

Level "4" Deliverables (Metals) – Dry Weight

Lab Work Order No: **9J15017**

Client Sample ID: **See "COC"**

1.	Acronyms and Abbreviations	1
	BLK: Method Blank	
	BS: Blank Spike (or Lab Control Sample, LCS)	
	BSD: Blank Spike Duplicate (or LCSD)	
	CCV: Continuous Calibration Verification	
	COA: Certificate of Analysis (Lab Report)	
	ICS: Interference Check Solution	
	ICV: Initial Calibration Verification	
	IPC: Instrument Performance Check	
	MRL: Minimum Reporting Limit	
	MS: Matrix Spike	
	MSD: Matrix Spike Duplicate	
	SIC: Spectral Interference Check	
2.	Chain of Custody	2-3
3.	Sample results with analysis and preparation dates: See "COA" (Lab Report).	
4.	Summary of QC samples (BLK, BS/BSD, MS/MSD): See "Quality Control Section" of the "COA".	
5.	Case Narratives: See cover page of "COA".	
6.	Batch QC Check List	NA
7.	Preparation Bench Sheet	4-5
8.	Summary of tuning report	NA
9.	Injection logs	NA
10.	Raw data	6-7
11.	Summary of continuing calibration	NA
12.	Summary of interference check	NA
13.	Summary of initial calibration	NA
14.	Summary of internal standard	NA
15.	Standard preparation Records	NA

Prepared by:/Date: Dec 12/4/2019

Reviewed by:/Date: _____



12/06/19

SUBCONTRACT ORDER

Apex Laboratories

A9J0427

10/14/19

KCC 10/14/19

SENDING LABORATORY:

Apex Laboratories
 6700 S.W. Sandburg Street
 Tigard, OR 97223
 Phone: (503) 718-2323
 Fax: (503) 336-0745
 Project Manager: Philip Nerenberg

RECEIVING LABORATORY:

Weck Laboratories, Inc
 14859 E. Clark Avenue
 City of Industry, CA 91745
 Phone: (626) 336-2139
 Fax: (626) 336-2634

9J15019

Sample Name: A9J0427-01 Sedimen Sampled: 10/10/19 09:00 (SED-05-SS-1.0)

Analysis	Due	Expires	Comments
8151A Herbicides (SUB)	10/24/19 17:00	10/24/19 09:00	Level IV DP--needs custody seal for shipping
Data Package (SUB)	10/24/19 17:00	01/17/20 09:00	Level IV--needs custody seal for shipping
Containers Supplied: (H)4 oz Glass Jar			

Sample Name: A9J0427-02 Sedimen Sampled: 10/10/19 10:00 (SED-06-SS-1.0)

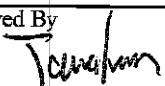
Analysis	Due	Expires	Comments
8151A Herbicides (SUB)	10/24/19 17:00	10/24/19 10:00	MS/MSD, Level IV DP--needs custody seal for shipping
Containers Supplied: (V)4 oz Glass Jar (W)4 oz Glass Jar (X)4 oz Glass Jar			

Sample Name: A9J0427-03 Sedimen Sampled: 10/10/19 11:00 (SED-07-SS-1.0)

Analysis	Due	Expires	Comments
8151A Herbicides (SUB)	10/24/19 17:00	10/24/19 11:00	Level IV DP--needs custody seal for shipping
Containers Supplied: (H)4 oz Glass Jar			

Sample Name: A9J0427-04 Sedimen Sampled: 10/10/19 11:00 (SED-07-SS-1.0-DUP)

Analysis	Due	Expires	Comments
8151A Herbicides (SUB)	10/24/19 17:00	10/24/19 11:00	Level IV DP--needs custody seal for shipping
Containers Supplied: (H)4 oz Glass Jar			

Released By  Date 10/14/19 13:50 UPS (Shipper) Received By  Date 10/15/19 09:55 3.4°C per

SUBCONTRACT ORDER

Apex Laboratories

A9J0427

10/14/19 091507
 Acc 10/14/19

Sample Name: A9J0427-05 Sedimen Sampled: 10/10/19 13:10 (SED-08-SS-1.0)

