

FEB 28 2013

2013-002167

February 27, 2012

Scott Anderson, Director  
Utah Division of Solid and Hazardous Waste  
288 North 1460 West  
Salt Lake City, Utah 84114-4880  
Attention: Rob Powers

Re: 2012 Davis Energy Recovery Facility Annual Reports

Dear Mr. Anderson:

Please find the following documents transmitted with this letter to satisfy the annual reporting requirements of the Utah Administration Code R315-302-2(4) for the Davis Energy Recovery Facility which is owned and operated by Wasatch Integrated Waste Management District.

- Calendar year 2012 Solid Waste Incinerator Annual Report (State Form)
- Report of training programs and procedures completed by facility personnel during 2012
- Report of the 2012 Ash Residue Characterization Report conducted at the Davis Energy Recovery Facility
- Financial Assurance documentation required by UACR315-309

Please do not hesitate to contact me if you have any questions regarding these submissions.

Sincerely,

**Wasatch Integrated Waste Management District**



Nathan Rich, P.E.  
Executive Director

attachments

cc: Davis County Health Department

# SOLID WASTE INCINERATOR ANNUAL REPORT

FEB 28 2013

For Calendar year 2012

## Administrative Information (Please enter all the information requested below - type or print legibly)

Facility Name: Davis Energy Recovery Facility  
 Facility Mailing Address: P.O. Box 900  
(Number & Street, Box and/or Route)  
 City: Layton Zip Code: 84041  
 County: Davis Permit No.: 9423R1

### Owner

Name: Wasatch Integrated Waste Phone No.: (801)614-5600  
 Mailing Address: P.O. Box 900  
(Number & Street, Box and/or Route)  
 City: Layton State: Utah Zip Code: 84041  
 Contact's Name: Nathan Rich Title: Executive Director  
 Contact's Mailing Address: Same as above  
 Phone No.: (801)614-5601 Contact's Email Address: nathanr@wiwmd.org

### Operator (Complete this section only if the operator is not an employee of the Owner shown above)

Name: \_\_\_\_\_ Phone No.: (\_\_\_\_)  
 Mailing Address: \_\_\_\_\_  
(Number & Street, Box and/or Route)  
 City: \_\_\_\_\_ State: Utah Zip Code: \_\_\_\_\_  
 Contact's Name: \_\_\_\_\_ Title: \_\_\_\_\_  
 Contact's Mailing Address: \_\_\_\_\_  
 Phone No.: (\_\_\_\_) Contact's Email Address: \_\_\_\_\_

## Facility Type and Status

Large Incinerator  
Capacity greater than ten tons per day

Small Incinerator  
Capacity is 10 tons per day or less but greater than 250 pounds per week

Permit Not Required  
Non-commercial with capacity of 250 pounds or less per week

Currently in Operation  Facility Closed During Year - Date: \_\_\_\_\_  
(The " - Date" is the date that all waste and ash were removed from the site)

## Waste Incinerated

Total tons received at facility for incineration:

Waste Type	Waste Origin		Total	Measurement	
	In-State	Out-of-State		Tons	Cubic Yards
Municipal	<u>120,700</u>	<u>3421</u>	<u>124121</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Industrial	<u>541</u>	<u>                    </u>	<u>541</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C/D	<u>                    </u>	<u>                    </u>	<u>                    </u>	<input type="checkbox"/>	<input type="checkbox"/>

<sup>1</sup>C/D waste includes construction/demolition, yard waste, dead animals, and other waste (see rule R315-301-2(12))

## Conversion Factor Used

None  From rules  Site Specific (please list factors used): \_\_\_\_\_

**Ash Disposal**

Tons of ash disposed: 33,796.16

Facility at which ash was disposed: Davis Landfill

**Recycling**

Material Recycled: 43.17 Tons  Cubic Yds.

(Material recycled should not be included in disposed tons reported Report compost on separate form Circle tons or yards)

**Fee Paid to the Utah Department of environmental Quality**

Disposal Fee Required to be paid to State Yes  No  (If yes please show fees paid below)

Municipal	\$	<u>                    </u>	C/D	\$	<u>                    </u>
Industrial	\$	<u>104.10</u>	Annual	\$	<u>14,700.00</u>

**Financial Assurance**

Current Closure Cost Estimate: \$92,110.00

Current Post-Closure Cost Estimate: \$0.00

Current Amount or Balance in Mechanism: \$11,331,145/\$5,176,264

(If facility permit has been renewed if balance does not equal or exceed total for closure and post-closure care please contact the Division)

Current Financial Assurance Mechanism: Government Test/PTIF Escrow

(ie Bond, Trust Fund, Corporate or government Test etc )

Mechanism Holder and Account Number: WIWMD Utah State Treasurer #6579

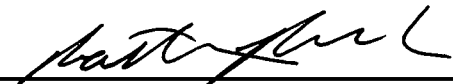
(ie Name of Bond Company, Bank etc Account number)

**Financial Assurance:** Each facility must recalculate the cost of closure to account for inflation and design changes each year. The inflation factor can be found on the Division web page. Facilities that are using a trust account should include a copy of the most recent account statement.

**Note** Facilities using "Local Government Financial Test" or the "Corporate Financial Test" must provide the information required in R315-309-8(4) or R315-309-9(3) each year.

**Other Required Reports**

**Training Report:** A report of all training programs or procedures completed by facility personnel during the year.

**Signature:**  **Date:** 2-27-13

Signature should be by an executive officer, general partner, proprietor, elected official, or a duly authorized representative A duly authorized representative must meet the requirements of the solid waste rules (UAC R315-310-2(4)(d))

Print name: Nathan Rich Title: Executive Director

## **Wasatch Integrated Waste Management District 2012 Plant Training Report**

Wasatch Integrated Waste Management District Plant personnel completed the following training during 2012.

### **NEW HIRE TRAINING**

Each new full time and temporary employee completes the following training before being assigned to any task at the facility including:

- Orientation
- Briefing on waste-to-energy specific hazards
- Hazard communication
- Safety equipment requirements
- Emergency gathering points
- Hazardous materials
- Safety and District OSHA Programs(s) Manual Review and Overview
- Task specific training

### **MONTHLY SAFETY MEETINGS**

Monthly safety meetings are held to discuss OSHA standards, PPE training, equipment operation, site specific training, first aid, hazardous materials training, and solid Waste Association of North America (SWANA) waste training. Attendance is mandatory at safety/training meetings. All employees certify that presented material, process/procedure, and training of subject matter were understood.

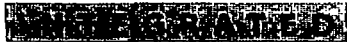
### **ADDITIONAL SAFETY MEETINGS**

Additional safety meetings to discuss immediate safety issues particular to the facility are held on an as needed basis. Attendance is mandatory at safety/training meetings. All employees certify that presented material, process/procedure, and training of subject matter were understood.

## **TRAINING SCHEDULE**

<b>January</b>	<b>DOT-HAZWOPER 8 hour Refresher; OSHA Air and Blood Born Pathogen Refresher; Power Wash Basic Safety Orientation</b>
<b>February</b>	<b>OSHA HAZCOM-MSDS Refresher; New Hire Orientation</b>
<b>March</b>	<b>OSHA Confined Space; New Hire Orientation</b>
<b>April</b>	<b>AHA First Aid/CPR/AED; Pre Maintenance Shut Down Awareness /LOTO Refresher</b>
<b>May</b>	<b>Temporary Employee and Contractor Safety Orientation; Plant Maintenance Shut Down</b>
<b>June</b>	<b>OSHA Fire Prevention/Fire Extinguisher; New Hire Orientation</b>
<b>July</b>	<b>Power Wash Operations/Safety Review</b>
<b>August</b>	<b>OSHA Hearing Protection Refresher; Power Wash Basic Safety Orientation</b>
<b>September</b>	<b>Forklift Basic Safety Orientation; OSHA Electrical Hazards Awareness; Temporary Employee Orientation</b>
<b>October</b>	<b>Propane Cylinder Fill/Transport Safety</b>
<b>December:</b>	<b>HAZMAT Site Specific – PHMSA Emergency Response Guide; DOT-HAZWOPER 8 hour Refresher</b>

# WASATCH



waste management district

October 26, 2012

Scott T. Anderson, Director  
Utah Division of Solid and Hazardous Waste  
PO Box 144880  
Salt Lake City, Utah 84114-4880

REC  
JAN 09 2013  
DEPAR  
HAROLD

Dear Mr. Anderson:

I am the chief financial officer of Wasatch Integrated Waste Management District. This letter is in support of the use of the financial test to demonstrate financial assurance for closure, post-closure care. Cost estimates covered by the local government financial test are shown for each facility.

## Part I

Wasatch Integrated Waste Management District is the owner or operator of the following facilities in Utah for which financial assurance for closure of post-closure care is demonstrated through the financial test specified in R315-309-8. The current closure and/or post-closure cost estimates covered by the test are shown for each facility.

a.

Name: **Davis Class I Landfill**  
Permit Number: **9419R2**  
Address: **1997 East 3500 North, Layton, Utah 84040**  
Closure Cost Estimate: **\$8,924,929**  
Post-Closure Cost Estimate: **\$2,314,106**

b.

Name: **Davis Energy Recovery Facility**  
Permit Number: **9423R1**  
Address: **3404 North 650 East, Layton, Utah 84041**  
Closure Cost Estimate: **\$92,110**  
Post-Closure Cost Estimate: **\$0**

Total of all current closure and post-closure cost estimates from all facilities listed above: **\$11,331,145**

The fiscal year of Wasatch Integrated Waste Management District ends on June 30. The Wasatch Integrated Waste Management District's independently audited; fiscal year-end financial statements for the latest completed fiscal year have been placed in the facilities operating record.

## Part II

### Alternative I – Bond Rating

The figures for the following items marked with an asterisk are derived from Wasatch Integrated Waste Management District independently audited, fiscal year-end financial statements for the latest completed fiscal year, ended June 30, 2012.

Current bond rating of most recent rated general obligation bonds that are not secured by insurance, a letter of credit, or other collateral guarantee for Wasatch Integrated Waste Management District.

1. Rating service and rating: **Not Apply**
2. Data of issuance of bond: **Not Apply**
3. Date of maturity of bond: **Not Apply**

### Alternative II – Financial Ratios

1. \*Total of cash and marketable securities: **\$26,473,445**
2. \*Total expenditures: **\$19,019,551**
3. \*Annual debt service: **\$0**

Is line 1 divided by line 2 greater than or equal to .05? **Yes, 1.39**

Is line 3 divided by line 2 less than or equal to .20? **Yes, 0.00**

I hereby certify that Wasatch Integrated Waste Management District meets the requirements of Alternative II.

## Part III

In additional, I hereby certify that Wasatch Integrated Waste Management District meets the following conditions:

- Wasatch Integrated Waste Management District's financial statements are prepared in conformity with Generally Accepted Accounting Principles for governments and has had these financial statements audited by an independent certified public account [UAC R315-309-8(2)(c)];
- Wasatch Integrated Waste Management District has operated at a deficit greater than 5% or more of total annual revenue in each of the past two fiscal years;
- Wasatch Integrated Waste Management District is not in default on any outstanding general obligation bonds and does not have any outstanding general obligation bonds rated lower than Baa as issued by Moody's or BBB as issued by Standard and Poor's;
- Wasatch Integrated Waste Management District's most recent fiscal year-end financial statements have not received an adverse opinion, a disclaimer of opinion, or a qualified opinion from the independent certified

public accountant that audits the financial statements as required under [UAC R315-309-8(4)], and

- Wasatch Integrated Waste Management District's financial statements comply with the requirements of Statement #18 of the Governmental Accountant Standards Board (GASB).

**Part IV**

- Wasatch Integrated Waste Management's total annual revenue: **\$15,755,795 X .43 = \$6,774,992**

Amount that can be assured by the local government financial test: **\$6,774,992**

Total of all landfill closure and post closure costs from Part I: **\$11,331,145**

Total of all other assured environmental costs: **\$0**

Total of all assured costs: **\$11,331,145**

Total trust fund escrow account: **\$5,176,264**

Total excess coverage: **\$620,111**

I hereby certify that the statements, evidence provided, and certifications made in Parts I through IV above are correct and that Wasatch Integrated Waste Management District meets the requirements of UAC R315-309-8 a portion of the assured costs for closure, post-closure care, and/or remedial action for the above named facilities.

Signature: 

Name: David Van De Graff

Title: Controller

Date: October 26, 2012



**WASATCH INTEGRATED WASTE MANAGEMENT DISTRICT**

**Report on Application of Agreed-Upon Procedures**

**October 26, 2012**



Crane, Christensen,  
Palmer & Ambrose  
Certified Public Accountants  
Business Advisors

Kent R. Christensen, CPA  
Jeffrey L. Ambrose, CPA  
Chuck Palmer, CPA

Independent Accountant's Report on  
Application of Agreed-Upon Procedures

President and Board of Directors  
Wasatch Integrated Waste Management District  
P.O. Box 900  
Layton, UT 84041-0900

We have performed the procedures enumerated below which were agreed to by you solely to assist the District in meeting its closure and post-closure care financial assurance requirements. This engagement to apply agreed-upon procedures was performed in accordance with standards established by the American Institute of Certified Public Accountants. The sufficiency of the procedures is solely the responsibility of the District's Board of Directors and Management. Consequently, we make no representation regarding the sufficiency of the procedures described below either for the purpose for which this report has been requested or for any other purpose.

**PROCEDURES:**

1. Confirm the data and statements contained in the letter dated October 26, 2012 from the District's controller David VanDeGraff are in agreement with the data and statements presented in the audited financial statements for the year ended June 30, 2012.
2. Confirm that the financial statements were prepared in conformity with Generally Accepted Accounting Principles for Governments.
3. Confirm that the District did not operate at a deficit equal to 5% or more of its total annual revenue for the past two years.
4. Confirm that the financial statements were audited by the independent certified public accountant.
5. Confirm that the District's audited financial statements did not receive an adverse opinion, disclaimer of opinion, or other qualified opinion from the auditor.

**FINDINGS:**

1. We confirmed that the data and statements contained in the letter dated October 26, 2012 from the District's controller were in agreement with audited financial statements for the year ended June 30, 2012.
2. We confirmed that the financial statements were prepared in conformity with Generally Accepted Accounting Principles for Governments.
3. The District did operate at a deficit equal to 5% or more of its total annual revenue for the past two years.
4. We confirmed that the financial statements were audited by the independent certified public accountant.
5. We confirmed that the District's audited financial statements did not receive an adverse opinion, disclaimer of opinion, or other qualified opinion from the auditor.

**DISTRICT'S RESPONSE TO FINDING #3:**

The District is not planning on replacing the Energy Recovery Facility; therefore, the District is not charging fees to cover the depreciation costs. Total depreciation and amortization cost has been \$3,828,329 and \$3,697,934 during the past two years. The net loss for the same two years was \$2,985,522 and \$452,169. At the end of the current year, the District had excess coverage for the current post closure costs of \$619,591. In addition, the District has also increased its cash balances for the past two years by \$1,019,686 and \$616,528. The District's position is they are charging appropriate rates to generate the needed cash to finance the current operations, cover the post closure costs and capital asset needs for the future.

We were not engaged to and did not perform an audit, the objective of which would be the expression of an opinion on the specified elements, accounts or items. Accordingly, we do not express such an opinion. Had we performed additional procedures, other matters might have come to our attention that could have been reported to you. Additionally, we did not audit the District's response to finding #3 and, accordingly, we express no opinion on it.

This report is intended solely for the use of the District's Board of Directors and Management and should not be used by those who have not agreed to the procedures and taken responsibility for the sufficiency of the procedures for their purposes.

*Crane, Christensen, Palmer + Ambrose P.C.*

# Solid Waste Section: EPA Documents

- The Volunteer Monitor's Guide to Quality Assurance Plans  
The guide has a lot of graphics that make it slow to view.
- EPA Illegal Dumping Prevention Guidebook

## 2012 Financial Assurance Inflation Adjustment

Each year's "Solid Waste Facility Annual Report" must contain, when applicable, inflation adjusted cost estimates for closure, post-closure care, and corrective action or a new cost estimate. If an inflation adjusted cost estimate is to be used, it must be based on US Department of Commerce, Bureau of Economic Analysis' (BEA) Gross Domestic Product implicit price deflator. To assist in the preparation of inflation adjusted cost estimates and to provide consistency the Division uses the January 27, 2012 number. For the annual report submitted March 1, 2012 the cost estimates from the 2012 report must be multiplied by **1.02105**.

If you have used an incorrect multiplier in the past, or you do not have a 2012 cost estimate, please contact Ralph Bohn (801-536-0212) for assistance in obtaining the correct previous values of the inflation multiplier to use.

## Comments

For more information, please contact Ralph Bohn (801-536-0212).

<b>Closure and Post Closure Costs as of:</b>	<b>6/30/2011</b>	<b>6/30/2012</b>
CPI Adjustment	0.947900%	2.105000%
Multiplier	1.0094790	1.0210500
<b><u>Landfill Closure Costs</u></b>		
Unlined Cell Closure Costs (Closed)	\$ -	\$ -
Stage A Closure Costs (Closed)	\$ -	\$ -
Stage B Closure Costs - 2016	\$ 3,882,118	\$ 3,963,837
Stage C Closure Costs - 2019	\$ 4,858,814	\$ 4,961,092
Stage D Closure Costs - 2028	\$ -	\$ -
Stage E Closure Costs - 2019	\$ -	\$ -
Stage F Closure Costs - 2028	\$ -	\$ -
Stage G Closure Costs -2028	\$ -	\$ -
<b>Total Landfill Closure Costs</b>	<b>\$ 8,740,932</b>	<b>\$ 8,924,929</b>
Landfill Post Closure Costs	\$ 2,266,398	\$ 2,314,106
<b>Total Landfill Closure and Post-Closure Costs</b>	<b>\$ 11,007,330</b>	<b>\$ 11,239,035</b>
<b><u>Energy Recovery Facility</u></b>		
Total Energy Recovery Facility Closure Costs	\$ 90,211	\$ 92,110
<b>Total Closure and Post Closure Costs</b>	<b>\$ 11,097,541</b>	<b>\$ 11,331,145</b>
<b>Permitted Landfill Capacity - Cubic Yards</b>		
Permitted Unlined Cell Capacity	2,463,782	2,463,782
Permitted Lined Cell Capacity	6,066,887	6,066,887
<b>Permitted Total Landfill Capacity</b>	<b>8,530,669</b>	<b>8,530,669</b>
<b><u>Total Landfill Capacity Used</u></b>		
Permitted Unlined Cell Capacity Used	2,463,782	2,463,782
Permitted Lined Cell Capacity Used	2,359,872	2,558,405
<b>Total Waste in Landfill</b>	<b>4,823,654</b>	<b>5,022,187</b>
<b>% Used</b>	<b>57%</b>	<b>59%</b>
<b>Total Landfill Capacity Remaining</b>		
Remaining Capacity	3,707,015	3,508,482
<b>% Remaining Capacity</b>	<b>43%</b>	<b>41%</b>
<b>Unlined Cell</b>		
Permitted	2,463,782	2,463,782
Waste in Unlined Cell	2,463,782	2,463,782
Remaining	0	0
<b>% Remaining</b>	<b>0%</b>	<b>0%</b>
<b>% Used</b>	<b>100%</b>	<b>100%</b>
<b>Lined Cell</b>		
Permitted	6,066,887	6,066,887
Waste in Lined Cell	2,359,872	2,558,405
Remaining	3,707,015	3,508,482
<b>% Remaining</b>	<b>61%</b>	<b>58%</b>
<b>% Used</b>	<b>39%</b>	<b>42%</b>
<b>Estimate Life of WTE</b>		
<b>Cost</b>		
Buildings - Plant	\$ 47,931,364	\$ 13,705,282
Equipment - Plant	\$ -	\$ 34,741,627
<b>Total Cost</b>	<b>\$ 47,931,364</b>	<b>\$ 48,446,909</b>

<b>Accumulated Depreciation</b>		
Buildings - Plant	\$ 40,763,188	\$ 10,757,761
Equipment - Plant	\$ -	\$ 31,356,314
<b>Total Depreciation</b>	<b>\$ 40,763,188</b>	<b>\$ 42,114,075</b>
<b>Net Book Value</b>	<b>\$ 7,168,176</b>	<b>\$ 6,332,834</b>
% Used	85%	87%
<b>Closure and Post Closure Liability</b>		
Landfill Closure	\$ 8,740,932	\$ 8,924,929
% Used	<u>39%</u>	<u>42%</u>
Landfill Closure Liability ( Lined Cells)	\$ 3,408,963	\$ 3,748,470
Landfill Post Closure	\$ 2,266,398	\$ 2,314,106
% Used (Total landfill)	<u>57%</u>	<u>59%</u>
Total Landfill Post Closure Liability	\$ 1,291,847	\$ 1,365,323
Total Landfill Closure & Post Closure Liability	\$ 4,700,810	\$ 5,113,793
Energy Recovery Facility Closure	\$ 90,211	\$ 92,110
Total Closure & Post Closure - Depreciation	<u>85%</u>	<u>87%</u>
Energy Recovery Facility Closure Liability	\$ 76,679	\$ 80,136
Total Closure & Post Closure Liability	\$ 4,777,490	\$ 5,193,928
<b>Largest Area Closure Costs</b>		
Unlineds Cell (Closed)	\$ -	\$ -
Stage A Closure (Closed)	\$ -	\$ -
Stage B Closure	\$ 3,882,118	\$ 3,963,837
Stage C Closure	\$ 4,858,814	\$ 4,961,092
Post Closure	\$ 2,266,398	\$ 2,314,106
Landfill Subtotal	<u>\$ 11,007,330</u>	<u>\$ 11,239,035</u>
Energy Recovery Facility Closure Costs	<u>\$ 90,211</u>	<u>\$ 92,110</u>
Total Largest Area Closure and Post-Closure Current Costs	<u>\$ 11,097,541</u>	<u>\$ 11,331,145</u>
Total Revenue	\$ 15,807,202	\$ 15,997,462
Less gain (Loss) on sale of assets	\$ 2,135	\$ 242,875
Total annual Revenue for fiscal year	\$ 15,805,067	\$ 15,754,587
43% of the local government's total revenue	<u>43%</u>	<u>43%</u>
Maximum allowable assurance by financial test	\$ 6,796,179	\$ 6,774,472
Coverage Requirement	\$ 11,097,541	\$ 11,331,145
Financial Test Allowance	\$ 6,796,179	\$ 6,774,472
Remaining	\$ 4,301,362	\$ 4,556,673
Escrow Balance	\$ 4,682,287	\$ 5,176,264
Coverage Excess (Short)	<u>\$ 380,925</u>	<u>\$ 619,591</u>
Cash + Marketable Securities	\$ 25,453,759	\$ 26,473,445
Total Expenditures	\$ 16,259,372	\$ 19,007,173
<b>Ratio (&gt; or = to 0.05)</b>	<b>1.57</b>	<b>1.39</b>
Annual Debt Service	\$ -	\$ -
Total Expenditures	\$ 16,259,372	\$ 19,007,173
<b>Ratio (&lt; r= to 0.20)</b>	<b>0.00</b>	<b>0.00</b>

Volumes In Place as of June 31, 2012

Year	Landfill										Waste Processed at Plant (ton/yr)	District Wide			
	Yearly MSW Placement at Landfill		MSW Cumulative		Yearly Ash Placement		Ash Cumulative		Yearly MSW & Ash			MSW & Ash Cumulative	Waste Disposed (ton/yr)	Percentage Increase in Tonnage	
	(ton/yr)	(cy/yr)	(ton)	(cy)	(ton/yr)	(cy/yr)	(ton)	(cy)	(ton/yr)	(cy/yr)					(ton)
1953	885	1,478	885	1,478			0	0	885	1,478					
1954	1,771	2,951	2,656	4,427			0	0	1,771	2,951					
1955	2,656	4,427	5,312	8,854			0	0	2,656	4,427					
1956	3,542	5,903	8,854	14,757			0	0	3,542	5,903					
1957	4,427	7,378	13,281	22,135			0	0	4,427	7,378					
1958	5,312	8,854	18,594	30,989			0	0	5,312	8,854					
1959	6,198	10,330	24,791	41,319			0	0	6,198	10,330					
1960	7,083	11,805	31,675	53,125			0	0	7,083	11,805					
1961	7,969	13,281	39,843	66,406			0	0	7,969	13,281					
1962	8,854	14,757	48,698	81,163			0	0	8,854	14,757					
1963	9,740	16,233	58,437	97,395			0	0	9,740	16,233					
1964	10,625	17,708	69,062	115,103			0	0	10,625	17,708					
1965	11,510	19,184	80,572	134,287			0	0	11,510	19,184					
1966	12,396	20,660	92,968	154,047			0	0	12,396	20,660					
1967	13,281	22,135	106,249	177,082			0	0	13,281	22,135					
1968	14,167	23,611	120,416	200,693			0	0	14,167	23,611					
1969	15,052	25,087	135,468	225,780			0	0	15,052	25,087					
1970	15,937	26,562	151,405	252,342			0	0	15,937	26,562					
1971	16,823	28,038	168,226	280,360			0	0	16,823	28,038					
1972	17,708	29,514	185,936	309,894			0	0	17,708	29,514					
1973	18,594	30,989	204,630	340,883			0	0	18,594	30,989					
1974	19,479	32,465	224,009	373,348			0	0	19,479	32,465					
1975	20,364	33,941	244,373	407,289			0	0	20,364	33,941					
1976	21,250	35,416	265,623	442,705			0	0	21,250	35,416					
1977	22,135	36,892	287,758	479,597			0	0	22,135	36,892					
1978	23,021	38,368	310,779	517,965			0	0	23,021	38,368					
1979	23,906	39,843	334,685	557,808			0	0	23,906	39,843					
1980	24,791	41,319	359,476	599,127			0	0	24,791	41,319					
1981	25,677	42,795	385,153	641,922			0	0	25,677	42,795					
1982	26,562	44,271	411,718	688,193			0	0	26,562	44,271					
1983	27,448	45,746	439,183	731,939			0	0	27,448	45,746					
1984	28,333	47,222	467,496	779,161			0	0	28,333	47,222					
1985	29,219	48,698	496,715	827,956			0	0	29,219	48,698					
1986	30,104	50,173	526,819	878,032			0	0	30,104	50,173					
1987	30,989	51,649	557,808	929,681	1,742	1,161	1,742	1,161	32,731	52,810	559,550	930,842	6,898		
1988	31,875	53,125	589,683	982,805	27,147	18,098	28,889	19,259	59,022	71,223	618,572	1,002,064	103,616		
1989	32,760	54,600	622,443	1,037,405	30,609	20,406	59,498	39,665	63,369	75,008	681,941	1,077,071	111,549		
1990	33,646	56,076	656,089	1,093,481	30,214	20,143	89,712	59,808	63,860	76,219	745,801	1,163,289	108,623		
1991	34,531	57,552	690,620	1,151,033	29,874	19,783	119,388	79,591	64,205	77,334	810,006	1,230,624	106,022		
1992	35,416	59,027	726,036	1,210,060	31,583	21,122	151,069	100,713	67,099	80,149	877,105	1,310,775	104,826		
1993	36,302	60,503	762,338	1,270,563	24,077	16,051	175,146	116,784	60,379	76,554	937,484	1,387,327	101,616		
1994	46,428	80,708	810,783	1,351,272	32,483	21,655	207,629	138,419	80,906	102,364	1,018,392	1,601,651	126,463	173,868	
1995	72,761	121,268	863,524	1,472,540	33,938	22,625	241,667	161,045	106,699	143,894	1,125,091	1,704,014	126,662	199,413	15%
1996	67,810	112,683	951,134	1,585,223	31,398	20,932	272,965	181,977	99,008	133,615	1,224,099	1,647,908	122,602	190,212	-5%
1997	97,247	138,924	1,048,381	1,724,148	32,969	21,879	305,934	203,956	130,216	160,904	1,354,315	1,828,104	117,860	214,897	13%
1998	118,732	165,331	1,164,113	1,889,479	34,663	23,102	340,587	227,058	150,385	188,433	1,504,700	2,116,537	128,808	244,540	14%
1999	136,407	194,867	1,300,520	2,084,346	34,616	23,077	375,202	250,135	171,022	217,944	1,675,722	2,334,481	126,722	262,129	7%
2000	122,377	174,824	1,422,897	2,259,170	34,944	23,296	410,146	273,431	157,321	198,120	1,833,043	2,532,601	130,046	252,423	-4%
2001	148,999	212,856	1,571,896	2,472,026	30,468	20,305	440,604	293,736	179,457	233,161	2,012,600	2,766,762	113,687	262,586	4%
2002	123,775	176,821	1,685,671	2,648,848	32,439	21,628	473,043	315,382	156,214	198,447	2,168,714	2,964,210	120,148	243,921	-7%
2003	120,117	171,598	1,815,788	2,820,443	33,174	22,118	508,217	337,478	153,291	193,712	2,322,005	3,157,921	116,690	238,807	-2%
2004	126,266	178,937	1,941,044	2,999,380	36,337	24,225	542,554	361,703	161,593	203,162	2,483,598	3,361,083	124,101	249,357	4%
2005	135,069	192,941	2,076,103	3,192,322	33,408	22,272	575,962	383,975	168,487	215,213	2,652,085	3,576,297	116,262	251,311	1%
2006	137,723	196,747	2,213,826	3,389,068	37,476	24,983	613,437	408,958	175,197	221,730	2,827,282	3,796,028	127,416	265,138	6%
2007	155,035	221,478	2,368,960	3,610,547	33,345	22,230	646,781	431,167	188,379	243,708	3,015,642	4,041,734	123,240	278,275	5%
2008	144,214	206,020	2,513,074	3,816,567	33,848	22,432	680,429	453,619	177,962	228,462	3,193,604	4,270,186	123,241	267,455	-4%
2009	146,084	207,277	2,658,168	4,023,844	30,397	20,265	710,827	473,884	175,491	227,542	3,368,995	4,497,728	117,392	262,486	-2%
2010	130,282	186,117	2,788,450	4,209,981	31,868	21,239	742,685	495,123	162,140	207,356	3,531,136	4,705,084	124,360	254,642	-3%
2011	128,601	183,716	2,917,051	4,393,677	33,716	22,477	778,400	517,600	162,316	206,193	3,693,451	4,911,277	127,656	258,259	1%
June 12	70,657	101,224	2,987,908	4,494,901	14,530	9,687	790,930	527,266	85,386	110,910	3,778,838	5,022,187	66,924	127,780	-50%

Total Landfill: 8,530,689 = Permitted Design Capacity of Landfill  
 5,022,187 = Waste In Landfill  
 3,508,482 = Volume Remaining Total Site  
 59% = Percentage of Total Landfill Used

Unlined Cell: 2,463,782 = Permitted Design Capacity of Unlined Cell (Closed)  
 0 = Volume Remaining  
 100% = Percentage of Unlined Landfill Used

Lined Cell: 6,066,887 = Permitted Design Capacity of Lined Cell  
 2,558,405 = Waste In Lined Cell  
 3,508,482 = Volume Remaining In Lined Cell  
 42% = Percentage of Lined Cell Used

Notes:

Design Landfill Capacity = 8,530,689 cubic yards of waste per 2007 permit

Aerial survey data indicates that as of June 1996 the landfill had received 1,781,100 cubic yards of waste. To estimate the total received through December 1986, 1,847,908 cubic yards, it was assumed that half the waste received during 1988 was received after the June survey.

The amount of waste received during 1994 and later is documented by scale house records.

Waste placement rates for the years prior to scale records was estimated by distributing the remaining volume, 1,270,563 cy, over the years 1953 through 1993 assuming an annual increase of 885 tons per year.

