APPENDIX E:
ANALYTICAL PROTOCOL

Introduction

This appendix contains brief descriptions of the analytical methods used. The analogous water, solid, and gas methods are described together.

Methods used for sample analysis are presented in Table E-1. Most of the laboratory methods identified in this document were published by the United States Environmental Protection Agency in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846," Third Edition, or "Methods for Chemical Analysis of Water and Wastes." Additional methods identified were published in "Criteria for Identification of Hazardous and Extremely Hazardous Wastes," "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act," 40 CFR 136, 49 FR 209 (26 October 1984), Annual Book of ASTM Standards, Volume 4.08, and "Standard Methods for the Examination of Water and Wastewater."

Extraction Methods

Extraction/digestion methods for liquid and solid matrices are briefly described in this section.

Method SW3005[1]
Acid Digestion of Aqueous Samples for Analyses by ICP

This method is an acid digestion procedure used to prepare water samples for metals analysis. The digested samples can be analyzed for total recoverable and dissolved metals determination by either flame (FLAA) or inductively coupled plasma atomic emission spectroscopy (ICP-AES). Samples may be analyzed for the following metals:

Aluminum	Cadmium	Iron	Nickel	Thallium
Antimony	Calcium	Lead	Potassium	Vanadium
Arsenic	Chromium	Magnesium	Selenium	Zinc
Barium	Cobalt	Manganese	Silver	
Beryllium	Copper	Molybdenum	Sodium	

Table E-1
Analytical Methods Used During Sampling Activities at Plant Yates

Parameter	Analytical Method[a]		
	Water	Gas	Solids
Moisture Content	NA	NA	A-D3173[2]
Particulate Loading	NA	EPA M5/M17	NA
Particle Size Distribution	NA	EPA	
Ultimate	NA	NA	ASTM D-3176[3]
Proximate	NA	NA	ASTM D-3172[4]
Carbon	NA	NA	ASTM D-5373[5]
Sulfur	NA	NA	ASTM D-4239[6]
Heating Value	NA	NA	ASTM D-2015[7]
Chloride	E300.0	E300.0	SM4500-Cl-D[8]
Fluoride	E340.2	E340.2	E340.2[9]
Phosphate	E365.2	E365.2	NA
Sulfate	E300.0	E300.0	E300.0[10]
Sulfite	E377.1	NA	E377.1[11]
Ammonia	E350.1	E350.2	NA
Cyanide, Total	SW9012	SW9012	NA
ICP-AES Metals	SW6010	SW6010	SW6010[12]
ICP-MS Metals	SW6020	SW6020	SW6020[13]
Metals	NA	NA	INAA
Metals	NA	NA	GDMS
Arsenic	SW7060	SW7060	SW7060[14]
Cadmium	SW7131	SW7131	SW7131[15]
Lead	SW7421	SW7421	SW7421[16]
Mercury	SW7470	SW7471	SW7471[17]
Selenium	SW7740	SW7740	SW7740[18]
Aldehydes	SW8315	E0011a	NA
Volatile Organic Compounds	SW8240	SW8240	NA
Semivolatile Organic Compounds	SW8270	SW8270	SW8270[19]
Polychlorinated Dioxins and Furans	NA	Method 23	Method 23[20]
Radionuclides	NA	NA	E901.1/900.0[21]

[a] Method abbreviations include ASTM = American Society of Testing and Materials, EPA = EPA "Methods for Chemical Analysis of Water and Wastes," SM = "Standard Methods for the Examination of Water and Wastewater," and SW = SW-846 "Test Methods for Evaluating Solid Waste."

NA = Not Applicable.

For analysis of total recoverable metals, the entire sample is acidified at collection time with nitric (HNO_3) acid to a pH <2. At the time of analysis, a 50-mL aliquot of the sample is heated with 1 mL of 1:1 nitric acid and 5 mL of hydrochloric acid and reduced to a specific volume. The sample must not be boiled because antimony is volatile and easily lost. The digestate is then adjusted to a final volume of 50 mL with reagent water.

For analysis of dissolved metals, the samples are filtered through a 0.45 μm filter immediately upon collection in the field, and acidified with nitric (HNO_3) acid to a pH <2. For analysis, the sample is digested as described above.

Modified Method SW3020[22]
Acid Digestion of Aqueous Samples for Analyses by Graphite Furnace Atomic Absorption Spectroscopy

Water samples are digested according to a modification of method SW3020. In Method SW3020, the sample is treated in a manner similar to that described in Method SW3005 except that 1 mL of 1:1 HNO_3 and 5 mL of H_2O_2 are used.

Microwave Assisted Acid Digestion of Solids

Microwave assisted digestion is applicable to the preparation of solid samples and water samples containing solids for metals analysis by FLAA or GFAA or ICP. A representative sample of up to 0.5 g (wet weight) is digested with concentrated nitric acid for 60 minutes using microwave heating in a suitable laboratory microwave unit. The sample is placed in a Teflon PFA vessel with 10 mL of concentrated acid. The vessel is capped and heated in the microwave unit for three 20-minute intervals with 5-minute cooling period between each heating period. After the samples are cooled and vented, 5 mL of hydrofluoric acid and 1 mL of hydrochloric acid are added and the sample is digested for 15 minutes. After cooling, the vessel contents are diluted to volume and analyzed by the appropriate SW-846 method. A separate sample is dried for a total solids and/or percent moisture determination.

Some samples can contain diverse matrix types, which may present specific analytical problems. Spiked samples and any relevant standard reference material are processed to aid in determining whether the method is applicable to a given matrix.

SW3500 Series Methods
Organic Extraction and Sample Preparation

The SW3500 series methods are used to quantitatively extract nonvolatile and semivolatile organic compounds from various sample matrices. Prior to analysis, a sample of a known volume or weight is solvent extracted, then dried and concentrated in a Kuderna-Danish apparatus.

Method SW3510[23]
Separatory Extraction

Method SW3510 is designed to quantitatively extract nonvolatile and semivolatile organic compounds from liquid samples using standard separatory funnel techniques. The sample and extracting solvent must be immiscible in order to yield recovery of target compounds. Subsequent cleanup and detection methods are described in the organic analytical method that will be used to analyze the extract.

Samples are adjusted to a specified extraction pH and extracted with the appropriate solvent for the analytical method. Methylene chloride should be employed when a solvent is not specified.

Method SW3520[24]
Liquid-Liquid Extraction

Method SW3520 is designed to quantitatively extract nonvolatile and semivolatile organic compounds from liquid samples using standard liquid/liquid techniques. The sample and extracting solvent must be immiscible in order to yield recovery of target compounds. Subsequent cleanup and detection methods are described in the organic analytical method that will be used to analyze the extract.

Samples are adjusted to a specified extraction pH and extracted with the appropriate solvent for the analytical method. Methylene chloride should be employed when a solvent is not specified.

Method SW3540[25]
Soxhlet Extraction

Method SW3540 is a procedure for extracting nonvolatile and semivolatile organic compounds from solids such as soils and sludges. The Soxhlet extraction process ensures intimate contact of the sample matrix with the extraction solvent. Extraction is accomplished by mixing the solid sample with anhydrous sodium sulfate, placing it in an extraction thimble or between two plugs of glass wool, and extracting it with an appropriate solvent in the Soxhlet extractor. Methylene chloride should be employed when a solvent is not specified. The extract is dried and concentrated, and then treated using a clean-up method, or analyzed directly by the appropriate measurement technique.

Method SW3550[26]
Sonication Extraction

Method SW3550 is a procedure for extracting nonvolatile and semivolatile organic compounds from solids such as soils and sludges. The sonication process ensures intimate contact of the sample matrix with the extraction solvent. Extraction is accomplished by mixing the solid sample with anhydrous sodium sulfate, mixing with the extraction medium, and dispersing into the solvent by sonication. The extract is dried and then concentrated.

The resulting solution may then be cleaned up or analyzed directly using the appropriate technique.

Method SW5030[27]
Purge-and-Trap Method

Method SW5030 is used to determine the concentration of volatile organic compounds (VOCs) in a variety of liquid and solid matrices. It is based upon a purge-and-trap gas chromatographic procedure. The method is applicable to the types of samples collected for this project. The success of this method depends on the level of interferences in the sample; results may vary due to the large variability and complexity of some matrices.

A direct purge-and-trap can be performed for low-concentration samples. If higher concentrations are expected, a portion of the solid sample is dispersed in methanol to dissolve the volatile organic constituents. A portion of the methanol solution is combined with water in a purging chamber. An inert gas is then bubbled through the solution at ambient temperature to transfer the volatile components to the vapor phase. The vapor is swept through a sorbent column where the volatile components are trapped. After purging is completed, the sorbent column is heated and backflushed with inert gas to desorb the components onto a gas chromatographic column. The gas chromatographic column is heated to elute the components that are detected by the appropriate detector.

Organic and Inorganic Analytical Methods for Water and Solid Samples

Method ASTM D-3173
Percent Moisture

Percent moisture was determined for solid samples undergoing analysis for organic and inorganic analytes. The percent moisture must be known so that the analytical results can be reported on a dry weight basis (i.e., µg/kg or mg/kg). The sample is weighed, dried, and then re-weighed. Percent moisture is calculated as:

$$\frac{\text{Wet Weight} - \text{Dried Weight}}{\text{Wet Weight}} \times 100$$

Method E300.0
Anions (Cl, F and SO_4) by Ion Chromatography

Water samples were analyzed for fluoride, chloride, and sulfate anions by ion chromatography using U.S. EPA Method 300.0. Ion chromatography is a rapid method for separating and analyzing complex solutions of ionic species. The technique employs a carbonate/bicarbonate eluent and ion exchange resins to separate individual ions, and a suppressor column to remove the eluent ions. The detection and quantitation of the anions is performed conductimetrically.

Method E350.1
Nitrogen, Ammonia

Ammonia nitrogen in water samples were measured by U.S. EPA Method 350.1. This method is an automated colorimetric procedure in which alkaline phenol and hypochlorite react with ammonia to form an indophenol blue complex that is proportional to the ammonia concentration. The blue color is intensified with sodium nitroprusside and is measured at 630-660 nm.

Method SW9012[28]
Cyanide, Total

Water and impinger samples were analyzed for total cyanide using SW9012. Cyanide as hydrocyanic acid (HCN) is released from cyanide complexes by means of an reflux-distillation under highly acidic conditions. The released cyanide is absorbed into a scrubber containing sodium hydroxide solution. The cyanide ion in the absorbing solution is then determined using an automated UV colorimetry. The colorimetric procedure is sensitive to about 0.02 mg/L.

Method 365.2[29]
Total Phosphate

Total phosphate was determined on acid-preserved water samples using EPA Method 365.2. Complexed phosphates are digested to the ortho-phosphate form by heating with sulfuric acid and potassium persulfate. The ortho-phosphate is reacted with ammonium molybdate and antimony potassium tartrate to form an antimony-phospho-molybdate complex which is reduced to an intensely blue-colored complex by ascorbic acid. The sample intensity is measured at 650 or 880 nm and compared with the intensity of a standard phosphate solution.

Method SW6010[30]
ICP Metals

Samples are analyzed for trace elements or metals using SW6010. Analysis for most metals requires digestion of the sample with acid. This digestion is performed as SW846 Method 3005 for water or SW846 Method 3050 for solids. Following digestion, the trace elements are simultaneously or sequentially determined using ICP-AES.

Methods
SW7060[31]*/SW7041*[32]*/SW7131*[33]*/SW7421*[34]*/SW7740*[35]*/SW7841*[36]
Graphite Furnace Atomic Absorption Metals Analyses for Arsenic, Cadmium, Lead, and Selenium

Graphite furnace AA spectrometry was used to measure concentrations of arsenic (As), cadmium (Cd), lead (Pb), and selenium (Se) in the water and solid samples. The samples are extracted using SW3020 or SW3050 as appropriate. Discrete aliquots of sample extract are deposited in a graphite tube furnace in microliter amounts. The graphite tube is

resistively heated by an electrical current. The sample solution is dried and charred to remove sample matrix components, and then atomized at temperatures sufficient to vaporize the element of interest. Matrix modification is used to eliminate interference effects, and may also enhance the vaporization efficiency and allow lower detection limits. This method usually has a linear analysis range at the ppb or sub-ppb level.

Method SW7470[37]/SW7471[38]
Mercury - Manual Cold-Vapor Technique

Liquid (water and impinger) and solid samples were analyzed for mercury using SW7470 and SW7471, respectively. This method is a cold-vapor flameless AA technique based on the absorption of radiation by mercury vapor. Mercury is reduced to the elemental state and aerated from solution in a closed system. The mercury vapor passes through a cell positioned in the light path of an AA spectrophotometer. Mercury concentration is measured as a function of absorbance.

Instrumental Neutron Activation Analysis (INAA)

Neutron activation is a non-destructive technique that measures the number and energy of gamma and X-rays emitted by the radioactive isotopes produced in the sample matrix by irradiation with thermal neutrons. The samples require no special preparation except for encapsulation in high purity polyethylene vials prior to irradiation. Both samples and standards of the elements of interest are irradiated in a nuclear reactor. Each sample is then counted on a gamma ray detector to produce its characteristic gamma ray spectrum. Quantitation of sample concentration is done by comparison with the energy spectra from those standards run simultaneously with the unknown samples.

This technique is applicable to determining bulk composition and is feasible for very small sample quantities. The method does not introduce any contaminating or interfering substances, and it provides a multi-element analysis. It is not applicable to those elements that have either extremely short half-lives, or those elements, such as lead, that do not produce radioactive isotopes.

Glow Discharge Mass Spectrometry (GDMS)

Glow discharge mass spectrometry was used as an alternative to INAA for determining the bulk composition of the size fractionated fly ash samples. In this technique, the sample is mixed with silver powder and is pressed into the shape of a pin to serve as a conducting electrode in a low-pressure argon plasma ionization chamber. Sample atoms are sputtered into the plasma and then ionized. The plasma is a constant matrix in which the ionization efficiencies of the elements also remain constant. The ionization efficiencies expressed as relative sensitivity factors (RSFs) are used to convert ion intensities to elemental concentrations. The application of this technique to fly ash particles has been demonstrated successfully, and it can provide a complete analysis on the target list, including fluorine, beryllium, and lead, that cannot be determined by INAA.

EPA Method 0011A[39]
Aldehydes

Aldehydes in the gas, liquid, and solid samples were determined using EPA Method 0011A. Samples collected in dinitrophenylhydrazine (DNPH) are extracted with methylene chloride and then solvent exchanged to acetonitrile. The acetonitrile is concentrated and analyzed by high performance liquid chromatography as the DNPH adduct.

Method SW8240[40]
Volatile Organic Compounds

Volatile, or purgeable, organics in water and by VOST in the gas streams were analyzed using Method SW8240. This method uses a purge-and-trap GC/MS technique. An inert gas is bubbled through the water samples to transfer the purgeable organic compounds from the liquid to vapor phase. The vapor is then swept through a sorbent trap where the purgeable organics are trapped. The trap is backflushed and heated to desorb the purgeable organics onto a gas chromatographic column where they are separated and then detected with a mass spectrometer. VOST samples are thermally desorbed from the resin/charcoal traps and analyzed directly.

Method SW8270[41]
Semivolatile Organic Compounds

Semivolatile organics, also known as base/neutral and acid extractables (BNA), were analyzed using Method SW8270. These techniques quantitatively determine the concentration of a number of semivolatile organic compounds. Organic compounds are extracted from the sample with methylene chloride at a pH greater than 12 to obtain base/neutral extractables. Acid extractable compounds are obtained from the sample by extraction with methylene chloride at a pH of 2 or less. Both base/neutral and acid extracts are then concentrated by removal of the methylene chloride through evaporation. Compounds of interest are separated and quantified using a GC/MS.

Method 23[42]
Chlorinated Dioxins and Furans

Flue gas and gas particulate samples were analyzed for chlorinated dioxins and furans using Method 23. The dioxins and furans are extracted from the samples with toluene using the soxhlet extraction described in Method 23. The extracts are cleaned by passing the solvent through alumina, silica gel, and carbon columns. The cleaned extracts are concentrated and injected onto the a fused silica capillary column of a gas chromatograph/mass spectrometer.

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APPENDIX F:
ERROR PROPAGATION AND UNCERTAINTY CALCULATIONS

An error propagation analysis was performed on calculated results to determine the contribution of process, sampling, and analytical variability and measurement bias to the overall uncertainty in the result. This uncertainty was determined by propagating the bias and precision error of individual parameters through the calculation of the results. This uncertainty does not represent the total uncertainty in the result since some important bias errors are unknown and have been assigned a value of zero for this analysis. Also, the uncertainties calculated apply only over the period of time during which the measurements were made.

The procedure described below is based on ANSI/ASME PTC 19.1-1985, "Measurement Uncertainty."

Nomenclature

r = Calculated result, a function of several parameters;

S_{pi} = Sample standard deviation of parameter i;

θ_i = Sensitivity of the result to parameter i;

β_{pi} = Bias error estimate for parameter i;

v_i = Degrees of freedom in parameter i;

v_r = Degrees of freedom in result;

S_r = Precision component of result uncertainty;

B_r = Bias component of result uncertainty;

t = Student "t" factor (two-tailed distribution at 95%);

U_r = Uncertainty in r; and

N_i = Number of measurements of parameter i.

For a result, r, the uncertainty in r is calculated as:

$$U_r = \sqrt{\beta_r^2 + (S_r * t)^2} \qquad \text{(F-1)}$$

The components are calculated by combining the errors in the parameters used in the result calculation.

$$\beta_r = \sqrt{\sum_{i=1}^{j} (\theta_i * \beta_{\bar{pi}})^2} \qquad \text{(F-2)}$$

$$S_r = \sqrt{\sum_{i=1}^{j} (\theta_i * S_{\bar{pi}})^2} \qquad \text{(F-3)}$$

The sensitivity of the result to each parameter is found from a Taylor series estimation method:

$$\theta_i = \frac{\partial r}{\partial p_i} \qquad \text{(F-4)}$$

Or using a perturbation method (useful in computer applications):

$$\theta_i = \frac{r_{P_i + \Delta P_i} - r_{P_i}}{\Delta P_i} \qquad \text{(F-5)}$$

The standard deviation of the average for each parameter is calculated as:

$$S_{\bar{pi}} = \frac{S_{pi}}{\sqrt{N}} \qquad \text{(F-6)}$$

The degrees of freedom for each parameter is found from

$$v_i = N_i - 1 \qquad \text{(F-7)}$$

and the degrees of freedom for the result if found by weighing the sensitivity and precision error in each parameter.

$$v_r = \frac{S_r^4}{\sum_{i=1}^{j} \left[\frac{(S_{\overline{pi}} \times \theta_i)^4}{v_i} \right]} \qquad \text{(F-8)}$$

The student "t" in Equation 1 is associated with the degrees of freedom in the result.

The precision error terms are easily generated using collected data. The bias error terms are more difficult to quantify. The percentage bias assumed in certain flow rates is based on how accurately particular flows were felt to be measured. For example, the coal flow rate was measured by counting (nominally) 500 lb buckets. While this method has good precision, there is likely to be a bias. A 5% bias is therefore assumed for the coal flow rate to account for the uncertainty. Similarly, measurements of slurry flow rates in FGD systems are quite precise, but are frequently biased. For this reason a 20% bias was assumed for limestone and JBR blowdown slurry flow rates. The following conventions were used for this report:

- 5% bias in coal flow rates.
- 20% bias in limestone slurry and JBR blowdown slurry flow rates.
- No bias in gas flow rates.
- No bias in analytical results unless the result is less than detection limit. Then one-half the detection limit is used for both the parameter value and its bias in calculations.

In addition to the assumptions about bias errors referred to above, the calculations also assume that the population distribution of each measurement is normally distributed and that the samples collected reflect the true population.

Also, the uncertainty calculated is only for the average value over the sampling period. The uncertainty does not represent long-term process variations. In other words, the calculated uncertainty does not include a bias term to reflect the fact that the sampled system was probably not operating (and emitting) at conditions equivalent to the average conditions for

that system over a longer period (in other words, autocorrelation may be important). An example of the confidence interval calculation is provided below.

Confidence Interval Calculations

The following example shows an example calculation for the 95% confidence interval for emission factor. This procedure utilizes the same method outlined earlier in this appendix. The example uses concentration data for mercury in the stack gas.

$$E = \frac{\left(Q_{gas} * C_{i,s}\right) + \left(Q_{gas} * C_{i,v}\right)}{H_{coal} * F_{coal} * (1-C_{w,coal})} * 2204.6 \qquad \textbf{(F-9)}$$

where:

E = Emission factor in lb/10^{12} Btu;

$Q_{stackgas}$ = Gas flow rate, Nm^3/hr;

$C_{i,s}$ = Solid-phase conc., μg/Nm^3;

$C_{i,v}$ = Vapor-phase conc., μg/Nm^3;

H_{coal} = Coal higher heating value, Btu/lb on a dry basis;

F_{coal} = Coal feed rate, lb/hr;

$C_{w,coal}$ = Coal water content, weight fraction; and

2204.6 = Conversion from μg/Btu to lb/10^{12} Btu.

The values used to calculate the emission factor and the confidence interval are as follows:

	Parameter					
	$Q_{stackgas}$ Nm^3/hr	$C_{i,s}$ $\mu g/Nm^3$	$C_{i,v}$ $\mu g/Nm^3$	H_{coal} Btu/lb	$C_{w,coal}$ g/g	F_{coal} lb/hr
Mean	456,000	0.00707	3.04	12,700	0.117	91,000
S_p	3,990	0.00638	0.11	260	0.0087	3,200
$S_{\bar{p}}$	2,310	0.00451	0.064	150	0.0050	380
N	3	2	3	3	3	71
β_p	0	0	0	0	0	4,540
θ	$6.6x10^{6}$	0.99	0.99	$-2.3x10^{4}$	2.73	$-3.2x10^{5}$
v_p	2	1	2	2	2	70

The calculation of the sensitivity, θ, for the vapor-phase concentration is shown below:

Vapor-phase analytical: 2.92 $\mu g/Nm^3$

3.13 $\mu g/Nm^3$

3.07 $\mu g/Nm^3$

$N = 3$

$Mean = \Sigma C_{i,v} / N = 3.04$

$S_p = \sqrt{[\Sigma(C_{i,v} - Mean)^2/(N-1)]} = 0.11$

$S_{\bar{p}} = \frac{0.11}{\sqrt{3}} = 0.064$

As explained above, the β for analytical results is set equal to zero.

$\beta_p = 0$

Next, calculate the sensitivity using perturbation method. The perturbation is equal to the standard deviation:

$\theta = [r_{Ci,v = 3.15} - r_{Ci,v = 3.04}] / 0.11 = [3.109 - 3.00] / 0.11$

$= 0.99$

Similar calculations are performed for each parameter.

The precision component is then found by root-sum-squaring the product of the normalized standard deviations and their respective sensitivities.

$$S_r = \sqrt{\left(\theta_{Q_{mixture}} S_{\overline{Q_{mixture}}}\right)^2 + \left(\theta_{C_{i,s}} S_{\overline{C_{i,s}}}\right)^2 + \left(\theta_{C_{i,v}} S_{\overline{C_{i,v}}}\right)^2 + \left(\theta_{H_{coal}} S_{\overline{H_{coal}}}\right)^2 + \left(\theta_{F_{coal}} S_{\overline{F_{coal}}}\right)^2 + \left(\theta_{C_{w,coal}} S_{\overline{C_{w,coal}}}\right)^2}$$

$$S_r = 0.066$$

The bias component is found using the same equation substituting βp for the Sp term.

$$\beta_r = \sqrt{\left(\theta_{Q_{mixture}} \beta_{Q_{mixture}}\right)^2 + \left(\theta_{C_{i,s}} \beta_{C_{i,s}}\right)^2 + \left(\theta_{C_{i,v}} \beta_{C_{i,v}}\right)^2 + \left(\theta_{H_{coal}} \beta_{H_{coal}}\right)^2 + \left(\theta_{F_{coal}} \beta_{F_{coal}}\right)^2 + \left(\theta_{C_{w,coal}} \beta_{C_{w,coal}}\right)^2}$$

$$\beta_r = 0.14$$

The uncertainty in the result is then

$$U_r = \sqrt{\beta_r^2 + \left(t \times S_r\right)^2} \qquad \textbf{(F-12)}$$

To calculate the Student t factor, the degrees of freedom must be calculated using the following equation:

$$v_r = \frac{S_r^4}{\sum_{i=1}^{j} \frac{\left(S_{\overline{pi}} \theta_i\right)^4}{v_{pi}}}$$

$$= 2.7$$

The Student t factor for a two-tailed 95% confidence interval with 2.7 degrees of freedom is 3.2. The uncertainty in the emission factor can now be calculated.

$$U_r = \sqrt{(0.14)^2 + (3.2 \times .066)^2}$$

$$= 0.25$$

The emission rate is calculated as 3.0 lb/10^{12} Btu.

The value is reported as 3.0 $\pm$ 0.3 lb/10^{12} Btu.

APPENDIX G: TREATMENT OF NONDETECTS, VALUES OUTSIDE OF THE CALIBRATION RANGE, AND BLANKS

Treatment of nondetects (analytical results for which the concentration of the species of interest is below the detection limit of the method) and blank values is of critical importance in this program because detection levels and blank concentrations are often on the same order of magnitude as sample values. When the results are then used for risk assessments or policy decisions, treatment of the data becomes important. This discussion describes how blank and nondetect values are to be treated in presenting/developing reported results.

Nondetects

The discussion presented below explains how averages, sums, and reported emission values are to be calculated for all species given various combinations of detected and nondetected values.

All values detected. The arithmetic average or sum is taken, as appropriate. No special techniques required.

All values below the detection limit. For individual test runs or species, the data are to be reported as "ND < (detection limit)." For cases where all three runs are below the detection limit, the average is reported as nondetected less than the average detection limit of the three runs.

Some values are detected and some are nondetects. As an approximation, half of the detection limit for nondetect values and the actual value for detects will be used to determine reported values. As an example of averaging, an average for three test runs with results of 10, 8, and ND <6 would be 7. As an example for summing (such as for mercury fractions), individual species values of 50, ND <1, and ND <2 would be summed to provide a value of 50+ 0.5 + 1, or 51.5. In reporting these types of sums or average no "<" sign is used. The only exception to this rule occurs when the average is less than the highest detection limit of the nondetected values. In this case, the average is reported as "ND < (the highest detection limit)." For example, 5, ND <4, and ND <3 would be reported as "ND <4."

This approach is also used to obtain test train totals which required analyses of separate fractions for each individual run. Specifically, the volatile, metals, and anion test train totals for each run are obtained by addition of test train fractions which were analyzed separately.

Fractions from the volatile test train included separate analyses of the tenax and tenax/charcoal tubes for each sample period. Separate analyses were conducted on the filterable and gaseous test train components for both the metals and anion test trains.

Detection limit ratio. These methods of treating the data may result in some loss of information in going from raw data to final values. Specifically, what is often lost is the amount of a final emission value that is attributable to detection limits and the amount that is attributable to measured values. In order to quantify and present this information, all results in this report are presented along with the "Detection Limit Component Ratio," which is calculated as the ratio of the contribution of detection limit values to a final emission result.

For example, a set of three values of 16, ND <6, and ND <5 should be reported as 7, with a detection limit ratio of 26% [(3+2.5)/(16+3+2.5)], while a set of values of 12, ND <6, and 9 should be reported as 8, with a detection limit ratio of 13 percent. The different ratios provide insight as to the extent something is "really there" and, it is hoped, can help provide better information to those making decisions on risk and policy issues.

Values Outside the Calibration Range

It is possible that the reported lab data will be outside the calibration range of the instrument. Data reported below the lower detection limit will be flagged with a qualifier (e.g., "J"). Data with the "J" flag will have been tentatively identified and tentatively quantified. Data reported above the upper detection limit will be flagged with a qualifier (e.g., "E"). Data with the "E" flag will have been positively identified and tentatively quantified. Data with both qualifiers will be estimates. Consider J and E values to be quantitatively representative when calculating averages. Neither flag should cause a value to be weighted more or less important. The J and E data qualifiers should appear in the respective laboratory analytical report. The data qualifiers need not appear on the calculated data summaries.

Blank Values

The level and treatment of blank values is important in interpreting data, since in some cases species are detected but not at levels significantly higher than blanks. In these cases, measured values may not represent emissions, but rather just limitations of the method. However, most of the test methods used in this program either do not allow subtraction of blanks or are silent on how to treat blank values.

When a method does not specify how the sample will be blank-corrected, the appropriate blank train values should be subtracted. Laboratory and site/reagent blanks will be analyzed and the results evaluated for identification of contamination. If a sample compound is blank-corrected, the data will be flagged by a "B." If the value is blank-corrected below the detection limit, it should be reported as "ND $<$ (detection limit) BC." A "C" flag indicates

that the blank value was greater than the sampled value. In no case should the blank-corrected values be reported below the method detection limit.

