$$

Where

A = ug/L CN
B = wet weight of sample
D = dilution factor to bring sample into analysis range
E = % solids/100
F = final volume in liters (0 05 L)

Example: cyanide result ug/L to mg/Kg

$$\frac{16.645218 \text{ ug/L (A)} \times 1 \text{ (D)} \times 0.05 \text{ L (F)}}{1.00\text{g (B)} \times 0.748 \text{ (E)}} = 1.113 \text{ mg/Kg reported as } 1.1 \text{ mg/Kg}$$

SAMPLE IDs:

The following customer IDs are associated with this SDG:

MC31Y8	MC31Y9	MC31Z5	MC31Z5	MC31Z6	MC31Z7
MC31Z8	MC31Z9	MC3200	MC3201	MC3202	

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV), blanks (ICB, & CCB), and interference check samples (ICSA & ICSAB) associated with this data were confirmed to be within EPA CLP allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verifications (LCSS & PBS) were found to be within acceptable ranges and all field samples were prepared and analyzed within the contract specified holding times.

MATRIX RELATED QUALITY CONTROL:

The sample matrix spike, CCN = WG21598-1 (MC31Y8S) was found to be outside CLP control limits for mercury, nickel, and thallium. The reported concentrations for these analytes are flagged with an "N" on all associated Form 1 and on Form 5a.

An "N" indicates a matrix-related interference in the sample preparation procedure &/or analysis for the flagged analyte. This is normally the consequence of a relatively high anionic content in the sample or (for some sediments) an inconsistent sample matrix relative to that analyte.

CLP control limits for matrix spike recoveries are set at 75% to 125% of the analyte quantity added unless original sample concentrations exceed the true values of these "spikes" by a factor of four or more. In this case, affected analytes are not flagged even if recoveries are outside percentage recovery control limits.

Post-digestion spikes are mandatory for analytes demonstrating unsatisfactory matrix spike recoveries during ICP analysis (excluding silver). The results of such spikes are presented on Form 5b.

Unsatisfactory recovery of post-digestion spikes of this type do not have bearing upon the aforementioned "N" flags, but may indicate interference during analysis &/or a solution matrix which is hostile to the analyte in question.

Satisfactory recovery of an analyte in a post-digestion spike of this type implies interference by the required preparation procedure or in the sample matrix itself. Lack of uniformity for an analyte in sediments will also result in satisfactory recovery of post-digestion spikes after failure in the related matrix spike.

The sample matrix duplicate, CCN = WG21598-2 (MC31Y8D) was outside CLP control limits for aluminum, arsenic, cadmium, calcium, copper, iron, lead, magnesium, manganese, nickel, vanadium, and zinc. The reported concentrations for these analytes are flagged with a "*" on all associated Form 1 and on Form 6.

A "*" indicates a non-homogeneous sample matrix in regard to the flagged analyte. This is normally the consequence of a relatively coarse texture or of a mixed-matrix in sediment samples.

CLP control limits for duplicate determinations are +/- 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples, and +/- the CRDL for concentrations less than five times the CRDL. The RPD is not calculated if both the original and duplicate values fall below the IDL.

A five-fold serial dilution of sample, CCN = MC31Y8-1 (MC31Y8L) was performed in accordance with CLP requirements for ICP analysis.

The adjusted sample concentrations were inside CLP control limits for the requested analytes.

CLP control limits for serial dilution are defined as a deviation less than or equal to 10% in the dilution-adjusted concentrations from the original values for all analyte concentrations with values greater than fifty (50) times their respective Instrument Detection Limit (IDL) in the original sample.

The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

(b) (4)

Data Reviewer II
December 3, 2002

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue Cary, NC 27513

DATA REPORTING QUALIFIERS FOR INORGANICS

On Form I, under the column labeled "C" for concentration qualifier and "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. Up to five qualifiers may be reported on Form I for each analyte.

The C (concentration) qualifiers used are:

U: This flag indicates the analyte was analyzed for but not detected. This reported value was obtained from a reading that was less than the Instrument Detection Limit (IDL). The IDL will be adjusted to reflect any dilution and, for soils, the percent moisture.

B: This flag indicates the analyte was analyzed for and the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detection Limit (IDL).

The Q qualifiers used are:

E: This flag indicates an estimated value. This flag is used:

1. When the serial dilution (a five fold dilution for CLP and a five fold dilution for SW-846 method 6010B) results are not within 10%. The analyte concentration must be sufficiently high (minimally a factor of 50X above the IDL in the original sample).

N: This flag indicates the sample spike recovery is outside of control limits:

***:** This flag is used for duplicate analysis when the sample and the sample duplicate results are not within control limits.

The extensions: D, S, SD, L. A, added to the end of the client ID represent as follows:

- D: matrix duplicate
- S: matrix spike
- SD: matrix spike duplicate
- L: serial dilution
- A: post digestion spike

Method Codes:

- P: ICP PLASMA
- CV: MERCURY COLD VAPOR AA
- CA: MIDI-DISTILLATION SPECTROPHOTOMETRIC

ATTACHMENT B

ORGANIC DATA VALIDATION REPORT

(Forty two Pages)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
ENVIRONMENTAL SCIENCE CENTER
701 MAPES ROAD
FORT MEADE, MD 20755-5350

DATE : January 16, 2003

SUBJECT: Region III Data QA Review

FROM : Fredrick Foreman
Region III ESAT RPO (3ES20)

TO : Greg Hamm
Regional Project Manager (3HS31)

Attached is the organic data validation report for the Washington Compressed Steel site (Case #: 31206, SDG#: C31Y9) completed by the Region III Environmental Services Assistance Team (ESAT) contractor under the direction of Region III ESD.

If you have any questions regarding this review, please call me at (410) 305-2629.

Attachments

cc: [redacted] (TETRA TECH EMI)

TO File #: 0007 TDF#: 1237

OFFICE OF ANALYTICAL SERVICES AND QUALITY ASSURANCE

ESAT DATA VALIDATION EVALUATION CHECKLIST
Contract #68-W-01-018

Task Order #: 0007 TDF #: 1237 Revision #: 0 Case/DAS #: 31206
Site Name: WASHINGTON COMPRESSED STEEL SDGs #: C31Y9
Analysis Type: ORGANIC SOW #: OLM04.2
Reviewer: [redacted]
CLP Laboratory Code: (CEIMIC)

EPA CLP TPO: JENNIE HAN-LIU
EPA RPM: GREG HAMM (3HS31)
cc: [redacted]
(TETRA TECH EMI)

Region: 1

Number of hours spent on review: 15
Number of samples: 9
Validation Type: M2

Date submitted to EPA: 1/15/03

CRITERIA	YES	NO	COMMENTS
Format according to Region III protocol	✓		
Clarity of report	✓		
Qualifiers applied correctly	✓		
Consistency between narrative and data summary form(s)	✓		
Error-free transcription	✓		

EFFICIENCY OF CONTRACTOR	YES	NO	COMMENTS
Approval recommended for current submission	✓		
Time spent on review is reasonable	✓		
Technical Evaluation	3.1		Michael F. Mahoney EPA Oversight MM

ESD OVERSIGHT

DATES	EPA	Oversight	ESAT
Received at EPA	1/15/03		
Oversight assigned		1/15/03	
Oversight received		1/16/03	
Oversight completed	1/16/03		
Feedback given			1/22/03 D.H.
Mailed to RPM			

Lockheed Martin Environmental Services
US EPA Environmental Science Center
701 Mapes Road Ft. Meade, MD 20755-5350
Telephone 410-305-3037 Facsimile 410-305-3597

LOCKHEED MARTIN

DATE: January 15, 2003

SUBJECT: Level M2 Organic Data Validation for Case 31206
SDG: C31Y9
Site: Washington Compressed Steel

FROM: (b) (4)(b) (4)
Senior Data Reviewer

(b) (4)(b) (4)
Senior Oversight Chemist

TO: Fredrick Foreman
ESAT Region 3 Project Officer

OVERVIEW

Case 31206, Sample Delivery Group (SDG) C31Y9, consisted of nine (9) soil samples submitted to Ceimic Corporation (CEIMIC) for volatile, semivolatile and pesticide/PCB analyses. The sample set included one (1) field duplicate pair. Samples were analyzed according to Contract Laboratory Program (CLP) Statement of Work (SOW) OLM04.2 through Routine Analysis Services (RAS) program.