1200 lb/cy in place density 1952 through 1998

1400 lb/cy in place density thereafter

# Landfill Scale Report

For 1/1/2012 To 6/30/2012

Run: 8/6/2012 5:05:56 PM

	Total		Cash Customers			Other Waste Types			Recycled Materials				Ash		
	Waste Received	Total Loads	Cash Waste Rec	Cash Loads	Non Process In	C D	Clean Fill	Green Waste	Tires	Mulch	Compost	Carpet Pad	Metals	Metal from Ash	Waste Landfilled
Jan 2012	8,985.45	8,740	2,411.65	4,904	16.09	1,657.10	114.66	684.20	0.00	42.50	5.50	4.78	31.89	276.12	8,280.67
Feb 2012	7,992.12	6,865	2,280.05	4,945	14.64	1,862.18	179.24	605.30	0.17	40.25	43.50	7.30	29.40	325.84	7,364.59
Mar 2012	9,801.27	12,865	3,734.80	10,894	21.75	2,287.39	193.59	1,273.07	0.00	752.85	535.50	6.61	59.07	415.09	8,484.28
Apr 2012	16,767.60	16,043	4,365.04	13,077	12.43	2,124.71	163.42	2,070.73	1.78	1,927.75	1,382.25	7.28	106.49	211.17	14,593.75
May 2012	22,976.26	17,839	4,930.49	14,165	72.55	2,638.35	437.05	2,417.16	5.78	2,705.00	2,078.25	7.29	107.23	229.04	20,511.35
Jun 2012	13,423.21	15,384	4,501.37	12,866	39.20	2,295.81	462.31	1,738.57	0.66	1,653.25	912.50	7.82	93.32	232.89	11,622.04
<b>Totals</b>	<b>79,945.91</b>	<b>75,536</b>	<b>22,223.42</b>	<b>60,851</b>	<b>176.66</b>	<b>13,065.53</b>	<b>1,550.26</b>	<b>8,789.03</b>	<b>8.39</b>	<b>7,121.60</b>	<b>4,957.50</b>	<b>41.08</b>	<b>427.40</b>	<b>1,690.15</b>	<b>70,856.88</b>
<b>District</b>	<b>137,078.62</b>	<b>84,863</b>	<b>22,378.23</b>	<b>61,263</b>					<b>89.49</b>					<b>Ash Landfilled</b>	<b>14,529.79</b>
														<b>Total Tons Recycled</b>	<b>11,104.47</b>
														<b>Household Haz Waste</b>	<b>1.00</b>
														<b>Refrigerators</b>	<b>255</b>
														<b>Batteries</b>	<b>911</b>
														<b>E-Waste</b>	<b>148.42</b>



## Plant Scale Report

For 1/1/2012 To 6/30/2012

Run: 8/6/2012 5:05:56 PM

	Total	Cash Customers				Recycled Materials			Ash		Waste To Inventory
		Waste Received	Total Loads	Cash Waste Received	Cash Loads	Non Process	Tires	Carpet Pad	Metals	Ash	
January 2012	9,600.01	1,653	25.28	77	16.09	4.19	0.00	0.00	2,452.66	174	9,583.92
February 2012	9,025.45	1,590	33.78	78	14.64	16.61	0.00	0.00	2,612.98	188	9,010.81
March 2012	11,880.08	1,993	15.94	68	21.75	11.29	0.00	0.00	3,018.01	219	11,858.33
April 2012	7,889.60	1,288	23.80	58	12.43	11.88	0.00	0.00	3,502.44	168	7,877.17
May 2012	6,452.41	920	17.56	30	72.55	17.72	0.00	21.51	1,166.20	74	6,358.35
June 2012	12,285.15	1,883	38.44	101	39.20	19.41	0.00	10.84	3,467.65	240	12,235.11
<b>Totals:</b>	<b>57,132.70</b>	<b>9,327</b>	<b>154.82</b>	<b>412</b>	<b>176.66</b>	<b>81.10</b>	<b>0.00</b>	<b>32.35</b>	<b>16,219.94</b>	<b>1,063</b>	<b>56,923.69</b>
<b>District:</b>	<b>137,078.62</b>	<b>84,863</b>	<b>22,378.23</b>	<b>61,263</b>		<b>89.49</b>					

Fixed Assets Inventory List

ranges:

Asset ID:	First to Last	Cost Basis:	First to Last
Description:	First to Last	Accum Depr:	First to Last
Asset Type:	First to Last	Net Book:	First to Last
Structure ID:	First to Last	Amort Code:	First to Last
Class ID:	BUILDINGS to BUILDINGS	Pl in Svc Date:	First to Last
Location ID:	PLANT to PLANT	Acquire Date:	First to Last
Property Type:	First to Last		
Quantity:	First to Last		

Sorted By: Asset ID

Description	Asset ID	Location ID	Qty	Cost Basis	Accum Depr	Net Book
PLANT OFFICE BUILDING	00010-1	PLANT	1	\$132,564.97	\$106,058.04	\$26,506.93
PLANT MANAGERS OFFICE	00011-1	PLANT	1	\$15,903.10	\$15,903.10	\$0.00
PLANT BUILDING	00012-1	PLANT	1	\$12,420,334.89	\$9,825,683.09	\$2,594,651.80
PLANT CONTROL ROOM REMODEL	00012-2	PLANT	1	\$11,528.00	\$2,200.11	\$9,327.89
PLANT MANAGER'S OFFICE REMODEL	00012-3	PLANT	1	\$2,969.00	\$211.33	\$2,757.67
PLANT CONFERENCE ROOM REMODEL	00012-4	PLANT	1	\$13,984.75	\$867.58	\$13,117.17
PLANT PURCHASING OFFICE IMPROVEM	00040-1	PLANT	1	\$1,041.50	\$1,041.50	\$0.00
CITIZENS FACILITY	00118-1	PLANT	1	\$570,003.61	\$423,703.02	\$146,300.59
STORAGE TRAILER AT PLANT	00137-1	PLANT	1	\$3,100.00	\$3,100.00	\$0.00
CITIZENS FACILITY ASPHALT	00154-1	PLANT	1	\$6,932.00	\$4,783.11	\$2,148.89
MAINT SHOP HEATER-DEMIN RM	00329-1	PLANT	1	\$9,076.60	\$9,076.60	\$0.00
INERGEN/FIRE CONTROL SYS-CONTROL	00337-1	PLANT	1	\$8,181.00	\$8,181.00	\$0.00
STORAGE BLDG - PLANT	00354-1	PLANT	1	\$138,843.93	\$91,142.29	\$47,701.64
RECVG CLERK OFFICE REMODEL	00400-1	PLANT	1	\$2,506.39	\$2,506.39	\$0.00
SAFETY OFFICER OFFICE REMODEL	00401-1	PLANT	1	\$4,067.25	\$4,067.25	\$0.00
PLANT SCALEHOUSE	00445-1	PLANT	1	\$187,346.95	\$141,315.55	\$46,031.40
PURCH. & RECV. NEW OFFICES	00476-1	PLANT	1	\$11,170.37	\$11,170.37	\$0.00
NEW INVENTORY OFFICE	00525-1	PLANT	1	\$7,156.47	\$4,690.44	\$2,466.03
CONTROL ROOM REMODEL	00554-1	PLANT	1	\$4,188.55	\$4,188.55	\$0.00
HAZMAT FACILITY - PLANT	00560-1	PLANT	1	\$47,619.73	\$28,618.82	\$19,000.91
FRONT OF PLANT SEWERLINE	00614-1	PLANT	1	\$8,300.00	\$4,680.34	\$3,619.66
PLATFORM - BLOW DOWN VALVES	00615-1	PLANT	1	\$9,305.46	\$9,305.46	\$0.00
FIRE CONTROL SYSTEM	00617-1	PLANT	1	\$44,550.00	\$44,550.00	\$0.00
PLANT PATIO (DECK & AWNING)	00675-1	PLANT	1	\$6,125.00	\$3,298.58	\$2,826.42
PURCHASING OFFICE - PLANT	00834-1	PLANT	1	\$14,152.40	\$6,485.39	\$7,667.01
PLANT BUILDING LENNOX KCA A/C UN	01053-1	PLANT	1	\$24,330.00	\$932.62	\$23,397.38
26 Assets			26	\$13,705,281.92	\$10,757,760.53	\$2,947,521.39

Fixed Assets Inventory List

Sortanges:

Asset ID: First to Last  
 Description: First to Last  
 Asset Type: First to Last  
 Structure ID: First to Last  
 Class ID: WST/ENRGY EQUIP to WST/ENRGY EQUIP  
 Location ID: First to Last  
 Property Type: First to Last  
 Quantity: First to Last

Cost Basis: First to Last  
 Accum Depr: First to Last  
 Net Book: First to Last  
 Amort Code: First to Last  
 Pl in Svc Date: First to Last  
 Acquire Date: First to Last

Sorted By: Asset Description

Description	Asset ID	Location ID	Qty	Cost Basis	Accum Depr	Net Book
ASH EXTRACTOR UPGRADE	00637-1	PLANT	1	\$485,489.50	\$376,214.47	\$109,275.03
ASH GRAPPLE BUCKET	01076-1	PLANT	1	\$68,985.00	\$2,304.54	\$66,680.46
BURNING EQUIPMENT	00015-1	PLANT	1	\$12,420,334.89	\$12,420,334.89	\$0.00
CEMS ANALYZERS - ECHO-CHEM ANALYT	00678-1	PLANT	1	\$163,962.08	\$112,016.81	\$51,945.27
CLAM SHELL ASH GRAPPLE	00024-1	PLANT	1	\$63,902.19	\$63,902.19	\$0.00
CRANE SCALE REBUILD	00406-1	PLANT	1	\$27,210.15	\$27,210.15	\$0.00
DURAG 290 OPA-CITY MONITORS A & B	00848-1	PLANT	1	\$33,730.00	\$19,279.94	\$14,450.06
FEEDGRATE SYSTEM UPGRADE	00473-1	PLANT	1	\$504,437.99	\$341,511.48	\$162,926.51
FIELD VIEW SYSTEM-SOFTWARE	00194-1	PLANT	1	\$7,303.68	\$7,303.68	\$0.00
FURNACE CAMERAS	00248-1	PLANT	1	\$28,450.00	\$28,450.00	\$0.00
GEN BANK WET DRAG CONVEYOR	01079-1	PLANT	1	\$86,405.00	\$2,405.62	\$83,999.38
GSA SYSTEM (PLANT EMISSIONS SCRU	00486-1	PLANT	1	\$6,905,653.31	\$4,525,230.22	\$2,380,423.09
HOIST CRANE - ATTACHED REFUSE CR	00407-1	PLANT	1	\$3,460.98	\$3,460.98	\$0.00
LIFT STATION 7 IMPROVEMENTS	00018-1	PLANT	1	\$19,060.10	\$19,060.10	\$0.00
LS-7 REPLACEMENT	00290-1	PLANT	1	\$15,269.37	\$15,269.37	\$0.00
ORANGE PEEL CRANE GRAPPLE	00023-1	PLANT	1	\$73,293.50	\$73,293.50	\$0.00
ORANGE PEEL CRANE GRAPPLE - SN#	00391-1	PLANT	1	\$49,466.00	\$49,466.00	\$0.00
PATRN MOLD-SLIDER CARRIAGE ROLLE	00491-1	PLANT	1	\$1,137.00	\$1,137.00	\$0.00
PATRN MOLDS LOWER FDGRATE TILE 8	00299-1	PLANT	1	\$2,848.56	\$2,848.56	\$0.00
PATRN MOLDS UPPER FDGRATE TILE 8	00300-1	PLANT	1	\$2,848.56	\$2,848.56	\$0.00
PATTERN MOLD - TUMBLER GRATE	00047-1	PLANT	1	\$15,320.00	\$7,911.69	\$7,408.31
PATTERN MOLD 8027 1ST ROW CARRIA	00256-1	PLANT	1	\$1,500.00	\$1,500.00	\$0.00
PATTERN MOLDS FOR GRATES	00540-1	PLANT	1	\$3,950.00	\$3,950.00	\$0.00
PLANT ASH BASIN	00027-1	PLANT	1	\$41,844.84	\$41,844.84	\$0.00
PLANT POLLUTION EQUIPMENT	00013-1	PLANT	1	\$12,420,334.89	\$12,420,334.89	\$0.00
PLANT STACK ANALYZIER	00014-1	PLANT	1	\$48,282.32	\$48,282.32	\$0.00
PRECIPITATOR CONTROL UPGRADE	00313-1	PLANT	1	\$62,660.31	\$62,660.31	\$0.00
PRIMARY AIR FANS	00360-1	PLANT	1	\$51,783.25	\$51,783.25	\$0.00
RAW WATER PUMP UPGRADE	00294-1	PLANT	1	\$25,539.12	\$25,539.12	\$0.00
ROTARY SEAL FEEDER (AIR LOCKS)	00394-1	PLANT	1	\$4,578.00	\$4,578.00	\$0.00
SHAKER TABLE REBUILD - 2006 SHUT	00754-1	PLANT	1	\$110,028.99	\$94,322.86	\$15,706.13
SHAKER TABLES	00338-1	PLANT	1	\$19,736.31	\$19,736.31	\$0.00
SMART TRANSMITTERS	00195-1	PLANT	1	\$4,856.00	\$4,856.00	\$0.00
STEAM STOP VALVES	00260-1	PLANT	1	\$4,450.00	\$4,450.00	\$0.00
TURBINE CNTRIFUGE	00168-1	PLANT	1	\$9,439.80	\$1,730.89	\$7,708.91
UNDERFIRE CONVEYOR A & B	00005-1	PLANT	1	\$775,770.25	\$290,980.22	\$484,790.03
UTAH POWER AND LIGHT HOOKUP	00025-1	PLANT	1	\$144,611.38	\$144,611.38	\$0.00
VI-CLR PRECIPITATORS PLT UPGRADE	00463-1	PLANT	1	\$33,694.13	\$33,694.13	\$0.00

38 Assets

38 \$34,741,627.45 \$31,356,314.27 \$3,385,313.18

Account: 00-830-11000-0005  
Currency:

Cash Equivalents - Landfill Closure Escrow Account

Period	Debit	Credit	Net Change	Period Balance
Beginning Balance			\$4,682,286.58	\$4,682,286.58
July	\$460,005.40		\$460,005.40	\$5,142,291.98
August	\$2,435.85		\$2,435.85	\$5,144,727.83
September	\$2,520.66		\$2,520.66	\$5,147,248.49
October	\$2,769.84		\$2,769.84	\$5,150,018.33
November	\$2,873.93		\$2,873.93	\$5,152,892.26
December	\$3,146.85		\$3,146.85	\$5,156,039.11
January	\$3,282.44		\$3,282.44	\$5,159,321.55
February	\$3,258.67		\$3,258.67	\$5,162,580.22
March	\$3,480.29		\$3,480.29	\$5,166,060.51
April	\$3,371.71		\$3,371.71	\$5,169,432.22
May	\$3,475.88		\$3,475.88	\$5,172,908.10
June	\$3,356.28		\$3,356.28	\$5,176,264.38
Totals:	\$5,176,264.38	\$0.00	\$5,176,264.38	\$5,176,264.38

SW101

Division of  
Solid and Hazardous Waste

FEB 28 2013

2013-002167

**WASATCH**

**INTEGRATED**

waste management district

Ash Residue  
Characterization Report  
2012

# WASATCH

waste management district

February 27, 2013

Scott Anderson, Director  
Utah Division of Solid and Hazardous Waste  
288 North 1460 West  
Salt Lake City, Utah 84114-4880  
Attention: Roy Van Os

Re: Residue Characterization 2012, Davis Energy Recovery Facility

Dear Mr. Anderson:

Wasatch Integrated Waste Management District (Wasatch) owns and operates a municipal solid waste incinerator located in Davis County, Utah. The Davis Energy Recovery Facility operates under Solid Waste Permit Number 9423R1 issued on January 31, 2008 (renewal date January 31, 2018). Under this permit Wasatch is required to characterize ash residue from the energy recovery facility quarterly, to determine the appropriate disposal criteria under RCRA.

This letter reports the results of the quarterly residue sampling for the calendar year 2012. In addition to the sampling events, this letter also includes summaries of sample reduction, laboratory analysis, and data quality assurance.

## **Sample Collection**

Composite residue samples were collected and handled in accordance with the Combined Ash Residue Characterization and Quality Assurance Plan (Plan) (Rigo, 2000).

Due to safety concerns, the combined ash residue samples were taken directly from the bed of the transport vehicle as they left the ash load out area, rather than sampling directly from the ash crane as stated in the Plan. Residue was sampled once per hour. The transport vehicle was stopped and a shovel full of residue was removed from the bed of the truck and placed in a 5-gallon pail and covered. The number of hours that the transport vehicle removes ash determines the number of hours that will make up the two sampling periods for each day.

Two sampling periods per day and seven consecutive hauling days were sampled totaling fourteen samples during each of the quarterly sampling events. The four sampling events began in May, June, July, and October.

Typically samples are collected and analyzed for each quarter during the year, however samples collected during the 1<sup>st</sup> quarter of 2012 (February) were inadvertently contaminated prior to sample reduction and mixing and were, therefore, not analyzed. Following is a brief description of the

series of events leading to the sample contamination and subsequent identification of the contamination problem.

Representative combined ash samples for the first quarter of 2012 were collected and prepared in accordance with the Plan. Upon receipt at the laboratory, the samples were tested to determine which Extraction Fluid would be required by the test method. The laboratory reported that 12 of the 15 samples had been determined to require Extraction Fluid No. 2. As stated in the Plan, and based upon 15 years of sampling history, it is expected that no more than one or two samples should require Extraction Fluid No. 2 in any one quarter. The drastic change in the character of the first quarter ash samples was immediately investigated by the facility to determine the cause of this change as described in the Initial Quality Control Data Screening section of the Plan.

Results of the investigation found that the samples had been contaminated by airborne dust during a maintenance episode at the energy recovery facility. After rough samples are collected, they often contain excess moisture which prevents sample reduction and proper mixing prior to collection of the laboratory sample. In this instance, the lids were removed from the sample buckets to allow the samples to dry sufficiently so they could be screened and reduced as required by the Plan. During this time period, maintenance was performed on refractory within the incinerators which resulted in a heavy coating of dust, within the entire facility, from the sprayed-on refractory mix. At one point during the maintenance, the facility was actually evacuated due to the heavy airborne particulate. The spray-on refractory mix included a large proportion of hydrated lime which explains the unusually high pH observed in the reduced samples. First quarter samples were not analyzed due to the identified contamination problem and an additional set of samples was collected to ensure facility compliance with sampling requirements. All other samples analyzed during 2012 required Extraction Fluid No. 1.

Tables 1 through 4 summarize sample identification used during the four quarterly events (Note: first two sampling events are from samples taken during the 2<sup>nd</sup> Quarter and are identified as AS-2 and AS-2A).

Table 1

<b>Sample Identification – 2<sup>nd</sup> Quarter 2012</b>			
<b>Residue Characterization</b>			
<b>Sample ID</b>	<b>Sample Date</b>	<b>Sample Time</b>	<b>Description</b>
AS-12-02-01	5/29/12	a.m.	4-hour Composite
AS-12-02-02	5/29/12	a.m./p.m.	4-hour Composite
AS-12-02-03	5/30/12	a.m.	4-hour Composite
AS-12-02-04	5/30/12	a.m./p.m.	4-hour Composite
AS-12-02-05	5/31/12	a.m.	4-hour Composite
AS-12-02-06	5/31/12	a.m./p.m.	3-hour Composite
AS-12-02-07	6/1/12	a.m.	4-hour Composite
AS-12-02-08	6/1/12	a.m./p.m.	4-hour Composite
AS-12-02-09	6/4/12	a.m.	4-hour Composite
AS-12-02-10	6/4/12	a.m./p.m.	4-hour Composite
AS-12-02-11	6/5/12	a.m.	4-hour Composite
AS-12-02-12	6/5/12	a.m./p.m.	4-hour Composite
AS-12-02-13	6/6/12	a.m.	4-hour Composite
AS-12-02-14	6/6/12	a.m./p.m.	4-hour Composite

Table 2

<b>Sample Identification – 2<sup>nd</sup> Quarter (A) 2012</b>			
<b>Residue Characterization</b>			
<b>Sample ID</b>	<b>Sample Date</b>	<b>Sample Time</b>	<b>Description</b>
AS-12-02A-01	6/18/12	a.m.	4-hour Composite
AS-12-02A-02	6/18/12	a.m./p.m.	4-hour Composite
AS-12-02A-03	6/19/12	a.m.	4-hour Composite
AS-12-02A-04	6/19/12	a.m./p.m.	4-hour Composite
AS-12-02A-05	6/20/12	a.m.	4-hour Composite
AS-12-02A-06	6/20/12	a.m./p.m.	4-hour Composite
AS-12-02A-07	6/21/12	a.m.	4-hour Composite
AS-12-02A-08	6/21/12	a.m./p.m.	4-hour Composite
AS-12-02A-09	6/22/12	a.m.	4-hour Composite
AS-12-02A-10	6/22/12	a.m./p.m.	4-hour Composite
AS-12-02A-11	6/25/12	a.m.	4-hour Composite
AS-12-02A-12	6/25/12	p.m.	4-hour Composite
AS-12-02A-13	6/26/12	a.m.	4-hour Composite
AS-12-02A-14	6/26/12	p.m.	4-hour Composite

Table 3

<b>Sample Identification – 3<sup>rd</sup> Quarter 2012</b>			
<b>Residue Characterization</b>			
<b>Sample ID</b>	<b>Sample Date</b>	<b>Sample Time</b>	<b>Description</b>
AS-12-03-01	7/25/12	a.m.	4-hour Composite
AS-12-03-02	7/25/12	a.m./p.m.	4-hour Composite
AS-12-03-03	7/26/12	a.m.	4-hour Composite
AS-12-03-04	7/26/12	a.m./p.m.	4-hour Composite
AS-12-03-05	7/27/12	a.m.	4-hour Composite
AS-12-03-06	7/27/12	a.m./p.m.	4-hour Composite
AS-12-03-07	7/30/12	a.m.	4-hour Composite
AS-12-03-08	7/30/12	a.m./p.m.	4-hour Composite
AS-12-03-09	7/31/12	a.m.	4-hour Composite
AS-12-03-10	7/31/12	a.m./p.m.	4-hour Composite
AS-12-03-11	8/1/12	a.m.	4-hour Composite
AS-12-03-12	8/1/12	a.m./p.m.	4-hour Composite
AS-12-03-13	8/2/12	a.m.	4-hour Composite
AS-12-03-14	8/2/12	a.m./p.m.	4-hour Composite



Table 4

Sample Identification – 4 <sup>th</sup> Quarter 2011 Residue Characterization			
Sample ID	Sample Date	Sample Time	Description
AS-12-04-01	10/1/12	a.m.	4-hour Composite
AS-12-04-02	10/1/12	a.m./p.m.	4-hour Composite
AS-12-04-03	10/2/12	a.m.	4-hour Composite
AS-12-04-04	10/2/12	a.m./p.m.	4-hour Composite
AS-12-04-05	10/3/12	a.m.	4-hour Composite
AS-12-04-06	10/3/12	a.m./p.m.	4-hour Composite
AS-12-04-07	10/4/12	a.m.	4-hour Composite
AS-12-04-08	10/4/12	a.m./p.m.	4-hour Composite
AS-12-04-09	10/5/12	a.m.	4-hour Composite
AS-12-04-10	10/5/12	a.m./p.m.	4-hour Composite
AS-12-04-11	10/8/12	a.m.	4-hour Composite
AS-12-04-12	10/8/12	a.m./p.m.	4-hour Composite
AS-12-04-13	10/9/12	a.m.	4-hour Composite
AS-12-04-14	10/9/12	a.m./p.m.	4-hour Composite

#### Sample Reduction, Preparation and Analysis

Once a sample was collected it was stored in a closed bucket until it was prepared for shipment to the analytical laboratory. Samples were prepared according to the procedures listed in the Plan. They are as follows:

- Sample is weighed and results recorded.
- Sample is screened at No. 9 sieve ( $\frac{3}{8}$  inch).
- Reducible oversized material is crushed to minus  $\frac{3}{8}$  inch jaw crusher and recombined with fines.
- Irreducible oversize fraction is weighed, photographed and discarded.
- Minus  $\frac{3}{8}$  inch material is mixed for a minimum of 15 minutes in a rotary cement mixer.
- Sub-samples for extraction and analysis are collected from the rotary mixer using a  $1\frac{1}{2}$  inch diameter sample thief and placed in clean 16 oz borosilicate jars with Teflon lids.
- Laboratory sub-samples are delivered to the analytic laboratory under chain of custody.

Of the fourteen samples obtained a duplicate sub-sample of the minus  $\frac{3}{8}$  fraction was selected using a random number generator. This duplicate sample was labeled AS-X-X-15 in each of the four sampling events.

All samples were delivered under chain of custody to American West Analytical Laboratories (AWAL), a State of Utah Certified Laboratory, for analysis. All samples were extracted in strict

accordance with EPA Method 1311, Toxic Characteristic Leaching Procedure (TCLP) and analyzed using EPA Methods 6010B and 7470A (mercury).

The irreducible fraction was discarded and not included in the sample for laboratory analysis. Photos of the irreducible fraction are kept on file. The omission of this fraction will, on average, bias the results high. This is based on previous laboratory analysis and the relatively large particle size and generally inert nature of the irreducible fraction.

Tables 5 through 8 summarize the weight of the total sample, the weight of the irreducible fraction and analysis requested.

Table 5

Sample Identification – 1 <sup>st</sup> Run of 2 <sup>nd</sup> Quarter 2012						
Residue Characterization						
Sample ID	Total Sample (lb)	Irreducible Fraction		-3/8 inch Sample (lb)	Laboratory Sub-sample (oz)	Analysis Requested
		(lb)	(%)			
AS-12-02-01	13	1	8	12	16	TCLP Lead and Cadmium
AS-12-02-02	11	2	18	9	16	TCLP Lead and Cadmium TCLP 8 RCRA Metals & ZHE Organics
AS-12-02-03	10	1	10	9	16	TCLP Lead and Cadmium
AS-12-02-04	13	1	8	12	16	TCLP Lead and Cadmium
AS-12-02-05	15	.5	3	14.5	16	TCLP Lead and Cadmium
AS-12-02-06	12	1	8	11	16	TCLP Lead and Cadmium
AS-12-02-07	14	1	7	13	16	TCLP Lead and Cadmium
AS-12-02-08	15	2	13	13	16	TCLP Lead and Cadmium
AS-12-02-09	12	1	8	11	16	TCLP Lead and Cadmium
AS-12-02-10	11	2	18	9	16	TCLP Lead and Cadmium
AS-12-02-11	8	1	12	7	16	TCLP Lead and Cadmium TCLP 8 RCRA Metals
AS-12-02-12	10	1	10	9	16	TCLP Lead and Cadmium
AS-12-02-13	10	3	30	7	16	TCLP Lead and Cadmium
AS-12-02-14	11	1	9	10	16	TCLP Lead and Cadmium

Table 6

Sample Identification – 2 <sup>nd</sup> Run of 2 <sup>nd</sup> Quarter 2012						
Residue Characterization						
Sample ID	Total Sample (lb)	Irreducible Fraction		-3/8 inch Sample (lb)	Laboratory Sub-sample (oz)	Analysis Requested
		(lb)	(%)			
AS-12-02A-01	38	1	3	37	16	TCLP Lead and Cadmium
AS-12-02A-02	33	1	3	32	16	TCLP Lead and Cadmium
AS-12-02A-03	35	1	3	34	16	TCLP Lead and Cadmium
AS-12-02A-04	44	.5	1	43.5	16	TCLP Lead and Cadmium
AS-12-02A-05	33	2	6	31	16	TCLP Lead and Cadmium & TCLP 8 RCRA Metals
AS-12-02A-06	33	2	6	31	16	TCLP Lead and Cadmium
AS-12-02A-07	35	13	37	22	16	TCLP Lead and Cadmium
AS-12-02A-08	28	5	2	23	16	TCLP Lead and Cadmium
AS-12-02A-09	31	1	3	30	16	TCLP Lead and Cadmium
AS-12-02A-10	34	2	6	32	16	TCLP Lead and Cadmium
AS-12-02A-11	42	5	12	37	16	TCLP Lead and Cadmium
AS-12-02A-12	39	8	21	31	16	TCLP Lead and Cadmium
AS-12-02A-13	34	6	18	28	16	TCLP Lead and Cadmium
AS-12-02A-14	34	5	18	29	16	TCLP Lead and Cadmium & TCLP 8 RCRA Metals

Table 7

Sample Identification – 3 <sup>rd</sup> Quarter 2012						
Residue Characterization						
Sample ID	Total Sample (lb)	Irreducible Fraction		-3/8 inch Sample (lb)	Laboratory Sub-sample (oz)	Analysis Requested
		(lb)	(%)			
AS-12-03-01	34	8	24	26	16	TCLP Lead and Cadmium
AS-12-03-02	30	4	13	26	16	TCLP Lead and Cadmium
AS-12-03-03	26	3	16	23	16	TCLP Lead and Cadmium & TCLP 8 RCRA Metals
AS-12-03-04	30	3	23	27	16	TCLP Lead and Cadmium
AS-12-03-05	34	7	21	27	16	TCLP Lead and Cadmium
AS-12-03-06	34	7	21	27	16	TCLP Lead and Cadmium
AS-12-03-07	29	5	17	24	16	TCLP Lead and Cadmium
AS-12-03-08	28	4	14	24	16	TCLP Lead and Cadmium
AS-12-03-09	29	7	24	22	16	TCLP Lead and Cadmium
AS-12-03-10	35	7	20	28	16	TCLP Lead and Cadmium & TCLP 8 RCRA Metals
AS-12-03-11	35	5	14	30	16	TCLP Lead and Cadmium
AS-12-03-12	29	8	28	21	16	TCLP Lead and Cadmium
AS-12-03-13	35	9	26	26	16	TCLP Lead and Cadmium
AS-12-03-14	41	6	15	35	16	TCLP Lead and Cadmium

Table 8

Sample Identification – 4 <sup>th</sup> Quarter 2012 Residue Characterization						
Sample ID	Total Sample (lb)	Irreducible Fraction		-3/8 inch Sample (lb)	Laboratory Sub-sample (oz)	Analysis Requested
		(lb)	(%)			
AS-12-04-01	29	8	28	21	16	TCLP Lead and Cadmium
AS-12-04-02	36	10	28	26	16	TCLP Lead and Cadmium
AS-12-04-03	25	7	28	18	16	TCLP Lead and Cadmium
AS-12-04-04	29	8	28	21	16	TCLP Lead and Cadmium
AS-12-04-05	31	6	19	25	16	TCLP Lead and Cadmium
AS-12-04-06	32	8	25	24	16	TCLP Lead and Cadmium
AS-12-04-07	34	6	18	28	16	TCLP Lead and Cadmium & TCLP 8 RCRA Metals
AS-12-04-08	27	7	26	20	16	TCLP Lead and Cadmium
AS-12-04-09	24	8	33	16	16	TCLP Lead and Cadmium
AS-12-04-10	35	8	23	27	16	TCLP Lead and Cadmium
AS-12-04-11	34	6	18	28	16	TCLP Lead and Cadmium
AS-12-04-12	30	7	23	23	16	TCLP Lead and Cadmium
AS-12-04-13	38	6	16	32	16	TCLP Lead and Cadmium & TCLP 8 RCRA Metals
AS-12-04-14	31	6	19	25	16	TCLP Lead and Cadmium

#### Data Validation

The analytical data generated during the 2011 residue characterization has been reviewed and evaluated for completeness, quality, accuracy, and precision according to EPA data validation general guidelines and requirements. Based on this review the data can be reliably used to determine the regulatory status of the residue. Chemical analysis reports for all samples are provided in Attachment 1.

Some of the data has been flagged with qualifiers, which typically designate the value as an estimate or reject the data. The following qualifiers may have been used in this review:

- UJ - The analyte was not detected above the reported sample quantization limit. However, the reported quantization limit is approximate and may or may not represent the actual limit of quantization necessary to accurately and precisely measure the analyte in the sample.
- J - The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
- JFD - The reported value is qualified because the associated field duplicate sample analysis control limits were exceeded.

#### Extraction Fluid

It is important to know which extraction fluid was used in the laboratory analysis. Most ash samples require Extraction Fluid #1. The requirement to use Extraction Fluid #2 may indicate a change in the chemical characteristics of the ash and should be noted. Extraction fluid

determinations are provided in Attachment II.

### **Holding Times**

Holding Times - To ascertain the validity of the results, the holding times (time of collection to time of analysis) was reviewed. All samples analyzed were within the applicable hold time.

### **Completeness**

Four sets of 15 samples, for a total of 60 samples, were sent to the laboratory for analysis during 2012 as indicated on the complete chain of custody forms (Attachment III). Laboratory sample set identification numbers of 1207205, 1209297, 1210097 and 1212454 were assigned to the 1<sup>st</sup> set of 2<sup>nd</sup>, 2<sup>nd</sup> set of 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> quarter sample sets respectively. Analytical reports on all 60 samples were 100 percent complete for all requested analysis.

### **Methods and Detection Limits**

All samples were extracted using EPA method 1311 and analyzed using EPA methods 6010B and 7470A as requested. All reported detection limits are sufficient to meet data objectives.

### **Initial Calibration**

The ICP-AES must be calibrated at least daily and more frequent calibration may be required. Minimum requirements consist of analysis of a blank and a calibration standard. The calibration must be checked by immediate analysis of at least two exposures of the calibration verification standard. The Results must lie within 10 percent of the true value and the percent RSD of the exposures must be less than three percent. All initial calibration criteria were met.

### **Blanks**

The analysis of blanks is used as an indication of contamination in the sample. Sample preparation blanks must be prepared at a rate of one for every 20 samples. All blank results met method requirements for the project data set.

### **Matrix Spike Analysis of Extract**

The matrix spike sample analysis provides information about the effect of the sample matrix on the digestion and measurement methodology. Matrix spikes are required at a rate of one for every 20 samples processed and are required to exhibit recoveries of a certain percentage. All matrix spike analysis and results met method requirements for the project data set.

### **Duplicate Sample Analysis of Extract**

Duplicate analyses are indicators of laboratory precision based on each sample matrix. Some parameters use a duplicate analysis rather than a matrix spike analysis. All duplicate analysis results and associated relative percent differences (RPDs) were below 20%.

### **Field Duplicate Analysis**

Field duplicate analysis provides a means to monitor the performance of the laboratory's precision and the consistency of field sampling techniques. Precision is a measure of the reproducibility of the data. The most commonly used measure is the RPD. This is calculated as the difference between the two measurements divided by the average of the two measurements as:

$$RPD = \frac{2(S - D)}{S + D} \times 100$$

Where:

S = Sample Result  
D = Duplicate Result

The acceptance criteria for sample values greater than 5 times the laboratory detection limit (LDL) is a control limit of +/- 20% for the RPD. If the sample values are less than 5 times the LDL, a control limit of +/- the LDL shall be used. If field duplicate analysis results for a particular analyte fall outside the control windows of +/- 20% or +/- LDL, whichever is appropriate, the results for that analyte in all other samples associated with that laboratory set should be flagged as estimated

It should be noted that field QA/QC samples should not be the basis of accepting or rejecting data, but rather as additional evidence to support the conclusions arrived at by a review of the total data package. Actions taken as a result of duplicate sample analysis must be weighed carefully since it may be difficult to determine if poor precision is a result of sample non-homogeneity, method defects, or laboratory technique. In general, the results of duplicate analysis should be used to support conclusions drawn about the quality of the data rather than as a basis for these conclusions.

