ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

CLP Inorganic 802252

CHAIN OF CUSTODY RECORD

REGION 6
First International Bldg.,
Dallas, Texas 752

FILE
EPA ID# - TXD980810386
CASE # - 5672

PROJ. NO.: 5672
PROJECT NAME: South Cavalcade
SAMPLERS: (Signature) Mike R Young

STA. NO.	DATE 1986	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Acetone Glass Cyanide Soil	REMARKS Sample #	Tag #
SCH-A04									
SB02-05	3/6	0905		✓	Area 4, Boring 2, 8'-10'	1	1	MFC183	6-04375
SB02-27	3/6	1425		✓	" " 58'-60'	1	1	MFC184	6-04379

1012239

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Tony Tillman	3/6/86 1547				
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
		Marie M. Chaver	3.7.86 9:00 AM	FEC # 110 011 882	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

5672 3 0-0006-7708

002252

U.S. ENVIRONMENTAL PROTECTION AGENCY HWI Sample Management Office
P.O. Box 818, Alexandria, VA 22313 (703) 557-2490 · FTS 557-2490

INORGANICS TRAFFIC REPORT

Sample Number
MFC 183

(1) Case Number: 5672
Sample Site Name/Code:

(2) SAMPLE CONCENTRATION
(Check One)
✓ Low Concentration
___ Medium Concentration

(3) SAMPLE MATRIX
(Check One)
___ Water
✓ Soil/Sediment

(4) Ship To:
CAMBRG
1106 Commonwealth
Boston, MA 02215
(617) 232-2207
Attn: LINDA LEONARD

Transfer
Ship To:

(5) Sampling Office: VI
Sampling Personnel:
(Name) Mike R. Young
(Phone) (512) 345-6651
Sampling Date: 3-6-86
(Begin) _____ (End) _____

(6) Shipping Information:
Name Of Carrier: Fed X
Date Shipped: 3-6-86
Airbill Number: 110 011 882

(9) ANALYSIS LAB:
Recd by: Marie M. Chudy
Date Recd: 3.7.86

(7) Sample Description:
(Check One)
___ Surface Water
___ Ground Water
___ Leachate
✓ Mixed Media
✓ Solids
___ Other _____
(specify)
MATCHES ORGANIC SAMPLE NO. FC 897

(8) Mark Volume Level
On Sample Bottle
Check Analysis required
✓ Total Metals
✓ Cyanide

(10)
Sample Condition
On Receipt:
(eg broken, leakage, chain of custody, etc.)
Sample ok
COC ok
seals intact

LAB COPY FOR RETURN TO SMO

0087

002253

U.S. ENVIRONMENTAL PROTECTION AGENCY HWI Sample Management Office
P.O. Box 818, Alexandria, VA 22313 - 703 557 2490 - FTS 557 2490

INORGANICS TRAFFIC REPORT

Sample Number
MFC 184

(1) **Case Number:** 5672
Sample Site Name/Code:

(2) **SAMPLE CONCENTRATION** (Check One)
- ___ Low Concentration
- ✓ Medium Concentration

(3) **SAMPLE MATRIX** (Check One)
- ___ Water
- ✓ Soil/Sediment

(4) **Ship To:**
CAMBRG
1106 Commonwealth
Boston MA 02215
(617) 272-2269
Attn: Linda Leonard

Transfer Ship To:

(5) **Sampling Office:** VI

Sampling Personnel:
(Name) Mike Young
(Phone) (512) 345-6651
Sampling Date 3/6/86
(Begin) 1425 (End) 1425

(6) **Shipping Information:**
Name Of Carrier: Fed X
Date Shipped: 3/6/86
Airbill Number: 110 011 882

(9) **ANALYSIS LAB:**
Recd by: Marie M Chudi
Date Recd: 3-7-86

(10) **Sample Condition On Receipt:**
(eg broken, leakage, chain of custody, etc.)
sample ok
COC ok
seal intact

(7) **Sample Description:** (Check One)
- ___ Surface Water
- ___ Ground Water
- ___ Leachate
- ✓ Mixed Media
- ___ Solids
- ___ Other ___ (specify)

MATCHES ORGANIC SAMPLE NO. FC896

(8) **Mark Volume Level On Sample Bottle**
Check Analysis required
- ✓ Total Metals
- ✓ Cyanide

LAB COPY FOR RETURN TO SMO

00088

002254

U.S. ENVIRONMENTAL PROTECTION AGENCY HWI Sample Management Office

INORGANICS TRAFFIC REPORT

Sample Number
MFC 183

(1) Case Number: 5672
Sample Site Name/Code:

(2) SAMPLE CONCENTRATION
(Check One)
___ Low Concentration
✓ Medium Concentration

(3) SAMPLE MATRIX
(Check One)
___ Water
✓ Soil/Sediment

(4) Ship To:
Contac

Attn:

Transfer
Ship To:

(5) Sampling Office: VL

Sampling Personnel:

(Name) Mike R Young
(Phone) (513) 345-1001
Sampling Date:
3-6-86
(Begin) _____ (End) _____

(6) Shipping Information:
Name Of Carrier:
FedEx

Date Shipped:

Airbill Number:

(9) ANALYSIS LAB:
Recd by:

Date Recd:

(10)
Sample Condition
On Receipt:
(eg broken, leakage, chain of custody, etc.)

(7) Sample Description:
(Check One)
___ Surface Water
___ Ground Water
___ Leachate
___ Mixed Media
✓ Solids
___ Other _____
(specify)
MATCHES ORGANIC SAMPLE NO. 17

(8) Mark Volume Level
On Sample Bottle
Check Analysis required
✓ Total Metals
✓ Cyanide

LAB FILE COPY 5672-6 800:0

U.S. ENVIRONMENTAL PROTECTION AGENCY HWI Sample Management Office

FTS 557-2490

INORGANICS TRAFFIC REPORT

Sample Number
MFC 184

(1) Case Number: 5672
Sample Site Name/Code:

(2) SAMPLE CONCENTRATION
(Check One)
___ Low Concentration
✓ Medium Concentration

(3) SAMPLE MATRIX
(Check One)
___ Water
✓ Soil/Sediment

(4) Ship To:

Attn:

Transfer
Ship To:

(5) Sampling Office: LV

Sampling Personnel:

(Name) Mike Young

(Phone) 512) 34[illegible]-6651

Sampling Date: 3/6/86

(Begin) 1425 (End) 1425

(6) Shipping Information:

Name Of Carrier:

Date Shipped:

Airbill Number:

(9) ANALYSIS LAB:

Recd by:

Date Recd:

(7) Sample Description:
(Check One)
___ Surface Water
___ Ground Water
___ Leachate
✓ Mixed Media
___ Solids
___ Other ___
(specify)

MATCHES ORGANIC SAMPLE NO. FC[illegible]

(8) Mark Volume Level
On Sample Bottle
Check Analysis required
✓ Total Metals
✓ Cyanide

(10)
Sample Condition
On Receipt:
(eg. broken, leakage, chain of custody, etc.)