SUMMARY

Data were validated according to Innovative Approaches for Validation of Organic Data, Level M2. This level of review includes assessment of all Quality Assurance/Quality Control (QA/QC) data and review of chromatograms, but excludes review of raw data and sample spectra. All samples were successfully analyzed for all target compounds ewxcept as noted in "Major Problem" section.

All nine (9) soil samples reported positive results for one or more Aroclors (with concentrations ranging to 33000 ug/Kg). In pesticide/PCB analyses where multi-component compounds are present, false positives for single component compounds are common. Caution should be exercised in interpreting pesticide results in these samples.

MAJOR PROBLEM

- Response Factors (RFs) were less than 0.05 for volatile target compound 1,2-dibromo-3-chloropropane in the continuing calibrations. No positive result was reported for this compound in affected samples. The quantitation limit for 1,2-dibromo-3-chloropropane in affected samples was qualified "R" on Data Summary Forms (DSFs).

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION

(confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

NO CODE = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unusable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION

(can be used for both positive results and sample quantitation limits):

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

Q = No analytical result.

Appendix B

Data Summary Forms

DATA SUMMARY FORM: VOLATILES

Case #: 31206
Site :
Lab. :

SDG : C31Y9
WASHINGTON COMPRESSED STEEL
CEIMIC

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :		C31Y9		C31Z5		C31Z6		C31Z7		C31Z8	
Sampling Location :		WCS-010		WCS-02		WCS-03		WCS-04		WCS-05	
Field QC:											
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		11/21/2002		11/21/2002		11/21/2002		11/21/2002		11/21/2002	
Time Sampled :		12:12		10:33		10:55		11:08		11:22	
%Moisture :		18		20		24		15		26	
Dilution Factor :		1.06		1.04		1.16		2.08		0.94	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	10										
Chloromethane	10										
Vinyl Chloride	10										
Bromomethane	10										
Chloroethane	10										
Trichlorofluoromethane	10			2	J						
1,1-Dichloroethene	10										
1,1,2-Trichloro-1,2,2-trifluoroethane	10										
Acetone	10	12	B	6	B	14	B	26	B	12	B
Carbon Disulfide	10										
Methyl Acetate	10										
Methylene Chloride	10	12	B	12	B	15	B	22	B	17	B
trans-1,2-Dichloroethene	10										
Methyl tert-Butyl Ether	10										
1,1-Dichloroethane	10										
cis-1,2-Dichloroethene	10										
2-Butanone	10										
Chloroform	10										
1,1,1-Trichloroethane	10										
Cyclohexane	10										
Carbon Tetrachloride	10										
Benzene	10										
1,2-Dichloroethane	10										
Trichloroethene	10										
Methylcyclohexane	10										
1,2-Dichloropropane	10										
Bromodichloromethane	10										
cis-1,3-Dichloropropene	10										
4-Methyl-2-pent__:one	10										
Toluene	10										
trans-1,3-Dichloropropene	10										
1,1,2-Trichloroethane	10										
Tetrachloroethene	10			6	J						

CRQL = Contract Required Quantitation Limit

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

SEE NARRATIVE FOR CODE DEFINITIONS

Revised 09/99

DATA SUMMARY FORM: VOLATILES

Case #: 31206
Site :
Lab. :

SDG : C31Y9
WASHINGTON COMPRESSED STEEL
CEIMIC

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :		C31Y9		C31Z5		C31Z6		C31Z7		C31Z8	
Sampling Location :		WCS-010		WCS-02		WCS-03		WCS-04		WCS-05	
Field QC:											
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		11/21/2002		11/21/2002		11/21/2002		11/21/2002		11/21/2002	
Time Sampled :		12:12		10:33		10:55		11:08		11:22	
%Moisture :		18		20		24		15		26	
Dilution Factor :		1.06		1.04		1.16		2.08		0.94	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-Hexanone	10										
Dibromochloromethane	10										
1,2-Dibromoethane	10										
Chlorobenzene	10										
Ethylbenzene	10										
Xylenes (total)	10										
Styrene	10										
Bromoform	10										
Isopropylbenzene	10										
1,1,2,2-Tetrachloroethane	10										
1,3-Dichlorobenzene	10										
1,4-Dichlorobenzene	10										
1,2-Dichlorobenzene	10										
1,2-Dibromo-3-chloropropane	10		R		R		R		R		R
1,2,4-Trichlorobenzene	10										

CRQL = Contract Required Quantitation Limit

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

SEE NARRATIVE FOR CODE DEFINITIONS

Revised 09/99

DATA SUMMARY FORM: VOLATILES

Case #: 31206
Site :
Lab. :

SDG : C31Y9
WASHINGTON COMPRESSED STEEL
CEIMIC

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :		C31Z9		C3200		C3201		C3202			
Sampling Location :		WCS-06		WCS-07		WCS-08		WCS-09			
Field QC:						Dupl. of C3202		Dupl. of C3201			
Matrix :		Soil		Soil		Soil		Soil			
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg			
Date Sampled :		11/21/2002		11/21/2002		11/21/2002		11/21/2002			
Time Sampled :		11:35		11:53		12:05		12:34			
%Moisture :		16		17		15		15			
Dilution Factor :		1.16		0.96		1.19		1.14			
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane	10										
Chloromethane	10										
Vinyl Chloride	10										
Bromomethane	10										
Chloroethane	10										
Trichlorofluoromethane	10			1	J						
1,1-Dichloroethene	10										
1,1,2-Trichloro-1,2,2-trifluoroethane	10										
Acetone	10	12	B	8	B	9	B	4	B		
Carbon Disulfide	10										
Methyl Acetate	10										
Methylene Chloride	10	14	B	15	B	14	B	11	B		
trans-1,2-Dichloroethene	10										
Methyl tert-Butyl Ether	10										
1,1-Dichloroethane	10										
cis-1,2-Dichloroethene	10										
2-Butanone	10										
Chloroform	10										
1,1,1-Trichloroethane	10										
Cyclohexane	10										
Carbon Tetrachloride	10										
Benzene	10										
1,2-Dichloroethane	10										
Trichloroethene	10										
Methylcyclohexane	10										
1,2-Dichloropropane	10										
Bromodichloromethane	10										
cis-1,3-Dichloropropene	10										
4-Methyl-2-pentanone	10										
Toluene	10										
trans-1,3-Dichloropropene	10										
1,1,2-Trichloroethane	10										
Tetrachloroethene	10										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

Revised 09/99

DATA SUMMARY FORM: VOLATILES

Case #: 31206
Site :
Lab. :