Table 9

Field Duplicate Results								
Sample ID	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
<b>1<sup>st</sup> Set of 2<sup>nd</sup> Quarter 2012</b>								
AS-12-02-02	<0.010	0.520	0.101	<0.010	<0.050	<0.010	<0.010	<0.010
AS-12-02-15	<0.010	0.482	0.068	<0.010	<0.050	<0.010	<0.010	<0.010
RPD (%)		7.58	39.05					
<b>2<sup>nd</sup> Set of 2<sup>nd</sup> Quarter 2012</b>								
AS-12-2A-13	<0.010	0.515	0.563	<0.010	0.976	<0.010	<0.010	<0.010
AS-12-2A-15	<0.010	0.341	0.647	<0.010	0.219	<0.010	<0.010	<0.010
RPD (%)		40.65	13.88		126.69			
<b>3<sup>rd</sup> Quarter 2012</b>								
AS-12-3-03	<0.010	0.437	0.102	0.025	0.103	<0.010	<0.010	<0.010
AS-12-3-15	<0.010	0.386	0.069	<0.010	0.059	<0.010	<0.010	<0.010
RPD (%)		12.39	38.60	85.71	54.32			
<b>4<sup>th</sup> Quarter 2012</b>								
AS-12-4-13	<0.010	0.376	0.555	<0.010	0.174	<0.010	<0.010	<0.010
AS-12-4-15	<0.010	0.428	0.583	<0.010	0.271	<0.010	<0.010	<0.010
RPD (%)		12.93	4.92		43.60			

Qualifiers used as a result of the Field duplicate analysis are listed in Table 10, copies of the reports are provided in Attachment IV.

Table 10

Summary of Field Duplicate Qualifiers		
Event	Constituent	Action/Comment

**Laboratory Control Sample**

Laboratory control samples (LCS) demonstrate on a daily basis the ability of the laboratory to analyze samples with good qualitative and quantitative accuracy. LCS are analyzed at a rate of one per 20 samples. Recovery limits for analytes in the LCS are 75-125%. All laboratory control sample results were within acceptable limits, copies of the reports are provided in Attachment V.

**Results**

Laboratory analytical results of the combined residue samples by method 1311 are included in Attachment I. Tables 12 through 15 provide a summary of the analytical results and a comparison to regulatory thresholds for determination of regulatory status.

Table 11

Summary of 1 <sup>st</sup> Set of 2 <sup>nd</sup> Quarter 2012 Residue Characterization								
	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
<b>Concentration For Toxicity Characteristic</b>	5.0	100.0	1.0	5.0	5.0	0.2	1.0	5.0
<b>Sample ID</b>								
AS-12-02-01			0.060		<0.05			
AS-12-02-02	<0.010	0.520	0.101	<0.010	<0.05	<0.010	<0.010	<0.010
AS-12-02-03			0.096		<0.05			
AS-12-02-04			0.007		<0.05			
AS-12-02-05			0.044		<0.05			
AS-12-02-06			0.014		<0.05			
AS-12-02-07			0.035		<0.05			
AS-12-02-08			0.021		<0.05			
AS-12-02-09			0.194		0.058			
AS-12-02-10			0.068		<0.05			
AS-12-02-11	<0.010	0.445	0.357	<0.010	0.078	<0.010	<0.010	<0.010
AS-12-02-12			0.427		0.094			
AS-12-02-13			0.410		0.497			
AS-12-02-14			0.337		0.140			

Table 12

Summary of 2 <sup>nd</sup> Set of 2 <sup>nd</sup> Quarter 2012 Residue Characterization								
	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
<b>Concentration For Toxicity Characteristic</b>	5.0	100.0	1.0	5.0	5.0	0.2	1.0	5.0
<b>Sample ID</b>	<b>TCLP Results</b>							
AS-12-2A-01			0.018		<0.05			
AS-12-2A-02			0.329		0.265			
AS-12-2A-03			0.014		<0.05			
AS-12-2A-04			0.044		<0.05			
AS-12-2A-05	<0.010	0.250	0.055	<0.010	<0.05	<0.010	<0.010	<0.010
AS-12-2A-06			0.475		0.059			
AS-12-2A-07			0.096		<0.05			
AS-12-2A-08			0.078		<0.05			
AS-12-2A-09			0.278		0.079			
AS-12-2A-10			0.343		0.227			
AS-12-2A-11			0.562		0.153			
AS-12-2A-12			0.614		0.187			
AS-12-2A-13	<0.010	0.515	0.563	<0.010	0.976	<0.010	<0.010	<0.010
AS-12-2A-14			0.699		0.139			

Table 13

Summary of 3 <sup>rd</sup> Quarter 2012 Residue Characterization								
	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
<b>Concentration For Toxicity Characteristic</b>	5.0	100.0	1.0	5.0	5.0	0.2	1.0	5.0
<b>Sample ID</b>	<b>TCLP Results</b>							
AS-12-3-01			0.059		<0.050			
AS-12-3-02			0.021		<0.050			
AS-12-3-03	<0.010	0.437	0.102	0.025	0.103	<0.010	<0.010	<0.010
AS-12-3-04			0.124		0.050			
AS-12-3-05			0.050		<0.050			
AS-12-3-06			0.032		<0.050			
AS-12-3-07			0.028		<0.050			
AS-12-3-08			0.035		<0.050			
AS-12-3-09			0.358		0.186			
AS-12-3-10	<0.010	0.434	0.080	<0.010	0.118	<0.010	<0.010	<0.010
AS-12-3-11			0.076		<0.050			
AS-12-3-12			0.072		<0.050			
AS-12-3-13			0.046		<0.050			
AS-12-3-14			0.043		0.131			



Table 14

Summary of 4 <sup>th</sup> Quarter 2012 Residue Characterization								
	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
<b>Concentration For Toxicity Characteristic</b>	5.0	100.0	1.0	5.0	5.0	0.2	1.0	5.0
<b>Sample ID</b>	<b>TCLP Results</b>							
AS-12-4-01			0.335		<0.050			
AS-12-4-02			0.536		0.251			
AS-12-4-03			0.515		0.409			
AS-12-4-04			0.438		0.101			
AS-12-4-05			0.404		0.087			
AS-12-4-06			0.469		0.177			
AS-12-4-07	<0.010	0.436	0.496	<0.010	0.225	<0.010	<0.010	<0.010
AS-12-4-08			0.646		0.137			
AS-12-4-09			0.195		0.050			
AS-12-4-10			0.262		0.212			
AS-12-4-11			0.619		1.620			
AS-12-4-12			0.545		0.88			
AS-12-4-13	<0.010	0.376	0.555	<0.010	0.174	<0.010	<0.010	<0.010
AS-12-4-14			0.941		0.071			

### ZHE Organics

One sample each year is subjected to zero headspace extraction (ZHE) and analyzed for the complete list of RCRA organics. Wasatch Integrated used a random number generator to identify which sample to subject to this analysis; AS-12-02-02 was analyzed for ZHE organics. There were no organics found in the samples. The results of this test can be viewed within the laboratory analytical results provided in Attachment I.

### Conclusions

The analytical results presented in this 2012 report are representative of the ash residue that is being discharged from the energy recovery facility and are of sufficient quality for the determination of the regulatory status of the combined residue under RCRA.

The results show that the combined residue from Wasatch Integrated Waste Management District Energy Recovery Facility to be RCRA non-hazardous.

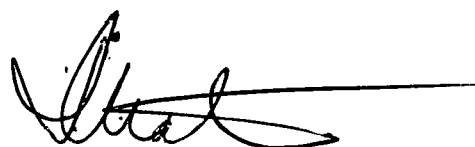
Please do not hesitate to contact us if you have any questions regarding these submissions.

Sincerely,

**Wasatch Integrated Waste Management District**



Nathan Rich, P.E.  
Executive Director



John Watson  
Plant Manager

## LIST OF TABLES AND ATTACHMENTS

### LIST OF TABLES

Table 1	Sample Identification - 1 <sup>st</sup> Quarter 2012
Table 2	Sample Identification - 2 <sup>nd</sup> Quarter 2012
Table 3	Sample Identification - 3 <sup>rd</sup> Quarter 2012
Table 4	Sample Identification - 4 <sup>th</sup> Quarter 2012
Table 5	Sample Reduction Data - 1 <sup>st</sup> Quarter 2012
Table 6	Sample Reduction Data - 2 <sup>nd</sup> Quarter 2012
Table 7	Sample Reduction Data - 3 <sup>rd</sup> Quarter 2012
Table 8	Sample Reduction Data - 4 <sup>th</sup> Quarter 2012
Table 9	Field Duplicate Analysis
Table 10	Field Duplicate Results
Table 11	Summary of 1 <sup>st</sup> Quarter 2012 Residue Characterization
Table 12	Summary of 2 <sup>nd</sup> Quarter 2012 Residue Characterization
Table 13	Summary of 3 <sup>rd</sup> Quarter 2012 Residue Characterization
Table 14	Summary of 4 <sup>th</sup> Quarter 2012 Residue Characterization

### LIST OF ATTACHMENTS

Attachment I	Laboratory Analytical Reports
Attachment II	Extraction Fluid Determination Logs
Attachment III	Chain of Custody Forms
Attachment IV	Duplicate Sample Analysis
Attachment V	Laboratory Quality Control Reports
Attachment VI	Field Sampling Documentation

**ATTACHMENT I**

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**LABORATORY ANALYTICAL REPORTS**

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**1<sup>st</sup> QUARTER EVENT**



### INORGANIC ANALYTICAL REPORT

Client Wassatch Integrated WMD Contact John Watson  
 Project 2nd Qtr 12 Ash Samples  
 Lab Sample ID 1207205-001  
 Client Sample ID AS-12-02-01  
 Collection Date 6/19/2012 1100h  
 Received Date 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results		TCLP METALS Method 1311					
Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	7/16/2012 1210h	7/17/2012 1321h	SW6020A	0.00250	0.0403	*
Lead	mg/L	7/16/2012 1210h	7/17/2012 1321h	SW6020A	0.0500	< 0.0500	*

\* - The reporting limits were raised due to sample matrix interferences

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### INORGANIC ANALYTICAL REPORT

Client Wassatch Integrated WMD Contact John Watson  
 Project 2nd Qtr 12 Ash Samples  
 Lab Sample ID 1207205-002  
 Client Sample ID AS-12-02-02  
 Collection Date 6/19/2012 921h  
 Received Date 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results		TCLP METALS Method 1311					
Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	7/16/2012 1210h	7/17/2012 1402h	SW6020A	0.0100	< 0.0100	*
Barium	mg/L	7/16/2012 1210h	7/17/2012 1402h	SW6020A	0.0500	0.520	*
Cadmium	mg/L	7/16/2012 1210h	7/17/2012 1402h	SW6020A	0.00250	0.101	*
Chromium	mg/L	7/16/2012 1210h	7/17/2012 1402h	SW6010C	0.0100	< 0.0100	*
Lead	mg/L	7/16/2012 1210h	7/17/2012 1402h	SW6020A	0.0500	< 0.0500	*
Mercury	mg/L	7/16/2012 1530h	7/17/2012 809h	SW7470A	0.0100	< 0.0100	*
Selenium	mg/L	7/16/2012 1210h	7/17/2012 1402h	SW6020A	0.0100	< 0.0100	*
Silver	mg/L	7/16/2012 1210h	7/17/2012 1402h	SW6020A	0.0100	< 0.0100	*

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### INORGANIC ANALYTICAL REPORT

Client Wassatch Integrated WMD Contact John Watson  
 Project 2nd Qtr 12 Ash Samples  
 Lab Sample ID 1207205-003  
 Client Sample ID AS-12-02-03  
 Collection Date 7/11/2012 1214h  
 Received Date 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results		TCLP METALS Method 1311					
Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	7/23/2012 1325h	7/24/2012 2355h	SW6020A	0.00250	0.0962	*
Lead	mg/L	7/23/2012 1325h	7/23/2012 1900h	SW6020A	0.0500	< 0.0500	*

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### INORGANIC ANALYTICAL REPORT

Client Wassatch Integrated WMD Contact John Watson  
 Project 2nd Qtr 12 Ash Samples  
 Lab Sample ID 1207205-004  
 Client Sample ID AS-12-02-04  
 Collection Date 6/19/2012 930h  
 Received Date 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results		TCLP METALS Method 1311					
Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	7/16/2012 1210h	7/17/2012 1402h	SW6020A	0.00250	0.00662	*
Lead	mg/L	7/16/2012 1210h	7/17/2012 1402h	SW6020A	0.0500	< 0.0500	*

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 2nd Qtr' 12 Ash Samples  
 Lab Sample ID: 1207205-005  
 Client Sample ID: AS-12-02-05  
 Collection Date: 7/11/2012 1236h  
 Received Date: 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results TCLP METALS Method 1311

TCLP Prep Date	7/20/2012 1600h	Date	Date	Method	Reporting	Analytical	Qual
Compound	Units	Prepared	Analyzed	Used	Limit	Result	
Cadmium	mg/L	7/23/2012 1225h	7/26/2012 2259h	SW6020A	0.00250	0.0444	
Lead	mg/L	7/23/2012 1225h	7/27/2012 1901h	SW6020A	0.0500	< 0.0500	*

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 2nd Qtr' 12 Ash Samples  
 Lab Sample ID: 1207205-006  
 Client Sample ID: AS-12-02-06  
 Collection Date: 6/19/2012 952h  
 Received Date: 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results TCLP METALS Method 1311

TCLP Prep Date	7/15/2012 1630h	Date	Date	Method	Reporting	Analytical	Qual
Compound	Units	Prepared	Analyzed	Used	Limit	Result	
Cadmium	mg/L	7/16/2012 1210h	7/17/2012 1411h	SW6020A	0.00250	0.0137	
Lead	mg/L	7/16/2012 1210h	7/17/2012 1411h	SW6020A	0.0500	< 0.0500	*

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 2nd Qtr' 12 Ash Samples  
 Lab Sample ID: 1207205-007  
 Client Sample ID: AS-12-02-07  
 Collection Date: 7/11/2012 1317h  
 Received Date: 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results TCLP METALS Method 1311

TCLP Prep Date	7/20/2012 1600h	Date	Date	Method	Reporting	Analytical	Qual
Compound	Units	Prepared	Analyzed	Used	Limit	Result	
Cadmium	mg/L	7/23/2012 1225h	7/26/2012 2259h	SW6020A	0.00250	0.0351	
Lead	mg/L	7/23/2012 1225h	7/27/2012 1901h	SW6020A	0.0500	< 0.0500	*

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 2nd Qtr' 12 Ash Samples  
 Lab Sample ID: 1207205-008  
 Client Sample ID: AS-12-02-08  
 Collection Date: 6/19/2012 1012h  
 Received Date: 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results TCLP METALS Method 1311

TCLP Prep Date	7/15/2012 1630h	Date	Date	Method	Reporting	Analytical	Qual
Compound	Units	Prepared	Analyzed	Used	Limit	Result	
Cadmium	mg/L	7/16/2012 1210h	7/17/2012 1411h	SW6020A	0.00250	0.0209	
Lead	mg/L	7/16/2012 1210h	7/17/2012 1411h	SW6020A	0.0500	< 0.0500	*

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 2nd Qtr 12 Ash Samples  
 Lab Sample ID 1207205-009  
 Client Sample ID AS-12-02-09  
 Collection Date 7/11/2012 1356h  
 Received Date 7/13/2012 810h

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Analytical Results		TCLP METALS Method 1311						
Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual	
Cadmium	mg/L	7/23/2012 1225h	7/26/2012 2357h	SW6020A	0.00250	0.194		
Lead	mg/L	7/23/2012 1225h	7/27/2012 1523h	SW6020A	0.0500	0.0585		

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 2nd Qtr 12 Ash Samples  
 Lab Sample ID 1207205-010  
 Client Sample ID AS-12-02-10  
 Collection Date 6/19/2012 1030h  
 Received Date 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

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Analytical Results		TCLP METALS Method 1311						
Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual	
Cadmium	mg/L	7/14/2012 2110h	7/17/2012 1420h	SW6020A	0.00250	0.0680		
Lead	mg/L	7/14/2012 2110h	7/17/2012 1420h	SW6020A	0.0500	< 0.0500	*	

\* The reporting limits were raised due to sample matrix interferences

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 2nd Qtr 12 Ash Samples  
 Lab Sample ID 1207205-011  
 Client Sample ID AS-12-02-11  
 Collection Date 7/11/2012 1419h  
 Received Date 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

463 West 3600 South Salt Lake City, Utah 84115

Analytical Results		TCLP METALS Method 1311						
Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual	
Arsenic	mg/L	7/23/2012 1225h	7/26/2012 2341h	SW6020A	0.0100	< 0.0100	*	
Barium	mg/L	7/23/2012 1225h	7/26/2012 2341h	SW6020A	0.0500	0.445		
Cadmium	mg/L	7/23/2012 1225h	7/26/2012 2341h	SW6020A	0.00250	0.357		
Chromium	mg/L	7/23/2012 1225h	7/26/2012 1615h	SW610C	0.0100	< 0.0100		
Lead	mg/L	7/23/2012 1225h	7/27/2012 1526h	SW6020A	0.0500	0.0777		
Mercury	mg/L	7/23/2012 1115h	7/23/2012 847h	SW7470A	0.0100	< 0.0100		
Selenium	mg/L	7/23/2012 1225h	7/26/2012 2341h	SW6020A	0.0100	< 0.0100	*	
Silver	mg/L	7/23/2012 1225h	7/26/2012 2341h	SW6020A	0.0100	< 0.0100	*	

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 2nd Qtr 12 Ash Samples  
 Lab Sample ID 1207205-012  
 Client Sample ID AS-12-02-12  
 Collection Date 7/11/2012 1434h  
 Received Date 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

463 West 3600 South Salt Lake City, Utah 84115

Analytical Results		TCLP METALS Method 1311						
Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual	
Cadmium	mg/L	7/23/2012 1225h	7/27/2012 004h	SW6020A	0.00250	0.427		
Lead	mg/L	7/23/2012 1225h	7/27/2012 1534h	SW6020A	0.0500	0.0936		

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 2nd Qtr 12 Ash Samples  
 Lab Sample ID 1207205-013  
 Client Sample ID AS-12-02-13  
 Collection Date 7/11/2012  
 Received Date 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

463 West 3600 South Salt Lake City, Utah 84115

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	7/23/2012 1225h	7/27/2012 009h	SW6020A	0.00250	0.410	
Lead	mg/L	7/23/2012 1225h	7/27/2012 1537h	SW6020A	0.0500	0.497	

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Report Date 7/30/2012 Page 14 of 28

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 2nd Qtr 12 Ash Samples  
 Lab Sample ID 1207205-014  
 Client Sample ID AS-12-02-14  
 Collection Date 7/11/2012  
 Received Date 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

463 West 3600 South Salt Lake City, Utah 84115

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	7/23/2012 1225h	7/27/2012 015h	SW6020A	0.00250	0.337	
Lead	mg/L	7/23/2012 1225h	7/27/2012 1540h	SW6020A	0.0500	0.140	

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Report Date 7/30/2012 Page 15 of 28

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### INORGANIC ANALYTICAL REPORT

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 Project 2nd Qtr 12 Ash Samples  
 Lab Sample ID 1207205-015  
 Client Sample ID AS-12-02-15  
 Collection Date 6/19/2012 921h  
 Received Date 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

463 West 3600 South Salt Lake City, Utah 84115

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	7/16/2012 1210h	7/17/2012 1425h	SW6020A	0.0100	< 0.0100	*
Barium	mg/L	7/16/2012 1210h	7/18/2012 209h	SW6020A	0.0500	0.482	
Cadmium	mg/L	7/16/2012 1210h	7/17/2012 1435h	SW6020A	0.00250	0.0677	
Chromium	mg/L	7/16/2012 1210h	7/18/2012 1239h	SW6010C	0.0100	< 0.0100	
Lead	mg/L	7/16/2012 1210h	7/17/2012 1425h	SW6020A	0.0500	< 0.0500	*
Mercury	mg/L	7/16/2012 1518h	7/17/2012 810h	SW7470A	0.0100	< 0.0100	*
Selenium	mg/L	7/16/2012 1210h	7/17/2012 1425h	SW6020A	0.0100	< 0.0100	*
Silver	mg/L	7/16/2012 1210h	7/17/2012 1425h	SW6020A	0.0100	< 0.0100	*

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 Laboratory Director

Jose Rocha  
 QA Officer

Report Date 7/30/2012 Page 16 of 28

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### ORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 2nd Qtr 12 Ash Samples  
 Lab Sample ID 1207205-011A  
 Client Sample ID AS-12-02-11  
 Collection Date 7/11/2012 1419h  
 Received Date 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

463 West 3600 South Salt Lake City, Utah 84115

#### Analytical Results TCLP VOAs by GC/MS Method 8260C/1311/5030C

Compound	Units	Dilution Factor	CAS Number	Reporting Limit	Analytical Result	Qual
1,1-Dichloroethene	mg/L	20	75-35-4	0.0400	< 0.0400	
1,2-Dichloroethane	mg/L	20	107-06-2	0.0400	< 0.0400	
1,4-Dichlorobenzene	mg/L	20	106-46-7	0.0400	< 0.0400	
2-Butanone	mg/L	20	78-93-3	0.200	< 0.200	
Benzene	mg/L	20	71-43-2	0.0200	< 0.0200	
Carbon tetrachloride	mg/L	20	56-23-5	0.0400	< 0.0400	
Chlorobenzene	mg/L	20	108-90-7	0.0400	< 0.0400	
Chloroform	mg/L	20	67-66-3	0.0400	< 0.0400	
Tetrachloroethene	mg/L	20	127-18-4	0.0400	< 0.0400	
Trichloroethene	mg/L	20	79-01-6	0.0400	< 0.0400	
Vinyl chloride	mg/L	20	75-01-4	0.0200	< 0.0200	

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The pH of the sample was > 2. Analysis was performed within the 1 day holding time.

Report Date 7/30/2012 Page 17 of 28

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**2<sup>nd</sup> QUARTER EVENT**



### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact: John Watson  
 Project 2nd Qtr (A) '12  
 Lab Sample ID 1209297-001  
 Client Sample ID AS-12-02A-1  
 Collection Date 9/12/2012 0820h  
 Received Date 9/18/2012 1324h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	TCLP Prep Date 9/26/2012 2010h		Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
		Units	Prepared						
Cadmium	mg/L	9/28/2012	1045h	9/29/2012	2112h	SW6020A	0.00250	0.0179	
Lead	mg/L	9/28/2012	1045h	9/29/2012	2112h	SW6020A	0.0500	< 0.0500	*

\* The reporting limits were raised due to sample matrix interferences

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Report Date 10/2/2012 Page 2 of 20

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact: John Watson  
 Project 2nd Qtr (A) '12  
 Lab Sample ID 1209297-003  
 Client Sample ID AS-12-02A-3  
 Collection Date 9/13/2012 1001h  
 Received Date 9/18/2012 1324h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	TCLP Prep Date 9/26/2012 2010h		Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
		Units	Prepared						
Cadmium	mg/L	9/28/2012	1045h	9/29/2012	2112h	SW6020A	0.00250	0.0143	
Lead	mg/L	9/28/2012	1045h	9/29/2012	2112h	SW6020A	0.0500	< 0.0500	*

\* The reporting limits were raised due to sample matrix interferences

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Report Date 10/2/2012 Page 4 of 20

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact: John Watson  
 Project 2nd Qtr (A) '12  
 Lab Sample ID 1209297-002  
 Client Sample ID AS-12-02A-2  
 Collection Date 9/13/2012 0848h  
 Received Date 9/18/2012 1324h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	TCLP Prep Date 9/26/2012 2010h		Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
		Units	Prepared						
Cadmium	mg/L	9/28/2012	1045h	9/29/2012	2147h	SW6020A	0.00250	0.329	
Lead	mg/L	9/28/2012	1045h	9/29/2012	2147h	SW6020A	0.0500	0.265	*

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Report Date 10/2/2012 Page 3 of 20

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact: John Watson  
 Project 2nd Qtr (A) '12  
 Lab Sample ID 1209297-004  
 Client Sample ID AS-12-02A-4  
 Collection Date 9/13/2012 0922h  
 Received Date 9/18/2012 1324h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	TCLP Prep Date 9/26/2012 2010h		Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
		Units	Prepared						
Cadmium	mg/L	9/28/2012	1045h	9/29/2012	2222h	SW6020A	0.00250	0.0445	
Lead	mg/L	9/28/2012	1045h	9/29/2012	2222h	SW6020A	0.0500	< 0.0500	*

\* The reporting limits were raised due to sample matrix interferences

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Report Date 10/2/2012 Page 5 of 20

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 2nd Qtr (A) '12  
 Lab Sample ID 1209297-005  
 Client Sample ID AS-12-02A-5  
 Collection Date 9/13/2012 1032h  
 Received Date 9/18/2012 1324h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results		TCLP METALS Method 1311						
TCLP Prep Date 9/26/2012 2010h		Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual	
Compound	Units							
Arsenic	mg/L	9/28/2012 1045h	10/1/2012 1225h	SW6020A	0 0100	< 0 0100	*	
Barium	mg/L	9/28/2012 1045h	9/29/2012 2229h	SW6020A	0 0500	0 250		
Cadmium	mg/L	9/28/2012 1045h	9/29/2012 2229h	SW6020A	0 00250	0 0554		
Chromium	mg/L	9/28/2012 1045h	9/29/2012 2229h	SW6020A	0 0100	< 0 0100	*	
Lead	mg/L	9/28/2012 1045h	9/29/2012 2229h	SW6020A	0 0500	< 0 0500	*	
Mercury	mg/L	9/27/2012 1630h	9/28/2012 1202h	SW7470A	0 0100	< 0 0100	*	
Selenium	mg/L	9/28/2012 1045h	9/29/2012 2229h	SW6020A	0 0100	< 0 0100	*	
Silver	mg/L	9/28/2012 1045h	9/29/2012 2229h	SW6020A	0 0100	< 0 0100	*	

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 2nd Qtr (A) '12  
 Lab Sample ID 1209297-007  
 Client Sample ID AS-12-02A-7  
 Collection Date 9/13/2012 1155h  
 Received Date 9/18/2012 1324h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results		TCLP METALS Method 1311						
TCLP Prep Date 9/26/2012 2010h		Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual	
Compound	Units							
Cadmium	mg/L	9/28/2012 1045h	9/29/2012 2244h	SW6020A	0 00250	0 0957		
Lead	mg/L	9/28/2012 1045h	9/29/2012 2244h	SW6020A	0 0500	< 0 0500	*	

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Report Date 10/2/2012 Page 8 of 20

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 2nd Qtr (A) '12  
 Lab Sample ID 1209297-006  
 Client Sample ID AS-12-02A-6  
 Collection Date 9/13/2012 1117h  
 Received Date 9/18/2012 1324h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results		TCLP METALS Method 1311						
TCLP Prep Date 9/26/2012 2010h		Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual	
Compound	Units							
Cadmium	mg/L	9/28/2012 1045h	9/29/2012 2237h	SW6020A	0 00250	0 475		
Lead	mg/L	9/28/2012 1045h	9/29/2012 2237h	SW6020A	0 0500	0 0595		

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Report Date 10/2/2012 Page 7 of 20

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 2nd Qtr (A) '12  
 Lab Sample ID 1209297-008  
 Client Sample ID AS-12-02A-8  
 Collection Date 9/13/2012 1227h  
 Received Date 9/18/2012 1324h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results		TCLP METALS Method 1311						
TCLP Prep Date 9/26/2012 2010h		Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual	
Compound	Units							
Cadmium	mg/L	9/28/2012 1045h	9/29/2012 2231h	SW6020A	0 00250	0 0785		
Lead	mg/L	9/28/2012 1045h	9/29/2012 2231h	SW6020A	0 0500	< 0 0500	*	

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\* - The reporting limits were raised due to sample matrix interferences

Report Date 10/2/2012 Page 9 of 20

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 2nd Qtr (A) '12  
 Lab Sample ID 1209297-009  
 AMERICAN WEST Client Sample ID AS-12-02A-9  
 ANALYTICAL Collection Date 9/13/2012 12:59h  
 LABORATORIES Received Date 9/18/2012 13:24h

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Analytical Results									TCLP METALS Method 1311		
Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual				
Cadmium	mg/L	9/28/2012 1045h	9/29/2012 2215h	SW6020A	0.00250	0.278					
Lead	mg/L	9/28/2012 1045h	9/29/2012 2215h	SW6020A	0.0500	0.0791					

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Report Date 10/2/2012 Page 10 of 20

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 2nd Qtr (A) '12  
 Lab Sample ID 1209297-010  
 AMERICAN WEST Client Sample ID AS-12-02A-10  
 ANALYTICAL Collection Date 9/13/2012 13:20h  
 LABORATORIES Received Date 9/18/2012 13:24h

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Analytical Results									TCLP METALS Method 1311		
Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual				
Cadmium	mg/L	9/28/2012 1045h	9/29/2012 2305h	SW6020A	0.00250	0.343					
Lead	mg/L	9/28/2012 1045h	9/29/2012 2305h	SW6020A	0.0500	0.227					

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Report Date 10/2/2012 Page 11 of 20

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 2nd Qtr (A) '12  
 Lab Sample ID 1209297-011  
 AMERICAN WEST Client Sample ID AS-12-02A-11  
 ANALYTICAL Collection Date 9/13/2012 14:13h  
 LABORATORIES Received Date 9/18/2012 13:24h

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Analytical Results									TCLP METALS Method 1311		
Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual				
Cadmium	mg/L	9/28/2012 1045h	9/29/2012 2315h	SW6020A	0.00250	0.562					
Lead	mg/L	9/28/2012 1045h	9/29/2012 2315h	SW6020A	0.0500	0.153					

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Report Date 10/2/2012 Page 12 of 20

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 2nd Qtr (A) '12  
 Lab Sample ID 1209297-012  
 AMERICAN WEST Client Sample ID AS-12-02A-12  
 ANALYTICAL Collection Date 9/13/2012 14:50h  
 LABORATORIES Received Date 9/18/2012 13:24h

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Analytical Results									TCLP METALS Method 1311		
Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual				
Cadmium	mg/L	9/28/2012 1045h	9/29/2012 2315h	SW6020A	0.00250	0.614					
Lead	mg/L	9/28/2012 1045h	10/1/2012 1325h	SW6020A	0.0500	0.187					

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Report Date 10/2/2012 Page 13 of 20

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 2nd Qtr (A) '12  
 Lab Sample ID: 1209297-013  
 Client Sample ID: AS-12-02A-13  
 Collection Date: 9/13/2012 1515h  
 Received Date: 9/18/2012 1324h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	9/28/2012 1045h	10/1/2012 1329h	SW6020A	0.0100	< 0.0100	*
Barium	mg/L	9/28/2012 1045h	9/30/2012 0002h	SW6020A	0.0500	0.515	
Cadmium	mg/L	9/28/2012 1045h	9/30/2012 0002h	SW6020A	0.00250	0.563	
Chromium	mg/L	9/28/2012 1045h	9/30/2012 0002h	SW6020A	0.0100	< 0.0100	*
Lead	mg/L	9/28/2012 1045h	10/1/2012 1329h	SW6020A	0.0500	0.976	
Mercury	mg/L	9/27/2012 1630h	9/28/2012 1213h	SW7470A	0.0100	< 0.0100	*
Selenium	mg/L	9/28/2012 1045h	9/30/2012 0002h	SW6020A	0.0100	< 0.0100	*
Silver	mg/L	9/28/2012 1045h	9/30/2012 0002h	SW6020A	0.0100	< 0.0100	*

\* The reporting limits were raised due to sample matrix interferences

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 2nd Qtr (A) '12  
 Lab Sample ID: 1209297-014  
 Client Sample ID: AS-12-02A-14  
 Collection Date: 9/13/2012 1553h  
 Received Date: 9/18/2012 1324h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	9/28/2012 1045h	9/30/2012 0009h	SW6020A	0.00250	0.699	
Lead	mg/L	9/28/2012 1045h	10/1/2012 1333h	SW6020A	0.0500	0.139	

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 Laboratory Director

Jose Rocha  
 QA Officer

Report Date: 10/2/2012 Page 15 of 20

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 2nd Qtr (A) '12  
 Lab Sample ID: 1209297-015  
 Client Sample ID: AS-12-02A-15  
 Collection Date: 9/13/2012 1630h  
 Received Date: 9/18/2012 1324h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	9/28/2012 1045h	10/1/2012 1329h	SW6020A	0.0100	< 0.0100	*
Barium	mg/L	9/28/2012 1045h	9/30/2012 0016h	SW6020A	0.0500	0.341	
Cadmium	mg/L	9/28/2012 1045h	9/30/2012 0016h	SW6020A	0.00250	0.647	
Chromium	mg/L	9/28/2012 1045h	9/30/2012 0016h	SW6020A	0.0100	< 0.0100	*
Lead	mg/L	9/28/2012 1045h	10/1/2012 1329h	SW6020A	0.0500	0.218	
Mercury	mg/L	9/27/2012 1630h	9/28/2012 1215h	SW7470A	0.0100	< 0.0100	*
Selenium	mg/L	9/28/2012 1045h	9/30/2012 0016h	SW6020A	0.0100	< 0.0100	*
Silver	mg/L	9/28/2012 1045h	9/30/2012 0016h	SW6020A	0.0100	< 0.0100	*

\* The reporting limits were raised due to sample matrix interferences

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Report Date: 10/2/2012 Page 16 of 20

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**3<sup>rd</sup> QUARTER EVENT**



### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD      Contact: John Watson  
 Project: 3rd Qtr '12 Ash  
 Lab Sample ID: 1210097-001  
 WEST Client Sample ID: AS-12-03-01  
 ANALYTICAL Collection Date: 9/19/2012 913h  
 LABORATORIES Received Date: 10/5/2012 1323h

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analytical Results TCLP METALS Method 1311

Compound	Units	TCLP Prep Date: 10/9/2012 1850h		Method Used	Reporting Limit	Analytical Result	Qual
		Date Prepared	Date Analyzed				
Cadmium	mg/L	10/11/2012 920h	10/12/2012 1615h	SW6020A	0.00250	0.0589	
Lead	mg/L	10/11/2012 920h	10/12/2012 1615h	SW6020A	0.0500	< 0.0500	*

