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2160031

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

December 15, 2004

CH2M Hill
Attention: Dan Jablonski
3 Hutton Centre Dr. Ste 200
Santa Ana CA 92707

Dear Dan,

This package contains samples in our Service ID 04-5674 and your project is Omega. Enclosed please find:

(1) Original Analytical Report.
(2) Original Chain of Custody.
(3) One diskettes containing EDD deliverable.
(4) Original and one copy of Level C Data Package Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

Applied P & CH Laboratories
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
CH2M Hill
Attention: Dan Jablonski
3 Hutton Center Dr.
Santa Ana CA 92707
Tel: (714)435-6215 Fax: (714)429-2050

Service ID #: 801-045674
Collected by: ML
Collected on: 12/07/04

Received: 12/07/04
Extracted: N/A
Tested: 12/07/04
Reported: 12/09/04

Sample Description: Water
Project Description: Omega Chemical

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result OC2-MW1A-W-0-98 04-05674-1	OC2-MW1B-W-0-99 04-05674-2	OC2-MW6-W-0-100 04-05674-3
Dilution Factor				1	1	1
Chromium (VI)	218.6	μg/L	1	29.2	82.1	76.6

Component Analyzed	Method	Unit	PQL	Analysis Result OC2-MW7A-W-0-102 04-05674-4	OC2-MW7A-W-1-103 04-05674-5	OC2-MW9B-W-0-101 04-05674-6
Dilution Factor				1	1	1
Chromium (VI)	218.6	μg/L	1	4.4	4.3	5.6

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & CH Laboratories

Level D Data Package Deliverables

General Information

Project: Omega Chemical

APCL Service ID: 04-5674

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Case Narrative

Project: Omega Chemical

For U.S. Army Corps of Engineers

APCL Service No: 04-5674

1. Sample Identification

The sample identifications are listed in the following table:

U.S. Army Corps of Engineers Sample ID	APCL Sample ID
OC2-MW1A-W-0-98	04-05674-1
OC2-MW1B-W-0-99	04-05674-2
OC2-MW6-W-0-100	04-05674-3
OC2-MW9B-W-0-101	04-05674-6
OC2-MW7A-W-0-102	04-05674-4
OC2-MW7A-W-1-103	04-05674-5

2. Analytical Methodology

Samples are analyzed by EPA methods
218.6 (Chromium (VI)).

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

None

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Regina Kirakozova
Associate QA/QC Director
Applied P & CH Laboratories

Applied P & Ch Laboratory

APCL

13760 Magnolia Ave. Chino CA 91710
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Chain of Custody

Please Print in pen

Page 1 of 1

Client: CH2M HILL Contact: DAN JABLONSKI Tel #: 714-435-6215 Fax #: 714-429-2050

Address: 3 HUTTON CNTR DR. City: SANTA ANA State: CA Zip code: 92707

Bill to:

Project Name/Code OMEGA CHEMICAL Job # P.O. #

Project Address APCL Quotation #

Due Date: ☒ regular ☐ rush: ___ days ___ hours Sampled by: M. LADEAU

White – With report
Yellow – Lab copy
Pink – Originator

Field Sample ID No.	Sample Description	Date Collected	Time	Sample Matrix	Preservation	# of Containers	HEX. CHROM											Remarks
	OC2-MW1A-W-0-98	12/7/04	0805	GW	NONE	1	X											
	OC2-MW1B-W-0-99		0845			1	X											
	OC2-MW6-W-0-100		0935			1	X											
	OC2-MW9B-W-0-101		1030			2	X											LAB QC
	OC2-MW7A-W-0-102		1140			1	X											
	OC2-MW7A-W-1-103		1200			1	X											

5674

QC Requirement: ☐ Regular; ☒ QA/QC Report; ☐ WIP; ☐ Raw Data; ☐ Extended Raw Data ☐ CLP; ☒ ACE ☐ AFCEE ☐ NEESA ___ (E, C or D); ☐ Other _____ (Please specify)

Sample Disposal: ☐ Return ☒ Disposal by APCL ☐ Hold for _____ days after receiving date. **If not specified, samples will be discarded 45 days after samples are received.**

Sample Conditions: ☐ Intact; ☐ Broken. Cooler Seal: ☐ Intact; ☐ Broken; ☐ None. Tag # _____ Temperature: ☐ Room ☐ Cold (_____ °C).

Relinquished by [signature] Date/Time 12/7/04 / 14:08 Received by M. Reynoso Date/Time 12-07-04 14:08

Relinquished by M. Reynoso Date/Time 12/07/04 / 15:50 Received by [signature] Date/Time 12/07/04 / 1550

APCL USE ONLY Service # Note:

Clients understand that all terms described in the proposals, quotations for this project, and/or the general terms provided in the current APCL price schedules will be followed. APCL reserves the right

Applied P & CH Laboratories
13760 Magnolia Ave., Chino CA 91710
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Sample Receiving Checklist

APCL ServiceID 5674 **Client Name/Project:** Omega

1. Sample Arrival

Date/Time Received 12/7/04 1550 Date/Time Opened 12/7/04 1550 By (name) Jason N

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☐ FedEx ☒ APCL Empl: MR

2. Chain-of-Custody (CoC)

☒ With Samples? ☐ Faxed? ☒ Client has Copy? ☒ Signed, dated? By: _____
☒ Project ID? ☒ Analyses Clear? ☐ Hold Samples? #on Hold _____ # Received _____
☐ CoC/Docs Zip-Locked under lid? ☐ Compos.#: _ ☒ #Samples OK? _____
☒ Sampled By : M. Ladeau

3. Shipping Container/Cooler

☒ Cooler Used? # of 1 Cooled by: ☒ Ice ☐ Blue Ice ☐ Dry Ice ☐ None
Temp °C 3.8
(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).
Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. Sample Preservation

☐ **pH <2** ☐ pH >12
If Not, pH = _____ Preserved by: ☐ Client ☐ APCL ☐ Third Party _____

5. Holding-time Requirements

☐ pH 24hr ☐ BACT 6/24hr ☒ Cr^{VI} 24hr ☐ NO_3^- 48hr ☐ BOD 48hr
☐ Cl_2 ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP
☐ HT Expired? ☐ Client notified?

6. Sample Container Condition

☒ Intact? ☐ Broken? ☐ Documented? Number: _____
Type: ☒ plastic ☐ glass ☐ Tube: brass/SS ☐ Tedlar Bag
☒ Quantity OK? ☐ Leaking? ☐ Anomaly?
☒ Caps tight? ☐ Air Bubbles? ☐ Anomaly?
Labels: ☒ Unique ID? ☒ Date/Time ☐ Preserved?

7. Turn Around Time

☒ RUSH TAT: _____ ☐ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

☐ Drinking H_2O ☒ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: _____
☒ Ground H_2O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

9. Pre-Login Check List Completed & OK?

☒ ALL OK? (if not, attach docs) ☐ Client Contact? (Name:_____)Date/Time:_____

Received/Checked by: _____ Printed: 7 Dec 2004 7:23 a.m.

HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

DocumentFile: [neal.texfiles]smprcl.tex.

Applied P & CH Laboratories
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Sample Login: Check List

04-05674 (1451_ 345) (5577646_ 345)

12/07/04

Part 1: General Information

☐	Company Information	Name:	*U.S. Army Corps of Engineers*
		Address:	*1325 J Street ,Sacramento ,CA 95814-2922*
☐	Project Information	Project Description:	*Omega Chemical*
		Project #:	
☐	Billing Information	P.O. #:	
		Bill Address:	*1325 J Street ,Sacramento ,CA 95814-2922*
		Lab Project ID:	
		Client Database #:	*1*
☐	Receiving Information	Who Received Sample?	*Jason Nario*
		Receiving Date/Time:	*12/07/04 1550*
		COC No.	
☐	Shipping Information	Shipping Company	*APCL pick up*
		Packing Information:	*Cooler/Ice Chester*
		Cooler Temperature:	*3.8 °C*
☐	Container Information	Container Provider:	*Client*
☐	Sampling Information	Sampling Person:	*ML*
		Sampling Company:	*Client*
☐	Turn-Around-Time Option:		*Rush 5 working day(s)*
☐	QC Option:		*Army Corps. E.*
☐	Disposal Option:		*Not specify*

Part 2: Sample Information

Seq. #	Sample ID (on COC)	Sample Sub-ID	APCL Sample ID	Matrix	Cont-tainer	Preser-vative	Vol, ml Am. g	# of Replica	Condition G, L, B	Collected mmddyy	Hold ?	Composite Group	TAT Days
1	OC2-MW1A-W-0-98	CR6	04-05674-1	W	P		125	1	G	120704	N	0	7
2	OC2-MW1B-W-0-99	CR6	04-05674-2	W	P		125	1	G	120704	N	0	7
3	OC2-MW6-W-0-100	CR6	04-05674-3	W	P		125	1	G	120704	N	0	7
4	OC2-MW9B-W-0-101	CR6	04-05674-6	W	P		125	2	G	120704	N	0	7
5	OC2-MW7A-W-0-102	CR6	04-05674-4	W	P		125	1	G	120704	N	0	7
6	OC2-MW7A-W-1-103	CR6	04-05674-5	W	P		125	1	G	120704	N	0	7