SDG : C31Y9
WASHINGTON COMPRESSED STEEL
CEIMIC

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :		C31Z9		C3200		C3201		C3202			
Sampling Location :		WCS-06		WCS-07		WCS-08		WCS-09			
Field QC:						Dupl. of C3202		Dupl. of C3201			
Matrix :		Soil		Soil		Soil		Soil			
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg			
Date Sampled :		11/21/2002		11/21/2002		11/21/2002		11/21/2002			
Time Sampled :		11:35		11:53		12:05		12:34			
%Moisture :		16		17		15		15			
Dilution Factor :		1.16		0.96		1.19		1.14			
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-Hexanone	10										
Dibromochloromethane	10										
1,2-Dibromoethane	10										
Chlorobenzene	10										
Ethylbenzene	10										
Xylenes (total)	10										
Styrene	10										
Bromoform	10										
Isopropylbenzene	10										
1,1,2,2-Tetrachloroethane	10										
1,3-Dichlorobenzene	10										
1,4-Dichlorobenzene	10										
1,2-Dichlorobenzene	10										
1,2-Dibromo-3-chloropropane	10		R		R		R		R		
1,2,4-Trichlorobenzene	10										

CRQL = Contract Required Quantitation Limit

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

SEE NARRATIVE FOR CODE DEFINITIONS

Revised 09/99

DATA SUMMARY FORM: BNA

Case #: 31206
Site :
Lab. :

SDG : C31Y9
WASHINGTON COMPRESSED STEEL
CEIMIC

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :		C31Y9		C31Z5		C31Z6		C31Z7		C31Z8	
Sampling Location :		WCS-010		WCS-02		WCS-03		WCS-04		WCS-05	
Field QC:											
Matrix :		Soil		Soil		Soil		Soil (medium level)		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		11/21/2002		11/21/2002		11/21/2002		11/21/2002		11/21/2002	
Time Sampled :		12:12		10:33		10:55		11:08		11:22	
%Moisture :		20		20		22		13		26	
Dilution Factor :		30.0		29.8		29.7		150		29.6	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	330								UJ		
Phenol	330								UJ		
bis-(2-Chloroethyl) ether	330								UJ		
2-Chlorophenol	330								UJ		
2-Methylphenol	330								UJ		
2,2'-oxybis(1-Chloropropane)	330								UJ		
Acetophenone	330								UJ		
4-Methylphenol	330								UJ		
N-Nitroso-di-n-propylamine	330								UJ		
Hexachloroethane	330								UJ		
Nitrobenzene	330								UJ		
Isophorone	330								UJ		
2-Nitrophenol	330								UJ		
2,4-Dimethylphenol	330								UJ		
bis(2-Chloroethoxy)methane	330								UJ		
2,4-Dichlorophenol	330								UJ		
Naphthalene	330								UJ		
4-Chloroaniline	330								UJ		
Hexachlorobutadiene	330								UJ		
Caprolactam	330								UJ		
4-Chloro-3-methylphenol	330								UJ		
2-Methylnaphthalene	330								UJ		
Hexachlorocyclopentadiene	330								UJ		
2,4,6-Trichlorophenol	330								UJ		
2,4,5-Trichlorophenol	830								UJ		
1,1'-Biphenyl	330								UJ		
2-Chloronaphthalene	330								UJ		
2-Nitroaniline	830								UJ		
Dimethylphthalate	330								UJ		
2,6-Dinitrotoluene	330								UJ		
Acenaphthylene	330								UJ		
3-Nitroaniline	830								UJ		

CRQL = Contract Required Quantitation Limit

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

SEE NARRATIVE FOR CODE DEFINITIONS

Revised 09/99

DATA SUMMARY FORM: BNA

Case #: 31206
Site :
Lab. :

SDG : C31Y9
WASHINGTON COMPRESSED STEEL
CEIMIC

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :		C31Y9		C31Z5		C31Z6		C31Z7		C31Z8	
Sampling Location :		WCS-010		WCS-02		WCS-03		WCS-04		WCS-05	
Field QC:											
Matrix :		Soil		Soil		Soil		Soil (medium level)		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		11/21/2002		11/21/2002		11/21/2002		11/21/2002		11/21/2002	
Time Sampled :		12:12		10:33		10:55		11:08		11:22	
%Moisture :		20		20		22		13		26	
Dilution Factor :		30.0		29.8		29.7		150		29.6	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	330								UJ		
2,4-Dinitrophenol	830								UJ		
4-Nitrophenol	830								UJ		
Dibenzofuran	330								UJ		
2,4-Dinitrotoluene	330								UJ		
Diethylphthalate	330								UJ		
Fluorene	330								UJ		
4-Chlorophenyl-phenyl ether	330								UJ		
4-Nitroaniline	830								UJ		
4,6-Dinitro-2-methylphenol	830								UJ		
N-Nitrosodiphenylamine	330								UJ		
4-Bromophenyl-phenylether	330								UJ		
Hexachlorobenzene	330								UJ		
Atrazine	330								UJ		
Pentachlorophenol	830								UJ		
Phenanthrene	330	7400	J	13000		2600	J	21000	J	5700	J
Anthracene	330	1600	J	3200	J				UJ		
Carbazole	330			1700	J				UJ		
Di-n-butylphthalate	330	2200	J	1500	J				UJ		
Fluoranthene	330	11000	J	19000		4600	J	27000	J	9400	J
Pyrene	330	13000		17000		5100	J	25000	J	9000	J
Butylbenzylphthalate	330	1800	J	2100	J	14000		6800	J		
3,3'-Dichlorobenzidine	330								UJ		
Benzo(a)anthracene	330	6300	J	10000	J	3100	J	14000	J	5300	J
Chrysene	330	7000	J	11000	J	3400	J	15000	J	6100	J
bis(2-Ethylhexyl)phthalate	330	7900	B	5700	B	85000		8400	B	8100	B
Di-n-octylphthalate	330								UJ		
Benzo(b)fluoranthene	330	5800	J	7900	J	3900	J	15000	J	5800	J
Benzo(k)fluoranthene	330	6600	J	8400	J	3700	J	11000	J	5400	J
Benzo(a)pyrene	330	6100	J	8700	J	4000	J	12000	J	5900	J
Indeno(1,2,3-cd)pyrene	330	5000	J	6200	J	3800	J	12000	J	5100	J
Dibenzo(a,h)anthracene	330								UJ		
Benzo(g,h,i)perylene	330	3900	J	5800	J	3000	J	15000	J	4000	J

CRQL = Contract Required Quantitation Limit

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

SEE NARRATIVE FOR CODE DEFINITIONS

Revised 09/99

DATA SUMMARY FORM: BNA

Case #: 31206
Site :
Lab. :