\* The reporting limits were raised due to sample matrix interferences

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD      Contact: John Watson  
 Project: 3rd Qtr '12 Ash  
 Lab Sample ID: 1210097-002  
 WEST Client Sample ID: AS-12-03-02  
 ANALYTICAL Collection Date: 9/19/2012 948h  
 LABORATORIES Received Date: 10/5/2012 1323h

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analytical Results TCLP METALS Method 1311

Compound	Units	TCLP Prep Date: 10/9/2012 1850h		Method Used	Reporting Limit	Analytical Result	Qual
		Date Prepared	Date Analyzed				
Cadmium	mg/L	10/11/2012 920h	10/12/2012 1650h	SW6020A	0.00250	0.0221	
Lead	mg/L	10/11/2012 920h	10/12/2012 1650h	SW6020A	0.0500	< 0.0500	*

\* The reporting limits were raised due to sample matrix interferences

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Report Date: 10/18/2012 Page 2 of 20  
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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD      Contact: John Watson  
 Project: 3rd Qtr '12 Ash  
 Lab Sample ID: 1210097-003  
 WEST Client Sample ID: AS-12-03-03  
 ANALYTICAL Collection Date: 9/19/2012 1027h  
 LABORATORIES Received Date: 10/5/2012 1323h

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analytical Results TCLP METALS Method 1311

Compound	Units	TCLP Prep Date: 10/8/2012 1700h		Method Used	Reporting Limit	Analytical Result	Qual
		Date Prepared	Date Analyzed				
Arsenic	mg/L	10/10/2012 910h	10/12/2012 2210h	SW6020A	0.0100	< 0.0100	*
Barium	mg/L	10/10/2012 910h	10/12/2012 2210h	SW6020A	0.0500	0.437	
Cadmium	mg/L	10/10/2012 910h	10/12/2012 2210h	SW6020A	0.00250	0.102	
Chromium	mg/L	10/10/2012 910h	10/12/2012 2210h	SW6020A	0.0100	0.0246	
Lead	mg/L	10/10/2012 910h	10/12/2012 2210h	SW6020A	0.0500	0.103	
Mercury	mg/L	10/4/2012 1310h	10/10/2012 1030h	SW7470A	0.0100	< 0.0100	*
Selenium	mg/L	10/10/2012 910h	10/12/2012 1920h	SW6020A	0.0100	< 0.0100	*
Silver	mg/L	10/10/2012 910h	10/12/2012 2210h	SW6020A	0.0100	< 0.0100	*

\* - The reporting limits were raised due to sample matrix interferences

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD      Contact: John Watson  
 Project: 3rd Qtr '12 Ash  
 Lab Sample ID: 1210097-004  
 WEST Client Sample ID: AS-12-03-04  
 ANALYTICAL Collection Date: 9/19/2012 1105h  
 LABORATORIES Received Date: 10/5/2012 1323h

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analytical Results TCLP METALS Method 1311

Compound	Units	TCLP Prep Date: 10/9/2012 1850h		Method Used	Reporting Limit	Analytical Result	Qual
		Date Prepared	Date Analyzed				
Cadmium	mg/L	10/11/2012 920h	10/12/2012 1650h	SW6020A	0.00250	0.124	
Lead	mg/L	10/11/2012 920h	10/12/2012 1650h	SW6020A	0.0500	0.0502	

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 3rd Qtr '12 Ash  
 AMERICAN Lab Sample ID: 1210097-005  
 WEST Client Sample ID: As-12-03-05  
 ANALYTICAL Collection Date: 9/19/2012 1130h  
 LABORATORIES Received Date: 10/5/2012 1323h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	10/11/2012 920h	10/12/2012 1705h	SW6020A	0.00250	0.0504	
Lead	mg/L	10/11/2012 920h	10/12/2012 1705h	SW6020A	0.0500	<0.0500	*

\* - The reporting limits were raised due to sample matrix interferences

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Report Date: 10/18/2012 Page 6 of 20

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 3rd Qtr '12 Ash  
 AMERICAN Lab Sample ID: 1210097-006  
 WEST Client Sample ID: As-12-03-06  
 ANALYTICAL Collection Date: 9/19/2012 1225h  
 LABORATORIES Received Date: 10/5/2012 1323h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	10/11/2012 920h	10/12/2012 1712h	SW6020A	0.00250	0.0323	
Lead	mg/L	10/11/2012 920h	10/12/2012 1712h	SW6020A	0.0500	<0.0500	*

\* - The reporting limits were raised due to sample matrix interferences

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 3rd Qtr '12 Ash  
 AMERICAN Lab Sample ID: 1210097-007  
 WEST Client Sample ID: As-12-03-07  
 ANALYTICAL Collection Date: 9/19/2012 1257h  
 LABORATORIES Received Date: 10/5/2012 1323h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	10/11/2012 920h	10/12/2012 1740h	SW6020A	0.00250	0.0280	
Lead	mg/L	10/11/2012 920h	10/12/2012 1740h	SW6020A	0.0500	<0.0500	*

\* - The reporting limits were raised due to sample matrix interferences

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 3rd Qtr '12 Ash  
 AMERICAN Lab Sample ID: 1210097-008  
 WEST Client Sample ID: As-12-03-08  
 ANALYTICAL Collection Date: 9/19/2012 1325h  
 LABORATORIES Received Date: 10/5/2012 1323h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	10/11/2012 920h	10/12/2012 1747h	SW6020A	0.00250	0.0353	
Lead	mg/L	10/11/2012 920h	10/12/2012 1747h	SW6020A	0.0500	<0.0500	*

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD  
 Project: 3rd Qtr '12 Ash  
 AMERICAN Lab Sample ID: 1210097-009  
 WEST Client Sample ID: AS-12-03-09  
 ANALYTICAL Collection Date: 9/19/2012 1430h  
 LABORATORIES Received Date: 10/5/2012 1323h

Contact: John Watson

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
463 West 3600 South Salt Lake City, Utah 84115							
Cadmium	mg/L	10/11/2012 920h	10/12/2012 1754h	SW6020A	0.00250	0.358	
Lead	mg/L	10/11/2012 920h	10/12/2012 1754h	SW6020A	0.0500	0.186	

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD  
 Project: 3rd Qtr '12 Ash  
 AMERICAN Lab Sample ID: 1210097-010  
 WEST Client Sample ID: AS-12-03-10  
 ANALYTICAL Collection Date: 9/19/2012 1505h  
 LABORATORIES Received Date: 10/5/2012 1323h

Contact: John Watson

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
463 West 3600 South Salt Lake City, Utah 84115							
Arsenic	mg/L	10/10/2012 910h	10/12/2012 2307h	SW6020A	0.0100	< 0.0100	*
Barium	mg/L	10/10/2012 910h	10/12/2012 2307h	SW6020A	0.0500	0.434	*
Cadmium	mg/L	10/10/2012 910h	10/12/2012 2307h	SW6020A	0.00250	0.0805	*
Chromium	mg/L	10/10/2012 910h	10/12/2012 2307h	SW6020A	0.0100	< 0.0100	*
Lead	mg/L	10/10/2012 910h	10/12/2012 2307h	SW6020A	0.0500	0.118	*
Mercury	mg/L	10/9/2012 1310h	10/10/2012 1041h	SW7470A	0.0100	< 0.0100	*
Selenium	mg/L	10/10/2012 910h	10/12/2012 1948h	SW6020A	0.0100	< 0.0100	*
Silver	mg/L	10/10/2012 910h	10/12/2012 2307h	SW6020A	0.0100	< 0.0100	*

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Report Date: 10/18/2012 Page 11 of 20

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD  
 Project: 3rd Qtr '12 Ash  
 AMERICAN Lab Sample ID: 1210097-011  
 WEST Client Sample ID: AS-12-03-11  
 ANALYTICAL Collection Date: 9/19/2012 1533h  
 LABORATORIES Received Date: 10/5/2012 1323h

Contact: John Watson

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
463 West 3600 South Salt Lake City, Utah 84115							
Cadmium	mg/L	10/11/2012 920h	10/12/2012 1802h	SW6020A	0.00250	0.0755	
Lead	mg/L	10/11/2012 920h	10/12/2012 1802h	SW6020A	0.0500	< 0.0500	*

\* The reporting limits were raised due to sample matrix interferences

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD  
 Project: 3rd Qtr '12 Ash  
 AMERICAN Lab Sample ID: 1210097-012  
 WEST Client Sample ID: AS-12-03-12  
 ANALYTICAL Collection Date: 9/19/2012 1604h  
 LABORATORIES Received Date: 10/5/2012 1323h

Contact: John Watson

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
463 West 3600 South Salt Lake City, Utah 84115							
Cadmium	mg/L	10/11/2012 920h	10/12/2012 1802h	SW6020A	0.00250	0.0717	
Lead	mg/L	10/11/2012 920h	10/12/2012 1802h	SW6020A	0.0500	< 0.0500	*

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact: John Watson  
 Project 3rd Qtr '12 Ash  
 AMERICAN Lab Sample ID 1210097-013  
 WEST Client Sample ID AS-12-03-13  
 ANALYTICAL Collection Date 9/19/2012 1632h  
 LABORATORIES Received Date 10/5/2012 1323h

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#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	10/11/2012 920h	10/12/2012 1816h	SW6020A	0.00250	0.0463	*
Lead	mg/L	10/11/2012 920h	10/12/2012 1816h	SW6020A	0.0500	< 0.0500	*

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact: John Watson  
 Project 3rd Qtr '12 Ash  
 AMERICAN Lab Sample ID 1210097-014  
 WEST Client Sample ID AS-12-03-14  
 ANALYTICAL Collection Date 9/19/2012 1700h  
 LABORATORIES Received Date 10/5/2012 1323h

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#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	10/11/2012 920h	10/12/2012 1837h	SW6020A	0.00250	0.0432	*
Lead	mg/L	10/11/2012 920h	10/12/2012 1837h	SW6020A	0.0500	0.131	*

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Report Date 10/18/2012 Page 14 of 20

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Report Date 10/18/2012 Page 15 of 20

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact: John Watson  
 Project 3rd Qtr '12 Ash  
 AMERICAN Lab Sample ID 1210097-015  
 WEST Client Sample ID AS-12-03-15  
 ANALYTICAL Collection Date 9/19/2012 1730h  
 LABORATORIES Received Date 10/5/2012 1323h

463 West 3600 South  
 Salt Lake City, Utah  
 84115

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	10/10/2012 910h	10/12/2012 2314h	SW6020A	0.0100	< 0.0100	*
Barium	mg/L	10/10/2012 910h	10/12/2012 2314h	SW6020A	0.0500	0.386	*
Cadmium	mg/L	10/10/2012 910h	10/12/2012 2314h	SW6020A	0.00250	0.0695	*
Chromium	mg/L	10/10/2012 910h	10/12/2012 2314h	SW6020A	0.0100	< 0.0100	*
Lead	mg/L	10/10/2012 910h	10/12/2012 2314h	SW6020A	0.0500	0.0585	*
Mercury	mg/L	10/9/2012 1310h	10/10/2012 1045h	SW7470A	0.0100	< 0.0100	*
Selenium	mg/L	10/10/2012 910h	10/15/2012 1956h	SW6020A	0.0100	< 0.0100	*
Silver	mg/L	10/10/2012 910h	10/12/2012 2314h	SW6020A	0.0100	< 0.0100	*

\* The reporting limits were raised due to sample matrix interferences

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Kyle F. Gross  
 Laboratory Director

Jose Rocha  
 QA Officer

Report Date 10/18/2012 Page 16 of 20

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**4<sup>th</sup> QUARTER EVENT**



### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 4TH Qtr '12 Ash  
 Lab Sample ID: 1212454-001  
 Client Sample ID: AS-12-04-1  
 Collection Date: 12/15/2012 730h  
 Received Date: 12/20/2012 1000h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	12/27/2012 1405h	12/27/2012 1930h	SW6020A	0.00250	0.335	
Lead	mg/L	12/27/2012 1405h	12/27/2012 1930h	SW6020A	0.0500	< 0.0500	

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 Laboratory Director

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 QA Officer

Report Date: 1/3/2013 Page 2 of 20

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 4TH Qtr '12 Ash  
 Lab Sample ID: 1212454-002  
 Client Sample ID: AS-12-04-2  
 Collection Date: 12/15/2012 800h  
 Received Date: 12/20/2012 1000h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	12/27/2012 1405h	12/27/2012 1930h	SW6020A	0.00250	0.536	
Lead	mg/L	12/27/2012 1405h	12/27/2012 1930h	SW6020A	0.0500	0.251	

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 Laboratory Director

Jose Rocha  
 QA Officer

Report Date: 1/3/2013 Page 3 of 20

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached COC. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only if the addressee provides written consent to the publisher of this report. This consent is not to be construed as an endorsement of the product or process by the publisher of this report.



### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 4TH Qtr '12 Ash  
 Lab Sample ID: 1212454-003  
 Client Sample ID: AS-12-04-3  
 Collection Date: 12/15/2012 830h  
 Received Date: 12/20/2012 1000h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	12/27/2012 1405h	12/27/2012 2010h	SW6020A	0.00250	0.515	
Lead	mg/L	12/27/2012 1405h	12/27/2012 2010h	SW6020A	0.0500	0.409	

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 QA Officer

Report Date: 1/3/2013 Page 4 of 20

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 4TH Qtr '12 Ash  
 Lab Sample ID: 1212454-004  
 Client Sample ID: AS-12-04-4  
 Collection Date: 12/15/2012 900h  
 Received Date: 12/20/2012 1000h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	12/27/2012 1405h	12/27/2012 2020h	SW6020A	0.00250	0.438	
Lead	mg/L	12/27/2012 1405h	12/27/2012 2020h	SW6020A	0.0500	0.101	

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Report Date: 1/3/2013 Page 5 of 20

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project: 4TH Qtr '12 Ash  
 Lab Sample ID 1212454-005  
 Client Sample ID AS-12-04-5  
 Collection Date 12/15/2012 930h  
 Received Date 12/20/2012 1000h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	12/27/2012 1405h	12/27/2012 2039h	SW6020A	0.00250	0.404	
Lead	mg/L	12/27/2012 1405h	12/27/2012 2039h	SW6020A	0.0500	0.0874	

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Report Date: 1/3/2013 Page 6 of 20

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact: John Watson  
 Project: 4TH Qtr '12 Ash  
 Lab Sample ID: 1212454-006  
 Client Sample ID AS-12-04-6  
 Collection Date 12/15/2012 1000h  
 Received Date 12/20/2012 1000h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	12/27/2012 1405h	12/27/2012 2039h	SW6020A	0.00250	0.469	
Lead	mg/L	12/27/2012 1405h	12/27/2012 2039h	SW6020A	0.0500	0.177	

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Report Date: 1/3/2013 Page 7 of 20

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project: 4TH Qtr '12 Ash  
 Lab Sample ID 1212454-007  
 Client Sample ID: AS-12-04-7  
 Collection Date 12/15/2012 1030h  
 Received Date 12/20/2012 1000h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Arsenic	mg/L	12/27/2012 1405h	12/28/2012 1300h	SW6020A	0.0100	< 0.0100	
Barium	mg/L	12/27/2012 1405h	12/27/2012 2039h	SW6020A	0.0500	0.436	
Cadmium	mg/L	12/27/2012 1405h	12/27/2012 2039h	SW6020A	0.00250	0.496	
Chromium	mg/L	12/27/2012 1405h	12/27/2012 2039h	SW6020A	0.0100	< 0.0100	
Lead	mg/L	12/27/2012 1405h	12/27/2012 2039h	SW6020A	0.0500	0.225	
Mercury	mg/L	12/27/2012 1445h	12/28/2012 818h	SW7470A	0.0100	< 0.0100	
Selenium	mg/L	12/27/2012 1405h	12/27/2012 2039h	SW6020A	0.0100	< 0.0100	
Silver	mg/L	12/27/2012 1405h	12/27/2012 2039h	SW6020A	0.0100	< 0.0100	

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Report Date: 1/3/2013 Page 8 of 20

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### INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact: John Watson  
 Project: 4TH Qtr '12 Ash  
 Lab Sample ID: 1212454-008  
 Client Sample ID: AS-12-04-8  
 Collection Date 12/15/2012 1100h  
 Received Date 12/20/2012 1000h

AMERICAN WEST ANALYTICAL LABORATORIES

Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	12/27/2012 1405h	12/27/2012 2044h	SW6020A	0.00250	0.646	
Lead	mg/L	12/27/2012 1405h	12/27/2012 2044h	SW6020A	0.0500	0.137	

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Report Date: 1/3/2013 Page 9 of 20

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 4TH Qtr '12 Ash  
 Lab Sample ID: 1212454-009  
 Client Sample ID: AS-12-04-9  
 Collection Date: 12/15/2012 1130h  
 Received Date: 12/20/2012 1000h

AMERICAN WEST ANALYTICAL LABORATORIES

#### TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	12/27/2012 1405h	12/27/2012 2055h	SW6020A	0.00250	0.195	
Lead	mg/L	12/27/2012 1405h	12/27/2012 2055h	SW6020A	0.0500	0.0505	

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Report Date 1/3/2013 Page 10 of 20

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 4TH Qtr '12 Ash  
 Lab Sample ID: 1212454-010  
 Client Sample ID: AS-12-04-10  
 Collection Date: 12/15/2012 1200h  
 Received Date: 12/20/2012 1000h

AMERICAN WEST ANALYTICAL LABORATORIES

#### TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	12/27/2012 1405h	12/27/2012 2055h	SW6020A	0.00250	0.262	
Lead	mg/L	12/27/2012 1405h	12/27/2012 2055h	SW6020A	0.0500	0.212	

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Report Date 1/3/2013 Page 11 of 20

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 4TH Qtr '12 Ash  
 Lab Sample ID: 1212454-011  
 Client Sample ID: AS-12-04-11  
 Collection Date: 12/15/2012 1230h  
 Received Date: 12/20/2012 1000h

AMERICAN WEST ANALYTICAL LABORATORIES

#### TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	12/27/2012 1405h	12/27/2012 2100h	SW6020A	0.00250	0.619	
Lead	mg/L	12/27/2012 1405h	12/27/2012 2100h	SW6020A	0.0500	1.62	

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Report Date 1/3/2013 Page 12 of 20

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 4TH Qtr '12 Ash  
 Lab Sample ID: 1212454-012  
 Client Sample ID: AS-12-04-12  
 Collection Date: 12/15/2012 1300h  
 Received Date: 12/20/2012 1000h

AMERICAN WEST ANALYTICAL LABORATORIES

#### TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Cadmium	mg/L	12/27/2012 1405h	12/27/2012 2100h	SW6020A	0.00250	0.545	
Lead	mg/L	12/27/2012 1405h	12/27/2012 2100h	SW6020A	0.0500	0.0878	

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Report Date 1/3/2013 Page 13 of 20

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# INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 4TH Qtr '12 Ash  
 Lab Sample ID 1212454-013  
 AMERICAN WEST Client Sample ID AS-12-04-13  
 ANALYTICAL Collection Date 12/15/2012 1330h  
 LABORATORIES Received Date 12/20/2012 1000h

Analytical Results		TCLP METALS Method 1311								
TCLP Prep Date: 12/26/2012 1500h		Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual	
463 West 3600 South Salt Lake City, Utah 84115	Arsenic	mg/L	12/27/2012	1405h	12/28/2012	1310h	SW6020A	0 0100	< 0 0100	
	Barium	mg/L	12/27/2012	1405h	12/27/2012	2127h	SW6020A	0 0500	0 376	
	Cadmium	mg/L	12/27/2012	1405h	12/27/2012	2127h	SW6020A	0 00250	0 555	
	Chromium	mg/L	12/27/2012	1405h	12/27/2012	2127h	SW6020A	0 0100	< 0 0100	
	Lead	mg/L	12/27/2012	1405h	12/27/2012	2127h	SW6020A	0 0500	0 174	
	Mercury	mg/L	12/27/2012	1445h	12/28/2012	825h	SW7470A	0 0100	< 0 0100	
	Selenium	mg/L	12/27/2012	1405h	12/27/2012	2127h	SW6020A	0 0100	< 0 0100	
	Silver	mg/L	12/27/2012	1405h	12/27/2012	2127h	SW6020A	0 0100	< 0 0100	
	* The reporting limits were raised due to sample matrix interferences									

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# INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 4TH Qtr '12 Ash  
 Lab Sample ID 1212454-014  
 AMERICAN WEST Client Sample ID AS-12-04-14  
 ANALYTICAL Collection Date 12/15/2012 1400h  
 LABORATORIES Received Date 12/20/2012 1000h

Analytical Results		TCLP METALS Method 1311							
TCLP Prep Date: 12/26/2012 1500h		Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
463 West 3600 South Salt Lake City, Utah 84115	Cadmium	mg/L	12/27/2012	1405h	12/27/2012	2127h	SW6020A	0 00250	0 941
	Lead	mg/L	12/27/2012	1405h	12/27/2012	2127h	SW6020A	0 0500	0 0714

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Report Date 1/3/2013 Page 14 of 20

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Report Date 1/3/2013 Page 15 of 20

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# INORGANIC ANALYTICAL REPORT

Client Wasatch Integrated WMD Contact John Watson  
 Project 4TH Qtr '12 Ash  
 Lab Sample ID 1212454-015  
 AMERICAN WEST Client Sample ID AS-12-04-15  
 ANALYTICAL Collection Date 12/15/2012 1430h  
 LABORATORIES Received Date 12/20/2012 1000h

Analytical Results		TCLP METALS Method 1311								
TCLP Prep Date: 12/26/2012 1500h		Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual	
463 West 3600 South Salt Lake City, Utah 84115	Arsenic	mg/L	12/27/2012	1405h	12/28/2012	1310h	SW6020A	0 0100	< 0 0100	
	Barium	mg/L	12/27/2012	1405h	12/27/2012	2130h	SW6020A	0 0500	0 428	
	Cadmium	mg/L	12/27/2012	1405h	12/27/2012	2130h	SW6020A	0 00250	0 583	
	Chromium	mg/L	12/27/2012	1405h	12/27/2012	2130h	SW6020A	0 0100	< 0 0100	
	Lead	mg/L	12/27/2012	1405h	12/27/2012	2130h	SW6020A	0 0500	0 271	
	Mercury	mg/L	12/27/2012	1445h	12/28/2012	830h	SW7470A	0 0100	< 0 0100	
	Selenium	mg/L	12/27/2012	1405h	12/27/2012	2130h	SW6020A	0 0100	< 0 0100	
	Silver	mg/L	12/27/2012	1405h	12/27/2012	2130h	SW6020A	0 0100	< 0 0100	
	* The reporting limits were raised due to sample matrix interferences									

(801) 263-8686  
 Toll Free (888) 263-8686  
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Kyle F Gross  
 Laboratory Director

Jose Rocha  
 QA Officer

Report Date 1/3/2013 Page 16 of 20

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAP protocols. Pertinent sampling information is located on the attached COC. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contract. The company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of accuracy.

**ATTACHMENT II**

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**EXTRACTION FLUID DETERMINATION LOGS**

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American West Analytical Laboratories  
 TCLP/SPLP Extraction for EPA Method 1311/1312

Extraction Start Date 7-20-12 Extraction End Date 7-21-12 Room Temperature (Req 23 ± 2°C) 25 / 24 Fluid ID \* TCLP-F1-120719  
 Starting Analyst h Ending Analyst h Tumbler RPM (Req. 30 ± 2 rpm) 30 Fluid pH 4.88  
 Start Time 16:00 / 17:00 Stop Time 11:10 Oven Temp (Req 100 ± 20°C) N/A Thermometer ID 65, Hot Flash  
 Prep Batch ID See below Time tumbled (Req 18 ± 2 hours) 19 / 18 Balance ID Courtney Balance ID Ashley

Pre-Extraction					Extraction			Post Extraction
Sample ID #	Semi/Pest/Herb ZIIIE/Metals	Initial pH	Adjusted pH	Percent Solids (%)	Sample Amount (g) Total Weight/Solid Weight	Extraction Fluid	Extraction Fluid Added (mL)	Final pH
* MB-TCLP-20051	metals	N/A	N/A	N/A	N/A / N/A	Dor II	2000	N/A
1207205-003A	metals	9	3	100	100g / N/A	Dor II	2000	7
1207205-005A	metals	10	5	100	100g / N/A	Dor II	2000	7
1207205-007A	metals	10	4	100	100g / N/A	Dor II	2000	7
1207205-009A	metals	9	3	100	100g / N/A	Dor II	2000	7
1207205-011A	metals	8	4	100	100g / N/A	Dor II	2000	7
1207205-012A	metals	8	4	100	100g / N/A	Dor II	2000	7
1207205-013A	metals	7	4	100	100g / N/A	Dor II	2000	7
1207205-014A	metals	8	4	100	100g / N/A	Dor II	2000	7
A MB-TCLP-20055	metals	N/A	N/A	N/A	N/A / N/A	100D	2000	N/A
1207327-001A	metals	6	6	100	100g / N/A	100D	2000	6
1207327-002A	metals	6	6	100	100g / N/A	100D	2000	6
1207327-003A	metals	6	6	100	100g / N/A	100D	2000	6

Comments 4 - Telp-F2-120720 pH 2.89  
N/A  
N/A  
N/A

American West Analytical Laboratories  
 TCLP/SPLP Extraction for EPA Method 1311/1312

Extraction Start Date 7-15-12 Extraction End Date 7-16-12 Room Temperature (Req 23 ± 2°C) 22.5 / 21.4 Fluid ID See below  
 Starting Analyst h Ending Analyst h Tumbler RPM (Req. 30 ± 2 rpm) 30 Fluid pH See below  
 Start Time 16:30 Stop Time 10:30 Oven Temp (Req 100 ± 20°C) N/A Thermometer ID 65, Hot Flash  
 Prep Batch ID See below Time tumbled (Req 18 ± 2 hours) 18 Balance ID Courtney Balance ID Ashley

Pre-Extraction					Extraction			Post Extraction
Sample ID #	Semi/Pest/Herb ZHE/Metals	Initial pH	Adjusted pH	Percent Solids (%)	Sample Amount (g) Total Weight/Solid Weight	Extraction Fluid	Extraction Fluid Added (mL)	Final pH
* MB-TCLP-19919	metals	N/A	N/A	N/A	N/A / N/A	Dor II	2000	N/A
1207183-001F	metals	10.5	4.5	92.3	180g / 92.3g 25g / 23.1g	Dor II	1846	5
1207205-001A	metals	10	4	100	100g / N/A	Dor II	2000	7
1207205-002A	metals	9	4	100	100g / N/A	Dor II	2000	7
1207205-004A	metals	10	3	100	100g / N/A	Dor II	2000	8
1207205-006A	metals	10	3	100	100g / N/A	Dor II	2000	8
1207205-008A	metals	10	4	100	100g / N/A	Dor II	2000	7
1207205-010A	metals	9	3	100	100g / N/A	Dor II	2000	7
1207205-015A	metals	9	5	100	100g / N/A	Dor II	2000	8
A MB-TCLP-19916	ZHE	N/A	N/A	N/A	N/A / N/A	Dor II	500	N/A
1207183-001E	ZHE	N/A	N/A	92.3	25g / 23.1g	Dor II	462	N/A
1207205-011A	ZHE	N/A	N/A	100	25g / N/A	Dor II	500	N/A

Comments 120705 pH 4.88  
\* - Telp-F1-120720 pH 4.88  
b - Telp-F12-120711 pH 4.91  
N/A  
N/A

American West Analytical Laboratories  
 TCLP/SPLP Extraction for EPA Method 1311/1312

Extraction Start Date 9-26-12 Extraction End Date 9-27-12 Room Temperature (Req 23 ± 2°C) 22.41 Fluid ID TCLP-FI-120926  
 Starting Analyst h Ending Analyst h Tumbler RPM (Req 30 ± 2 rpm) 30 Fluid pH 4.90  
 Start Time 20:10 Stop Time 12:10 Oven Temp (Req 100 ± 20°C) N/A Thermometer ID 65\_Hot Flash  
 Prep Batch ID 21312 Time tumbled (Req 18 ± 2 hours) 16 Balance ID Courtesy Balance ID Ashley

Pre-Extraction					Extraction			Post Extraction
Sample ID #	Semi/Pest/Herb ZHE/Metals	Initial pH	Adjusted pH	Percent Solids (%)	Sample Amount (g) Total Weight/Solid Weight	Extraction Fluid	Extraction Fluid Added (mL)	Final pH
* 1209297-012A	metals	8	4	100	100g / N/A	Dr II	2000	4.7
1209297-014A	metals	8	4	100	100g / N/A	Dr II	2000	7
1209297-015A	metals	8	4	100	100g / N/A	Dr II	2000	7
<del>9/27/12</del>								

Comments \* continued from page 41.