LAB FILE COPY

5672-6 0004

002256

FILE

South Chauvicade / Koppers

CASE: 5672

TXD 980 810 386

002257

ENVIRONMENTAL PROTECTION AGENCY
Office of Enforcement

CLP Inorganic

CHAIN OF CUSTODY RECORD

Soil

REGION 6
First International Bldg., 1201 Elm St.
Dallas, Texas 75270

PROJ. NO.: 5672

PROJECT NAME: South Cavalcade/Koppers

SAMPLERS: (Signature) Mike R Young

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	Rec glass, metals, cyanide						REMARKS: Sample #	REMARKS: Tag #
~~SB05-24~~ SCK-A01	~~3-10-86~~	~~1425~~ TRS		✓	~~Area 1, Boring 5 54'-56'~~ TRS	1 TRS	1 TRS						~~MFC 188~~ TRS	~~6-04490~~ TRS
SB06-24	3-11-86	1530		✓	Area 1, Boring 6 56'-60'	1	1						MFC 187	6-04483
SB07-06	3/14/86	0950		✓	Area 1, Boring 7 10'-12'	1	1						MFC 148	6-20255

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Mike R Young	3-13-86 0800	Tony Tillari	Tony Tillari	3/14/86 1236	
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks	
		J. Peterson	3/15/86 1000	FEC # 110 011 893	

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

5672-16-0001

002258

6—7394

FEDERAL EXPRESS

USE THIS AIRBILL FOR DOMESTIC SHIPMENTS AND FOR SHIPMENTS FROM PUERTO RICO TO THE U.S.A.
FILL OUT PURPLE AREAS. FOR ASSISTANCE, CALL 800-238-5355 TOLL FREE.
SEE BACK OF FORM SET FOR COMPLETE PREPARATION INSTRUCTIONS.

SHIPPER'S FEDERAL EXPRESS ACCOUNT NUMBER: 0787-0262-1

DATE: 3-14-96

1 From (Your Name): Mike R. Young

Your Phone Number (Very Important):

Company: Camp Dresser & McKee Inc

Department/Floor No:

Street Address: 3445 Executive Center Dr.

City: Austin

State: Tx

ZIP Zip Code Required For Correct Invoicing: 78731

2 To (Recipient's Name):

Recipient's Phone Number:

Company:

Department/Floor No:

Exact Street Address (Use of P.O. Boxes or P.O. # Zip Codes Will Delay Delivery And Result in Extra Charge.)

City:

State:

ZIP Street Address Zip Required (No P.O. Box # Zip Code)

AIRBILL NO. 1100 1898

3 YOUR BILLING REFERENCE INFORMATION (FIRST 24 CHARACTERS WILL APPEAR ON INVOICE.)

7777-143-05-5-16VL

PAYMENT: Sender Shipper; Recipient's FedEx Acct. No. (Fill in below); 3rd Party FedEx Acct. No. (Fill in below); Net Credit Card (Fill in below); Cash

FedEx Acct. No. or Major Credit Card No.

4 SERVICES CHECK ONLY ONE BOX

1 [x] PRIORITY 1 Overnight Delivery Using Your Packaging

6 [ ] OVERNIGHT LETTER (Use Packaging 9"x12")

OVERNIGHT DELIVERY USING OUR PACKAGING

2 [ ] Courier-Pak Overnight Envelope 12"x 15½"

3 [ ] Overnight Box 12¾"x 17¾"x 3" A [ ]

4 [ ] Overnight Tube 38"x 6"x 6" B [ ]

5 [ ] STANDARD AIR Delivery not later than second business day

SERVICE COMMITMENT

PRIORITY 1 - Delivery is scheduled early next business morning to most locations. If delay later that or there business days is the destination is outside our delivery service area.

STANDARD AIR - Delivery is generally next business day or not later than second business day to most locations or more business days if the destination is outside our delivery service area.

5 DELIVERY AND SPECIAL HANDLING CHECK SERVICES REQUIRED

1 [ ] HOLD FOR PICK-UP Give the Federal Express address where you want package held in Section 3 at right.

2 [ ] DELIVER WEEKDAY

3 [x] DELIVER SATURDAY (Extra charge applies)

4 [ ] HOLD FOR SATURDAY PICK-UP (Extra charge applies)

5 [ ] SHIPMENT SURVEILLANCE SERVICE (SSS) (Extra charge applies.)

6 [ ] DRY ICE _____ Lbs

7 [ ] OTHER SPECIAL SERVICE _____

8 [ ]

9 [ ] SATURDAY PICK-UP OR SATURDAY DROP-OFF (Extra charge applies.)

PACKAGES	WEIGHT	YOUR DECLARED VALUE
Total	Total	Total

Total Charges For Delivery

Total Charges For Other Services

Total Charges

H HOLD FOR PICK-UP AT THIS FEDERAL EXPRESS STATION

Street Address

City

State

ZIP Zip Code of Street Address Required

Emp. No.

Date

Cash Received

Return Shipment

Street Address

City

State

Zip

Received By

X

Time Received

FedEx Employee Number

TITLE

5072-6-0003

002259

U.S. ENVIRONMENTAL PROTECTION AGENCY HWI Sample Management Office

INORGANICS TRAFFIC REPORT

Sample Number
MFC 43

① Case Number: 3672
Sample Site Name/Code:

② SAMPLE CONCENTRATION
(Check One)
✓ Low Concentration
Medium Concentration

③ SAMPLE MATRIX
U 92200 (Check One)
Water
✓ Soil/Sediment

④ Ship To:

Attn:

Transfer
Ship To:

⑤ Sampling Office: VI

Sampling Personnel:

(Name) Mike Young

(Phone) (512) 345-6651

Sampling Date: 3/14/86

(Begin) 0950 (End) 0950

⑥ Shipping Information:

Name Of Carrier:

Date Shipped:

Airbill Number:

⑨ ANALYSIS LAB:

Recd by:

Date Recd:

⑦ Sample Description:
(Check One)
Surface Water
Ground Water
Leachate
Mixed Media
✓ Solids
Other
(specify)

MATCHES ORGANIC SAMPLE NO. [illegible]

⑧ Mark Volume Level
On Sample Bottle
Check Analysis required
✓ Total Metals
✓ Cyanide

⑩
Sample Condition
On Receipt:
(eg broken, leakage, chain of custody, etc.)