SDG : C31Y9
WASHINGTON COMPRESSED STEEL
CEIMIC

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :		C31Z9		C3200		C3201		C3202			
Sampling Location :		WCS-06		WCS-07		WCS-08		WCS-09			
Field QC:						Dupl. of C3202		Dupl. of C3201			
Matrix :		Soil		Soil		Soil		Soil			
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg			
Date Sampled :		11/21/2002		11/21/2002		11/21/2002		11/21/2002			
Time Sampled :		11:35		11:53		12:05		12:34			
%Moisture :		15		18		17		16			
Dilution Factor :		29.8		29.7		29.8		29.9			
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	330										
Phenol	330										
bis-(2-Chloroethyl) ether	330										
2-Chlorophenol	330										
2-Methylphenol	330										
2,2'-oxybis(1-Chloropropane)	330										
Acetophenone	330										
4-Methylphenol	330										
N-Nitroso-di-n-propylamine	330										
Hexachloroethane	330										
Nitrobenzene	330										
Isophorone	330										
2-Nitrophenol	330										
2,4-Dimethylphenol	330										
bis(2-Chloroethoxy)methane	330										
2,4-Dichlorophenol	330										
Naphthalene	330										
4-Chloroaniline	330										
Hexachlorobutadiene	330										
Caprolactam	330										
4-Chloro-3-methylphenol	330										
2-Methylnaphthalene	330										
Hexachlorocyclopentadiene	330										
2,4,6-Trichlorophenol	330										
2,4,5-Trichlorophenol	830										
1,1'-Biphenyl	330										
2-Chloronaphthalene	330										
2-Nitroaniline	830										
Dimethylphthalate	330										
2,6-Dinitrotoluene	330										
Acenaphthylene	330										
3-Nitroaniline	830										

CRQL = Contract Required Quantitation Limit

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

SEE NARRATIVE FOR CODE DEFINITIONS

Revised 09/99

DATA SUMMARY FORM: BNA

Case #: 31206
Site :
Lab. :

SDG : C31Y9
WASHINGTON COMPRESSED STEEL
CEIMIC

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :		C31Z9		C3200		C3201		C3202			
Sampling Location :		WCS-06		WCS-07		WCS-08		WCS-09			
Field QC:						Dupl. of C3202		Dupl. of C3201			
Matrix :		Soil		Soil		Soil		Soil			
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg			
Date Sampled :		11/21/2002		11/21/2002		11/21/2002		11/21/2002			
Time Sampled :		11:35		11:53		12:05		12:34			
%Moisture :		15		18		17		16			
Dilution Factor :		29.8		29.7		29.8		29.9			
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene	330										
2,4-Dinitrophenol	830										
4-Nitrophenol	830										
Dibenzofuran	330										
2,4-Dinitrotoluene	330										
Diethylphthalate	330										
Fluorene	330										
4-Chlorophenyl-phenyl ether	330										
4-Nitroaniline	830										
4,6-Dinitro-2-methylphenol	830										
N-Nitrosodiphenylamine	330										
4-Bromophenyl-phenylether	330										
Hexachlorobenzene	330										
Atrazine	330										
Pentachlorophenol	830										
Phenanthrene	330	4800	J	2300	J	8100	J	5000	J		
Anthracene	330										
Carbazole	330										
Di-n-butylphthalate	330										
Fluoranthene	330	7800	J	3700	J	9800	J	5900	J		
Pyrene	330	7200	J	2900	J	8600	J	5200	J		
Butylbenzylphthalate	330	3700	J								
3,3'-Dichlorobenzidine	330										
Benzo(a)anthracene	330	4000	J	1500	J	4400	J	2500	J		
Chrysene	330	4500	J	1700	J	5300	J	2900	J		
bis(2-Ethylhexyl)phthalate	330	3800	B	2800	B	2100	B	1600	B		
Di-n-octylphthalate	330										
Benzo(b)fluoranthene	330			1900	J	4700	J	3000	J		
Benzo(k)fluoranthe	330			1500	J	3900	J	2400	J		
Benzo(a)pyrene	330	4100	J	1600	J	3900	J	2400	J		
Indeno(1,2,3-cd)pyrene	330	2900	J	1300	J	3200	J	2000	J		
Dibenzo(a,h)anthracene	330										
Benzo(g,h,i)perylene	330	2000	J			2200	J	1600	J		

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

Revised 09/99

DATA SUMMARY FORM: PESTICIDES AND PCBS

Case #: 31206
Site :
Lab. :

SDG : C31Y9
WASHINGTON COMPRESSED STEEL
CEIMIC

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :		C31Y9		C31Z5		C31Z6		C31Z7		C31Z8	
Sampling Location :		WCS-010		WCS-02		WCS-03		WCS-04		WCS-05	
Field QC:											
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		11/21/2002		11/21/2002		11/21/2002		11/21/2002		11/21/2002	
Time Sampled :		12:12		10:33		10:55		11:08		11:22	
%Moisture :		20		20		22		13		26	
pH :		6.6		6.7		6.7		6.9		6.9	
Dilution Factor :		9.97 / 99.7		98.7 / 987		9.9 / 99		9.84 / 98.4		9.93 / 99.3	
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	1.7										
beta-BHC	1.7	45						81	J	34	
delta-BHC	1.7	24	J			77	J				
gamma-BHC (Lindane)	1.7										
Heptachlor	1.7					600 +	J				
Aldrin	1.7	610 +		1100	J	1300 +	J	740 +	J	320	J
Heptachlor epoxide	1.7	260	J	400	J	600 +	J	280	J		
Endosulfan I	1.7										
Dieldrin	3.3										
4,4'-DDE	3.3	270	J	830	J	260	J	45	J	110	J
Endrin	3.3					60	J	47	J	49	
Endosulfan II	3.3										
4,4'-DDD	3.3	240	J	49000 +		93				130	
Endosulfan sulfate	3.3	51	J	2500							
4,4'-DDT	3.3	250	J	2700	J	100	J	180	J	580	J
Methoxychlor	17										
Endrin ketone	3.3										
Endrin aldehyde	3.3										
alpha-Chlordane	1.7	27	J			31	J	61	J		
gamma-Chlordane	1.7	520 +		1000		930 +		950 +	J	290	J
Toxaphene	170										
Aroclor-1016	33										
Aroclor-1221	67										
Aroclor-1232	33										
Aroclor-1242	33										
Aroclor-1248	33	8400 +	J	17000	J	33000 +	J	17000 +	J	5500	J
Aroclor-1254	33	6000 +	J			11000 +	J	27000 +		7100 +	J
Aroclor-1260	33										

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

Revised 09/99

+ results reported from diluted analysis

DATA SUMMARY FORM: PESTICIDES AND PCBS

Case #: 31206
Site :
Lab. :

SDG : C31Y9
WASHINGTON COMPRESSED STEEL
CEIMIC

Number of Soil Samples : 9
Number of Water Samples : 0

Sample Number :		C31Z9		C3200		C3201		C3202			
Sampling Location :		WCS-06		WCS-07		WCS-08		WCS-09			
Field QC:						Dupl. of C3202		Dupl. of C3201			
Matrix :		Soil		Soil		Soil		Soil			
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg			
Date Sampled :		11/21/2002		11/21/2002		11/21/2002		11/21/2002			
Time Sampled :		11:35		11:53		12:05		12:34			
%Moisture :		15		18		17		16			
pH :		7.5		6.6		7.6		7.6			
Dilution Factor :		1.00 / 9.97		1.00 / 10.0		0.99 / 9.87		0.99 / 9.93			
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	1.7										
beta-BHC	1.7	3.7	J								
delta-BHC	1.7										
gamma-BHC (Lindane)	1.7										
Heptachlor	1.7	4.8	J			3.3	J	2.7	J		
Aldrin	1.7	16	J	3.6	J	31	J	53 +	J		
Heptachlor epoxide	1.7	14	J			10	J				
Endosulfan I	1.7										
Dieldrin	3.3			59	J						
4,4'-DDE	3.3	13	J	110 +		32	J	47	J		
Endrin	3.3	7.7	J			7.1	J	6.6	J		
Endosulfan II	3.3										
4,4'-DDD	3.3	13	J	4.9	J	12	J	13	J		
Endosulfan sulfate	3.3										
4,4'-DDT	3.3	46	J	130 +	J	120 +	J	110 +	J		
Methoxychlor	17										
Endrin ketone	3.3										
Endrin aldehyde	3.3										
alpha-Chlordane	1.7			15							
gamma-Chlordane	1.7	74 +	J			90 +	J	87 +	J		
Toxaphene	170										
Aroclor-1016	33										
Aroclor-1221	67										
Aroclor-1232	33										
Aroclor-1242	33										
Aroclor-1248	33	400				460	J	440	J		
Aroclor-1254	33	3200 +		600	J	2900 +	J	2400 +	J		
Aroclor-1260	33										