N/A  
N/A  
N/A

American West Analytical Laboratories  
 TCLP/SPLP Extraction for EPA Method 1311/1312

Extraction Start Date 9-26-12 Extraction End Date 9-27-12 Room Temperature (Req 23 ± 2°C) 22.21 Fluid ID TCLP-FI-120926  
 Starting Analyst h Ending Analyst h Tumbler RPM (Req 30 ± 2 rpm) 30 Fluid pH 4.90  
 Start Time 20:10 Stop Time 12:10 Oven Temp (Req 100 ± 20°C) N/A Thermometer ID 65\_Hot Flash  
 Prep Batch ID 21312 Time tumbled (Req 18 ± 2 hours) 16 Balance ID Courtesy Balance ID Ashley

Pre-Extraction					Extraction			Post Extraction
Sample ID #	Semi/Pest/Herb ZHE/Metals	Initial pH	Adjusted pH	Percent Solids (%)	Sample Amount (g) Total Weight/Solid Weight	Extraction Fluid	Extraction Fluid Added (mL)	Final pH
HB-TCLP-21312	metals	N/A	N/A	N/A	N/A / N/A	Dr II	2000	N/A
1209297-001A	metals	9	2	100	100g / N/A	Dr II	2000	7
1209297-002A	metals	8	2	100	100g / N/A	Dr II	2000	7
1209297-003A	metals	9	2	100	100g / N/A	Dr II	2000	7
1209297-004A	metals	9	2	100	100g / N/A	Dr II	2000	7
1209297-005A	metals	9	3	100	100g / N/A	Dr II	2000	7
1209297-006A	metals	10	3	100	100g / N/A	Dr II	2000	7
1209297-007A	metals	9	3	100	100g / N/A	Dr II	2000	7
1209297-008A	metals	9	3	100	100g / N/A	Dr II	2000	7
1209297-009A	metals	9	2	100	100g / N/A	Dr II	2000	7
1209297-010A	metals	9	2	100	100g / N/A	Dr II	2000	7
1209297-011A	metals	8	3	100	100g / N/A	Dr II	2000	7
1209297-012A	metals	8	3	100	100g / N/A	Dr II	2000	7

Comments

N/A  
N/A  
N/A  
N/A

American West Analytical Laboratories  
 TCLP/SPLP Extraction for EPA Method 1311/1312

Extraction Start Date 10-9-12 Extraction End Date 10-10-12  
 Starting Analyst h Ending Analyst h  
 Start Time 10:50 Stop Time 11:00  
 Prep Batch ID 21528 Time tumbled (Req 18 ± 2 hours) 16

Room Temperature (Req. 23 ± 2°C) 22.8 / 21  
 Tumbler RPM (Req. 30 ± 2 rpm) 30  
 Oven Temp (Req. 100 ± 20°C) N/A  
 Balance ID Courtesy

Fluid ID TCLP-FI-121009  
 Fluid pH 4.88  
 Thermometer ID 65 Hot Flash  
 Balance ID Ashley

Pre-Extraction					Extraction			Post Extraction
Sample ID #	Sem/Pest/Herb ZHE/Metals	Initial pH	Adjusted pH	Percent Solids (%)	Sample Amount (g) Total Weight/Solid Weight	Extraction Fluid	Extraction Fluid Added (mL)	Final pH
MB-TCLP-21528	metals	N/A	4h	N/A	N/A / N/A	Dor II	2000	N/A
1210097-001A	metals	9	4	100	100g / N/A	Dor II	2000	7
1210097-002A	metals	10	5	100	100g / N/A	Dor II	2000	7
1210097-004A	metals	9	5	100	100g / N/A	Dor II	2000	7
1210097-005A	metals	9	5	100	100g / N/A	Dor II	2000	7
1210097-006A	metals	9	5	100	100g / N/A	Dor II	2000	7
1210097-007A	metals	9	5	100	100g / N/A	Dor II	2000	7
1210097-008A	metals	9	4	100	100g / N/A	Dor II	2000	8
1210097-009A	metals	9	5	100	100g / N/A	Dor II	2000	7
1210097-011A	metals	10	5	100	100g / N/A	Dor II	2000	7
1210097-012A	metals	10	5	100	100g / N/A	Dor II	2000	7
1210097-013A	metals	9	4	100	100g / N/A	Dor II	2000	7
1210097-014A	metals	10	5	100	100g / N/A	Dor II	2000	8

Comments \* continued on next page.  
N/A  
N/A  
N/A

American West Analytical Laboratories  
 TCLP/SPLP Extraction for EPA Method 1311/1312

Extraction Start Date 10-8-12 Extraction End Date 10-9-12  
 Starting Analyst h Ending Analyst h  
 Start Time 17:00 Stop Time 10:05  
 Prep Batch ID See below Time tumbled (Req 18 ± 2 hours) 17

Room Temperature (Req. 23 ± 2°C) 22.4 / 21  
 Tumbler RPM (Req. 30 ± 2 rpm) 30  
 Oven Temp (Req. 100 ± 20°C) 103  
 Balance ID Courtesy

Fluid ID TCLP-FI-121003  
 Fluid pH 4.88  
 Thermometer ID 65 Hot Flash  
 Balance ID Ashley

Pre-Extraction					Extraction			Post Extraction
Sample ID #	Sem/Pest/Herb ZHE/Metals	Initial pH	Adjusted pH	Percent Solids (%)	Sample Amount (g) Total Weight/Solid Weight	Extraction Fluid	Extraction Fluid Added (mL)	Final pH
MB-TCLP 21537	metals	N/A	N/A	N/A	N/A / N/A	Dor II	2000	N/A
1210048-003A	metals	7	3	100	100g / N/A	Dor II	2000	8
1210097-003A	metals	9	5	100	100g / N/A	Dor II	2000	7
1210097-010A	metals	9	3	100	100g / N/A	Dor II	2000	7
1210097-015A	metals	9	5	100	100g / N/A	Dor II	2000	7
1210109-002A	metals	5	5	100	100g / N/A	Dor II	2000	6
1210062-001A	metals	6	2	86.2	100g / 86.2g	Dor II	1724	5
<del>MB-TCLP 21536</del>	<del>metals</del>	<del>N/A</del>	<del>N/A</del>	<del>N/A</del>	<del>N/A / N/A</del>	<del>Dor II</del>	<del>2000</del>	<del>N/A</del>
					/	I or II		
					/	I or II		
					/	I or II		
					/	I or II		
					/	I or II		
					/	I or II		

Comments N/A  
N/A  
N/A  
N/A

American West Analytical Laboratories  
TCLP/SPLP Extraction for EPA Method 1311/1312

Extraction Start Date 12-26-12  
Starting Analyst AK  
Start Time: 15:00  
Prep Batch ID 22895

Extraction End Date 12-27-12  
Ending Analyst di  
Stop Time: 9:58  
Time tumbled (Req. 18 ± 2 hours): 19

Room Temperature (Req. 23 ± 2°C) 21.0 / 21.0  
Tumbler RPM (Req. 30 ± 2 rpm) 30  
Oven Temp (Req. 100 ± 20°C) 44  
Balance ID Courtney

Fluid ID Tclp-F1-121226  
Fluid pH 4.88  
Thermometer ID 65, Hot Flash  
Balance ID Ashley

Pre-Extraction					Extraction			Post Extraction
Sample ID #	Semi/Pest/Herb ZHE/Metals	Initial pH	Adjusted pH	Percent Solids (%)	Sample Amount (g)	Extraction Fluid	Extraction Fluid Added (mL)	Final pH
					Total Weight/Solid Weight			
MB-TCLP 22895	metals	N/A	N/A	N/A	N/A / N/A	D or II	2000	N/A
1212454-001A	metals	9	3	100	100g / N/A	D or II	2000	8
1212454-002A	metals	8	2	100	100g / N/A	D or II	2000	7
1212454-003A	metals	9	3	100	100g / N/A	D or II	2000	7
1212454-004A	metals	9	3	100	100g / N/A	D or II	2000	7
1212454-005A	metals	10	5	100	100g / N/A	D or II	2000	8
1212454-006A	metals	9	3	100	100g / N/A	D or II	2000	8
1212454-007A	metals	9	2	100	100g / N/A	D or II	2000	8
1212454-008A	metals	9	4	100	100g / N/A	D or II	2000	8
1212454-009A	metals	8	2	100	100g / N/A	D or II	2000	7
1212454-010A	metals	9	3	100	100g / N/A	D or II	2000	8
1212454-011A	metals	9	3	100	100g / N/A	D or II	2000	7
* 1212454-012A	metals	9	4	100	100g / N/A	D or II	2000	8

Comments \* continued on next page - 12-26-12

American West Analytical Laboratories  
TCLP/SPLP Extraction for EPA Method 1311/1312

Extraction Start Date 10-9-12  
Starting Analyst AK  
Start Time: 18:50  
Prep Batch ID Sa-bulaw

Extraction End Date 10-10-12  
Ending Analyst di  
Stop Time: 11:00  
Time tumbled (Req. 18 ± 2 hours) 16

Room Temperature (Req. 23 ± 2°C) 23.8 / 21  
Tumbler RPM (Req. 30 ± 2 rpm) 30  
Oven Temp (Req. 100 ± 20°C) N/A  
Balance ID Courtney

Fluid ID Sa-bulaw  
Fluid pH Sa-bulaw  
Thermometer ID 65, Hot Flash  
Balance ID Ashley

Pre-Extraction					Extraction			Post Extraction
Sample ID #	Semi/Pest/Herb ZHE/Metals	Initial pH	Adjusted pH	Percent Solids (%)	Sample Amount (g)	Extraction Fluid	Extraction Fluid Added (mL)	Final pH
					Total Weight/Solid Weight			
* 1210143-002A	metals	5	5	100	100g / N/A	D or II	2000	5
1210144-001A	metals	6	2	100	100g / N/A	D or II	2000	5
o MB-TCLP 21568	metals	N/A	N/A	N/A	N/A / N/A	I or II	2000	N/A
1210144-002A	metals	6	6	100	100g / N/A	I or II	2000	6
					/	I or II		
					/	I or II		
					/	I or II		
					/	I or II		
					/	I or II		
					/	I or II		
					/	I or II		
					/	I or II		

Comments \* cont'd from page 2 - 10-9-12 Tclp-F1-121009 pH. 4.88

0 - TClp-F2-121009 pH. 2.85  
N/A  
N/A

American West Analytical Laboratories  
**TCLP/SPLP Extraction for EPA Method 1311/1312**

Extraction Start Date 12-26-12 Extraction End Date 12-27-12  
 Starting Analyst lh Ending Analyst lh  
 Start Time 15:00 Stop Time 9:58  
 Prep Batch ID 22835 Time tumbled (Req 18 ± 2 hours) 19

Room Temperature (Req 23 ± 2°C) 21.0 / 21.0  
 Tumbler RPM (Req 30 ± 2 rpm) 30  
 Oven Temp (Req 100 ± 20°C) 46  
 Balance ID Courtney

Fluid ID TCLP-F1-122612  
 Fluid pH 4.88  
 Thermometer ID 65, Hot Flash  
 Balance ID Ashley

Pre-Extraction					Extraction			Post Extraction
Sample ID #	Sem/Pest/Herb ZHE/Metals	Initial pH	Adjusted pH	Percent Solids (%)	Sample Amount (g) Total Weight/Solid Weight	Extraction Fluid	Extraction Fluid Added (mL)	Final pH
* 1212454-013A	metals	9	4	100	100g / N/A	Or II	2000	8
1212454-014A	metals	9	4	100	100g / N/A	Or II	2000	8
1212454-015A	metals	9	2	100	100g / N/A	Or II	2000	7
1212483-001C	metals	6	5	100	100g / N/A	Or II	2000	7
1212484-001A	metals	9	2	100	100g / N/A	Or II	2000	5
1212452-001D	metals	5	5	100	100g / N/A	Or II	2000	5
					/	I or II		
					/	I or II		
					/	I or II		
					/	I or II		
					/	I or II		
					/	I or II		
					/	I or II		
					/	I or II		

Comments \* Continued from last page of results

**ATTACHMENT III**

---

**CHAIN OF CUSTODY**

---

Client Wasatch Integrated Waste  
 Address 3404 N. 650 E  
Layton UT 84041  
 City State Zip  
 Phone 801-614-5603 Fax 801-614-5653  
 Contact John Watson  
 E-mail john@wimwd.org  
 Project Name 2nd Oct '12 Ash Samples  
 Project Number/P O #  
 Sampler Name John Watson



AMERICAN WEST ANALYTICAL LABORATORIES  
 463 West 3600 South Salt Lake City, Utah 84115  
 (801) 263-8686 (888) 263-8686  
 Fax (801) 263-8687  
 Email: awal@awal-labs.com

CHAIN OF CUSTODY

Lab Sample Set # 1207205  
 Page 2 of 2  
 Turn Around Time (Circle One)  
 1 day 2 day 3 day 4 day 5 day Standard

Sample ID	Date/Time Collected	Matrix	Number of Containers (Total)	TESTS REQUIRED			QC LEVEL				COMMENTS	LABORATORY USE ONLY
				TCLP METALS RCRA	TCLP Cd & Pb	ZnE ORGANICS	1	2	3	4		
AS-12-02-013	7/11/12				X							1 Shipped or hand delivered Notes
- 14	7/11/12				X							2 Ambient or Chilled Notes
- 15	6/19/12 9:21			X								3 Temperature <u>24.3</u>
												4 Received Broken/Leaking (Improperly Sealed) Notes
												5 Properly Preserved Notes
												6 Received Within Holding Times Notes

Relinquished By Signature	Date	Received By Signature	Date	Special Instructions
PRINT NAME	Time	PRINT NAME	Time	
Relinquished By Signature	Date	Received By Signature	Date	
PRINT NAME	Time	PRINT NAME	Time	
Relinquished By Signature	Date	Received By Signature	Date	

Client Wasatch Integrated Waste  
 Address 3404 N. 650 E  
Layton UT 84041  
 City State Zip  
 Phone 801-614-5603 Fax 801-614-5653  
 Contact John Watson  
 E-mail john@wimwd.org  
 Project Name 2nd Oct '12 Ash Samples  
 Project Number/P O #  
 Sampler Name John Watson



AMERICAN WEST ANALYTICAL LABORATORIES  
 463 West 3600 South Salt Lake City, Utah 84115  
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 Email: awal@awal-labs.com

CHAIN OF CUSTODY

Lab Sample Set # 1207205  
 Page 1 of 2  
 Turn Around Time (Circle One)  
 1 day 2 day 3 day 4 day 5 day Standard

Sample ID	Date/Time Collected	Matrix	Number of Containers (Total)	TESTS REQUIRED			QC LEVEL				COMMENTS	LABORATORY USE ONLY
				TCLP METALS RCRA	TCLP Cd & Pb	ZnE ORGANICS	1	2	3	4		
AS-12-02-01	6/19/12 11:00				X							1 Shipped or hand delivered Notes
-02	6/19/12 9:21			X								2 Ambient or Chilled Notes
-03	7/11/12 12:14				X							3 Temperature <u>24.3</u>
-04	6/19/12 9:30				X							4 Received Broken/Leaking (Improperly Sealed) Notes
-05	7/11/12 12:36				X							5 Properly Preserved Notes
-06	6/19/12 9:52				X							6 Received Within Holding Times Notes
-07	7/11/12 13:17				X							
-08	6/19/12 10:12				X							
-09	7/11/12 13:56				X							
-10	6/19/12 10:30				X							
-11	7/11/12 14:19			X								
-12	7/11/12 14:34			X								

Relinquished By Signature	Date	Received By Signature	Date	Special Instructions
PRINT NAME	Time	PRINT NAME	Time	
Relinquished By Signature	Date	Received By Signature	Date	
PRINT NAME	Time	PRINT NAME	Time	
Relinquished By Signature	Date	Received By Signature	Date	

Client Wasatch Integrated Waste  
 Address 3404 N. 650 E  
Laurens UT 84041  
 City State Zip  
 Phone 801-614-5603 Fax 801-614-5653  
 Contact John Watson  
 E-mail johnw@wiwmd.org  
 Project Name 2nd atr (A) '12  
 Project Number/P O #  
 Sampler Name John Watson / Brent Larsen



AMERICAN WEST ANALYTICAL LABORATORIES  
 463 West 3600 South  
 Salt Lake City, Utah 84115  
 Fax (801) 263-8687  
 Email: awal@awal-labs.com

CHAIN OF CUSTODY

Lab Sample Set # 1209297  
 Page 1 of 2  
 Turn Around Time (Circle One)  
 1 day 2 day 3 day 4 day 5 day Standard

Matrix Number of Containers (Total)  
 TLP METALS D/D/A  
 TLP CA & Pb

Sample ID	Date/Time Collected	Matrix	TLP METALS D/D/A	TLP CA & Pb	TESTS REQUIRED	QC LEVEL	COMMENTS
AS-12-02A-1	9/12/12 8:20		X			1 2 <u>2+</u>	
-2	9/13/12 8:48		X			3 3+ 4	
-3	10:01		X				
-4	9:27		X				
-5	10:32	X					
-6	11:17		X				
-7	11:55		X				
-8	12:17		X				
-9	12:59		X				
-10	13:20		X				
-11	14:13		X				
-12	14:50		X				

Matrix	Number of Containers (Total)	TLP METALS D/D/A	TLP CA & Pb	TESTS REQUIRED	QC LEVEL	COMMENTS
		X			1 2 <u>2+</u>	
		X			3 3+ 4	
		X				
		X				
X						
		X				
		X				
		X				
		X				
		X				
		X				

LABORATORY USE ONLY
SAMPLES WERE: 1 Shipped or hand delivered Notes
2 Ambient or Chilled Notes
3 Temperature <u>22.7</u>
4 Received Broken/Leaking (Improperly Sealed) Notes
5 Properly Preserved Checked at Bench Notes
6 Received Within Holding Times Notes
COC Tape Was: 1 Present on Outer Package 2 Unbroken on Outer Package 3 Present on Sample 4 Unbroken on Sample
Discrepancies Between Sample Labels and COC Record? Notes

Relinquished By Signature John Watson Date 9/18/12 Time 13:24  
 Received By Signature Brent Larsen Date 9/18/12 Time 12:4  
 PRINT NAME  
 Relinquished By Signature Date Received By Signature Date  
 PRINT NAME Time PRINT NAME Time  
 Relinquished By Signature Date Received By Signature Date  
 PRINT NAME Time PRINT NAME Time  
 Relinquished By Signature Date Received By Signature Date  
 PRINT NAME Time PRINT NAME Time

Special Instructions

1 Present on Outer Package  
2 Unbroken on Outer Package  
3 Present on Sample  
4 Unbroken on Sample  
Discrepancies Between Sample Labels and COC Record?  
Notes

Client Wasatch Integrated Waste  
 Address 3404 N. 650 E  
Laurens UT 84041  
 City State Zip  
 Phone 801-614-5603 Fax 801-614-5653  
 Contact John Watson  
 E-mail johnw@wiwmd.org  
 Project Name 2nd atr (A) '12  
 Project Number/P O #  
 Sampler Name John Watson / Brent Larsen



AMERICAN WEST ANALYTICAL LABORATORIES  
 463 West 3600 South  
 Salt Lake City, Utah 84115  
 Fax (801) 263-8687  
 Email: awal@awal-labs.com

CHAIN OF CUSTODY

Lab Sample Set # 1209297  
 Page 2 of 2  
 Turn Around Time (Circle One)  
 1 day 2 day 3 day 4 day 5 day Standard

Sample ID	Date/Time Collected	Matrix	TLP METALS D/D/A	TLP CA & Pb	TESTS REQUIRED	QC LEVEL	COMMENTS
AS-12-02A-13	9/18/12 15:15		X			1 2 <u>2+</u>	
-14	15:53		X	X		3 3+ 4	
-15	16:30	X					

Matrix	Number of Containers (Total)	TLP METALS D/D/A	TLP CA & Pb	TESTS REQUIRED	QC LEVEL	COMMENTS
		X			1 2 <u>2+</u>	
		X	X		3 3+ 4	
X						

LABORATORY USE ONLY
SAMPLES WERE: 1 Shipped or hand delivered Notes
2 Ambient or Chilled Notes
3 Temperature <u>22.7</u>
4 Received Broken/Leaking (Improperly Sealed) Notes
5 Properly Preserved Checked at Bench Notes
6 Received Within Holding Times Notes
COC Tape Was: 1 Present on Outer Package 2 Unbroken on Outer Package 3 Present on Sample 4 Unbroken on Sample
Discrepancies Between Sample Labels and COC Record? Notes

Relinquished By Signature John Watson Date 9/18/12 Time 13:24  
 Received By Signature Brent Larsen Date 9/18/12 Time 12:4  
 PRINT NAME  
 Relinquished By Signature Date Received By Signature Date  
 PRINT NAME Time PRINT NAME Time  
 Relinquished By Signature Date Received By Signature Date  
 PRINT NAME Time PRINT NAME Time  
 Relinquished By Signature Date Received By Signature Date  
 PRINT NAME Time PRINT NAME Time

Special Instructions

1 Present on Outer Package  
2 Unbroken on Outer Package  
3 Present on Sample  
4 Unbroken on Sample  
Discrepancies Between Sample Labels and COC Record?  
Notes



Client Wasatch Integrated Waste  
 Address 3404 N. 650 E  
LAYTON UT 84041  
 City State Zip  
 Phone 801-614-5603 Fax 801-614-5653



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 463 West 3600 South Salt Lake City, Utah 84115  
 (801) 263-8686 (888) 263-8686  
 Email: awal@awal-labs.com

CHAIN OF CUSTODY  
 Lab Sample Set # 1210097  
 Page 2 of 2  
 Turn Around Time (Circle One)  
 1 day 2 day 3 day 4 day 5 day Standard

Contact John Watson  
 E-mail john.w@willowind.org  
 Project Name 3rd Qtr '12 Ash  
 Project Number/P O #  
 Sampler Name Brent Larsen

Sample ID	Date/Time Collected	Matrix	Number of Containers (Total)	TESTS REQUIRED						QC LEVEL			LABORATORY USE ONLY							
				TEL	P	METALS	IC	EA	TEL	P	CA	EA		1	2	2+				
AS-12-03-13	9/12/12 1638																			
- 14	1700																			
- 15	1730			X																

Relinquished By Signature	Date	Received By Signature	Date	Special Instructions
<u>Brent Larsen</u>	9/12/12 16:05	<u>John Watson</u>	9/12/12 15:05	
Relinquished By Signature	Date	Received By Signature	Date	
<u>John Watson</u>	10/5/12 1323	<u>John Watson</u>	10/5/12 1323	
Relinquished By Signature	Date	Received By Signature	Date	
<u>John Watson</u>				

Client Wasatch Integrated Waste  
 Address 3404 N. 650 E  
LAYTON UT 84041  
 City State Zip  
 Phone 801-614-5603 Fax 801-614-5653  
 Contact John Watson  
 E-mail john.w@willowind.org  
 Project Name 3rd Qtr '12 Ash  
 Project Number/P O #  
 Sampler Name Brent Larsen



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 Email: awal@awal-labs.com

CHAIN OF CUSTODY  
 Lab Sample Set # 1210097  
 Page 1 of 2  
 Turn Around Time (Circle One)  
 1 day 2 day 3 day 4 day 5 day Standard

Sample ID	Date/Time Collected	Matrix	Number of Containers (Total)	TESTS REQUIRED						QC LEVEL			LABORATORY USE ONLY							
				TEL	P	METALS	IC	EA	TEL	P	CA	EA		1	2	2+				
AS-12-03-01	9/12/12 0913																			
- 02	0948																			
- 03	1027			X																
- 04	1105																			
- 05	1130																			
- 06	1225																			
- 07	1257																			
- 08	1325																			
- 09	1430																			
- 10	1505			X																
- 11	1539																			
- 12	1604																			

Relinquished By Signature	Date	Received By Signature	Date	Special Instructions
<u>Brent Larsen</u>	9/12/12 18:05	<u>John Watson</u>	9/12/12 15:05	
Relinquished By Signature	Date	Received By Signature	Date	
<u>John Watson</u>	10/5/12 1323	<u>John Watson</u>	10/5/12 1323	
Relinquished By Signature	Date	Received By Signature	Date	
<u>John Watson</u>				

Client Wasatch Integrated Waste  
 Address 3404 N. 650 E  
LAYTON UT 84041  
 City State Zip  
 Phone 801-614-5603 Fax 801-614-5653  
 Contact JOHN WATSON  
 E-mail johnw@wiwind.org  
 Project Name 4th Qtr '12 Ash  
 Project Number/P O # \_\_\_\_\_  
 Sampler Name Jon Corbin



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 (801) 263-8686 (888) 263-8686 Fax (801) 263-8687  
 Email: awal@awal-labs.com

CHAIN OF CUSTODY

Lab Sample Set # 1212454  
 Page 1 of 2  
 Turn Around Time (Circle One)  
 1 day 2 day 3 day 4 day 5 day Standard

Sample ID	Date/Time Collected	Matrix	TESTS REQUIRED		QC LEVEL				COMMENTS	LABORATORY USE ONLY
			TELP METALS PCBs	P/P Cd & Pb	1	2	3	4		
A9-12-04-1	12/15/12 0730		X				2+			1 Shipped or hand delivered Notes
-2	0800		X							2 Ambient or Chilled Notes
-3	0830		X							3 Temperature 16.4°
-4	0900		X							4 Received Broken/Leaking (Improperly Sealed) Notes
-5	0930		X							5 Properly Preserved Checked at Bench Notes
-6	1000		X							6 Received Within Sticking Times Notes
-7	1030	X								
-8	1100		X							
-9	1130		X							
-10	1200		X							
-11	1230		X							
-12	1300		X							

Relinquished By Signature	Date	Received By Signature	Date	Special Instructions Do not conduct "initial and adjusted" pH test without witness representative present. Chad Staples stayed to witness Russ take pH. - DB 12/20/12
PRINT NAME	Time	PRINT NAME	Time	
Relinquished By Signature	Date	Received By Signature	Date	
PRINT NAME	Time	PRINT NAME	Time	

Client Wasatch Integrated Waste  
 Address 3404 N. 650 E  
LAYTON UT 84041  
 City State Zip  
 Phone 801-614-5603 Fax 801-614-9653  
 Contact JOHN WATSON  
 E-mail johnw@wiwind.org  
 Project Name 4th Qtr '12 Ash  
 Project Number/P O # \_\_\_\_\_  
 Sampler Name Jon Corbin



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CHAIN OF CUSTODY

Lab Sample Set # 1212454  
 Page 2 of 2  
 Turn Around Time (Circle One)  
 1 day 2 day 3 day 4 day 5 day Standard

Sample ID	Date/Time Collected	Matrix	TESTS REQUIRED		QC LEVEL				COMMENTS	LABORATORY USE ONLY
			TELP METALS PCBs	P/P Cd & Pb	1	2	3	4		
A9-12-04-13	12/15/12 1330		X				2+			1 Shipped or hand delivered Notes
-14	1400		X							2 Ambient or Chilled Notes
-15	1430	X								3 Temperature 16.4°

Relinquished By Signature	Date	Received By Signature	Date	Special Instructions Do not conduct "initial and adjusted" pH test without witness representative present.
PRINT NAME	Time	PRINT NAME	Time	
Relinquished By Signature	Date	Received By Signature	Date	
PRINT NAME	Time	PRINT NAME	Time	

**ATTACHMENT IV**

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**DUPLICATE SAMPLE ANALYSIS**

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 2nd Qtr '12 Ash Samples  
 Lab Sample ID: 1207205-002  
 Client Sample ID: AS-12-02-02  
 Collection Date: 6/19/2012 921h  
 Received Date: 7/13/2012 810h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
TCLP Prep Date 7/15/2012 1630h							
Arsenic	mg/L	7/16/2012 1210h	7/17/2012 1402h	SW6020A	0.0100	< 0.0100	*
Barium	mg/L	7/16/2012 1210h	7/18/2012 204h	SW6020A	0.0500	0.530	*
Cadmium	mg/L	7/16/2012 1210h	7/17/2012 1402h	SW6020A	0.00250	0.101	*
Chromium	mg/L	7/16/2012 1210h	7/18/2012 1235h	SW6010C	0.0100	< 0.0100	*
Lead	mg/L	7/16/2012 1210h	7/17/2012 1402h	SW6020A	0.0500	< 0.0500	*
Mercury	mg/L	7/16/2012 1530h	7/17/2012 809h	SW7470A	0.0100	< 0.0100	*
Selenium	mg/L	7/16/2012 1210h	7/17/2012 1402h	SW6020A	0.0100	< 0.0100	*
Silver	mg/L	7/16/2012 1210h	7/17/2012 1402h	SW6020A	0.0100	< 0.0100	*

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 Toll Free (888) 263-8686  
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Kyle F Gross Laboratory Director

Jose Rocha QA Officer

\* The reporting limits were raised due to sample matrix interferences

Report Date: 7/10/2012 Page 3 of 28

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 2nd Qtr (A) '12  
 Lab Sample ID: 1209297-013  
 Client Sample ID: AS-12-02A-13  
 Collection Date: 9/13/2012 1515h  
 Received Date: 9/18/2012 1324h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
TCLP Prep Date 9/26/2012 2010h							
Arsenic	mg/L	9/28/2012 1045h	10/1/2012 1329h	SW6020A	0.0100	< 0.0100	*
Barium	mg/L	9/28/2012 1045h	9/30/2012 0023h	SW6020A	0.0500	0.515	*
Cadmium	mg/L	9/28/2012 1045h	9/30/2012 0023h	SW6020A	0.00250	0.563	*
Chromium	mg/L	9/28/2012 1045h	9/30/2012 0023h	SW6020A	0.0100	< 0.0100	*
Lead	mg/L	9/28/2012 1045h	10/1/2012 1329h	SW6020A	0.0500	0.976	*
Mercury	mg/L	9/27/2012 1630h	9/28/2012 1211h	SW7470A	0.0100	< 0.0100	*
Selenium	mg/L	9/28/2012 1045h	9/30/2012 0023h	SW6020A	0.0100	< 0.0100	*
Silver	mg/L	9/28/2012 1045h	9/30/2012 0023h	SW6020A	0.0100	< 0.0100	*

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 e-mail awal@awal-labs.com

Kyle F Gross Laboratory Director

Jose Rocha QA Officer

\* The reporting limits were raised due to sample matrix interferences

Report Date: 10/2/2012 Page 14 of 20

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 3rd Qtr '12 Ash  
 Lab Sample ID: 1210097-003  
 Client Sample ID: AS-12-03-03  
 Collection Date: 9/19/2012 1027h  
 Received Date: 10/5/2012 1323h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
TCLP Prep Date 10/8/2012 1700h							
Arsenic	mg/L	10/10/2012 910h	10/12/2012 2210h	SW6020A	0.0100	< 0.0100	*
Barium	mg/L	10/10/2012 910h	10/12/2012 2210h	SW6020A	0.0500	0.437	*
Cadmium	mg/L	10/10/2012 910h	10/12/2012 2210h	SW6020A	0.00250	0.102	*
Chromium	mg/L	10/10/2012 910h	10/12/2012 2210h	SW6020A	0.0100	0.0246	*
Lead	mg/L	10/10/2012 910h	10/12/2012 2210h	SW6020A	0.0500	0.103	*
Mercury	mg/L	10/9/2012 1310h	10/10/2012 1036h	SW7470A	0.0100	< 0.0100	*
Selenium	mg/L	10/10/2012 910h	10/12/2012 1923h	SW6020A	0.0100	< 0.0100	*
Silver	mg/L	10/10/2012 910h	10/12/2012 2210h	SW6020A	0.0100	< 0.0100	*

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 Toll Free (888) 263-8686  
 Fax (801) 263-8687  
 e-mail awal@awal-labs.com

Kyle F Gross Laboratory Director

Jose Rocha QA Officer

\* The reporting limits were raised due to sample matrix interferences

Report Date: 10/18/2012 Page 4 of 20

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### INORGANIC ANALYTICAL REPORT

Client: Wasatch Integrated WMD Contact: John Watson  
 Project: 4TH Qtr '12 Ash  
 Lab Sample ID: 1212454-013  
 Client Sample ID: AS-12-04-13  
 Collection Date: 12/15/2012 1330h  
 Received Date: 12/20/2012 1000h

AMERICAN WEST ANALYTICAL LABORATORIES

#### Analytical Results TCLP METALS Method 1311

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
TCLP Prep Date 12/26/2012 1500h							
Arsenic	mg/L	12/27/2012 1405h	12/28/2012 1310h	SW6020A	0.0100	< 0.0100	*
Barium	mg/L	12/27/2012 1405h	12/27/2012 2127h	SW6020A	0.0500	0.376	*
Cadmium	mg/L	12/27/2012 1405h	12/27/2012 2127h	SW6020A	0.00250	0.555	*
Chromium	mg/L	12/27/2012 1405h	12/27/2012 2127h	SW6020A	0.0100	< 0.0100	*
Lead	mg/L	12/27/2012 1405h	12/27/2012 2127h	SW6020A	0.0500	0.174	*
Mercury	mg/L	12/27/2012 1445h	12/28/2012 823h	SW7470A	0.0100	< 0.0100	*
Selenium	mg/L	12/27/2012 1405h	12/27/2012 2127h	SW6020A	0.0100	< 0.0100	*
Silver	mg/L	12/27/2012 1405h	12/27/2012 2127h	SW6020A	0.0100	< 0.0100	*

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(801) 263-8686  
 Toll Free (888) 263-8686  
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Kyle F Gross Laboratory Director

Jose Rocha QA Officer

\* The reporting limits were raised due to sample matrix interferences

Report Date: 1/3/2013 Page 14 of 20

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# **ATTACHMENT V**

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## **LABORATORY QUALITY CONTROL REPORTS**

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American West Analytical Laboratories

*emailed  
7/30/12*

HC

**WORK ORDER Summary**

Work Order: **1207205**

Client: Wasatch Integrated WMD

Page 1 of 3 7/16/2012

Client ID: WAS130

Contact: John Watson

Project: 2nd Qtr 12 Ash Samples

QC Level: LEVEL II+

WO Type: Standard *eh*

Comments: QC 2+ Include copy of TCLP log with final report ,

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage
1207205-001A	AS-12-02-01	6/19/2012 1100h	7/13/2012 0810h	7/30/2012	Solid	1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
SEL Analytes CD PB								
1207205-002A	AS-12-02-02	6/19/2012 0921h				1311LM-PR	<input type="checkbox"/>	iCLPFridge- met/hg
						3005A-TCLP-PR	<input type="checkbox"/>	iCLPFridge- met/hg
						6010C-TCLP	<input checked="" type="checkbox"/>	iCLPFridge- met/hg
SEL Analytes: CR								
						6020-TCLP	<input checked="" type="checkbox"/>	iCLPFridge- met/hg
SEL Analytes: AS BA CD PB SE AG								
						HG-TCLP-7470A	<input type="checkbox"/>	iCLPFridge- met/hg
						HG-TCLP-PR	<input type="checkbox"/>	iCLPFridge- met/hg
1207205-003A	AS-12-02-03	7/11/2012 1214h				1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
SEL Analytes CD PB								
1207205-004A	AS-12-02-04	6/19/2012 0930h				1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
SEL Analytes CD PB								
1207205-005A	AS-12-02-05	7/11/2012 1236h				1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
SEL Analytes CD PB								
1207205-006A	AS-12-02-06	6/19/2012 0952h				1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
SEL Analytes CD PB								

FOR LABORATORY USE ONLY (fill out on page 1) %M  RT  CN  TAT  QC  HOK \_\_\_\_\_ HOK *AL* HOK *MA*

**WORK ORDER Summary**

Work Order: **1207205**

Client: Wasatch Integrated WMD

Page 2 of 3 7/16/2012

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage
1207205-007A	AS-12-02-07	7/11/2012 1317h	7/13/2012 0810h	7/30/2012	Solid	1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
SEL Analytes CD PB								
1207205-008A	AS-12-02-08	6/19/2012 1012h				1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
SEL Analytes CD PB								
1207205-009A	AS-12-02-09	7/11/2012 1356h				1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
SEL Analytes CD PB								
1207205-010A	AS-12-02-10	6/19/2012 1030h				1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
SEL Analytes CD PB								
1207205-011A	AS-12-02-11	7/11/2012 1419h				1311LM-PR	<input type="checkbox"/>	iCLPFridge- met/hg & voc
						1311ZHE-PR	<input type="checkbox"/>	iCLPFridge- met/hg & voc
						3005A-TCLP-PR	<input type="checkbox"/>	iCLPFridge- met/hg & voc
						6010C-TCLP	<input checked="" type="checkbox"/>	iCLPFridge- met/hg & voc
SEL Analytes CR								
						6020-TCLP	<input checked="" type="checkbox"/>	iCLPFridge- met/hg & voc
SEL Analytes: AS BA CD PB SE AG								
						8260-W-TCLP	<input checked="" type="checkbox"/>	iCLPFridge- met/hg & voc
						HG-TCLP-7470A	<input type="checkbox"/>	iCLPFridge- met/hg & voc
						HG-TCLP-PR	<input type="checkbox"/>	iCLPFridge- met/hg & voc

FOR LABORATORY USE ONLY (fill out on page 1) %M  RT  CN  TAT  QC  HOK \_\_\_\_\_ HOK \_\_\_\_\_ HOK \_\_\_\_\_

**WORK ORDER Summary**

Work Order: **1207205**

Client: Wasatch Integrated WMD

Page 3 of 3 7/16/2012

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage
1207205-012A	AS-12-02-12	7/11/2012 1434h	7/13/2012 0810h	7/30/2012	Solid	1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
<b>SEL Analytes CD PB</b>								
1207205-013A	AS-12-02-13	7/11/2012				1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
<b>SEL Analytes CD PB</b>								
1207205-014A	AS-12-02-14					1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
<b>SEL Analytes CD PB</b>								
1207205-015A	AS-12-02-15	6/19/2012 0921h				1311LM-PR	<input type="checkbox"/>	tCLPFridge- met/hg
						3005A-TCLP-PR	<input type="checkbox"/>	tCLPFridge- met/hg
						6010C-TCLP	<input checked="" type="checkbox"/>	tCLPFridge- met/hg
						6020-TCLP	<input checked="" type="checkbox"/>	tCLPFridge- met/hg
<b>SEL Analytes: CR</b>								
<b>SEL Analytes AS BA CD PB SE AG</b>								
						HG-TCLP-7470A	<input type="checkbox"/>	tCLPFridge- met/hg
						HG-TCLP-PR	<input type="checkbox"/>	tCLPFridge- met/hg

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American West Analytical Laboratories