APPENDIX H: DETAILED ANALYTICAL RESULTS

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Gas Stream Data

SAMPLE STREAM: ESP INLET

Analyte Group	Specie	Analytical Method	Units	Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Particulate Loading		Grav	g/Nm3	8.305		9.017		9.533		8.952	1.53	
Reduced Species	Ammonia as N	EPA 350.1	ug/Nm3	27.98	B	32.33	B	26.65	B	29	7.38	
Reduced Species	Hydrogen Cyanide	SW 9012	ug/Nm3	0.043	J	0.221	J	0.199	J	0.154	0.24	
Anions - Vapor Phase	Chloride	EPA 300.0	ug/Nm3	127,702		105,013		102,681		111,799	34,338	
Anions - Vapor Phase	Fluoride	EPA 340.2	ug/Nm3	7,866		8,946		8,123		8,311	1,401	
Anions - Vapor Phase	Sulfate	EPA 300.0	ug/Nm3	7,339,547		7,389,801		7,662,782		7,464,043	432,118	
Anions - Particulate	Chloride	EPA 300.0	ug/Nm3	3,703		10,334		4,333		6,123	9,094	
Anions - Particulate	Fluoride	EPA 340.2	ug/Nm3	0.248	B	2.01	B	1.72	B	1.33	2.35	
Anions - Particulate	Sulfate	EPA 300.0	ug/Nm3	52,251		124,668		61,094		79,338	98,145	
Anions - Total	Chloride	EPA 300.0	ug/Nm3	131,404		115,347		107,014		117,922	30,799	
Anions - Total	Fluoride	EPA 340.2	ug/Nm3	7,866		8,948		8,124		8,313	1,403	
Anions - Total	Sulfate	EPA 300.0	ug/Nm3	7,391,798		7,514,469		7,723,876		7,543,381	417,161	
Radionuclides	Actinium-228 @ 338 KeV	EPA 901.1	pCi/g	< 16		32		34		24.7	35.9	11%
Radionuclides	Actinium-228 @ 911 KeV	EPA 901.1	pCi/g	16		18		27		20.3	14.6	
Radionuclides	Actinium-228 @ 968 KeV	EPA 901.1	pCi/g	< 22		34		43		29.3	41.0	13%
Radionuclides	Bismuth-212 @ 727 KeV	EPA 901.1	pCi/g	< 37	<	43	<	38	<	39.3	--	100%
Radionuclides	Bismuth-214 @ 1120.4 KeV	EPA 901.1	pCi/g	< 25	<	24	<	24	<	24.3	--	100%
Radionuclides	Bismuth-214 @ 1764.7 KeV	EPA 901.1	pCi/g	71	<	34		60		49.3	70.9	11%
Radionuclides	Bismuth-214 @ 609.4 KeV	EPA 901.1	pCi/g	21		28		35		28.0	17.4	
Radionuclides	K-40 @ 1460 KeV	EPA 901.1	pCi/g	170		150		380		233	317	
Radionuclides	Lead-210 @ 46 KeV	EPA 901.1	pCi/g	73		94		70		79.0	32.5	
Radionuclides	Lead-212 @ 238 KeV	EPA 901.1	pCi/g	11		20		26		19.0	18.8	
Radionuclides	Lead-214 @ 295.2 KeV	EPA 901.1	pCi/g	24		16		32		24.0	19.9	
Radionuclides	Lead-214 @ 352.0 KeV	EPA 901.1	pCi/g	24		23		29		25.3	7.99	
Radionuclides	Radium-226 @ 186.0 KeV	EPA 901.1	pCi/g	110		130		150		130	50	
Radionuclides	Thallium-208 @ 583 KeV	EPA 901.1	pCi/g	12		19		20		17.0	10.8	

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Gas Stream Data

SAMPLE STREAM: ESP INLET

Analyte Group	Specie	Analytical Method	Units	Run 1	Run 2	Run 3	Average	95% CI	DL Ratio
Radionuclides	Thallium-208 @ 860 KeV	EPA 901.1	pCi/g	< 61	< 72	< 67	< 66.7	--	100%
Radionuclides	Thorium-234 @ 1001 KeV	EPA 901.1	pCi/g	68	75	95	79.3	34.8	
Radionuclides	Thorium-234 @ 63.3 KeV	EPA 901.1	pCi/g	66	54	88	69.3	42.8	
Radionuclides	Uranium-235 @ 143 KeV	EPA 901.1	pCi/g	66	54	88	69.3	42.8	
Part Metals by Wt	Aluminum	SW 6010	ug/g	94,401	94,503	102,093	96,999	10,961	
Part Metals by Wt	Antimony	ICP-MS	ug/g	3.24	2.89	4.68	3.61	2.36	
Part Metals by Wt	Arsenic	SW 7060	ug/g	41	44	50	44.9	11.6	
Part Metals by Wt	Barium	SW 6010	ug/g	447	504	530	494	106	
Part Metals by Wt	Beryllium	SW 6010	ug/g	11	10	11	10.4	0.57	
Part Metals by Wt	Boron			--	--	--			
Part Metals by Wt	Cadmium	SW 7131	ug/g	2.76	2.07	3.21	2.68	1.43	
Part Metals by Wt	Calcium	SW 6010	ug/g	19,815	17,647	16,792	18,085	3,871	
Part Metals by Wt	Chromium	SW 6010	ug/g	183	550	223	318	500	
Part Metals by Wt	Cobalt	SW 6010	ug/g	31	31	31	31	0.83	
Part Metals by Wt	Copper	SW 6010	ug/g	86	85	86	86	2.64	
Part Metals by Wt	Iron	SW 6010	ug/g	102,776	87,367	82,002	90,715	26,792	
Part Metals by Wt	Lead	SW 7421	ug/g	71	79	86	79	19	
Part Metals by Wt	Magnesium	SW 6010	ug/g	4,549	4,619	4,910	4,692	476	
Part Metals by Wt	Manganese	SW 6010	ug/g	248	239	223	237	32	
Part Metals by Wt	Mercury	SW 7471	ug/g	0.63	1.06	0.68	0.79	0.59	
Part Metals by Wt	Molybdenum	SW 6010	ug/g	17	41	46	35	39	
Part Metals by Wt	Nickel	SW 6010	ug/g	160	339	179	226	245	
Part Metals by Wt	Phosphorus	SW 6010	ug/g	161	256	269	228	146	
Part Metals by Wt	Potassium	SW 6010	ug/g	16,630	17,647	18,125	17,467	1,897	
Part Metals by Wt	Selenium	SW 7740	ug/g	12	18	14	15	7.01	
Part Metals by Wt	Sodium	SW 6010	ug/g	5,196	5,121	5,042	5,120	192	
Part Metals by Wt	Strontium	SW 6010	ug/g	319	329	325	324	12	
Part Metals by Wt	Titanium	SW 6010	ug/g	5,811	6,172	6,446	6,143	792	
Part Metals by Wt	Vanadium	SW 6010	ug/g	310	310	306	308	5.74	
Part Metals by Wt	Zinc	SW 6010	ug/g	391	419	458	423	84	

Gas Stream Data

SAMPLE STREAM: ESP INLET

Analyte Group	Specie	Analytical Method	Units	Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Part Metals by Vol	Aluminum	SW 6010	ug/Nm3	784,242		852,556		973,562		870,120	238,184	
Part Metals by Vol	Antimony	ICP-MS	ug/Nm3	26.92		26.10		44.68		32.56	26.08	
Part Metals by Vol	Arsenic	SW 7060	ug/Nm3	339		397		477		404	172	
Part Metals by Vol	Barium	SW 6010	ug/Nm3	3,713		4,550		5,053		4,438	1,682	
Part Metals by Vol	Beryllium	SW 6010	ug/Nm3	87		91		100		93	16	
Part Metals by Vol	Boron			--		--		--				
Part Metals by Vol	Cadmium	SW 7131	ug/Nm3	23		19		31		24	15	
Part Metals by Vol	Calcium	SW 6010	ug/Nm3	164,612		159,202		160,128		161,314	7,188	
Part Metals by Vol	Chromium	SW 6010	ug/Nm3	1,518		4,959		2,127		2,868	4,562	
Part Metals by Vol	Cobalt	SW 6010	ug/Nm3	254		281		291		275	48	
Part Metals by Vol	Copper	SW 6010	ug/Nm3	718		763		823		768	131	
Part Metals by Vol	Iron	SW 6010	ug/Nm3	853,821		788,179		781,972		807,991	98,905	
Part Metals by Vol	Lead	SW 7421	ug/Nm3	589		717		819		708	286	
Part Metals by Vol	Magnesium	SW 6010	ug/Nm3	37,788		41,671		46,820		42,093	11,256	
Part Metals by Vol	Manganese	SW 6010	ug/Nm3	2,062		2,157		2,126		2,115	121	
Part Metals by Vol	Mercury	SW 7471	ug/Nm3	5.23		10		6.44		7.08	5.56	
Part Metals by Vol	Molybdenum	SW 6010	ug/Nm3	139		371		435		315	387	
Part Metals by Vol	Nickel	SW 6010	ug/Nm3	1,327		3,062		1,704		2,031	2,267	
Part Metals by Vol	Phosphorus	SW 6010	ug/Nm3	1,338		2,305		2,564		2,069	1,606	
Part Metals by Vol	Potassium	SW 6010	ug/Nm3	138,151		159,202		172,840		156,731	43,416	
Part Metals by Vol	Selenium	SW 7740	ug/Nm3	103		162		134		133	73	
Part Metals by Vol	Sodium	SW 6010	ug/Nm3	43,168		46,195		48,080		45,814	6,156	
Part Metals by Vol	Strontium	SW 6010	ug/Nm3	2,651		2,967		3,100		2,906	572	
Part Metals by Vol	Titanium	SW 6010	ug/Nm3	48,274		55,677		61,471		55,141	16,434	
Part Metals by Vol	Vanadium	SW 6010	ug/Nm3	2,575		2,793		2,916		2,761	429	
Part Metals by Vol	Zinc	SW 6010	ug/Nm3	3,247		3,784		4,371		3,801	1,397	
Metals, Vapor	Aluminum	SW 6010	ug/Nm3	72	B	1,621	B	220	B	146	937	
Metals, Vapor	Antimony	ICP-MS	ug/Nm3	1.07	B	< 0.004	C	0.044	B	0.56	6.50	
Metals, Vapor	Arsenic	SW 7060	ug/Nm3	< 0.19	C	10.42	B	< 0.14	C	< 0.08	--	100%

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Gas Stream Data

SAMPLE STREAM: ESP INLET

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3			Average	95% CI	DL Ratio
Metals, Vapor	Barium	SW 6010	ug/Nm3		0.87	B	11.97	B	2.11	B		1.49	7.85	
Metals, Vapor	Beryllium	SW 6010	ug/Nm3		0.076	J	0.37	B	0.037	J		0.06	0.25	
Metals, Vapor	Boron	SW 6010	ug/Nm3		7,330	B	7,080	B	5,451	B		6,390	11,939	
Metals, Vapor	Cadmium	SW 7131	ug/Nm3	<	0.07	C	0.07	B	0.18	B		0.11	0.93	16%
Metals, Vapor	Calcium	SW 6010	ug/Nm3		288	B	5,333	B	305	B		297	106	
Metals, Vapor	Chromium	SW 6010	ug/Nm3		22	B	102	B	0.65	B		11.33	136	
Metals, Vapor	Cobalt	SW 6010	ug/Nm3		0.30	J	1.22	C	0.74	C	<	1.22	--	55%
Metals, Vapor	Copper	SW 6010	ug/Nm3		1.01	J	10	B	1.26	B		1.13	1.59	
Metals, Vapor	Iron	SW 6010	ug/Nm3		146	B	1,321	B	128	B		137	118	
Metals, Vapor	Lead	SW 7421	ug/Nm3	<	0.24	C	2.51	B	0.17	C	<	0.10	--	100%
Metals, Vapor	Magnesium	SW 6010	ug/Nm3		19	B	188	B	22	B		20.50	18	
Metals, Vapor	Manganese	SW 6010	ug/Nm3	<	0.12	C	13	B	0.09	C	<	0.05	--	100%
Metals, Vapor	Mercury	CVAA	ug/Nm3		5.09	B	5.26	B	5.97	B		5.53	5.59	
Metals, Vapor	Molybdenum	SW 6010	ug/Nm3	<	1.36	C	14	B	0.63	J	<	0.66	--	52%
Metals, Vapor	Nickel	SW 6010	ug/Nm3		13	B	53	B	2.15	C		7.18	78	7%
Metals, Vapor	Phosphorus	SW 6010	ug/Nm3	<	18	C	45	B	13	C	<	7.80	--	100%
Metals, Vapor	Potassium	SW 6010	ug/Nm3	<	0.84	C	209	B	21	B		10.74	131	2%
Metals, Vapor	Selenium	SW 7740	ug/Nm3	<	0.25	C	0.21	J	0.18	C	<	0.25	--	100%
Metals, Vapor	Sodium	SW 6010	ug/Nm3		214	B	227	B	270	B		242	356	
Metals, Vapor	Strontium	SW 6010	ug/Nm3		1.68	B	32	B	2.32	B		2.00	4	
Metals, Vapor	Titanium	SW 6010	ug/Nm3		3.31	B	94	B	14	B		8.89	71	
Metals, Vapor	Vanadium	SW 6010	ug/Nm3		0.96	B	28	B	1.45	B		1.20	3	
Metals, Vapor	Zinc	SW 6010	ug/Nm3		46	B	57	B	16	B		31	185	
Total Metals	Aluminum	SW 6010	ug/Nm3		784,314		854,177		973,781			870,757	238,039	
Total Metals	Antimony	ICP-MS	ug/Nm3		27.98		26.68		44.72			33.13	25	
Total Metals	Arsenic	SW 7060	ug/Nm3		340		407		477			408	171	
Total Metals	Barium	SW 6010	ug/Nm3		3,713		4,562		5,055			4,443	1,686	
Total Metals	Beryllium	SW 6010	ug/Nm3		88		92		100			93	16	
Total Metals	Boron(vapor only)	SW 6010	ug/Nm3		7,330		7,080		5,451			6,620	2,536	
Total Metals	Cadmium	SW 7131	ug/Nm3		24		19		31			25	14	

Gas Stream Data

SAMPLE STREAM: ESP INLET

Analyte Group	Specie	Analytical Method	Units		Run 1	Run 2	Run 3	Average	95% CI	DL Ratio
Total Metals	Calcium	SW 6010	ug/Nm3		164,900	164,535	160,433	163,289	6,162	
Total Metals	Chromium	SW 6010	ug/Nm3		1,540	5,061	2,127	2,909	4,686	
Total Metals	Cobalt	SW 6010	ug/Nm3		254	283	293	277	49	
Total Metals	Copper	SW 6010	ug/Nm3		719	773	825	772	131	
Total Metals	Iron	SW 6010	ug/Nm3		853,967	789,500	782,099	808,522	98,206	
Total Metals	Lead	SW 7421	ug/Nm3		590	719	819	710	286	
Total Metals	Magnesium	SW 6010	ug/Nm3		37,807	41,859	46,842	42,169	11,243	
Total Metals	Manganese	SW 6010	ug/Nm3		2,063	2,170	2,127	2,120	134	
Total Metals	Mercury	SW 7471	ug/Nm3		10	15	12	13	5.60	
Total Metals	Molybdenum	SW 6010	ug/Nm3		141	385	436	321	391	
Total Metals	Nickel	SW 6010	ug/Nm3		1,341	3,115	1,707	2,054	2,328	
Total Metals	Phosphorus	SW 6010	ug/Nm3		1,356	2,350	2,578	2,095	1,614	
Total Metals	Potassium	SW 6010	ug/Nm3		138,153	159,411	172,861	156,808	43,476	
Total Metals	Selenium	SW 7740	ug/Nm3		104	162	135	134	72	
Total Metals	Sodium	SW 6010	ug/Nm3		43,382	46,422	48,349	46,051	6,222	
Total Metals	Strontium	SW 6010	ug/Nm3		2,653	2,999	3,102	2,918	585	
Total Metals	Titanium	SW 6010	ug/Nm3		48,277	55,771	61,485	55,178	16,457	
Total Metals	Vanadium	SW 6010	ug/Nm3		2,576	2,820	2,917	2,771	437	
Total Metals	Zinc	SW 6010	ug/Nm3		3,293	3,842	4,388	3,841	1,360	
Hg Vapor, Bloom	Mercury, Elemental	CVAFS	ug/Nm3		2.43	2.36	1.15	1.98	1.78	
Hg Vapor, Bloom	Mercury II	CVAFS	ug/Nm3		4.38	3.46	4.45	4.10	1.37	
Hg Vapor, Bloom	Mercury, Methyl	CVAFS	ug/Nm3		0.10	0.28	0.57	0.31	0.59	
Hg Vapor, Bloom	Mercury, Total	CVAFS	ug/Nm3		6.91	6.09	6.17	6.39	1.12	
Extract Metals, Nitric	Antimony	ICP-MS	ug/g		2.37	3.04	2.62	2.68	0.85	
Extract Metals, Nitric	Arsenic	ICP-MS	ug/g		36.33	63.18	28.23	43	45	
Extract Metals, Nitric	Barium	ICP-MS	ug/g		181	287	192	220	145	
Extract Metals, Nitric	Beryllium	ICP-MS	ug/g		3.36	5.14	3.83	4.11	2.29	
Extract Metals, Nitric	Boron	ICP-MS	ug/g		1,495	1,871	1,181	1,516	857	
Extract Metals, Nitric	Cadmium	ICP-MS	ug/g	<	0.72	2.28	4.03	2.22	4.57	5%

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Gas Stream Data

SAMPLE STREAM: ESP INLET

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Extract Metals, Nitric	Chromium	ICP-MS	ug/g		35.93		36.16		14.92		29	30	
Extract Metals, Nitric	Cobalt	ICP-MS	ug/g		3.75		9.51		1.81		5.03	9.95	
Extract Metals, Nitric	Copper	ICP-MS	ug/g		28.83		47.95		19.56		32	36	
Extract Metals, Nitric	Lead	ICP-MS	ug/g		22.90		62.80		32.06		39	52	
Extract Metals, Nitric	Manganese	ICP-MS	ug/g		138		143		80.04		120	87	
Extract Metals, Nitric	Mercury	ICP-MS	ug/g	<	1.92		180		64.11		82	226	0.4%
Extract Metals, Nitric	Molybdenum	ICP-MS	ug/g		34.16		69.84		24.60		43	59	
Extract Metals, Nitric	Nickel	ICP-MS	ug/g		53.31		50.81		31.25		45	30	
Extract Metals, Nitric	Selenium	ICP-MS	ug/g	<	23.43	<	22.58	<	23.92	<	23	--	100%
Extract Metals, Nitric	Vanadium	ICP-MS	ug/g		107.21		220.17		109.68		146	160	
Extract Metals, Gastric	Antimony	ICP-MS	ug/g		0.66		0.73		0.73		0.71	0.09	
Extract Metals, Gastric	Arsenic	ICP-MS	ug/g	<	0.65	<	0.68	<	0.71	<	0.68	--	100%
Extract Metals, Gastric	Barium	ICP-MS	ug/g		81.68		103		126		103	55	
Extract Metals, Gastric	Beryllium	ICP-MS	ug/g		0.90		1.39		1.13		1.14	0.61	
Extract Metals, Gastric	Boron	ICP-MS	ug/g		699		696		699		698	4.55	
Extract Metals, Gastric	Cadmium	ICP-MS	ug/g		0.55		2.91		2.01		1.82	2.97	
Extract Metals, Gastric	Chromium	ICP-MS	ug/g		28.99		31.89		21.52		27	13	
Extract Metals, Gastric	Cobalt	ICP-MS	ug/g		1.21		2.37		1.80		1.80	1.44	
Extract Metals, Gastric	Copper	ICP-MS	ug/g		8.57		12.41		8.89		9.96	5.29	
Extract Metals, Gastric	Lead	ICP-MS	ug/g		5.63		13.36		9.12		9.37	9.62	
Extract Metals, Gastric	Manganese	ICP-MS	ug/g		87.97		36.41		55.76		60	65	
Extract Metals, Gastric	Mercury	ICP-MS	ug/g		1.63		3.23		0.84		1.90	3.03	
Extract Metals, Gastric	Molybdenum	ICP-MS	ug/g		20.75		38.48		28.60		29	22	
Extract Metals, Gastric	Nickel	ICP-MS	ug/g		6.17		20.16		4.58		10	21	
Extract Metals, Gastric	Selenium	ICP-MS	ug/g	<	0.84	<	0.88	<	0.92	<	0.88	--	100%
Extract Metals, Gastric	Vanadium	ICP-MS	ug/g	<	0.34	<	0.36	<	0.37	<	0.36	--	100%
Extract Metals, Acetic	Antimony	ICP-MS	ug/g		0.44		1.30		0.65		0.80	1.11	
Extract Metals, Acetic	Arsenic	ICP-MS	ug/g		1.16		0.73		1.17		1.02	0.63	
Extract Metals, Acetic	Barium	ICP-MS	ug/g		34.39		53.34		56.47		48	30	

Gas Stream Data

SAMPLE STREAM: ESP INLET

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3			Average	95% CI	DL Ratio
Extract Metals, Acetic	Beryllium	ICP-MS	ug/g		0.12		0.56		0.28			0.32	0.54	
Extract Metals, Acetic	Boron	ICP-MS	ug/g		904		1,041		1,086			1,010	236	
Extract Metals, Acetic	Cadmium	ICP-MS	ug/g		0.82		2.97		1.17			1.65	2.86	
Extract Metals, Acetic	Chromium	ICP-MS	ug/g		5.32		11.11		5.67			7.37	8.07	
Extract Metals, Acetic	Cobalt	ICP-MS	ug/g		1.19		1.86		1.37			1.48	0.87	
Extract Metals, Acetic	Copper	ICP-MS	ug/g		5.56		17.04		10.24			10.95	14.35	
Extract Metals, Acetic	Lead	ICP-MS	ug/g		0.14		0.37		0.11			0.21	0.35	
Extract Metals, Acetic	Manganese	ICP-MS	ug/g		72.92		31.05		50.15			51.37	52.09	
Extract Metals, Acetic	Mercury	ICP-MS	ug/g		0.17		1.56		0.39			0.71	1.86	
Extract Metals, Acetic	Molybdenum	ICP-MS	ug/g		0.39		3.91		0.06			1.45	5.30	
Extract Metals, Acetic	Nickel	ICP-MS	ug/g		6.62		11.09		8.19			8.64	5.63	
Extract Metals, Acetic	Selenium	ICP-MS	ug/g	<	0.54		0.23	J	0.17	J	<	0.54	--	41%
Extract Metals, Acetic	Vanadium	ICP-MS	ug/g		1.45		1.05		1.88			1.46	1.03	
Metals by Size, >10 um	Aluminum	SW 6010	ug/g		98,300		103,000		125,000			108,767	35,411	
Metals by Size, >10 um	Antimony	ICP-MS	ug/g		2.53		1.71		1.82			2.02	1.10	
Metals by Size, >10 um	Arsenic	SW 7060	ug/g		29.80		23.30		25.00			26	8.37	
Metals by Size, >10 um	Barium	SW 6010	ug/g		459		521		565			515	132	
Metals by Size, >10 um	Beryllium	SW 6010	ug/g		11.20		10.70		7.09			10	5.57	
Metals by Size, >10 um	Cadmium	SW 7131	ug/g		2.03		1.64		1.32			1.66	0.88	
Metals by Size, >10 um	Calcium	SW 6010	ug/g		19,500		20,000		26,700			22,067	9,988	
Metals by Size, >10 um	Chromium	SW 6010	ug/g		185		182		185			184	4.30	
Metals by Size, >10 um	Cobalt	SW 6010	ug/g		30.30		33.40		33.30			32	4.38	
Metals by Size, >10 um	Copper	SW 6010	ug/g		97.80		84.90		79.60			87	23	
Metals by Size, >10 um	Iron	SW 6010	ug/g		102,000		101,000		103,000			102,000	2,484	
Metals by Size, >10 um	Lead	SW 7421	ug/g		59.40		47.80		45.30			51	19	
Metals by Size, >10 um	Magnesium	SW 6010	ug/g		4,860		4,900		6,300			5,353	2,037	
Metals by Size, >10 um	Manganese	SW 6010	ug/g		241		230		243			238	17	
Metals by Size, >10 um	Mercury	SW 7471	ug/g		0.32		0.69		0.48			0.50	0.47	
Metals by Size, >10 um	Molybdenum	SW 6010	ug/g		7.27		20.80		21.40			16	20	
Metals by Size, >10 um	Nickel	SW 6010	ug/g		133		124		106			121	34	

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Gas Stream Data

SAMPLE STREAM: ESP INLET

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Metals by Size, >10 um	Phosphorus	SW 6010	ug/g	<	72.60	<	72.20	<	72.20	<	72	--	100%
Metals by Size, >10 um	Potassium	SW 6010	ug/g		17,800		17,900		19,700		18,467	2,656	
Metals by Size, >10 um	Selenium	SW 7740	ug/g		6.47		10.70		15.00		11	11	
Metals by Size, >10 um	Silicon	SW 6010	ug/g		223,000		223,000		209,000		218,333	20,081	
Metals by Size, >10 um	Sodium	SW 6010	ug/g		5,470		4,330		4,060		4,620	1,859	
Metals by Size, >10 um	Strontium	SW 6010	ug/g		340		330		402		357	97	
Metals by Size, >10 um	Titanium	SW 6010	ug/g		6,340		6,210		5,900		6,150	562	
Metals by Size, >10 um	Vanadium	SW 6010	ug/g		310		296		274		293	45	
Metals by Size, >10 um	Zinc	SW 6010	ug/g		346		276		243		288	131	
Metals by Size, 10-3 um	Aluminum	SW 6010	ug/g		123,000		107,000		123,000		117,667	22,949	
Metals by Size, 10-3 um	Antimony	ICP-MS	ug/g		6.04		4.19		4.19		4.81	2.66	
Metals by Size, 10-3 um	Arsenic	SW 7060	ug/g		82.90		72.10		57.90		71	31	
Metals by Size, 10-3 um	Barium	SW 6010	ug/g		575.00		572.00		745.00		631	246	
Metals by Size, 10-3 um	Beryllium	SW 6010	ug/g		16.50		11.30		10.50		13	8.09	
Metals by Size, 10-3 um	Cadmium	SW 7131	ug/g		7.30		5.81		4.40		5.84	3.60	
Metals by Size, 10-3 um	Calcium	SW 6010	ug/g		14,500		15,000		26,300		18,600	16,578	
Metals by Size, 10-3 um	Chromium	SW 6010	ug/g		225		215		213		218	16	
Metals by Size, 10-3 um	Cobalt	SW 6010	ug/g		45.70		42.40		41.40		43	5.59	
Metals by Size, 10-3 um	Copper	SW 6010	ug/g		152		140		135		142	22	
Metals by Size, 10-3 um	Iron	SW 6010	ug/g		60,700		59,300		72,900		64,300	18,584	
Metals by Size, 10-3 um	Lead	SW 7421	ug/g		157		104		97		119	82	
Metals by Size, 10-3 um	Magnesium	SW 6010	ug/g		6,460		6,480		6,110		6,350	517	
Metals by Size, 10-3 um	Manganese	SW 6010	ug/g		228		211		238		226	34	
Metals by Size, 10-3 um	Mercury	SW 7471	ug/g		0.22		0.60		0.60		0.47	0.54	
Metals by Size, 10-3 um	Molybdenum	SW 6010	ug/g		55.90		51.90		30.50		46	34	
Metals by Size, 10-3 um	Nickel	SW 6010	ug/g		182		128		145		152	69	
Metals by Size, 10-3 um	Phosphorus	SW 6010	ug/g	<	72.80	<	72.60	<	72.50	<	73	--	100%
Metals by Size, 10-3 um	Potassium	SW 6010	ug/g		23,300		21,500		20,700		21,833	3,308	
Metals by Size, 10-3 um	Selenium	SW 7740	ug/g		6.29		2.39	<	1.15		3.09	7.25	6%
Metals by Size, 10-3 um	Silicon	SW 6010	ug/g		236,000		231,000		225,000		230,667	13,683	

Gas Stream Data

SAMPLE STREAM: ESP INLET

Analyte Group	Specie	Analytical Method	Units		Run 1	Run 2	Run 3		Average	95% CI	DL Ratio
Metals by Size, 10-3 um	Sodium	SW 6010	ug/g		7,780	6,780	5,660		6,740	2,635	
Metals by Size, 10-3 um	Strontium	SW 6010	ug/g		389	381	382		384	11	
Metals by Size, 10-3 um	Titanium	SW 6010	ug/g		6,530	7,270	6,700		6,833	963	
Metals by Size, 10-3 um	Vanadium	SW 6010	ug/g		463	399	312		391	188	
Metals by Size, 10-3 um	Zinc	SW 6010	ug/g		868	709	613		730	320	
Metals by Size, <3 um	Aluminum	SW 6010	ug/g		133,000	143,000	129,000		135,000	17,915	
Metals by Size, <3 um	Antimony	ICP-MS	ug/g		11.85	11.48	7.68		10	5.73	
Metals by Size, <3 um	Arsenic	SW 7060	ug/g		147.00	209.00	119.00		158	114	
Metals by Size, <3 um	Barium	SW 6010	ug/g		716.00	965.00	664.00		782	400	
Metals by Size, <3 um	Beryllium	SW 6010	ug/g		21.50	14.90	14.50		17	10	
Metals by Size, <3 um	Cadmium	SW 7131	ug/g		16.70	18.90	9.66		15	12	
Metals by Size, <3 um	Calcium	SW 6010	ug/g		16,300	25,500	16,100		19,300	13,342	
Metals by Size, <3 um	Chromium	SW 6010	ug/g		262	260	216		246	65	
Metals by Size, <3 um	Cobalt	SW 6010	ug/g		75.70	59.20	54.30		63	28	
Metals by Size, <3 um	Copper	SW 6010	ug/g		210	203	171		195	52	
Metals by Size, <3 um	Iron	SW 6010	ug/g		59,500	59,800	56,400		58,567	4,676	
Metals by Size, <3 um	Lead	SW 7421	ug/g		227	128	171		175	123	
Metals by Size, <3 um	Magnesium	SW 6010	ug/g		7,270	8,140	6,980		7,463	1,500	
Metals by Size, <3 um	Manganese	SW 6010	ug/g		282	289	231		267	79	
Metals by Size, <3 um	Mercury	SW 7471	ug/g		0.69	0.70	0.52		0.63	0.25	
Metals by Size, <3 um	Molybdenum	SW 6010	ug/g		134.00	100.00	76.30		103	72	
Metals by Size, <3 um	Nickel	SW 6010	ug/g		213.00	213.00	179.00		202	49	
Metals by Size, <3 um	Phosphorus	SW 6010	ug/g	<	499.00	443.00	25.10	<	499	--	35%
Metals by Size, <3 um	Potassium	SW 6010	ug/g		24,000	25,700	23,800		24,500	2,594	
Metals by Size, <3 um	Selenium	SW 7740	ug/g	<	7.95	6.34	0.79	<	7.95	--	36%
Metals by Size, <3 um	Silicon	SW 6010	ug/g		240,000	210,000	220,000		223,333	37,949	
Metals by Size, <3 um	Sodium	SW 6010	ug/g		8,900	7,890	7,080		7,957	2,265	
Metals by Size, <3 um	Strontium	SW 6010	ug/g		428	478	385		430	116	
Metals by Size, <3 um	Titanium	SW 6010	ug/g		7,040	6,750	7,120		6,970	484	
Metals by Size, <3 um	Vanadium	SW 6010	ug/g		688	580	6,980		2,749	9,103	