LAB FILE COPY

U.S. ENVIRONMENTAL PROTECTION AGENCY · HWI Sample Management Office

INORGANICS TRAFFIC REPORT

Sample Number
MFC 187

(1) Case Number: 5672
Sample Site Name/Code:

(2) SAMPLE CONCENTRATION
(Check One)
___ Low Concentration
✓ Medium Concentration

(3) SAMPLE MATRIX
(Check One)
___ Water
✓ Soil/Sediment

(4) Ship To:

Attn:

Transfer
Ship To:

(5) Sampling Office: VI

Sampling Personnel:

(Name)

(Phone)

Sampling Date: 3-11-86

(Begin) (End)

(6) Shipping Information:

Name Of Carrier:

Date Shipped:

Airbill Number:

(9) ANALYSIS LAB:

Recd by:

Date Recd:

(10) Sample Condition
On Receipt:

(eg broken, leakage, chain of custody, etc.)

(7) Sample Description:
(Check One)
___ Surface Water
___ Ground Water
___ Leachate
___ Mixed Media
✓ Solids
___ Other ___
(specify)

MATCHES ORGANIC SAMPLE NO.

(8) Mark Volume Level
On Sample Bottle
Check Analysis required
___ Total Metals
___ Cyanide

LAB FILE COPY

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 - ALEXANDRIA, VA 22313
703/557-2409 FTS: 8-557-2490

DATE 86/03/31

COVER PAGE

INORGANIC ANALYSIS DATA PACKAGE

LAB NAME WILSON LABORATORIES CASE NO. 5672

SOW NO. 784 Q.C. REPORT NO. 5672

SAMPLE NUMBERS

EPA NO.	LAB ID NO.	EPA NO.	LAB ID NO.
MFC147	8603-1646	MFC148	8603-1647
MFC148	8603-1648P	MFC146	8603-1649A

002262

COMMENTS:

ICP INTERELEMENT AND BACKGROUND CORRECTIONS APPLIED? YES X NO
IF YES, CORRECTIONS APPLIED BEFORE X OR AFTER GENERATION OF RAW DATA

FOOTNOTES:

NR - NOT REQUIRED BY CONTRACT AT THIS TIME

FORM I:

VALUE - IF THE RESULT IS A VALUE GREATER THAN OR EQUAL TO THE INSTRUMENT DETECTION LIMIT BUT LESS THAN THE CONTRACT REQUIRED DETECTION LIMIT, REPORT THE VALUE IN BRACKETS (I.E.,[10]). INDICATE THE ANALYTICAL METHOD USED WITH P (FOR ICP/AA) OR F (FOR FURNACE).

U - INDICATES ELEMENT WAS ANALYZED FOR BUT NOT DETECTED. REPORT WITH THE DETECTION LIMIT VALUE (E.G., 10U).

E - INDICATES A VALUE ESTIMATED OR NOT REPORTED DUE TO THE PRESENCE OF INTERFERENCE. EXPLANATORY NOTE INCLUDED ON COVER PAGE

S - INDICATES VALUE DETERMINED BY METHOD OF STANDARD ADDITION

R - INDICATES SPIKE SAMPLE RECOVERY IS NOT WITHIN CONTROL LIMITS

* - INDICATES DUPLICATE ANALYSIS IS NOT WITHIN CONTROL LIMITS

+ - INDICATES THE CORRELATION COEFFICIENT FOR METHOD OF STANDARD ADDITION IS LESS THAN 0.995

5672-6-0005

ATOMIC ABSORPTION SENSITIVITIES

EPA SUPERFUND CASE # 5672

SENSITIVITY = STANDARD / ABSORBANCE

METAL	STANDARD MG/L	ABSORBANCE	SENSITIVITY	DATE	ANALYST
AL					
BA					
BE					
CA					
CR					
CU					
CO					
FE					
MG					
MN					
NI					
K	10	.174	~~.174~~	86/03/26	CAG
AG	.50	~~.07~~ .070	~~.070~~	86/03/26	CAG
NA	5	.163	~~.163~~	86/03/26	CAG
V					
ZN					
SB					
AS	.01	.022		86/03/28	BAT
CD					
PB	.005	.033		86/03/28	BAT
HG	.05	~~3.35~~ 3.35	~~3.35~~	86/03/04	MAG
SE	.02	.093		86/03/28	BAT
TL	.01	.024		86/03/28	BAT
SN					

CASE # 5672 NUMBER OF SAMPLES = 12 DUE DATE 86/04/11

5672-6-0006

002263

FORM I

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS:8-557-2490

EPA SAMPLE NO.
MFC148

DATE 86/03/31

INORGANIC ANALYSIS DATA SHEET

LAB NAME WILSON LABORATORIES
SOW NO. 784
LAB SAMPLE ID. NO. 8603-1647

CASE NO. 5672
QC REPORT NO. 5672

ELEMENTS IDENTIFIED AND MEASURED

CONCENTRATION: LOW X MEDIUM
MATRIX: WATER SOIL X SLUDGE OTHER

UG/L OR MG/KG DRY WEIGHT (CIRCLE ONE)

1.	ALUMINUM	7570	P	13.	MAGNESIUM	1190 U	P
2.	ANTIMONY	30 U R	P	14.	MANGANESE	24	P
3.	ARSENIC	6 U	F	15.	MERCURY	.12 U	
4.	BARIUM	60 U	P	16.	NICKEL	24 U	P
5.	BERYLLIUM	1.2 U	P	17.	POTASSIUM	1190 U	P
6.	CADMIUM	2.4 U	P	18.	SELENIUM	3 U R	F
7.	CALCIUM	1790 U	P	19.	SILVER	6 U	P
8.	CHROMIUM	6 U	P	20.	SODIUM	2980 U	P
9.	COBALT	24 U	F	21.	THALLIUM	6 U	F
10.	COPPER	12 U	F	22.	TIN	24 U	P
11.	IRON	3460	P	23.	VANADIUM	18 U	P
12.	LEAD	3 U R	F	24.	ZINC	12 U	P
CYANIDE		.48		PERCENT SOLIDS (%)		83	

FOOTNOTES: FOR REPORTING RESULTS TO EPA, STANDARD RESULT QUALIFIERS ARE USED AS DEFINED ON COVER PAGE. ADDITIONAL FLAGS OR FOOTNOTES EXPLAINING RESULTS ARE ENCOURAGED. DEFINITION OF SUCH FLAGS MUST BE EXPLICIT AND CONTAINED ON COVER PAGE, HOWEVER.