CRQL = Contract Required Quantitation Limit

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (100 - %Moisture) / 100

+ results reported from diluted analysis

SEE NARRATIVE FOR CODE DEFINITIONS

Revised 09/99

Appendix C

Tentatively Identified Compounds

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C31Y9

Lab Name: CEIMIC CORP Contract: 68-W-99-065

Lab Code: CEIMIC Case No.: 31206 SAS No.: SDG No.: C31Y9

Matrix: (soil/water) SOIL Lab Sample ID: 021307-02

Sample wt/vol: 4.7 (g/mL) G Lab File ID: Q5016

Level: (low/med) LOW Date Received: 11/22/02

% Moisture: not dec. 18 Date Analyzed: 12/02/02

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. ~~556-67-2~~	~~CYCLOTETRASILOXANE, OCTAMETH~~	~~14.20~~	~~15~~	~~NJ~~
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

DU 1/13/03

JE

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C31Z5

Lab Name: CEIMIC CORP Contract: 68-W-99-065

Lab Code: CEIMIC Case No.: 31206 SAS No.: SDG No.: C31Y9

Matrix: (soil/water) SOIL Lab Sample ID: 021307-03

Sample wt/vol: 4.8 (g/mL) G Lab File ID: Q5035

Level: (low/med) LOW Date Received: 11/22/02

% Moisture: not dec. 20 Date Analyzed: 12/03/02

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. ~~556-67-2~~	~~CYCLOTETRASILOXANE, OCTAMETH~~	~~14.20~~	~~32~~	~~NJ~~
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

DV 1/15/03

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C31Z6

Lab Name: CEIMIC CORP Contract: 68-W-99-065

Lab Code: CEIMIC Case No.: 31206 SAS No.: SDG No.: C31Y9

Matrix: (soil/water) SOIL Lab Sample ID: 021307-04

Sample wt/vol: 4.3 (g/mL) G Lab File ID: Q5018

Level: (low/med) LOW Date Received: 11/22/02

% Moisture: not dec. 24 Date Analyzed: 12/03/02

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	~~UNKNOWN SILOXANE~~	~~14.20~~	~~36~~	~~J~~
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

DU 1/13/03

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C31Z7

Lab Name: CEIMIC CORP Contract: 68-W-99-065

Lab Code: CEIMIC Case No.: 31206 SAS No.: SDG No.: C31Y9

Matrix: (soil/water) SOIL Lab Sample ID: 021307-05

Sample wt/vol: 2.4 (g/mL) G Lab File ID: Q5019

Level: (low/med) LOW Date Received: 11/22/02

% Moisture: not dec. 15 Date Analyzed: 12/03/02

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	~~UNKNOWN SILOXANE~~	~~14.20~~	32	J
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

DU 1/13/03

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C31Z8

Lab Name: CEIMIC CORP Contract: 68-W-99-065

Lab Code: CEIMIC Case No.: 31206 SAS No.: SDG No.: C31Y9

Matrix: (soil/water) SOIL Lab Sample ID: 021307-06

Sample wt/vol: 5.3 (g/mL) G Lab File ID: Q5020

Level: (low/med) LOW Date Received: 11/22/02

% Moisture: not dec. 26 Date Analyzed: 12/03/02

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. ~~556-67-2~~	~~CYCLOTETRASILOXANE, OCTAMETH~~	~~14.20~~	~~16~~	~~NJ~~
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

DW 1/13/03

66

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C31Z9

Lab Name: CEIMIC CORP Contract: 68-W-99-065

Lab Code: CEIMIC Case No.: 31206 SAS No.: SDG No.: C31Y9

Matrix: (soil/water) SOIL Lab Sample ID: 021307-07

Sample wt/vol: 4.3 (g/mL) G Lab File ID: Q5021

Level: (low/med) LOW Date Received: 11/22/02

% Moisture: not dec. 16 Date Analyzed: 12/03/02

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	~~UNKNOWN SILOXANE~~	~~14.20~~	~~20~~	~~J~~
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

DW 1/23/03

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C3200

Lab Name: CEIMIC CORP Contract: 68-W-99-065

Lab Code: CEIMIC Case No.: 31206 SAS No.: SDG No.: C31Y9

Matrix: (soil/water) SOIL Lab Sample ID: 021307-08

Sample wt/vol: 5.2 (g/mL) G Lab File ID: Q5022

Level: (low/med) LOW Date Received: 11/22/02

% Moisture: not dec. 17 Date Analyzed: 12/03/02

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. ~~556-67-2~~	~~CYCLOTETRASILOXANE, OCTAMETH~~	~~14.20~~	~~19~~	~~NJ~~
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

DU 1/13/03

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C3201

Lab Name: CEIMIC CORP Contract: 68-W-99-065

Lab Code: CEIMIC Case No.: 31206 SAS No.: SDG No.: C31Y9

Matrix: (soil/water) SOIL Lab Sample ID: 021307-09

Sample wt/vol: 4.2 (g/mL) G Lab File ID: Q5023

Level: (low/med) LOW Date Received: 11/22/02

% Moisture: not dec. 15 Date Analyzed: 12/03/02

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. ~~556-67-2~~	~~CYCLOTETRASILOXANE, OCTAMETH~~	~~14.20~~	~~24~~	~~NJ~~
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

DV 1/13/03

gcl

1F
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C3202

Lab Name: CEIMIC CORP Contract: 68-W-99-065

Lab Code: CEIMIC Case No.: 31206 SAS No.: SDG No.: C31Y9

Matrix: (soil/water) SOIL Lab Sample ID: 021307-10

Sample wt/vol: 4.4 (g/mL) G Lab File ID: Q5024

Level: (low/med) LOW Date Received: 11/22/02

% Moisture: not dec. 15 Date Analyzed: 12/03/02

GC Column: RTX-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	~~UNKNOWN SILOXANE~~	~~14.20~~	~~19~~	~~J~~
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C31Y9

Lab Name: CEIMIC CORP Contract: 68-W-99-065

Lab Code: CEIMIC Case No.: 31206 SAS No.: SDG No.: C31Y9

Matrix: (soil/water) SOIL Lab Sample ID: 021307-02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: DF016

Level: (low/med) LOW Date Received: 11/22/02

% Moisture: 20 Decanted: (Y/N) N Date Extracted:12/01/02

Concentrated Extract Volume: 500(uL) Date Analyzed: 12/10/02

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 6.6 Extraction: (Type) SONC