Analysis	Due	Expires	Comments
8151A Herbicides (SUB) Containers Supplied: (H)4 oz Glass Jar	10/24/19 17:00	10/24/19 13:10	Level IV DP--needs custody seal for shipping

Sample Name: A9J0427-06 Sedimen Sampled: 10/10/19 15:15 (SED-09-SS-1.0)

Analysis	Due	Expires	Comments
8151A Herbicides (SUB) Containers Supplied: (H)4 oz Glass Jar	10/24/19 17:00	10/24/19 15:15	Level IV DP--needs custody seal for shipping

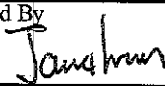
Sample Name: A9J0427-07 Sedimen Sampled: 10/10/19 14:15 (SED-10-SS-1.0)

Analysis	Due	Expires	Comments
8151A Herbicides (SUB) Containers Supplied: (H)4 oz Glass Jar	10/24/19 17:00	10/24/19 14:15	Level IV DP--needs custody seal for shipping

Sample Name: A9J0427-08 Water Sampled: 10/10/19 17:00 (SED-SS-RB)

Analysis	Due	Expires	Comments
8151A Herbicides (SUB) Containers Supplied: (L)1 L Amber Glass - Non Preserved (M)1 L Amber Glass - Non Preserved	10/24/19 17:00	10/17/19 17:00	Level IV DP--needs custody seal for shipping

Released By  Date 10/14/19 13:50 UPS (Shipper)

Received By  Date 10/15/19 0955 3.4C 10222

Released By UPS (Shipper) Received By Date



WECK LABORATORIES, INC.

WETCHEM - General Preparation

10/19/2019

Matrix: Solid

Printed: 10/16/2019 10:46:35AM

Preparation Bench Sheet

Batch:

W9J1001

Lab Sample ID (20) Sample Name	Analysis Due Date	By	Prepared Sampled	Initial (g)	Final (ml)	Turb <1NTU	Pres @Lab	Filtered @Lab	pH<2	Client	Comments
9J14015-01 A A9J0371-01	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 11:25	1	1					Apex Laboratories	Lab: ① 2.026 ② 12.002g SR&PJ:[None] ① 8.142 ② 8.140
9J14015-02 A A9J0371-03	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 11:25	1	1					Apex Laboratories	Lab: ① 2.070 ② 12.089g SR&PJ:[None] ① 8.224 ② 8.223
9J14015-03 A A9J0371-05	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 11:25	1	1					Apex Laboratories	Lab: ① 2.063 ② 12.065 SR&PJ:[None] ① 7.928 ② 7.928
9J14015-04 A A9J0371-06	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 11:25	1	1					Apex Laboratories	Lab: ① 2.041 ② 12.157 SR&PJ:[None] ① 10.109 ② 10.109
9J14015-05 A A9J0371-07	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 13:10	1	1					Apex Laboratories	Lab: ① 2.078 ② 12.046 SR&PJ:[None] ① 9.318 ② 9.318
9J14015-06 A A9J0371-08	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 13:55	1	1					Apex Laboratories	Lab: ① 2.044 ② 12.025 SR&PJ:[None] ① 8.371 ② 8.364
9J14015-07 A A9J0371-10	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 13:55	1	1					Apex Laboratories	Lab: ① 2.038 ② 12.097 SR&PJ:[None] ① 8.887 ② 8.878
9J14015-08 A A9J0371-11	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 13:55	1	1					Apex Laboratories	Lab: ① 2.005 ② 12.020 SR&PJ:[None] ① 8.621 ② 8.611
9J14015-09 A A9J0371-12	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 15:30	1	1					Apex Laboratories	Lab: ① 2.008 ② 12.049 SR&PJ:[None] ① 8.832 ② 8.825
9J14015-10 A A9J0371-14	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 15:30	1	1					Apex Laboratories	Lab: ① 2.050 ② 12.026 SR&PJ:[None] ① 8.456 ② 8.450
9J14015-11 A A9J0371-15	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 15:30	1	1					Apex Laboratories	Lab: ① 2.043 ② 12.023 SR&PJ:[None] ① 9.196 ② 9.194
9J14015-13 C A9J0371-17	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 11:18	1	1					Apex Laboratories	Lab: ① 2.051 ② 12.085 SR&PJ:[None] ① 7.903 ② 7.895
9J14015-14 A A9J0371-18	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 12:45	1	1					Apex Laboratories	Lab: ① 2.044 ② 12.046 SR&PJ:[None] ① 8.119 ② 8.112
9J14015-15 A A9J0371-19	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 15:45	1	1					Apex Laboratories	Lab: ① 2.064 ② 12.094 SR&PJ:[None] ① 9.446 ② 9.441
9J14015-16 A A9J0371-20	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 16:30	1	1					Apex Laboratories	Lab: ① 2.089 ② 12.096 SR&PJ:[None] ① 8.583 ② 8.583
9J14015-17 A A9J0371-21	Dry Weight 10/21/19 12:00	mem	10/16/19 10:44 10/09/19 16:30	1	1					Apex Laboratories	Lab: ① 2.022 ② 12.052 SR&PJ:[None] ① 8.308 ② 8.301
9J15017-01 A A9J0427-01	Dry Weight 10/22/19 12:00	mem	10/16/19 10:44 10/10/19 09:00	1	1					Apex Laboratories	Lab: ① 2.039 ② 12.056 SR&PJ:[None] ① 9.719 ② 9.716
9J15017-02 C A9J0427-02	Dry Weight 10/22/19 12:00	mem	10/16/19 10:44 10/10/19 10:00	1	1					Apex Laboratories	Lab: ① 2.023 ② 12.064 SR&PJ:[None] ① 9.662 ② 9.660
9J15017-03 A A9J0427-03	Dry Weight 10/22/19 12:00	mem	10/16/19 10:44 10/10/19 11:00	1	1					Apex Laboratories	Lab: ① 2.063 ② 12.098 SR&PJ:[None] ① 8.117 ② 8.116



WECK LABORATORIES, INC.

WETCHEM - General Preparation

Matrix: Solid

Printed: 10/16/2019 10:46:35AM

Preparation Bench Sheet

Batch: W9J1001

Lab Sample ID (20) Sample Name	Analysis Due Date	By	Prepared Sampled	Initial (g)	Final (ml)	Turb <1NTU	Pres @Lab	Filtered @Lab	pH<2	Client	Comments
9J15017-04 A A9J0427-04	Dry Weight 10/22/19 12:00	mem	10/16/19 10:44 10/10/19 11:00	1	1					Apex Laboratories	Lab: ① 2.013 ② 12.020 SR&PJ: [None] ① 7.817 ② 7.817

To Lab: If PJ comment differ from SR comment, please confirm correct comment with supervisor or PM.

QC Sample ID (1) Sample Name	By	Prepared	Initial (g)	Final (ml)	Source ID	Spike 1 ID Spike 1	Spike 1 Amt (ul)	Spike 2 ID Spike 2	Spike 2 Amt (ul)	Surrogate Amt (ul)	Comments
W9J1001-DUP1 Duplicate	mem	10/16/19 10:44	1	1	9J14015-01						① 2.077 ② 12.111 ③ 8.336 ④ 8.335

Thermometer ID: T-

Temperature C:

Spike By & Date:

Micro Pipette ID: MP

Spike Ref ID:

Spike Amount:

Digestion Tube Ref ID:

Transfer Pipette Ref ID:

Digestion Block ID: DIGE

Oven ID: OVEN 12

Time In: 16:35

Time Out:

HNO₃ Ref ID:H₂SO₄ Ref ID:

HCl Ref ID:

H₂O₂ Ref ID:

Filter Ref ID:

Balance ID: BAL 04

Mercury Only:

Reducing Agent Ref ID:

20% KMnO₄:10% K₂S₂O₈:MPN
Prepared By10/17/19
Date

Preparation Reviewed By

Date

Extracts Received By

Date
Page 2 of 2

Total Solid - Solid

Result taken by:
Worksheet#

MPN

W9J1001

Date: 10/17/2019
Ini. Temp 105
Final Ten 105

Client	lab#	Tare (g)	T+S (g)	T+R (g)	Solid (g)	Residue (g)	Calculation	Results	Units	% Moist	T + R (g) 2nd time	Residue (g)	Results 2nd time	PASS (DIFF < 4%)
Apex Laboratories	9J14015-01	2.026	12.002	8.142	9.976	6.116	61.31	61.31	%	38.69	8.14	6.114	61.2871	Y
Apex Laboratories	9J14015-02	2.07	12.089	8.224	10.019	6.154	61.42	61.42	%	38.58	8.223	6.153	61.4133	Y
Apex Laboratories	9J14015-03	2.063	12.065	7.928	10.002	5.865	58.64	58.64	%	41.36	7.928	5.865	58.6383	Y
Apex Laboratories	9J14015-04	2.041	12.157	10.109	10.116	8.068	79.75	79.75	%	20.25	10.109	8.068	79.7548	Y
Apex Laboratories	9J14015-05	2.078	12.046	9.318	9.968	7.24	72.63	72.63	%	27.37	9.318	7.24	72.6324	Y
Apex Laboratories	9J14015-06	2.044	12.025	8.371	9.981	6.327	63.39	63.39	%	36.61	8.364	6.32	63.3203	Y
Apex Laboratories	9J14015-07	2.038	12.097	8.887	10.059	6.849	68.09	68.09	%	31.91	8.878	6.84	67.9988	Y
Apex Laboratories	9J14015-08	2.005	12.02	8.621	10.015	6.616	66.06	66.06	%	33.94	8.611	6.606	65.9611	Y
Apex Laboratories	9J14015-09	2.008	12.049	8.832	10.041	6.824	67.96	67.96	%	32.04	8.825	6.817	67.8916	Y
Apex Laboratories	9J14015-10	2.05	12.026	8.456	9.976	6.406	64.21	64.21	%	35.79	8.45	6.4	64.154	Y
Apex Laboratories	9J14015-11	2.043	12.023	9.196	9.98	7.153	71.67	71.67	%	28.33	9.194	7.151	71.6533	Y
Apex Laboratories	9J14015-13	2.051	12.085	7.903	10.034	5.852	58.32	58.32	%	41.68	7.895	5.844	58.242	Y

Apex Laboratories	9J14015-14	2.044	12.046	8.119	10.002	6.075	60.74	60.74	%	39.26	8.112	6.068	60.6679	Y
Apex Laboratories	9J14015-15	2.064	12.094	9.446	10.03	7.382	73.60	73.60	%	26.40	9.441	7.377	73.5494	Y
Apex Laboratories	9J14015-16	2.089	12.096	8.589	10.007	6.5	64.95	64.95	%	35.05	8.583	6.494	64.8946	Y
Apex Laboratories	9J14015-17	2.022	12.052	8.308	10.03	6.286	62.67	62.67	%	37.33	8.301	6.279	62.6022	Y
Apex Laboratories	9J15017-01	2.039	12.056	9.719	10.017	7.68	76.67	76.67	%	23.33	9.716	7.677	76.6397	Y
Apex Laboratories	9J15017-02	2.023	12.064	9.662	10.041	7.639	76.08	76.08	%	23.92	9.66	7.637	76.0582	Y
Apex Laboratories	9J15017-03	2.063	12.098	8.117	10.035	6.054	60.33	60.33	%	39.67	8.116	6.053	60.3189	Y
Apex Laboratories	9J15017-04	2.013	12.02	7.817	10.007	5.804	58.00	58.00	%	42.00	7.817	5.804	57.9994	Y
Apex Laboratories	9J14015-01-DUP	2.077	12.111	8.336	10.034	6.259	62.38	62.38	%	37.62	8.335	6.258	62.3679	Y