Part 3: Analysis Information

Test Items: ☐ *218.6/7199* Chromium (VI)

Seq. #	Client"s Sample ID (as given on COC)	Sample Sub-ID	APCL Sample ID	Matrix	CHROMIUM
1	OC2-MW1A-W-0-98	CR6	04-05674-1	W	X
2	OC2-MW1B-W-0-99	CR6	04-05674-2	W	X
3	OC2-MW6-W-0-100	CR6	04-05674-3	W	X
4	OC2-MW9B-W-0-101	CR6	04-05674-6	W	X
5	OC2-MW7A-W-0-102	CR6	04-05674-4	W	X
6	OC2-MW7A-W-1-103	CR6	04-05674-5	W	X

MS/MSD # 6 12/7/04

Login By JASON M. NARIO

Check By

Level D Data Package Deliverables

Wet Chemistry

Applied P & Ch Laboratory

Applied P & CH Laboratories

Wet Analysis Results for Method 218.6

Client Name:	U.S. Army Corps of Engineers	Project No:		Anal. Method	218.6
Project ID:	Omega Chemical	Service ID:	045674	Collected by:	ML

Component Name: Chromium (VI)
CAS No: 1333-82-0

Lab ID	Sample ID	Matrix	Coll. Date	Rcv Date	Anal. Date	Batch	Unit	RL	Result	Q
04-5674-1	OC2-MW1A-W-0-98	Water	12/07/04	12/07/04	12/07/04	04W4784	μg/L	1	29.2	
04-5674-2	OC2-MW1B-W-0-99	Water	12/07/04	12/07/04	12/07/04	04W4784	μg/L	1	82.1	
04-5674-3	OC2-MW6-W-0-100	Water	12/07/04	12/07/04	12/07/04	04W4784	μg/L	1	76.6	
04-5674-4	OC2-MW7A-W-0-102	Water	12/07/04	12/07/04	12/07/04	04W4784	μg/L	1	4.4	
04-5674-5	OC2-MW7A-W-1-103	Water	12/07/04	12/07/04	12/07/04	04W4784	μg/L	1	4.3	
04-5674-6	OC2-MW9B-W-0-101	Water	12/07/04	12/07/04	12/07/04	04W4784	μg/L	1	5.6	
04W4784MB01	LABQC	Water	12/06/04	12/06/04	12/06/04	04W4784	μg/L	1	<0.097	U

Not Detected is shown as MDL, with dilution and moisture corrected if applicable.

Note: Q - Qualifier.
Qualifier: U - Not Detected or less than MDL
B - Less than RL (PQL, EQL or CRDL), but greater than MDL.

APCL Cr 6 Sample Analysis Report

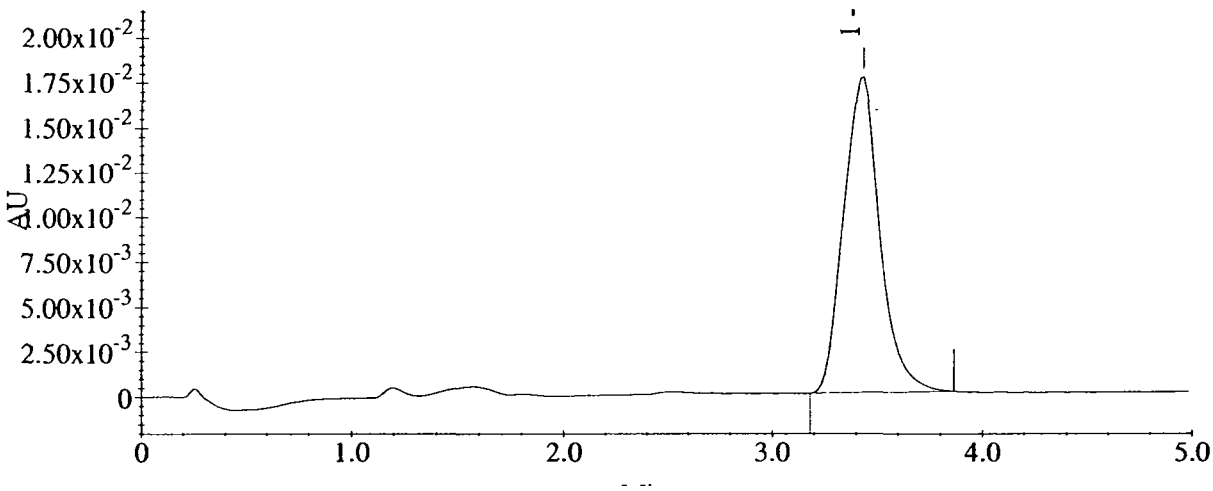
Sample Name : 5674-01 f=1
Data File Name : C:\DATA\04W4784L\5674-01_014.DXD
Dilution Factor : 1.00

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/07/2004 4:31:56 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	Cr6	3.43	29.24	209342	17480

5674-01 f=1



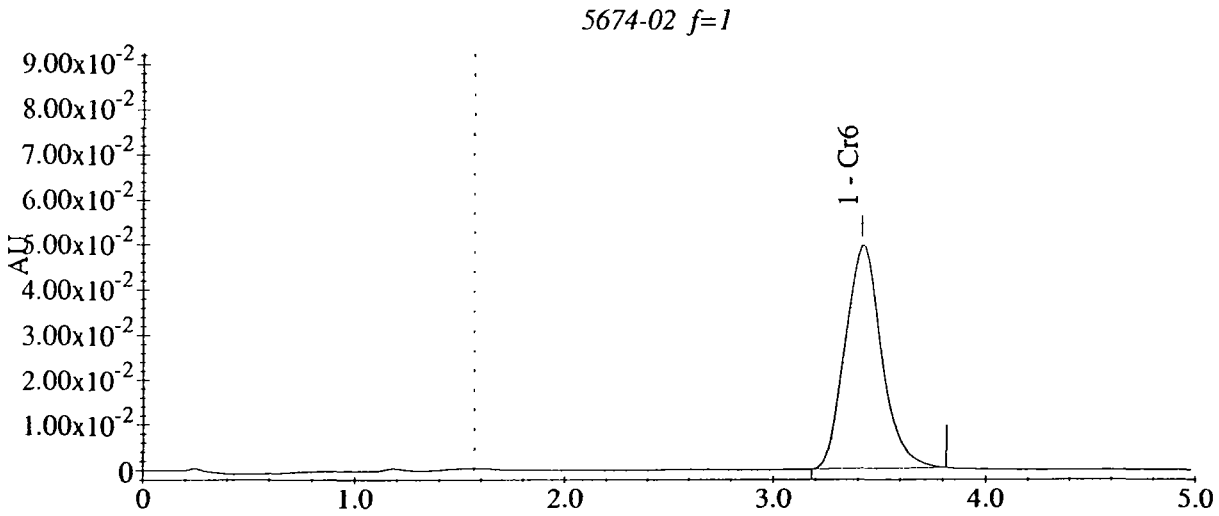
APCL Cr 6 Sample Analysis Report

Sample Name : 5674-02 f=1
Data File Name : C:\DATA\04W4784L\5674-02_015.DXD
Dilution Factor : 1.00

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/07/2004 4:39:10 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	Cr6	3.42	82.12	588030	49239



APCL Cr 6 Sample Analysis Report

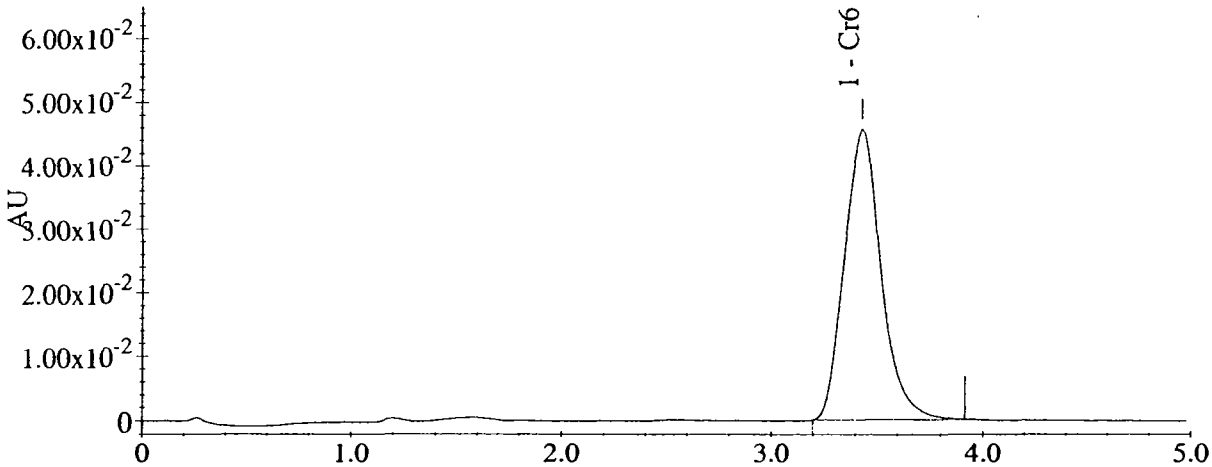
Sample Name : 5674-03 f=1
Data File Name : C:\DATA\04W4784L\5674-03_016.DXD
Dilution Factor : 1.00