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. ~~70362-46-8~~	~~1,1' BIPHENYL, 2,2',3,5-TETR~~	~~10.74~~	~~5900~~	~~NJ~~
2.	~~UNKNOWN PCB~~	~~10.94~~	~~4300~~	~~J~~
3. ~~60233-24-1~~	~~1,1' BIPHENYL, 2,3',4,6 TETR~~	~~11.04~~	~~3500~~	~~NJ~~
4. ~~32598-10-0~~	~~1,1' BIPHENYL, 2,3',4,4' TET~~	~~11.29~~	~~5600~~	~~NJ~~
5.	~~UNKNOWN PCB~~	~~11.45~~	~~2700~~	~~J~~
6.	UNKNOWN	14.06	3200	J
7. 192-97-2	BENZO[E]PYRENE	14.55	10000	NJ
8.	UNKNOWN	14.87	6000	J
9.	UNKNOWN	14.99	4700	J
10.	UNKNOWN	17.00	3300	J
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

DU 1/13/

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C31Z5

Lab Name: CEIMIC CORP Contract: 68-W-99-065

Lab Code: CEIMIC Case No.: 31206 SAS No.: SDG No.: C31Y9

Matrix: (soil/water) SOIL Lab Sample ID: 021307-03

Sample wt/vol: 30.2 (g/mL) G Lab File ID: DF019

Level: (low/med) LOW Date Received: 11/22/02

% Moisture: 20 Decanted: (Y/N) N Date Extracted:12/01/02

Concentrated Extract Volume: 500(uL) Date Analyzed: 12/10/02

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 6.7 Extraction: (Type) SONC

Number TICs found: 11 CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. ~~41464-40-8~~	~~1,1' BIPHENYL, 2,2',4,5' TET~~	~~10.93~~	~~4400~~	~~NJ~~
2. ~~55215-17-3~~	~~1,1' BIPHENYL, 2,2',3,4,6 PE~~	~~11.29~~	~~2800~~	~~NJ~~
3. 72-54-8	1,1-DICHLORO-2,2-BIS(P-CHLOR	11.98	22000	NJ
4.	UNKNOWN	12.36	4000	J
5. 192-97-2	BENZO[E]PYRENE	14.53	4900	NJ
6.	UNKNOWN	15.39	6500	J
7.	UNKNOWN	15.63	10000	J
8.	UNKNOWN	16.22	6100	J
9.	UNKNOWN	16.99	4300	J
10.	UNKNOWN	18.19	5000	J
11.	UNKNOWN	20.19	9700	J
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

DV 11/13/03

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C31Z6

Lab Name: CEIMIC CORP Contract: 68-W-99-065

Lab Code: CEIMIC Case No.: 31206 SAS No.: SDG No.: C31Y9

Matrix: (soil/water) SOIL Lab Sample ID: 021307-04

Sample wt/vol: 30.3 (g/mL) G Lab File ID: DF020

Level: (low/med) LOW Date Received: 11/22/02

% Moisture: 22 Decanted: (Y/N) N Date Extracted:12/01/02

Concentrated Extract Volume: 500(uL) Date Analyzed: 12/10/02

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 6.7 Extraction: (Type) SONC

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. ~~16606-02-3~~	~~1,1'-BIPHENYL, 2,4',5-TRICHL~~	~~10.45~~	~~5400~~	~~NJ~~
2.	~~UNKNOWN PCB~~	~~11.29~~	~~2600~~	~~J~~
3.	UNKNOWN	14.52	7100	J
4.	UNKNOWN	15.65	11000	J
5.	UNKNOWN	16.25	14000	J
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

FORM I SV-TIC OLM04.2

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C31Z8

Lab Name: CEIMIC CORP Contract: 68-W-99-065

Lab Code: CEIMIC Case No.: 31206 SAS No.: SDG No.: C31Y9

Matrix: (soil/water) SOIL Lab Sample ID: 021307-06

Sample wt/vol: 30.4 (g/mL) G Lab File ID: DF021

Level: (low/med) LOW Date Received: 11/22/02

% Moisture: 26 Decanted: (Y/N) N Date Extracted:12/01/02

Concentrated Extract Volume: 500(uL) Date Analyzed: 12/10/02

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 6.9 Extraction: (Type) SONC

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	10.74	3800	J
2.	UNKNOWN PAH	13.25	3300	J
3.	UNKNOWN	13.39	16000	J
4. 198-55-0	PERYLENE	14.53	3400	NJ
5.	UNKNOWN	15.63	6800	J
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C31Z9

Lab Name: CEIMIC CORP Contract: 68-W-99-065

Lab Code: CEIMIC Case No.: 31206 SAS No.: SDG No.: C31Y9

Matrix: (soil/water) SOIL Lab Sample ID: 021307-07

Sample wt/vol: 30.2 (g/mL) G Lab File ID: DF022

Level: (low/med) LOW Date Received: 11/22/02

% Moisture: 15 Decanted: (Y/N) N Date Extracted:12/01/02

Concentrated Extract Volume: 500(uL) Date Analyzed: 12/10/02

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 7.5 Extraction: (Type) SONC

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. ~~50-32-8~~ UNKNOWN	~~BENZO[A]~~ PYRENE	14.14	11000	NJ
2. 192-97-2	BENZO[E] PYRENE	14.54	3300	NJ
3.	UNKNOWN	15.89	2400	J
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

DW 1/31/

1G
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

C3201

Lab Name: CEIMIC CORP Contract: 68-W-99-065

Lab Code: CEIMIC Case No.: 31206 SAS No.: SDG No.: C31Y9

Matrix: (soil/water) SOIL Lab Sample ID: 021307-09

Sample wt/vol: 30.2 (g/mL) G Lab File ID: DF024

Level: (low/med) LOW Date Received: 11/22/02

% Moisture: 17 Decanted: (Y/N) N Date Extracted:12/01/02

Concentrated Extract Volume: 500(uL) Date Analyzed: 12/10/02

Injection Volume: 2.0(uL) Dilution Factor: 30.0

GPC Cleanup: (Y/N) Y pH: 7.6 Extraction: (Type) SONC

Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/Kg) ug/Kg

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. ~~540-97-6~~	~~CYCLOHEXASILOXANE, DODECAMET~~	~~6.42~~	~~3300~~	~~NJ~~
2.	~~UNKNOWN SILOXANE~~	~~8.01~~	~~3200~~	~~J~~
3.	~~UNKNOWN SILOXANE~~	~~10.67~~	~~2400~~	~~J~~
4. ~~207-08-9~~ UNKNOWN	~~BENZO[K]~~ FLUORANTHENE	14.54	3200	NJ
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

DV 1/13/03

Appendix D

Chain of Custody Records

USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 31206
DAS No:
R

Region: 3	Date Shipped: 11/21/2002	Chain of Custody Record	Sampler Signature: (b) (4)
Project Code:	Carrier Name: FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:	Airbill: 838267719557	1 (b) (4) 11/21/02 1544	
CERCLIS ID:	Shipped to: Ceimic Corporation, 10 Dean Knauss Drive, Narragansett RI 02882, (401) 782-8900	2	
Spill ID:		3	
Site Name/State: Washington Compressed Steel/PA		4	
Project Leader: (b) (4)			
Action: Removal Action			
Sampling Co: Tetra Tech Em Inc			

