



ANALYTICAL ENVIRONMENTAL SERVICES, INC.

June 30, 2010

Jessica Vickers
Tetra Tech EM Inc.
1955 Evergreen Blvd.
Duluth GA 30096

TEL: (678) 775-3104
FAX: (678) 775-3138

RE: Powder Springs Plating

Dear Jessica Vickers:

Order No: 1006L70

Analytical Environmental Services, Inc. received 2 samples on 6/24/2010 5:45:00 PM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

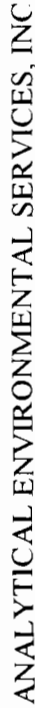
AES' certifications are as follows:

- NELAC/Florida Certification number E87582 for analysis of Environmental Water, soil/hazardous waste, and Drinking Water Microbiology, effective 07/01/09-06/30/10.
- AIHA Certification ID #100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) effective until 09/01/11.

These results relate only to the items tested. This report may only be reproduced in full.

If you have any questions regarding these test results, please feel free to call.

James Forrest
Project Manager



3785 Presidential Parkway, Atlanta GA 30340-3704

TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order:

0779001

Date: 6/29/02 Page 1 of 1

Date: 6/29/02 Page 1 of 1

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Analytical Environmental Services, Inc
Date: 30-Jun-10

Client: Tetra Tech EM Inc.	Client Sample ID: PSP-108-CON
Project Name: Powder Springs Plating	Collection Date: 6/24/2010 8:45:00 AM
Lab ID: 1006L70-001	Matrix: Soil

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
TOTAL MERCURY SW7471B									
Mercury	BRL		0.0362	0.117	mg/Kg-dry	131403	1	06/25/2010 13:20	MP
Hexavalent Chromium in Soil SW7196									
Chromium, Hexavalent	BRL		0.688	1.15	mg/Kg-dry	131526	1	06/28/2010 18:15	CG
METALS, TOTAL SW6010C									
Arsenic	0.825	J	0.0767	5.08	mg/Kg-dry	131399	1	06/25/2010 13:59	MW
Barium	79.0		0.0313	5.08	mg/Kg-dry	131399	1	06/25/2010 13:59	MW
Cadmium	BRL		0.0866	2.54	mg/Kg-dry	131399	1	06/25/2010 13:59	MW
Chromium	15.5		0.0828	2.54	mg/Kg-dry	131399	1	06/25/2010 13:59	MW
Lead	22.8		0.166	5.08	mg/Kg-dry	131399	1	06/25/2010 13:59	MW
Selenium	0.305	J	0.182	5.08	mg/Kg-dry	131399	1	06/25/2010 13:59	MW
Silver	BRL		0.0201	2.54	mg/Kg-dry	131399	1	06/25/2010 13:59	MW
PERCENT MOISTURE D2216									
Percent Moisture	14.9		0	0	wt%	R174870	1	06/25/2010 19:00	AS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank

- E Estimated value above quantitation range
- S Spike Recovery outside limits due to matrix
- J Estimated value detected below Reporting Limit
- > Greater than Result value
- < Less than Result value

Analytical Environmental Services, Inc
Date: 30-Jun-10

Client: Tetra Tech EM Inc.	Client Sample ID: PSP-116-CON
Project Name: Powder Springs Plating	Collection Date: 6/24/2010 10:15:00 AM
Lab ID: 1006L70-002	Matrix: Soil