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/07/2004 4:46:24 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	Cr6	3.43	76.62	548616	45697

5674-03 f=1



APCL Cr 6 Sample Analysis Report

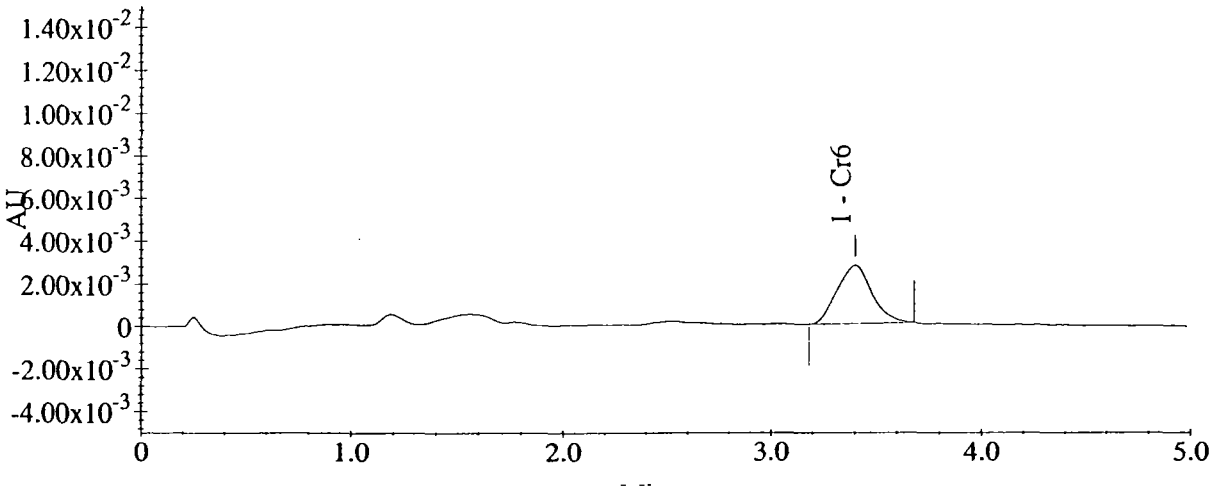
Sample Name : 5674-04 f=1
Data File Name : C:\DATA\04W4784L\5674-04_018.DXD
Dilution Factor : 1.00

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/07/2004 5:00:54 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	Cr6	3.40	4.39	31433	2752

5674-04 f=1



APCL Cr 6 Sample Analysis Report

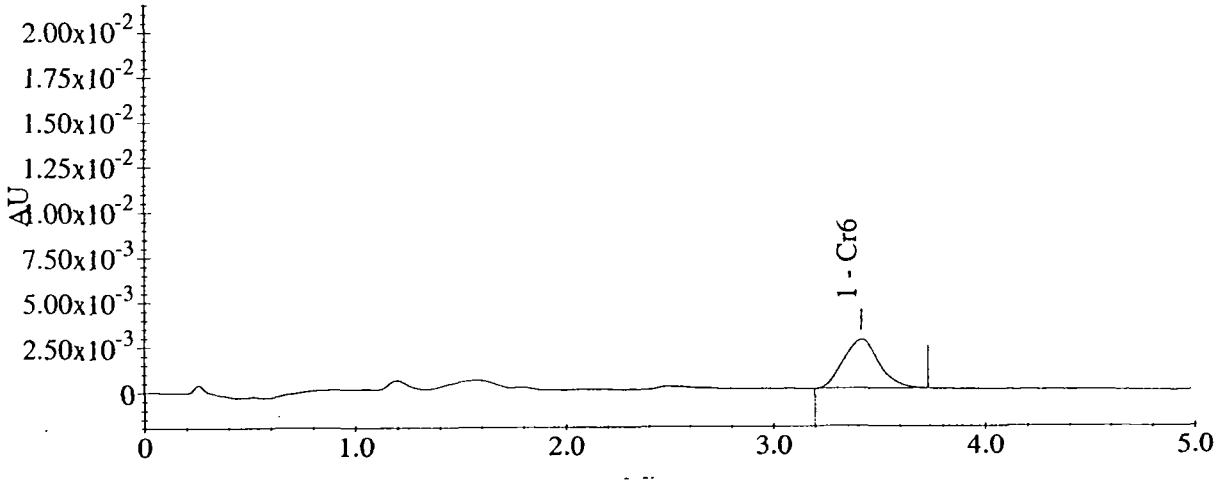
Sample Name : 5674-05 f=1
Data File Name : C:\DATA\04W4784L\5674-05_019.DXD
Dilution Factor : 1.00

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/07/2004 5:08:08 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	Cr6	3.42	4.34	31046	2691

5674-05 f=1



APCL Cr 6 Sample Analysis Report

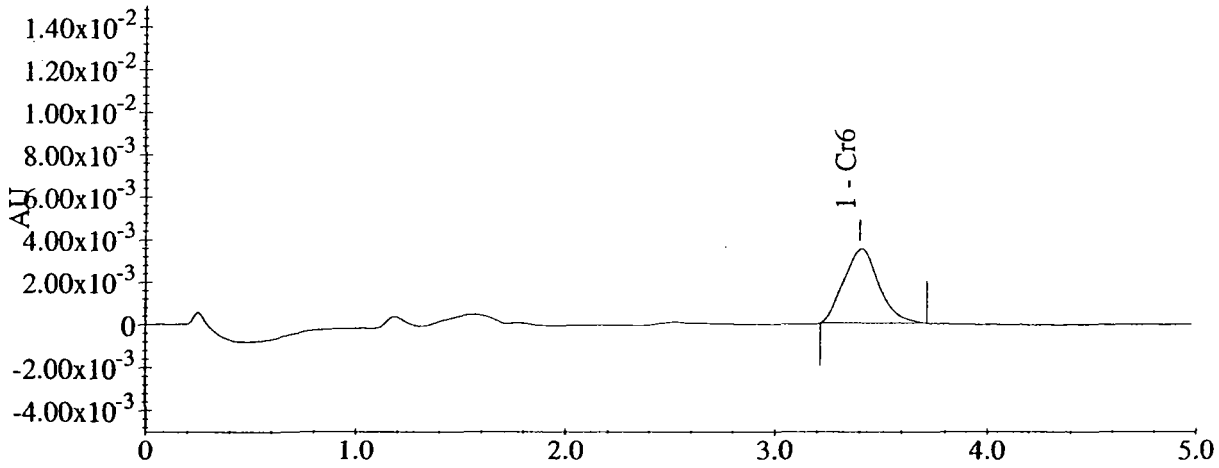
Sample Name : 5674-06 f=1
Data File Name : C:\DATA\04W4784L\5674-06_017.DXD
Dilution Factor : 1.00

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/07/2004 4:53:38 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	Cr6	3.40	5.62	40208	3480

5674-06 f=1



APCL Cr 6 Sample Analysis Report

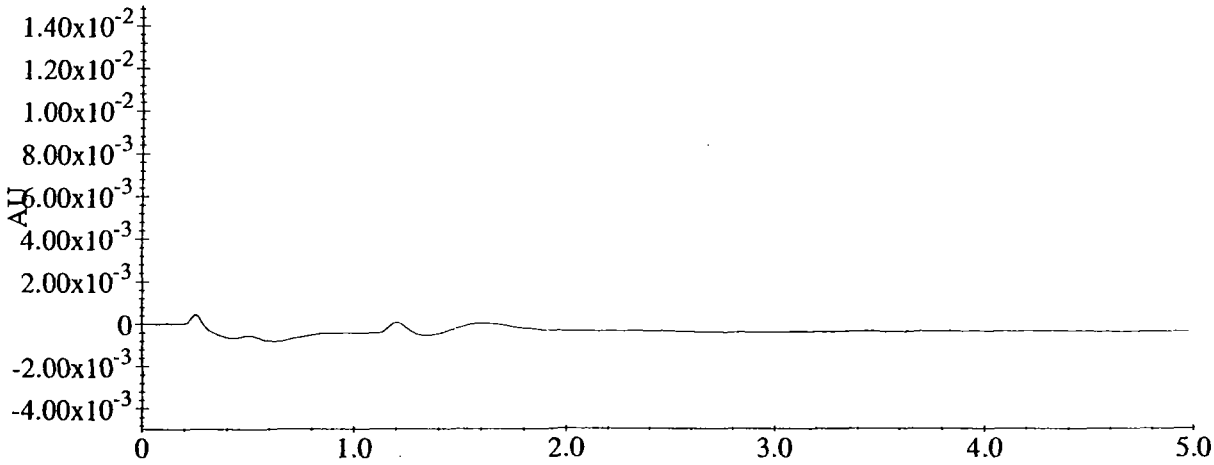
Sample Name : mb
Data File Name : C:\DATA\04W4784L\W4784L K01_002.DXD
Dilution Factor : 1.00

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/06/2004 4:49:39 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height

mb



FORM-3

Applied P & CH Laboratories

Lab Control Spike/Lab Control Spike Duplicate Recovery for Method 218.6

Client Name:	U.S. Army Corps of Engineers	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	045674
Project ID:	Omega Chemical	Project No:		Sample Matrix:	Water
		Batch No:	04W4784		
LCS Filename:	-	Date Analyzed:	120604	Time Analyzed:	16:56
LCSD Filename:	-	Date Analyzed:	120604	Time Analyzed:	17:05