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	QC Type
C31Y8	Soil (0"-12")/ (b) (4)	L/G	Semi soils (14), VOA encore (14)	785 (Ice Only), 786 (Ice Only), 787 (Ice Only), 788 (Ice Only), 789 (Ice Only), 790 (Ice Only), 791 (Ice Only), 879 (Ice Only) (8)	WCS-01	S: 11/21/2002 10:15	MC31Y8	–
C31Y9	Soil (0"-12")/ (b) (4)	L/G	Semi soils (14), VOA encore (14)	795 (Ice Only), 796 (Ice Only), 797 (Ice Only), 798 (Ice Only), 800 (Ice Only) (5)	WCS-010	S: 11/21/2002 12:22	MC31Y9	–
C31Z5	Soil (0"-12")/ (b) (4)	L/G	Semi soils (14), VOA encore (14)	831 (Ice Only), 833 (Ice Only), 834 (Ice Only), 835 (Ice Only), 836 (Ice Only) (5)	WCS-02	S: 11/21/2002 10:33	MC31Z5	–
C31Z6	Soil (0"-12")/ (b) (4)	L/G	Semi soils (14), VOA encore (14)	837 (Ice Only), 839 (Ice Only), 840 (Ice Only), 841 (Ice Only), 842 (Ice Only) (5)	WCS-03	S: 11/21/2002 10:55	MC31Z6	–
C31Z7	Soil (0"-12")/ (b) (4)(b) (4)	L/G	Semi soils (14), VOA encore (14)	843 (Ice Only), 845 (Ice Only), 846 (Ice Only), 847 (Ice Only), 848 (Ice Only) (5)	WCS-04	S: 11/21/2002 11:08	MC31Z7	–
C31Z8	Soil (0"-12")/ (b) (4)	L/G	Semi soils (14), VOA encore (14)	849 (Ice Only), 851 (Ice Only), 852 (Ice Only), 853 (Ice Only), 854 (Ice Only) (5)	WCS-05	S: 11/21/2002 11:22	MC31Z8	–
C31Z9	Soil (0"-12")/ (b) (4)(b) (4)(b) (4)	L/G	Semi soils (14), VOA encore (14)	855 (Ice Only), 857 (Ice Only), 858 (Ice Only), 859 (Ice Only), 860 (Ice Only) (5)	WCS-06	S: 11/21/2002 11:35	MC31Z9	–
C3200	Soil (0"-12")/ (b) (4)(b) (4)	L/G	Semi soils (14), VOA encore (14)	861 (Ice Only), 863 (Ice Only), 864 (Ice Only), 865 (Ice Only), 866 (Ice Only) (5)	WCS-07	S: 11/21/2002 11:53	MC3200	–
C3201	Soil (0"-12")/ (b) (4)	L/G	Semi soils (14), VOA encore (14)	867 (Ice Only), 869 (Ice Only), 870 (Ice Only), 871 (Ice Only), 872 (Ice Only) (5)	WCS-08	S: 11/21/2002 12:05	MC3201	–

DEC 2002 RECEIVED

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC: C31Y8	Additional Sampler Signature(s): (b) (4)	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Composite = C, Grab = G	Shipment Iced?

Semi soils = CLP Semivolatiles and Pestidies/PCBs , VOA encore = CLP TCL Volatiles (encore)

TR Number: 3-373675543-112102-0003

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 703/264-9348 Fax 703/264-9222

REGION COPY

USEPA Contract Laboratory Program
Organic Traffic Report & Chain of Custody Record

Case No: 31206
DAS No:
R

Region:	3	Date Shipped:	11/21/2002	Chain of Custody Record	Sampler Signature: (b) (4)
Project Code:		Carrier Name:	FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:		Airbill:	838267719557	1 (b) (4) 11/21/02 1544	
CERCLIS ID:		Shipped to:	Celmic Corporation 10 Dean Knauss Drive Narragansett RI 02882 (401) 782-8900	2	
Spill ID:				3	
Site Name/State:	Washington Compressed Steel/PA			4	
Project Leader:	(b) (4)				
Action:	Removal Action				
Sampling Co:	Tetra Tech Em Inc				

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	QC Type
C3202	Soil (0"-12")/ (b) (4)(b) (4)	L/G	Semi soils (14), VOA encore (14)	873 (Ice Only), 875 (Ice Only), 876 (Ice Only), 877 (Ice Only), 878 (Ice Only) (5)	WCS-09	S: 11/21/2002 12:34	MC3202	Dup of C3201

DEC 2002
RECEIVED

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC: C31Y8	Additional Sampler Signature(s): (b) (4)	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?

Semi soils = CLP Semivolatiles and Pestidies/PCBs , VOA encore = CLP TCL Volatiles (encore)

TR Number: 3-373675543-112102-0003

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, 2000 Edmund Halley Dr., Reston, VA. 20191-3400 Phone 703/264-9348 Fax 703/264-9222

REGION COPY

U.S. EPA Region III Sample Scheduling Request Form

ZTS

RAS CASE No: CT1574 31206	DAS No:	NSF No:
Date: November 11, 2002	Data Validation Level: M2, I M2	EPA Lab Reply:
Site Name: Washington Compressed Steel		Cost:
Address: 1900 N. American Street	City: Philadelphia	State: PA
Latitude:	Longitude:	Anal +Val Data TAT:35 days
Program: Superfund	CERCLIS No: NONE	Activity: RS Removal Evaluation
Account No: 03T03N50102DA3T5LS00	Operable Unit:	Spill ID:
Preparer: (b) (4) 610-364-(b) (4)	RPM/PO:Greg Ham (3HS31)	Site Leader: (b) (4)
Phone: 610-364(b) (4)	Phone: 215-814-3194	Phone: 610-364-(b) (4)
FAX: 610-485-8587	FAX: 215-814-3254	FAX: 610-485-8587
E-mail: (b) (4) @ttemi.com	E-mail: ham.greg@epa,gov	E-mail: (b) (4) @ttemi.com
EPA CO: Deborah Eble	Contract Type: START 3 Eastern Area / Prime: Tetra Tech EM Inc.	Sub:
Lab Assignment Date:	Analytical TAT: 14 days	Ship Date From: November 21, 2002
Organic Lab: ☒ CEIMIC		Ship Date To: Nove3mber 22, 2002
Inorganic Lab: 14 days LIBRTY		Carrier:

SAMPLES	METHOD	PARAMETER	MATRIX
15	ILM04.1	TAL Metals & Cyanide	Soil
15	OLM04.2	TCL Organics	Soil
			OSC needs verbal result faxed to him at above number when recieved at RSCC.

NOTE: Data validation levels M3 & IM2 require justification. QC field samples must be included as part of total number of samples.

1. Special Instructions: OSC needs verbal result faxed to him at above number when recieved at RSCC. Please arrange for a Saturday delivery incase the samplers cannot get the samples out on Thursday. Thursday is the only day they have access to the facility.
2. Objectives / Project Plan ID / Permit ID: Site characterization.
3. Program / Project / Permit Reporting Limits As per method
4. DQO (QC Requirements)

Appendix E

Laboratory Case Narratives

SDG Narrative

The enclosed data package is in response to USEPA, Region III, Case No. 31206, SDG No. C31Y9, Contract No. 68-W-99-065. Under this SDG there are 11 VOA analyses, 11 SVOA analyses, and 11 Pest/PCB analyses for 9 soil samples received at Ceimic Corporation on November 22, 2002. The analyses for sample C31Y8 were cancelled.