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Gas Stream Data

SAMPLE STREAM: ESP INLET

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Metals by Size, <3 um	Zinc	SW 6010	ug/g		1,220		1,210		473		968	1,064	
Organics, Aldehydes	Acetaldehyde	BIF-0011	ug/Nm3		69.68		123		204		132	169	
Organics, Aldehydes	Fomaldehyde	BIF-0011	ug/Nm3		34.84		70.95		75.72		61	56	
Organics, Semi-Volatile	1,2,4,5-Tetrachlorobenzene	SW 8270	ng/Nm3	<	221	<	200	<	140	<	187	--	100%
Organics, Semi-Volatile	1,2,4-Trichlorobenzene	SW 8270	ng/Nm3	<	226	<	204	<	211	<	214	--	100%
Organics, Semi-Volatile	1,2-Dichlorobenzene	SW 8270	ng/Nm3	<	298	<	269	<	228	<	265	--	100%
Organics, Semi-Volatile	1,2-Diphenylhydrazine	SW 8270	ng/Nm3	<	38,206	<	34,545	<	35,932	<	36,227	--	100%
Organics, Semi-Volatile	1,3-Dichlorobenzene	SW 8270	ng/Nm3	<	151	<	137	<	258	<	182	--	100%
Organics, Semi-Volatile	1,4-Dichlorobenzene	SW 8270	ng/Nm3	<	309	<	279	<	211	<	266	--	100%
Organics, Semi-Volatile	1-Chloronaphthalene	SW 8270	ng/Nm3	<	246	<	222	<	193	<	220	--	100%
Organics, Semi-Volatile	1-Naphthylamine	SW 8270	ng/Nm3	<	596	<	539	<	729	<	621	--	100%
Organics, Semi-Volatile	2,3,4,6-Tetrachlorophenol	SW 8270	ng/Nm3	<	192	<	174	<	167	<	178	--	100%
Organics, Semi-Volatile	2,4,5-Trichlorophenol	SW 8270	ng/Nm3	<	126	<	114	<	183	<	141	--	100%
Organics, Semi-Volatile	2,4,6-Trichlorophenol	SW 8270	ng/Nm3	<	133	<	121	<	182	<	145	--	100%
Organics, Semi-Volatile	2,4-Dichlorophenol	SW 8270	ng/Nm3	<	169	<	153	<	204	<	176	--	100%
Organics, Semi-Volatile	2,4-Dimethylphenol	SW 8270	ng/Nm3	<	420	<	380	<	467	<	422	--	100%
Organics, Semi-Volatile	2,4-Dinitrophenol	SW 8270	ng/Nm3	<	2,674	<	2,418	<	1,502	<	2,198	--	100%
Organics, Semi-Volatile	2,4-Dinitrotoluene	SW 8270	ng/Nm3	<	210	<	190	<	212	<	204	--	100%
Organics, Semi-Volatile	2,6-Dichlorophenol	SW 8270	ng/Nm3	<	276	<	250	<	184	<	237	--	100%
Organics, Semi-Volatile	2,6-Dinitrotoluene	SW 8270	ng/Nm3	<	132	<	120	<	309	<	187	--	100%
Organics, Semi-Volatile	2-Chloronaphthalene	SW 8270	ng/Nm3	<	124	<	112	<	141	<	126	--	100%
Organics, Semi-Volatile	2-Chlorophenol	SW 8270	ng/Nm3	<	292	<	264	<	228	<	261	--	100%
Organics, Semi-Volatile	2-Methylnaphthalene	SW 8270	ng/Nm3	<	252	<	228	<	131	<	204	--	100%
Organics, Semi-Volatile	2-Methylphenol(o-cresol)	SW 8270	ng/Nm3		936		3,524	<	111		1,505	4,478	1%
Organics, Semi-Volatile	2-Naphthylamine	SW 8270	ng/Nm3	<	745	<	674	<	575	<	665	--	100%
Organics, Semi-Volatile	2-Nitroaniline	SW 8270	ng/Nm3	<	154	<	139	<	238	<	177	--	100%
Organics, Semi-Volatile	2-Nitrophenol	SW 8270	ng/Nm3	<	168	<	152	<	188	<	169	--	100%
Organics, Semi-Volatile	2-Picoline	SW 8270	ng/Nm3	<	416	<	377	<	297	<	363	--	100%
Organics, Semi-Volatile	3,3'-Dichlorobenzidine	SW 8270	ng/Nm3	<	187	<	169	<	120	<	159	--	100%

Gas Stream Data

SAMPLE STREAM: ESP INLET

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Organics, Semi-Volatile	3-Methylcholanthrene	SW 8270	ng/Nm3	<	299	<	270	<	180	<	250	--	100%
Organics, Semi-Volatile	3-Nitroaniline	SW 8270	ng/Nm3	<	194	<	176	<	141	<	171	--	100%
Organics, Semi-Volatile	4,6-Dinitro-2-methylphenol	SW 8270	ng/Nm3	<	303	<	274	<	155	<	244	--	100%
Organics, Semi-Volatile	4-Aminobiphenyl	SW 8270	ng/Nm3	<	286	<	258	<	428	<	324	--	100%
Organics, Semi-Volatile	4-Bromophenyl phenyl ether	SW 8270	ng/Nm3	<	174	<	158	<	174	<	169	--	100%
Organics, Semi-Volatile	4-Chloro-3-methylphenol	SW 8270	ng/Nm3	<	276	<	250	<	185	<	237	--	100%
Organics, Semi-Volatile	4-Chlorophenyl phenyl ether	SW 8270	ng/Nm3	<	202	<	182	<	151	<	178	--	100%
Organics, Semi-Volatile	4-Methylphenol(p-cresol)	SW 8270	ng/Nm3		848		2,256	<	165		1,062	2,739	3%
Organics, Semi-Volatile	4-Nitroaniline	SW 8270	ng/Nm3	<	185	<	167	<	218	<	190	--	100%
Organics, Semi-Volatile	4-Nitrophenol	SW 8270	ng/Nm3	<	264	<	239	<	337	<	280	--	100%
Organics, Semi-Volatile	7,12-Dimethylbenz(a)anthracene	SW 8270	ng/Nm3	<	734	<	663	<	478	<	625	--	100%
Organics, Semi-Volatile	Acenaphthene	SW 8270	ng/Nm3	<	183	<	165	<	98	<	148	--	100%
Organics, Semi-Volatile	Acenaphthylene	SW 8270	ng/Nm3	<	86	<	78	<	150	<	105	--	100%
Organics, Semi-Volatile	Acetophenone	SW 8270	ng/Nm3		3,775		3,379	<	201		2,418	5,010	1%
Organics, Semi-Volatile	Aniline	SW 8270	ng/Nm3	<	356	<	322	<	221	<	300	--	100%
Organics, Semi-Volatile	Anthracene	SW 8270	ng/Nm3	<	222	<	201	<	132	<	185	--	100%
Organics, Semi-Volatile	Benzidine	SW 8270	ng/Nm3	<	7,641	<	6,909	<	7,186	<	7,245	--	100%
Organics, Semi-Volatile	Benzo(a)anthracene	SW 8270	ng/Nm3	<	197	<	178	<	161	<	179	--	100%
Organics, Semi-Volatile	Benzo(a)pyrene	SW 8270	ng/Nm3	<	146	<	132	<	186	<	155	--	100%
Organics, Semi-Volatile	Benzo(b)fluoranthene	SW 8270	ng/Nm3	<	217	<	197	<	326	<	247	--	100%
Organics, Semi-Volatile	Benzo(g,h,i)perylene	SW 8270	ng/Nm3	<	186	<	168	<	367	<	240	--	100%
Organics, Semi-Volatile	Benzo(k)fluoranthene	SW 8270	ng/Nm3	<	370	<	334	<	359	<	354	--	100%
Organics, Semi-Volatile	Benzoic acid	SW 8270	ng/Nm3		152,823		100,526		181,095		144,815	101,553	
Organics, Semi-Volatile	Benzyl alcohol	SW 8270	ng/Nm3		6,495	<	373	<	219		2,264	9,104	4%
Organics, Semi-Volatile	Butylbenzylphthalate	SW 8270	ng/Nm3		279	<	136	<	225	<	225	--	39%
Organics, Semi-Volatile	Chrysene	SW 8270	ng/Nm3	<	256	<	231	<	193	<	227	--	100%
Organics, Semi-Volatile	Di-n-octylphthalate	SW 8270	ng/Nm3	<	348	<	315	<	126	<	263	--	100%
Organics, Semi-Volatile	Dibenz(a,h)anthracene	SW 8270	ng/Nm3	<	181	<	164	<	291	<	212	--	100%
Organics, Semi-Volatile	Dibenz(a,j)acridine	SW 8270	ng/Nm3	<	222	<	201	<	303	<	242	--	100%
Organics, Semi-Volatile	Dibenzofuran	SW 8270	ng/Nm3	<	156	<	141	<	193	<	163	--	100%
Organics, Semi-Volatile	Dibutylphthalate	SW 8270	ng/Nm3		314		7,254		259		2,609	9,995	

Gas Stream Data

SAMPLE STREAM: ESP INLET

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Organics, Semi-Volatile	Diethylphthalate	SW 8270	ng/Nm3		353		331	<	185		259	359	12%
Organics, Semi-Volatile	Dimethylphenethylamine	SW 8270	ng/Nm3	<	45,847	<	41,454	<	43,118	<	43,473	--	100%
Organics, Semi-Volatile	Dimethylphthalate	SW 8270	ng/Nm3	<	107	<	97	<	121	<	108	--	100%
Organics, Semi-Volatile	Diphenylamine	SW 8270	ng/Nm3	<	202	<	182	<	100	<	161	--	100%
Organics, Semi-Volatile	Ethyl methanesulfonate	SW 8270	ng/Nm3	<	192	<	174	<	244	<	203	--	100%
Organics, Semi-Volatile	Fluoranthene	SW 8270	ng/Nm3	<	244	<	220	<	169	<	211	--	100%
Organics, Semi-Volatile	Fluorene	SW 8270	ng/Nm3	<	128	<	116	<	137	<	127	--	100%
Organics, Semi-Volatile	Hexachlorobenzene	SW 8270	ng/Nm3	<	89	<	81	<	113	<	94	--	100%
Organics, Semi-Volatile	Hexachlorobutadiene	SW 8270	ng/Nm3	<	267	<	241	<	184	<	231	--	100%
Organics, Semi-Volatile	Hexachlorocyclopentadiene	SW 8270	ng/Nm3	<	3,408	<	3,081	<	2,116	<	2,869	--	100%
Organics, Semi-Volatile	Hexachloroethane	SW 8270	ng/Nm3	<	227	<	205	<	228	<	220	--	100%
Organics, Semi-Volatile	Indeno(1,2,3-cd)pyrene	SW 8270	ng/Nm3	<	201	<	181	<	478	<	287	--	100%
Organics, Semi-Volatile	Isophorone	SW 8270	ng/Nm3	<	110	<	99	<	221	<	143	--	100%
Organics, Semi-Volatile	Methyl methanesulfonate	SW 8270	ng/Nm3	<	19,103	<	17,273	<	17,966	<	18,114	--	100%
Organics, Semi-Volatile	N-Nitroso-di-n-butylamine	SW 8270	ng/Nm3	<	500	<	453	<	226	<	393	--	100%
Organics, Semi-Volatile	N-Nitrosodimethylamine	SW 8270	ng/Nm3	<	508	<	459	<	282	<	417	--	100%
Organics, Semi-Volatile	N-Nitrosodiphenylamine	SW 8270	ng/Nm3	<	216	<	196	<	97	<	169	--	100%
Organics, Semi-Volatile	N-Nitrosodipropylamine	SW 8270	ng/Nm3	<	287	<	259	<	235	<	260	--	100%
Organics, Semi-Volatile	N-Nitrosopiperidine	SW 8270	ng/Nm3	<	360	<	326	<	215	<	300	--	100%
Organics, Semi-Volatile	Naphthalene	SW 8270	ng/Nm3		894		719		1,085		899	456	
Organics, Semi-Volatile	Nitrobenzene	SW 8270	ng/Nm3	<	202	<	182	<	303	<	229	--	100%
Organics, Semi-Volatile	Pentachlorobenzene	SW 8270	ng/Nm3	<	169	<	153	<	134	<	152	--	100.0%
Organics, Semi-Volatile	Pentachloronitrobenzene	SW 8270	ng/Nm3	<	791	<	715	<	496	<	667	--	100%
Organics, Semi-Volatile	Pentachlorophenol	SW 8270	ng/Nm3	<	330	<	298	<	319	<	316	--	100%
Organics, Semi-Volatile	Phenacetin	SW 8270	ng/Nm3	<	206	<	187	<	139	<	177	--	100%
Organics, Semi-Volatile	Phenanthrene	SW 8270	ng/Nm3	<	238	<	215	<	168	<	207	--	100%
Organics, Semi-Volatile	Phenol	SW 8270	ng/Nm3		3,236		11,642		10,169		8,349	11,151	
Organics, Semi-Volatile	Pronamide	SW 8270	ng/Nm3	<	282	<	255	<	87	<	208	--	100%
Organics, Semi-Volatile	Pyrene	SW 8270	ng/Nm3	<	179	<	162	<	147	<	162	--	100%
Organics, Semi-Volatile	Pyridine	SW 8270	ng/Nm3	<	443	<	401	<	211	<	352	--	100%
Organics, Semi-Volatile	bis(2-Chloroethoxy)methane	SW 8270	ng/Nm3	<	215	<	194	<	218	<	209	--	100%

Gas Stream Data

SAMPLE STREAM: ESP INLET

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Organics, Semi-Volatile	bis(2-Chloroethyl)ether	SW 8270	ng/Nm3	<	280	<	253	<	138	<	223	--	100%
Organics, Semi-Volatile	bis(2-Chloroisopropyl)ether	SW 8270	ng/Nm3	<	277	<	251	<	287	<	272	--	100%
Organics, Semi-Volatile	bis(2-Ethylhexyl)phthalate	SW 8270	ng/Nm3		875		1,199		2,156		1,410	1,655	
Organics, Semi-Volatile	p-Chloroaniline	SW 8270	ng/Nm3	<	214	<	193	<	268	<	225	--	100%
Organics, Semi-Volatile	p-Dimethylaminoazobenzene	SW 8270	ng/Nm3	<	197	<	178	<	261	<	212	--	100%
Organics, Volatile	1,1,1-Trichloroethane	SW 8240	ng/Nm3		798		589		731		706	265	
Organics, Volatile	1,1,2,2-Tetrachloroethane	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	1,1,2-Trichloroethane	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	1,1-Dichloroethane	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	1,1-Dichloroethene	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	1,2-Dichlorobenzene	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	1,2-Dichloroethane	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	1,2-Dichloropropane	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	1,3-Dichlorobenzene	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	1,4-Dichlorobenzene	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	2-Butanone	SW 8240	ng/Nm3	<	2,661	<	2,677	<	2,674	<	2,671	--	100%
Organics, Volatile	2-Hexanone	SW 8240	ng/Nm3	<	2,661	<	2,677	<	2,674	<	2,671	--	100%
Organics, Volatile	4-Methyl-2-Pentanone	SW 8240	ng/Nm3	<	2,661	<	2,677	<	2,674	<	2,671	--	100%
Organics, Volatile	Acetone	SW 8240	ng/Nm3	<	2,661		45,690	<	2,673		16,119	63,622	6%
Organics, Volatile	Benzene	SW 8240	ng/Nm3		763		1,125		1,301		1,063	682	
Organics, Volatile	Bromodichloromethane	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	Bromoform	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	Bromomethane	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	Carbon Disulfide	SW 8240	ng/Nm3		585		18,917		1,818		7,107	25,456	
Organics, Volatile	Carbon Tetrachloride	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	Chlorobenzene	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	Chloroethane	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	Chloroform	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	Chloromethane	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	Dibromochloromethane	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%

Gas Stream Data

SAMPLE STREAM: ESP INLET

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Organics, Volatile	Ethyl Benzene	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	Methylene Chloride	SW 8240	ng/Nm3		30,861		67,992		422,046		173,633	536,447	
Organics, Volatile	Styrene	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	Tetrachloroethene	SW 8240	ng/Nm3		1,401		857		838		1,032	795	
Organics, Volatile	Toluene	SW 8240	ng/Nm3		585		893		2,139		1,206	2,044	
Organics, Volatile	Trichloroethene	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	Trichlorofluoromethane	SW 8240	ng/Nm3		568		5,746		21,240		9,185	26,724	
Organics, Volatile	Vinyl Acetate	SW 8240	ng/Nm3	<	2,661	<	2,677	<	2,674	<	2,671	--	100%
Organics, Volatile	Vinyl Chloride	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	cis-1,3-Dichloropropene	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	m,p-Xylene	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	o-Xylene	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	trans-1,2-Dichloroethene	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%
Organics, Volatile	trans-1,3-Dichloropropene	SW 8240	ng/Nm3	<	532	<	535	<	535	<	534	--	100%

Note: Shaded data has been invalidated due to particulate contamination of impinger solutions and was not used to calcualte average impinger concentrations.

Gas Stream Data

SAMPLE STREAM: ESP OUTLET

Analyte Group	Specie	Analytical Method	Units	Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Particulate Loading		Grav	g/Nm3	0.1469		0.1201		0.1582		0.1417	0.05	
Reduced Species	Ammonia as N	EPA 350.1	ug/Nm3	28.78		31.84		19.67		27	16	
Reduced Species	Hydrogen Cyanide	SW 9012	ug/Nm3	0.17		1.14		1.47		0.93	1.68	
Anions - Vapor Phase	Chloride	EPA 300.0	ug/Nm3	148,560		153,339		104,650		135,516	66,674	
Anions - Vapor Phase	Fluoride	EPA 340.2	ug/Nm3	9,124		7,899		6,570		7,865	3,174	
Anions - Vapor Phase	Sulfate	EPA 300.0	ug/Nm3	7,279,750		7,109,346		6,176,702		6,855,266	1,475,195	
Anions - Particulate	Chloride	EPA 300.0	ug/Nm3	71.7		61.7		1.7		45	94	
Anions - Particulate	Fluoride	EPA 340.2	ug/Nm3	0.22		0.07		0.06		0.12	0.21	
Anions - Particulate	Sulfate	EPA 300.0	ug/Nm3	3,875		4,465		4,304		4,215	758	
Anions - Total	Chloride	EPA 300.0	ug/Nm3	148,631		153,400		104,652		135,561	66,765	
Anions - Total	Fluoride	EPA 340.2	ug/Nm3	9,125		7,899		6,570		7,865	3,174	
Anions - Total	Sulfate	EPA 300.0	ug/Nm3	7,283,625		7,113,811		6,181,006		6,859,481	1,474,900	
Radionuclides	K-40 @ 1460 KeV	EPA 901.1	pCi/g	86		61		71		73	31	
Part Metals by Wt	Aluminum	SW 6010	ug/g	58,436	B	101,041	B	49,147	B	101,041	--	
Part Metals by Wt	Antimony	ICP-MS	ug/g	2.474	0	2.992	***	2.770	***	2.745	0.65	
Part Metals by Wt	Arsenic	SW 7060	ug/g	95.69	B	134	B	122.22	B	117	48	
Part Metals by Wt	Barium	SW 6010	ug/g	< 3.91	C	618	B	< 3.49	C	618	--	
Part Metals by Wt	Beryllium	SW 6010	ug/g	12	B	14	B	12	B	14	--	
Part Metals by Wt	Boron	SW 6010	ug/g	--		--		--		--	--	
Part Metals by Wt	Cadmium	SW 7131	ug/g	2.65	B	8.91	B	5.85	B	8.91	--	
Part Metals by Wt	Calcium	SW 6010	ug/g	10,005	B	14,791	B	9,951	B	14,791	--	
Part Metals by Wt	Chromium	SW 6010	ug/g	167	B	192	B	167	B	192	--	
Part Metals by Wt	Cobalt	SW 6010	ug/g	7.28	B	37	B	30	B	37	--	
Part Metals by Wt	Copper	SW 6010	ug/g	109	B	132	B	106	B	116	35	
Part Metals by Wt	Iron	SW 6010	ug/g	59,773	B	66,900	B	55,621	B	60,765	14,172	

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Gas Stream Data

SAMPLE STREAM: ESP OUTLET

Analyte Group	Specie	Analytical Method	Units	Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Part Metals by Wt	Lead	SW 7421	ug/g	103	B	153	B	115	B	153	--	
Part Metals by Wt	Magnesium	SW 6010	ug/g	2,956	B	5,471	B	2,620	B	5,471	--	
Part Metals by Wt	Manganese	SW 6010	ug/g	242	B	271	B	216	B	243	68	
Part Metals by Wt	Mercury	SW 7471	ug/g	0.77	B	1.01	B	0.90	B	0.90	0.30	
Part Metals by Wt	Molybdenum	SW 6010	ug/g	53.71	B	72	B	48.78	B	58	31	
Part Metals by Wt	Nickel	SW 6010	ug/g	147	B	167	B	155	B	157	25	
Part Metals by Wt	Phosphorus	SW 6010	ug/g	830	B	830	B	892	B	830	--	
Part Metals by Wt	Potassium	SW 6010	ug/g	13,416	B	17,893	B	15,028	B	17,893	--	
Part Metals by Wt	Selenium	SW 7740	ug/g	970.70	B	366	B	383.66	B	574	855	
Part Metals by Wt	Sodium	SW 6010	ug/g	< 111	C	6,683	B	< 100	C	6,683	--	
Part Metals by Wt	Strontium	SW 6010	ug/g	216	B	361	B	< 2.23	C	361	--	
Part Metals by Wt	Titanium	SW 6010	ug/g	4,710	B	5,983	B	5,446	B	5,380	1,587	
Part Metals by Wt	Vanadium	SW 6010	ug/g	349.83	B	422	B	369.32	B	381	93	
Part Metals by Wt	Zinc	SW 6010	ug/g	< 4.96	C	903	B	< 4.43	C	903	--	
Part Metals by Vol	Aluminum	SW 6010	ug/Nm3	8,578	B	12,141	B	7,774	B	12,141	--	
Part Metals by Vol	Antimony	ICP-MS	ug/Nm3	0.363		0.359		0.438		0.387	0.110	
Part Metals by Vol	Arsenic	SW 7060	ug/Nm3	14.05	B	16	B	19.33	B	16	6.63	
Part Metals by Vol	Barium	SW 6010	ug/Nm3	< 0.57	C	74	B	< 0.55	C	74	--	
Part Metals by Vol	Beryllium	SW 6010	ug/Nm3	1.72	B	1.65	B	1.94	B	1.65	--	
Part Metals by Vol	Boron			--		--		--		--	--	
Part Metals by Vol	Cadmium	SW 7131	ug/Nm3	0.39	B	1.07	B	0.93	B	1.07	--	
Part Metals by Vol	Calcium	SW 6010	ug/Nm3	1,469	B	1,777	B	1,574	B	1,777	--	
Part Metals by Vol	Chromium	SW 6010	ug/Nm3	24	B	23	B	26	B	23	--	
Part Metals by Vol	Cobalt	SW 6010	ug/Nm3	1.07	B	4.45	B	4.75	B	4.45	--	
Part Metals by Vol	Copper	SW 6010	ug/Nm3	16	B	16	B	17	B	16	1.20	
Part Metals by Vol	Iron	SW 6010	ug/Nm3	8,774	B	8,039	B	8,798	B	8,537	1,073	
Part Metals by Vol	Lead	SW 7421	ug/Nm3	15	B	18	B	18	B	18	--	
Part Metals by Vol	Magnesium	SW 6010	ug/Nm3	434	B	657	B	414	B	657	--	
Part Metals by Vol	Manganese	SW 6010	ug/Nm3	35.55	B	33	B	34.21	B	34	3.74	
Part Metals by Vol	Mercury	SW 7471	ug/Nm3	0.11	B	0.12	B	0.14	B	0.13	0.04	

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Gas Stream Data

SAMPLE STREAM: ESP OUTLET

Analyte Group	Specie	Analytical Method	Units	Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Part Metals by Vol	Molybdenum	SW 6010	ug/Nm3	7.88	B	8.67	B	7.72	B	8.09	1.27	
Part Metals by Vol	Nickel	SW 6010	ug/Nm3	22	B	20	B	25	B	22	5.68	
Part Metals by Vol	Phosphorus	SW 6010	ug/Nm3	122	B	100	B	141	B	100	--	
Part Metals by Vol	Potassium	SW 6010	ug/Nm3	1,969	B	2,150	B	2,377	B	2,150	--	
Part Metals by Vol	Selenium	SW 7740	ug/Nm3	142	B	44	B	61	B	82	131	
Part Metals by Vol	Sodium	SW 6010	ug/Nm3	< 16	C	803	B	< 16	C	803	--	
Part Metals by Vol	Strontium	SW 6010	ug/Nm3	32	B	43	B	< 0.35	C	43	--	
Part Metals by Vol	Titanium	SW 6010	ug/Nm3	691	B	719	B	861	B	757	227	
Part Metals by Vol	Vanadium	SW 6010	ug/Nm3	51.35	B	51	B	58.42	B	54	11	
Part Metals by Vol	Zinc	SW 6010	ug/Nm3	< 0.73	C	108	B	< 0.70	C	108	--	
Metals, Vapor	Aluminum	SW 6010	ug/Nm3	58	B	38	B	77	B	58	48	
Metals, Vapor	Antimony	ICP-MS	ug/Nm3	0.021	B	0.018	B	0.025	B	0.02	0.010	
Metals, Vapor	Arsenic	SW 7060	ug/Nm3	< 0.17	C	< 0.19	C	< 0.18	C	< 0.18	--	100%
Metals, Vapor	Barium	SW 6010	ug/Nm3	0.81	B	0.69	B	1.50	B	1.00	1.08	
Metals, Vapor	Beryllium	SW 6010	ug/Nm3	0.12	J	< 0.16	C	< 0.16	C	< 0.16	--	57%
Metals, Vapor	Boron	SW 6010	ug/Nm3	7,482	B	6,621	B	6,617	B	6,906	1,237	
Metals, Vapor	Cadmium	SW 7131	ug/Nm3	< 0.06	C	0.25	B	< 0.07	C	0.10	0.31	21%
Metals, Vapor	Calcium	SW 6010	ug/Nm3	224	B	171	B	158	B	184	87	
Metals, Vapor	Chromium	SW 6010	ug/Nm3	0.99	B	< 0.73	C	< 0.70	C	< 0.73	--	42%
Metals, Vapor	Cobalt	SW 6010	ug/Nm3	0.66	J	< 1.00	C	0.45	J	< 1.00	--	31%
Metals, Vapor	Copper	SW 6010	ug/Nm3	< 0.99	C	1.39	B	1.28	B	1.06	1.21	16%
Metals, Vapor	Iron	SW 6010	ug/Nm3	34	B	31	B	87	B	50	78	
Metals, Vapor	Lead	SW 7421	ug/Nm3	< 0.21	C	0.88	B	< 0.22	C	0.37	1.11	20%
Metals, Vapor	Magnesium	SW 6010	ug/Nm3	15	B	10	B	11	B	12	6.40	
Metals, Vapor	Manganese	SW 6010	ug/Nm3	< 0.10	C	< 0.12	C	< 0.11	C	< 0.11	--	100%
Metals, Vapor	Mercury	CVAA	ug/Nm3	6.04	B	5.18	B	5.54	B	5.59	1.07	
Metals, Vapor	Molybdenum	SW 6010	ug/Nm3	0.55	J	< 1.36	C	0.60	J	< 1.36	--	37%
Metals, Vapor	Nickel	SW 6010	ug/Nm3	< 2.57	C	< 2.90	C	1.87	J	< 2.90	--	59%
Metals, Vapor	Phosphorus	SW 6010	ug/Nm3	< 16	C	< 18	C	< 17	C	< 17	--	100%
Metals, Vapor	Potassium	SW 6010	ug/Nm3	71	B	< 0.84	C	< 0.81	C	24	101	1%

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Gas Stream Data

SAMPLE STREAM: ESP OUTLET

Analyte Group	Specie	Analytical Method	Units	Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Metals, Vapor	Selenium	SW 7740	ug/Nm3	< 0.22	C	< 0.25	C	< 0.24	C	< 0.23	--	100%
Metals, Vapor	Sodium	SW 6010	ug/Nm3	416	B	241	B	204	B	287	282	
Metals, Vapor	Strontium	SW 6010	ug/Nm3	1.49	B	1.31	B	1.28	B	1.36	0.28	
Metals, Vapor	Titanium	SW 6010	ug/Nm3	2.16	B	1.38	B	4.01	B	2.52	3.36	
Metals, Vapor	Vanadium	SW 6010	ug/Nm3	1.35	B	< 0.69	C	1.18	B	0.96	1.33	12%
Metals, Vapor	Zinc	SW 6010	ug/Nm3	14	B	113	B	59	B	62	123	
Total Metals	Aluminum	SW 6010	ug/Nm3	8,636		12,179		7,650		12,179	--	
Total Metals	Antimony	ICP-MS	ug/Nm3	0.384		0.377		0.463		0.408	0.119	
Total Metals	Arsenic	SW 7060	ug/Nm3	14.13		16.14		19.43		16.57	6.64	
Total Metals	Barium	SW 6010	ug/Nm3	1.09		75		1.77		74.98	--	
Total Metals	Beryllium	SW 6010	ug/Nm3	1.64		1.73		2.02		1.73	--	
Total Metals	Boron(Vapor Only)	SW 6010	ug/Nm3	7,482		6,621		6,617		6,906	1,237	
Total Metals	Cadmium	SW 7131	ug/Nm3	0.42		1.32		0.96		1.32	--	
Total Metals	Calcium	SW 6010	ug/Nm3	1,693		1,948		1,732		1,948	--	
Total Metals	Chromium	SW 6010	ug/Nm3	25.49		23		20.76		23.43	--	
Total Metals	Cobalt	SW 6010	ug/Nm3	1.73		4.95		5.20		4.95	--	
Total Metals	Copper	SW 6010	ug/Nm3	16.53		17.22		18.03		17.26	1.87	
Total Metals	Iron	SW 6010	ug/Nm3	8,808		8,069		8,885		8,587	1,119	
Total Metals	Lead	SW 7421	ug/Nm3	15.22		19		16.39		19.21	--	
Total Metals	Magnesium	SW 6010	ug/Nm3	449		668		426		668	--	
Total Metals	Manganese	SW 6010	ug/Nm3	35.60		32.60		34.27		34.15	3.74	
Total Metals	Mercury	SW 7471	ug/Nm3	6.153		5.302		5.683		5.713	1.06	
Total Metals	Molybdenum	SW 6010	ug/Nm3	8.436		9.352		8.317		8.702	1.41	
Total Metals	Nickel	SW 6010	ug/Nm3	22.86		21.55		26.46		23.62	6.32	
Total Metals	Phosphorus	SW 6010	ug/Nm3	130		109		150		108.72	--	
Total Metals	Potassium	SW 6010	ug/Nm3	2,049		2,150		2,378		2,150	--	
Total Metals	Selenium	SW 7740	ug/Nm3	143		44.13		60.80		82.51	131	
Total Metals	Sodium	SW 6010	ug/Nm3	424		1,044		212		1,044	--	
Total Metals	Strontium	SW 6010	ug/Nm3	33.20		44.74		1.46		44.74	--	
Total Metals	Titanium	SW 6010	ug/Nm3	694		720		865		760	230	