*Included report w/ TCLP  
2005 10/21/12*

HC

**WORK ORDER Summary**

Work Order: **1209297**

Client: Wasatch Integrated WMD

Page 1 of 2 9/18/2012

Client ID: WAS130

Contact: John Watson

Project: 2nd Qtr (A) '12

QC Level: LEVEL II+

WO Type Standard

Comments: QC 2+ Include copy of TCLP log with final report ,

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage
1209297-001A	AS-12-02A-1	9/12/2012 0820h	9/18/2012 1324h	10/2/2012	Soil	1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
SEL Analytes: CD PB								
1209297-002A	AS-12-02A-2	9/13/2012 0848h				1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
SEL Analytes: CD PB								
1209297-003A	AS-12-02A-3	9/13/2012 1001h				1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
SEL Analytes: CD PB								
1209297-004A	AS-12-02A-4	9/13/2012 0922h				1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
SEL Analytes: CD PB								
1209297-005A	AS-12-02A-5	9/13/2012 1032h				1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
SEL Analytes: AS BA CD CR PB SE AG								
1209297-006A	AS-12-02A-6	9/13/2012 1117h				HG-TCLP-7470A	<input type="checkbox"/>	TCLPFridge
						HG-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						1311LM-PR	<input type="checkbox"/>	TCLPFridge
1209297-007A	AS-12-02A-7	9/13/2012 1155h				3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
						1311LM-PR	<input type="checkbox"/>	TCLPFridge
SEL Analytes: CD PB								
1209297-008A	AS-12-02A-8	9/13/2012 1227h				1311LM-PR	<input type="checkbox"/>	TCLPFridge
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge

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**WORK ORDER Summary**

Work Order: **1209297**

Client: Wasatch Integrated WMD

Page 2 of 2 9/18/2012

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage						
1209297-008A	AS-12-02A-8	9/13/2012 1227h	9/18/2012 1324h	10/2/2012	Soil	6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge						
						SEL Analytes: CD PB								
						1209297-009A	AS-12-02A-9	9/13/2012 1259h				1311LM-PR	<input type="checkbox"/>	TCLPFridge
1209297-010A	AS-12-02A-10	9/13/2012 1320h				3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge						
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge						
						SEL Analytes: CD PB								
1209297-011A	AS-12-02A-11	9/13/2012 1413h				1311LM-PR	<input type="checkbox"/>	TCLPFridge						
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge						
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge						
SEL Analytes: CD PB														
1209297-012A	AS-12-02A-12	9/13/2012 1450h				1311LM-PR	<input type="checkbox"/>	TCLPFridge						
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge						
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge						
SEL Analytes: CD PB														
1209297-013A	AS-12-02A-13	9/13/2012 1515h				1311LM-PR	<input type="checkbox"/>	TCLPFridge						
						3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge						
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge						
SEL Analytes: AS BA CD CR PB SE AG														
1209297-014A	AS-12-02A-14	9/13/2012 1553h				HG-TCLP-7470A	<input type="checkbox"/>	TCLPFridge						
						HG-TCLP-PR	<input type="checkbox"/>	TCLPFridge						
						1311LM-PR	<input type="checkbox"/>	TCLPFridge						
1209297-015A	AS-12-02A-15	9/13/2012 1630h				3005A-TCLP-PR	<input type="checkbox"/>	TCLPFridge						
						6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge						
						SEL Analytes: AS BA CD CR PB SE AG								
						HG-TCLP-7470A	<input type="checkbox"/>	TCLPFridge						
						HG-TCLP-PR	<input type="checkbox"/>	TCLPFridge						

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*Muller*  
*Report w/*  
*TCLP Logbook*  
*10/12/12 HC*

## WORK ORDER Summary

Client: Wasatch Integrated WMD  
 Client ID: WASI30  
 Project: 3rd Qtr '12 Ash  
 Comments: QC 2+ Include copy of TCLP log with final report ,

Contact: John Watson  
 QC Level: LEVEL II+

Work Order: **1210097**  
 Page 1 of 2 10/5/2012  
 WO Type: Standard

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	SEL	Storage
1210097-001A	AS-12-03-01	9/19/2012 0913h	10/5/2012 1323h	10/19/2012	Solid	1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	TCLPFridge TCLPFridge TCLPFridge
SEL Analytes: CD PB								
1210097-002A	AS-12-03-02	9/19/2012 0948h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	TCLPFridge TCLPFridge TCLPFridge
SEL Analytes: CD PB								
1210097-003A	AS-12-03-03	9/19/2012 1027h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	TCLPFridge TCLPFridge TCLPFridge
SEL Analytes: AS BA CD CR PB SE AG								
1210097-004A	As-12-03-04	9/19/2012 1105h				HG-TCLP-7470A HG-TCLP-PR 1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	TCLPFridge TCLPFridge TCLPFridge TCLPFridge TCLPFridge
SEL Analytes: CD PB								
1210097-005A	As-12-03-05	9/19/2012 1130h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	TCLPFridge TCLPFridge TCLPFridge
SEL Analytes: CD PB								
1210097-006A	As-12-03-06	9/19/2012 1225h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	TCLPFridge TCLPFridge TCLPFridge
SEL Analytes: CD PB								
1210097-007A	As-12-03-07	9/19/2012 1257h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	TCLPFridge TCLPFridge TCLPFridge
SEL Analytes: CD PB								
1210097-008A	As-12-03-08	9/19/2012 1325h				1311LM-PR 3005A-TCLP-PR	<input type="checkbox"/> <input type="checkbox"/>	TCLPFridge TCLPFridge

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## WORK ORDER Summary

Client: Wasatch Integrated WMD

Work Order: **1210097**  
 Page 2 of 2 10/5/2012

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	SEL	Storage
1210097-008A	As-12-03-08	9/19/2012 1325h	10/5/2012 1323h	10/19/2012	Solid	6020-TCLP	<input checked="" type="checkbox"/>	TCLPFridge
SEL Analytes: CD PB								
1210097-009A	As-12-03-09	9/19/2012 1430h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	TCLPFridge TCLPFridge TCLPFridge
SEL Analytes: CD PB								
1210097-010A	AS-12-03-10	9/19/2012 1505h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	TCLPFridge TCLPFridge TCLPFridge
SEL Analytes: AS BA CD CR PB SE AG								
1210097-011A	As-12-03-11	9/19/2012 1533h				HG-TCLP-7470A HG-TCLP-PR 1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	TCLPFridge TCLPFridge TCLPFridge TCLPFridge TCLPFridge
SEL Analytes: CD PB								
1210097-012A	As-12-03-12	9/19/2012 1604h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	TCLPFridge TCLPFridge TCLPFridge
SEL Analytes: CD PB								
1210097-013A	As-12-03-13	9/19/2012 1632h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	TCLPFridge TCLPFridge TCLPFridge
SEL Analytes: CD PB								
1210097-014A	As-12-03-14	9/19/2012 1700h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	TCLPFridge TCLPFridge TCLPFridge
SEL Analytes: CD PB								
1210097-015A	AS-12-03-15	9/19/2012 1730h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	TCLPFridge TCLPFridge TCLPFridge
SEL Analytes: AS DA CD CR PB SE AG								
HG-TCLP-7470A <input type="checkbox"/> TCLPFridge HG-TCLP-PR <input type="checkbox"/> TCLPFridge								

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*Amended 1/31/13*

**WORK ORDER Summary**

Work Order: **1212454**

Client: Wasatch Integrated WMD

Page 1 of 2 12/28/2012

Client ID: WAS130

Contact: John Watson

Project: 4TH Qtr '12 Ash

QC Level II+

WO Type: Standard

Comments: QC 2+ Include copy of TCLP log with final report.

*DB*

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	SEL Storage
1212454-001A	AS-12-04-1	12/15/2012 0730h	12/20/2012 1000h	1/7/2013	Solid	1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge <input checked="" type="checkbox"/> TCLPFridge
SEL Analytes: CD PB							
1212454-002A	AS-12-04-2	12/15/2012 0800h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge <input checked="" type="checkbox"/> TCLPFridge
SEL Analytes: CD PB							
1212454-003A	AS-12-04-3	12/15/2012 0830h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge <input checked="" type="checkbox"/> TCLPFridge
SEL Analytes: CD PB							
1212454-004A	AS-12-04-4	12/15/2012 0900h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge <input checked="" type="checkbox"/> TCLPFridge
SEL Analytes: CD PB							
1212454-005A	AS-12-04-5	12/15/2012 0930h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge <input checked="" type="checkbox"/> TCLPFridge
SEL Analytes: CD PB							
1212454-006A	AS-12-04-6	12/15/2012 1000h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge <input checked="" type="checkbox"/> TCLPFridge
SEL Analytes: CD PB							
1212454-007A	AS-12-04-7	12/15/2012 1030h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge <input checked="" type="checkbox"/> TCLPFridge
SEL Analytes: AS BA CD CR PB SE AG							
						HG-TCLP-7470A HG-TCLP-PR	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge
1212454-008A	AS-12-04-8	12/15/2012 1100h				1311LM-PR 3005A-TCLP-PR	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge

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**WORK ORDER Summary**

Work Order: **1212454**

Client: Wasatch Integrated WMD

Page 2 of 2 12/28/2012

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	SEL Storage
1212454-008A	AS-12-04-8	12/15/2012 1100h	12/20/2012 1000h	1/7/2013	Solid	6020-TCLP	<input checked="" type="checkbox"/> TCLPFridge
SEL Analytes: CD PB							
1212454-009A	AS-12-04-9	12/15/2012 1130h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge <input checked="" type="checkbox"/> TCLPFridge
SEL Analytes: CD PB							
1212454-010A	AS-12-04-10	12/15/2012 1200h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge <input checked="" type="checkbox"/> TCLPFridge
SEL Analytes: CD PB							
1212454-011A	AS-12-04-11	12/15/2012 1230h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge <input checked="" type="checkbox"/> TCLPFridge
SEL Analytes: CD PB							
1212454-012A	AS-12-04-12	12/15/2012 1300h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge <input checked="" type="checkbox"/> TCLPFridge
SEL Analytes: CD PB							
1212454-013A	AS-12-04-13	12/15/2012 1330h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge <input checked="" type="checkbox"/> TCLPFridge
SEL Analytes: AS BA CD CR PB SE AG							
						HG-TCLP-7470A HG-TCLP-PR	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge
1212454-014A	AS-12-04-14	12/15/2012 1400h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge <input checked="" type="checkbox"/> TCLPFridge
SEL Analytes: CD PB							
1212454-015A	AS-12-04-15	12/15/2012 1430h				1311LM-PR 3005A-TCLP-PR 6020-TCLP	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge <input checked="" type="checkbox"/> TCLPFridge
SEL Analytes: AS BA CD CR PB SE AG							
						HG-TCLP-7470A HG-TCLP-PR	<input type="checkbox"/> TCLPFridge <input type="checkbox"/> TCLPFridge

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# METHOD BLANKS



**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1207205  
 Project: 2nd Qtr 12 Ash Samples

Contact: John Watson  
 Dept: ME  
 QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-19923	Chromium	mg/L	SW6010C	< 0 0100	-	-	-	-	-	-	-	7/17/2012 1348h
MB-20075	Chromium	mg/L	SW6010C	< 0 0100	-	-	-	-	-	-	-	7/26/2012 1603h
MB-TCLP-19919	Chromium	mg/L	SW6010C	< 0 0100	-	-	-	-	-	-	-	7/17/2012 1451h
MB-TCLP-20054	Chromium	mg/L	SW6010C	< 0 0100	-	-	-	-	-	-	-	7/26/2012 1652h
MB-TCLP-20058	Chromium	mg/L	SW6010C	< 0 0100	-	-	-	-	-	-	-	7/26/2012 1657h
MB-19923	Arsenic	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/17/2012 1303h
MB-19923	Barium	mg/L	SW6020A	< 0 0500	-	-	-	-	-	-	-	7/17/2012 1303h
MB-19923	Cadmium	mg/L	SW6020A	< 0 00250	-	-	-	-	-	-	-	7/17/2012 1303h
MB-19923	Lead	mg/L	SW6020A	< 0 0500	-	-	-	-	-	-	-	7/17/2012 1303h
MB-19923	Selenium	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/17/2012 1303h
MB-19923	Silver	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/17/2012 1303h
MB-20075	Arsenic	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/26/2012 2232h
MB-20075	Barium	mg/L	SW6020A	< 0 0500	-	-	-	-	-	-	-	7/26/2012 2232h
MB-20075	Cadmium	mg/L	SW6020A	< 0 00250	-	-	-	-	-	-	-	7/26/2012 2232h
MB-20075	Lead	mg/L	SW6020A	< 0 0500	-	-	-	-	-	-	-	7/27/2012 1444h
MB-20075	Selenium	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/26/2012 2232h
MB-20075	Silver	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/26/2012 2232h
MB-TCLP-19919	Arsenic	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/17/2012 1307h
MB-TCLP-19919	Barium	mg/L	SW6020A	< 0 0500	-	-	-	-	-	-	-	7/17/2012 1307h
MB-TCLP-19919	Cadmium	mg/L	SW6020A	< 0 00250	-	-	-	-	-	-	-	7/17/2012 1307h
MB-TCLP-19919	Lead	mg/L	SW6020A	< 0 0500	-	-	-	-	-	-	-	7/17/2012 1307h
MB-TCLP-19919	Selenium	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/17/2012 1307h

Report Date 7/30/2012 Page 19 of 28

All analyses applicable to the CWA, SDWA and RCRA are performed in accordance to NELAP protocols. Permittee sampling information is located on the attached CDC. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contract. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1207205  
 Project: 2nd Qtr 12 Ash Samples

Contact: John Watson  
 Dept: ME  
 QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-TCLP-19919	Silver	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/17/2012 1307h
MB-TCLP-20054	Arsenic	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/26/2012 2241h
MB-TCLP-20054	Barium	mg/L	SW6020A	< 0 0500	-	-	-	-	-	-	-	7/26/2012 2241h
MB-TCLP-20054	Cadmium	mg/L	SW6020A	< 0 00250	-	-	-	-	-	-	-	7/26/2012 2241h
MB-TCLP-20054	Lead	mg/L	SW6020A	< 0 0500	-	-	-	-	-	-	-	7/27/2012 1450h
MB-TCLP-20054	Selenium	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/26/2012 2241h
MB-TCLP-20054	Silver	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/26/2012 2241h
MB-TCLP-20055	Arsenic	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/26/2012 2236h
MB-TCLP-20055	Barium	mg/L	SW6020A	< 0 0500	-	-	-	-	-	-	-	7/26/2012 2236h
MB-TCLP-20055	Cadmium	mg/L	SW6020A	< 0 00250	-	-	-	-	-	-	-	7/26/2012 2236h
MB-TCLP-20055	Lead	mg/L	SW6020A	< 0 0500	-	-	-	-	-	-	-	7/27/2012 1447h
MB-TCLP-20055	Selenium	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/26/2012 2236h
MB-TCLP-20055	Silver	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/26/2012 2236h
MB-TCLP-20058	Arsenic	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/26/2012 2246h
MB-TCLP-20058	Barium	mg/L	SW6020A	< 0 0500	-	-	-	-	-	-	-	7/26/2012 2246h
MB-TCLP-20058	Cadmium	mg/L	SW6020A	< 0 00250	-	-	-	-	-	-	-	7/26/2012 2246h
MB-TCLP-20058	Lead	mg/L	SW6020A	< 0 0500	-	-	-	-	-	-	-	7/27/2012 1453h
MB-TCLP-20058	Selenium	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/26/2012 2246h
MB-TCLP-20058	Silver	mg/L	SW6020A	< 0 0100	-	-	-	-	-	-	-	7/26/2012 2246h
MB-19936	Mercury	mg/L	SW7470A	< 0 00100	-	-	-	-	-	-	-	7/17/2012 804h
MB-20064	Mercury	mg/L	SW7470A	< 0 00100	-	-	-	-	-	-	-	7/25/2012 841h
MB-TCLP-19919	Mercury	mg/L	SW7470A	< 0 00100	-	-	-	-	-	-	-	7/17/2012 831h

Report Date 7/30/2012 Page 20 of 28

All analyses applicable to the CWA, SDWA and RCRA are performed in accordance to NELAP protocols. Permittee sampling information is located on the attached CDC. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contract. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1207205  
 Project: 2nd Qtr 12 Ash Samples

Contact: John Watson  
 Dept: ME  
 QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-TCLP-19925	Mercury	mg/L	SW7470A	< 0.00100				-				7/17/2012 832h
MB-TCLP-20054	Mercury	mg/L	SW7470A	< 0.00100				-				7/25/2012 902h
MB-TCLP-20058	Mercury	mg/L	SW7470A	< 0.00100				-				7/25/2012 904h

Report Date 7/30/2012 Page 21 of 28

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**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1207205  
 Project: 2nd Qtr 12 Ash Samples

Contact: John Watson  
 Dept: MSVOA  
 QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB VOC 071612A	1,1-Dichloroethene	mg/L	SW8260C	< 0.00200				-				7/16/2012 920h
MB VOC 071612A	1,2-Dichloroethane	mg/L	SW8260C	< 0.00200				-				7/16/2012 920h
MB VOC 071612A	1,4-Dichlorobenzene	mg/L	SW8260C	< 0.00200				-				7/16/2012 920h
MB VOC 071612A	2-Butanone	mg/L	SW8260C	< 0.0100				-				7/16/2012 920h
MB VOC 071612A	Benzene	mg/L	SW8260C	< 0.00200				-				7/16/2012 920h
MB VOC 071612A	Carbon tetrachloride	mg/L	SW8260C	< 0.00200				-				7/16/2012 920h
MB VOC 071612A	Chlorobenzene	mg/L	SW8260C	< 0.00200				-				7/16/2012 920h
MB VOC 071612A	Chloroform	mg/L	SW8260C	< 0.00200				-				7/16/2012 920h
MB VOC 071612A	Tetrachloroethene	mg/L	SW8260C	< 0.00200				-				7/16/2012 920h
MB VOC 071612A	Trichloroethene	mg/L	SW8260C	< 0.00200				-				7/16/2012 920h
MB VOC 071612A	Vinyl chloride	mg/L	SW8260C	< 0.00100				-				7/16/2012 920h
MB VOC 071612A	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	0.0540	0.05000		108	76-138				7/16/2012 920h
MB VOC 071612A	Surr: 4-Bromofluorobenzene	%REC	SW8260C	0.0525	0.05000		105	77-121				7/16/2012 920h
MB VOC 071612A	Surr: Dibromofluoromethane	%REC	SW8260C	0.0547	0.05000		109	67-128				7/16/2012 920h
MB VOC 071612A	Surr: Toluene-d8	%REC	SW8260C	0.0488	0.05000		97.7	81-135				7/16/2012 920h
MB-TCLP-19916	1,1-Dichloroethene	mg/L	SW8260C	< 0.0400				-				7/16/2012 1619h
MB-TCLP-19916	1,2-Dichloroethane	mg/L	SW8260C	< 0.0400				-				7/16/2012 1619h
MB-TCLP-19916	1,4-Dichlorobenzene	mg/L	SW8260C	< 0.0400				-				7/16/2012 1619h
MB-TCLP-19916	2-Butanone	mg/L	SW8260C	< 0.200				-				7/16/2012 1619h
MB-TCLP-19916	Benzene	mg/L	SW8260C	< 0.0400				-				7/16/2012 1619h
MB-TCLP-19916	Carbon tetrachloride	mg/L	SW8260C	< 0.0400				-				7/16/2012 1619h
MB-TCLP-19916	Chlorobenzene	mg/L	SW8260C	< 0.0400				-				7/16/2012 1619h
MB-TCLP-19916	Chloroform	mg/L	SW8260C	< 0.0400				-				7/16/2012 1619h

Report Date 7/30/2012 Page 25 of 28

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

### QC SUMMARY REPORT

Client: Wasatch Integrated WMD  
Lab Set ID: 1207205  
Project: 2nd Qtr' 12 Ash Samples

Contact: John Watson  
Dept: MSVOA  
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-TCLP-19916	Tetrachloroethene	mg/L	SW8260C	< 0.0400				-				7/16/2012 1619h
MB-TCLP-19916	Trichloroethene	mg/L	SW8260C	< 0.0400				-				7/16/2012 1619h
MB-TCLP-19916	Vinyl chloride	mg/L	SW8260C	< 0.0200				-				7/16/2012 1619h
MB-TCLP-19916	Surr 1,2-Dichloroethane-d4	%REC	SW8260C	1.14	1.000		114	76-138				7/16/2012 1619h
MB-TCLP-19916	Surr 4-Bromofluorobenzene	%REC	SW8260C	1.11	1.000		111	77-121				7/16/2012 1619h
MB-TCLP-19916	Surr Dibromofluoromethane	%REC	SW8260C	1.14	1.000		114	67-128				7/16/2012 1619h
MB-TCLP-19916	Surr Toluene-d8	%REC	SW8260C	1.01	1.000		101	81-135				7/16/2012 1619h

Report Date: 7/30/2012 Page 26 of 28

All analyses applicable to the CWA, RCRA, and RCRA are performed in accordance to NELAP protocols. Pertinent sampling information is located on the attached COC. This report is provided for the exclusive use of the addressee. Permisses of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the republishing of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1209297  
 Project: 2nd Qtr (A) '12

Contact: John Watson  
 Dept: ME  
 QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-21329	Arsenic	mg/L	SW6020A	< 0.0100				-				10/1/2012 1234h
MB-21329	Barium	mg/L	SW6020A	< 0.0500				-				9/29/2012 2050h
MB-21329	Cadmium	mg/L	SW6020A	< 0.00250				-				9/29/2012 2050h
MB-21329	Chromium	mg/L	SW6020A	< 0.0100				-				9/29/2012 2050h
MB-21329	Lead	mg/L	SW6020A	< 0.0500				-				9/29/2012 2050h
MB-21329	Selenium	mg/L	SW6020A	< 0.0100				-				9/29/2012 2050h
MB-21329	Silver	mg/L	SW6020A	< 0.0100				-				9/29/2012 2050h
MB-TCLP-21312	Arsenic	mg/L	SW6020A	< 0.0100				-				10/1/2012 1238h
MB-TCLP-21312	Barium	mg/L	SW6020A	< 0.0500				-				9/29/2012 2057h
MB-TCLP-21312	Cadmium	mg/L	SW6020A	< 0.00250				-				9/29/2012 2057h
MB-TCLP-21312	Chromium	mg/L	SW6020A	< 0.0100				-				9/29/2012 2057h
MB-TCLP-21312	Lead	mg/L	SW6020A	< 0.0500				-				9/29/2012 2057h
MB-TCLP-21312	Selenium	mg/L	SW6020A	< 0.0100				-				9/29/2012 2057h
MB-TCLP-21312	Silver	mg/L	SW6020A	< 0.0100				-				9/29/2012 2057h
MB-21319	Mercury	mg/L	SW7470A	< 0.00100				-				9/28/2012 1156h
MB-TCLP-21171	Mercury	mg/L	SW7470A	< 0.00100				-				9/28/2012 1216h

Report Date: 10/2/2012 Page 18 of 20

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**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1210097  
 Project: 3rd Qtr '12 Ash

Contact: John Watson  
 Dept: ME  
 QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-21556	Arsenic	mg/L	SW6020A	< 0.0100				-				10/12/2012 2142h
MB-21556	Barium	mg/L	SW6020A	< 0.0500				-				10/12/2012 2142h
MB-21556	Cadmium	mg/L	SW6020A	< 0.00250				-				10/12/2012 2142h
MB-21556	Chromium	mg/L	SW6020A	< 0.0100				-				10/12/2012 2142h
MB-21556	Lead	mg/L	SW6020A	< 0.0500				-				10/12/2012 2142h
MB-21556	Selenium	mg/L	SW6020A	< 0.0100				-				10/15/2012 1906h
MB-21556	Silver	mg/L	SW6020A	< 0.0100				-				10/12/2012 2142h
MB-21584	Cadmium	mg/L	SW6020A	< 0.00250				-				10/12/2012 1531h
MB-21584	Lead	mg/L	SW6020A	< 0.0500				-				10/12/2012 1531h
MB-TCLP-21537	Arsenic	mg/L	SW6020A	< 0.0100				-				10/12/2012 2149h
MB-TCLP-21537	Barium	mg/L	SW6020A	< 0.0500				-				10/12/2012 2149h
MB-TCLP-21537	Cadmium	mg/L	SW6020A	< 0.00250				-				10/12/2012 2149h
MB-TCLP-21537	Chromium	mg/L	SW6020A	< 0.0100				-				10/12/2012 2149h
MB-TCLP-21537	Lead	mg/L	SW6020A	< 0.0500				-				10/12/2012 2149h
MB-TCLP-21537	Selenium	mg/L	SW6020A	< 0.0100				-				10/15/2012 1913h
MB-TCLP-21537	Silver	mg/L	SW6020A	< 0.0100				-				10/12/2012 2149h
MB-TCLP-21568	Cadmium	mg/L	SW6020A	< 0.00250				-				10/12/2012 1538h
MB-TCLP-21568	Lead	mg/L	SW6020A	< 0.0500				-				10/12/2012 1538h
MB-21544	Mercury	mg/L	SW7470A	< 0.00100				-				10/10/2012 1019h
MB-TCLP-21536	Mercury	mg/L	SW7470A	< 0.00100				-				10/10/2012 1047h
MB-TCLP-21537	Mercury	mg/L	SW7470A	< 0.00100				-				10/10/2012 1048h

U - This flag indicates the compound was analyzed for but not detected above the MDL





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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

### QC SUMMARY REPORT

Client: Wasatch Integrated WMD  
Lab Set ID: 1212454  
Project: 4TH Qtr '12 Ash

Contact: John Watson  
Dept: ME  
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	RPD		Date Analyzed
									Limit	Qual	
MB-22899	Barium	mg/L	SW6020A	< 0.0500				-			12/27/2012 1909h
MB-22899	Cadmium	mg/L	SW6020A	< 0.00250				-			12/27/2012 1909h
MB-22899	Chromium	mg/L	SW6020A	< 0.0100				-			12/27/2012 1909h
MB-22899	Lead	mg/L	SW6020A	< 0.0500				-			12/27/2012 1909h
MB-22899	Selenium	mg/L	SW6020A	< 0.0100				-			12/27/2012 1909h
MB-22899	Silver	mg/L	SW6020A	< 0.0100				-			12/27/2012 1909h
MB-22899	Arsenic	mg/L	SW6020A	< 0.0100				-			12/28/2012 1238h
MB-TCLP-22895	Barium	mg/L	SW6020A	< 0.0500				-			12/27/2012 1914h
MB-TCLP-22895	Cadmium	mg/L	SW6020A	< 0.00250				-			12/27/2012 1914h
MB-TCLP-22895	Chromium	mg/L	SW6020A	< 0.0100				-			12/27/2012 1914h
MB-TCLP-22895	Lead	mg/L	SW6020A	< 0.0500				-			12/27/2012 1914h
MB-TCLP-22895	Selenium	mg/L	SW6020A	< 0.0100				-			12/27/2012 1914h
MB-TCLP-22895	Silver	mg/L	SW6020A	< 0.0100				-			12/27/2012 1914h
MB-TCLP-22895	Arsenic	mg/L	SW6020A	< 0.0100				-			12/28/2012 1243h
MB-22901	Mercury	mg/L	SW7470A	< 0.00100				-			12/28/2012 813h
MB-TCLP-22895	Mercury	mg/L	SW7470A	< 0.00100				-			12/28/2012 833h

Report Date: 1/3/2013 Page 18 of 20

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# **LABORATORY QUALITY CONTROL REPORTS**



**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1207205  
 Project: 2nd Qtr' 12 Ash Samples

Contact: John Watson  
 Dept: ME  
 QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-19923	Chromium	mg/L	SW6010C	0.415	0.4000	0	104	80-120				7/17/2012 1352h
LCS-20075	Chromium	mg/L	SW6010C	0.444	0.4000	0	111	80-120				7/26/2012 1607h
LCS-19923	Arsenic	mg/L	SW6020A	0.439	0.4000	0	110	85-115				7/17/2012 1312h
LCS-19923	Barium	mg/L	SW6020A	0.412	0.4000	0	103	85-115				7/17/2012 1312h
LCS-19923	Cadmium	mg/L	SW6020A	0.410	0.4000	0	102	85-115				7/17/2012 1312h
LCS-19923	Lead	mg/L	SW6020A	0.420	0.4000	0	105	85-115				7/17/2012 1312h
LCS-19923	Selenium	mg/L	SW6020A	0.416	0.4000	0	104	85-115				7/17/2012 1312h
LCS-19923	Silver	mg/L	SW6020A	0.424	0.4000	0	106	85-115				7/17/2012 1312h
LCS-20075	Arsenic	mg/L	SW6020A	0.451	0.4000	0	113	85-115				7/26/2012 2250h
LCS-20075	Barium	mg/L	SW6020A	0.387	0.4000	0	96.7	85-115				7/26/2012 2250h
LCS-20075	Cadmium	mg/L	SW6020A	0.396	0.4000	0	98.9	85-115				7/26/2012 2250h
LCS-20075	Lead	mg/L	SW6020A	0.375	0.4000	0	93.9	85-115				7/27/2012 1457h
LCS-20075	Selenium	mg/L	SW6020A	0.415	0.4000	0	104	85-115				7/26/2012 2250h
LCS-20075	Silver	mg/L	SW6020A	0.409	0.4000	0	102	85-115				7/26/2012 2250h
LCS-19936	Mercury	mg/L	SW7470A	0.00329	0.003330	0	98.8	80-120				7/17/2012 805h
LCS-20064	Mercury	mg/L	SW7470A	0.00310	0.003330	0	93.0	80-120				7/25/2012 843h

Report Date 7/30/2012 Page 18 of 28

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**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1207205  
 Project: 2nd Qtr' 12 Ash Samples

Contact: John Watson  
 Dept: ME  
 QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1207205-001AMS	Chromium	mg/L	SW6010C	0.396	0.4000	0.01120	96.1	75-125				7/17/2012 1412h
1207205-011AMS	Chromium	mg/L	SW6010C	0.426	0.4000	0	106	75-125				7/26/2012 1636h
1207205-001AMS	Arsenic	mg/L	SW6020A	0.469	0.4000	0.006307	116	75-125				7/17/2012 1335h
1207205-001AMS	Barium	mg/L	SW6020A	0.868	0.4000	0.4905	94.5	75-125				7/17/2012 1335h
1207205-001AMS	Cadmium	mg/L	SW6020A	0.470	0.4000	0.06034	103	75-125				7/17/2012 1335h
1207205-001AMS	Lead	mg/L	SW6020A	0.436	0.4000	0.01248	106	75-125				7/17/2012 1335h
1207205-001AMS	Selenium	mg/L	SW6020A	0.442	0.4000	0.006604	109	75-125				7/17/2012 1335h
1207205-001AMS	Silver	mg/L	SW6020A	0.407	0.4000	0	102	75-125				7/17/2012 1335h
1207205-011AMS	Arsenic	mg/L	SW6020A	0.499	0.4000	0.006099	123	75-125				7/26/2012 2355h
1207205-011AMS	Barium	mg/L	SW6020A	0.828	0.4000	0.4447	95.7	75-125				7/26/2012 2355h
1207205-011AMS	Cadmium	mg/L	SW6020A	0.751	0.4000	0.3567	98.5	75-125				7/26/2012 2355h
1207205-011AMS	Lead	mg/L	SW6020A	0.438	0.4000	0.07770	90.0	75-125				7/27/2012 1528h
1207205-011AMS	Selenium	mg/L	SW6020A	0.430	0.4000	0.007933	106	75-125				7/26/2012 2355h
1207205-011AMS	Silver	mg/L	SW6020A	0.396	0.4000	0	98.9	75-125				7/26/2012 2355h
1207205-002AMS	Mercury	mg/L	SW7470A	0.0350	0.03330	0	105	80-120				7/17/2012 813h
1207205-011AMS	Mercury	mg/L	SW7470A	0.0307	0.03330	0	92.2	80-120				7/25/2012 851h

Report Date 7/30/2012 Page 22 of 28

All analyses applicable to the CMA, SDWA and RCRA are performed in accordance to NELAP protocols. Performance information is located on the attached COC. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-qualification of this report for any purpose other than that for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1207205  
 Project: 2nd Qtr' 12 Ash Samples

Contact: John Watson  
 Dept: ME  
 QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1207205-001AMSD	Chromium	mg/L	SW6010C	0.389	0.4000	0.01120	94.5	75-125	1.61	20		7/17/2012 1416h
1207205-011AMSD	Chromium	mg/L	SW6010C	0.429	0.4000	0	107	75-125	0.645	20		7/26/2012 1640h
1207205-001AMSD	Arsenic	mg/L	SW6020A	0.470	0.4000	0.006307	116	75-125	0.338	20		7/17/2012 1340h
1207205-001AMSD	Barium	mg/L	SW6020A	0.858	0.4000	0.4905	91.8	75-125	1.22	20		7/17/2012 1340h
1207205-001AMSD	Cadmium	mg/L	SW6020A	0.463	0.4000	0.06034	101	75-125	1.69	20		7/17/2012 1340h
1207205-001AMSD	Lead	mg/L	SW6020A	0.426	0.4000	0.01248	104	75-125	2.27	20		7/17/2012 1340h
1207205-001AMSD	Selenium	mg/L	SW6020A	0.419	0.4000	0.006604	105	75-125	5.21	20		7/17/2012 1340h
1207205-001AMSD	Silver	mg/L	SW6020A	0.403	0.4000	0	101	75-125	1.05	20		7/17/2012 1340h
1207205-011AMSD	Arsenic	mg/L	SW6020A	0.488	0.4000	0.006099	120	75-125	2.22	20		7/27/2012 000h
1207205-011AMSD	Barium	mg/L	SW6020A	0.802	0.4000	0.4447	89.4	75-125	3.12	20		7/27/2012 000h
1207205-011AMSD	Cadmium	mg/L	SW6020A	0.741	0.4000	0.3567	96.2	75-125	1.26	20		7/27/2012 000h
1207205-011AMSD	Lead	mg/L	SW6020A	0.433	0.4000	0.07770	88.8	75-125	1.08	20		7/27/2012 1531h
1207205-011AMSD	Selenium	mg/L	SW6020A	0.414	0.4000	0.007933	102	75-125	3.71	20		7/27/2012 000h
1207205-011AMSD	Silver	mg/L	SW6020A	0.391	0.4000	0	97.6	75-125	1.25	20		7/27/2012 000h
1207205-002AMSD	Mercury	mg/L	SW7470A	0.0345	0.03330	0	104	80-120	1.44	20		7/17/2012 814h
1207205-011AMSD	Mercury	mg/L	SW7470A	0.0317	0.03330	0	95.3	80-120	3.24	20		7/25/2012 853h