Analyses	Result	Qual	MDL	Reporting Limit	Units	BatchID	DF	Date Analyzed	Analyst
TOTAL MERCURY SW7471B									
				(SW7471)					
Mercury	BRL		0.0353	0.113	mg/Kg-dry	131403	1	06/25/2010 13:22	MP
Hexavalent Chromium in Soil SW7196									
				(SW3060A)					
Chromium, Hexavalent	23.9		0.636	1.07	mg/Kg-dry	131526	1	06/28/2010 18:15	CG
METALS, TOTAL SW6010C									
				(SW3050B)					
Arsenic	0.367	J	0.0790	5.24	mg/Kg-dry	131399	1	06/25/2010 11:48	MW
Barium	37.6		0.0323	5.24	mg/Kg-dry	131399	1	06/25/2010 11:48	MW
Cadmium	BRL		0.0893	2.62	mg/Kg-dry	131399	1	06/25/2010 11:48	MW
Chromium	758		0.0853	2.62	mg/Kg-dry	131399	1	06/25/2010 11:48	MW
Lead	10.0		0.171	5.24	mg/Kg-dry	131399	1	06/25/2010 11:48	MW
Selenium	0.449	J	0.187	5.24	mg/Kg-dry	131399	1	06/25/2010 11:48	MW
Silver	BRL		0.0207	2.62	mg/Kg-dry	131399	1	06/25/2010 11:48	MW
PERCENT MOISTURE D2216									
Percent Moisture	13.1		0	0	wt%	R174870	1	06/25/2010 19:00	AS

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Not detected at MDL
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
- B Analyte detected in the associated method blank

- E Estimated value above quantitation range
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- > Greater than Result value
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Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Tetra Tech Work Order Number 1006670

Checklist completed by M. J. Date 6/24/10
Signature Date

Carrier name: FedEx ☐ UPS ☐ Courier ☐ Client ☒ US Mail ☐ Other ☐

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Container/Temp Blank temperature in compliance? (4°C±2)* Yes ☒ No ☐

Cooler #1 3.96 Cooler #2 ☐ Cooler #3 ☐ Cooler #4 ☐ Cooler #5 ☐ Cooler #6 ☐

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Was TAT marked on the COC? Yes ☒ No ☐

Proceed with Standard TAT as per project history? Yes ☐ No ☐ Not Applicable ☒

Water - VOA vials have zero headspace? No VOA vials submitted ☒ Yes ☐ No ☐

Water - pH acceptable upon receipt? Yes ☐ No ☐ Not Applicable ☒

Sample Condition: Good ☒ Adjusted? ☐ Checked by ☐

Other(Explain) ☐

(For diffusive samples or AIHA lead) Is a known blank included? Yes ☐ No ☒

See Case Narrative for resolution of the Non-Conformance.

* Samples do not have to comply with the given range for certain parameters.

\\Quality Assurance\\Checklists Procedures Sign-Off Templates\\Checklists\\Sample Receipt Checklists\\Sample_Cooler_Receipt_Checklist

Client: Tetra Tech EM Inc.
Project: Powder Springs Plating
Lab Order: 1006L70

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1006L70-001A	PSP-108-CON	6/24/2010 8:45:00AM	Soil	TOTAL METALS BY ICP		06/25/2010	06/25/2010
1006L70-001A	PSP-108-CON	6/24/2010 8:45:00AM	Soil	Hexavalent Chromium-Soils		06/28/2010	06/28/2010
1006L70-001A	PSP-108-CON	6/24/2010 8:45:00AM	Soil	MERCURY		06/25/2010	06/25/2010
1006L70-001A	PSP-108-CON	6/24/2010 8:45:00AM	Soil	PERCENT MOISTURE			06/25/2010
1006L70-002A	PSP-116-CON	6/24/2010 10:15:00AM	Soil	TOTAL METALS BY ICP		06/25/2010	06/25/2010
1006L70-002A	PSP-116-CON	6/24/2010 10:15:00AM	Soil	Hexavalent Chromium-Soils		06/28/2010	06/28/2010
1006L70-002A	PSP-116-CON	6/24/2010 10:15:00AM	Soil	MERCURY		06/25/2010	06/25/2010
1006L70-002A	PSP-116-CON	6/24/2010 10:15:00AM	Soil	PERCENT MOISTURE			06/25/2010

Client: Tetra Tech EM Inc.
 Project Name: Powder Springs Plating
 Workorder: 1006L70