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration LCS	LCS Rec% #	QC Limit, % REC
CHROMIUM (VI)	µg/L	100	0	106	106	80-120
# of Out-of-control					0	

Spiked Components	Unit	Spike Added	LCSD Concentration	LCSD Rec% #	RPD% #	QC Limit, % RPD	QC Limit, % REC
CHROMIUM (VI)	µg/L	100	109	109	3	25	80-120
# of Out-of-control				0	0		

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

APCL Cr 6 Sample Analysis Report

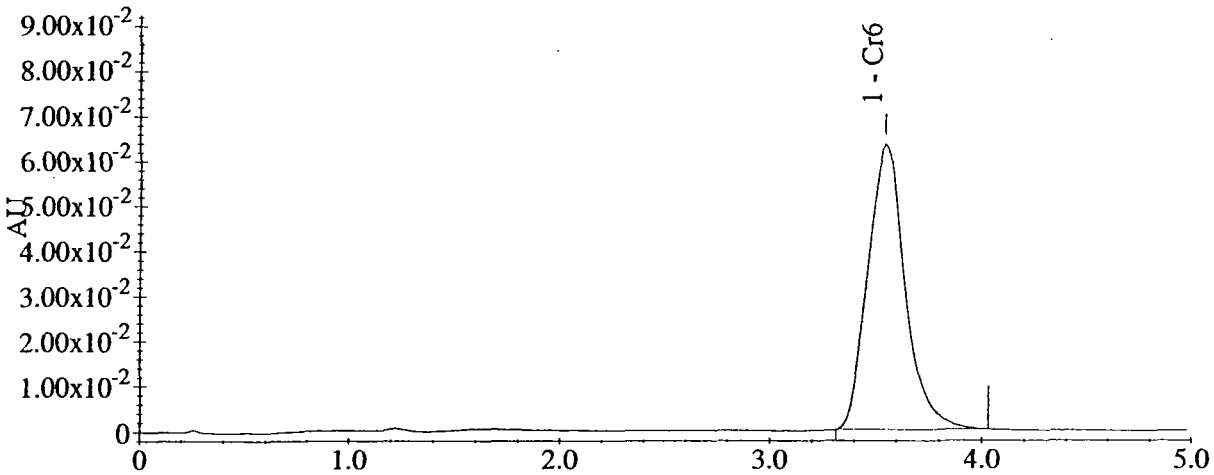
Sample Name : lcs 100ppb w8373a
Data File Name : C:\DATA\04W4784L\W4784L L01_003.DXD
Dilution Factor : 1.00

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/06/2004 4:56:56 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	Cr6	3.55	106.46	762261	63089

lcs 100ppb w8373a



APCL Cr 6 Sample Analysis Report

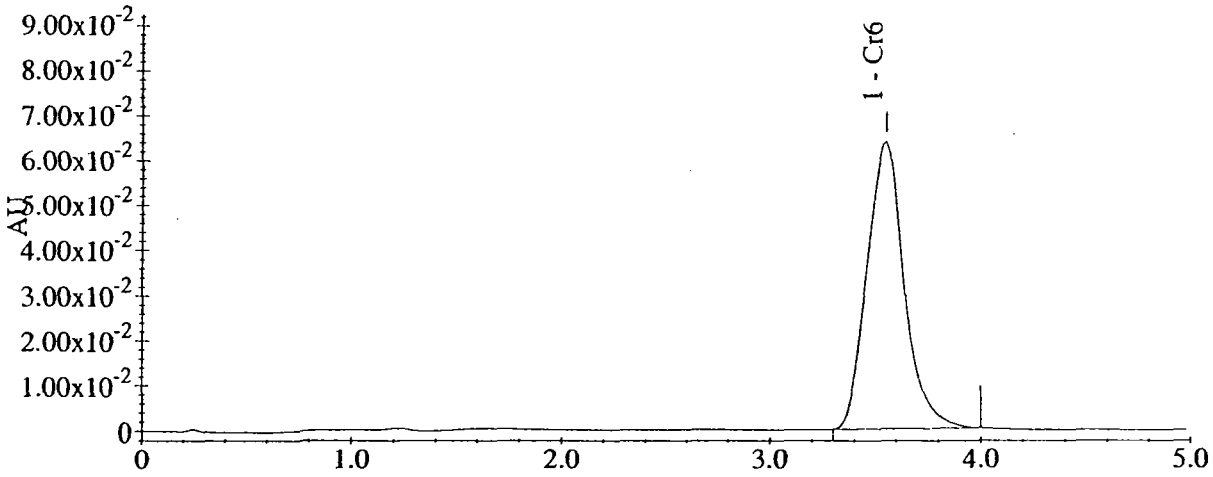
Sample Name : lcsd 100ppb w8373a
Data File Name : C:\DATA\04W4784L\W4784L J01_004.DXD
Dilution Factor : 1.00

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/06/2004 5:05:35 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	Cr6	3.55	108.90	779733	63488

lcsd 100ppb w8373a



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FORM-3

Applied P & CH Laboratories

Matrix Spike/Matrix Spike Duplicate Recovery for Method 218.6

Client Name:	U.S. Army Corps of Engineers	Contract No:		Lab Code:	APCL
Case No:		SAS No:		Service ID:	045674
Project ID:	Omega Chemical	Project No:		Sample Matrix:	Water
		Batch No:	04W4784		
MS Filename:	-	Date Analyzed:	120704	Time Analyzed:	17:15
MSD Filename:	-	Date Analyzed:	-	Time Analyzed:	-
MS Sample No:	**OC2-MW9B-W-0-101**	Sample Lab ID:	04-5674-6		

Spiked Components	Unit	Spike Added	Concentration Unspiked	Concentration MS	MS Rec% #	QC Limit, % REC
CHROMIUM (VI)	μg/L	100	5.6	101	95	75-125
# of Out-of-control					0	

Column to be used to flag recovery and RPD values:

* – Values outside of contract required QC Limits D – Spiked components diluted out

Comments: _____

APCL Cr 6 Sample Analysis Report

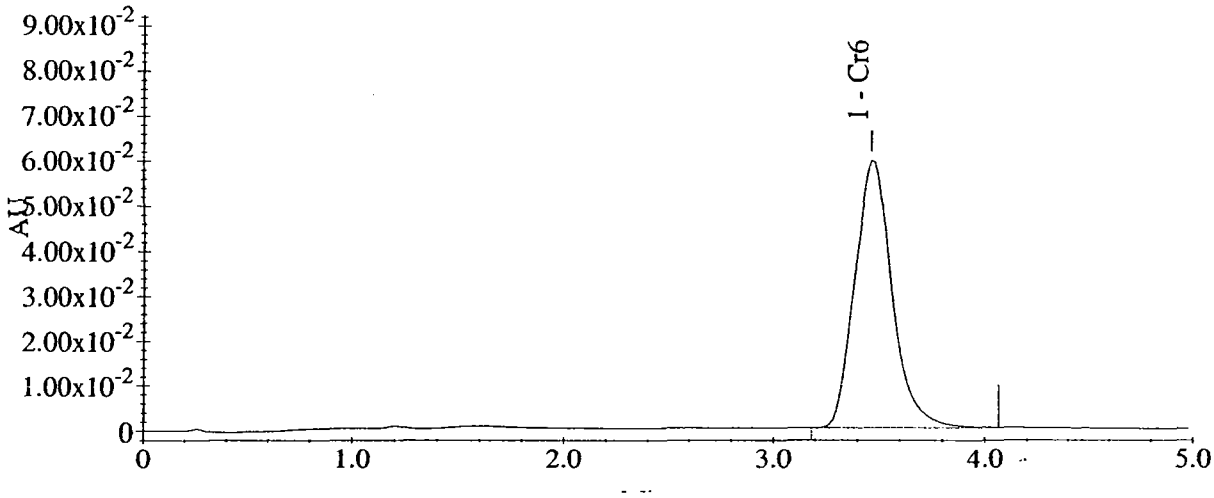
Sample Name : 5674-06 ms2 100ppb f=1 w8803
Data File Name : C:\DATA\04W4784L\W4784L M02_020.DXD
Dilution Factor : 1.00

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/07/2004 5:15:21 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