Report Date: 7/30/2012 Page 23 of 28

All analyses applicable to the CWA, SDWA and RCRA are performed in accordance to NELAP protocols. Permit sampling information is located on the attached COC. This report is provided for the exclusive use of the addressee. Privilege of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1207205  
 Project: 2nd Qtr' 12 Ash Samples

Contact: John Watson  
 Dept: MSVOA  
 QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS VOC 071612	1,1-Dichloroethene	mg/L	SW8260C	0.0272	0.02000	0	136	46-171				7/16/2012 842h
LCS VOC 071612	1,2-Dichloroethane	mg/L	SW8260C	0.0229	0.02000	0	114	60-137				7/16/2012 842h
LCS VOC 071612	Benzene	mg/L	SW8260C	0.0217	0.02000	0	108	62-127				7/16/2012 842h
LCS VOC 071612	Chlorobenzene	mg/L	SW8260C	0.0214	0.02000	0	107	63-140				7/16/2012 842h
LCS VOC 071612	Chloroform	mg/L	SW8260C	0.0240	0.02000	0	120	67-132				7/16/2012 842h
LCS VOC 071612	Trichloroethene	mg/L	SW8260C	0.0234	0.02000	0	117	54-152				7/16/2012 842h
LCS VOC 071612	Surr 1,2-Dichloroethane-d4	%REC	SW8260C	0.0541	0.05000		108	76-138				7/16/2012 842h
LCS VOC 071612	Surr 4-Bromofluorobenzene	%REC	SW8260C	0.0509	0.05000		102	77-121				7/16/2012 842h
LCS VOC 071612	Surr Dibromofluoromethane	%REC	SW8260C	0.0556	0.05000		111	67-128				7/16/2012 842h
LCS VOC 071612	Surr Toluene-d8	%REC	SW8260C	0.0493	0.05000		98.5	81-135				7/16/2012 842h

Report Date: 7/30/2012 Page 24 of 28

All analyses applicable to the CWA, SDWA and RCRA are performed in accordance to NELAP protocols. Permit sampling information is located on the attached COC. This report is provided for the exclusive use of the addressee. Privilege of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1207205  
 Project: 2nd Qtr 12 Ash Samples

Contact: John Watson  
 Dept: MSVOA  
 QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1207188-014AMS	1,1-Dichloroethene	mg/L	SW8260C	0.231	0.2000	0	116	51-152				7/16/2012 1231h
1207188-014AMS	1,2-Dichloroethane	mg/L	SW8260C	0.201	0.2000	0	100	39-162				7/16/2012 1231h
1207188-014AMS	Benzene	mg/L	SW8260C	0.186	0.2000	0	93.0	66-145				7/16/2012 1231h
1207188-014AMS	Chlorobenzene	mg/L	SW8260C	0.181	0.2000	0	90.7	63-140				7/16/2012 1231h
1207188-014AMS	Chloroform	mg/L	SW8260C	0.205	0.2000	0	103	50-146				7/16/2012 1231h
1207188-014AMS	Trichloroethene	mg/L	SW8260C	0.203	0.2000	0	101	61-153				7/16/2012 1231h
1207188-014AMS	Surr 1,2-Dichloroethane-d4	%REC	SW8260C	0.554	0.5000		111	72-151				7/16/2012 1231h
1207188-014AMS	Surr 4-Bromofluorobenzene	%REC	SW8260C	0.517	0.5000		103	80-128				7/16/2012 1231h
1207188-014AMS	Surr Dibromofluoromethane	%REC	SW8260C	0.557	0.5000		111	80-124				7/16/2012 1231h
1207188-014AMS	Surr Toluene-d8	%REC	SW8260C	0.486	0.5000		97.1	77-129				7/16/2012 1231h

Report Date: 7/30/2012 Page 27 of 28

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAP protocols. Permit sampling information is located on the attached COC. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1207205  
 Project: 2nd Qtr 12 Ash Samples

Contact: John Watson  
 Dept: MSVOA  
 QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1207188-014AMSD	1,1-Dichloroethene	mg/L	SW8260C	0.249	0.2000	0	125	51-152	7.53	25		7/16/2012 1250h
1207188-014AMSD	1,2-Dichloroethane	mg/L	SW8260C	0.205	0.2000	0	103	39-162	2.12	25		7/16/2012 1250h
1207188-014AMSD	Benzene	mg/L	SW8260C	0.196	0.2000	0	97.9	66-145	5.13	25		7/16/2012 1250h
1207188-014AMSD	Chlorobenzene	mg/L	SW8260C	0.190	0.2000	0	94.8	63-140	4.42	25		7/16/2012 1250h
1207188-014AMSD	Chloroform	mg/L	SW8260C	0.212	0.2000	0	106	50-146	3.07	25		7/16/2012 1250h
1207188-014AMSD	Trichloroethene	mg/L	SW8260C	0.209	0.2000	0	105	61-153	3.2	25		7/16/2012 1250h
1207188-014AMSD	Surr 1,2-Dichloroethane-d4	%REC	SW8260C	0.560	0.5000		112	72-151				7/16/2012 1250h
1207188-014AMSD	Surr 4-Bromofluorobenzene	%REC	SW8260C	0.526	0.5000		105	80-128				7/16/2012 1250h
1207188-014AMSD	Surr Dibromofluoromethane	%REC	SW8260C	0.567	0.5000		113	80-124				7/16/2012 1250h
1207188-014AMSD	Surr Toluene-d8	%REC	SW8260C	0.496	0.5000		99.3	77-129				7/16/2012 1250h

Report Date: 7/30/2012 Page 28 of 28

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAP protocols. Permit sampling information is located on the attached COC. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1209297  
 Project: 2nd Qtr (A) '12

Contact: John Watson  
 Dept: ME  
 QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-21329	Arsenic	mg/L	SW6020A	0.405	0.4000	0	101	85-115				10/1/2012 1242h
LCS-21329	Barium	mg/L	SW6020A	0.389	0.4000	0	97.3	85-115				9/29/2012 2104h
LCS-21329	Cadmium	mg/L	SW6020A	0.387	0.4000	0	96.9	85-115				9/29/2012 2104h
LCS-21329	Chromium	mg/L	SW6020A	0.385	0.4000	0	96.4	85-115				9/29/2012 2104h
LCS-21329	Lead	mg/L	SW6020A	0.374	0.4000	0	93.6	85-115				9/29/2012 2104h
LCS-21329	Selenium	mg/L	SW6020A	0.382	0.4000	0	95.6	85-115				9/29/2012 2104h
LCS-21329	Silver	mg/L	SW6020A	0.385	0.4000	0	96.2	85-115				9/29/2012 2104h
LCS-21319	Mercury	mg/L	SW7470A	0.00336	0.003330	0	101	80-120				9/28/2012 1158h

Report Date 10/2/2012 Page 17 of 20

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAP protocols. Permit sampling information is located on the attached CDC. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1209297  
 Project: 2nd Qtr (A) '12

Contact: John Watson  
 Dept: ME  
 QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1209297-001AMS	Arsenic	mg/L	SW6020A	0.430	0.4000	0.003473	107	75-125				10/1/2012 1250h
1209297-001AMS	Barium	mg/L	SW6020A	0.646	0.4000	0.2521	98.6	75-125				9/29/2012 2133h
1209297-001AMS	Cadmium	mg/L	SW6020A	0.416	0.4000	0.01795	99.6	75-125				9/29/2012 2133h
1209297-001AMS	Chromium	mg/L	SW6020A	0.384	0.4000	0.0005530	95.8	75-125				9/29/2012 2133h
1209297-001AMS	Lead	mg/L	SW6020A	0.378	0.4000	0.003877	93.6	75-125				9/29/2012 2133h
1209297-001AMS	Selenium	mg/L	SW6020A	0.411	0.4000	0.001508	102	75-125				9/29/2012 2133h
1209297-001AMS	Silver	mg/L	SW6020A	0.392	0.4000	0	98.1	75-125				9/29/2012 2133h
1209297-011AMS	Arsenic	mg/L	SW6020A	0.423	0.4000	0.003884	105	75-125				10/1/2012 1305h
1209297-011AMS	Barium	mg/L	SW6020A	0.712	0.4000	0.3591	88.3	75-125				9/29/2012 2319h
1209297-011AMS	Cadmium	mg/L	SW6020A	0.898	0.4000	0.5622	84.0	75-125				9/29/2012 2319h
1209297-011AMS	Chromium	mg/L	SW6020A	0.383	0.4000	0	95.7	75-125				9/29/2012 2319h
1209297-011AMS	Lead	mg/L	SW6020A	0.523	0.4000	0.1531	92.4	75-125				9/29/2012 2319h
1209297-011AMS	Selenium	mg/L	SW6020A	0.442	0.4000	0.001042	110	75-125				9/29/2012 2319h
1209297-011AMS	Silver	mg/L	SW6020A	0.384	0.4000	0	96.0	75-125				9/29/2012 2319h
1209297-005AMS	Mercury	mg/L	SW7470A	0.0343	0.03330	0	103	80-120				9/28/2012 1206h

Report Date 10/2/2012 Page 19 of 20

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAP protocols. Permit sampling information is located on the attached CDC. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



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Kyle F. Gross  
 Laboratory Director

Jose Rocha  
 QA Officer

**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1209297  
 Project: 2nd Qtr (A) '12

Contact: John Watson  
 Dept: ME  
 QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1209297-001AMSD	Arsenic	mg/L	SW6020A	0.425	0.4000	0.003473	105	75-125	1.11	20		10/1/2012 1254h
1209297-001AMSD	Barium	mg/L	SW6020A	0.635	0.4000	0.2521	95.7	75-125	1.79	20		9/29/2012 2140h
1209297-001AMSD	Cadmium	mg/L	SW6020A	0.405	0.4000	0.01795	96.8	75-125	2.79	20		9/29/2012 2140h
1209297-001AMSD	Chromium	mg/L	SW6020A	0.385	0.4000	0.0005530	96.1	75-125	0.348	20		9/29/2012 2140h
1209297-001AMSD	Lead	mg/L	SW6020A	0.367	0.4000	0.003877	90.7	75-125	3.06	20		9/29/2012 2140h
1209297-001AMSD	Selenium	mg/L	SW6020A	0.401	0.4000	0.001508	99.9	75-125	2.44	20		9/29/2012 2140h
1209297-001AMSD	Silver	mg/L	SW6020A	0.386	0.4000	0	96.6	75-125	1.56	20		9/29/2012 2140h
1209297-011AMSD	Arsenic	mg/L	SW6020A	0.421	0.4000	0.003884	104	75-125	0.503	20		10/1/2012 1309h
1209297-011AMSD	Barium	mg/L	SW6020A	0.696	0.4000	0.3591	84.2	75-125	2.28	20		9/29/2012 2347h
1209297-011AMSD	Cadmium	mg/L	SW6020A	0.895	0.4000	0.5622	83.3	75-125	0.306	20		9/29/2012 2347h
1209297-011AMSD	Chromium	mg/L	SW6020A	0.407	0.4000	0	102	75-125	6.09	20		9/29/2012 2347h
1209297-011AMSD	Lead	mg/L	SW6020A	0.482	0.4000	0.1434	84.6	75-125	4.63	20		10/1/2012 1309h
1209297-011AMSD	Selenium	mg/L	SW6020A	0.432	0.4000	0.001042	108	75-125	2.39	20		9/29/2012 2347h
1209297-011AMSD	Silver	mg/L	SW6020A	0.385	0.4000	0	96.2	75-125	0.182	20		9/29/2012 2347h
1209297-005AMSD	Mercury	mg/L	SW7470A	0.0339	0.03330	0	102	80-120	1.17	20		9/28/2012 1207h

Report Date 10/2/2012 Page 20 of 20

All analyses applicable to the OVA, SDWA and RCRA are performed in accordance to NELAP protocols. Payment billing information is located on the attached COC. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff or reproduction of this report in connection with the assessment, promotion or sale of any product or process or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1210097  
 Project: 3rd Qtr '12 Ash

Contact: John Watson  
 Dept: ME  
 QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-21556	Arsenic	mg/L	SW6020A	0.399	0.4000	0	99.7	85-115				10/12/2012 2156h
LCS-21556	Barium	mg/L	SW6020A	0.392	0.4000	0	97.9	85-115				10/12/2012 2156h
LCS-21556	Cadmium	mg/L	SW6020A	0.385	0.4000	0	96.3	85-115				10/12/2012 2156h
LCS-21556	Chromium	mg/L	SW6020A	0.385	0.4000	0	96.3	85-115				10/12/2012 2156h
LCS-21556	Lead	mg/L	SW6020A	0.394	0.4000	0	98.6	85-115				10/12/2012 2156h
LCS-21556	Selenium	mg/L	SW6020A	0.367	0.4000	0	91.8	85-115				10/15/2012 1920h
LCS-21556	Silver	mg/L	SW6020A	0.388	0.4000	0	97.0	85-115				10/12/2012 2156h
LCS-21584	Cadmium	mg/L	SW6020A	0.385	0.4000	0	96.3	85-115				10/12/2012 1608h
LCS-21584	Lead	mg/L	SW6020A	0.391	0.4000	0	97.8	85-115				10/12/2012 1608h
LCS-21544	Mercury	mg/L	SW7470A	0.00302	0.003330	0	90.7	80-120				10/10/2012 1021h

Report Date 10/18/2012 Page 17 of 20

All analyses applicable to the CWA, SDWA and RCRA are performed in accordance to NELAP protocols. Pertinent sampling information is located on the attached COC. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff or reproduction of this report in connection with the advertisement, promotion or sale of any product or process or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1210097  
 Project: 3rd Qtr '12 Ash

Contact: John Watson  
 Dept: ME  
 QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1210097-001AMS	Cadmium	mg/L	SW6020A	0.469	0.4000	0.05886	103	75-125				10/12/2012 1636h
1210097-001AMS	Lead	mg/L	SW6020A	0.422	0.4000	0.01279	102	75-125				10/12/2012 1636h
1210097-003AMS	Arsenic	mg/L	SW6020A	0.402	0.4000	0.0008420	100	75-125				10/12/2012 2253h
1210097-003AMS	Barium	mg/L	SW6020A	0.807	0.4000	0.4365	92.5	75-125				10/12/2012 2253h
1210097-003AMS	Cadmium	mg/L	SW6020A	0.481	0.4000	0.1019	94.7	75-125				10/12/2012 2253h
1210097-003AMS	Chromium	mg/L	SW6020A	0.373	0.4000	0.02456	87.2	75-125				10/12/2012 2253h
1210097-003AMS	Lead	mg/L	SW6020A	0.474	0.4000	0.1034	92.7	75-125				10/12/2012 2253h
1210097-003AMS	Selenium	mg/L	SW6020A	0.374	0.4000	0.002594	92.8	75-125				10/15/2012 1935h
1210097-003AMS	Silver	mg/L	SW6020A	0.384	0.4000	0	96.0	75-125				10/12/2012 2253h
1210097-013AMS	Cadmium	mg/L	SW6020A	0.456	0.4000	0.04629	102	75-125				10/12/2012 1823h
1210097-013AMS	Lead	mg/L	SW6020A	0.432	0.4000	0.02587	102	75-125				10/12/2012 1823h
1210097-003AMS	Mercury	mg/L	SW7470A	0.0303	0.03330	0	91.0	80-120				10/10/2012 1037h

Report Date 10/18/2012 Page 19 of 20

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

### QC SUMMARY REPORT

Client: Wasatch Integrated WMD  
Lab Set ID: 1210097  
Project: 3rd Qtr '12 Ash

Contact: John Watson  
Dept: ME  
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1210097-001AMSD	Cadmium	mg/L	SW6020A	0.452	0.4000	0.05886	98.3	75-125	3.75	20		10/12/2012 1643h
1210097-001AMSD	Lead	mg/L	SW6020A	0.418	0.4000	0.01279	101	75-125	0.914	20		10/12/2012 1643h
1210097-003AMSD	Arsenic	mg/L	SW6020A	0.416	0.4000	0.0008420	104	75-125	3.52	20		10/12/2012 2300h
1210097-003AMSD	Barium	mg/L	SW6020A	0.866	0.4000	0.4365	107	75-125	7.13	20		10/12/2012 2300h
1210097-003AMSD	Cadmium	mg/L	SW6020A	0.507	0.4000	0.1019	101	75-125	5.34	20		10/12/2012 2300h
1210097-003AMSD	Chromium	mg/L	SW6020A	0.384	0.4000	0.02456	89.8	75-125	2.74	20		10/12/2012 2300h
1210097-003AMSD	Lead	mg/L	SW6020A	0.511	0.4000	0.1034	102	75-125	7.57	20		10/12/2012 2300h
1210097-003AMSD	Selenium	mg/L	SW6020A	0.383	0.4000	0.002594	95.1	75-125	2.43	20		10/15/2012 1942h
1210097-003AMSD	Silver	mg/L	SW6020A	0.401	0.4000	0	100	75-125	4.35	20		10/12/2012 2300h
1210097-013AMSD	Cadmium	mg/L	SW6020A	0.450	0.4000	0.04629	101	75-125	1.44	20		10/12/2012 1830h
1210097-013AMSD	Lead	mg/L	SW6020A	0.423	0.4000	0.02587	99.2	75-125	2.18	20		10/12/2012 1830h
1210097-003AMSD	Mercury	mg/L	SW7470A	0.0303	0.03330	0	91.0	80-120	0	20		10/10/2012 1039h

Report Date 10/18/2012 Page 20 of 20

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**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1212454  
 Project: 4TH Qtr '12 Ash

Contact: John Watson  
 Dept: ME  
 QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-22899	Barium	mg/L	SW6020A	0.387	0.4000	0	96.8	85-115				12/27/2012 1920h
LCS-22899	Cadmium	mg/L	SW6020A	0.380	0.4000	0	95.0	85-115				12/27/2012 1920h
LCS-22899	Chromium	mg/L	SW6020A	0.353	0.4000	0	88.3	85-115				12/27/2012 1920h
LCS-22899	Lead	mg/L	SW6020A	0.369	0.4000	0	92.3	85-115				12/27/2012 1920h
LCS-22899	Selenium	mg/L	SW6020A	0.380	0.4000	0	94.9	85-115				12/27/2012 1920h
LCS-22899	Silver	mg/L	SW6020A	0.376	0.4000	0	94.0	85-115				12/27/2012 1920h
LCS-22899	Arsenic	mg/L	SW6020A	0.414	0.4000	0	103	85-115				12/28/2012 1247h
LCS-22901	Mercury	mg/L	SW7470A	0.00328	0.003330	0	98.5	80-120				12/28/2012 815h

Report Date 1/3/2013 Page 17 of 20

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**QC SUMMARY REPORT**

Client: Wasatch Integrated WMD  
 Lab Set ID: 1212454  
 Project: 4TH Qtr '12 Ash

Contact: John Watson  
 Dept: ME  
 QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1212454-002AMS	Barium	mg/L	SW6020A	0.792	0.4000	0.3663	106	75-125				12/27/2012 1951h
1212454-002AMS	Cadmium	mg/L	SW6020A	0.990	0.4000	0.5364	113	75-125				12/27/2012 1951h
1212454-002AMS	Chromium	mg/L	SW6020A	0.355	0.4000	0	88.7	75-125				12/27/2012 1951h
1212454-002AMS	Lead	mg/L	SW6020A	0.659	0.4000	0.2509	102	75-125				12/27/2012 1951h
1212454-002AMS	Selenium	mg/L	SW6020A	0.398	0.4000	0.001860	99.1	75-125				12/27/2012 1951h
1212454-002AMS	Silver	mg/L	SW6020A	0.400	0.4000	0	100	75-125				12/27/2012 1951h
1212454-002AMS	Arsenic	mg/L	SW6020A	0.445	0.4000	0.006815	110	75-125				12/28/2012 1257h
1212454-007AMS	Mercury	mg/L	SW7470A	0.0343	0.03330	0	103	80-120				12/28/2012 821h

Report Date 1/3/2013 Page 19 of 20

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

### QC SUMMARY REPORT

Client: Wasatch Integrated WMD  
Lab Set ID: 1212454  
Project: 4TH Qtr '12 Ash

Contact: John Watson  
Dept: ME  
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1212454-002AMSD	Barium	mg/L	SW6020A	0.724	0.4000	0.3663	89.3	75-125	9.05	20		12/27/2012 1957h
1212454-002AMSD	Cadmium	mg/L	SW6020A	0.892	0.4000	0.5364	88.9	75-125	10.5	20		12/27/2012 1957h
1212454-002AMSD	Chromium	mg/L	SW6020A	0.346	0.4000	0	86.6	75-125	2.41	20		12/27/2012 1957h
1212454-002AMSD	Lead	mg/L	SW6020A	0.608	0.4000	0.2509	89.3	75-125	8.06	20		12/27/2012 1957h
1212454-002AMSD	Selenium	mg/L	SW6020A	0.393	0.4000	0.001860	97.8	75-125	1.25	20		12/27/2012 1957h
1212454-002AMSD	Silver	mg/L	SW6020A	0.361	0.4000	0	90.4	75-125	10.2	20		12/27/2012 1957h
1212454-002AMSD	Arsenic	mg/L	SW6020A	0.442	0.4000	0.006815	109	75-125	0.809	20		12/28/2012 1301h
1212454-007AMSD	Mercury	mg/L	SW7470A	0.0346	0.03330	0	104	80-120	0.871	20		12/28/2012 823h

Report Date 1/3/2013 Page 20 of 20

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**ATTACHMENT VI**

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**FIELD SAMPLING DOCUMENTATION**

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**1<sup>st</sup> QUARTER EVENT**

### ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION:   
 REDUCED BY:   
 DATE/TIME REDUCED:    
 TOTAL SAMPLE WEIGHT:  Tare = 9 lbs  
 IRREDUCIBLE FRACTION WT:

DESCRIPTION OF IRREDUCIBLE FRACTION: mouth guard, cans, wire, nails  
misc.

JAW CRUSHER PASSES (Three passes minimum)  MIXER TIME (15min. minimum)   
 NUMBER OF SPLITS (with Thief)  SPLITTER TYPE (usually Thief)   
 PHOTOGRAPH TAKEN

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION:   
 REDUCED BY:   
 DATE/TIME REDUCED:    
 TOTAL SAMPLE WEIGHT:  Tare = 12 lbs  
 IRREDUCIBLE FRACTION WT:

DESCRIPTION OF IRREDUCIBLE FRACTION: Cans.

JAW CRUSHER PASSES (Three passes minimum)  MIXER TIME (15min. minimum)   
 NUMBER OF SPLITS (with Thief)  SPLITTER TYPE (usually Thief)   
 PHOTOGRAPH TAKEN

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION:   
 REDUCED BY:   
 DATE/TIME REDUCED:    
 TOTAL SAMPLE WEIGHT:  Tare = 12 lbs  
 IRREDUCIBLE FRACTION WT:

DESCRIPTION OF IRREDUCIBLE FRACTION: Spring, tin can, bolt, spoon

JAW CRUSHER PASSES (Three passes minimum)  MIXER TIME (15min. minimum)   
 NUMBER OF SPLITS (with Thief)  SPLITTER TYPE (usually Thief)   
 PHOTOGRAPH TAKEN

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION:   
 REDUCED BY:   
 DATE/TIME REDUCED:    
 TOTAL SAMPLE WEIGHT:  Tare = 9 lbs  
 IRREDUCIBLE FRACTION WT:

DESCRIPTION OF IRREDUCIBLE FRACTION: Ho blade, tin cans, wire, small chain

JAW CRUSHER PASSES (Three passes minimum)  MIXER TIME (15min. minimum)   
 NUMBER OF SPLITS (with Thief)  SPLITTER TYPE (usually Thief)   
 PHOTOGRAPH TAKEN

COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-02-07  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 7/11/12 13:17  
 TOTAL SAMPLE WEIGHT: 14 lbs  
 IRREDUCIBLE FRACTION WT: 1 lb *Tare = 13 lbs*

DESCRIPTION OF IRREDUCIBLE FRACTION cans, nails, metal strips  
MISC

JAW CRUSHER PASSES (Three passes minimum)  3 Passes  
 MIXER TIME (15min. minimum)  15  
 NUMBER OF SPLITS (with Thief)  2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief)  Thief  
 PHOTOGRAPH TAKEN  Yes

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-02-05  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 7/11/12 12:36  
 TOTAL SAMPLE WEIGHT: 15 lbs  
 IRREDUCIBLE FRACTION WT: 1/2 lb *Tare 14 1/2 lbs*

DESCRIPTION OF IRREDUCIBLE FRACTION cans, tin lids, nails/bolts  
wire, glass, misc

JAW CRUSHER PASSES (Three passes minimum)  3 Passes  
 MIXER TIME (15min. minimum)  15  
 NUMBER OF SPLITS (with Thief)  2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief)  Thief  
 PHOTOGRAPH TAKEN  Yes

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-02-08  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 6/19/12 10:12  
 TOTAL SAMPLE WEIGHT: 13 lbs  
 IRREDUCIBLE FRACTION WT: 2 lbs *Tare = 13 lb*

DESCRIPTION OF IRREDUCIBLE FRACTION Tin cans, Bolt, etc

JAW CRUSHER PASSES (Three passes minimum)  3 Passes  
 MIXER TIME (15min. minimum)  16  
 NUMBER OF SPLITS (with Thief)  2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief)  Thief  
 PHOTOGRAPH TAKEN  Yes

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-02-06  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 6/19/12 9:52  
 TOTAL SAMPLE WEIGHT: 12 lbs  
 IRREDUCIBLE FRACTION WT: 1 lb *11 lb=Tare*

DESCRIPTION OF IRREDUCIBLE FRACTION Cans, spoon, wire

JAW CRUSHER PASSES (Three passes minimum)  3 Passes  
 MIXER TIME (15min. minimum)  15  
 NUMBER OF SPLITS (with Thief)  2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief)  Thief  
 PHOTOGRAPH TAKEN  Yes

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**ASH SAMPLING REDUCTION FORM**

**ASH SAMPLING REDUCTION FORM**

SAMPLE IDENTIFICATION: AS-12-02-11  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 7/11/12 14:19  
 TOTAL SAMPLE WEIGHT: 8 lbs  
 IRREDUCIBLE FRACTION WT: 1 lb *Tare 7 lbs*

SAMPLE IDENTIFICATION: AS-12-02-09  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 7/11/12 13:56  
 TOTAL SAMPLE WEIGHT: 12 lbs  
 IRREDUCIBLE FRACTION WT: 1 lb *Tare = 11 lbs*

DESCRIPTION OF IRREDUCIBLE FRACTION *cans, spade, clasp, wire*  
*battery, misc*

DESCRIPTION OF IRREDUCIBLE FRACTION *Fork, cans, metal pieces,*  
*glass, misc*

JAW CRUSHER PASSES (Three passes minimum)  3 Passes  
 MIXER TIME (15min minimum)  15  
 NUMBER OF SPLITS (with Thief)  2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief)  Thief  
 PHOTOGRAPH TAKEN  Yes

JAW CRUSHER PASSES (Three passes minimum)  3 Passes  
 MIXER TIME (15min minimum)  15  
 NUMBER OF SPLITS (with Thief)  2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief)  Thief  
 PHOTOGRAPH TAKEN  Yes

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**ASH SAMPLING REDUCTION FORM**

**ASH SAMPLING REDUCTION FORM**

SAMPLE IDENTIFICATION: AS-12-02-12  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 7/11/12 14:34  
 TOTAL SAMPLE WEIGHT: 10 lbs  
 IRREDUCIBLE FRACTION WT: 1 lb *9 lbs = tare*

SAMPLE IDENTIFICATION: AS-12-02-10  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 6/19/12 10:50  
 TOTAL SAMPLE WEIGHT: 11 lbs  
 IRREDUCIBLE FRACTION WT: 2 lbs *Tare = 9 lbs*

DESCRIPTION OF IRREDUCIBLE FRACTION *Cans, metal pieces, wire*  
*plastic glove, misc*

DESCRIPTION OF IRREDUCIBLE FRACTION *Tin cans, bracket, wire*

JAW CRUSHER PASSES (Three passes minimum)  3 Passes  
 MIXER TIME (15min minimum)  15  
 NUMBER OF SPLITS (with Thief)  2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief)  Thief  
 PHOTOGRAPH TAKEN  Yes

JAW CRUSHER PASSES (Three passes minimum)  3 Passes  
 MIXER TIME (15min minimum)  15  
 NUMBER OF SPLITS (with Thief)  2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief)  Thief  
 PHOTOGRAPH TAKEN  Yes

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



ASH SAMPLING REDUCTION FORM

ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 5-29-12 - Tuesday  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trip # That Sample Was Taken On											
7:08	1	2	3	4	5	6	7	8	9	10	11	12
7:40	1	2	3	4	5	6	7	8	9	10	11	12
10:00	1	2	3	4	5	6	7	8	9	10	11	12
10:48	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

SAMPLE IDENTIFICATION: AS-12-02- 13  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 7/11/12 14:55  
 TOTAL SAMPLE WEIGHT: 10 lb  
 IRREDUCIBLE FRACTION WT: 3 lb *tone = 7 lb*

DESCRIPTION OF IRREDUCIBLE FRACTION cars, nails, misc metal bracket

JAW CRUSHER PASSES (Three passes minimum)  MIXER TIME (15min minimum)   
 NUMBER OF SPLITS (with Thief)  SPLITTER TYPE (usually Thief)   
 PHOTOGRAPH TAKEN

COMMENTS \_\_\_\_\_

ASH SAMPLING REDUCTION FORM

ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 5-29-12 - Tuesday  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trip # That Sample Was Taken On											
11:30	1	2	3	4	5	6	7	8	9	10	11	12
12:44	1	2	3	4	5	6	7	8	9	10	11	12
13:24	1	2	3	4	5	6	7	8	9	10	11	12
14:53	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

SAMPLE IDENTIFICATION: AS-12-02- 14  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 7/11/12 14:13  
 TOTAL SAMPLE WEIGHT: 11 lbs  
 IRREDUCIBLE FRACTION WT: 1 lb *tone = 10 lb*

DESCRIPTION OF IRREDUCIBLE FRACTION wire, can, misc metal misc

JAW CRUSHER PASSES (Three passes minimum)  MIXER TIME (15min minimum)   
 NUMBER OF SPLITS (with Thief)  SPLITTER TYPE (usually Thief)   
 PHOTOGRAPH TAKEN

COMMENTS \_\_\_\_\_

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 5-31-12-Thurs  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trip # That Sample Was Taken On											
7:29	1	2	3	4	5	6	7	8	9	10	11	12
8:31	1	2	3	4	5	6	7	8	9	10	11	12
9:14	1	2	3	4	5	6	7	8	9	10	11	12
10:25	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 5-30-12-Wends  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trip # That Sample Was Taken On											
7:11	1	2	3	4	5	6	7	8	9	10	11	12
7:41	1	2	3	4	5	6	7	8	9	10	11	12
8:15	1	2	3	4	5	6	7	8	9	10	11	12
8:53	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 5-31-12-Thurs  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trip # That Sample Was Taken On											
11:18	1	2	3	4	5	6	7	8	9	10	11	12
13:15	1	2	3	4	5	6	7	8	9	10	11	12
15:07	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 5-30-12-Wends  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trip # That Sample Was Taken On											
9:46	1	2	3	4	5	6	7	8	9	10	11	12
10:28	1	2	3	4	5	6	7	8	9	10	11	12
11:08	1	2	3	4	5	6	7	8	9	10	11	12
12:43	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 6-4-12-mondax  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Tnp # That Sample Was Taken On											
7:03	1	2	3	4	5	6	7	8	9	10	11	12
7:30	1	2	3	4	5	6	7	8	9	10	11	12
8:07	1	2	3	4	5	6	7	8	9	10	11	12
8:56	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 6-1-12-Friday  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Tnp # That Sample Was Taken On											
7:23	1	2	3	4	5	6	7	8	9	10	11	12
7:55	1	2	3	4	5	6	7	8	9	10	11	12
8:40	1	2	3	4	5	6	7	8	9	10	11	12
9:10	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 6-4-12-mondax  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Tnp # That Sample Was Taken On											
9:33	1	2	3	4	5	6	7	8	9	10	11	12
10:32	1	2	3	4	5	6	7	8	9	10	11	12
11:07	1	2	3	4	5	6	7	8	9	10	11	12
14:53	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 6-1-12-Friday  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Tnp # That Sample Was Taken On											
9:45	1	2	3	4	5	6	7	8	9	10	11	12
10:17	1	2	3	4	5	6	7	8	9	10	11	12
10:48	1	2	3	4	5	6	7	8	9	10	11	12
12:30	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 (2) 3 4  
 Date 6-6-12-Wends  
 Sample Taken In (AM) PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Tnp # That Sample Was Taken On											
7:07	①	2	3	4	5	6	7	8	9	10	11	12
7:48	1	②	3	4	5	6	7	8	9	10	11	12
8:35	1	2	③	4	5	6	7	8	9	10	11	12
9:18	1	2	3	④	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 (2) 3 4  
 Date 6-5-12 Tuesday  
 Sample Taken In (AM) PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Tnp # That Sample Was Taken On											
7:07	①	2	3	4	5	6	7	8	9	10	11	12
7:38	1	②	3	4	5	6	7	8	9	10	11	12
8:17	1	2	③	4	5	6	7	8	9	10	11	12
9:10	1	2	3	④	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 (2) 3 4  
 Date 6-6-12 - Wednesday  
 Sample Taken In (AM) (PM)  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Tnp # That Sample Was Taken On											
10:40	1	2	3	4	⑤	6	7	8	9	10	11	12
11:22	1	2	3	4	5	⑥	7	8	9	10	11	12
12:31	1	2	3	4	5	6	⑦	8	9	10	11	12
13:24	1	2	3	4	5	6	7	⑧	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 (2) 3 4  
 Date 6-5-12 - Tuesday  
 Sample Taken In (AM) (PM)  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Tnp # That Sample Was Taken On											
10:25	1	2	3	4	⑤	6	7	8	9	10	11	12
11:06	1	2	3	4	5	⑥	7	8	9	10	11	12
11:46	1	2	3	4	5	6	⑦	8	9	10	11	12
13:04	1	2	3	4	5	6	7	⑧	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# 2<sup>nd</sup> QUARTER EVENT