COMMENTS:

LAB MANAGER Kathi A. Mitchell

5672-6-0007

002264

FORM I

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 - ALEXANDRIA, VA 22313
703/557-2490 FTS:8-557-2490

EPA SAMPLE NO.
MFC187

DATE 86/03/31

INORGANIC ANALYSIS DATA SHEET

LAB NAME WILSON LABORATORIES
SOW NO. 784
LAB SAMPLE ID. NO. 8603-1646

CASE NO. 5672
QC REPORT NO. 5672

ELEMENTS IDENTIFIED AND MEASURED

CONCENTRATION: LOW X MEDIUM
MATRIX: WATER SOIL X SLUDGE OTHER

UG/L OR MG/KG DRY WEIGHT (CIRCLE ONE)

1.	ALUMINUM	34900	P	12.	MAGNESIUM	13900	P
2.	ANTIMONY	36 U R	P	14.	MANGANESE	549	P
3.	ARSENIC	36	P	15.	MERCURY	.12 U	
4.	BARIUM	139	P	16.	NICKEL	24 U	P
5.	BERYLLIUM	1.2 U	P	17.	POTASSIUM	5430	P
6.	CADMIUM	8.5	P	18.	SELENIUM	3 U R	P
7.	CALCIUM	48900	P	19.	SILVER	6 U	P
8.	CHROMIUM	24	P	20.	SODIUM	3020 U	P
9.	COBALT	24 U	P	21.	THALLIUM	6 U	P
10.	COPPER	12 U	P	22.	TIN	24 U	P
11.	IRON	33400	P	23.	VANADIUM	48	P
12.	LEAD	9.7 R	P	24.	ZINC	66	P
CYANIDE		.24 U		PERCENT SOLIDS (%)		62	

FOOTNOTES: FOR REPORTING RESULTS TO EPA, STANDARD RESULT QUALIFIERS ARE USED AS DEFINED ON COVER PAGE. ADDITIONAL FLAGS OR FOOTNOTES EXPLAINING RESULTS ARE ENCOURAGED. DEFINITION OF SUCH FLAGS MUST BE EXPLICIT AND CONTAINED ON COVER PAGE, HOWEVER.

COMMENTS:

LAB MANAGER Kathi A. Mitchell

002265

FORM II A

Q. C. REPORT NO. 5672

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME WILSON LABORATORIES

CASE NO. 5672

SOW NO. 784

DATE 88/08/31

UNITS UG/L

COMPOUND	INITIAL CALIB.[1]				CONTINUING CALIBRATION[2]						
METALS:	TRUE VALUE	FOUND	%R	II	TRUE VALUE	FOUND	%R	I	FOUND	%R	II	METHOD[4]
1. ALUMINUM	1500	1500	100	II	1500	1500	100	I			II	P I
2. ANTIMONY	1000	1000	100	II	1000	950	95	I			II	P I
3. ARSENIC	230	252	107	II	235	249	106	I			II	F I
4. BARIUM	9700	10080	104	II	9700	10120	104	I			II	P I
5. BERYLLIUM	470	483	105	II	470	501	107	I			II	P I
6. CADMIUM	78	71	91	II	78	72	92	I			II	P I
7. CALCIUM	10000	10000	100	II	10000	10000	100	I			II	P I
8. CHROMIUM	520	550	106	II	520	530	102	I			II	P I
9. COBALT	520	550	106	II	520	550	106	I			II	P I
10. COPPER	680	680	100	II	680	670	99	I			II	P I
11. IRON	1600	1600	100	II	1600	1600	100	I			II	P I
12. LEAD	109	115	105 106 Kam 8/05/31	II	109	119	109	I			II	F I
13. MAGNESIUM	10000	9000	90	II	10000	9000	90	I			II	P I
14. MANGANESE	700	730	104	II	700	720	103	I			II	P I
15. MERCURY	6.7	6.7	100	II	6.7	6.6	99	I			II	I
16. NICKEL	410	400	98	II	410	410	100	I			II	P I
17. POTASSIUM	10000	9000	90	II	10000	9000	90	I			II	P I
18. SELENIUM	50	47	94	II	50	~~44~~ 45	90	I			II	F I
19. SILVER	50	50	100	II	50	50	100	I			II	P I
20. SODIUM	8000	8000	93	II	8000	8000	93	I			II	P I
21. THALLIUM	125	130	104	II	125	132	106	I			II	F I
22. TIN	1000	1000	100	II	1000	1060	106	I			II	P I
23. VANADIUM	1690	1700	101	II	1690	1720	102	I			II	P I
24. ZINC	840	870	104	II	840	870	104	I			II	P I
OTHER:												
CYANIDE	250	257	103	II	250	258	103	I			II	I

1 INITIAL CALIBRATION SOURCE EPA 2 CONTINUING CALIBRATION SOURCE EPA
3 CONTROL LIMITS : MERCURY AND TIN 80-120; ALL OTHER COMPOUNDS 90-110
4 INDICATE ANALYTICAL METHOD USED: P - ICP/FLAME AA; F - FURNACE

002266

5672-6-000B

Q. C. REPORT NO. 5672

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME WILSON LABORATORIES CASE NO. 5672

SOW NO. 784

DATE 86/03/31 UNITS UG/L

COMPOUND	INITIAL CALIB.[1] TRUE VALUE	FOUND	%R	II	CONTINUING CALIBRATION[2] TRUE VALUE	FOUND	%R	I	FOUND	%R	II	METHOD[4]	I
METALS:													
1. ALUMINUM				II				I			II		I
2. ANTIMONY				II				I			II		I
3. ARSENIC				II	235	234	100	I			II	F	I
4. BARIUM				II				I			II		I
5. BERYLLIUM				II				I			II		I
6. CADMIUM				II				I			II		I
7. CALCIUM				II				I			II		I
8. CHROMIUM				II				I			II		I
9. COBALT				II				I			II		I
10. COPPER				II				I			II		I
11. IRON				II				I			II		I
12. LEAD				II	109	118	105	I			II	F	I
13. MAGNESIUM				II				I			II		I
14. MANGANESE				II				I			II		I
15. MERCURY				II				I			II		I
16. NICKEL				II				I			II		I
17. POTASSIUM				II				I			II		I
18. SELENIUM				II	50	45	90	I			II	F	I
19. SILVER				II				I			II		I
20. SODIUM				II				I			II		I
21. THALLIUM				II	125	136	109	I			II	F	I
22. TIN				II				I			II		I
23. VANADIUM				II				I			II		I
24. ZINC				II				I			II		I
OTHER:													
CYANIDE				II				I			II		I

1 INITIAL CALIBRATION SOURCE EPA 2 CONTINUING CALIBRATION SOURCE EPA
3 CONTROL LIMITS : MERCURY AND TIN 80-120; ALL OTHER COMPOUNDS 90-110
4 INDICATE ANALYTICAL METHOD USED: P - ICP/FLAME AA; F - FURNACE

002267

Form II C

Q. C. Report No. 5672

INITIAL AND CONTINUING CALIBRATION VERIFICATION[3]

LAB NAME Wilson Laboratories

CASE NO. 5672

SOW NO. 784

DATE 86/03/31

UNITS ug/L

Compound	Initial Calib.[1]			Continuing Calibration[2]					
Metals[4]:	True Value	Found	%R	True Value	Found	%R	Found	%R	Method[4]
1. Aluminum									
2. Antimony									
3. Arsenic									
4. Barium									
5. Beryllium									
6. Cadmium									
7. Calcium									
8. Chromium									
9. Cobalt									
10. Copper									
11. Iron									
12. Lead	109	112	103	109	118	108			
13. Magnesium									
14. Manganese									
15. Mercury									
16. Nickel									
17. Potassium									
18. Selenium									
19. Silver									
20. Sodium									
21. Thallium									
22. Tin									
23. Vanadium									
24. Zinc									
Other:									
Cyanide									

