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## **ANALYTICAL REPORT**

Job Number: 720-686-1

Job Description: City of Livermore Airport

For:

Consolidated Engineering Lab  
2001 Crow Canyon Road  
#100  
SanRamon, CA 94583

Attention: Mr. Marc Hachey

*Surinder Sidhu*

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Surinder Sidhu  
Project Manager I  
ssidhu@stl-inc.com  
12/12/2005

## METHOD SUMMARY

Client: Consolidated Engineering Lab

Job Number: 720-686-1

Description	Lab Location	Method	Preparation Method
<b>Matrix:</b> Solid			
Inductively Coupled Plasma - Atomic Emission Spectrometry	STL-SF	SW846 6010B	
Acid Digestion of Waters for Total Recoverable or	STL-SF		SW846 3005A
California WET Citrate Leach	STL-SF		CA-WET CA WET Citrate

### LAB REFERENCES:

STL-SF = STL-San Francisco

### METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986  
And Its Updates.

## SAMPLE SUMMARY

Client: Consolidated Engineering Lab

Job Number: 720-686-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
720-686-1	1-1	Solid	11/10/2005 0000	11/29/2005 1153
720-686-2	1-2	Solid	11/10/2005 0000	11/29/2005 1153
720-686-3	1-14	Solid	11/10/2005 0000	11/29/2005 1153

## Analytical Data

Client: Consolidated Engineering Lab

Job Number: 720-686-1

### Client Sample ID: 1-1

Lab Sample ID: 720-686-1

Date Sampled: 11/10/2005 0000

Client Matrix: Solid

Date Received: 11/29/2005 1153

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### 6010B Inductively Coupled Plasma - Atomic Emission Spectrometry-STLC Citrate

Method: 6010B

Analysis Batch: 720-2550

Instrument ID: Varian ICP

Preparation: CA WET Citrate

Prep Batch: 720-2528

Lab File ID: N/A

Dilution: 1.0

Initial Weight/Volume: 1 g

Date Analyzed: 12/02/2005 2211

Final Weight/Volume: 1 mL

Date Prepared: 12/02/2005 1920

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Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
Chromium		0.12		0.047

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## Analytical Data

Client: Consolidated Engineering Lab

Job Number: 720-686-1

### Client Sample ID: 1-2

Lab Sample ID: 720-686-2

Date Sampled: 11/10/2005 0000

Client Matrix: Solid

Date Received: 11/29/2005 1153

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### 6010B Inductively Coupled Plasma - Atomic Emission Spectrometry-STLC Citrate

Method: 6010B

Analysis Batch: 720-2550

Instrument ID: Varian ICP

Preparation: CA WET Citrate

Prep Batch: 720-2528

Lab File ID: N/A

Dilution: 1.0

Initial Weight/Volume: 1 g

Date Analyzed: 12/02/2005 2215

Final Weight/Volume: 1 mL

Date Prepared: 12/02/2005 1920

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Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
Chromium		0.089		0.047

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## Analytical Data

Client: Consolidated Engineering Lab

Job Number: 720-686-1

### Client Sample ID: 1-14

Lab Sample ID: 720-686-3

Date Sampled: 11/10/2005 0000

Client Matrix: Solid

Date Received: 11/29/2005 1153

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### 6010B Inductively Coupled Plasma - Atomic Emission Spectrometry-STLC Citrate

Method: 6010B

Analysis Batch: 720-2550

Instrument ID:

Varian ICP

Preparation: CA WET Citrate

Prep Batch: 720-2528

Lab File ID:

N/A

Dilution: 1.0

Initial Weight/Volume: 1 g

Date Analyzed: 12/02/2005 2226

Final Weight/Volume: 1 mL

Date Prepared: 12/02/2005 1920

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Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
Chromium		0.17		0.047

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## DATA REPORTING QUALIFIERS

<b>Lab Section</b>	<b>Qualifier</b>	<b>Description</b>
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## Quality Control Results