EPA ID:	CEIMIC ID:	Analysis
C31Y9	021307-02	VOA, SVOA, Pest/PCB
C31Y9MS	021307-02MS	VOA, SVOA, Pest/PCB
C31Y9MSD	021307-02MSD	VOA, SVOA, Pest/PCB
C31Z5	021307-03	VOA, SVOA, Pest/PCB
C31Z6	021307-04	VOA, SVOA, Pest/PCB
C31Z7	021307-05	VOA, SVOA, Pest/PCB
C31Z8	021307-06	VOA, SVOA, Pest/PCB
C31Z9	021307-07	VOA, SVOA, Pest/PCB
C3200	021307-08	VOA, SVOA, Pest/PCB
C3201	021307-09	VOA, SVOA, Pest/PCB
C3202	021307-10	VOA, SVOA, Pest/PCB

Sample Receipt

Cooler Temperatures upon receipt were 5°C.

No tag numbers were written on sample tags for C3202 (tag 878) and C31Y9 (tag 798). The BNA/PEST fraction for C31Y8 arrived broken. Dyncorp was notified and instructed Ceimic to cancel the sample.

(2) Instrumentation and Column Identification

The following instruments were used for the analyses:

GC/MS Analysis

A. VOA

MS17 HP5973 GC/MS, 30m, 0.25mm ID, 1.4 um, RTX-624 capillary column.
OI trap #10 (8cm Tenax, 8cm silica gel, 8cm carbon molecular sieve)

B. SVOA

MS4 HP5970B GC/MS,30 m,25 mm ID, ZB-5 fused silica capillary column

MS11 HP5973 GC/MS,30 m,25 mm ID, ZB-5 fused silica capillary column

C. PEST/PCB

AD6: HP5890II using 30m x 0.53mm ID, DB5 megabore column (GC8)

AD7: HP5890II using 30m x 0.53mm ID, DB35 megabore column (GC8)

(3) Sample Information

An "x" qualifier is flagged by Target Thru-put software whenever the data is manually edited. The letters "M" for GC/MS and "FF" for GC are used on the raw data of the quantitation report whenever a manual integration is performed. Manual integrations are performed on GC/MS and GC standards and samples when computer generated integration picks up only a portion of the chromatographic peak, due to software limitations. When manual integrations are required, these integrations are performed using sound defensible professional judgment, in order to report accurate data. Each manual integration is signed and dated, and reviewed by both the lab supervisor and the GC/MS Interpretation Specialist for GC/MS or the Organic Lab Manager for Pest/PCB.

A. VOA Fraction (Method CLP SOW OLM04.2)

The following samples were received as Encore samples and analyzed according to OLM04.2, Method 5035:

EPA ID:	Ceimic ID:
C31Y9	021307-02
C31Y9	021307-02
C31Y9MS	021307-02MS
C31Y9MSD	021307-02MSD
C31Z5	021307-03
C31Z6	021307-04
C31Z7	021307-05
C31Z8	021307-06
C31Z9	021307-07
C3200	021307-08
C3201	021307-09
C3202	021307-10

The following samples were analyzed out of hold time, but within technical hold time:

EPA ID:	Ceimic ID:
C31Y9MS	021307-02MS
C31Y9MSD	021307-02MSD
C31Z5	021307-03

11/21 → 12/3 12 days ok

Sample C31Y9MS (021307-02MS) had low spike recoveries for Trichloroethene and Chlorobenzene.

B. SVOA Fraction (Method CLP SOW OLM04.2)

The quantitation ion for bis-(2-chloroethyl)ether was changed to the secondary ion 63, rather than the primary ion 93, because there is interference with the ion 93 from aniline, which is present in the standard mix.

The following samples were analyzed at a dilution as a result of GC/FID screening and the dark color and viscosity of the extract:

EPA ID:	CEIMIC ID:	DILUTION:
C31Y9	021307-02	1:30
C31Y9MS	021307-02MS	1:30
C31Y9MSD	021307-02MSD	1:30
C31Z5	021307-03	1:30
C31Z6	021307-04	1:30
C31Z8	021307-06	1:30
C31Z9	021307-07	1:30
C3200	021307-08	1:30
C3201	021307-09	1:30
C3202	021307-10	1:30

Sample C31Z7 (021307-05) and the associated MS/MSD samples were re-extracted as medium soils, out of hold time, and were analyzed at a dilution of 1:5.

Samples C31Y9MS (021307-02MS) and C31Y9MSD (021307-02MSD) were extracted out of hold time.

Sample C31Y9MS (021307-02MS) had a 0% recovery for 2,4-Dinitrotoluene and a negative recovery for Pyrene.

Sample C31Y9MSD (021307-02MSD) had 0% recoveries for Pdntachlorophenol and Pyrene.

C. PEST/PCB Fraction (Method CLP SOW OLM04.2)

The matrix spike / MS duplicate portions of sample C31Y9 [021307-02] were extracted one day outside of contract-required holding time (12/02/02).

All of the samples in this SDG contain one or more target analytes at concentrations exceeding the linear range of the initial calibration. The extracts were diluted according to the following table and reanalyzed:

Sample	Lab ID	Dilution Factor	Sample	Lab ID	Dilution Factor
C31Y9	021307-02	100	C31Z9	021307-07	10
C31Z5	021307-03	1000	C3200	021307-08	10
C31Z6	021307-04	100	C3201	021307-09	10
C31Z7	021307-05	100	C3202	021307-10	10
C31Z8	021307-06	100			

Aroclor-1248 and Aroclor-1254 are identified in all of the samples listed above, with the exception of samples C31Z5 (containing only Aroclor-1248) and C3200 (containing only Aroclor-1254).

The following matrix spike compound recoveries and relative recovery differences are outside of QC limits in the analysis of sample C31Y9 due to interferences with the Aroclor responses, as well as the required dilution by a factor of 10:

Compound	MS recovery	MSD recovery	Relative difference
Heptachlor	762%	Undetected	200%
Aldrin	1286%	810%	45%
Dieldrin	Undetected	Undetected	Undefined
Endrin	193%	76%*	87%
4,4'-DDT	476%	71%*	148%

* denotes a compound recovery within QC limits.

Deviations from the SOW

None other than specified above.

End of SDG Narrative

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the laboratory manager or his/her designee, as verified by the following signature.

(b) (4)

(b) (4) Director of Client Support Services

12/11/02

Date

ALKANE NARRATIVE REPORT
Report date : 12/18/2002
SDG: C31Y9

Client Sample ID: C31Z5 Lab Sample ID: 021307-03 File ID: DF019

Compound	RT	Est. Conc.	Q
Unknown Branched Alkane	12.47	7300	J

M

VALIDATOR'S COPY

Tetra Tech EM Inc.

709 Chelsea Parkway ◆ Boothwyn, PA 19061 ◆ (610) 485-6410 ◆ FAX (610) 485-8587

December 20, 2002

MEMO TO FILE
CASE 31206
Washington Compressed Steel

RSCC
U.S. EPA Region III OAS/QA
Environmental Science Center
701 Mapes Road
Ft. Meade, MD 20755

Dear Ms. Jeffery:

This memo is written to correct the sampling time on the Inorganic Traffic Report Chain of Custody Record numbers 3-373675543-112102-0001 for sample MC31Y9. The correct sampling time is 12:12. This memo is further written to correct the sampling time on the Organic Traffic Report Chain of Custody Record numbers 3-373675543-112102-0003 for sample C31Y9. The correct sampling time is 12:12. The tag number 798 was omitted from the tag for the moisture jar for sample C31Y9. Tag number 878 was omitted from the tag for the moisture jar sample C3202.

Please note these changes.

Sincerely,

(b) (4)

For Sampler (b) (4)(b) (4)

cc: EPA OSC Greg Ham (3HS31)
START 3 TDD Files

contains recycled fiber and is recyclable