Gas Stream Data

SAMPLE STREAM: ESP OUTLET

Analyte Group	Specie	Analytical Method	Units	Run 1	Run 2	Run 3	Average	95% CI	DL Ratio
Total Metals	Vanadium	SW 6010	ug/Nm3	52.70	51.11	59.60	54.47	11	
Total Metals	Zinc	SW 6010	ug/Nm3	1413	221	59.62	221.22	--	
Hg Vapor, Bloom	Mercury, Elemental	CVAFS	ug/Nm3	2.52	2.60	2.38	2.50	0.28	
Hg Vapor, Bloom	Mercury II	CVAFS	ug/Nm3	5.07	3.78	3.64	4.16	1.96	
Hg Vapor, Bloom	Mercury, Methyl	CVAFS	ug/Nm3	0.72	0.75	0.42	0.63	0.45	
Hg Vapor, Bloom	Mercury, Total	CVAFS	ug/Nm3	8.32	7.14	6.43	7.30	2.36	
Extract Metals, Nitric	Antimony	ICP-MS	ug/g	4.790	2.379	2.471	3.21	3.39	
Extract Metals, Nitric	Arsenic	ICP-MS	ug/g	94	116	85	98.39	39.98	
Extract Metals, Nitric	Barium	ICP-MS	ug/g	316	322	315	318	8.38	
Extract Metals, Nitric	Beryllium	ICP-MS	ug/g	3.992	8.127	4.183	5.43	5.80	
Extract Metals, Nitric	Boron	ICP-MS	ug/g	2413	1987	1430	1,943	1,225	
Extract Metals, Nitric	Cadmium	ICP-MS	ug/g	14	13	1.521	9.79	17.83	
Extract Metals, Nitric	Chromium	ICP-MS	ug/g	92	54	47	64	61	
Extract Metals, Nitric	Cobalt	ICP-MS	ug/g	18	18	15	17	3.76	
Extract Metals, Nitric	Copper	ICP-MS	ug/g	113	91	91	98	32	
Extract Metals, Nitric	Lead	ICP-MS	ug/g	126	120	102	116	31	
Extract Metals, Nitric	Manganese	ICP-MS	ug/g	2,584	197	132	971	3,471	
Extract Metals, Nitric	Mercury	ICP-MS	ug/g	8.782	1.784	< 1.853	3.83	10.71	8%
Extract Metals, Nitric	Molybdenum	ICP-MS	ug/g	72	80	64	72	21	
Extract Metals, Nitric	Nickel	ICP-MS	ug/g	95	93	63	84	46	
Extract Metals, Nitric	Selenium	ICP-MS	ug/g	< 24	< 24	< 23	< 23.26	--	100%
Extract Metals, Nitric	Vanadium	ICP-MS	ug/g	325	339	152	272	259	
Extract Metals, Gastric	Antimony	ICP-MS	ug/g	1.024	0.769	1.068	0.95	0.40	
Extract Metals, Gastric	Arsenic	ICP-MS	ug/g	< 0.668	< 0.629	< 0.684	< 0.66	--	100%
Extract Metals, Gastric	Barium	ICP-MS	ug/g	115	129	132	125	22	
Extract Metals, Gastric	Beryllium	ICP-MS	ug/g	2.829	2.909	2.416	2.72	0.66	
Extract Metals, Gastric	Boron	ICP-MS	ug/g	861	792	814	822	88	
Extract Metals, Gastric	Cadmium	ICP-MS	ug/g	4.803	7.294	5.486	5.86	3.20	

Gas Stream Data

SAMPLE STREAM: ESP OUTLET

Analyte Group	Specie	Analytical Method	Units	Run 1	Run 2	Run 3	Average	95% CI	DL Ratio
Extract Metals, Gastric	Chromium	ICP-MS	ug/g	52	63	49	54	18	
Extract Metals, Gastric	Cobalt	ICP-MS	ug/g	5.432	6.286	4.678	5.47	2.00	
Extract Metals, Gastric	Copper	ICP-MS	ug/g	36	36	29	33	9.29	
Extract Metals, Gastric	Lead	ICP-MS	ug/g	34	35	30	33	7.07	
Extract Metals, Gastric	Manganese	ICP-MS	ug/g	49	48	41	46	10.69	
Extract Metals, Gastric	Mercury	ICP-MS	ug/g	0.479	0.345	0.318	0.38	0.22	
Extract Metals, Gastric	Molybdenum	ICP-MS	ug/g	62	66	56	61	11.70	
Extract Metals, Gastric	Nickel	ICP-MS	ug/g	38	47	30	38	22	
Extract Metals, Gastric	Selenium	ICP-MS	ug/g	17	21	16	18	6.83	
Extract Metals, Gastric	Vanadium	ICP-MS	ug/g	127	152	89	122.27	78.53	
Extract Metals, Acetic	Antimony	ICP-MS	ug/g	1.023	0.882	0.721	0.88	0.38	
Extract Metals, Acetic	Arsenic	ICP-MS	ug/g	5.183	2.711	2.250	3.38	3.92	
Extract Metals, Acetic	Barium	ICP-MS	ug/g	45	38	49	44.11	13.44	
Extract Metals, Acetic	Beryllium	ICP-MS	ug/g	1.197	0.976	0.769	0.98	0.53	
Extract Metals, Acetic	Boron	ICP-MS	ug/g	779	1000	942	907	284	
Extract Metals, Acetic	Cadmium	ICP-MS	ug/g	3.243	22	3.394	9.57	26.91	
Extract Metals, Acetic	Chromium	ICP-MS	ug/g	21	21	16	19.47	7.19	
Extract Metals, Acetic	Cobalt	ICP-MS	ug/g	4.566	9.437	4.058	6.02	7.38	
Extract Metals, Acetic	Copper	ICP-MS	ug/g	19	19	16	17.90	4.94	
Extract Metals, Acetic	Lead	ICP-MS	ug/g	1.950	1.220	1.317	1.50	0.98	
Extract Metals, Acetic	Manganese	ICP-MS	ug/g	39	43	36	39	8.45	
Extract Metals, Acetic	Mercury	ICP-MS	ug/g	0.309	0.019 J	0.077 J	0.13	0.38	
Extract Metals, Acetic	Molybdenum	ICP-MS	ug/g	9.913	1.379	2.010	4.43	11.81	
Extract Metals, Acetic	Nickel	ICP-MS	ug/g	22	23	23	23	1.03	
Extract Metals, Acetic	Selenium	ICP-MS	ug/g	3.938	2.786	5.471	4.07	3.35	
Extract Metals, Acetic	Vanadium	ICP-MS	ug/g	9.440	2.758	1.856	4.68	10.29	
Metals by Size, > 10 um	Aluminum	SW 6010	ug/g	70,100	66,700	79,300	72,033	16,195	
Metals by Size, > 10 um	Antimony	ICP-MS	ug/g	3.58	2.74	3.17	3.17	1.04	
Metals by Size, > 10 um	Arsenic	SW 7060	ug/g	58	41	49	49	21	

Gas Stream Data

SAMPLE STREAM: ESP OUTLET

Analyte Group	Specie	Analytical Method	Units	Run 1	Run 2	Run 3	Average	95% CI	DL Ratio
Metals by Size, > 10 um	Barium	SW 6010	ug/g	409	347	424	393	101	
Metals by Size, > 10 um	Beryllium	SW 6010	ug/g	18	4.04	8.05	10	18	
Metals by Size, > 10 um	Cadmium	SW 7131	ug/g	4.03	2.76	4.03	3.61	1.82	
Metals by Size, > 10 um	Calcium	SW 6010	ug/g	15,800	12,800	13,500	14,033	3,899	
Metals by Size, > 10 um	Chromium	SW 6010	ug/g	197	219	223	213	35	
Metals by Size, > 10 um	Cobalt	SW 6010	ug/g	40	26	30	32	18	
Metals by Size, > 10 um	Copper	SW 6010	ug/g	117	94	94	102	33	
Metals by Size, > 10 um	Iron	SW 6010	ug/g	95,000	203,000	169,000	155,667	137,187	
Metals by Size, > 10 um	Lead	SW 7421	ug/g	86	62	68	72	31	
Metals by Size, > 10 um	Magnesium	SW 6010	ug/g	3,000	3,920	4,270	3,730	1,630	
Metals by Size, > 10 um	Manganese	SW 6010	ug/g	299	1,160	723	727	1,070	
Metals by Size, > 10 um	Mercury	SW 7471	ug/g	0.59	0.60	0.45	0.55	0.21	
Metals by Size, > 10 um	Molybdenum	SW 6010	ug/g	46	37	47	43	13	
Metals by Size, > 10 um	Nickel	SW 6010	ug/g	174	105	109	129	96	
Metals by Size, > 10 um	Phosphorus	SW 6010	ug/g	< 71	< 71	< 71	< 71	--	100%
Metals by Size, > 10 um	Potassium	SW 6010	ug/g	15,500	13,300	15,000	14,600	2,865	
Metals by Size, > 10 um	Selenium	SW 7740	ug/g	76	245	153	158	210	
Metals by Size, > 10 um	Silicon	SW 6010	ug/g	207,000	145,000	174,000	175,333	77,068	
Metals by Size, > 10 um	Sodium	SW 6010	ug/g	7,310	4,640	4,450	5,467	3,973	
Metals by Size, > 10 um	Strontium	SW 6010	ug/g	309	267	305	294	58	
Metals by Size, > 10 um	Titanium	SW 6010	ug/g	6,170	4,640	4,940	5,250	2,014	
Metals by Size, > 10 um	Vanadium	SW 6010	ug/g	340	247	272	286	120	
Metals by Size, > 10 um	Zinc	SW 6010	ug/g	517	346	378	414	226	
Metals by Size, 10 - 3 um	Aluminum	SW 6010	ug/g	75,800	119,000	120,000	104,933	62,693	
Metals by Size, 10 - 3 um	Antimony	ICP-MS	ug/g	8.95	8.65	8.12	8.57	1.05	
Metals by Size, 10 - 3 um	Arsenic	SW 7060	ug/g	132	124	125	127	11	
Metals by Size, 10 - 3 um	Barium	SW 6010	ug/g	603	668	616	629	85	
Metals by Size, 10 - 3 um	Beryllium	SW 6010	ug/g	25	15	15	18	15	
Metals by Size, 10 - 3 um	Cadmium	SW 7131	ug/g	12	10	10	11	2.39	
Metals by Size, 10 - 3 um	Calcium	SW 6010	ug/g	13,500	14,700	13,700	13,967	1,597	

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Gas Stream Data

SAMPLE STREAM: ESP OUTLET

Analyte Group	Specie	Analytical Method	Units	Run 1		Run 2	Run 3		Average	95% CI	DL Ratio
Metals by Size, 10 - 3 um	Chromium	SW 6010	ug/g	282		297	246		275	65	
Metals by Size, 10 - 3 um	Cobalt	SW 6010	ug/g	50		55	48		51	10	
Metals by Size, 10 - 3 um	Copper	SW 6010	ug/g	165		187	157		170	39	
Metals by Size, 10 - 3 um	Iron	SW 6010	ug/g	60,900		69,600	58,700		63,067	14,320	
Metals by Size, 10 - 3 um	Lead	SW 7421	ug/g	193		190	189		191	5.17	
Metals by Size, 10 - 3 um	Magnesium	SW 6010	ug/g	3,190		6,600	5,100		4,963	4,246	
Metals by Size, 10 - 3 um	Manganese	SW 6010	ug/g	253		334	255		281	115	
Metals by Size, 10 - 3 um	Mercury	SW 7471	ug/g	0.76	<	0.48	0.36	<	0.48	--	18%
Metals by Size, 10 - 3 um	Molybdenum	SW 6010	ug/g	90		80	70		80	25	
Metals by Size, 10 - 3 um	Nickel	SW 6010	ug/g	245		192	197		211	73	
Metals by Size, 10 - 3 um	Phosphorus	SW 6010	ug/g	193		220	272		228	100	
Metals by Size, 10 - 3 um	Potassium	SW 6010	ug/g	18,500		24,300	21,100		21,300	7,217	
Metals by Size, 10 - 3 um	Selenium	SW 7740	ug/g	58		46	31		45	33	
Metals by Size, 10 - 3 um	Silicon	SW 6010	ug/g	211,000		227,000	216,000		218,000	20,335	
Metals by Size, 10 - 3 um	Sodium	SW 6010	ug/g	8,080		8,420	7,280		7,927	1,454	
Metals by Size, 10 - 3 um	Strontium	SW 6010	ug/g	319		413	363		365	117	
Metals by Size, 10 - 3 um	Titanium	SW 6010	ug/g	6,540		7,220	6,810		6,857	851	
Metals by Size, 10 - 3 um	Vanadium	SW 6010	ug/g	505		548	475		509	91	
Metals by Size, 10 - 3 um	Zinc	SW 6010	ug/g	1,090		1,120	1,030		1,080	114	
Metals by Size, < 3 um	Aluminum	SW 6010	ug/g	123,000		125,000	117,000		121,667	10,343	
Metals by Size, < 3 um	Antimony	ICP-MS	ug/g	13.10		13.78	13.17		13	0.94	
Metals by Size, < 3 um	Arsenic	SW 7060	ug/g	183		198	226		202	54	
Metals by Size, < 3 um	Barium	SW 6010	ug/g	773		782	719		758	85	
Metals by Size, < 3 um	Beryllium	SW 6010	ug/g	14		14	18		15	5.02	
Metals by Size, < 3 um	Cadmium	SW 7131	ug/g	23		23	17		21	8.04	
Metals by Size, < 3 um	Calcium	SW 6010	ug/g	17,100		16,000	15,400		16,167	2,142	
Metals by Size, < 3 um	Chromium	SW 6010	ug/g	326		284	259		290	84	
Metals by Size, < 3 um	Cobalt	SW 6010	ug/g	69		65	57		64	15	
Metals by Size, < 3 um	Copper	SW 6010	ug/g	332		222	195		250	180	
Metals by Size, < 3 um	Iron	SW 6010	ug/g	70,300		67,000	66,500		67,933	5,130	

Gas Stream Data

SAMPLE STREAM: ESP OUTLET

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Metals by Size, < 3 um	Lead	SW 7421	ug/g		311		236		124		224	234	
Metals by Size, < 3 um	Magnesium	SW 6010	ug/g		7,870		7,080		5,160		6,703	3,462	
Metals by Size, < 3 um	Manganese	SW 6010	ug/g		327		325		306		319	29	
Metals by Size, < 3 um	Mercury	SW 7471	ug/g		0.44		0.32		0.40		0.39	0.15	
Metals by Size, < 3 um	Molybdenum	SW 6010	ug/g		138		117		98		118	49	
Metals by Size, < 3 um	Nickel	SW 6010	ug/g		259		227		220		235	52	
Metals by Size, < 3 um	Phosphorus	SW 6010	ug/g		528		773		1,160		820	792	
Metals by Size, < 3 um	Potassium	SW 6010	ug/g		25,100		22,500		20,500		22,700	5,730	
Metals by Size, < 3 um	Selenium	SW 7740	ug/g		79		55		45		60	43	
Metals by Size, < 3 um	Silicon	SW 6010	ug/g		213,000		209,000		199,000		207,000	17,915	
Metals by Size, < 3 um	Sodium	SW 6010	ug/g		9,490		8,240		7,210		8,313	2,837	
Metals by Size, < 3 um	Strontium	SW 6010	ug/g		460		439		389		429	91	
Metals by Size, < 3 um	Titanium	SW 6010	ug/g		6,880		6,820		6,960		6,887	174	
Metals by Size, < 3 um	Vanadium	SW 6010	ug/g		852		781		668		767	231	
Metals by Size, < 3 um	Zinc	SW 6010	ug/g		1,790		1,580		1,570		1,647	309	
Organics, Aldehydes	Acetaldehyde	BIF-0011	ug/Nm3		2.38		1.22		0.14		1.24	2.78	
Organics, Aldehydes	Fomaldehyde	BIF-0011	ug/Nm3		1.01		0.40		0.11		0.50	1.15	
Organics, Semi-Volatile	1,2,4,5-Tetrachlorobenzene	SW 8270	ng/Nm3	<	182	<	180	<	131	<	164	--	100%
Organics, Semi-Volatile	1,2,4-Trichlorobenzene	SW 8270	ng/Nm3	<	186	<	184	<	197	<	189	--	100%
Organics, Semi-Volatile	1,2-Dichlorobenzene	SW 8270	ng/Nm3	<	245	<	243	<	213	<	234	--	100%
Organics, Semi-Volatile	1,2-Diphenylhydrazine	SW 8270	ng/Nm3	<	31,477	<	31,174	<	33,586	<	32,079	--	100%
Organics, Semi-Volatile	1,3-Dichlorobenzene	SW 8270	ng/Nm3	<	125	<	123	<	241	<	163	--	100%
Organics, Semi-Volatile	1,4-Dichlorobenzene	SW 8270	ng/Nm3	<	254	<	252	<	197	<	235	--	100%
Organics, Semi-Volatile	1-Chloronaphthalene	SW 8270	ng/Nm3	<	203	<	201	<	180	<	195	--	100%
Organics, Semi-Volatile	1-Naphthylamine	SW 8270	ng/Nm3	<	491	<	486	<	682	<	553	--	100%
Organics, Semi-Volatile	2,3,4,6-Tetrachlorophenol	SW 8270	ng/Nm3	<	158	<	157	<	156	<	157	--	100%
Organics, Semi-Volatile	2,4,5-Trichlorophenol	SW 8270	ng/Nm3	<	104	<	103	<	171	<	126	--	100%
Organics, Semi-Volatile	2,4,6-Trichlorophenol	SW 8270	ng/Nm3	<	110	<	109	<	170	<	130	--	100%
Organics, Semi-Volatile	2,4-Dichlorophenol	SW 8270	ng/Nm3	<	139	<	138	<	191	<	156	--	100%

Gas Stream Data

SAMPLE STREAM: ESP OUTLET

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Organics, Semi-Volatile	2,4-Dimethylphenol	SW 8270	ng/Nm3	<	346	<	343	<	437	<	375	--	100%
Organics, Semi-Volatile	2,4-Dinitrophenol	SW 8270	ng/Nm3	<	2,203	<	2,182	<	1,404	<	1,930	--	100%
Organics, Semi-Volatile	2,4-Dinitrotoluene	SW 8270	ng/Nm3	<	173	<	171	<	198	<	181	--	100%
Organics, Semi-Volatile	2,6-Dichlorophenol	SW 8270	ng/Nm3	<	228	<	225	<	172	<	208	--	100%
Organics, Semi-Volatile	2,6-Dinitrotoluene	SW 8270	ng/Nm3	<	109	<	108	<	289	<	169	--	100%
Organics, Semi-Volatile	2-Chloronaphthalene	SW 8270	ng/Nm3	<	102	<	101	<	132	<	112	--	100%
Organics, Semi-Volatile	2-Chlorophenol	SW 8270	ng/Nm3	<	240	<	238	<	213	<	231	--	100%
Organics, Semi-Volatile	2-Methylnaphthalene	SW 8270	ng/Nm3	<	208	<	206	<	122	<	179	--	100%
Organics, Semi-Volatile	2-Methylphenol(o-cresol)	SW 8270	ng/Nm3		2,487		2,837		10,378		5,234	11,076	
Organics, Semi-Volatile	2-Naphthylamine	SW 8270	ng/Nm3	<	614	<	608	<	537	<	586	--	100%
Organics, Semi-Volatile	2-Nitroaniline	SW 8270	ng/Nm3	<	127	<	125	<	223	<	158	--	100%
Organics, Semi-Volatile	2-Nitrophenol	SW 8270	ng/Nm3	<	138	<	137	<	175	<	150	--	100%
Organics, Semi-Volatile	2-Picoline	SW 8270	ng/Nm3	<	343	<	340	<	278	<	320	--	100%
Organics, Semi-Volatile	3,3'-Dichlorobenzidine	SW 8270	ng/Nm3	<	154	<	153	<	112	<	140	--	100%
Organics, Semi-Volatile	3-Methylcholanthrene	SW 8270	ng/Nm3	<	246	<	244	<	168	<	219	--	100%
Organics, Semi-Volatile	3-Nitroaniline	SW 8270	ng/Nm3	<	160	<	159	<	132	<	150	--	100%
Organics, Semi-Volatile	4,6-Dinitro-2-methylphenol	SW 8270	ng/Nm3	<	249	<	247	<	144	<	214	--	100%
Organics, Semi-Volatile	4-Aminobiphenyl	SW 8270	ng/Nm3	<	235	<	233	<	400	<	289	--	100%
Organics, Semi-Volatile	4-Bromophenyl phenyl	SW 8270	ng/Nm3	<	144	<	142	<	163	<	149	--	100%
Organics, Semi-Volatile	4-Chloro-3-methylphenol	SW 8270	ng/Nm3	<	228	<	225	<	173	<	209	--	100%
Organics, Semi-Volatile	4-Chlorophenyl phenyl ether	SW 8270	ng/Nm3	<	166	<	165	<	141	<	157	--	100%
Organics, Semi-Volatile	4-Methylphenol(p-cresol)	SW 8270	ng/Nm3		2,068		1,443		1,679		1,730	784	
Organics, Semi-Volatile	4-Nitroaniline	SW 8270	ng/Nm3	<	152	<	151	<	204	<	169	--	100%
Organics, Semi-Volatile	4-Nitrophenol	SW 8270	ng/Nm3	<	218	<	215	<	315	<	249	--	100%
Organics, Semi-Volatile	7,12-Dimethylbenz(a)anthracene	SW 8270	ng/Nm3	<	604	<	599	<	447	<	550	--	100%
Organics, Semi-Volatile	Acenaphthene	SW 8270	ng/Nm3	<	150	<	149	<	91	<	130	--	100%
Organics, Semi-Volatile	Acenaphthylene	SW 8270	ng/Nm3	<	71	<	70	<	140	<	94	--	100%
Organics, Semi-Volatile	Acetophenone	SW 8270	ng/Nm3		3,525		2,930		3,322		3,259	751	
Organics, Semi-Volatile	Aniline	SW 8270	ng/Nm3	<	294	<	291	<	207	<	264	--	100%
Organics, Semi-Volatile	Anthracene	SW 8270	ng/Nm3	<	183	<	181	<	124	<	163	--	100%
Organics, Semi-Volatile	Benzidine	SW 8270	ng/Nm3	<	6,295	<	6,235	<	6,717	<	6,416	--	100%

Gas Stream Data

SAMPLE STREAM: ESP OUTLET

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Organics, Semi-Volatile	Benzo(a)anthracene	SW 8270	ng/Nm3	<	162	<	161	<	151	<	158	--	100%
Organics, Semi-Volatile	Benzo(a)pyrene	SW 8270	ng/Nm3	<	121	<	119	<	174	<	138	--	100%
Organics, Semi-Volatile	Benzo(b)fluoranthene	SW 8270	ng/Nm3	<	179	<	177	<	305	<	220	--	100%
Organics, Semi-Volatile	Benzo(g,h,i)perylene	SW 8270	ng/Nm3	<	153	<	152	<	343	<	216	--	100%
Organics, Semi-Volatile	Benzo(k)fluoranthene	SW 8270	ng/Nm3	<	305	<	302	<	336	<	314	--	100%
Organics, Semi-Volatile	Benzoic acid	SW 8270	ng/Nm3		123,074		105,679		160,875		129,876	70,107	
Organics, Semi-Volatile	Benzyl alcohol	SW 8270	ng/Nm3		12,685	<	337	<	205		4,319	18,001	2%
Organics, Semi-Volatile	Butylbenzylphthalate	SW 8270	ng/Nm3		409		324		274		336	170	
Organics, Semi-Volatile	Chrysene	SW 8270	ng/Nm3	<	211	<	209	<	180	<	200	--	100%
Organics, Semi-Volatile	Di-n-octylphthalate	SW 8270	ng/Nm3	<	287	<	284	<	118	<	230	--	100%
Organics, Semi-Volatile	Dibenz(a,h)anthracene	SW 8270	ng/Nm3	<	149	<	148	<	272	<	190	--	100%
Organics, Semi-Volatile	Dibenz(a,j)acridine	SW 8270	ng/Nm3	<	183	<	181	<	283	<	216	--	100%
Organics, Semi-Volatile	Dibenzofuran	SW 8270	ng/Nm3	<	128	<	127	<	180	<	145	--	100%
Organics, Semi-Volatile	Dibutylphthalate	SW 8270	ng/Nm3	<	155		209	<	109	<	155	--	39%
Organics, Semi-Volatile	Diethylphthalate	SW 8270	ng/Nm3		434	<	105	<	173		191	525	24%
Organics, Semi-Volatile	Dimethylphenethylamine	SW 8270	ng/Nm3	<	37,772	<	37,409	<	40,303	<	38,494	--	100%
Organics, Semi-Volatile	Dimethylphthalate	SW 8270	ng/Nm3	<	88	<	87	<	113	<	96	--	100%
Organics, Semi-Volatile	Diphenylamine	SW 8270	ng/Nm3	<	166	<	165	<	93	<	141	--	100%
Organics, Semi-Volatile	Ethyl methanesulfonate	SW 8270	ng/Nm3	<	158	<	157	<	228	<	181	--	100%
Organics, Semi-Volatile	Fluoranthene	SW 8270	ng/Nm3	<	201	<	199	<	158	<	186	--	100%
Organics, Semi-Volatile	Fluorene	SW 8270	ng/Nm3	<	106	<	105	<	128	<	113	--	100%
Organics, Semi-Volatile	Hexachlorobenzene	SW 8270	ng/Nm3	<	74	<	73	<	105	<	84	--	100%
Organics, Semi-Volatile	Hexachlorobutadiene	SW 8270	ng/Nm3	<	220	<	218	<	172	<	203	--	100%
Organics, Semi-Volatile	Hexachlorocyclopentadiene	SW 8270	ng/Nm3	<	2,808	<	2,781	<	1,978	<	2,522	--	100%
Organics, Semi-Volatile	Hexachloroethane	SW 8270	ng/Nm3	<	187	<	185	<	213	<	195	--	100%
Organics, Semi-Volatile	Indeno(1,2,3-cd)pyrene	SW 8270	ng/Nm3	<	165	<	164	<	447	<	259	--	100%
Organics, Semi-Volatile	Isophorone	SW 8270	ng/Nm3	<	90	<	89	<	207	<	129	--	100%
Organics, Semi-Volatile	Methyl methanesulfonate	SW 8270	ng/Nm3	<	15,738	<	15,587	<	16,793	<	16,039	--	100%
Organics, Semi-Volatile	N-Nitroso-di-n-butylamine	SW 8270	ng/Nm3	<	412	<	408	<	211	<	344	--	100%
Organics, Semi-Volatile	N-Nitrosodimethylamine	SW 8270	ng/Nm3	<	419	<	415	<	264	<	366	--	100%
Organics, Semi-Volatile	N-Nitrosodiphenylamine	SW 8270	ng/Nm3	<	178	<	176	<	90	<	148	--	100%

Gas Stream Data

SAMPLE STREAM: ESP OUTLET

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Organics, Semi-Volatile	N-Nitrosodipropylamine	SW 8270	ng/Nm3	<	236	<	234	<	220	<	230	--	100%
Organics, Semi-Volatile	N-Nitrosopiperidine	SW 8270	ng/Nm3	<	297	<	294	<	201	<	264	--	100%
Organics, Semi-Volatile	Naphthalene	SW 8270	ng/Nm3		957		773		1,562		1,097	1,025	
Organics, Semi-Volatile	Nitrobenzene	SW 8270	ng/Nm3	<	166	<	165	<	283	<	205	--	100%
Organics, Semi-Volatile	Pentachlorobenzene	SW 8270	ng/Nm3	<	139	<	138	<	126	<	134	--	100%
Organics, Semi-Volatile	Pentachloronitrobenzene	SW 8270	ng/Nm3	<	652	<	645	<	463	<	587	--	100%
Organics, Semi-Volatile	Pentachlorophenol	SW 8270	ng/Nm3	<	272	<	269	<	299	<	280	--	100%
Organics, Semi-Volatile	Phenacetin	SW 8270	ng/Nm3	<	170	<	168	<	130	<	156	--	100%
Organics, Semi-Volatile	Phenanthrene	SW 8270	ng/Nm3	<	196	<	194	<	157	<	182	--	100%
Organics, Semi-Volatile	Phenol	SW 8270	ng/Nm3		4,407		5,767		15,449		8,541	14,959	
Organics, Semi-Volatile	Pronamide	SW 8270	ng/Nm3	<	233	<	230	<	81	<	181	--	100%
Organics, Semi-Volatile	Pyrene	SW 8270	ng/Nm3	<	147	<	146	<	137	<	143	--	100%
Organics, Semi-Volatile	Pyridine	SW 8270	ng/Nm3	<	365	<	362	<	197	<	308	--	100%
Organics, Semi-Volatile	bis(2-Chloroethoxy)methane	SW 8270	ng/Nm3	<	177	<	175	<	204	<	185	--	100%
Organics, Semi-Volatile	bis(2-Chloroethyl)ether	SW 8270	ng/Nm3	<	230	<	228	<	129	<	196	--	100%
Organics, Semi-Volatile	bis(2-Chloroisopropyl)ether	SW 8270	ng/Nm3	<	229	<	226	<	268	<	241	--	100%
Organics, Semi-Volatile	bis(2-Ethylhexyl)phthalate	SW 8270	ng/Nm3		7,271		3,367		33,922		14,853	41,311	
Organics, Semi-Volatile	p-Chloroaniline	SW 8270	ng/Nm3	<	176	<	174	<	250	<	200	--	100%
Organics, Semi-Volatile	p-Dimethylaminoazobenzene	SW 8270	ng/Nm3	<	162	<	161	<	244	<	189	--	100%
Organics, Volatile	1,1,1-Trichloroethane	SW 8240	ng/Nm3		757		697		608		687	186	
Organics, Volatile	1,1,2,2-Tetrachloroethane	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	1,1,2-Trichloroethane	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	1,1-Dichloroethane	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	1,1-Dichloroethene	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	1,2-Dichlorobenzene	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	1,2-Dichloroethane	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	1,2-Dichloropropane	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	1,3-Dichlorobenzene	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	1,4-Dichlorobenzene	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	2-Butanone	SW 8240	ng/Nm3	<	2,561	<	2,681	<	2,683	<	2,642	--	100%

Gas Stream Data

SAMPLE STREAM: ESP OUTLET

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Organics, Volatile	2-Hexanone	SW 8240	ng/Nm3	<	2,561	<	2,681	<	2,683	<	2,642	--	100%
Organics, Volatile	4-Methyl-2-Pentanone	SW 8240	ng/Nm3	<	2,561	<	2,681	<	2,683	<	2,642	--	100%
Organics, Volatile	Acetone	SW 8240	ng/Nm3	<	2,561	<	2,681	<	2,683	<	2,642	--	100%
Organics, Volatile	Benzene	SW 8240	ng/Nm3		1,366		1,555		1,502		1,474	243	
Organics, Volatile	Bromodichloromethane	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	Bromoform	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	Bromomethane	SW 8240	ng/Nm3	<	654	<	536	<	537	<	576	--	100%
Organics, Volatile	Carbon Disulfide	SW 8240	ng/Nm3		2,356		6,901		948		3,402	7,730	
Organics, Volatile	Carbon Tetrachloride	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	Chlorobenzene	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	Chloroethane	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	Chloroform	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	Chloromethane	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	Dibromochloromethane	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	Ethyl Benzene	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	Methylene Chloride	SW 8240	ng/Nm3		18,300		47,739		31,659		32,566	36,621	
Organics, Volatile	Styrene	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	Tetrachloroethene	SW 8240	ng/Nm3		1,021		786		644		817	473	
Organics, Volatile	Toluene	SW 8240	ng/Nm3		688		1,341		1,502		1,177	1,071	
Organics, Volatile	Trichloroethene	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	Trichlorofluoromethane	SW 8240	ng/Nm3	<	512		679	<	537	<	537	--	44%
Organics, Volatile	Vinyl Acetate	SW 8240	ng/Nm3	<	2,561	<	2,681	<	2,683	<	2,642	--	100%
Organics, Volatile	Vinyl Chloride	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	cis-1,3-Dichloropropene	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	m,p-Xylene	SW 8240	ng/Nm3		789	<	536	<	537	<	537	--	40%
Organics, Volatile	o-Xylene	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	trans-1,2-Dichloroethene	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%
Organics, Volatile	trans-1,3-Dichloropropene	SW 8240	ng/Nm3	<	512	<	536	<	537	<	528	--	100%

Note: Shaded data has been invalidated due to high background in filter substrate. Shaded data is not included in "average" data calculation.