[1] Initial Calibration Source EPA [2] Continuing Calibration Source EPA

[3] Control Limits: Mercury and Tin 80-120; All Other Compounds 90-110

[4] Indicate Analytical Method Used: P - ICP/Flame AA; F - Furnace

002268

FORM III A

Q. C. REPORT NO. 5672

BLANKS

LAB NAME WILSON LABORATORIES CASE NO. 5672

DATE 86/03/31 UNITS UG/L

MATRIX WATER

COMPOUND	INITIAL CALIBRATION BLANK VALUE	CONTINUING CALIBRATION BLANK VALUE 1	2	3	4	PREPARATION BLANK MATRIX: 1 21 MAR	MATRIX: 2
METALS:							
1. ALUMINUM	200 U	200 U				200 U	
2. ANTIMONY	60 U	60 U				60 U	
3. ARSENIC	5 U	5 U				5 U	
4. BARIUM	100 U	100 U				100 U	
5. BERYLLIUM	2 U	2 U				2 U	
6. CADMIUM	4 U	4 U				4 U	
7. CALCIUM	3000 U	3000 U				3000 U	
8. CHROMIUM	10 U	10 U				10 U	
9. COBALT	40 U	40 U				40 U	
10. COPPER	20 U	20 U				20 U	
11. IRON	100 U	100 U				100 U	
12. LEAD	2.5 U	2.5 U				2.5 U	
13. MAGNESIUM	2000 U	2000 U				2000 U	
14. MANGANESE	15 U	15 U				15 U	
15. MERCURY	.2 U	.2 U				.2 U	
16. NICKEL	40 U	40 U				40 U	
17. POTASSIUM	2000 U	2000 U				2000 U	
18. SELENIUM	2.5 U	2.5 U				2.5 U	
19. SILVER	10 U	10 U				10 U	
20. SODIUM	5000 U	5000 U				5000 U	
21. THALLIUM	5 U	5 U				5 U	
22. TIN	40 U	40 U				40 U	
23. VANADIUM	30 U	30 U				30 U	
24. ZINC	20 U	20 U				20 U	
OTHER:							
CYANIDE	10 U	10 U				10 U	

002269

FORM III B

Q. C. REPORT NO. 5672

BLANKS

LAB NAME WILSON LABORATORIES CASE NO. 5672

DATE 86/03/31 UNITS UG/L

MATRIX WATER

COMPOUND	INITIAL CALIBRATION BLANK VALUE	CONTINUING CALIBRATION BLANK VALUE 1	2	3	4	PREPARATION BLANK MATRIX: 1	MATRIX: 2
METALS:							
1. ALUMINUM							
2. ANTIMONY							
3. ARSENIC		5 U					
4. BARIUM							
5. BERYLLIUM							
6. CADMIUM							
7. CALCIUM							
8. CHROMIUM							
9. COBALT							
10. COPPER							
11. IRON							
12. LEAD		2.5 U					
13. MAGNESIUM							
14. MANGANESE							
15. MERCURY							
16. NICKEL							
17. POTASSIUM							
18. SELENIUM		2.5 U					
19. SILVER							
20. SODIUM							
21. THALLIUM		5 U					
22. TIN							
23. VANADIUM							
24. ZINC							
OTHER:							
CYANIDE							

002270

Form III C

Q. C. Report No. 5672

BLANKS

LAB NAME Wilson Laboratories

CASE NO. 5672

DATE 86/03/31

UNITS ug/L

Matrix aqueous

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead	0.5U	0.5U					
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

002271

FORM IV A

Q. C. REPORT NO. 5672

ICP INTERFERENCE CHECK SAMPLE

LAB NAME WILSON LABORATORIES

DATE 86 03/31

CASE NO. 5672
CHECK SAMPLE I. D. ICS
CHECK SAMPLE SOURCE EPA
UNITS UG/L

COMPOUND	CONTROL LIMITS 1 MEAN	CONTROL LIMITS 1 STD DEV	TRUE 2	INITIAL OBSERVED	INITIAL %R	FINAL OBSERVED	FINAL %R
METALS:							
1. ALUMINUM	505000	13800	503000	529000	105	534000	106
2. ANTIMONY	60 U	0	---	60 U	---	60 U	---
3. ARSENIC					---		---
4. BARIUM	462	18	472	450	95	460	97
5. BERYLLIUM	457	19	456	468	103	475	104
6. CADMIUM	898	54	964	920	95	908	94
7. CALCIUM	500000	14500	499000	520000	104	540000	108
8. CHROMIUM	935	14	985	980	99	960	97
9. COBALT	465	26	478	480	100	480	100
10. COPPER	496	12	509	500	98	490	96
11. IRON	210000	17200	198000	215000	109	219000	111
12. LEAD	4990	64	4640*		---		---
13. MAGNESIUM	513000	16000	497000	530000	107	550000	111
14. MANGANESE	533	28	522	520	100	520	100
15. MERCURY					---		---
16. NICKEL	875	29	913	880	96	900	99
17. POTASSIUM					---		---
18. SELENIUM					---		---
19. SILVER			935		---		---
20. SODIUM	5000 U	0	---		---		---
21. THALLIUM	750	70	1090*		---		---
22. TIN	40 U	0	---	40 U	---	40 U	---
23. VANADIUM	468	19	471	460	98	470	100
24. ZINC	935	71	948	950	100	950	100

OTHER:

1 MEAN VALUE BASED ON N = 10.
2 TRUE VALUE OF EPA ICP INTERFERENCE CHECK SAMPLE OR CONTRACTOR STANDARD.
* ESTIMATED: NO 'TRUE' VALUE ACCCEPTED BECAUSE OF HIGH INTER-LAB % RSD

002272

FORM V A

Q. C. REPORT NO. 5672

SPIKE SAMPLE RECOVERY

LAB NAME WILSON LABORATORIES

DATE 86/03/31

CASE NO. 5672
EPA SAMPLE NO. MFC148
LAB SAMPLE ID NO. 8603-1647
UNITS UG/L

MATRIX SOLID

COMPOUND	CONTROL LIMIT % R	SPIKED SAMPLE RESULT (SSR)	SAMPLE RESULT (SR)	SPIKED ADDED (SA)	% R
METALS:					
1. ALUMINUM	75 - 125	16100	12700	0	N
2. ANTIMONY		360	60 U	500	72 R
3. ARSENIC		46	10 U	40	115
4. BARIUM		2150	100 U	2000	108
5. BERYLLIUM		54	2 U	50	108
6. CADMIUM		50	4 U	50	100
7. CALCIUM		3000 U	3000 U	0	N
8. CHROMIUM		210	10 U	200	105
9. COBALT		530	40 U	500	106
10. COPPER		250	20 U	250	100
11. IRON		7100	5800	0	N
12. LEAD		~~24~~ 36 86/03/31 BAT	5 U	20	~~120~~ 180 R 86/03/31 BAT
13. MAGNESIUM		2000 U	2000 U	0	N
14. MANGANESE		550	40	500	102
15. MERCURY		.4	.1 U	.4	100
16. NICKEL		550	40 U	500	110
17. POTASSIUM		2000 U	2000 U	0	N
18. SELENIUM		6	5 U	10	60 R
19. SILVER		50	10 U	50	100
20. SODIUM		5000 U	5000 U	0	N
21. THALLIUM		56	10 U	50	112
22. TIN		500	40 U	500	100
23. VANADIUM		530	30 U	500	106
24. ZINC		530	20 U	500	106
OTHER:					
CYANIDE		2.7	.4		96

1 %R = [(SSR -SR) / SA] X 100
"R" - OUT OF CONTROL
N - NO SPIKE REQUIRED
COMMENTS: MERCURY AND CYANIDE DATA EXPRESSED IN MG/KG

002273

FORM VI A

Q. C. REPORT NO. 5672

DUPLICATES

LAB NAME WILSON LABORATORIES

DATE 86/03/31

CASE NO. 5672
EPA SAMPLE NO. MFC148
LAB SAMPLE ID NO. 8603-1647
UNITS UG/L

MATRIX SOLID

COMPOUND	CONTROL LIMIT 1	SAMPLE(S)	DUPLICATE(D)	RPD 2
METALS:				
1. ALUMINUM		12700	11500	10
2. ANTIMONY		60 U	60 U	NC
3. ARSENIC		10 U	10 U	NC
4. BARIUM		100 U	100 U	NC
5. BERYLLIUM		2 U	2 U	NC
6. CADMIUM		4 U	4 U	NC
7. CALCIUM		3000 U	3000 U	NC
8. CHROMIUM		10 U	10 U	NC
9. COBALT		40 U	40 U	NC
10. COPPER		20 U	20 U	NC
11. IRON		5800	5200	11
12. LEAD		5 U	5 U	NC
13. MAGNESIUM		2000 U	2000 U	NC
14. MANGANESE		40	30	29
15. MERCURY		.1 U	.1 U	NC
16. NICKEL		40 U	40 U	NC
17. POTASSIUM		2000 U	2000 U	NC
18. SELENIUM		5 U	5 U	NC
19. SILVER		10 U	10 U	NC
20. SODIUM		5000 U	5000 U	NC
21. THALLIUM		10 U	10 U	NC
22. TIN		40 U	40 U	NC
23. VANADIUM		30 U	30 U	NC
24. ZINC		20 U	20 U	NC
OTHER:				
CYANIDE		.4	.3	29

* OUT OF CONTROL
1 TO BE ADDED AT A LATER DATE. 2 RPD =[I S - D I / ((S + D) / 2)] X 100
NC - NON CALCULABLE RPD DUE TO VALUE(S) LESS THEN CRDL
COMMENTS: MERCURY AND CYANIDE DATA EXPRESSED IN MG/KG

002274

FORM VII A

Q. C. REPORT NO. 5672

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME WILSON LABORATORIES CASE NO. 5672

DATE 86/03/31 LCS UNITS UG/L MG/KG
(CIRCLE ONE)

COMPOUND	REQUIRED DETECTION LIMITS (CRDL)-UG/L	INSTRUMENT DETECTION LIMITS (IDL)-UG/L ICP/A	FURNACE	LAB CONTROL SAMPLE TRUE	FOUND	%R
METALS:						
1. ALUMINUM	200	200		10700	10000	93
2. ANTIMONY	60	60		500	420	84
3. ARSENIC	10		5	250	268	107
4. BARIUM	200	100		5000	4430	89
5. BERYLLIUM	5	2		235	223	95
6. CADMIUM	5	4		39	40	103
7. CALCIUM	5000	3000		100000	94000	94
8. CHROMIUM	10	10		260	250	96
9. COBALT	50	40		260	240	92
10. COPPER	25	20		340	290	85
11. IRON	100	100		10800	10300	95
12. LEAD	5	200	2.5	100	118	118
13. MAGNESIUM	5000	2000		50000	47000	94
14. MANGANESE	15	15		350	330	94
15. MERCURY	0.2		0.2	6.7	6.7	100
16. NICKEL	40	40		210	180	86
17. POTASSIUM	5000	2000		50000	41000	82
18. SELENIUM	5		2.5	50	50	100
19. SILVER	10	10		100	100	100
20. SODIUM	5000	5000		100000	100000	100
21. THALLIUM	10		5	200	212	106
22. TIN	40	40		500	530	106
23. VANADIUM	50	30		850	770	91
24. ZINC	20	20		420	370	88
OTHER:						
CYANIDE	10	10		224	155	70

002275

FORM VIII A

Q. C. REPORT NO. 5672

STANDARD ADDITION RESULTS

LAB NAME WILSON LABORATORIES CASE NO. 5672

DATE 86/03/31 LCS UNITS UG/L

SAMPLE#	ELEMENT	0 ADD ABS.	1 ADD CON./ABS. [1]	2 ADD CON./ABS. [2]	3 ADD CON./ABS.	FINAL CON.	R*
MFC 1484	Pb	.062	50/.144	100/.244	200/.404	86	R.999

1 CON IS THE CONCENTRATION ADDED, ABS. IS THE INSTRUMENT READOUT IN ABSORBANCE OR CONCENTRATION.

2 CONCENTRATION AS DETERMINED BY MSA

* ''R'' IS THE CORRELATION COEFFICIENT.

+ - CORRELATION COEFFICIENT IS OUTSIDE OF CONTROL WINDOW OF 0.995.