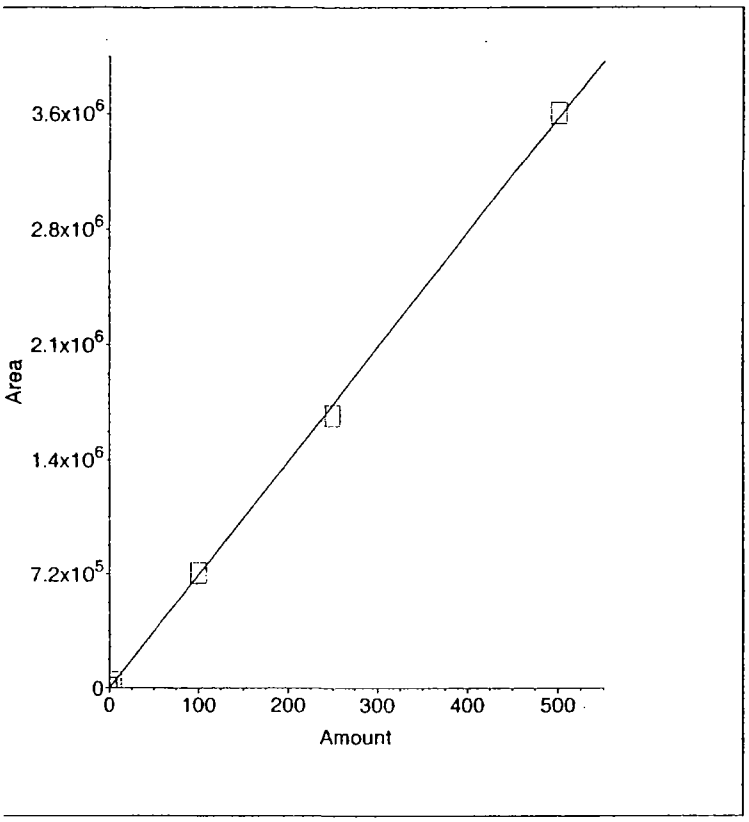
Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	Cr6	3.47	101.08	723769	59198

5674-06 ms2 100ppb f=1 w8803



Rec 95.46 %

Component:Cr6
andard:External Fit Type:Linear
igin:Force Calibration:Area
=0.999361
t=0.0001397*Resp+0



Calibration: 6 points, 0, 0.2, 5.0, 100, 250, 500 ppb

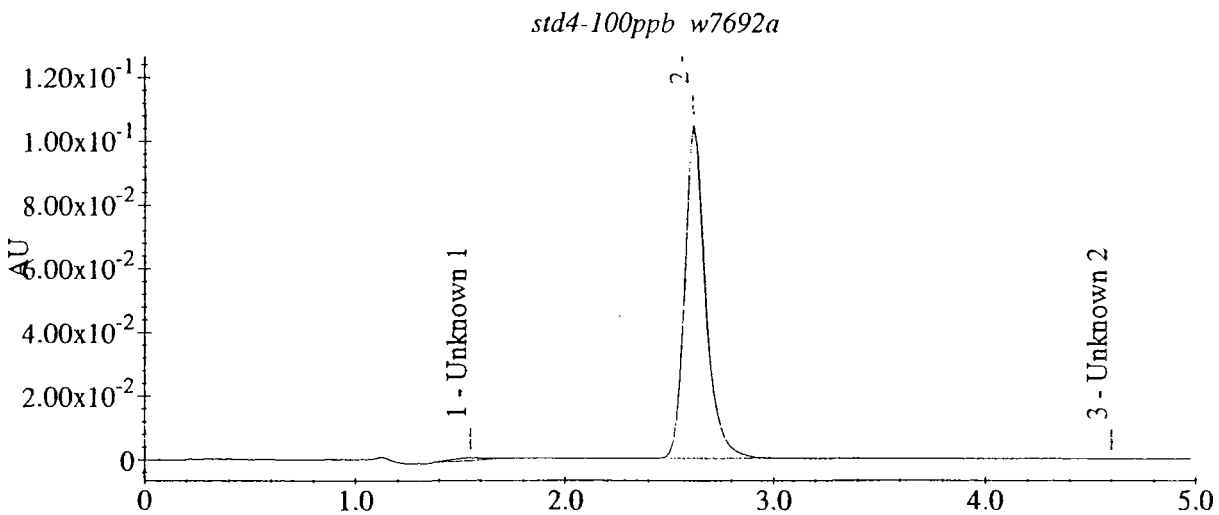
APCL Cr6 Sample Analysis Report

Sample Name : std4-100ppb w7692a
Data File Name : C:\data\03W5367L\std-004_004.DXD

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/08/2003 12:01:03 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
2	Cr6	2.62	120.55	730202	104749



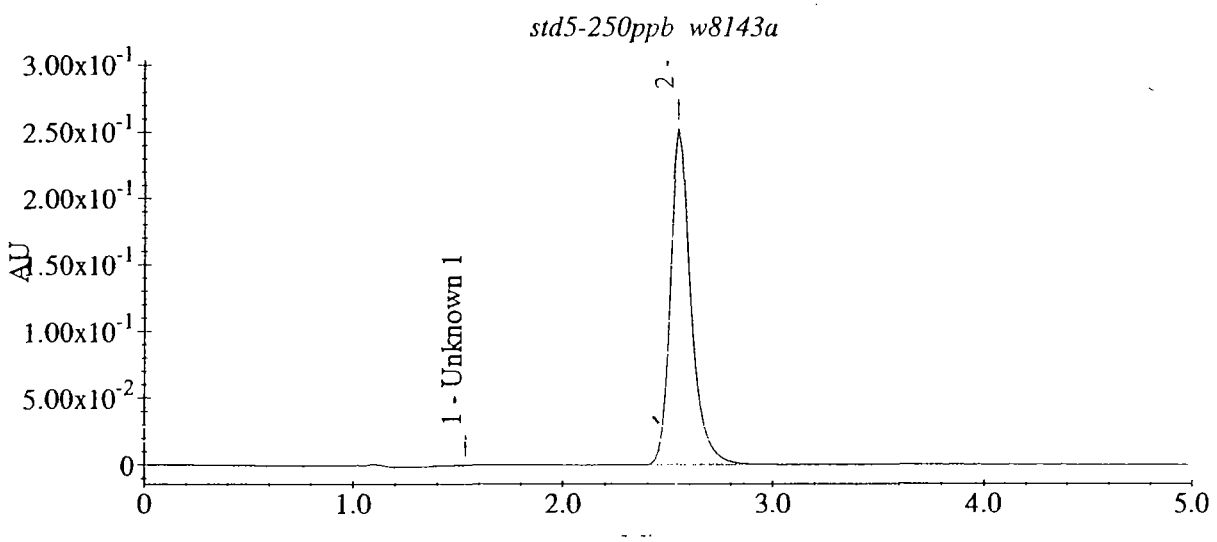
APCL Cr6 Sample Analysis Report

Sample Name : std5-250ppb w8143a
Data File Name : C:\data\03W5367L\std-005_005.DXD

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/08/2003 12:08:18 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
2	Cr6	2.55	284.22	1721619	252349



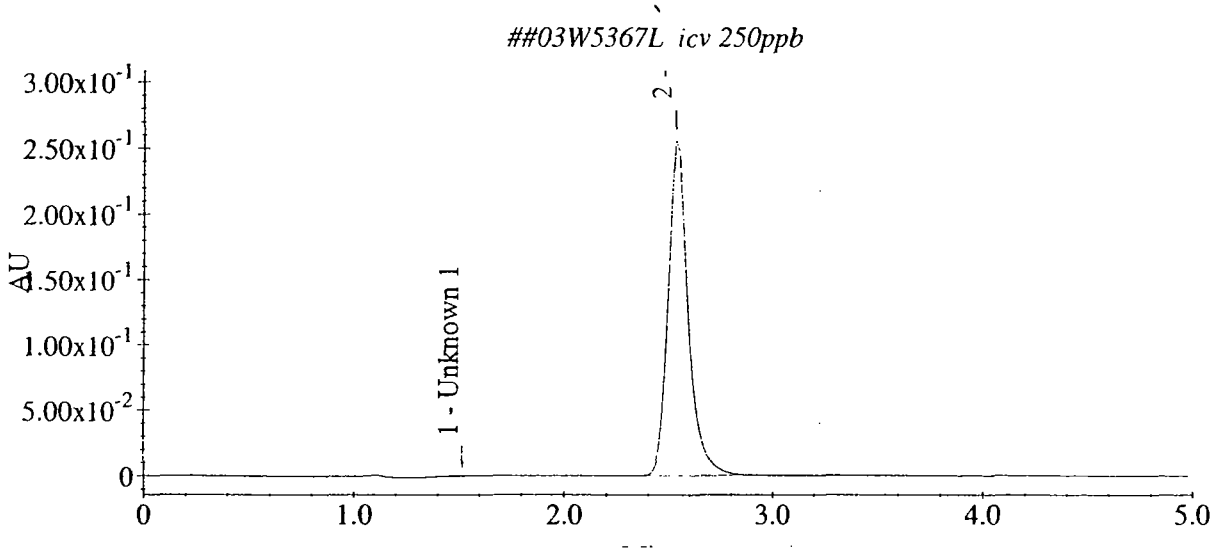
APCL Cr6 Sample Analysis Report

Sample Name : ##03W5367L icv 250ppb
Data File Name : C:\data\03W5367L\icv_007.DXD

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/08/2003 1:30:44 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
2	Cr6	2.53	243.09	1740600	257024