Gas Stream Data

SAMPLE STREAM: STACK

Analyte Group	Specie	Analytical Method	Units	Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Particulate Loading		Grav	g/Nm3	0.0192		0.0118		0.0125		0.0145	0.0101	
Reduced Species	Ammonia as N	EPA 350.1	ug/Nm3	18.72	B	5.91	B	8.98	B	11.20	16.62	
Reduced Species	Cyanide	SW 9012	ug/Nm3	4.87		8.55		71.99		28	93.74	
Anions - Vapor Phase	Chloride	EPA 300.0	ug/Nm3	294		914		411		540	819	
Anions - Vapor Phase	Fluoride	EPA 340.2	ug/Nm3	126		96		150		124	66	
Anions - Vapor Phase	Sulfate	EPA 300.0	ug/Nm3	754,933		633,232		650,180		679,449	163,764	
Anions - Particulate	Chloride	EPA 300.0	ug/Nm3	345.2		203.6		93.4		214	314	
Anions - Particulate	Fluoride	EPA 340.2	ug/Nm3	0.057		0.063		0.032		0.051	0.041	
Anions - Particulate	Sulfate	EPA 300.0	ug/Nm3	9,961	B	4,121	B	3,633	B	5,905	8,748	
Anions - Total	Chloride	EPA 300.0	ug/Nm3	640		1,118		504		754	801	
Anions - Total	Fluoride	EPA 340.2	ug/Nm3	125.9		96.5		149.8		124	66	
Anions - Total	Sulfate	EPA 300.0	ug/Nm3	764,894		637,353		653,814		685,353	172,349	
Radionuclides	K-40 @ 1460 KeV	EPA 901.1	pCi/g	< 56		< 56		62		< 56	--	47%
Part Metals by Wt	Aluminum	SW 6010	ug/g	2,096	B	14,330	B	13,177	B	13,754	7,328	
Part Metals by Wt	Antimony	ICP-MS	ug/g	7.46	****	4.22	B	3.33	B	3.77	5.66	
Part Metals by Wt	Arsenic	SW 7060	ug/g	66	B	87	B	76	B	81	71	
Part Metals by Wt	Barium	SW 6010	ug/g	< 180	C	303	B	126	B	214	1,120	
Part Metals by Wt	Beryllium	SW 6010	ug/g	< 1.60	C	3.11	B	2.77	B	2.94	2.12	
Part Metals by Wt	Boron	SW 6010	ug/g	--		--		--		--	--	
Part Metals by Wt	Cadmium	SW 7131	ug/g	< 16	C	35	B	48	B	41	79	
Part Metals by Wt	Calcium	SW 6010	ug/g	5,386	B	16,154	B	21,087	B	18,621	31,343	
Part Metals by Wt	Chromium	SW 6010	ug/g	< 110	C	93	B	565	B	329	2,995	
Part Metals by Wt	Cobalt	SW 6010	ug/g	< 147	C	18	J	< 37	C	< 37	--	52%
Part Metals by Wt	Copper	SW 6010	ug/g	< 27	C	60	B	52	B	56	49	
Part Metals by Wt	Iron	SW 6010	ug/g	6,478	B	9,994	B	13,386	B	11,690	21,547	

Gas Stream Data

SAMPLE STREAM: STACK

Analyte Group	Specie	Analytical Method	Units	Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Part Metals by Wt	Lead	SW 7421	ug/g	< 14	C	37	B	34	B	36	20	
Part Metals by Wt	Magnesium	SW 6010	ug/g	1,468	B	1,940	B	3,627	B	2,784	10,716	
Part Metals by Wt	Manganese	SW 6010	ug/g	182	B	285	B	691	B	488	2,579	
Part Metals by Wt	Mercury	SW 7471	ug/g	< 0.31	C	0.972	B	< 0.320	C	0.57	5.16	14%
Part Metals by Wt	Molybdenum	SW 6010	ug/g	16	B	100	B	100	B	73	118	
Part Metals by Wt	Nickel	SW 6010	ug/g	527	B	382	B	4,636	B	2,509	27,022	
Part Metals by Wt	Phosphorus	SW 6010	ug/g	419	B	< 217	C	< 162	C	< 217	--	100%
Part Metals by Wt	Potassium	SW 6010	ug/g	< 17,191	C	3,020	J	2,772	J	2,896	1,576	
Part Metals by Wt	Selenium	SW 7740	ug/g	3,331	B	819	B	979	B	1,710	3,495	
Part Metals by Wt	Sodium	SW 6010	ug/g	15,771	B	4,046	B	4,350	B	4,198	1,932	
Part Metals by Wt	Strontium	SW 6010	ug/g	42	B	102	B	111	B	106	53	
Part Metals by Wt	Titanium	SW 6010	ug/g	725	B	1,044	B	784	B	914	1,656	
Part Metals by Wt	Vanadium	SW 6010	ug/g	92.56	B	130	B	114	B	112	46	
Part Metals by Wt	Zinc	SW 6010	ug/g	< 229	C	650	B	423	B	536	1,446	
Part Metals by Vol	Aluminum	SW 6010	ug/Nm3	33.26	B	171	B	211	B	191	255	
Part Metals by Vol	Antimony	ICP-MS	ug/Nm3	0.116		0.050		0.053		0.052	0.019	
Part Metals by Vol	Arsenic	SW 7060	ug/Nm3	1.053	B	1.03	B	1.21	B	1.10	0.239	
Part Metals by Vol	Barium	SW 6010	ug/Nm3	< 2.86	C	3.61	B	2.02	B	2.814	10.081	
Part Metals by Vol	Beryllium	SW 6010	ug/Nm3	< 0.025	C	0.037	B	0.044	B	0.041	0.047	
Part Metals by Vol	Boron			--		--		--				
Part Metals by Vol	Cadmium	SW 7131	ug/Nm3	< 0.166	C	0.419	B	0.763	B	0.591	2.18	
Part Metals by Vol	Calcium	SW 6010	ug/Nm3	133	B	193	B	338	B	265	921	
Part Metals by Vol	Chromium	SW 6010	ug/Nm3	< 1.75	C	1.11	B	9.04	B	5.07	50	
Part Metals by Vol	Cobalt	SW 6010	ug/Nm3	< 2.33	C	0.21	J	< 0.597	C	< 0.597	--	59%
Part Metals by Vol	Copper	SW 6010	ug/Nm3	< 0.436	C	0.711	B	0.831	B	0.771	0.759	
Part Metals by Vol	Iron	SW 6010	ug/Nm3	103	B	119	B	214	B	167	604	
Part Metals by Vol	Lead	SW 7421	ug/Nm3	< 0.218	C	0.445	B	0.546	B	0.495	0.642	
Part Metals by Vol	Magnesium	SW 6010	ug/Nm3	23.29	B	23.13	B	58.05	B	41	222	
Part Metals by Vol	Manganese	SW 6010	ug/Nm3	2.90	B	3.40	B	11.06	B	7.23	49	
Part Metals by Vol	Mercury	SW 7471	ug/Nm3	< 0.005	C	0.0116	B	< 0.0051	C	0.0071	0.0573	18%

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Gas Stream Data

SAMPLE STREAM: STACK

Analyte Group	Specie	Analytical Method	Units	Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Part Metals by Vol	Molybdenum	SW 6010	ug/Nm3	0.286	B	1.19	B	1.60	B	1.40	2.64	
Part Metals by Vol	Nickel	SW 6010	ug/Nm3	6.35	B	4.56	B	74.20	B	39.38	442	
Part Metals by Vol	Phosphorus	SW 6010	ug/Nm3	6.66	B	< 2.59	C	< 2.60	C	< 2.59	--	100%
Part Metals by Vol	Potassium	SW 6010	ug/Nm3	< 273	C	36.01	J	44.37	J	40.19	53.13	
Part Metals by Vol	Selenium	SW 7740	ug/Nm3	52.88	B	9.76	B	15.68	B	26.11	58.07	
Part Metals by Vol	Sodium	SW 6010	ug/Nm3	266	B	48.23	B	69.62	B	58.93	136	
Part Metals by Vol	Strontium	SW 6010	ug/Nm3	0.666	B	1.22	B	1.77	B	1.49	3.51	
Part Metals by Vol	Titanium	SW 6010	ug/Nm3	11.61	B	12.45	B	12.55	B	12.50	0.59	
Part Metals by Vol	Vanadium	SW 6010	ug/Nm3	1.469	B	1.55	B	1.83	B	1.61	0.468	
Part Metals by Vol	Zinc	SW 6010	ug/Nm3	< 3.53	C	7.75	B	6.76	B	7.26	6.27	
Metals, Vapor	Aluminum	SW 6010	ug/Nm3	8.25	B	< 8.70	C	< 7.59	C	< 8.70	--	50%
Metals, Vapor	Antimony	ICP-MS	ug/Nm3	0.012	B	0.012	B	0.013	B	0.012	0.0019	
Metals, Vapor	Arsenic	SW 7060	ug/Nm3	< 0.156	C	< 0.201	C	< 0.176	C	< 0.178	--	100%
Metals, Vapor	Barium	SW 6010	ug/Nm3	< 0.126	C	0.113	J	< 0.142	C	< 0.142	--	54%
Metals, Vapor	Beryllium	SW 6010	ug/Nm3	< 0.131	C	< 0.170	C	0.032	J	< 0.170	--	82%
Metals, Vapor	Boron	SW 6010	ug/Nm3	468	B	412	B	440	B	440	70	
Metals, Vapor	Cadmium	SW 7131	ug/Nm3	< 0.056	C	< 0.073	C	< 0.063	C	< 0.064	--	100%
Metals, Vapor	Calcium	SW 6010	ug/Nm3	< 35.09	C	34.91	J	< 39.57	C	< 39.57	--	52%
Metals, Vapor	Chromium	SW 6010	ug/Nm3	< 0.590	C	< 0.763	C	< 0.666	C	< 0.673	--	100%
Metals, Vapor	Cobalt	SW 6010	ug/Nm3	0.218	J	0.211	J	0.751	J	0.394	0.770	
Metals, Vapor	Copper	SW 6010	ug/Nm3	2.32	B	0.910	J	< 1.02	C	1.25	2.36	14%
Metals, Vapor	Iron	SW 6010	ug/Nm3	1.71	B	< 1.83	C	< 1.59	C	< 1.83	--	50%
Metals, Vapor	Lead	SW 7421	ug/Nm3	< 0.190	C	< 0.245	C	< 0.214	C	< 0.216	--	100%
Metals, Vapor	Magnesium	SW 6010	ug/Nm3	5.55	B	< 6.98	C	5.27	J	< 6.98	--	24%
Metals, Vapor	Manganese	SW 6010	ug/Nm3	< 0.094	C	< 0.121	C	< 0.106	C	< 0.107	--	100%
Metals, Vapor	Mercury	CVAA	ug/Nm3	2.92	B	3.13	B	3.07	B	3.04	0.269	
Metals, Vapor	Molybdenum	SW 6010	ug/Nm3	0.12	J	0.13	J	0.10	J	0.116	0.048	
Metals, Vapor	Nickel	SW 6010	ug/Nm3	< 2.34	C	2.88	J	< 2.64	C	< 2.64	--	46%
Metals, Vapor	Phosphorus	SW 6010	ug/Nm3	< 14.46	C	< 18.68	C	< 16.31	C	< 16.48	--	100%
Metals, Vapor	Potassium	SW 6010	ug/Nm3	32.28	B	< 0.88	C	77.56	B	36.76	96.28	0.4%

Gas Stream Data

SAMPLE STREAM: STACK

Analyte Group	Specie	Analytical Method	Units		Run 1			Run 2			Run 3			Average	95% CI	DL Ratio
Metals, Vapor	Selenium	SW 7740	ug/Nm3		0.11	J		0.84	B		1.40	B		0.781	1.61	
Metals, Vapor	Sodium	SW 6010	ug/Nm3	<	9.41	C	<	12.16	C	<	10.61	C	<	10.73	--	100%
Metals, Vapor	Strontium	SW 6010	ug/Nm3	<	0.04	C	<	0.05	C	<	0.04	C	<	0.045	--	100%
Metals, Vapor	Titanium	SW 6010	ug/Nm3	<	0.242	C		0.190	J	<	0.273	C	<	0.273	--	58%
Metals, Vapor	Vanadium	SW 6010	ug/Nm3		0.422	J		0.420	J		0.821	B		0.554	0.574	
Metals, Vapor	Zinc	SW 6010	ug/Nm3		1.11	B		373	B		114	B		163	474	
Total Metals	Aluminum	SW 6010	ug/Nm3		41.53			175			215			195	251	
Total Metals	Antimony	ICP-MS	ug/Nm3		0.13			0.06			0.07			0.065	0.026	
Total Metals	Arsenic	SW 7060	ug/Nm3		1.13			1.13			1.30			1.19	0.236	
Total Metals	Barium	SW 6010	ug/Nm3	<	1.49			3.72			2.09			2.906	10.351	
Total Metals	Beryllium	SW 6010	ug/Nm3	<	0.08			0.12			0.08			0.099	0.288	
Total Metals	Boron(vapor only)	SW 6010	ug/Nm3		468			412			440			440	70	
Total Metals	Cadmium	SW 7131	ug/Nm3	<	0.11			0.46			0.79			0.625	2.152	
Total Metals	Calcium	SW 6010	ug/Nm3		151			228			357			292	825	
Total Metals	Chromium	SW 6010	ug/Nm3	<	1.17			1.49			9.37			5.431	50.05	
Total Metals	Cobalt	SW 6010	ug/Nm3		1.38			0.42			1.05			0.735	4.000	
Total Metals	Copper	SW 6010	ug/Nm3		2.54			1.62			1.34			1.480	1.784	
Total Metals	Iron	SW 6010	ug/Nm3		105			120			215			168	603	
Total Metals	Lead	SW 7421	ug/Nm3	<	0.20			0.57			0.65			0.610	0.543	
Total Metals	Magnesium	SW 6010	ug/Nm3		28.85			26.62			63.32			44.97	233	
Total Metals	Manganese	SW 6010	ug/Nm3		2.94			3.46			11.11			7.284	48.623	
Total Metals	Mercury	SW 7471	ug/Nm3		2.92			3.14			3.07			3.107	0.439	
Total Metals	Molybdenum	SW 6010	ug/Nm3		0.40			1.32			1.70			1.512	2.393	
Total Metals	Nickel	SW 6010	ug/Nm3		9.53			7.44			75.52			41.48	433	
Total Metals	Phosphorus	SW 6010	ug/Nm3		13.89		<	10.63		<	9.45		<	10.04	--	100%
Total Metals	Potassium	SW 6010	ug/Nm3		169			36.44			122			79.19	543	
Total Metals	Selenium	SW 7740	ug/Nm3		52.99			10.60			17.08			27	57	
Total Metals	Sodium	SW 6010	ug/Nm3		271			54.31			74.93			64.62	131	
Total Metals	Strontium	SW 6010	ug/Nm3		0.69			1.24			1.79			1.517	3.486	
Total Metals	Titanium	SW 6010	ug/Nm3		11.84			12.64			12.68			12.66	0.255	

Gas Stream Data

SAMPLE STREAM: STACK

Analyte Group	Specie	Analytical Method	Units	Run 1	Run 2	Run 3	Average	95% CI	DL Ratio
Total Metals	Vanadium	SW 6010	ug/Nm3	1.89	1.97	2.65	2.17	1.04	
Total Metals	Zinc	SW 6010	ug/Nm3	2.93	380.73	120.36	251	1,654	
Hg Vapor, Bloom	Mercury, Elemental	CVAFS	ug/Nm3	2.98	3.08	2.29	2.78	1.07	
Hg Vapor, Bloom	Mercury II	CVAFS	ug/Nm3	0.33	0.47	0.60	0.468	0.335	
Hg Vapor, Bloom	Mercury, Methyl	CVAFS	ug/Nm3	0.045	0.061	0.028	0.044	0.041	
Hg Vapor, Bloom	Mercury, Total	CVAFS	ug/Nm3	3.36	3.62	2.92	3.30	0.88	
Hexavalent Chromium	Chromium VI	Cr(VI) BIF	ug/Nm3	< 0.18 C	< 0.19 C	< 0.20 C	< 0.190	--	100%
Hexavalent Chromium	Total Chromium	SW 7191	ug/Nm3	< 0.52 C	< 0.57 C	< 0.59 C	< 0.560	--	100%
Extract Metals, Nitric	Antimony	ICP-MS	ug/g	3.915	5.782	2.094	5.78	--	
Extract Metals, Nitric	Arsenic	ICP-MS	ug/g	< 3.603	164	16	164	--	
Extract Metals, Nitric	Barium	ICP-MS	ug/g	4697	354	13871	354	--	
Extract Metals, Nitric	Beryllium	ICP-MS	ug/g	< 0.533	10.250	1.359	10.25	--	
Extract Metals, Nitric	Boron	ICP-MS	ug/g	2762	< 15	17259	< 15.34	--	100%
Extract Metals, Nitric	Cadmium	ICP-MS	ug/g	< 0.836	67	< 0.986	67.00	--	
Extract Metals, Nitric	Chromium	ICP-MS	ug/g	62	44	< 2.173	43.77	--	
Extract Metals, Nitric	Cobalt	ICP-MS	ug/g	< 0.283	< 0.899	< 0.334	< 0.90	--	100%
Extract Metals, Nitric	Copper	ICP-MS	ug/g	14.064	124	26	124	--	
Extract Metals, Nitric	Lead	ICP-MS	ug/g	28	91	40	90.84	--	
Extract Metals, Nitric	Manganese	ICP-MS	ug/g	239	328	73	328	--	
Extract Metals, Nitric	Mercury	ICP-MS	ug/g	< 2.247	< 7.136	< 2.649	< 7.14	--	100%
Extract Metals, Nitric	Molybdenum	ICP-MS	ug/g	3.503	51	7.081	51.40	--	
Extract Metals, Nitric	Nickel	ICP-MS	ug/g	66	392	123	392	--	
Extract Metals, Nitric	Selenium	ICP-MS	ug/g	< 27	< 87	< 32	< 86.88	--	100%
Extract Metals, Nitric	Vanadium	ICP-MS	ug/g	46	385	< 1.304	385	--	
Extract Metals, Gastric	Antimony	ICP-MS	ug/g	0.957	3.367	0.628	3.37	--	
Extract Metals, Gastric	Arsenic	ICP-MS	ug/g	< 0.696	< 2.465	< 0.962	< 2.46	--	100%
Extract Metals, Gastric	Barium	ICP-MS	ug/g	20	214	54	214	--	

Gas Stream Data

SAMPLE STREAM: STACK

Analyte Group	Specie	Analytical Method	Units	Run 1	Run 2	Run 3	Average	95% CI	DL Ratio
Extract Metals, Gastric	Beryllium	ICP-MS	ug/g	1.674	4.196	1.056	4.20	--	
Extract Metals, Gastric	Boron	ICP-MS	ug/g	128	147	285	147	--	
Extract Metals, Gastric	Cadmium	ICP-MS	ug/g	4.028	12	4.119	12.40	--	
Extract Metals, Gastric	Chromium	ICP-MS	ug/g	64	85	93	84.69	--	
Extract Metals, Gastric	Cobalt	ICP-MS	ug/g	3.412	11	2.298	10.92	--	
Extract Metals, Gastric	Copper	ICP-MS	ug/g	45	51	29	51.26	--	
Extract Metals, Gastric	Lead	ICP-MS	ug/g	5.709	66	4.340	65.75	--	
Extract Metals, Gastric	Manganese	ICP-MS	ug/g	126	349	89	349	--	
Extract Metals, Gastric	Mercury	ICP-MS	ug/g	< 0.042	< 0.149	< 0.058	< 0.15	--	100%
Extract Metals, Gastric	Molybdenum	ICP-MS	ug/g	16	49	11	48.58	--	
Extract Metals, Gastric	Nickel	ICP-MS	ug/g	17	169	9.036	169	--	
Extract Metals, Gastric	Selenium	ICP-MS	ug/g	135	140	278	140	--	
Extract Metals, Gastric	Vanadium	ICP-MS	ug/g	< 0.368	< 1.304	< 0.509	< 1.30	--	100%
Extract Metals, Acetic	Antimony	ICP-MS	ug/g	< 0.011	< 0.034	< 0.012	< 0.03	--	100%
Extract Metals, Acetic	Arsenic	ICP-MS	ug/g	45	< 0.497	8.392	< 0.50	--	100%
Extract Metals, Acetic	Barium	ICP-MS	ug/g	58	17	80	17.20	--	
Extract Metals, Acetic	Beryllium	ICP-MS	ug/g	2.149	2.907	2.774	2.91	--	
Extract Metals, Acetic	Boron	ICP-MS	ug/g	450	< 0.82	321	< 0.82	--	100%
Extract Metals, Acetic	Cadmium	ICP-MS	ug/g	2.326	5.916	0.575	5.92	--	
Extract Metals, Acetic	Chromium	ICP-MS	ug/g	60	36	19	36.41	--	
Extract Metals, Acetic	Cobalt	ICP-MS	ug/g	2.221	7.465	4.031	7.47	--	
Extract Metals, Acetic	Copper	ICP-MS	ug/g	33	64	44	63.85	--	
Extract Metals, Acetic	Lead	ICP-MS	ug/g	< 0.013	20.033	< 0.014	20.03	--	
Extract Metals, Acetic	Manganese	ICP-MS	ug/g	158	470	203	470	--	
Extract Metals, Acetic	Mercury	ICP-MS	ug/g	0.184	< 0.384	< 0.136	< 0.38	--	100%
Extract Metals, Acetic	Molybdenum	ICP-MS	ug/g	7.892	3.454	6.287	3.45	--	
Extract Metals, Acetic	Nickel	ICP-MS	ug/g	34	66	33	66.17	--	
Extract Metals, Acetic	Selenium	ICP-MS	ug/g	71	61	52	61.21	--	
Extract Metals, Acetic	Vanadium	ICP-MS	ug/g	15	< 0.185	11	< 0.19	--	100%

Gas Stream Data

SAMPLE STREAM: STACK

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Aldehydes	Acetaldehyde	BIF-0011	ug/Nm3		4.78		12.07		9.38		8.74	9.16	
Aldehydes	Fomaldehyde	BIF-0011	ug/Nm3		40.43		17.04		14.79		24	35	
Organics, Semi-Volatiles	1,2,4,5-Tetrachlorobenzene	SW 8270	ng/Nm3	<	192	<	192	<	129	<	171	--	100%
Organics, Semi-Volatiles	1,2,4-Trichlorobenzene	SW 8270	ng/Nm3	<	196	<	196	<	195	<	196	--	100%
Organics, Semi-Volatiles	1,2-Dichlorobenzene	SW 8270	ng/Nm3	<	259	<	259	<	211	<	243	--	100%
Organics, Semi-Volatiles	1,2-Diphenylhydrazine	SW 8270	ng/Nm3	<	33,190	<	33,190	<	33,190	<	33,190	--	100%
Organics, Semi-Volatiles	1,3-Dichlorobenzene	SW 8270	ng/Nm3	<	131	<	131	<	238	<	167	--	100%
Organics, Semi-Volatiles	1,4-Dichlorobenzene	SW 8270	ng/Nm3	<	268	<	268	<	195	<	244	--	100%
Organics, Semi-Volatiles	1-Chloronaphthalene	SW 8270	ng/Nm3	<	214	<	214	<	178	<	202	--	100%
Organics, Semi-Volatiles	1-Naphthylamine	SW 8270	ng/Nm3	<	518	<	518	<	674	<	570	--	100%
Organics, Semi-Volatiles	2,3,4,6-Tetrachlorophenol	SW 8270	ng/Nm3	<	167	<	167	<	154	<	163	--	100%
Organics, Semi-Volatiles	2,4,5-Trichlorophenol	SW 8270	ng/Nm3	<	110	<	110	<	169	<	129	--	100%
Organics, Semi-Volatiles	2,4,6-Trichlorophenol	SW 8270	ng/Nm3	<	116	<	116	<	168	<	133	--	100%
Organics, Semi-Volatiles	2,4-Dichlorophenol	SW 8270	ng/Nm3	<	147	<	147	<	189	<	161	--	100%
Organics, Semi-Volatiles	2,4-Dimethylphenol	SW 8270	ng/Nm3	<	365	<	365	<	431	<	387	--	100%
Organics, Semi-Volatiles	2,4-Dinitrophenol	SW 8270	ng/Nm3	<	2,323	<	2,323	<	1,387	<	2,011	--	100%
Organics, Semi-Volatiles	2,4-Dinitrotoluene	SW 8270	ng/Nm3	<	183	<	183	<	196	<	187	--	100%
Organics, Semi-Volatiles	2,6-Dichlorophenol	SW 8270	ng/Nm3	<	240	<	240	<	170	<	217	--	100%
Organics, Semi-Volatiles	2,6-Dinitrotoluene	SW 8270	ng/Nm3	<	115	<	115	<	286	<	172	--	100%
Organics, Semi-Volatiles	2-Chloronaphthalene	SW 8270	ng/Nm3	<	108	<	108	<	130	<	115	--	100%
Organics, Semi-Volatiles	2-Chlorophenol	SW 8270	ng/Nm3	<	254	<	254	<	211	<	239	--	100%
Organics, Semi-Volatiles	2-Methylnaphthalene	SW 8270	ng/Nm3	<	219	<	219	<	121	<	186	--	100%
Organics, Semi-Volatiles	2-Methylphenol(o-cresol)	SW 8270	ng/Nm3		1,404		4,414		3,034		2,951	3,744	
Organics, Semi-Volatiles	2-Naphthylamine	SW 8270	ng/Nm3	<	647	<	647	<	531	<	608	--	100%
Organics, Semi-Volatiles	2-Nitroaniline	SW 8270	ng/Nm3	<	133	<	133	<	220	<	162	--	100%
Organics, Semi-Volatiles	2-Nitrophenol	SW 8270	ng/Nm3	<	146	<	146	<	173	<	155	--	100%
Organics, Semi-Volatiles	2-Picoline	SW 8270	ng/Nm3	<	362	<	362	<	274	<	333	--	100%
Organics, Semi-Volatiles	3,3'-Dichlorobenzidine	SW 8270	ng/Nm3	<	163	<	163	<	111	<	145	--	100%
Organics, Semi-Volatiles	3-Methylcholanthrene	SW 8270	ng/Nm3	<	260	<	260	<	166	<	229	--	100%
Organics, Semi-Volatiles	3-Nitroaniline	SW 8270	ng/Nm3	<	169	<	169	<	130	<	156	--	100%

Gas Stream Data

SAMPLE STREAM: STACK

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Organics, Semi-Volatiles	4,6-Dinitro-2-methylphenol	SW 8270	ng/Nm3	<	263	<	263	<	143	<	223	--	100%
Organics, Semi-Volatiles	4-Aminobiphenyl	SW 8270	ng/Nm3	<	248	<	248	<	395	<	297	--	100%
Organics, Semi-Volatiles	4-Bromophenyl phenyl	SW 8270	ng/Nm3	<	151	<	151	<	161	<	154	--	100%
Organics, Semi-Volatiles	4-Chloro-3-methylphenol	SW 8270	ng/Nm3	<	240	<	240	<	171	<	217	--	100%
Organics, Semi-Volatiles	4-Chlorophenyl phenyl ether	SW 8270	ng/Nm3	<	175	<	175	<	140	<	163	--	100%
Organics, Semi-Volatiles	4-Methylphenol(p-cresol)	SW 8270	ng/Nm3		1,314		1,494	<	152		961	1,917	3%
Organics, Semi-Volatiles	4-Nitroaniline	SW 8270	ng/Nm3	<	161	<	161	<	201	<	174	--	100%
Organics, Semi-Volatiles	4-Nitrophenol	SW 8270	ng/Nm3	<	229	<	229	<	311	<	257	--	100%
Organics, Semi-Volatiles	7,12-Dimethylbenz(a)anthracene	SW 8270	ng/Nm3	<	637	<	637	<	441	<	572	--	100%
Organics, Semi-Volatiles	Acenaphthene	SW 8270	ng/Nm3	<	159	<	159	<	90	<	136	--	100%
Organics, Semi-Volatiles	Acenaphthylene	SW 8270	ng/Nm3	<	75	<	75	<	139	<	96	--	100%
Organics, Semi-Volatiles	Acetophenone	SW 8270	ng/Nm3		2,967		3,518		3,385		3,290	714	
Organics, Semi-Volatiles	Aniline	SW 8270	ng/Nm3	<	310	<	310	<	204	<	275	--	100%
Organics, Semi-Volatiles	Anthracene	SW 8270	ng/Nm3	<	193	<	193	<	122	<	169	--	100%
Organics, Semi-Volatiles	Benzidine	SW 8270	ng/Nm3	<	6,638	<	6,638	<	6,638	<	6,638	--	100%
Organics, Semi-Volatiles	Benzo(a)anthracene	SW 8270	ng/Nm3	<	171	<	171	<	149	<	164	--	100%
Organics, Semi-Volatiles	Benzo(a)pyrene	SW 8270	ng/Nm3	<	127	<	127	<	172	<	142	--	100%
Organics, Semi-Volatiles	Benzo(b)fluoranthene	SW 8270	ng/Nm3	<	189	<	189	<	301	<	226	--	100%
Organics, Semi-Volatiles	Benzo(g,h,i)perylene	SW 8270	ng/Nm3	<	162	<	162	<	339	<	221	--	100%
Organics, Semi-Volatiles	Benzo(k)fluoranthene	SW 8270	ng/Nm3	<	321	<	321	<	332	<	325	--	100%
Organics, Semi-Volatiles	Benzoic acid	SW 8270	ng/Nm3		120,481		116,498		118,821		118,600	4,970	
Organics, Semi-Volatiles	Benzyl alcohol	SW 8270	ng/Nm3		8,098	<	358	<	202		2,793	11,415	3%
Organics, Semi-Volatiles	Butylbenzylphthalate	SW 8270	ng/Nm3		325		335		243		301	125	
Organics, Semi-Volatiles	Chrysene	SW 8270	ng/Nm3	<	222	<	222	<	178	<	207	--	100%
Organics, Semi-Volatiles	Di-n-octylphthalate	SW 8270	ng/Nm3	<	302	<	302	<	117	<	241	--	100%
Organics, Semi-Volatiles	Dibenz(a,h)anthracene	SW 8270	ng/Nm3	<	157	<	157	<	269	<	195	--	100%
Organics, Semi-Volatiles	Dibenz(a,j)acridine	SW 8270	ng/Nm3	<	193	<	193	<	279	<	222	--	100%
Organics, Semi-Volatiles	Dibenzofuran	SW 8270	ng/Nm3	<	135	<	135	<	178	<	150	--	100%
Organics, Semi-Volatiles	Dibutylphthalate	SW 8270	ng/Nm3		253		208	<	108		172	260	10%
Organics, Semi-Volatiles	Diethylphthalate	SW 8270	ng/Nm3		298		194		213		235	137	
Organics, Semi-Volatiles	Dimethylphenethylamine	SW 8270	ng/Nm3	<	39,828	<	39,828	<	39,828	<	39,828	--	100%