ANALYTICAL QC SUMMARY REPORT

BatchID: 131399

Sample ID: MB-131399	Client ID:					Units: mg/Kg	Prep Date: 06/25/2010	Run No: 174815			
SampleType: MBLK	TestCode: METALS, TOTAL	SW6010C				BatchID: 131399	Analysis Date: 06/25/2010	Seq No: 3635481			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Arsenic	BRL	5.00	0	0	0	0	0	0	0	0	
Barium	BRL	5.00	0	0	0	0	0	0	0	0	
Cadmium	BRL	2.50	0	0	0	0	0	0	0	0	
Chromium	BRL	2.50	0	0	0	0	0	0	0	0	
Lead	BRL	5.00	0	0	0	0	0	0	0	0	
Selenium	0.1955	5.00	0	0	0	0	0	0	0	0	J
Silver	BRL	2.50	0	0	0	0	0	0	0	0	

Sample ID: LCS-131399	Client ID:					Units: mg/Kg	Prep Date: 06/25/2010	Run No: 174815			
SampleType: LCS	TestCode: METALS, TOTAL	SW6010C				BatchID: 131399	Analysis Date: 06/25/2010	Seq No: 3635479			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Arsenic	49.45	5.00	50	0	98.9	80	120	0	0	0	
Barium	50.77	5.00	50	0	102	80	120	0	0	0	
Cadmium	49.69	2.50	50	0	99.4	80	120	0	0	0	
Chromium	52.28	2.50	50	0	105	80	120	0	0	0	
Lead	49.39	5.00	50	0	98.8	80	120	0	0	0	
Selenium	50.10	5.00	50	0.1955	99.8	80	120	0	0	0	
Silver	4.934	2.50	5	0	98.7	80	120	0	0	0	

Sample ID: 1006L70-002AMS	Client ID: PSP-116-CON					Units: mg/Kg-dry	Prep Date: 06/25/2010	Run No: 174815			
SampleType: MS	TestCode: METALS, TOTAL	SW6010C				BatchID: 131399	Analysis Date: 06/25/2010	Seq No: 3635492			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Arsenic	50.55	5.34	53.38	0.3672	94	75	125	0	0	0	
Barium	89.51	5.34	53.38	37.63	97.2	75	125	0	0	0	
Cadmium	52.50	2.67	53.38	0	98.3	75	125	0	0	0	
Chromium	783.3	2.67	53.38	757.7	47.9	75	125	0	0	0	S

Qualifiers:	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Tetra Tech EM Inc.
Project Name: Powder Springs Plating
Workorder: 1006L70

ANALYTICAL QC SUMMARY REPORT

BatchID: 131399

Sample ID: 1006L70-002AMS	Client ID: PSP-116-CON	Units: mg/Kg-dry			Prep Date: 06/25/2010	Run No: 174815					
SampleType: MS	TestCode: METALS, TOTAL SW6010C	BatchID: 131399			Analysis Date: 06/25/2010	Seq No: 3635492					
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Lead	63.85	5.34	53.38	10.04	101	75	125	0	0	0	
Selenium	49.82	5.34	53.38	0.4490	92.5	75	125	0	0	0	
Silver	5.130	2.67	5.338	0	96.1	75	125	0	0	0	

Sample ID: 1006L70-002AMSD	Client ID: PSP-116-CON	Units: mg/Kg-dry			Prep Date: 06/25/2010	Run No: 174815					
SampleType: MSD	TestCode: METALS, TOTAL SW6010C	BatchID: 131399			Analysis Date: 06/25/2010	Seq No: 3635494					
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Arsenic	49.23	5.25	52.53	0.3672	93	75	125	50.55	2.65	20	
Barium	86.73	5.25	52.53	37.63	93.5	75	125	89.51	3.15	20	
Cadmium	50.86	2.63	52.53	0	96.8	75	125	52.50	3.17	20	
Chromium	774.7	2.63	52.53	757.7	32.4	75	125	783.3	1.1	20	S
Lead	60.90	5.25	52.53	10.04	96.8	75	125	63.85	4.74	20	
Selenium	47.96	5.25	52.53	0.4490	90.5	75	125	49.82	3.8	20	
Silver	5.019	2.63	5.253	0	95.6	75	125	5.130	2.18	20	