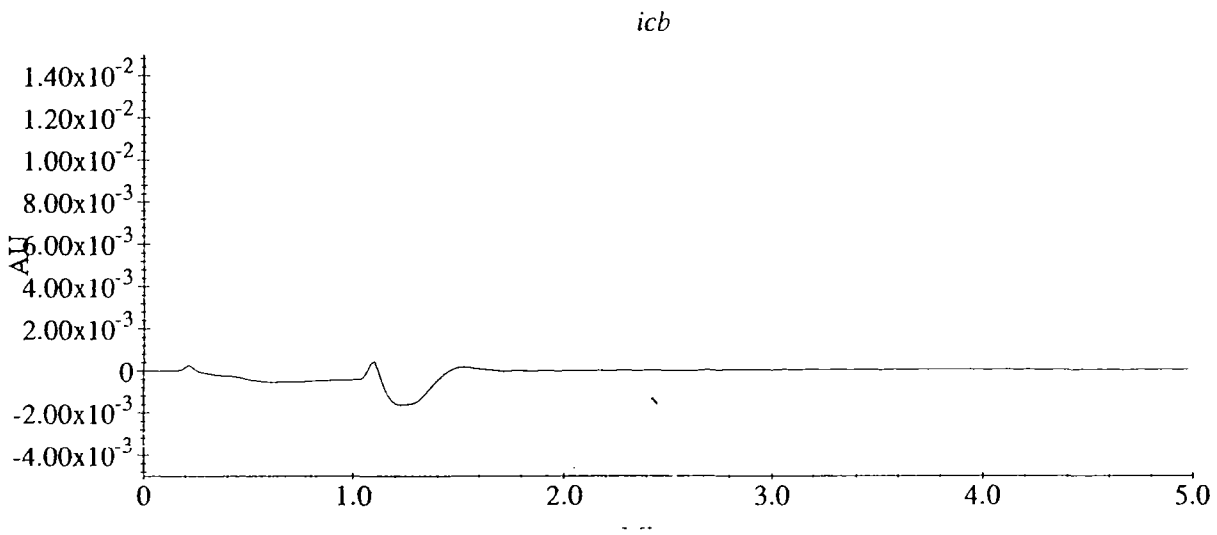
APCL Cr6 Sample Analysis Report

Sample Name : icb
Data File Name : C:\DATA\03W5367L\ICB_008.DXD

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/08/2003 1:37:59 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height



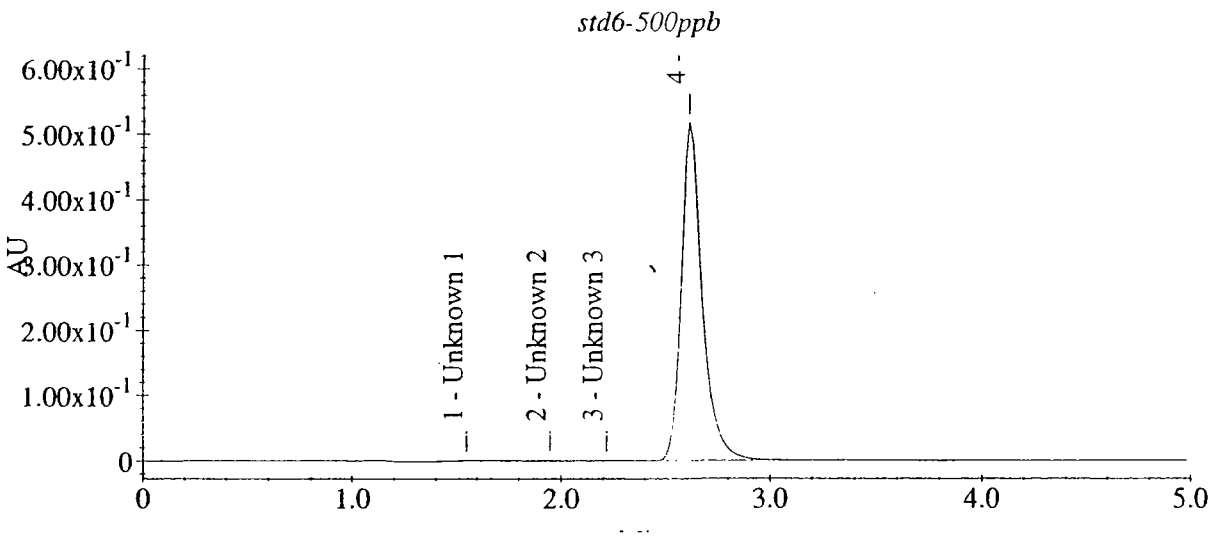
APCL Cr6 Sample Analysis Report

Sample Name : std6-500ppb
Data File Name : C:\data\03W5367L\std-006_006.DXD

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/08/2003 12:15:32 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
4	Cr6	2.62	595.96	3609877	517051



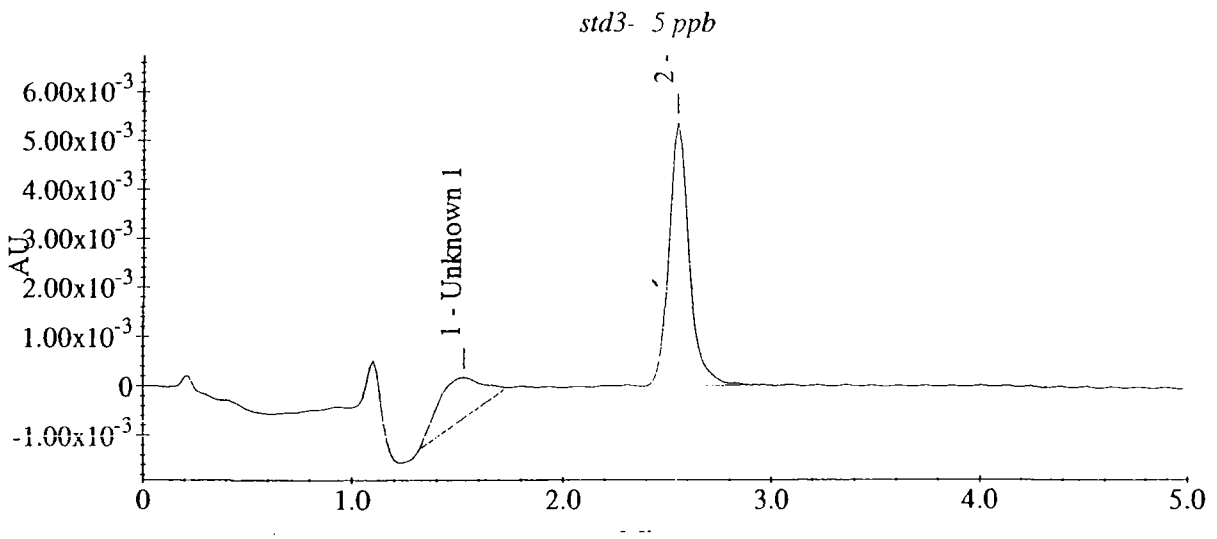
APCL Cr6 Sample Analysis Report

Sample Name : std3- 5 ppb
Data File Name : C:\data\03W5367L\std-003_003.DXD

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/08/2003 11:43:10 AM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
2	Cr6	2.55	5.91	35775	5363



APCL Cr6 Sample Analysis Report

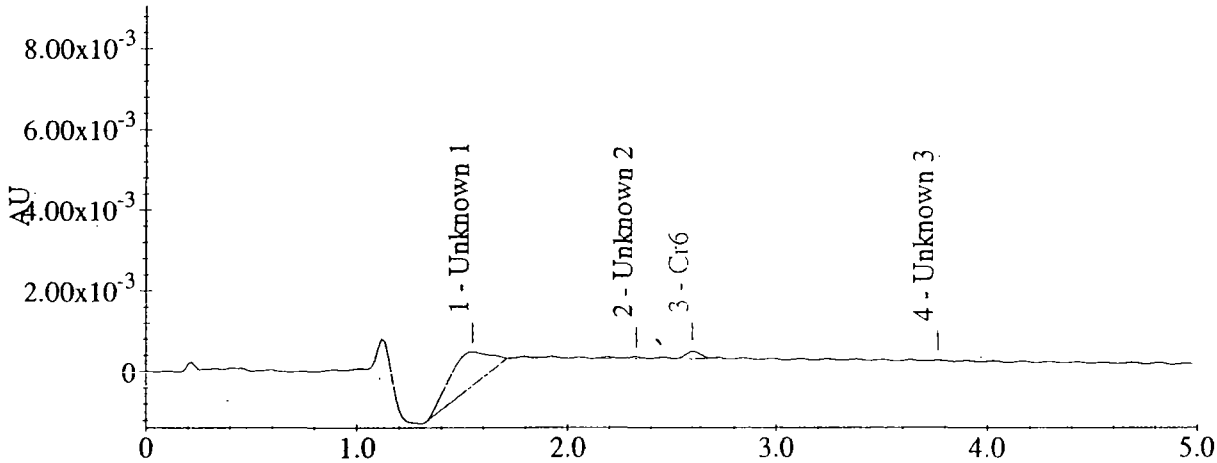
Sample Name : std2-0.2 ppb
Data File Name : C:\DATA\03W5367L\STD-002_002.DXD