ASH SAMPLING REDUCTION FORM

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-02A-03
REDUCED BY: John Watson
DATE/TIME REDUCED: 9-13-12 10:01
TOTAL SAMPLE WEIGHT: 35.4 net 34.2
IRREDUCIBLE FRACTION WT: 1.2

DESCRIPTION OF IRREDUCIBLE FRACTION: misc. metal tin cans, rocks, glass

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS

SAMPLE IDENTIFICATION: AS-12-02A-01
REDUCED BY: John Watson
DATE/TIME REDUCED: 9/12/02 - 8:20
TOTAL SAMPLE WEIGHT: 37.6 Net = 36.8
IRREDUCIBLE FRACTION WT: 0.8

DESCRIPTION OF IRREDUCIBLE FRACTION: misc metal (cans, keys, etc.), rocks, glass

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-02A-04
REDUCED BY: John Watson
DATE/TIME REDUCED: 9-13-12 9:22
TOTAL SAMPLE WEIGHT: 43.6 net 43.2
IRREDUCIBLE FRACTION WT: .4

DESCRIPTION OF IRREDUCIBLE FRACTION: misc metal (cans), rocks, glass

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS

SAMPLE IDENTIFICATION: AS-12-02A-02
REDUCED BY: John Watson
DATE/TIME REDUCED: 9-13-12 8:48
TOTAL SAMPLE WEIGHT: 32.8 net 32.2
IRREDUCIBLE FRACTION WT: .6

DESCRIPTION OF IRREDUCIBLE FRACTION: Tin cans, rocks, glass, misc. metal

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-02A-07  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 9-13-12 11:55  
 TOTAL SAMPLE WEIGHT: 34.8 net 27.4  
 IRREDUCIBLE FRACTION WT: 13.4

SAMPLE IDENTIFICATION: AS-12-02A-05  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 9-13-12 10:32  
 TOTAL SAMPLE WEIGHT: 32.8 net 31.2  
 IRREDUCIBLE FRACTION WT: 3.6

DESCRIPTION OF IRREDUCIBLE FRACTION metal cans glass rocks

DESCRIPTION OF IRREDUCIBLE FRACTION Metal misc cans glass rocks

JAW CRUSHER PASSES (Three passes minimum) 3 Passes  
 MIXER TIME (15min minimum) 15  
 NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief) Thief  
 PHOTOGRAPH TAKEN Yes

JAW CRUSHER PASSES (Three passes minimum) 3 Passes  
 MIXER TIME (15min minimum) 15  
 NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief) Thief  
 PHOTOGRAPH TAKEN Yes

COMMENTS

COMMENTS

ASH SAMPLING REDUCTION FORM

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-02A-08  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 9-13-12 ~~11:55~~ 12:27  
 TOTAL SAMPLE WEIGHT: 38.4 net 23.8  
 IRREDUCIBLE FRACTION WT: 4.6

SAMPLE IDENTIFICATION: AS-12-02A-06  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 9-13-12 11:17  
 TOTAL SAMPLE WEIGHT: 32.6 net 30.6  
 IRREDUCIBLE FRACTION WT: 2.0

DESCRIPTION OF IRREDUCIBLE FRACTION metal cans glass rocks misc

DESCRIPTION OF IRREDUCIBLE FRACTION metal cans glass brick rocks

JAW CRUSHER PASSES (Three passes minimum) 3 Passes  
 MIXER TIME (15min minimum) 15  
 NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief) Thief  
 PHOTOGRAPH TAKEN Yes

JAW CRUSHER PASSES (Three passes minimum) 3 Passes  
 MIXER TIME (15min minimum) 15  
 NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief) Thief  
 PHOTOGRAPH TAKEN Yes

COMMENTS

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-02A- (1)
REDUCED BY: John Watson
DATE/TIME REDUCED: 9-13-12 1413 net 37.8
TOTAL SAMPLE WEIGHT: 42.4
IRRUCIBLE FRACTION WT: 4.6

DESCRIPTION OF IRRUCIBLE FRACTION M.sc. Metal glass Rocks

JAW CRUSHER PASSES (Three passes minimum) 3 Passes
MIXER TIME (15min minimum) 15
NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz
SPLITTER TYPE (usually Thief) Thief
PHOTOGRAPH TAKEN Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-02A- 09
REDUCED BY: John Watson
DATE/TIME REDUCED: 9-13-12 12:59
TOTAL SAMPLE WEIGHT: 31.4 net 30.4
IRRUCIBLE FRACTION WT: 1.0

DESCRIPTION OF IRRUCIBLE FRACTION Metal cans glass rocks misc.

JAW CRUSHER PASSES (Three passes minimum) 3 Passes
MIXER TIME (15min minimum) 16
NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz
SPLITTER TYPE (usually Thief) Thief
PHOTOGRAPH TAKEN Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-02A- 12
REDUCED BY: John Watson
DATE/TIME REDUCED: 9-13-12 1450 net 31.2
TOTAL SAMPLE WEIGHT: 39.0
IRRUCIBLE FRACTION WT: 7.8

DESCRIPTION OF IRRUCIBLE FRACTION M.sc. Metal glass Rocks

JAW CRUSHER PASSES (Three passes minimum) 3 Passes
MIXER TIME (15min minimum) 15
NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz
SPLITTER TYPE (usually Thief) Thief
PHOTOGRAPH TAKEN Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-02A- 10
REDUCED BY: John Watson
DATE/TIME REDUCED: 9-13-12 13:20 net 32.2
TOTAL SAMPLE WEIGHT: 34.0
IRRUCIBLE FRACTION WT: 1.8

DESCRIPTION OF IRRUCIBLE FRACTION Metal cans glass rocks misc.

JAW CRUSHER PASSES (Three passes minimum) 3 Passes
MIXER TIME (15min minimum) 15
NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz
SPLITTER TYPE (usually Thief) Thief
PHOTOGRAPH TAKEN Yes

COMMENTS



ASH SAMPLING REDUCTION FORM

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-02A-15  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 9-13-12 1630  
 TOTAL SAMPLE WEIGHT: 34.4 net 28.2  
 IRREDUCIBLE FRACTION WT: 6.2

DESCRIPTION OF IRREDUCIBLE FRACTION Misc. metal Rocks  
glass

JAW CRUSHER PASSES (Three passes minimum)  3 Passes  3 Passes  
 MIXER TIME (15min minimum)  15  
 NUMBER OF SPLITS (with Thief)  2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief)  Thief  
 PHOTOGRAPH TAKEN  Yes  Yes

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SAMPLE IDENTIFICATION: AS-12-02A-13  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 9-13-12 1515  
 TOTAL SAMPLE WEIGHT: 34.4 net 28.2  
 IRREDUCIBLE FRACTION WT: 6.2

DESCRIPTION OF IRREDUCIBLE FRACTION Misc. Metal Rocks  
glass

JAW CRUSHER PASSES (Three passes minimum)  3 Passes  3 Passes  
 MIXER TIME (15min minimum)  15  
 NUMBER OF SPLITS (with Thief)  2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief)  Thief  
 PHOTOGRAPH TAKEN  Yes  Yes

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-02A-14  
 REDUCED BY: John Watson  
 DATE/TIME REDUCED: 9-13-12 1553  
 TOTAL SAMPLE WEIGHT: 34.0 net 28.6  
 IRREDUCIBLE FRACTION WT: 5.4

DESCRIPTION OF IRREDUCIBLE FRACTION: Misc. metal Rocks  
Glass

JAW CRUSHER PASSES (Three passes minimum)  3 Passes  3 Passes  
 MIXER TIME (15min minimum)  15  
 NUMBER OF SPLITS (with Thief)  2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief)  Thief  
 PHOTOGRAPH TAKEN  Yes  Yes

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 6-19-12 - Tues  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
7:12	1	2	3	4	5	6	7	8	9	10	11	12
7:42	1	2	3	4	5	6	7	8	9	10	11	12
8:14	1	2	3	4	5	6	7	8	9	10	11	12
8:44	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# 3

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 6-18-12 - Monday  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
1:07	1	2	3	4	5	6	7	8	9	10	11	12
7:40	1	2	3	4	5	6	7	8	9	10	11	12
8:09	1	2	3	4	5	6	7	8	9	10	11	12
8:43	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# 1

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 6-19-12 - Tues  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
10:46	1	2	3	4	5	6	7	8	9	10	11	12
11:21	1	2	3	4	5	6	7	8	9	10	11	12
12:55	1	2	3	4	5	6	7	8	9	10	11	12
13:47	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# 4

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 6-18-12 - Mon.  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
9:15	1	2	3	4	5	6	7	8	9	10	11	12
10:19	1	2	3	4	5	6	7	8	9	10	11	12
10:46	1	2	3	4	5	6	7	8	9	10	11	12
12:27	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# 2

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 (2) 3 4  
 Date 6-21-12 - Thurs  
 Sample Taken In (AM) (PM)  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
11:18	1	2	3	4	(5)	6	7	8	9	10	11	12
12:55	1	2	3	4	5	(6)	7	8	9	10	11	12
13:30	1	2	3	4	5	6	(7)	8	9	10	11	12
14:19	1	2	3	4	5	6	7	(8)	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# 8

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 (2) 3 4  
 Date 6-20-12 - Weds  
 Sample Taken In (AM) PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
7:01	(1)	2	3	4	5	6	7	8	9	10	11	12
7:49	1	(2)	3	4	5	6	7	8	9	10	11	12
8:20	1	2	(3)	4	5	6	7	8	9	10	11	12
8:53	1	2	3	(4)	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# 5

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 (2) 3 4  
 Date 6-22-12 - Fri  
 Sample Taken In (AM) PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
7:14	(1)	2	3	4	5	6	7	8	9	10	11	12
7:44	1	(2)	3	4	5	6	7	8	9	10	11	12
8:16	1	2	(3)	4	5	6	7	8	9	10	11	12
8:46	1	2	3	(4)	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# 9

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 (2) 3 4  
 Date 6-21-12 - Thurs  
 Sample Taken In (AM) PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
7:12	(1)	2	3	4	5	6	7	8	9	10	11	12
8:01	1	(2)	3	4	5	6	7	8	9	10	11	12
8:30	1	2	(3)	4	5	6	7	8	9	10	11	12
8:59	1	2	3	(4)	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# 7

# ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 6-25-12-Mon  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
12:49	1	2	3	4	5	6	7	8	9	10	11	12
13:19	1	2	3	4	5	6	7	8	9	10	11	12
13:54	1	2	3	4	5	6	7	8	9	10	11	12
14:49	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# 12

# ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 6-22-12-Fri  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
11:02	1	2	3	4	5	6	7	8	9	10	11	12
12:30	1	2	3	4	5	6	7	8	9	10	11	12
13:09	1	2	3	4	5	6	7	8	9	10	11	12
14:54	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# 10

# ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 6-25-12-Mon  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw

Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
9:54	1	2	3	4	5	6	7	8	9	10	11	12
10:23	1	2	3	4	5	6	7	8	9	10	11	12
10:54	1	2	3	4	5	6	7	8	9	10	11	12
11:25	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# 11

**3<sup>rd</sup> QUARTER EVENT**

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-03-03
REDUCED BY: Brent Larsen
DATE/TIME REDUCED: 9-19-12 1027
TOTAL SAMPLE WEIGHT: 25.6 net 22.8
IRREDUCIBLE FRACTION WT: 2.8

DESCRIPTION OF IRREDUCIBLE FRACTION: Misc. Metal cans rocks glass bolt nut

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-03-01
REDUCED BY: Brent Larsen
DATE/TIME REDUCED: 9-19-12 0913
TOTAL SAMPLE WEIGHT: 34.2 net 26.2
IRREDUCIBLE FRACTION WT: 8.0

DESCRIPTION OF IRREDUCIBLE FRACTION: Misc. metal cans glass rocks brick ~~nut~~ valve

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-03-04
REDUCED BY: Brent Larsen
DATE/TIME REDUCED: 9-19-12 1105
TOTAL SAMPLE WEIGHT: 30.4 net 27.8
IRREDUCIBLE FRACTION WT: 2.6

DESCRIPTION OF IRREDUCIBLE FRACTION: Misc. metal glass rocks

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-03-02
REDUCED BY: Brent Larsen
DATE/TIME REDUCED: 9-19-12 0948
TOTAL SAMPLE WEIGHT: 30.2 net 26.0
IRREDUCIBLE FRACTION WT: 4.2

DESCRIPTION OF IRREDUCIBLE FRACTION: Misc. metal cans rocks glass

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-03-07
REDUCED BY: Brent Larsen
DATE/TIME REDUCED: 9-19-12 1257
TOTAL SAMPLE WEIGHT: 29.2 net 24.6
IRREDUCIBLE FRACTION WT: 4.6

DESCRIPTION OF IRREDUCIBLE FRACTION Misc: metal cans glass
Rocks horse shoe

JAW CRUSHER PASSES (Three passes minimum) 3 Passes
MIXER TIME (15min minimum) 15
NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz
SPLITTER TYPE (usually Thief) Thief
PHOTOGRAPH TAKEN Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-03-05
REDUCED BY: Brent Larsen
DATE/TIME REDUCED: 9-19-12 1130
TOTAL SAMPLE WEIGHT: 34.4 net 27.2
IRREDUCIBLE FRACTION WT: 7.2

DESCRIPTION OF IRREDUCIBLE FRACTION Misc: metal pot
Cans glass rock

JAW CRUSHER PASSES (Three passes minimum) 3 Passes
MIXER TIME (15min minimum) 15
NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz
SPLITTER TYPE (usually Thief) Thief
PHOTOGRAPH TAKEN Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-03-08
REDUCED BY: Brent Larsen
DATE/TIME REDUCED: 9-19-12 1325
TOTAL SAMPLE WEIGHT: 28.4 net 24.0
IRREDUCIBLE FRACTION WT: 4.1

DESCRIPTION OF IRREDUCIBLE FRACTION Misc: Metal glass
rocks cans

JAW CRUSHER PASSES (Three passes minimum) 3 Passes
MIXER TIME (15min minimum) 15
NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz
SPLITTER TYPE (usually Thief) Thief
PHOTOGRAPH TAKEN Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-03-06
REDUCED BY: Brent Larsen
DATE/TIME REDUCED: 9-19-12 1205
TOTAL SAMPLE WEIGHT: 33.6 net 26.8
IRREDUCIBLE FRACTION WT: 6.8

DESCRIPTION OF IRREDUCIBLE FRACTION metal cans
cans glass rocks bricks

JAW CRUSHER PASSES (Three passes minimum) 3 Passes
MIXER TIME (15min minimum) 15
NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz
SPLITTER TYPE (usually Thief) Thief
PHOTOGRAPH TAKEN Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-03- 11
REDUCED BY: Brent Larsen
DATE/TIME REDUCED: 9-19-12 1533
TOTAL SAMPLE WEIGHT: 35.0 net 30.2
IRREDUCIBLE FRACTION WT: 4.8

DESCRIPTION OF IRREDUCIBLE FRACTION Misc. Metal glass
rocks cans

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-03- 09
REDUCED BY: Brent Larsen
DATE/TIME REDUCED: 9-19-12 1430
TOTAL SAMPLE WEIGHT: 29.2 net 21.8
IRREDUCIBLE FRACTION WT: 7.4

DESCRIPTION OF IRREDUCIBLE FRACTION Misc. Metal cans
Glass rocks

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-03- 12
REDUCED BY: Brent Larsen
DATE/TIME REDUCED: 9-19-12 1604
TOTAL SAMPLE WEIGHT: 28.8 net 21.2
IRREDUCIBLE FRACTION WT: 7.6

DESCRIPTION OF IRREDUCIBLE FRACTION Misc metal glass
rocks cans

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-03- 10
REDUCED BY: Brent Larsen
DATE/TIME REDUCED: 9-19-12 1605 net 28.0
TOTAL SAMPLE WEIGHT: 34.6
IRREDUCIBLE FRACTION WT: 6.6

DESCRIPTION OF IRREDUCIBLE FRACTION: Misc. metal cans
glass rocks

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS



ASH SAMPLING REDUCTION FORM

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-03-14  
 REDUCED BY: Brent Larsen  
 DATE/TIME REDUCED: 9-14-12 1730 *net 26.0*  
 TOTAL SAMPLE WEIGHT: ~~44.4~~ 34.6  
 IRREDUCIBLE FRACTION WT: 8.6

DESCRIPTION OF IRREDUCIBLE FRACTION Misc. Metal glass rock

JAW CRUSHER PASSES (Three passes minimum)  3 Passes  
 MIXER TIME (15min minimum)  15  
 NUMBER OF SPLITS (with Thief)  2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief)  Thief  
 PHOTOGRAPH TAKEN  Yes

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SAMPLE IDENTIFICATION: AS-12-03-13  
 REDUCED BY: Brent Larsen  
 DATE/TIME REDUCED: 9-14-12 1632 *net 26.0*  
 TOTAL SAMPLE WEIGHT: 34.6  
 IRREDUCIBLE FRACTION WT: 8.6

DESCRIPTION OF IRREDUCIBLE FRACTION Misc Metal can rocks glass

JAW CRUSHER PASSES (Three passes minimum)  3 Passes  
 MIXER TIME (15min minimum)  15  
 NUMBER OF SPLITS (with Thief)  2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief)  Thief  
 PHOTOGRAPH TAKEN  Yes

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-03-14  
 REDUCED BY: Brent Larsen  
 DATE/TIME REDUCED: 9-19-12 1700 *net 34.8*  
 TOTAL SAMPLE WEIGHT: 41.0  
 IRREDUCIBLE FRACTION WT: 6.2

DESCRIPTION OF IRREDUCIBLE FRACTION Misc. metal glass rocks

JAW CRUSHER PASSES (Three passes minimum)  3 Passes  
 MIXER TIME (15min minimum)  15  
 NUMBER OF SPLITS (with Thief)  2 Jars @ 16oz  
 SPLITTER TYPE (usually Thief)  Thief  
 PHOTOGRAPH TAKEN  Yes

COMMENTS \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 7-26-12-THURS  
 Sample Taken In (AM) PM  
 Sample Identification \_\_\_\_\_ # 3  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
7:31	1	2	3	4	5	6	7	8	9	10	11	12
8:06	1	2	3	4	5	6	7	8	9	10	11	12
8:35	1	2	3	4	5	6	7	8	9	10	11	12
9:11	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 7-25-12 - Wends  
 Sample Taken In (AM) PM  
 Sample Identification \_\_\_\_\_ # 1  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
7:25	1	2	3	4	5	6	7	8	9	10	11	12
8:14	1	2	3	4	5	6	7	8	9	10	11	12
8:52	1	2	3	4	5	6	7	8	9	10	11	12
9:31	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 7-26-12-THURS  
 Sample Taken In (AM) (PM)  
 Sample Identification \_\_\_\_\_ # 4  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
11:52	1	2	3	4	5	6	7	8	9	10	11	12
12:57	1	2	3	4	5	6	7	8	9	10	11	12
13:25	1	2	3	4	5	6	7	8	9	10	11	12
14:19	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 7-25-12-Wends  
 Sample Taken In (AM) (PM)  
 Sample Identification \_\_\_\_\_ # 2  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
11:18	1	2	3	4	5	6	7	8	9	10	11	12
12:45	1	2	3	4	5	6	7	8	9	10	11	12
13:37	1	2	3	4	5	6	7	8	9	10	11	12
15:03	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12



### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4 *(August)*  
 Date 8-1-12 - Wends  
 Sample Taken In AM PM  
 Sample Identification # 11  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
7:14	1	2	3	4	5	6	7	8	9	10	11	12
7:47	1	2	3	4	5	6	7	8	9	10	11	12
8:19	1	2	3	4	5	6	7	8	9	10	11	12
8:53	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 7-31-12 - Tues  
 Sample Taken In AM PM  
 Sample Identification # 9  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
7:08	1	2	3	4	5	6	7	8	9	10	11	12
7:42	1	2	3	4	5	6	7	8	9	10	11	12
8:28	1	2	3	4	5	6	7	8	9	10	11	12
9:03	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 8-1-12 - Wends  
 Sample Taken In AM PM  
 Sample Identification # 12  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
10:40	1	2	3	4	5	6	7	8	9	10	11	12
13:02	1	2	3	4	5	6	7	8	9	10	11	12
14:01	1	2	3	4	5	6	7	8	9	10	11	12
14:44	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 7-31-12 - Tues  
 Sample Taken In AM PM  
 Sample Identification # 10  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
10:27	1	2	3	4	5	6	7	8	9	10	11	12
11:03	1	2	3	4	5	6	7	8	9	10	11	12
12:41	1	2	3	4	5	6	7	8	9	10	11	12
13:18	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

## ASH SAMPLING FIELD DATA SHEET

Quarter            1    2    3    4  
 Date                8-2-12 - Thurs  
 Sample Taken In    AM                            PM  
 Sample Identification                            #13  
 Sampled By            Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
7:17	<u>1</u>	2	3	4	5	6	7	8	9	10	11	12
7:52	1	<u>2</u>	3	4	5	6	7	8	9	10	11	12
8:26	1	2	<u>3</u>	4	5	6	7	8	9	10	11	12
8:58	1	2	3	<u>4</u>	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

## ASH SAMPLING FIELD DATA SHEET

Quarter            1    2    3    4  
 Date                8-2-12 - Thurs  
 Sample Taken In    AM                            PM  
 Sample Identification                            #14  
 Sampled By            Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
10:58	1	2	3	4	<u>5</u>	6	7	8	9	10	11	12
12:40	1	2	3	4	5	<u>6</u>	7	8	9	10	11	12
13:11	1	2	3	4	5	6	<u>7</u>	8	9	10	11	12
13:48	1	2	3	4	5	6	7	<u>8</u>	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# 4<sup>th</sup> QUARTER EVENT

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-04-03
REDUCED BY: Jon Corbin
DATE/TIME REDUCED: 12/15/2012 0830
TOTAL SAMPLE WEIGHT: 25.2 LBS
IRREDUCIBLE FRACTION WT: 7 LBS

DESCRIPTION OF IRREDUCIBLE FRACTION aerosol can, cans, wiring, nails, batteries

JAW CRUSHER PASSES (Three passes minimum) 3 Passes
MIXER TIME (15min minimum) 15min
NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz
SPLITTER TYPE (usually Thief) Thief
PHOTOGRAPH TAKEN Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-04-04
REDUCED BY: Jon Corbin
DATE/TIME REDUCED: 12/15/2012 0900
TOTAL SAMPLE WEIGHT: 28.6 LBS
IRREDUCIBLE FRACTION WT: 7.6 LBS

DESCRIPTION OF IRREDUCIBLE FRACTION cans, battery, wiring, rotor, strapping material

JAW CRUSHER PASSES (Three passes minimum) 3 Passes
MIXER TIME (15min minimum) 15min
NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz
SPLITTER TYPE (usually Thief) Thief
PHOTOGRAPH TAKEN Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-04-01
REDUCED BY: Jon Corbin
DATE/TIME REDUCED: 12/15/2012 0730
TOTAL SAMPLE WEIGHT: 29.4 LBS
IRREDUCIBLE FRACTION WT: 7.6 LBS

DESCRIPTION OF IRREDUCIBLE FRACTION cans, nails, batteries, brake pad, wiring, spool

JAW CRUSHER PASSES (Three passes minimum) 3 Passes
MIXER TIME (15min minimum) 15min
NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz
SPLITTER TYPE (usually Thief) Thief
PHOTOGRAPH TAKEN Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-04-02
REDUCED BY: Jon Corbin
DATE/TIME REDUCED: 12/15/2012 0800
TOTAL SAMPLE WEIGHT: 36.2 LBS
IRREDUCIBLE FRACTION WT: 10 LBS

DESCRIPTION OF IRREDUCIBLE FRACTION cans, wiring, filter, bolt

JAW CRUSHER PASSES (Three passes minimum) 3 Passes
MIXER TIME (15min minimum) 15min
NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz
SPLITTER TYPE (usually Thief) Thief
PHOTOGRAPH TAKEN Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-04-07
REDUCED BY: Jon Corbin
DATE/TIME REDUCED: 12/15/2012 1050
TOTAL SAMPLE WEIGHT: 37.8 LBS
IRREDUCIBLE FRACTION WT: 5.8 LBS

DESCRIPTION OF IRREDUCIBLE FRACTION: nails, cans, battery, wiring

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15min
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-04-05
REDUCED BY: Jon Corbin
DATE/TIME REDUCED: 12/15/2012 0930
TOTAL SAMPLE WEIGHT: 30.6 LBS
IRREDUCIBLE FRACTION WT: 6.2 LBS

DESCRIPTION OF IRREDUCIBLE FRACTION: cans, battery, metal rods, nails, staples

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15min
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-04-08
REDUCED BY: Jon Corbin
DATE/TIME REDUCED: 12/15/2012 1100
TOTAL SAMPLE WEIGHT: 27.2 LBS
IRREDUCIBLE FRACTION WT: 7.4 LBS

DESCRIPTION OF IRREDUCIBLE FRACTION: cans, nails, brake pad, bracket, battery

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15min
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-04-06
REDUCED BY: Jon Corbin
DATE/TIME REDUCED: 12/15/12 1000
TOTAL SAMPLE WEIGHT: 32.4 LBS
IRREDUCIBLE FRACTION WT: 8.2 LBS

DESCRIPTION OF IRREDUCIBLE FRACTION: cans, batteries, spoon, wiring

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15min
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS



ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-04-11
REDUCED BY: Jon Corbin
DATE/TIME REDUCED: 12/15/2012 1230
TOTAL SAMPLE WEIGHT: 33.8 LBS
IRREDUCIBLE FRACTION WT: 5.8 LBS

DESCRIPTION OF IRREDUCIBLE FRACTION: cans, Filter, nails, bolt, battery, wiring

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15min
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS:

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-04-09
REDUCED BY: Jon Corbin
DATE/TIME REDUCED: 12/15/12 1130
TOTAL SAMPLE WEIGHT: 24.4 LBS
IRREDUCIBLE FRACTION WT: 8.2 LBS

DESCRIPTION OF IRREDUCIBLE FRACTION: Forks, cans, wiring nails, battery, Door knobs, spindle, bracket material

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15min
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS:

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-04-12
REDUCED BY: Jon Corbin
DATE/TIME REDUCED: 12/15/2012 1300
TOTAL SAMPLE WEIGHT: 30.4 LBS
IRREDUCIBLE FRACTION WT: 7.4 LBS

DESCRIPTION OF IRREDUCIBLE FRACTION: cans, wiring batteries, metal frame

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15min
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS:

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-04-10
REDUCED BY: Jon Corbin
DATE/TIME REDUCED: 12/15/2012 1200
TOTAL SAMPLE WEIGHT: 35.2 LBS
IRREDUCIBLE FRACTION WT: 7.8 LBS

DESCRIPTION OF IRREDUCIBLE FRACTION: cans, batteries, nails, aerosol can, wiring

JAW CRUSHER PASSES: 3 Passes
MIXER TIME: 15min
NUMBER OF SPLITS: 2 Jars @ 16oz
SPLITTER TYPE: Thief
PHOTOGRAPH TAKEN: Yes

COMMENTS:

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-04-13  
REDUCED BY: Jon Corbin  
DATE/TIME REDUCED: 12/15/2012 1330  
TOTAL SAMPLE WEIGHT: 38 LBS  
IRREDUCIBLE FRACTION WT: 6.4 LBS

DESCRIPTION OF IRREDUCIBLE FRACTION: Cans, wiring, bearing battery

JAW CRUSHER PASSES (Three passes minimum) 3 Passes  
MIXER TIME (15min minimum) 15 min  
NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz  
SPLITTER TYPE (usually Thief) Thief  
PHOTOGRAPH TAKEN Yes

COMMENTS

ASH SAMPLING REDUCTION FORM

SAMPLE IDENTIFICATION: AS-12-04-14  
REDUCED BY: Jon Corbin  
DATE/TIME REDUCED: 12/15/2012 1400  
TOTAL SAMPLE WEIGHT: 30.8 LBS  
IRREDUCIBLE FRACTION WT: 6.2 LBS

DESCRIPTION OF IRREDUCIBLE FRACTION: Cans, batteries, wrench, Door latch, pipe, wiring

JAW CRUSHER PASSES (Three passes minimum) 3 Passes  
MIXER TIME (15min minimum) 15 min  
NUMBER OF SPLITS (with Thief) 2 Jars @ 16oz  
SPLITTER TYPE (usually Thief) Thief  
PHOTOGRAPH TAKEN Yes

COMMENTS

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 10-2-12 - Tues  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trip # That Sample Was Taken On											
7:35	<u>1</u>											
8:05	1	<u>2</u>										
8:52	1	2	<u>3</u>									
9:38	1	2	3	<u>4</u>								
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

4

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 10-2-12 - Tues  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trip # That Sample Was Taken On											
11:57	1	2	3	4	<u>5</u>							
13:09	1	2	3	4	5	<u>6</u>						
13:37	1	2	3	4	5	6	<u>7</u>					
14:58	1	2	3	4	5	6	7	<u>8</u>				
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 10-1-12 - Mon  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trip # That Sample Was Taken On											
7:00	<u>1</u>											
7:37	1	<u>2</u>										
8:10	1	2	<u>3</u>									
8:43	1	2	3	<u>4</u>								
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

2

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 10-1-12 - Mon  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trip # That Sample Was Taken On											
9:11	1	2	3	4	<u>5</u>							
9:50	1	2	3	4	5	<u>6</u>						
11:18	1	2	3	4	5	6	<u>7</u>					
12:41	1	2	3	4	5	6	7	<u>8</u>				
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 10-4-12-Thurs  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
7:24	1	2	3	4	5	6	7	8	9	10	11	12
8:08	1	2	3	4	5	6	7	8	9	10	11	12
8:55	1	2	3	4	5	6	7	8	9	10	11	12
9:30	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

8

# ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 10-4-12-Thurs  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
11:11	1	2	3	4	5	6	7	8	9	10	11	12
13:18	1	2	3	4	5	6	7	8	9	10	11	12
13:48	1	2	3	4	5	6	7	8	9	10	11	12
15:08	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

# ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 10-3-12-Wends  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
7:17	1	2	3	4	5	6	7	8	9	10	11	12
7:43	1	2	3	4	5	6	7	8	9	10	11	12
8:13	1	2	3	4	5	6	7	8	9	10	11	12
8:41	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

6

# ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 10-3-12-Wends  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
11:32	1	2	3	4	5	6	7	8	9	10	11	12
12:22	1	2	3	4	5	6	7	8	9	10	11	12
13:03	1	2	3	4	5	6	7	8	9	10	11	12
14:15	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 10-8-12 - Mon  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
7:14	①	2	3	4	5	6	7	8	9	10	11	12
7:40	1	②	3	4	5	6	7	8	9	10	11	12
8:16	1	2	③	4	5	6	7	8	9	10	11	12
8:43	1	2	3	④	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 10-8-12 - Mon  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
11:33	1	2	3	4	⑤	6	7	8	9	10	11	12
13:26	1	2	3	4	5	⑥	7	8	9	10	11	12
13:57	1	2	3	4	5	6	⑦	8	9	10	11	12
15:05	1	2	3	4	5	6	7	⑧	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 10-5-12 - Fri  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
7:18	①	2	3	4	5	6	7	8	9	10	11	12
7:48	1	②	3	4	5	6	7	8	9	10	11	12
8:32	1	2	③	4	5	6	7	8	9	10	11	12
9:21	1	2	3	④	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

10

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 4  
 Date 10-5-12 - Fri  
 Sample Taken In AM PM  
 Sample Identification \_\_\_\_\_  
 Sampled By Jeff Bradshaw  
 Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trp # That Sample Was Taken On											
10:42	1	2	3	4	⑤	6	7	8	9	10	11	12
11:25	1	2	3	4	5	⑥	7	8	9	10	11	12
12:27	1	2	3	4	5	6	⑦	8	9	10	11	12
13:55	1	2	3	4	5	6	7	⑧	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12

13

### ASH SAMPLING FIELD DATA SHEET

Quarter 1 2 3 ④  
Date 10-9-12 - Tues  
Sample Taken In ④ AM PM  
Sample Identification \_\_\_\_\_  
Sampled By Jeff Bradshaw  
Comments and/or any variation to procedure \_\_\_\_\_

Time	Haul Trip # That Sample Was Taken On											
7:23	①	2	3	4	5	6	7	8	9	10	11	12
7:52	1	②	3	4	5	6	7	8	9	10	11	12
8:18	1	2	③	4	5	6	7	8	9	10	11	12
9:04	1	2	3	④	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12
	1	2	3	4	5	6	7	8	9	10	11	12