Qualifiers:	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Tetra Tech EM Inc.
Project Name: Powder Springs Plating
Workorder: 1006L70

ANALYTICAL QC SUMMARY REPORT**BatchID: 131403**

Sample ID: MB-131403	Client ID:					Units: mg/Kg	Prep Date: 06/25/2010	Run No: 174804			
SampleType: MBLK	TestCode: TOTAL MERCURY	SW7471B	BatchID: 131403				Analysis Date: 06/25/2010	Seq No: 3635286			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Mercury	BRL	0.100	0	0	0	0	0	0	0	0	
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Sample ID: LCS-131403	Client ID:				Units: mg/Kg	Prep Date: 06/25/2010	Run No: 174804				
SampleType: LCS	TestCode: TOTAL MERCURY	SW7471B	BatchID: 131403			Analysis Date: 06/25/2010	Seq No: 3635288				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Mercury	0.3779	0.100	0.4	0	94.5	80	120	0	0	0	
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Sample ID: 1006K52-001AMS	Client ID:					Units: mg/Kg-dry	Prep Date: 06/25/2010	Run No: 174804			
SampleType: MS	TestCode: TOTAL MERCURY	SW7471B					BatchID: 131403	Analysis Date: 06/25/2010	Seq No: 3635292		
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Mercury	0.5062	0.125	0.5005	0	101	70	130	0	0	0	
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Sample ID: 1006K52-001AMSD	Client ID:				Units: mg/Kg-dry		Prep Date: 06/25/2010		Run No: 174804		
SampleType: MSD	TestCode: TOTAL MERCURY SW7471B				BatchID: 131403		Analysis Date: 06/25/2010		Seq No: 3635293		
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual

Mercury	0.4958	0.125	0.4985	0	99.5	70	130	0.5062	2.06	30	
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Qualifiers:	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		

Client: Tetra Tech EM Inc.
Project Name: Powder Springs Plating
Workorder: 1006L70

ANALYTICAL QC SUMMARY REPORT

BatchID: 131526

Sample ID: MB-131526	Client ID:					Units: mg/Kg	Prep Date: 06/28/2010	Run No: 174965			
SampleType: MBLK	TestCode: Hexavalent Chromium in Soil	SW7196	BatchID: 131526				Analysis Date: 06/28/2010	Seq No: 3638856			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	BRL	2.00	0	0	0	0	0	0	0	0	

Sample ID: LCS-131526	Client ID:					Units: mg/Kg	Prep Date: 06/28/2010	Run No: 174965			
SampleType: LCS	TestCode: Hexavalent Chromium in Soil	SW7196	BatchID: 131526				Analysis Date: 06/28/2010	Seq No: 3638857			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	96.66	2.00	100	0	96.7	80	120	0	0	0	

Sample ID: 1006L70-001AMS	Client ID: PSP-108-CON					Units: mg/Kg-dry	Prep Date: 06/28/2010	Run No: 174965			
SampleType: MS	TestCode: Hexavalent Chromium in Soil	SW7196	BatchID: 131526				Analysis Date: 06/28/2010	Seq No: 3638860			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	109.3	2.30	115.1	0	95	75	125	0	0	0	

Sample ID: 1006L70-001AMSD	Client ID: PSP-108-CON					Units: mg/Kg-dry	Prep Date: 06/28/2010	Run No: 174965			
SampleType: MSD	TestCode: Hexavalent Chromium in Soil	SW7196	BatchID: 131526				Analysis Date: 06/28/2010	Seq No: 3638861			
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Chromium, Hexavalent	110.4	2.30	115.1	0	96	75	125	109.3	0.984	20	

Qualifiers:	>	Greater than Result value	<	Less than Result value	B	Analyte detected in the associated method blank
	BRL	Below reporting limit	E	Estimated (value above quantitation range)	H	Holding times for preparation or analysis exceeded
	J	Estimated value detected below Reporting Limit	N	Analyte not NELAC certified	R	RPD outside limits due to matrix
	Rpt Lim	Reporting Limit	S	Spike Recovery outside limits due to matrix		