Method File Name : C:\PeakNet\method\E2186-027.met
Date Time Collected : 12/08/2003 11:35:55 AM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
3	Cr6	2.60	0.08	1100	189

std2-0.2 ppb



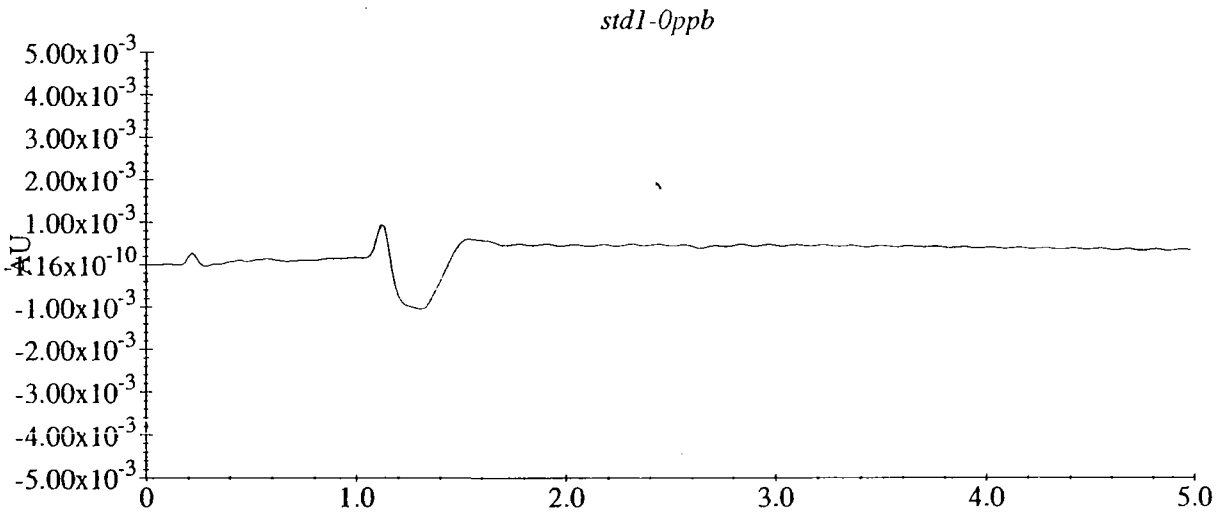
APCL Cr6 Sample Analysis Report

Sample Name : std1-0ppb
Data File Name : C:\DATA\03W5367L\STD-001_001.DXD

Method File Name : C:\PeakNet\method\E2186-027.met
Date Time Collected : 12/08/2003 11:28:38 AM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height



FORM-7

Applied P & CH Laboratories

CCV Recovery for Wet Analysis

Client Name:	U.S. Army Corps of Engineers	Contract No.:		Lab Code:	APCL
Case No:		SAS No.:		Service ID:	045674
Project ID:	Omega Chemical	Project No.:			

#	Component Name	Method	Batch No.	Unit	Expe-cted	Test Result	Rec. %	Dev. %	Flag	Control Limit, %	Test Date
1	Chromium (VI)	218.6	04W4784	μg/L	250	259	104	4	√	90-110	12/06/2004
	Chromium (VI)	218.6	04W4784	μg/L	250	239	96	-4	√	90-110	12/06/2004
	Chromium (VI)	218.6	04W4784	μg/L	250	257	103	3	√	90-110	12/07/2004
	Chromium (VI)	218.6	04W4784	μg/L	250	249	99	-1	√	90-110	12/07/2004

APCL Cr 6 Sample Analysis Report

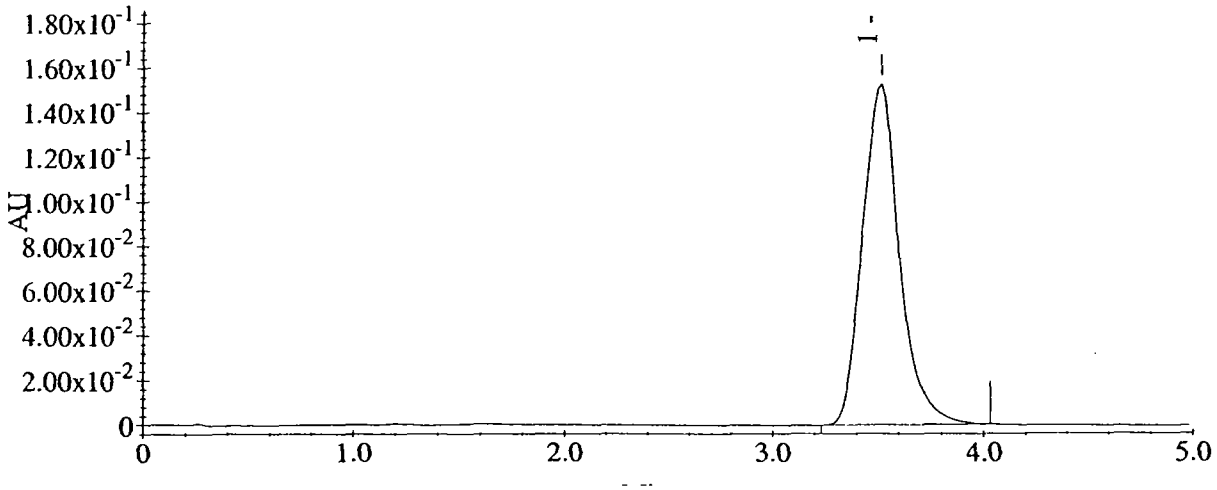
Sample Name : ##04w4784L icv250ppb w8803a
Data File Name : C:\DATA\04W4784L\W4784L Q01_001.DXD
Dilution Factor : 1.00

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/06/2004 4:41:28 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	Cr6	3.52	258.74	1852665	152454

##04w4784L icv250ppb w8803a



APCL Cr 6 Sample Analysis Report

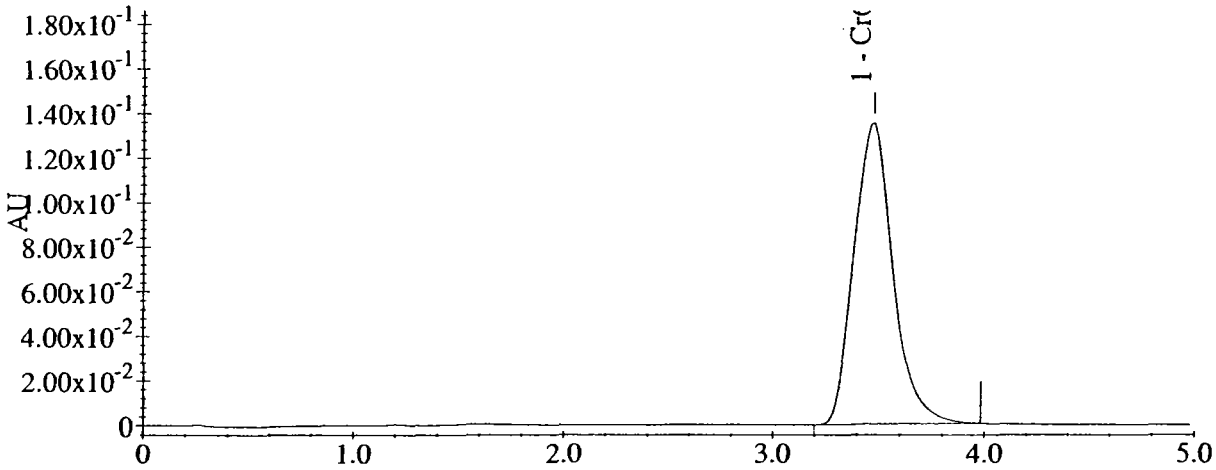
Sample Name : ccv 250ppb w8803a
Data File Name : C:\DATA\04W4784L\W4784L Q02_011.DXD
Dilution Factor : 1.00

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/06/2004 6:12:19 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	Cr6	3.48	238.79	1709785	135301

ccv 250ppb w8803a



APCL Cr 6 Sample Analysis Report

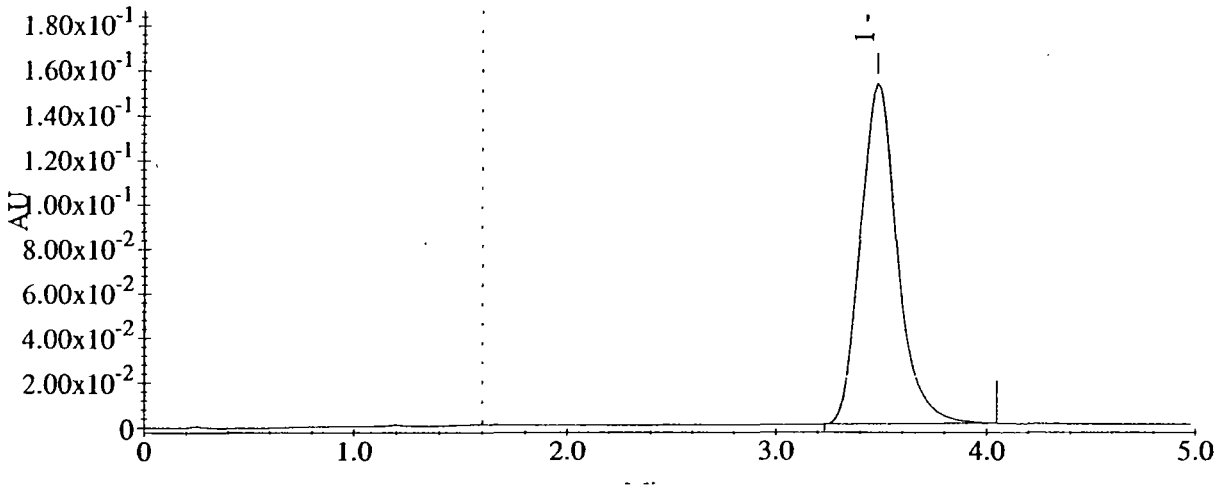
Sample Name : ccv 250ppb w8803a
Data File Name : C:\DATA\04W4784L\W4784L Q03_012.DXD
Dilution Factor : 1.00