002276

WILSON LABORATORIES
525 NORTH EIGHTH STREET - P.O. BOX 1884 - SALINA, KANSAS 67402-1884 - (913)825-7186

LABORATORY REPORT

CLIENT: EPA-REGION VI
ATTN: WILLIAM LANGLEY
6608 HORNWOOD DRIVE
HOUSTON, TX 77074

DATE RPTD: 03/31/86
DATE RCVD: 03/15/86
PURCHASE AUTH: 5672
FILE NO.: 85-9652
ORDER NO.: 2317

LAB NUMBER: 86031646
SAMPLE DESCRIPTION: CASE #5672 MFC 187

DATE SAMPLED: 03/11/86
TIME SAMPLED: 1530

ANALYSIS	CONCENTRATION	UNITS	BOOK-PAGE
CYANIDE, TOTAL	1.	MG/KG	710-CN-1
SOLIDS, TOTAL	82.	%	665-12
ALUMINUM, TOTAL	34900.	MG/KG	710-AL-1
ANTIMONY, TOTAL	36.U R	MG/KG	710-SB-1
ARSENIC, TOTAL	36.	MG/KG	710-AS-3
BARIUM, TOTAL	139.	MG/KG	710-BA-1
BERYLLIUM, TOTAL	1.2U	MG/KG	710-BE-1
CADMIUM, TOTAL	8.5	MG/KG	710-CD-1
CALCIUM, TOTAL	48900.	MG/KG	710-CA-1
CHROMIUM, TOTAL	24.	MG/KG	710-CR-1
COBALT, TOTAL	24.U	MG/KG	710-CO-1
COPPER, TOTAL	12.U	MG/KG	710-CU-1
IRON, TOTAL	33400.	MG/KG	710-FE-1
LEAD, TOTAL	9.7 R	MG/KG	710-PB-4
MAGNESIUM, TOTAL	13900.	MG/KG	710-MG-1
MANGANESE, TOTAL	549.	MG/KG	710-MN-1
MERCURY, TOTAL	0.12U	MG/KG	710-HG-3
NICKEL, TOTAL	24.U	MG/KG	710-NI-1
POTASSIUM, TOTAL	5430.	MG/KG	710-K-3
SELENIUM, TOTAL	3.U R	MG/KG	710-SE-3
SILVER, TOTAL	6.U	MG/KG	710-AG-3
SODIUM, TOTAL	3020.U	MG/KG	710-NA-3
THALLIUM, TOTAL	6.U	MG/KG	710-TL-6
TIN, TOTAL	24.U	MG/KG	710-SN-1
VANADIUM, TOTAL	48.	MG/KG	710-V-1
ZINC, TOTAL	66.	MG/KG	710-ZN-1

—CONCLUSION—LAB NUMBER: 86031646 CASE #5672 MFC 187

ND(), WHERE NOTED, INDICATES NONE DETECTED WITH THE DETECTION LIMIT IN PARENTHESES.

ANALYSES WERE PERFORMED ON SAMPLES AS RECEIVED IN ACCORDANCE WITH PROCEDURES PUBLISHED IN THE FEDERAL REGISTER, VOL. 49, NO. 209, OCT. 26, 1984 OR IN EPA PUBLICATION, SW 846, 2ND EDITION, JULY 1982 AND IN THE PROPOSED ADDITION TO SW 846, 1984.

002277

5672-6-0018

CLIENT: EPA-REGION VI

FILE NO.: 85-9652
ORDER NO.: 2317

SAMPLES WILL BE RETAINED FOR 30 DAYS UNLESS OTHERWISE NOTIFIED.

WILSON LABORATORIES

Lynn R Newcomer

LYNN R. NEWCOMER
CHIEF CHEMIST

002278

WILSON LABORATORIES

525 NORTH EIGHTH STREET - P.O. BOX 1884 - SALINA, KANSAS 67402-1884 - (913)825-7186

LABORATORY REPORT

CLIENT: EPA-REGION VI
ATTN: WILLIAM LANGLEY
6608 HORNWOOD DRIVE
HOUSTON, TX 77074

DATE RPTD: 03/31/86
DATE RCVD: 03/15/86
PURCHASE AUTH: 5672
FILE NO.: 85-9652
ORDER NO.: 2318

LAB NUMBER: 86031647
SAMPLE DESCRIPTION: CASE #5672 MFC 148

DATE SAMPLED: 03/14/86
TIME SAMPLED: 0950

ANALYSIS	CONCENTRATION	UNITS	BOOK-PAGE
CYANIDE, TOTAL	1.	MG/KG	710-CN-1
SOLIDS, TOTAL	83.	%	665-12
ALUMINUM, TOTAL	7570.	MG/KG	710-AL-1
ANTIMONY, TOTAL	36.U R	MG/KG	710-SB-1
ARSENIC, TOTAL	6.U	MG/KG	710-AS-3
BARIUM, TOTAL	60.U	MG/KG	710-BA-1
BERYLLIUM, TOTAL	1.2U	MG/KG	710-BE-1
CADMIUM, TOTAL	2.4U	MG/KG	710-CD-1
CALCIUM, TOTAL	1790.U	MG/KG	710-CA-1
CHROMIUM, TOTAL	6.U	MG/KG	710-CR-1
COBALT, TOTAL	24.U	MG/KG	710-CO-1
COPPER, TOTAL	12.U	MG/KG	710-CU-1
IRON, TOTAL	3460.	MG/KG	710-FE-1
LEAD, TOTAL	3.U R	MG/KG	710-PB-4
MAGNESIUM, TOTAL	1190.U	MG/KG	710-MG-1
MANGANESE, TOTAL	24.	MG/KG	710-MN-1
MERCURY, TOTAL	0.12U	MG/KG	710-HG-3
NICKEL, TOTAL	24.U	MG/KG	710-NI-1
POTASSIUM, TOTAL	1190.U	MG/KG	710-K-3
SELENIUM, TOTAL	3.U R	MG/KG	710-SE-3
SILVER, TOTAL	6.U	MG/KG	710-AG-3
SODIUM, TOTAL	2980.U	MG/KG	710-NA-3
THALLIUM, TOTAL	6.U	MG/KG	710-TL-6
TIN, TOTAL	24.U	MG/KG	710-SN-1
VANADIUM, TOTAL	18.U	MG/KG	710-V-1
ZINC, TOTAL	12.U	MG/KG	710-ZN-1

--CONCLUSION--LAB NUMBER: 86031647 CASE #5672 MFC 148

ND(), WHERE NOTED, INDICATES NONE DETECTED WITH THE DETECTION LIMIT IN PARENTHESES.

ANALYSES WERE PERFORMED ON SAMPLES AS RECEIVED IN ACCORDANCE WITH PROCEDURES PUBLISHED IN THE FEDERAL REGISTER, VOL. 49, NO. 209, OCT. 26, 1984 OR IN EPA PUBLICATION, SW 846, 2ND EDITION, JULY 1982 AND IN THE PROPOSED ADDITION TO SW 846, 1984.

002279

CLIENT: EPA-REGION VI

FILE NO.: 85-9652
ORDER NO.: 2318

SAMPLES WILL BE RETAINED FOR 30 DAYS UNLESS OTHERWISE NOTIFIED.

IF YOU HAVE ANY QUESTIONS CONCERNING THIS REPORT, PLEASE CONTACT PROJECT MANAGER BERNADINE K. SIEMENS, OR THE UNDERSIGNED.

WILSON LABORATORIES

Lynn R Newcomer

LYNN R. NEWCOMER
CHIEF CHEMIST

002280

WILSON LABORATORIES

525 NORTH EIGHTH STREET - P.O. BOX 1884 - SALINA, KANSAS 67402-1884 - (913)825-7186

LABORATORY REPORT

CLIENT: EPA-REGION VI
ATTN: WILLIAM LANGLEY
6608 HORNWOOD DRIVE
HOUSTON, TX 77074

DATE RPTD: 03/31/86
DATE RCVD: 03/15/86
PURCHASE AUTH: 5672
FILE NO.: 85-9652
ORDER NO.: 2319

LAB NUMBER: 86031648
SAMPLE DESCRIPTION: CASE #5672 MFC 148-DUPLICATE

DATE SAMPLED: 03/14/86
TIME SAMPLED: 0950

ANALYSIS	CONCENTRATION	UNITS	BOOK-PAGE
CYANIDE, TOTAL	1.	MG/KG	710-CN-1
SOLIDS, TOTAL	83.	%	665-12
ALUMINUM, TOTAL	6860.	MG/KG	710-AL-1
ANTIMONY, TOTAL	36.U R	MG/KG	710-SB-1
ARSENIC, TOTAL	6.U	MG/KG	710-AS-3
BARIUM, TOTAL	60.U	MG/KG	710-BA-1
BERYLLIUM, TOTAL	1.2U	MG/KG	710-BE-1
CADMIUM, TOTAL	2.4U	MG/KG	710-CD-1
CALCIUM, TOTAL	1790.U	MG/KG	710-CA-1
CHROMIUM, TOTAL	6.U	MG/KG	710-CR-1
COBALT, TOTAL	24.U	MG/KG	710-CO-1
COPPER, TOTAL	12.U	MG/KG	710-CU-1
IRON, TOTAL	3100.	MG/KG	710-FE-1
LEAD, TOTAL	3.U R	MG/KG	710-PB-4
MAGNESIUM, TOTAL	1190.U	MG/KG	710-MG-1
MANGANESE, TOTAL	18.	MG/KG	710-MN-1
MERCURY, TOTAL	0.12U	MG/KG	710-HG-3
NICKEL, TOTAL	24.U	MG/KG	710-NI-1
POTASSIUM, TOTAL	1190.U	MG/KG	710-K-3
SELENIUM, TOTAL	3.U R	MG/KG	710-SE-3
SILVER, TOTAL	6.U	MG/KG	710-AG-3
SODIUM, TOTAL	2980.U	MG/KG	710-NA-3
THALLIUM, TOTAL	6.U	MG/KG	710-TL-6
TIN, TOTAL	24.U	MG/KG	710-SN-1
VANADIUM, TOTAL	18.U	MG/KG	710-V-1
ZINC, TOTAL	12.U	MG/KG	710-ZN-1

—CONCLUSION—LAB NUMBER: 86031648 CASE #5672 MFC 148-DUPLICATE

ND(), WHERE NOTED, INDICATES NONE DETECTED WITH THE DETECTION LIMIT IN PARENTHESES.

ANALYSES WERE PERFORMED ON SAMPLES AS RECEIVED IN ACCORDANCE WITH PROCEDURES PUBLISHED IN THE FEDERAL REGISTER, VOL. 49, NO. 209, OCT. 26, 1984 OR IN EPA PUBLICATION, SW 846, 2ND EDITION, JULY 1982 AND IN THE PROPOSED ADDITION TO SW 846, 1984.

002281

SAMPLES WILL BE RETAINED FOR 30 DAYS UNLESS OTHERWISE NOTIFIED.

IF YOU HAVE ANY QUESTIONS CONCERNING THIS REPORT, PLEASE CONTACT PROJECT MANAGER BERNADINE K. SIEMENS, OR THE UNDERSIGNED.

WILSON LABORATORIES

Lynn R. Newcomer

LYNN R. NEWCOMER
CHIEF CHEMIST

002282

WILSON LABORATORIES

525 NORTH EIGHTH STREET - P.O. BOX 1884 - SALINA, KANSAS 67402-1884 - (913)825-7186

LABORATORY REPORT

CLIENT: EPA-REGION VI
ATTN: WILLIAM LANGLEY
6608 HORNWOOD DRIVE
HOUSTON, TX 77074

DATE RPTD: 03/31/86
DATE RCVD: 03/15/86
PURCHASE AUTH: 5672
FILE NO.: 85-9652
ORDER NO.: 2320

LAB NUMBER: 86031649
SAMPLE DESCRIPTION: CASE #5672 MFC 148-SPIKE

DATE SAMPLED: 03/14/86
TIME SAMPLED: 0950

ANALYSIS	CONCENTRATION	UNITS	BOOK-PAGE
CYANIDE, TOTAL	96.	%	710-CN-1
ALUMINUM, TOTAL	0.	%	710-AL-1
ANTIMONY, TOTAL	72.	%	710-SB-1
ARSENIC, TOTAL	115.	%	710-AS-3
BARIUM, TOTAL	108.	%	710-BA-1
BERYLLIUM, TOTAL	108.	%	710-BE-1
CADMIUM, TOTAL	100.	%	710-CD-1
CALCIUM, TOTAL	0.	%	710-CA-1
CHROMIUM, TOTAL	105.	%	710-CR-1
COBALT, TOTAL	106.	%	710-CO-1
COPPER, TOTAL	100.	%	710-CU-1
IRON, TOTAL	0.	%	710-FE-1
LEAD, TOTAL	~~120.~~ 180. SR	%	710-PB-4
MAGNESIUM, TOTAL	0.	%	710-MG-1
MANGANESE, TOTAL	102.	%	710-MN-1
MERCURY, TOTAL	100.	%	710-HG-3
NICKEL, TOTAL	110.	%	710-NI-1
POTASSIUM, TOTAL	0.	%	710-K-3
SELENIUM, TOTAL	60. R	%	710-SE-3
SILVER, TOTAL	100.	%	710-AG-3
SODIUM, TOTAL	0.	%	710-NA-3
THALLIUM, TOTAL	112.	%	710-TL-6
TIN, TOTAL	100.	%	710-SN-1
VANADIUM, TOTAL	106.	%	710-V-1
ZINC, TOTAL	106.	%	710-ZN-1

—CONCLUSION—LAB NUMBER: 86031649 CASE #5672 MFC 148-SPIKE

ND(), WHERE NOTED, INDICATES NONE DETECTED WITH THE DETECTION LIMIT IN PARENTHESES.

ANALYSES WERE PERFORMED ON SAMPLES AS RECEIVED IN ACCORDANCE WITH PROCEDURES PUBLISHED IN THE FEDERAL REGISTER, VOL. 49, NO. 209, OCT. 26, 1984 OR IN EPA PUBLICATION, SW 846, 2ND EDITION, JULY 1982 AND IN THE PROPOSED ADDITION TO SW 846, 1984.

CLIENT: EPA-REGION VI

FILE NO.: 85-9652
ORDER NO.: 2320

SAMPLES WILL BE RETAINED FOR 30 DAYS UNLESS OTHERWISE NOTIFIED.

IF YOU HAVE ANY QUESTIONS CONCERNING THIS REPORT, PLEASE CONTACT PROJECT MANAGER BERNADINE K. SIEMENS, OR THE UNDERSIGNED.

WILSON LABORATORIES

Lynn R Newcomer

LYNN R. NEWCOMER
CHIEF CHEMIST

002284