Gas Stream Data

SAMPLE STREAM: STACK

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Organics, Semi-Volatiles	Dimethylphthalate	SW 8270	ng/Nm3	<	93	<	93		435		176	557	18%
Organics, Semi-Volatiles	Diphenylamine	SW 8270	ng/Nm3	<	175	<	175	<	92	<	147	--	100%
Organics, Semi-Volatiles	Ethyl methanesulfonate	SW 8270	ng/Nm3	<	167	<	167	<	225	<	186	--	100%
Organics, Semi-Volatiles	Fluoranthene	SW 8270	ng/Nm3	<	212	<	212	<	156	<	193	--	100%
Organics, Semi-Volatiles	Fluorene	SW 8270	ng/Nm3	<	112	<	112	<	126	<	116	--	100%
Organics, Semi-Volatiles	Hexachlorobenzene	SW 8270	ng/Nm3	<	78	<	78	<	104	<	87	--	100%
Organics, Semi-Volatiles	Hexachlorobutadiene	SW 8270	ng/Nm3	<	232	<	232	<	170	<	211	--	100%
Organics, Semi-Volatiles	Hexachlorocyclopentadiene	SW 8270	ng/Nm3	<	2,961	<	2,961	<	1,955	<	2,625	--	100%
Organics, Semi-Volatiles	Hexachloroethane	SW 8270	ng/Nm3	<	197	<	197	<	211	<	202	--	100%
Organics, Semi-Volatiles	Indeno(1,2,3-cd)pyrene	SW 8270	ng/Nm3	<	174	<	174	<	441	<	263	--	100%
Organics, Semi-Volatiles	Isophorone	SW 8270	ng/Nm3	<	95	<	95	<	204	<	132	--	100%
Organics, Semi-Volatiles	Methyl methanesulfonate	SW 8270	ng/Nm3	<	16,595	<	16,595	<	16,595	<	16,595	--	100%
Organics, Semi-Volatiles	N-Nitroso-di-n-butylamine	SW 8270	ng/Nm3	<	435	<	435	<	209	<	359	--	100%
Organics, Semi-Volatiles	N-Nitrosodimethylamine	SW 8270	ng/Nm3	<	441	<	441	<	261	<	381	--	100%
Organics, Semi-Volatiles	N-Nitrosodiphenylamine	SW 8270	ng/Nm3	<	188	<	188	<	89	<	155	--	100%
Organics, Semi-Volatiles	N-Nitrosodipropylamine	SW 8270	ng/Nm3	<	249	<	249	<	217	<	239	--	100%
Organics, Semi-Volatiles	N-Nitrosopiperidine	SW 8270	ng/Nm3	<	313	<	313	<	198	<	275	--	100%
Organics, Semi-Volatiles	Naphthalene	SW 8270	ng/Nm3		1,955		1,470		1,175		1,533	978	
Organics, Semi-Volatiles	Nitrobenzene	SW 8270	ng/Nm3	<	175	<	175	<	279	<	210	--	100%
Organics, Semi-Volatiles	Pentachlorobenzene	SW 8270	ng/Nm3	<	147	<	147	<	124	<	139	--	100%
Organics, Semi-Volatiles	Pentachloronitrobenzene	SW 8270	ng/Nm3	<	687	<	687	<	458	<	611	--	100%
Organics, Semi-Volatiles	Pentachlorophenol	SW 8270	ng/Nm3	<	287	<	287	<	295	<	290	--	100%
Organics, Semi-Volatiles	Phenacetin	SW 8270	ng/Nm3	<	179	<	179	<	128	<	162	--	100%
Organics, Semi-Volatiles	Phenanthrene	SW 8270	ng/Nm3	<	206	<	206	<	155	<	189	--	100%
Organics, Semi-Volatiles	Phenol	SW 8270	ng/Nm3		5,277		11,417		11,285		9,326	8,713	
Organics, Semi-Volatiles	Pronamide	SW 8270	ng/Nm3	<	245	<	245	<	80	<	190	--	100%
Organics, Semi-Volatiles	Pyrene	SW 8270	ng/Nm3	<	155	<	155	<	135	<	149	--	100%
Organics, Semi-Volatiles	Pyridine	SW 8270	ng/Nm3	<	385	<	385	<	195	<	322	--	100%
Organics, Semi-Volatiles	bis(2-Chloroethoxy)methane	SW 8270	ng/Nm3	<	187	<	187	<	201	<	191	--	100%
Organics, Semi-Volatiles	bis(2-Chloroethyl)ether	SW 8270	ng/Nm3	<	243	<	243	<	127	<	204	--	100%
Organics, Semi-Volatiles	bis(2-Chloroisopropyl)ether	SW 8270	ng/Nm3	<	241	<	241	<	265	<	249	--	100%

Gas Stream Data

SAMPLE STREAM: STACK

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Average	95% CI	DL Ratio
Organics, Semi-Volatiles	bis(2-Ethylhexyl)phthalate	SW 8270	ng/Nm3		2,005		1,099		1,019		1,374	1,360	
Organics, Semi-Volatiles	p-Chloroaniline	SW 8270	ng/Nm3	<	186	<	186	<	247	<	206	--	100%
Organics, Semi-Volatiles	p-Dimethylaminoazobenzene	SW 8270	ng/Nm3	<	171	<	171	<	241	<	194	--	100%
Organics, Volatile	1,1,1-Trichloroethane	SW 8240	ng/Nm3		881		774	<	545		643	807	14%
Organics, Volatile	1,1,2,2-Tetrachloroethane	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	1,1,2-Trichloroethane	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	1,1-Dichloroethane	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	1,1-Dichloroethene	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	1,2-Dichlorobenzene	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	1,2-Dichloroethane	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	1,2-Dichloropropane	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	1,3-Dichlorobenzene	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	1,4-Dichlorobenzene	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	2-Butanone	SW 8240	ng/Nm3	<	2,485	<	2,690	<	2,725	<	2,633	--	100%
Organics, Volatile	2-Hexanone	SW 8240	ng/Nm3	<	2,485	<	2,690	<	2,725	<	2,633	--	100%
Organics, Volatile	4-Methyl-2-Pentanone	SW 8240	ng/Nm3	<	2,485	<	2,690	<	2,725	<	2,633	--	100%
Organics, Volatile	Acetone	SW 8240	ng/Nm3		2,965	<	2,690		6,341		3,550	6,332	13%
Organics, Volatile	Benzene	SW 8240	ng/Nm3		1,153		1,329		1,435		1,306	355	
Organics, Volatile	Bromodichloromethane	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	Bromoform	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	Bromomethane	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	Carbon Disulfide	SW 8240	ng/Nm3		1,978		2,797		1,998		2,258	1,160	
Organics, Volatile	Carbon Tetrachloride	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	Chlorobenzene	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	Chloroethane	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	Chloroform	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	Chloromethane	SW 8240	ng/Nm3		7,880		10,034	<	545		6,062	12,741	1%
Organics, Volatile	Dibromochloromethane	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	Ethyl Benzene	SW 8240	ng/Nm3	<	497	<	538	<	545	<	527	--	100%
Organics, Volatile	Methylene Chloride	SW 8240	ng/Nm3		242,946		110,653		22,912		125,503	275,181	

Gas Stream Data

SAMPLE STREAM: STACK

Analyte Group	Specie	Analytical Method	Units		Run 1			Run 2			Run 3			Average	95% CI	DL Ratio
Organics, Volatile	Styrene	SW 8240	ng/Nm3	<	544		<	538		<	545		<	542	--	100%
Organics, Volatile	Tetrachloroethene	SW 8240	ng/Nm3		2,494			664			1,272			1,477	2,315	
Organics, Volatile	Toluene	SW 8240	ng/Nm3		1,989			2,474			1,670			2,044	1,006	
Organics, Volatile	Trichloroethene	SW 8240	ng/Nm3	<	497		<	538		<	545		<	527	--	100%
Organics, Volatile	Trichlorofluoromethane	SW 8240	ng/Nm3		741			1,919			690			1,117	1,727	
Organics, Volatile	Vinyl Acetate	SW 8240	ng/Nm3	<	2,485		<	2,690		<	2,725		<	2,633	--	100%
Organics, Volatile	Vinyl Chloride	SW 8240	ng/Nm3	<	497		<	538		<	545		<	527	--	100%
Organics, Volatile	cis-1,3-Dichloropropene	SW 8240	ng/Nm3	<	497		<	538		<	545		<	527	--	100%
Organics, Volatile	m,p-Xylene	SW 8240	ng/Nm3	<	544		<	538		<	545		<	542	--	100%
Organics, Volatile	o-Xylene	SW 8240	ng/Nm3	<	497		<	538		<	545		<	527	--	100%
Organics, Volatile	trans-1,2-Dichloroethene	SW 8240	ng/Nm3	<	497		<	538		<	545		<	527	--	100%
Organics, Volatile	trans-1,3-Dichloropropene	SW 8240	ng/Nm3	<	497		<	538		<	545		<	527	--	100%
Dioxins/Furans	1234678-HpCDD	HR-GCMS	ng/Nm3	<	0.0067		<	0.0656		<	0.0068		<	0.0264	--	100%
Dioxins/Furans	1234678-HpCDF	HR-GCMS	ng/Nm3		0.0067		<	0.0230			0.0034		<	0.0230	--	53%
Dioxins/Furans	123478-HxCDD	HR-GCMS	ng/Nm3	<	0.0067		<	0.0328		<	0.0068		<	0.0154	--	100%
Dioxins/Furans	123478-HxCDF	HR-GCMS	ng/Nm3		0.0020		<	0.0164		<	0.0034		<	0.0164	--	83%
Dioxins/Furans	1234789-HpCDF	HR-GCMS	ng/Nm3	<	0.0067		<	0.0328		<	0.0068		<	0.0154	--	100%
Dioxins/Furans	123678-HxCDD	HR-GCMS	ng/Nm3	<	0.0034		<	0.0230		<	0.0034		<	0.0099	--	100%
Dioxins/Furans	123678-HxCDF	HR-GCMS	ng/Nm3	<	0.0020		<	0.0131		<	0.0024		<	0.0058	--	100%
Dioxins/Furans	12378-PeCDD	HR-GCMS	ng/Nm3	<	0.0020		<	0.0098		<	0.0024		<	0.0047	--	100%
Dioxins/Furans	12378-PeCDF	HR-GCMS	ng/Nm3	<	0.0013		<	0.0066		<	0.0017		<	0.0032	--	100%
Dioxins/Furans	123789-HxCDD	HR-GCMS	ng/Nm3	<	0.0034		<	0.0295		<	0.0034		<	0.0121	--	100%
Dioxins/Furans	123789-HxCDF	HR-GCMS	ng/Nm3	<	0.0034		<	0.0197		<	0.0034		<	0.0088	--	100%
Dioxins/Furans	234678-HxCDF	HR-GCMS	ng/Nm3		0.0034		<	0.0164			0.0030		<	0.0164	--	56%
Dioxins/Furans	23478-PeCDF	HR-GCMS	ng/Nm3	<	0.0013		<	0.0066		<	0.0017		<	0.0032	--	100%
Dioxins/Furans	2378-TCDD	HR-GCMS	ng/Nm3	<	0.0017		<	0.0066		<	0.0017		<	0.0033	--	100%
Dioxins/Furans	2378-TCDF	HR-GCMS	ng/Nm3		0.0020	M	<	0.0033			0.0017		<	0.0033	--	31%
Dioxins/Furans	OCDD	HR-GCMS	ng/Nm3		0.0168		<	0.1313		<	0.0102		<	0.1313	--	81%
Dioxins/Furans	OCDF	HR-GCMS	ng/Nm3		0.0168		<	0.1313			0.0136	M	<	0.1313	--	68%
Dioxins/Furans	Total HpCDD	HR-GCMS	ng/Nm3	<	0.0067		<	0.0656		<	0.0068		<	0.0264	--	100%

Gas Stream Data

SAMPLE STREAM: STACK

Analyte Group	Specie	Analytical Method	Units		Run 1			Run 2		Run 3		Average	95% CI	DL Ratio
Dioxins/Furans	Total HpCDF	HR-GCMS	ng/Nm3		0.0067		<	0.0295		0.0034	<	0.0295	--	59%
Dioxins/Furans	Total HxCDD	HR-GCMS	ng/Nm3		0.0101		<	0.0263	<	0.0034	<	0.0263	--	60%
Dioxins/Furans	Total HxCDF	HR-GCMS	ng/Nm3		0.0034		<	0.0164		0.0030	<	0.0164	--	56%
Dioxins/Furans	Total PeCDD	HR-GCMS	ng/Nm3	<	0.0020		<	0.0098	<	0.0024	<	0.0047	--	100%
Dioxins/Furans	Total PeCDF	HR-GCMS	ng/Nm3		0.0023	M	<	0.0066	<	0.0017	<	0.0066	--	64%
Dioxins/Furans	Total TCDD	HR-GCMS	ng/Nm3		0.0101	M	<	0.0066		0.0068		0.0067	0.0084	16%
Dioxins/Furans	Total TCDF	HR-GCMS	ng/Nm3		0.0020	M	<	0.0033		0.0017	<	0.0033	--	31%

Note: Shaded data invalid due to high background in filter substrate. Shaded data not used in calculation of average.
M= Maximum Estimated Concentration

Solid Stream Data

Sample Stream: Raw Coal

Analyte Group	Specie	Method	Units		Run 1	Run 2	Run 3a	Run 3d		Average	95% CI	DL Ratio
Anions	Chloride	D4208	ug/g		1250	1410	1390	1500		1,350	217	
Anions	Fluoride	D3761	ug/g		120	140	110	120		123	38	
Metals	Aluminum	INAA	ug/g		12,847	15,153	14,863	13,776		14,287	3,121	
Metals	Antimony	INAA	ug/g		0.77	0.56	0.52	0.49		0.62	0.33	
Metals	Arsenic	GFAA	ug/g		3.00	3.00	3.00	3.00		3.00		
Metals	Barium	INAA	ug/g		120	108	106	110		112	19	
Metals	Beryllium	ICPES	ug/g		1.20	1.10	1.10	1.10		1.13	0.14	
Metals	Boron	ICPES	ug/g		110	120	100	100		110	25	
Metals	Bromine	INAA	ug/g		7.16	7.89	7.20	6.89		7.42	1.02	
Metals	Cadmium	ICPES	ug/g		0.700	0.200	0.700	0.200		0.533	0.717	
Metals	Calcium	INAA	ug/g		2,793	3,611	2,624	2,677		3,010	1,311	
Metals	Cerium	INAA	ug/g		15.18	16.56	16.60	15.81		16.11	2.01	
Metals	Cesium	INAA	ug/g		1.10	1.21	1.20	1.15		1.17	0.16	
Metals	Chlorine	INAA	ug/g		1,169	1,180	1,269	1,427		1,206	136	
Metals	Chromium	INAA	ug/g		25.66	25.92	25.67	23.57		25.75	0.37	
Metals	Cobalt	INAA	ug/g		3.99	4.12	4.13	3.80		4.08	0.19	
Metals	Copper	INAA	ug/g		23.58	63.57	38.73	38.93		41.96	50.15	
Metals	Europium	INAA	ug/g		0.300	0.294	0.305	0.306		0.299	0.014	
Metals	Hafnium	INAA	ug/g		0.667	0.652	0.696	0.728		0.672	0.056	
Metals	Iodine	INAA	ug/g	<	2.09	1.99	1.94	1.05	<	2.09	--	21%
Metals	Iron	INAA	ug/g		12,989	13,405	12,074	11,827		12,823	1,691	
Metals	Lanthanum	INAA	ug/g		6.53	7.37	6.39	6.41		6.76	1.31	
Metals	Lead	ICPES	ug/g		8.00	8.00	11.00	8.00		9.00	4.30	
Metals	Lutetium	INAA	ug/g		0.119	0.121	0.121	0.101		0.120	0.003	
Metals	Magnesium	INAA	ug/g		653	641	686	630		660	57.87	
Metals	Manganese	INAA	ug/g		22.05	24.41	26.78	24.63		24.41	5.88	
Metals	Mercury	DGA/CVAA	ug/g		0.040	0.040	0.050	0.040		0.043	0.014	
Metals	Molybdenum	INAA	ug/g		20.29	21.36	13.53	21.63		18.39	10.54	
Metals	Neodymium	INAA	ug/g		7.09	9.32	7.50	11.38		7.97	2.95	
Metals	Nickel	INAA	ug/g		39.21	46.03	34.57	25.89		39.94	14.32	
Metals	Phosphorus	ICPES	ug/g		70	150	66	97		95	118	
Metals	Potassium	INAA	ug/g		2,940	2,182	4,034	3,125		3,052	2,313	
Metals	Rubidium	INAA	ug/g		19.71	22.53	20.40	19.57		20.88	3.66	
Metals	Samarium	INAA	ug/g		1.45	1.54	1.30	1.27		1.43	0.31	

Solid Stream Data

Sample Stream: Raw Coal

Analyte Group	Specie	Method	Units		Run 1		Run 2		Run 3a		Run 3d		Average	95% CI	DL Ratio
Metals	Scandium	INAA	ug/g		3.19		3.29		3.23		3.10		3.24	0.12	
Metals	Selenium	GFAA	ug/g		2.00		2.00		3.00		2.00		2.33	1.43	
Metals	Silver	INAA	ug/g	<	0.39	<	0.69	<	0.15	<	0.62	<	0.41	--	100%
Metals	Sodium	INAA	ug/g		674		717		646		625		679	88.78	
Metals	Strontium	INAA	ug/g		83.77		94.25		84.97		82.07		87.66	14.25	
Metals	Tantalum	INAA	ug/g		0.20		0.196		0.201		0.205		0.201	0.010	
Metals	Terbium	INAA	ug/g		0.17		0.194		0.177		0.174		0.179	0.036	
Metals	Thorium	INAA	ug/g		2.60		2.74		2.65		2.56		2.67	0.18	
Metals	Tin	INAA	ug/g	<	16.48	<	17.55	<	16.31	<	15.46	<	16.78	--	100%
Metals	Titanium	INAA	ug/g		814		929		806		890		850	170.97	
Metals	Tungsten	INAA	ug/g		0.26		0.30		0.24	<	1.03		0.27	0.08	
Metals	Uranium	INAA	ug/g		1.57		1.76		1.47		1.55		1.60	0.37	
Metals	Vanadium	INAA	ug/g		35.25		37.56		40.34		37.67		37.71	6.33	
Metals	Ytterbium	INAA	ug/g		0.77		0.79		0.66		0.70		0.74	0.18	
Metals	Zinc	INAA	ug/g		18.18		20.89		21.40		16.89		20.15	4.30	
Metals	Zirconium	INAA	ug/g		108.46		70.19		77.67		92.33		85.44	50.40	
Ultimate/Proximate	% Ash	D3174	%		11		12.59		12.87		12.21		12.15	2.51	
Ultimate/Proximate	% Carbon	D3176	%		71.37		70.41		70.65		70.73		70.81	1.24	
Ultimate/Proximate	% Hydrogen	D3176	%		4.84		4.74		4.71		4.75		4.76	0.17	
Ultimate/Proximate	% Moisture	D3173	%		12.7		11.2		11.2		11.3		11.70	2.15	
Ultimate/Proximate	% Nitrogen	D3176	%		1.43		1.47		1.44		1.51		1.45	0.05	
Ultimate/Proximate	% Oxygen (diff)	D3176	%		8.3		7.92		7.55		8.06		7.92	0.93	
Ultimate/Proximate	% Sulfur	D4239	%		3.06		2.87		2.78		2.74		2.90	0.36	
Ultimate/Proximate	Fixed Carbon	D3172	%		51.03		50.44		50.68		51.5		50.72	0.74	
Ultimate/Proximate	Higher Heating Value	D2015	Btu/lb		12,715		12,511		12,547		12,544		12,591	271	
Ultimate/Proximate	Heating Value (MAF)	D2015	MAF Btu		14,287		14,313		14,400		14,289		14,333	147	
Ultimate/Proximate	Volatile	D3175	%		37.97		36.97		36.45		36.29		37.13	1.92	

Solid Stream Data

Sample Stream: Feed Coal

Analyte Group	Specie	Analytical Method	Units	Run 1	Run 2	Run 3	Run 3d	Average	95% CI	DL Ratio
Anions	Chloride	D4208	ug/g	1,410	1,430	1,360	1,400	1,400	90	
Anions	Fluoride	D3761	ug/g	100	100	100	110	100		
Metals	Aluminum	INAA	ug/g	13,856	14,674	14,977	15,511	14,502	1,441	
Metals	Antimony	INAA	ug/g	0.68	0.57	0.57	0.65	0.61	0.16	
Metals	Arsenic	GFAA	ug/g	2.00	3.00	2.00	3.00	2.33	1.43	
Metals	Barium	INAA	ug/g	66.1	70.3	103	89.1	79.9	50.7	
Metals	Beryllium	ICPES	ug/g	1.10	1.10	1.10	1.20	1.10		
Metals	Boron	ICPES	ug/g	100	100	100	120	100		
Metals	Bromine	INAA	ug/g	7.25	7.67	7.38	8.24	7.44	0.53	
Metals	Cadmium	ICPES	ug/g	0.30	0.30	0.30	0.40	0.30		
Metals	Calcium	INAA	ug/g	1,764	1,941	2,717	2,365	2,141	1,260	
Metals	Cerium	INAA	ug/g	15.3	14.7	17.4	16.7	15.8	3.5	
Metals	Cesium	INAA	ug/g	1.16	1.04	1.31	1.13	1.17	0.34	
Metals	Chlorine	INAA	ug/g	1,220	1,293	1,222	1,266	1,245	103	
Metals	Chromium	INAA	ug/g	26.0	24.7	23.7	27.8	24.8	2.9	
Metals	Cobalt	INAA	ug/g	3.81	2.63	4.08	4.01	3.51	1.92	
Metals	Copper	INAA	ug/g	59.5	9.83	39.0	< 23.0	36.1	62.1	
Metals	Europium	INAA	ug/g	0.32	0.27	0.32	0.29	0.30	0.08	
Metals	Hafnium	INAA	ug/g	0.68	0.66	0.78	0.83	0.70	0.16	
Metals	Iodine	INAA	ug/g	< 1.66	1.32	0.87	1.03	< 1.66	- -	27%
Metals	Iron	INAA	ug/g	11,814	10,938	11,390	11,939	11,381	1,089	
Metals	Lanthanum	INAA	ug/g	6.76	7.02	7.15	7.44	6.98	0.49	
Metals	Lead	ICPES	ug/g	9.00	8.00	7.00	8.00	8.00	2.48	
Metals	Lutetium	INAA	ug/g	0.13	0.11	0.11	0.12	0.12	0.03	
Metals	Magnesium	INAA	ug/g	586	489	626	705	567	175	
Metals	Manganese	INAA	ug/g	24.9	22.8	22.5	24.4	23.4	3.3	
Metals	Mercury	DGA/CVAA	ug/g	0.09	0.07	0.07	0.09	0.08	0.03	
Metals	Molybdenum	INAA	ug/g	23.6	19.5	23.8	21.8	22.3	6.1	
Metals	Neodymium	INAA	ug/g	8.55	8.70	6.17	8.11	7.81	3.53	
Metals	Nickel	INAA	ug/g	29.9	32.7	27.5	46.4	30.0	6.39	
Metals	Phosphorus	ICPES	ug/g	77.0	87.0	89.0	89.0	84.3	16 0	
Metals	Potassium	INAA	ug/g	3,395	3,538	2,982	2,594	3,305	717	
Metals	Rubidium	INAA	ug/g	20.7	18.0	20.8	21.8	19.8	3.92	
Metals	Samarium	INAA	ug/g	1.45	1.37	1.37	1.53	1.40	0 12	
Metals	Scandium	INAA	ug/g	3.14	3.03	3.36	3.35	3.18	0.42	
Metals	Selenium	GFAA	ug/g	2.00	2.00	3.00	3.00	2.33	1.43	

Solid Stream Data

Sample Stream: Feed Coal

Analyte Group	Specie	Analytical Method	Units	Run 1	Run 2	Run 3	Run 3d	Average	95% CI	DL Ratio
Metals	Silver	INAA	ug/g	< 0.61	< 0.45	< 0.49	< 0.48	< 0.52	--	100%
Metals	Sodium	INAA	ug/g	663	632	597	653	631	82	
Metals	Strontium	INAA	ug/g	76.1	77.8	70.6	46.8	74.9	9.3	
Metals	Tantalum	INAA	ug/g	0.18	0.19	0.21	0.20	0.19	0.04	
Metals	Terbium	INAA	ug/g	0.18	0.16	0.19	0.18	0.18	0.03	
Metals	Thorium	INAA	ug/g	2.57	2.42	2.80	2.77	2.60	0.47	
Metals	Tin	INAA	ug/g	< 15.6	< 16.1	< 16.2	< 17.2	< 15.9	--	100%
Metals	Titanium	INAA	ug/g	912	818	953	732	894	172	
Metals	Tungsten	INAA	ug/g	0.44	0.20	< 1.08	0.29	< 1.08	--	46%
Metals	Uranium	INAA	ug/g	2.03	1.69	1.56	2.04	1.76	0.60	
Metals	Vanadium	INAA	ug/g	39.3	40.0	39.1	40.4	39.4	1.2	
Metals	Ytterbium	INAA	ug/g	0.71	0.62	6,584	0.73	2,195	9,442	
Metals	Zinc	INAA	ug/g	18.1	38.0	19.0	37.9	25.0	28	
Metals	Zirconium	INAA	ug/g	< 61.8	147.6	77.3	111.6	85.3	146	12%
Ultimate/Proximate	% Ash	D3174	%	10.5	11.3	11.6	12.2	11.1	1.4	
Ultimate/Proximate	% Carbon	D3176	%	72.2	72.1	71.8	71.3	72.0	0.5	
Ultimate/Proximate	% Hydrogen	D3176	%	4.82	4.83	4.83	4.83	4.83	0.01	
Ultimate/Proximate	% Nitrogen	D3176	%	1.55	1.55	1.45	1.49	1.52	0.14	
Ultimate/Proximate	% Oxygen (diff)	D3176	%	8.03	7.61	7.59	7.52	7.74	0.62	
Ultimate/Proximate	% Sulfur	D4239	%	2.87	2.65	2.69	2.66	2.74	0.29	
Ultimate/Proximate	Fixed Carbon	D3172	%	51.4	49.7	51.4	50.8	50.8	2.5	
Ultimate/Proximate	Higher Heating Value	D2015	Btu/lb	12,721	12,699	12,670	12,673	12,697	64	
Ultimate/Proximate	Heating Value (MAF)	D2015	MAF Btu	14,217	14,314	14,339	14,436	14,290	160	
Ultimate/Proximate	Volatile	D3175	%	38.1	36.0	36.9	37.0	37.0	2.7	
Radionuclides	Actinium-228 @ 338 KeV	EPA901.1	pCi/g	0.40	0.40	0.20	0.20	0.33	0.29	
Radionuclides	Actinium-228 @ 911 KeV	EPA901.1	pCi/g	0.30	0.30	0.40	0.30	0.33	0.14	
Radionuclides	Actinium-228 @ 968 KeV	EPA901.1	pCi/g	ND	ND	0.20	ND	0.07	0.29	
Radionuclides	Bismuth-212 @ 727 KeV	EPA901.1	pCi/g	ND	ND	ND	ND	ND		
Radionuclides	Bismuth-214 @ 1120.4 KeV	EPA901.1	pCi/g	0.80	1.10	0.90	0.90	0.93	0.38	
Radionuclides	Bismuth-214 @ 1764.7 KeV	EPA901.1	pCi/g	ND	0.30	ND	0.40	0.10	0.43	
Radionuclides	Bismuth-214 @ 609.4 KeV	EPA901.1	pCi/g	0.70	0.60	0.70	0.60	0.67	0.14	
Radionuclides	K-40 @ 1460 KeV	EPA901.1	pCi/g	1.20	2.90	ND	3.20	1.37	3.62	
Radionuclides	Lead-210 @ 46 KeV	EPA901.1	pCi/g	1.20	1.00	1.70	1.00	1.30	0.90	
Radionuclides	Lead-212 @ 238 KeV	EPA901.1	pCi/g	0.20	0.20	0.20	0.20	0.20	0.00	
Radionuclides	Lead-214 @ 295.2 KeV	EPA901.1	pCi/g	0.70	0.60	0.60	0.40	0.63	0.14	
Radionuclides	Lead-214@ 352.0 KeV	EPA901.1	pCi/g	0.70	0.60	0.60	0.50	0.63	0.14	

Solid Stream Data

Sample Stream: Feed Coal

Analyte Group	Specie	Analytical Method	Units	Run 1	Run 2	Run 3	Run 3d	Average	95% CI	DL Ratio
Radionuclides	Radium-226 @ 186.0 KeV	EPA901.1	pCi/g	1.00	1.50	1.00	1.60	1.17	0.72	
Radionuclides	Thallium-208 @ 583 KeV	EPA901.1	pCi/g	0.20	0.30	0.40	0.40	0.30	0.25	
Radionuclides	Thallium-208 @ 860 KeV	EPA901.1	pCi/g	ND	ND	ND	ND	ND		
Radionuclides	Thorium-234 @ 63.3 KeV	EPA901.1	pCi/g	0.60	1.60	0.70	1.30	0.97	1.37	
Radionuclides	Thorium-234 @ 92.6 KeV	EPA901.1	pCi/g	0.70	0.50	0.80	0.50	0.67	0.38	
Radionuclides	Uranium-235 @ 143 KeV	EPA901.1	pCi/g	0.20	ND	ND	ND	0.07	0.29	

Solid Stream Data

Sample Stream: Pulverizer Rejects

Analyte Group	Specie	Analytical Method	Units	Run 1	Run 2	Run 3	Run 3d	Average	95% CI	DL Ratio
Anions	Chloride	D4208	ug/g	520	540	460	460	507	103	
Anions	Fluoride	D3761	ug/g	330	310	330	340	323	29	
Metals	Aluminum	INAA	ug/g	22,782	28,605	30,095	32,254	27,161	9,601	
Metals	Antimony	INAA	ug/g	1.03	1.35	1.34	1.14	1.24	0.45	
Metals	Arsenic	GFAA	ug/g	32.0	67.0	42.0	40.0	47.0	44.8	
Metals	Barium	INAA	ug/g	540	123	327	339	330	519	
Metals	Beryllium	ICPES	ug/g	1.90	1.90	0.60	1.10	1.47	1.86	
Metals	Boron	ICPES	ug/g	100	170	75	73	115	122	
Metals	Bromine	INAA	ug/g	4.85	4.42	3.65	4.98	4.31	1.51	
Metals	Cadmium	ICPES	ug/g	1.00	7.80	3.40	1.80	4.07	8.57	
Metals	Calcium	INAA	ug/g	11,715	15,640	10,690	11,298	12,682	6,490	
Metals	Cerium	INAA	ug/g	25.9	33.1	30.7	33.6	29.9	9.06	
Metals	Cesium	INAA	ug/g	1.88	2.30	2.23	2.72	2.14	0.55	
Metals	Chlorine	INAA	ug/g	554	643	559	648	585	125	
Metals	Chromium	INAA	ug/g	58.0	64.2	69.5	76.1	63.9	14.3	
Metals	Cobalt	INAA	ug/g	7.41	8.02	7.87	8.38	7.77	0.80	
Metals	Copper	INAA	ug/g	81.5	94.2	< 59.0	< 56.1	68.4	85.2	14%
Metals	Europium	INAA	ug/g	0.59	0.65	0.67	0.67	0.64	0.11	
Metals	Hafnium	INAA	ug/g	2.30	1.82	2.34	2.47	2.15	0.73	
Metals	Iodine	INAA	ug/g	1.44	1.92	2.65	2.63	2.00	1.52	
Metals	Iron	INAA	ug/g	133,094	126,965	119,458	112,069	126,506	16,967	
Metals	Lanthanum	INAA	ug/g	14.5	17.4	16.5	16.6	16.2	3.7	
Metals	Lead	ICPES	ug/g	41.0	48.0	23.0	33.0	37.3	32.0	
Metals	Lutetium	INAA	ug/g	0.23	0.18	0.20	0.26	0.20	0.06	
Metals	Magnesium	INAA	ug/g	1,226	1,467	1,420	1,696	1,371	318	
Metals	Manganese	INAA	ug/g	93.9	80.1	122	122	98.6	52.7	
Metals	Mercury	DGA/CVAA	ug/g	0.26	0.090	0.040	0.21	0.130	0.287	
Metals	Molybdenum	INAA	ug/g	18.36	17.3	4.07	4.17	13.2	19.8	
Metals	Neodymium	INAA	ug/g	19.56	20.6	16.3	30.3	18.8	5.6	
Metals	Nickel	INAA	ug/g	56	< 115	< 103	117	< 115	--	66%
Metals	Phosphorus	ICPES	ug/g	1,200	2,500	780	990	1,493	2,228	
Metals	Potassium	INAA	ug/g	2,707	5,303	8.54	4,558	2,673	6,577	
Metals	Rubidium	INAA	ug/g	41.0	36.4	36.3	40.9	37.9	6.6	
Metals	Samarium	INAA	ug/g	2.18	2.50	2.54	2.67	2.41	0.49	

Solid Stream Data

Sample Stream: Pulverizer Rejects

Analyte Group	Specie	Analytical Method	Units	Run 1	Run 2	Run 3	Run 3d	Average	95% CI	DL Ratio
Metals	Scandium	INAA	ug/g	4.60	5.83	5.22	6.32	5.22	1.53	
Metals	Selenium	GFAA	ug/g	7.00	9.00	10.00	7.00	8.67	3.79	
Metals	Silver	INAA	ug/g	1.30	< 1.87	< 1.94	< 1.44	< 1.94	--	59%
Metals	Sodium	INAA	ug/g	1,169	998	1,160	1,162	1,109	239	
Metals	Strontium	INAA	ug/g	308	377	658	297	448	461	
Metals	Tantalum	INAA	ug/g	0.43	0.57	0.55	0.48	0.52	0.18	
Metals	Terbium	INAA	ug/g	0.32	0.29	0.35	0.40	0.32	0.08	
Metals	Thorium	INAA	ug/g	3.79	4.41	4.22	5.43	4.14	0.79	
Metals	Tin	INAA	ug/g	31.9	< 30.7	< 29.5	< 28.0	< 30.7	--	49%
Metals	Titanium	INAA	ug/g	1,993	1,936	2,020	2,028	1,983	106	
Metals	Tungsten	INAA	ug/g	0.30	0.49	< 0.74	< 1.05	< 0.74	--	32%
Metals	Uranium	INAA	ug/g	3.84	4.95	3.51	4.09	4.10	1.87	
Metals	Vanadium	INAA	ug/g	61.5	56.0	61.8	66.2	59.8	8.2	
Metals	Ytterbium	INAA	ug/g	1.09	1.86	1.32	1.44	1.42	0.99	
Metals	Zinc	INAA	ug/g	486	1,594	1,503	559	1,194	1,528	
Metals	Zirconium	INAA	ug/g	291	251	448	240	330	259	
Ultimate/Proximate	% Carbon	D3176	%	39.5	39.6	36.6	38.4	38.5	4.2	
Ultimate/Proximate	% Sulfur	D3176	%	17.1	15.3	15.7	15.1	16.0	2.3	

Solid Stream Data

Sample Stream: Bottom Ash

Analyte Group	Specie	Analytical Method	Units	Run 1	Run 2	Run 3	Run 3d	Average	95% CI	DL Ratio
Anions	Chloride	SM407C	ug/g	172	< 99.8	163	< 99.8	128	169	13%
Anions	Fluoride	EPA 340.2	ug/g	30.9	21.4	42.3	16.7	31.5	26.0	
Metals	Aluminum	SW 6010	ug/g	75,600	80,800	72,000	70,200	76,133	10,991	
Metals	Antimony	ICP-MS	ug/g	1.21	1.15	1.05	0.95	1.14	0.20	
Metals	Arsenic	SW 7060	ug/g	4.28	8.67	8.49	4.92	7.15	6.17	
Metals	Barium	SW 6010	ug/g	428	481	461	460	457	66	
Metals	Beryllium	SW 6010	ug/g	8.47	8.17	6.30	6.51	7.65	2.92	
Metals	Boron	ICPES	ug/g	360	240	250	240	283	165	
Metals	Cadmium	SW 7131	ug/g	0.29 J	0.18 J	0.49	0.29 J	0.32	0.39	
Metals	Calcium	SW 6010	ug/g	21,800	19,900	19,100	18,600	20,267	3,445	
Metals	Chromium	SW 6010	ug/g	196	197	184	182	192	18	
Metals	Cobalt	SW 6010	ug/g	33.1	32.1	29.7	27.5	31.6	4.34	
Metals	Copper	SW 6010	ug/g	84.0	76.9	69.6	68.3	76.8	17.9	
Metals	Iron	SW 6010	ug/g	144,000	127,000	120,000	118,000	130,333	30,663	
Metals	Lead	SW 7421	ug/g	20.2	21.2	18.2	18.3	19.9	3.8	
Metals	Magnesium	SW 6010	ug/g	3740	3850	3230	3070	3,607	822	
Metals	Manganese	SW 6010	ug/g	296	262	253	240	270	56	
Metals	Mercury	SW 7471	ug/g	0.0048 J	< 0.0109	< 0.0114	0.0048 J	< 0.0114	--	70%
Metals	Molybdenum	SW 6010	ug/g	4.57	< 2.89	< 2.97	4.52	< 2.97	--	39%
Metals	Nickel	SW 6010	ug/g	138	130	126	124	131	15	
Metals	Phosphorus	SW 6010	ug/g	306	413	470	420	396	207	
Metals	Potassium	SW 6010	ug/g	14,200	14,600	13,700	13,200	14,167	1,120	
Metals	Selenium	SW 7740	ug/g	< 1.13	< 1.13	< 1.16	< 1.14	< 1.14	--	100%
Metals	Silicon	SW 6010	ug/g	213,000	209,000	218,000	216,000	213,333	11,203	
Metals	Sodium	SW 6010	ug/g	3,850	3,610	3,380	3,300	3,613	584	
Metals	Strontium	SW 6010	ug/g	280	297	264	260	280	41	
Metals	Titanium	SW 6010	ug/g	5,450	5,810	5,400	5,430	5,553	556	
Metals	Vanadium	SW 6010	ug/g	281	286	264	260	277	29	
Metals	Zinc	SW 6010	ug/g	216	229	194	186	213	44	
Ultimate/Proximate	% Carbon	D3176	%	1.18	1.53	4.29	3.46	2.33	4.23	
Ultimate/Proximate	% Sulfur	D4239	%	0.053	0.052	0.340	0.133	0.148	0.412	
Radionuclides	Actinium-228 @ 338 KeV	EPA 901.1	pCi/g	2.1	2.1	2.1	2.2	2.1	0	

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Solid Stream Data

Sample Stream: Bottom Ash

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3	Run 3d		Average	95% CI	DL Ratio
Radionuclides	Actinium-228 @ 911 KeV	EPA 901.1	pCi/g		2.3		2.2		2.1	2.0		2.2	0.2	
Radionuclides	Actinium-228 @ 968 KeV	EPA 901.1	pCi/g		2.6		2.3		1.8	2.4		2.2	1.0	
Radionuclides	Bismuth-212 @ 727 KeV	EPA 901.1	pCi/g		3.5		2.8		2.6	3.0		3.0	1.2	
Radionuclides	Bismuth-214 @ 1120.4 KeV	EPA 901.1	pCi/g		7.8		7.6		6.8	6.8		7.4	1.3	
Radionuclides	Bismuth-214 @ 1764.7 KeV	EPA 901.1	pCi/g		7.4		7.3		5.8	6.5		6.8	2.2	
Radionuclides	Bismuth-214 @ 609.4 KeV	EPA 901.1	pCi/g		7.7		7.1		6.5	6.7		7.1	1.5	
Radionuclides	K-40 @ 1460 KeV	EPA 901.1	pCi/g		16		18		16	16		17	3	
Radionuclides	Lead-210 @ 46 KeV	EPA 901.1	pCi/g		1.2		1.3		1.6	1.6		1.4	0.5	
Radionuclides	Lead-212 @ 238 KeV	EPA 901.1	pCi/g		1.7		2.2		2.2	2.1		2.0	0.7	
Radionuclides	Lead-214 @ 295.2 KeV	EPA 901.1	pCi/g		8.1		7.3		6.6	7.0		7.3	1.9	
Radionuclides	Lead-214@ 352.0 KeV	EPA 901.1	pCi/g		8.2		7.8		6.8	7.1		7.6	1.8	
Radionuclides	Radium-226 @ 186.0 KeV	EPA 901.1	pCi/g		11		10		9.9	10		10	1.5	
Radionuclides	Thallium-208 @ 583 KeV	EPA 901.1	pCi/g		2.3		2.3		2.0	2.2		2.2	0.4	
Radionuclides	Thallium-208 @ 860 KeV	EPA 901.1	pCi/g		3.3		2.4		ND	2.6		1.9	4.2	
Radionuclides	Thorium-234 @ 63.3 KeV	EPA 901.1	pCi/g		6.1		5.5		5.7	5.0		5.8	0.8	
Radionuclides	Thorium-234 @ 92.6 KeV	EPA 901.1	pCi/g		5.1		4.5		5.5	4.5		5.0	1.3	
Radionuclides	Uranium-235 @ 143 KeV	EPA 901.1	pCi/g		0.26		0.28		0.38	0.25		0.31	0.16	
Organics, Semi-Volatile	1,2,4,5-Tetrachlorobenzene	SW 8270	ng/g	<	27.2	<	25.4	<	16.9		<	23.2	--	100%
Organics, Semi-Volatile	1,2,4-Trichlorobenzene	SW 8270	ng/g	<	27.8	<	25.9	<	25.6		<	26.4	--	100%
Organics, Semi-Volatile	1,2-Dichlorobenzene	SW 8270	ng/g	<	36.6	<	34.2	<	27.6		<	32.8	--	100%
Organics, Semi-Volatile	1,2-Diphenylhydrazine	SW 8270	ng/g	<	100	<	100	<	100		<	100	--	100%
Organics, Semi-Volatile	1,3-Dichlorobenzene	SW 8270	ng/g	<	18.6	<	17.4	<	31.2		<	22.4	--	100%
Organics, Semi-Volatile	1,4-Dichlorobenzene	SW 8270	ng/g	<	38.0	<	35.5	<	25.6		<	33.0	--	100%
Organics, Semi-Volatile	1-Chloronaphthalene	SW 8270	ng/g	<	30.3	<	28.3	<	23.3		<	27.3	--	100%
Organics, Semi-Volatile	1-Naphthylamine	SW 8270	ng/g	<	73.3	<	68.5	<	88.2		<	76.7	--	100%
Organics, Semi-Volatile	2,3,4,6-Tetrachlorophenol	SW 8270	ng/g	<	23.6	<	22.1	<	20.2		<	22.0	--	100%
Organics, Semi-Volatile	2,4,5-Trichlorophenol	SW 8270	ng/g	<	15.5	<	14.5	<	22.1		<	17.4	--	100%
Organics, Semi-Volatile	2,4,6-Trichlorophenol	SW 8270	ng/g	<	16.4	<	15.3	<	22.0		<	17.9	--	100%
Organics, Semi-Volatile	2,4-Dichlorophenol	SW 8270	ng/g	<	20.8	<	19.4	<	24.7		<	21.6	--	100%
Organics, Semi-Volatile	2,4-Dimethylphenol	SW 8270	ng/g	<	51.7	<	48.3	<	56.5		<	52.2	--	100%
Organics, Semi-Volatile	2,4-Dinitrophenol	SW 8270	ng/g	<	329	<	307	<	182		<	273	--	100%
Organics, Semi-Volatile	2,4-Dinitrotoluene	SW 8270	ng/g	<	25.8	<	24.1	<	25.7		<	25.2	--	100%
Organics, Semi-Volatile	2,6-Dichlorophenol	SW 8270	ng/g	<	34.0	<	31.7	<	22.2		<	29.3	--	100%
Organics, Semi-Volatile	2,6-Dinitrotoluene	SW 8270	ng/g	<	16.3	<	15.2	<	37.4		<	23.0	--	100%

Solid Stream Data

Sample Stream: Bottom Ash

Analyte Group	Specie	Analytical Method	Units		Run 1			Run 2		Run 3		Run 3d		Average	95% CI	DL Ratio
Organics, Semi-Volatile	2-Chloronaphthalene	SW 8270	ng/g	<	15.2		<	14.2	<	17.0		<	15.5	--	100%
Organics, Semi-Volatile	2-Chlorophenol	SW 8270	ng/g	<	35.9		<	33.5	<	27.6		<	32.3	--	100%
Organics, Semi-Volatile	2-Methylnaphthalene	SW 8270	ng/g		78.9		<	29.0	<	15.8			33.8	97	22%
Organics, Semi-Volatile	2-Methylphenol(o-cresol)	SW 8270	ng/g	<	25.1		<	23.4	<	13.5		<	20.7	--	100%
Organics, Semi-Volatile	2-Naphthylamine	SW 8270	ng/g	<	91.6		<	85.6	<	69.5		<	82.2	--	100%
Organics, Semi-Volatile	2-Nitroaniline	SW 8270	ng/g	<	18.9		<	17.6	<	28.8		<	21.8	--	100%
Organics, Semi-Volatile	2-Nitrophenol	SW 8270	ng/g	<	20.7		<	19.3	<	22.7		<	20.9	--	100%
Organics, Semi-Volatile	2-Picoline	SW 8270	ng/g	<	51.2		<	47.8	<	35.9		<	45.0	--	100%
Organics, Semi-Volatile	3,3'-Dichlorobenzidine	SW 8270	ng/g	<	23.0		<	21.5	<	14.5		<	19.7	--	100%
Organics, Semi-Volatile	3-Methylcholanthrene	SW 8270	ng/g	<	36.8		<	34.4	<	21.7		<	31.0	--	100%
Organics, Semi-Volatile	3-Nitroaniline	SW 8270	ng/g	<	23.9		<	22.3	<	17.1		<	21.1	--	100%
Organics, Semi-Volatile	4,6-Dinitro-2-methylphenol	SW 8270	ng/g	<	37.2		<	34.8	<	18.7		<	30.2	--	100%
Organics, Semi-Volatile	4-Aminobiphenyl	SW 8270	ng/g	<	35.1		<	32.8	<	51.7		<	39.9	--	100%
Organics, Semi-Volatile	4-Bromophenyl phenyl	SW 8270	ng/g	<	21.4		<	20.0	<	21.0		<	20.8	--	100%
Organics, Semi-Volatile	4-Chloro-3-methylphenol	SW 8270	ng/g	<	34.0		<	31.7	<	22.4		<	29.4	--	100%
Organics, Semi-Volatile	4-Chlorophenyl phenyl ether	SW 8270	ng/g	<	24.8		<	23.2	<	18.3		<	22.1	--	100%
Organics, Semi-Volatile	4-Methylphenol(p-cresol)	SW 8270	ng/g	<	27.0		<	25.2	<	19.9		<	24.0	--	100%
Organics, Semi-Volatile	4-Nitroaniline	SW 8270	ng/g	<	22.7		<	21.2	<	26.3		<	23.4	--	100%
Organics, Semi-Volatile	4-Nitrophenol	SW 8270	ng/g	<	32.5		<	30.3	<	40.7		<	34.5	--	100%
Organics, Semi-Volatile	7,12-Dimethylbenz(a)anthracene	SW 8270	ng/g	<	90.2		<	84.3	<	57.8		<	77.4	--	100%
Organics, Semi-Volatile	Acenaphthene	SW 8270	ng/g	<	22.5		<	21.0	<	11.8		<	18.4	--	100%
Organics, Semi-Volatile	Acenaphthylene	SW 8270	ng/g	<	10.6		<	9.9	<	18.2		<	12.9	--	100%
Organics, Semi-Volatile	Acetophenone	SW 8270	ng/g	<	21.6		<	20.1	<	24.3		<	22.0	--	100%
Organics, Semi-Volatile	Aniline	SW 8270	ng/g	<	43.8		<	40.9	<	26.8		<	37.2	--	100%
Organics, Semi-Volatile	Anthracene	SW 8270	ng/g		14.6	J	<	25.5	<	16.0		<	25.5	--	59%
Organics, Semi-Volatile	Benzidine	SW 8270	ng/g	<	20.0		<	20.0	<	20.0		<	20.0	--	100%
Organics, Semi-Volatile	Benzo(a)anthracene	SW 8270	ng/g		21.0	J	<	22.6	<	19.5		<	22.6	--	50%
Organics, Semi-Volatile	Benzo(a)pyrene	SW 8270	ng/g	<	18.0		<	16.8	<	22.5		<	19.1	--	100%
Organics, Semi-Volatile	Benzo(b)fluoranthene	SW 8270	ng/g		24.2		<	25.0	<	39.5		<	39.5	--	57%
Organics, Semi-Volatile	Benzo(g,h,i)perylene	SW 8270	ng/g		11.8	J	<	21.4	<	44.3		<	44.3	--	74%
Organics, Semi-Volatile	Benzo(k)fluoranthene	SW 8270	ng/g		24.2		<	42.5	<	43.4		<	43.4	--	64%
Organics, Semi-Volatile	Benzoic acid	SW 8270	ng/g	<	186		<	174	<	1,680		<	680	--	100%
Organics, Semi-Volatile	Benzyl alcohol	SW 8270	ng/g	<	50.7		<	47.4	<	26.5		<	41.5	--	100%
Organics, Semi-Volatile	Butylbenzylphthalate	SW 8270	ng/g	<	18.5		<	17.2	<	27.2		<	21.0	--	100%
Organics, Semi-Volatile	Chrysene	SW 8270	ng/g		12.0	J	<	29.4	<	23.3		<	29.4	--	69%

Solid Stream Data

Sample Stream: Bottom Ash

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3	Run 3d		Average	95% CI	DL Ratio
Organics, Semi-Volatile	Di-n-octylphthalate	SW 8270	ng/g	<	42.8		< 40.0	<	15.3		<	32.7	--	100%
Organics, Semi-Volatile	Dibenz(a,h)anthracene	SW 8270	ng/g	<	22.3		< 20.8	<	35.2		<	26.1	--	100%
Organics, Semi-Volatile	Dibenz(a,j)acridine	SW 8270	ng/g	<	27.3		< 25.5	<	36.6		<	29.8	--	100%
Organics, Semi-Volatile	Dibenzofuran	SW 8270	ng/g	<	19.2		< 17.9	<	23.3		<	20.1	--	100%
Organics, Semi-Volatile	Dibutylphthalate	SW 8270	ng/g	<	23.2		< 21.6	<	14.1		<	19.6	--	100%
Organics, Semi-Volatile	Diethylphthalate	SW 8270	ng/g	<	15.8		< 14.7	<	22.4		<	17.6	--	100%
Organics, Semi-Volatile	Dimethylphenethylamine	SW 8270	ng/g	<	120		< 120	<	120		<	120	--	100%
Organics, Semi-Volatile	Dimethylphthalate	SW 8270	ng/g	<	13.2		< 12.3	<	14.6		<	13.4	--	100%
Organics, Semi-Volatile	Diphenylamine	SW 8270	ng/g	<	24.8		< 23.2	<	12.0		<	20.0	--	100%
Organics, Semi-Volatile	Ethyl methanesulfonate	SW 8270	ng/g	<	23.6		< 22.1	<	29.5		<	25.1	--	100%
Organics, Semi-Volatile	Fluoranthene	SW 8270	ng/g	<	30.0		< 28.0	<	20.5		<	26.2	--	100%
Organics, Semi-Volatile	Fluorene	SW 8270	ng/g		11.3	J	< 14.7	<	16.5		<	16.5	--	58%
Organics, Semi-Volatile	Hexachlorobenzene	SW 8270	ng/g	<	11.0		< 10.3	<	13.6		<	11.6	--	100%
Organics, Semi-Volatile	Hexachlorobutadiene	SW 8270	ng/g	<	32.8		< 30.6	<	22.2		<	28.5	--	100%
Organics, Semi-Volatile	Hexachlorocyclopentadiene	SW 8270	ng/g	<	419		< 391	<	256		<	355	--	100%
Organics, Semi-Volatile	Hexachloroethane	SW 8270	ng/g	<	27.9		< 26.1	<	27.6		<	27.2	--	100%
Organics, Semi-Volatile	Indeno(1,2,3-cd)pyrene	SW 8270	ng/g	<	24.7		< 23.0	<	57.8		<	35.2	--	100%
Organics, Semi-Volatile	Isophorone	SW 8270	ng/g	<	13.5		< 12.6	<	26.8		<	17.6	--	100%
Organics, Semi-Volatile	Methyl methanesulfonate	SW 8270	ng/g	<	50.0		< 50.0	<	50.0		<	50.0	--	100%
Organics, Semi-Volatile	N-Nitroso-di-n-butylamine	SW 8270	ng/g	<	61.6		< 57.5	<	27.3		<	48.8	--	100%
Organics, Semi-Volatile	N-Nitrosodimethylamine	SW 8270	ng/g	<	62.5		< 58.4	<	34.2		<	51.7	--	100%
Organics, Semi-Volatile	N-Nitrosodiphenylamine	SW 8270	ng/g	<	26.6		< 24.8	<	11.7		<	21.0	--	100%
Organics, Semi-Volatile	N-Nitrosodipropylamine	SW 8270	ng/g	<	35.3		< 33.0	<	28.4		<	32.2	--	100%
Organics, Semi-Volatile	N-Nitrosopiperidine	SW 8270	ng/g	<	44.3		< 41.4	<	25.9		<	37.2	--	100%
Organics, Semi-Volatile	Naphthalene	SW 8270	ng/g		52.2		< 32.0	<	20.8		<	32.0	--	34%
Organics, Semi-Volatile	Nitrobenzene	SW 8270	ng/g	<	24.8		< 23.2	<	36.6		<	28.2	--	100%
Organics, Semi-Volatile	Pentachlorobenzene	SW 8270	ng/g	<	20.8		< 19.4	<	16.3		<	18.8	--	100%
Organics, Semi-Volatile	Pentachloronitrobenzene	SW 8270	ng/g	<	97.3		< 90.8	<	60.0		<	82.7	--	100%
Organics, Semi-Volatile	Pentachlorophenol	SW 8270	ng/g	<	40.6		< 37.9	<	38.6		<	39.0	--	100%
Organics, Semi-Volatile	Phenacetin	SW 8270	ng/g	<	25.4		< 23.7	<	16.8		<	22.0	--	100%
Organics, Semi-Volatile	Phenanthrene	SW 8270	ng/g		31.1		< 27.3	<	20.3		<	27.3	--	43%
Organics, Semi-Volatile	Phenol	SW 8270	ng/g	<	18.7		< 17.5	<	38.4		<	24.9	--	100%
Organics, Semi-Volatile	Pronamide	SW 8270	ng/g	<	34.7		< 32.4	<	10.5		<	25.9	--	100%
Organics, Semi-Volatile	Pyrene	SW 8270	ng/g	<	22.0		< 20.5	<	17.7		<	20.1	--	100%
Organics, Semi-Volatile	Pyridine	SW 8270	ng/g	<	54.5		< 50.9	<	25.6		<	43.7	--	100%

Solid Stream Data

Sample Stream: Bottom Ash

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3	Run 3d		Average	95% CI	DL Ratio
Organics, Semi-Volatile	bis(2-Chloroethoxy)methane	SW 8270	ng/g	<	26.4	<	24.7	<	26.3		<	25.8	--	100%
Organics, Semi-Volatile	bis(2-Chloroethyl)ether	SW 8270	ng/g	<	34.4	<	32.1	<	16.6		<	27.7	--	100%
Organics, Semi-Volatile	bis(2-Chloroisopropyl)ether	SW 8270	ng/g	<	34.1	<	31.9	<	34.7		<	33.6	--	100%
Organics, Semi-Volatile	bis(2-Ethylhexyl)phthalate	SW 8270	ng/g	<	86.0		157.0	<	25.2		<	86.0	--	26%
Organics, Semi-Volatile	p-Chloroaniline	SW 8270	ng/g	<	26.3	<	24.5	<	32.4		<	27.7	--	100%
Organics, Semi-Volatile	p-Dimethylaminoazobenzene	SW 8270	ng/g	<	24.2	<	22.6	<	31.5		<	26.1	--	100%

Solid Stream Data

Sample Stream: Sluiced Fly Ash

Analyte Group	Specie	Analytical Method	Units	Run 1	Run 2	Run 3	Run 3d	Average	95% CI	DL Ratio
Anions	Chlorine	SM407C	ug/g	< 99	< 100	< 100	433	< 100	--	100%
Anions	Fluorine	EPA 350.2	ug/g	77.2	129	91.0	NA	99.1	66.6	
Metals	Aluminum	SW 6010	ug/g	95,466	96,879	101,609	101,809	97,985	7,992	
Metals	Antimony	ICP-MS	ug/g	3.28	4.26	2.63	2.74	3.39	2.04	
Metals	Arsenic	SW 7060	ug/g	53.1	77.9	50.9	50.8	60.6	37.2	
Metals	Barium	SW 6010	ug/g	456	522	509	510	496	87.4	
Metals	Beryllium	SW 6010	ug/g	11.1	12.4	9.9	10.1	11.1	3.09	
Metals	Boron	ICPES	ug/g	580	410	430	450	473	231	
Metals	Cadmium	SW 7131	ug/g	3.89	5.41	3.07	3.26	4.12	2.95	
Metals	Calcium	SW 6010	ug/g	14,285	12,877	14,185	13,709	13,782	1,952	
Metals	Chromium	SW 6010	ug/g	186	193	176	174	185	21.4	
Metals	Cobalt	SW 6010	ug/g	38.8	37.6	34.3	35.7	36.9	5.82	
Metals	Copper	SW 6010	ug/g	110	110	93.4	88.7	104	23.4	
Metals	Iron	SW 6010	ug/g	96,371	79,073	92,353	83,968	89,266	22,491	
Metals	Lead	SW 7421	ug/g	81.4	100	68.2	69.8	83.2	39.8	
Metals	Magnesium	SW 6010	ug/g	4,778	4,829	5,040	5,010	4,882	345	
Metals	Manganese	SW 6010	ug/g	262	225	248	231	245	45.5	
Metals	Mercury	SW 7471	ug/g	0.091	0.188	0.156	0.181	0.145	0.122	
Metals	Molybdenum	SW 6010	ug/g	< 14.3	13.2 J	3.9	2.59 J	< 14.3	--	29%
Metals	Nickel	SW 6010	ug/g	151	149	128	154	143	32	
Metals	Phosphorus	SW 6010	ug/g	8.53 J	72.5	124	98.0	68.3	143	
Metals	Potassium	SW 6010	ug/g	18,208	18,611	17,807	17,539	18,209	999	
Metals	Selenium	SW 7740	ug/g	8.14	16.7	11.2	11.0	12.0	10.8	
Metals	Silicon	SW 6010	ug/g	218,294	222,330	216,296	213,699	218,973	7,636	
Metals	Sodium	SW 6010	ug/g	5,422	5,231	4,507	4,334	5,053	1,199	
Metals	Strontium	SW 6010	ug/g	315	336	315	313	322	30.3	
Metals	Titanium	SW 6010	ug/g	6,277	6,650	6,056	6,209	6,328	745	
Metals	Vanadium	SW 6010	ug/g	335	345	301	293	327	57.6	
Metals	Zinc	SW 6010	ug/g	509	601	427	431	512	216	
Ultimate/Proximate	% Carbon	D3176	%	3.38	4.50	5.54	5.71	4.47	2.68	

Solid Stream Data

Sample Stream: Sluiced Fly Ash

Analyte Group	Specie	Analytical Method	Units	Run 1	Run 2	Run 3	Run 3d	Average	95% CI	DL Ratio
Ultimate/Proximate	% Sulfur	D3176	%	0.115	0.146	0.140	0.141	0.134	0.041	
Radionuclides	Actinium-228 @ 338 KeV	EPA 901.1	pCi/g	2.3	2.4	2.4	2.2	2.4	0.14	
Radionuclides	Actinium-228 @ 911 KeV	EPA 901.1	pCi/g	2.3	2.3	2.4	2.4	2.3	0.14	
Radionuclides	Actinium-228 @ 968 KeV	EPA 901.1	pCi/g	2.5	2.4	2.6	2.3	2.5	0.25	
Radionuclides	Bismuth-212 @ 727 KeV	EPA 901.1	pCi/g	2.2	3.0	2.6	3.0	2.6	0.99	
Radionuclides	Bismuth-214 @ 1120.4 KeV	EPA 901.1	pCi/g	7.2	6.9	5.4	6.4	6.5	2.40	
Radionuclides	Bismuth-214 @ 1764.7 KeV	EPA 901.1	pCi/g	6.7	5.4	5.5	5.8	5.9	1.80	
Radionuclides	Bismuth-214 @ 609.4 KeV	EPA 901.1	pCi/g	7.1	6.4	6.0	6.0	6.5	1.38	
Radionuclides	K-40 @ 1460 KeV	EPA 901.1	pCi/g	19	18	17	16	18.0	2.48	
Radionuclides	Lead-210 @ 46 KeV	EPA 901.1	pCi/g	6.2	7.6	5.5	4.6	6.4	2.66	
Radionuclides	Lead-212 @ 238 KeV	EPA 901.1	pCi/g	2.3	2.2	2.1	2.1	2.2	0.25	
Radionuclides	Lead-214 @ 295.2 KeV	EPA 901.1	pCi/g	7.0	6.7	5.9	5.9	6.5	1.41	
Radionuclides	Lead-214@ 352.0 KeV	EPA 901.1	pCi/g	7.1	6.7	6.1	6.2	6.6	1.25	
Radionuclides	Radium-226 @ 186.0 KeV	EPA 901.1	pCi/g	9.9	11	8.7	9.3	9.9	2.86	
Radionuclides	Thallium-208 @ 583 KeV	EPA 901.1	pCi/g	2.3	2.3	2.1	2.2	2.2	0.29	
Radionuclides	Thallium-208 @ 860 KeV	EPA 901.1	pCi/g	3.0	2.9	3.0	2.6	3.0	0.14	
Radionuclides	Thorium-234 @ 63.3 KeV	EPA 901.1	pCi/g	6.0	8.5	5.2	5.3	6.6	4.28	
Radionuclides	Thorium-234 @ 92.6 KeV	EPA 901.1	pCi/g	5.7	4.0	5.3	4.2	5.0	2.21	
Radionuclides	Uranium-235 @ 143 KeV	EPA 901.1	pCi/g	0.16	0.23	0.28	< 0.013	0.22	0.15	
Organics, Semi-volatile	1,2,4,5-Tetrachlorobenzene	SW 8270	ng/g	< 27.5	< 25.7	< 17.4	< 17.5	< 23.5	--	100%
Organics, Semi-volatile	1,2,4-Trichlorobenzene	SW 8270	ng/g	< 28.1	< 26.3	< 26.2	< 26.3	< 26.9	--	100%
Organics, Semi-volatile	1,2-Dichlorobenzene	SW 8270	ng/g	< 37.0	< 34.6	< 28.3	< 28.5	< 33.3	--	100%
Organics, Semi-volatile	1,2-Diphenylhydrazine	SW 8270	ng/g	< 100	< 100	< 100	< 100	< 100	--	100%
Organics, Semi-volatile	1,3-Dichlorobenzene	SW 8270	ng/g	< 18.8	< 17.6	< 31.9	< 32.1	< 22.8	--	100%
Organics, Semi-volatile	1,4-Dichlorobenzene	SW 8270	ng/g	< 38.4	< 35.9	< 26.2	< 26.3	< 33.5	--	100%
Organics, Semi-volatile	1-Chloronaphthalene	SW 8270	ng/g	< 30.6	< 28.6	< 23.9	< 24.1	< 27.7	--	100%
Organics, Semi-volatile	1-Naphthylamine	SW 8270	ng/g	< 74.2	< 69.3	< 90.4	< 91.0	< 78.0	--	100%
Organics, Semi-volatile	2,3,4,6-Tetrachlorophenol	SW 8270	ng/g	< 23.9	< 22.4	< 20.7	< 20.8	< 22.3	--	100%
Organics, Semi-volatile	2,4,5-Trichlorophenol	SW 8270	ng/g	< 15.7	< 14.7	< 22.7	< 22.8	< 17.7	--	100%
Organics, Semi-volatile	2,4,6-Trichlorophenol	SW 8270	ng/g	< 16.6	< 15.5	< 22.5	< 22.7	< 18.2	--	100%

Solid Stream Data

Sample Stream: Sluiced Fly Ash

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Run 3d		Average	95% CI	DL Ratio
Organics, Semi-volatile	2,4-Dichlorophenol	SW 8270	ng/g	<	21.1	<	19.7	<	25.3	<	25.5	<	22.0	--	100%
Organics, Semi-volatile	2,4-Dimethylphenol	SW 8270	ng/g	<	52.3	<	48.9	<	57.9	<	58.2	<	53.0	--	100%
Organics, Semi-volatile	2,4-Dinitrophenol	SW 8270	ng/g	<	333	<	311	<	186	<	187	<	277	--	100%
Organics, Semi-volatile	2,4-Dinitrotoluene	SW 8270	ng/g	<	26.1	<	24.4	<	26.3	<	26.5	<	25.6	--	100%
Organics, Semi-volatile	2,6-Dichlorophenol	SW 8270	ng/g	<	34.4	<	32.1	<	22.8	<	22.9	<	29.8	--	100%
Organics, Semi-volatile	2,6-Dinitrotoluene	SW 8270	ng/g	<	16.4	<	15.4	<	38.3	<	38.6	<	23.4	--	100%
Organics, Semi-volatile	2-Chloronaphthalene	SW 8270	ng/g	<	15.4	<	14.4	<	17.5	<	17.6	<	15.8	--	100%
Organics, Semi-volatile	2-Chlorophenol	SW 8270	ng/g	<	36.3	<	34.0	<	28.3	<	28.5	<	32.9	--	100%
Organics, Semi-volatile	2-Methylnaphthalene	SW 8270	ng/g	<	31.4	<	29.3	<	16.2	<	16.3	<	25.6	--	100%
Organics, Semi-volatile	2-Methylphenol(o-cresol)	SW 8270	ng/g	<	25.4	<	23.7	<	13.8	<	13.9	<	21.0	--	100%
Organics, Semi-volatile	2-Naphthylamine	SW 8270	ng/g	<	92.7	<	86.7	<	71.2	<	71.7	<	83.5	--	100%
Organics, Semi-volatile	2-Nitroaniline	SW 8270	ng/g	<	19.1	<	17.9	<	29.5	<	29.7	<	22.2	--	100%
Organics, Semi-volatile	2-Nitrophenol	SW 8270	ng/g	<	20.9	<	19.6	<	23.2	<	23.4	<	21.2	--	100%
Organics, Semi-volatile	2-Picoline	SW 8270	ng/g	<	51.8	<	48.4	<	36.8	<	37.1	<	45.7	--	100%
Organics, Semi-volatile	3,3'-Dichlorobenzidine	SW 8270	ng/g	<	23.3	<	21.8	<	14.8	<	14.9	<	20.0	--	100%
Organics, Semi-volatile	3-Methylcholanthrene	SW 8270	ng/g	<	37.2	<	34.8	<	22.3	<	22.4	<	31.4	--	100%
Organics, Semi-volatile	3-Nitroaniline	SW 8270	ng/g	<	24.2	<	22.6	<	17.5	<	17.6	<	21.4	--	100%
Organics, Semi-volatile	4,6-Dinitro-2-methylphenol	SW 8270	ng/g	<	37.6	<	35.2	<	19.1	<	19.3	<	30.6	--	100%
Organics, Semi-volatile	4-Aminobiphenyl	SW 8270	ng/g	<	35.6	<	33.2	<	53.0	<	53.3	<	40.6	--	100%
Organics, Semi-volatile	4-Bromophenyl phenyl	SW 8270	ng/g	<	21.7	<	20.3	<	21.5	<	21.7	<	21.2	--	100%
Organics, Semi-volatile	4-Chloro-3-methylphenol	SW 8270	ng/g	<	34.4	<	32.1	<	22.9	<	23.1	<	29.8	--	100%
Organics, Semi-volatile	4-Chlorophenyl phenyl ether	SW 8270	ng/g	<	25.1	<	23.5	<	18.7	<	18.9	<	22.4	--	100%
Organics, Semi-volatile	4-Methylphenol(p-cresol)	SW 8270	ng/g	<	27.3	<	25.6	<	20.4	<	20.6	<	24.4	--	100%
Organics, Semi-volatile	4-Nitroaniline	SW 8270	ng/g	<	23.0	<	21.5	<	27.0	<	27.2	<	23.8	--	100%
Organics, Semi-volatile	4-Nitrophenol	SW 8270	ng/g	<	32.8	<	30.7	<	41.7	<	42.0	<	35.1	--	100%
Organics, Semi-volatile	7,12-Dimethylbenz(a)anthracene	SW 8270	ng/g	<	91.3	<	85.3	<	59.2	<	59.6	<	78.6	--	100%
Organics, Semi-volatile	Acenaphthene	SW 8270	ng/g	<	22.7	<	21.2	<	12.1	<	12.2	<	18.7	--	100%
Organics, Semi-volatile	Acenaphthylene	SW 8270	ng/g	<	10.7	<	10.0	<	18.6	<	18.7	<	13.1	--	100%
Organics, Semi-volatile	Acetophenone	SW 8270	ng/g	<	21.8	<	20.4	<	24.9	<	25.0	<	22.4	--	100%
Organics, Semi-volatile	Aniline	SW 8270	ng/g	<	44.4	<	41.5	<	27.4	<	27.6	<	37.8	--	100%
Organics, Semi-volatile	Anthracene	SW 8270	ng/g	<	27.6	<	25.8	<	16.4	<	16.5	<	23.3	--	100%
Organics, Semi-volatile	Benzidine	SW 8270	ng/g	<	20	<	20	<	20	<	20	<	20	--	100%

Solid Stream Data

Sample Stream: Sluiced Fly Ash

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Run 3d		Average	95% CI	DL Ratio
Organics, Semi-volatile	Benzo(a)anthracene	SW 8270	ng/g	<	24.5	<	22.9	<	20.0	<	20.1	<	22.5	--	100%
Organics, Semi-volatile	Benzo(a)pyrene	SW 8270	ng/g	<	18.2	<	17.0	<	23.1	<	23.2	<	19.4	--	100%
Organics, Semi-volatile	Benzo(b)fluoranthene	SW 8270	ng/g	<	27.0	<	25.3	<	40.4	<	40.7	<	30.9	--	100%
Organics, Semi-volatile	Benzo(g,h,i)perylene	SW 8270	ng/g	<	23.1	<	21.6	<	45.4	<	45.7	<	30.0	--	100%
Organics, Semi-volatile	Benzo(k)fluoranthene	SW 8270	ng/g	<	46.0	<	43.0	<	44.5	<	44.8	<	44.5	--	100%
Organics, Semi-volatile	Benzoic acid	SW 8270	ng/g	<	188	<	176	<	1,720	<	1,730	<	695	--	100%
Organics, Semi-volatile	Benzyl alcohol	SW 8270	ng/g	<	51.3	<	48.0	<	27.2	<	27.3	<	42.2	--	100%
Organics, Semi-volatile	Butylbenzylphthalate	SW 8270	ng/g	<	18.7	<	17.5	<	27.8	<	28.0	<	21.3	--	100%
Organics, Semi-volatile	Chrysene	SW 8270	ng/g	<	31.8	<	29.7	<	23.9	<	24.1	<	28.5	--	100%
Organics, Semi-volatile	Di-n-octylphthalate	SW 8270	ng/g	<	43.3	<	40.5	<	15.7	<	15.8	<	33.2	--	100%
Organics, Semi-volatile	Dibenz(a,h)anthracene	SW 8270	ng/g	<	22.5	<	21.1	<	36.1	<	36.3	<	26.6	--	100%
Organics, Semi-volatile	Dibenz(a,j)acridine	SW 8270	ng/g	<	27.6	<	25.8	<	37.5	<	37.7	<	30.3	--	100%
Organics, Semi-volatile	Dibenzofuran	SW 8270	ng/g	<	19.4	<	18.1	<	23.9	<	24.1	<	20.5	--	100%
Organics, Semi-volatile	Dibutylphthalate	SW 8270	ng/g	<	23.4	<	21.9	<	14.4	<	14.5	<	19.9	--	100%
Organics, Semi-volatile	Diethylphthalate	SW 8270	ng/g	<	16.0	<	14.9	<	22.9	<	23.1	<	17.9	--	100%
Organics, Semi-volatile	Dimethylphenethylamine	SW 8270	ng/g	<	120	<	120	<	120	<	120	<	120	--	100%
Organics, Semi-volatile	Dimethylphthalate	SW 8270	ng/g	<	13.3	<	12.4	<	15.0	<	15.1	<	13.6	--	100%
Organics, Semi-volatile	Diphenylamine	SW 8270	ng/g	<	25.1	<	23.5	<	12.3	<	12.4	<	20.3	--	100%
Organics, Semi-volatile	Ethyl methanesulfonate	SW 8270	ng/g	<	23.9	<	22.4	<	30.2	<	30.4	<	25.5	--	100%
Organics, Semi-volatile	Fluoranthene	SW 8270	ng/g	<	30.3	<	28.4	<	21.0	<	21.1	<	26.6	--	100%
Organics, Semi-volatile	Fluorene	SW 8270	ng/g	<	16.0	<	14.9	<	16.9	<	17.0	<	15.9	--	100%
Organics, Semi-volatile	Hexachlorobenzene	SW 8270	ng/g	<	11.1	<	10.4	<	14.0	<	14.1	<	11.8	--	100%
Organics, Semi-volatile	Hexachlorobutadiene	SW 8270	ng/g	<	33.2	<	31.0	<	22.8	<	22.9	<	29.0	--	100%
Organics, Semi-volatile	Hexachlorocyclopentadiene	SW 8270	ng/g	<	424	<	396	<	262	<	264	<	361	--	100%
Organics, Semi-volatile	Hexachloroethane	SW 8270	ng/g	<	28.2	<	26.4	<	28.3	<	28.5	<	27.6	--	100%
Organics, Semi-volatile	Indeno(1,2,3-cd)pyrene	SW 8270	ng/g	<	25.0	<	23.3	<	59.2	<	59.6	<	35.8	--	100%
Organics, Semi-volatile	Isophorone	SW 8270	ng/g	<	13.6	<	12.8	<	27.4	<	27.6	<	17.9	--	100%
Organics, Semi-volatile	Methyl methanesulfonate	SW 8270	ng/g	<	50	<	50	<	50	<	50	<	50	--	100%
Organics, Semi-volatile	N-Nitroso-di-n-butylamine	SW 8270	ng/g	<	62.3	<	58.2	<	28.0	<	28.2	<	49.5	--	100%
Organics, Semi-volatile	N-Nitrosodimethylamine	SW 8270	ng/g	<	63.2	<	59.1	<	35.0	<	35.2	<	52.4	--	100%
Organics, Semi-volatile	N-Nitrosodiphenylamine	SW 8270	ng/g	<	26.9	<	25.2	<	12.0	<	12.1	<	21.4	--	100%
Organics, Semi-volatile	N-Nitrosodipropylamine	SW 8270	ng/g	<	35.7	<	33.4	<	29.1	<	29.3	<	32.7	--	100%

Solid Stream Data

Sample Stream: Sluiced Fly Ash

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Run 3d		Average	95% CI	DL Ratio
Organics, Semi-volatile	N-Nitrosopiperidine	SW 8270	ng/g	<	44.8	<	41.9	<	26.6	<	26.7	<	37.8	--	100%
Organics, Semi-volatile	Naphthalene	SW 8270	ng/g	<	34.7	<	32.4	<	21.3	<	21.4	<	29.5	--	100%
Organics, Semi-volatile	Nitrobenzene	SW 8270	ng/g	<	25.1	<	23.5	<	37.5	<	37.7	<	28.7	--	100%
Organics, Semi-volatile	Pentachlorobenzene	SW 8270	ng/g	<	21.1	<	19.7	<	16.6	<	16.8	<	19.1	--	100%
Organics, Semi-volatile	Pentachloronitrobenzene	SW 8270	ng/g	<	98.4	<	92.0	<	61.4	<	61.8	<	83.9	--	100%
Organics, Semi-volatile	Pentachlorophenol	SW 8270	ng/g	<	41.1	<	38.4	<	39.6	<	39.8	<	39.7	--	100%
Organics, Semi-volatile	Phenacetin	SW 8270	ng/g	<	25.7	<	24.0	<	17.2	<	17.3	<	22.3	--	100%
Organics, Semi-volatile	Phenanthrene	SW 8270	ng/g	<	29.6	<	27.6	<	20.8	<	21.0	<	26.0	--	100%
Organics, Semi-volatile	Phenol	SW 8270	ng/g	<	19.0	<	17.7	<	39.3	<	39.6	<	25.3	--	100%
Organics, Semi-volatile	Pronamide	SW 8270	ng/g	<	35.1	<	32.8	<	10.7	<	10.8	<	26.2	--	100%
Organics, Semi-volatile	Pyrene	SW 8270	ng/g	<	22.2	<	20.8	<	18.2	<	18.3	<	20.4	--	100%
Organics, Semi-volatile	Pyridine	SW 8270	ng/g	<	55.1	<	51.6	<	26.2	<	26.3	<	44.3	--	100%
Organics, Semi-volatile	bis(2-Chloroethoxy)methane	SW 8270	ng/g	<	26.7	<	25.0	<	27.0	<	27.2	<	26.2	--	100%
Organics, Semi-volatile	bis(2-Chloroethyl)ether	SW 8270	ng/g	<	34.8	<	32.5	<	17.0	<	17.2	<	28.1	--	100%
Organics, Semi-volatile	bis(2-Chloroisopropyl)ether	SW 8270	ng/g	<	34.5	<	32.3	<	35.5	<	35.8	<	34.1	--	100%
Organics, Semi-volatile	bis(2-Ethylhexyl)phthalate	SW 8270	ng/g		431		259	<	25.9	<	26.0		234	522	2%
Organics, Semi-volatile	p-Chloroaniline	SW 8270	ng/g	<	26.6	<	24.8	<	33.2	<	33.4	<	28.2	--	100%
Organics, Semi-volatile	p-Dimethylaminoazobenzene	SW 8270	ng/g	<	24.5	<	22.9	<	32.3	<	32.5	<	26.6	--	100%

Solid Stream Data

Sample Stream: ESP Hopper Ash-Field 1

Analyte Group	Specie	Analytical Method	Units	Run 1	Run 2	Run 3	Run 3d	Average	95% CI	DL Ratio
Anions	Chloride	SM407C	ug/g	474	523	< 99.80	665	349	646	5%
Anions	Fluoride	EPA 340.2	ug/g	70.8	87.7	110	111	89.5	49	
Metals	Aluminum	SW 6010	ug/g	104,000	113,224	74,047	102,201	97,091	50,884	
Metals	Antimony	ICP-MS	ug/g	3.42	2.94	2.61	2.50	2.99	1.01	
Metals	Arsenic	SW 7060	ug/g	50.0	41.0	45.6	48.3	45.5	11.2	
Metals	Barium	SW 6010	ug/g	461	564	456	505	494	152	
Metals	Beryllium	SW 6010	ug/g	10.8	12.2	9.60	15.9	10.9	3.26	
Metals	Cadmium	SW 7131	ug/g	3.59	3.06	3.14	3.29	3.26	0.72	
Metals	Calcium	SW 6010	ug/g	19,900	18,837	15,030	18,737	17,922	6,362	
Metals	Chromium	SW 6010	ug/g	182	196	171	181	183	31.2	
Metals	Cobalt	SW 6010	ug/g	33.8	35.8	32.5	33.9	34.0	4.13	
Metals	Copper	SW 6010	ug/g	104.0	104.2	86.3	88.8	98.2	25.6	
Metals	Iron	SW 6010	ug/g	97,800	88,275	84,268	88,975	90,114	17,269	
Metals	Lead	SW 7421	ug/g	75.2	67.3	74.5	67.8	72.4	10.8	
Metals	Magnesium	SW 6010	ug/g	5,400	5,010	3,337	5,080	4,582	2,723	
Metals	Manganese	SW 6010	ug/g	243	211	203	215	219	52.0	
Metals	Mercury	SW 7471	ug/g	0.09	0.12	0.16	0.15	0.12	0.09	
Metals	Molybdenum	SW 6010	ug/g	25.3	32.8	17.6	22.8	25	18.8	
Metals	Nickel	SW 6010	ug/g	140	118	124	124	127	27.9	
Metals	Phosphorus	SW 6010	ug/g	104	< 71.7	150	< 69.7	96.7	143	12%
Metals	Potassium	SW 6010	ug/g	18,600	17,535	16,132	18,136	17,422	3,075	
Metals	Selenium	SW 7740	ug/g	8.60	7.88	11.4	10.4	9.30	4.66	
Metals	Silicon	SW 6010	ug/g	217,000	238,472	212,423	200,395	222,632	34,552	
Metals	Sodium	SW 6010	ug/g	5,630	5,361	4,679	4,870	5,223	1,217	
Metals	Strontium	SW 6010	ug/g	330	368	272	325	323	120	
Metals	Titanium	SW 6010	ug/g	6,120	6,042	6,192	5,932	6,118	187	
Metals	Vanadium	SW 6010	ug/g	322	302	293	298	305	37.4	
Metals	Zinc	SW 6010	ug/g	472	406	422	394	433	85.8	
Radionuclides	Actinium-228 @ 338 KeV	EPA 901.1	pCi/g	2.3	2.1	2.0	1.9	2.1	0.4	
Radionuclides	Actinium-228 @ 911 KeV	EPA 901.1	pCi/g	2.3	2.0	2.0	2.3	2.1	0.4	
Radionuclides	Actinium-228 @ 968 KeV	EPA 901.1	pCi/g	2.8	2.4	2.1	1.8	2.4	0.9	

ESP Hopper Ash (Field 1) - Page 1

Solid Stream Data

Sample Stream: ESP Hopper Ash-Field 1

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Run 3d		Average	95% CI	DL Ratio
Radionuclides	Bismuth-212 @ 727 KeV	EPA 901.1	pCi/g		3.4		2.8		2.1		2.7		2.8	1.6	
Radionuclides	Bismuth-214 @ 1120.4 KeV	EPA 901.1	pCi/g		7.3		5.8		5.3		5.5		6.1	2.6	
Radionuclides	Bismuth-214 @ 1764.7 KeV	EPA 901.1	pCi/g		6.9		5.1		5.6		5.2		5.9	2.3	
Radionuclides	Bismuth-214 @ 609.4 KeV	EPA 901.1	pCi/g		7.2		5.6		5.9		5.5		6.2	2.1	
Radionuclides	K-40 @ 1460 KeV	EPA 901.1	pCi/g		19		16		16		19		17	4.3	
Radionuclides	Lead-210 @ 46 KeV	EPA 901.1	pCi/g		5.6		5.1		5.6		3.7		5.4	0.7	
Radionuclides	Lead-212 @ 238 KeV	EPA 901.1	pCi/g		2.4		1.8		2.1		2.0		2.1	0.7	
Radionuclides	Lead-214 @ 295.2 KeV	EPA 901.1	pCi/g		6.8		5.7		5.9		5.8		6.1	1.5	
Radionuclides	Lead-214@ 352.0 KeV	EPA 901.1	pCi/g		7.2		5.6		5.9		6.0		6.2	2.1	
Radionuclides	Radium-226 @ 186.0 KeV	EPA 901.1	pCi/g		10		8.8		8.3		9.3		9.0	2.2	
Radionuclides	Thallium-208 @ 583 KeV	EPA 901.1	pCi/g		2.2		2.0		2.0		2.1		2.1	0.3	
Radionuclides	Thallium-208 @ 860 KeV	EPA 901.1	pCi/g		2.7		2.3		1.2		2.7		2.1	1.9	
Radionuclides	Thorium-234 @ 63.3 KeV	EPA 901.1	pCi/g		6.3		5.8		4.6		5.4		5.6	2.2	
Radionuclides	Thorium-234 @ 92.6 KeV	EPA 901.1	pCi/g		4.6		3.6		4.8		3.8		4.3	1.6	
Radionuclides	Uranium-235 @ 143 KeV	EPA 901.1	pCi/g		0.24		0.3		0.1		0.3		0.2	0.2	
Organics, Semi-volatile	1,2,4,5-Tetrachlorobenzene	SW 8270	ng/g	<	19.2	<	13.0	<	12.9	<	13.0	<	15.0	--	100%
Organics, Semi-volatile	1,2,4-Trichlorobenzene	SW 8270	ng/g	<	19.6	<	19.6	<	19.5	<	19.6	<	19.6	--	100%
Organics, Semi-volatile	1,2-Dichlorobenzene	SW 8270	ng/g	<	25.9	<	21.2	<	21.1	<	21.2	<	22.7	--	100%
Organics, Semi-volatile	1,2-Diphenylhydrazine	SW 8270	ng/g	<	100	<	100	<	100	<	100	<	100	--	100%
Organics, Semi-volatile	1,3-Dichlorobenzene	SW 8270	ng/g	<	13.2	<	23.9	<	23.8	<	23.9	<	20.3	--	100%
Organics, Semi-volatile	1,4-Dichlorobenzene	SW 8270	ng/g	<	26.8	<	19.6	<	19.5	<	19.6	<	22.0	--	100%
Organics, Semi-volatile	1-Chloronaphthalene	SW 8270	ng/g	<	21.4	<	17.9	<	17.8	<	17.9	<	19.0	--	100%
Organics, Semi-volatile	1-Naphthylamine	SW 8270	ng/g	<	51.8	<	67.7	<	67.4	<	67.7	<	62.3	--	100%
Organics, Semi-volatile	2,3,4,6-Tetrachlorophenol	SW 8270	ng/g	<	16.7	<	15.5	<	15.4	<	15.5	<	15.9	--	100%
Organics, Semi-volatile	2,4,5-Trichlorophenol	SW 8270	ng/g	<	11.0	<	17.0	<	16.9	<	17.0	<	15.0	--	100%
Organics, Semi-volatile	2,4,6-Trichlorophenol	SW 8270	ng/g	<	11.6	<	16.9	<	16.8	<	16.9	<	15.1	--	100%
Organics, Semi-volatile	2,4-Dichlorophenol	SW 8270	ng/g	<	14.7	<	19.0	<	18.9	<	19.0	<	17.5	--	100%
Organics, Semi-volatile	2,4-Dimethylphenol	SW 8270	ng/g	<	36.5	<	43.3	<	43.1	<	43.3	<	41.0	--	100%
Organics, Semi-volatile	2,4-Dinitrophenol	SW 8270	ng/g	<	233	<	139	<	139	<	139	<	170	--	100%
Organics, Semi-volatile	2,4-Dinitrotoluene	SW 8270	ng/g	<	18.3	<	19.7	<	19.6	<	19.7	<	19.2	--	100%
Organics, Semi-volatile	2,6-Dichlorophenol	SW 8270	ng/g	<	24.0	<	17.1	<	17.0	<	17.1	<	19.4	--	100%
Organics, Semi-volatile	2,6-Dinitrotoluene	SW 8270	ng/g	<	11.5	<	28.7	<	28.6	<	28.7	<	22.9	--	100%

Solid Stream Data

Sample Stream: ESP Hopper Ash-Field 1

Analyte Group	Specie	Analytical Method	Units		Run 1		Run 2		Run 3		Run 3d		Average	95% CI	DL Ratio
Organics, Semi-volatile	2-Chloronaphthalene	SW 8270	ng/g	<	10.8	<	13.1	<	13.0	<	13.1	<	12.3	--	100%
Organics, Semi-volatile	2-Chlorophenol	SW 8270	ng/g	<	25.4	<	21.2	<	21.1	<	21.2	<	22.6	--	100%
Organics, Semi-volatile	2-Methylnaphthalene	SW 8270	ng/g	<	21.9	<	12.1	<	12.1	<	12.1	<	15.4	--	100%
Organics, Semi-volatile	2-Methylphenol(o-cresol)	SW 8270	ng/g	<	17.7	<	10.3	<	10.3	<	10.3	<	12.8	--	100%
Organics, Semi-volatile	2-Naphthylamine	SW 8270	ng/g	<	64.8	<	53.3	<	53.1	<	53.3	<	57.1	--	100%
Organics, Semi-volatile	2-Nitroaniline	SW 8270	ng/g	<	13.4	<	22.1	<	22.0	<	22.1	<	19.2	--	100%
Organics, Semi-volatile	2-Nitrophenol	SW 8270	ng/g	<	14.6	<	17.4	<	17.3	<	17.4	<	16.4	--	100%
Organics, Semi-volatile	2-Picoline	SW 8270	ng/g	<	36.2	<	27.6	<	27.4	<	27.6	<	30.4	--	100%
Organics, Semi-volatile	3,3'-Dichlorobenzidine	SW 8270	ng/g	<	16.3	<	11.1	<	11.1	<	11.1	<	12.8	--	100%
Organics, Semi-volatile	3-Methylcholanthrene	SW 8270	ng/g	<	26.0	<	16.7	<	16.6	<	16.7	<	19.8	--	100%
Organics, Semi-volatile	3-Nitroaniline	SW 8270	ng/g	<	16.9	<	13.1	<	13.0	<	13.1	<	14.3	--	100%
Organics, Semi-volatile	4,6-Dinitro-2-methylphenol	SW 8270	ng/g	<	26.3	<	14.3	<	14.3	<	14.3	<	18.3	--	100%
Organics, Semi-volatile	4-Aminobiphenyl	SW 8270	ng/g	<	24.8	<	39.7	<	39.5	<	39.7	<	34.7	--	100%
Organics, Semi-volatile	4-Bromophenyl phenyl	SW 8270	ng/g	<	15.1	<	16.1	<	16.1	<	16.1	<	15.8	--	100%
Organics, Semi-volatile	4-Chloro-3-methylphenol	SW 8270	ng/g	<	24.0	<	17.2	<	17.1	<	17.2	<	19.4	--	100%
Organics, Semi-volatile	4-Chlorophenyl phenyl ether	SW 8270	ng/g	<	17.5	<	14.0	<	14.0	<	14.0	<	15.2	--	100%
Organics, Semi-volatile	4-Methylphenol(p-cresol)	SW 8270	ng/g	<	19.1	<	15.3	<	15.2	<	15.3	<	16.5	--	100%
Organics, Semi-volatile	4-Nitroaniline	SW 8270	ng/g	<	16.1	<	20.2	<	20.1	<	20.2	<	18.8	--	100%
Organics, Semi-volatile	4-Nitrophenol	SW 8270	ng/g	<	23.0	<	31.2	<	31.1	<	31.2	<	28.4	--	100%
Organics, Semi-volatile	7,12-Dimethylbenz(a)anthracene	SW 8270	ng/g	<	63.8	<	44.3	<	44.1	<	44.3	<	50.7	--	100%
Organics, Semi-volatile	Acenaphthene	SW 8270	ng/g	<	15.9	<	9.07	<	9.03	<	9.07	<	11.3	--	100%
Organics, Semi-volatile	Acenaphthylene	SW 8270	ng/g	<	7.5	<	13.9	<	13.9	<	13.9	<	11.8	--	100%
Organics, Semi-volatile	Acetophenone	SW 8270	ng/g	<	15.2	<	18.6	<	18.6	<	18.6	<	17.5	--	100%
Organics, Semi-volatile	Aniline	SW 8270	ng/g	<	31.0	<	20.5	<	20.4	<	20.5	<	24.0	--	100%
Organics, Semi-volatile	Anthracene	SW 8270	ng/g	<	19.3	<	12.3	<	12.2	<	12.3	<	14.6	--	100%
Organics, Semi-volatile	Benzidine	SW 8270	ng/g	<	20	<	20	<	20	<	20	<	20	--	100%
Organics, Semi-volatile	Benzo(a)anthracene	SW 8270	ng/g	<	17.1	<	15.0	<	14.9	<	15.0	<	15.7	--	100%
Organics, Semi-volatile	Benzo(a)pyrene	SW 8270	ng/g	<	12.7	<	17.3	<	17.2	<	17.3	<	15.7	--	100%
Organics, Semi-volatile	Benzo(b)fluoranthene	SW 8270	ng/g	<	18.9	<	30.3	<	30.1	<	30.3	<	26.4	--	100%
Organics, Semi-volatile	Benzo(g,h,i)perylene	SW 8270	ng/g	<	16.2	<	34.0	<	33.9	<	34.0	<	28.0	--	100%
Organics, Semi-volatile	Benzo(k)fluoranthene	SW 8270	ng/g	<	32.2	<	33.3	<	33.2	<	33.3	<	32.9	--	100%
Organics, Semi-volatile	Benzoic acid	SW 8270	ng/g	<	132	<	1,290	<	1,280	<	1,290	<	901	--	100%
Organics, Semi-volatile	Benzyl alcohol	SW 8270	ng/g	<	35.9	<	20.3	<	20.2	<	20.3	<	25.5	--	100%