Client: Consolidated Engineering Lab

Job Number: 720-686-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Client Matrix	Method	Prep Batch
<b>Metals</b>				
<b>Prep Batch: 720-2528</b>				
LCS 720-2528/2-B	Lab Control Spike	Solid	CA WET Citrate	
LCSD 720-2528/3-B	Lab Control Spike Duplicate	Solid	CA WET Citrate	
720-686-1	1-1	Solid	CA WET Citrate	
720-686-2	1-2	Solid	CA WET Citrate	
720-686-2MS	Matrix Spike	Solid	CA WET Citrate	
720-686-2MSD	Matrix Spike Duplicate	Solid	CA WET Citrate	
720-686-3	1-14	Solid	CA WET Citrate	
<b>Prep Batch: 720-2529</b>				
MB 720-2528/1-B	Method Blank	Solid	CA WET Citrate	
<b>Analysis Batch:720-2550</b>				
LCS 720-2528/2-B	Lab Control Spike	Solid	6010B	720-2528
LCSD 720-2528/3-B	Lab Control Spike Duplicate	Solid	6010B	720-2528
720-686-1	1-1	Solid	6010B	720-2528
720-686-2	1-2	Solid	6010B	720-2528
720-686-2MS	Matrix Spike	Solid	6010B	720-2528
720-686-2MSD	Matrix Spike Duplicate	Solid	6010B	720-2528
720-686-3	1-14	Solid	6010B	720-2528
<b>Analysis Batch:720-2550</b>				
MB 720-2528/1-B	Method Blank	Solid	6010B	720-2529



## Quality Control Results

Client: Consolidated Engineering Lab

Job Number: 720-686-1

### Laboratory Control/ Laboratory Control Duplicate Recovery Report - Batch: 720-2528

**Method: 6010B**  
**Preparation: CA WET Citrate**  
**STLC Citrate**

LCS Lab Sample ID: LCS 720-2528/2-B  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 12/02/2005 2143  
Date Prepared: 12/02/2005 1920

Analysis Batch: 720-2550  
Prep Batch: 720-2528  
Units: mg/L

Instrument ID: Varian ICP  
Lab File ID: N/A  
Initial Weight/Volume: 1 g  
Final Weight/Volume: 1 mL

LCSD Lab Sample ID: LCSD 720-2528/3-B  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 12/02/2005 2147  
Date Prepared: 12/02/2005 1920

Analysis Batch: 720-2550  
Prep Batch: 720-2528  
Units: mg/L

Instrument ID: Varian ICP  
Lab File ID: N/A  
Initial Weight/Volume: 1 g  
Final Weight/Volume: 1 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Chromium	94	96	80 - 120	2	20		

### Matrix Spike/ Matrix Spike Duplicate Recovery Report - Batch: 720-2528

**Method: 6010B**  
**Preparation: CA WET Citrate**  
**STLC Citrate**

MS Lab Sample ID: 720-686-2  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 12/02/2005 2219  
Date Prepared: 12/02/2005 1920

Analysis Batch: 720-2550  
Prep Batch: 720-2528

Instrument ID: Varian ICP  
Lab File ID: N/A  
Initial Weight/Volume: 1 g  
Final Weight/Volume: 1 mL

MSD Lab Sample ID: 720-686-2  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 12/02/2005 2222  
Date Prepared: 12/02/2005 1920

Analysis Batch: 720-2550  
Prep Batch: 720-2528

Instrument ID: Varian ICP  
Lab File ID: N/A  
Initial Weight/Volume: 1 g  
Final Weight/Volume: 1 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chromium	84	78	75 - 125	7	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Consolidated Engineering Lab

Job Number: 720-686-1

### Method Blank - Batch: 720-2529

Lab Sample ID: MB 720-2528/1-B  
Client Matrix: Solid  
Dilution: 1.0  
Date Analyzed: 12/02/2005 2139  
Date Prepared: 12/02/2005 1926

Analysis Batch: 720-2550  
Prep Batch: 720-2529  
Units: mg/L

### Method: 6010B Preparation: CA WET Citrate STLC Citrate

Instrument ID: Varian ICP  
Lab File ID: N/A  
Initial Weight/Volume: 5.0 mL  
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Chromium	ND		0.047

Calculations are performed before rounding to avoid round-off errors in calculated results.



## LOGIN SAMPLE RECEIPT CHECK LIST

Client: Consolidated Engineering Lab

Job Number: 720-686-1

**Login Number: 686**

<b>Question</b>	<b>T/F/NA</b>	<b>Comment</b>
Radioactivity either was not measured or, if measured, is at or below background	NA	
The cooler's custody seal, if present.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present	True	
Samples do not require splitting or compositing	True	