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/07/2004 3:50:54 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	Cr6	3.48	257.35	1842653	152247

ccv 250ppb w8803a



APCL Cr 6 Sample Analysis Report

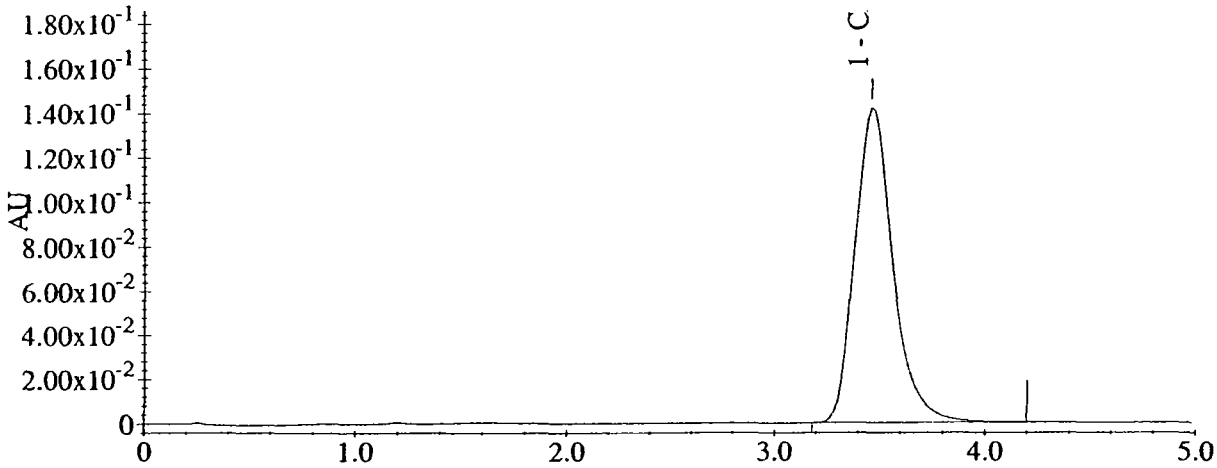
Sample Name : ccv 250ppb w8803a
Data File Name : C:\DATA\04W4784L\W4784L Q04_021.DXD
Dilution Factor : 1.00

Method File Name : c:\peaknet\method\e2186-027.met
Date Time Collected : 12/07/2004 5:26:06 PM
System Operator : C.W and W.W
Dilution Factor : 1.00

Peak Information : All Components

Peak #	Component Name	Retention Time	Amount (ppb)	Peak Area	Peak Height
1	Cr6	3.47	248.63	1780249	142082

ccv 250ppb w8803a



edule File: C:\PeakNet\schedule\2004\wet\04w4784l.sch

Sample	Sample Type	Level	Method	Data File	Volume	Dilution	Weight
##04w4784L icv250ppb w8803a	Sample		e2186-027.met	w4784l q01_001.dxd	1	1	1
mb	Sample		e2186-027.met	w4784l k01_002.dxd	1	1	1
lcs 100ppb w8373a	Sample		e2186-027.met	w4784l l01_003.dxd	1	1	1
lcsd 100ppb w8373a	Sample		e2186-027.met	w4784l j01_004.dxd	1	1	1
5657-01 f=1	Sample		e2186-027.met	5657-01_005.dxd	1	1	1
5657-02 f=1	Sample		e2186-027.met	5657-02_006.dxd	1	1	1
5657-03 f=1	Sample		e2186-027.met	5657-03_007.dxd	1	1	1
5657-04 f=1	Sample		e2186-027.met	5657-04_008.dxd	1	1	1
5657-05 f=1	Sample		e2186-027.met	5657-05_009.dxd	1	1	1
5657-03 ms1 100ppb f=1 w8803b	Sample		e2186-027.met	w4784l m01_010.dxd	1	1	1
ccv 250ppb w8803a	Sample		e2186-027.met	w4784l q02_011.dxd	1	1	1
ccv 250ppb w8803a	Sample		e2186-027.met	w4784l q03	1	1	1
ccb	Sample		e2186-027.met	w4784l ccb	1	1	1
5674-01 f=1	Sample		e2186-027.met	5674-01	1	1	1
5674-02 f=1	Sample		e2186-027.met	5674-02	1	1	1
5674-03 f=1	Sample		e2186-027.met	5674-03	1	1	1
5674-06 f=1	Sample		e2186-027.met	5674-06	1	1	1
5674-04 f=1	Sample		e2186-027.met	5674-04	1	1	1
5674-05 f=1	Sample		e2186-027.met	5674-05	1	1	1
5674-06 ms2 100ppb f=1 w8803b	Sample		e2186-027.met	w4784l m02	1	1	1
ccv 250ppb w8803a	Sample		e2186-027.met	w4784l q04	1	1	1
ccb	Sample		e2186-027.met	w4784l ccb	1	1	1

W8373 1000PPM CR6 STD

W8803 1000PPM CR6 STD

W8803A 1000PPM X 0.025ML/100ML = 0.250PPM WORKING STD DAILY DILUTE

W8373A 1000PPM X 0.025ML/250ML = 0.100PPM WORKING STD DAILY DILUTE

W8803B 1000PPM X 0.025ML/100ML = 0.250PPM WORKING STD DAILY DILUTE

Analyst : W.W

Date : 12/6-7/04

IC-L

ne	Int. Std.	Comment
	1	
	1	
	1	
	1	
	1	
	1	
	1	
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	1	
	1	
	1	
	1	
	1	
	1	
	1	

fault Method Path: C:\PEAKNET\METHOD
fault Data Path: C:\DATA\04W4784L
mment:

733

Sample	Sample Type	Level	Method	Data File	Volume	Dilution	Weight
std1-0ppb	Sample		e2186-027.met	c:\data\03w5367l\std-001	1	1	1
std2-0.2 ppb w7692a-1	Sample		e2186-027.met	c:\data\03w5367l\std-002	1	1	1
std3-5.0 ppb w7692a-2	Sample		e2186-027.met	c:\data\03w5367l\std-003	1	1	1
std4-100ppb w7692a	Sample		e2186-027.met	c:\data\03w5367l\std-004	1	1	1
std5-250ppb w8143a	Sample		e2186-027.met	c:\data\03w5367l\std-005	1	1	1
std6-500ppb w8143b	Sample		e2186-027.met	c:\data\03w5367l\std-006	1	1	1
##03W5367L icv 250ppb w7692b	Sample		e2186-027.met	c:\data\03w5367l\icv	1	1	1
icb	Sample		e2186-027.met	c:\data\03w5367l\icb	1	1	1
0.2ppb	Sample		e2186-027.met	c:\data\03w5367l\0.2ppb	1	1	1
0.2ppb	Sample		e2186-027.met	c:\data\03w5367l\0.2ppb	1	1	1
mdl-w-0.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-w	1	1	1
mdl-w-0.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-w	1	1	1
mdl-w-0.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-w	1	1	1
mdl-w-0.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-w	1	1	1
mdl-w-0.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-w	1	1	1
mdl-w-0.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-w	1	1	1
mdl-w-0.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-w	1	1	1
mdl-w-0.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-w	1	1	1
mdl-s-2.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-s	1	5	1
mdl-s-2.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-s	1	5	1
mdl-s-2.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-s	1	5	1
mdl-s-2.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-s	1	5	1
mdl-s-2.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-s	1	5	1
mdl-s-2.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-s	1	5	1
mdl-s-2.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-s	1	5	1
mdl-s-2.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-s	1	5	1
0.2ppb	Sample		e2186-027.met	c:\data\03w5367l\0.2ppb	1	1	1
mdl-s-2.5ppb	Sample		e2186-027.met	c:\data\03w5367l\mdl-s	1	5	1
ccv2 250ppb	Sample		e2186-027.met	c:\data\03w5367l\q02	1	1	1

W 7692 1000 ppm Cat STD

W 8143 1000 ppm Cat STD

W7692a 1000ppm X 0.025 ml/250 ml = 0.100 ppm

W 8143a 1000 ppm X 0.025 ml/100 ml = 0.250 ppm

W7692b 1000 ppm X 0.025 ml/100 ml = 0.250 ppm

W8143b 1000 ppm X 0.5 ml/1000 ml = 0.500 ppm

W7692a-1 0.100 ppm X 0.4 ml/200 ml = 0.0002 ppm

W7692a-2 0.100 ppm X 10.0 ml/500 ml = 0.005 ppm

working STD daily diluted.

Analyst W. W

Date 12/8/03

Instrument IC-C

ne	Int. Std.	Comment
	1	
	1	
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	1	
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	1	

ault Method Path: C:\PEAKNET\METHOD
ault Data Path: C:\DATA\03W2295L
nment: