APPENDIX B

Spiking Report

METALS AND CHLORINE SPIKES PROTOCOL

INCINERATOR COMPREHENSIVE PERFORMANCE TESTING

VEOLIA ENVIRONMENTAL SERVICES
SAUGET, IL
January 16, 2014

Table of Contents

Quality Control
- Chemicals for Spikes
- Chain of Custody

Spike Preparation Procedures
Spike Feeding Procedures
Attachments
- Specification Sheets
- Laboratory Analysis
- Calibration Records
- Calculations
- Recordkeeping Documents

Quality Control

Chemicals for Spikes

The following spikes have been selected for incinerator testing:

Mercury (II) nitrate hydrate	[high volatility metal]
Lead nitrate	[medium volatility metal]
Chromic acid	[low volatility metal]
Hexachloroethane	[chlorine source]

These chemicals were purchased from suppliers and delivered to the facility. Specification sheets or Certificates of Analysis with any applicable lot or batch numbers are provided for each of these chemicals in the attachments to this writing.

The Mercury (II) nitrate hydrate will be put into solution with de-ionized (DI) water and slightly acidified with concentrated Omni-trace nitric acid (specification sheet included in attachments) to help prevent any precipitation of solids. Pre-determined amounts of this solution will be fed during incinerator testing within plastic vials placed with the solid feed charges. Because the targeted mercury feed rate is significantly greater for the testing of No. 4 Incinerator, two different concentrations of Mercury nitrate solution batches will be prepared for use as spikes in the incinerator feeds.

The Lead nitrate will be put into re-closable plastic bags in pre-determined amounts and fed to the incinerators during testing by placing them with the solid feed charges.

The Chromic acid with a concentration of 35% will be fed to the incinerators at a pre-determined rate via metering pumps on an electronic scale device.

The Hexachloroethane will be put into re-closable plastic bags in pre-determined amounts and fed to the incinerators during testing by placing them with the solid feed charges.

Certification of Spike Measuring Equipment

The Mercury (II) nitrate hydrate will be measured out for the prepared solution in the facility laboratory based on calculated values. A mass balance certified for accuracy by a professional scale services company will be used. It is also calibrated before use as part of daily laboratory protocol. Class A graduated flasks and other selected laboratory equipment will be used for measuring out liquids for the given solution. A certified repipet dispenser will be used for filling individual vials. The concentration of the prepared Mercury solution will be confirmed by the laboratory.

The weighing devices used for measuring out the Lead nitrate spike bags and the Hexachloroethane spike bags are electronic scales with digital readout and control panels. They have been calibrated prior to use by a professional scale services company. Each scale panel bears a sticker indicating the calibration date and a written report on the calibration is

prepared. In addition, the procedures for preparing these spike bags require the scales to be zeroed on a consistent basis during use.

The device used for feeding Chromic acid combines a holding tank, metering pumps and an electronic scale with a digital readout and control panel. It has been calibrated prior to use by a professional scale services company. The scale panel bears a sticker indicating the calibration date and a written report on the calibration is prepared.

Chain of Custody

The purchased Mercury (II) nitrate hydrate will be recorded in the Product and Reagents Logbook upon receipt, assigned a tracking number and stored in the laboratory. The jars of product will be opened at the time designated to prepare the Mercury solutions. When the Mercury solutions have been prepared, the gasketed 5-gallon pails used to contain the solution will be sealed with tape across the lid with the Laboratory Manager's signature on the tape on two sides of the pail. When the pails are not in visual contact of the Laboratory Manager, they will be stored in his locked office. When the vials of Mercury solution are to be prepared, the tape on the pails must be intact with no sign it has been tampered with or been cut. If the integrity of the tape has been compromised, the Mercury solution will be considered invalid and a new solution will have to be prepared.

The Lead nitrate, Hexachloroethane and Chromic acid will be stored in their original shipping packaging in a designated indoor storage area within the facility. The Lead nitrate and Hexachloroethane containers will be opened when it is time to prepare the individual spike packages. The drums of Chromic acid will be opened as needed during the incinerator testing when they are placed on the feeding device.

Spike Preparation Procedures

The procedures written below are the steps taken by personnel when preparing and/or measuring out and documenting the spikes used for incinerator testing.

Mercury Nitrate Spike Solution Preparation Procedure

NOTE: Calculations for preparing Mercury solutions of a defined quantity and concentration are included as attachments to this writing.

1. Obtain the necessary chemicals and laboratory equipment.

2. Fill a 100 ml Class A graduated flask to line with DI water and pour into a designated 5 gallon pail.

3. Repeat as needed for additional DI water depending on the final volume of solution needed. The last 100 ml portion will be filled for later in the procedure to use in rinsing equipment and completing the final solution volume.

4. Fill the appropriate Class A graduated flask(s) with the applicable volume of Nitric acid and pour it into the 5 gallon pail. The volume needed will represent 10% of the total volume of solution needed.

5. Tare a beaker on the mass balance then add the designated amount of Mercury (II) nitrate hydrate.

6. Empty the beaker into the 5 gallon pail. Then rinse the beaker three times with an appropriate portion of the reserved 100 ml DI water.

7. After rinsing is complete, add the remaining DI water in the 100 ml flask to the solution in the 5 gallon pail to obtain the final desired volume.

8. Record the quantities of chemicals placed in the 5 gallon pail in the Laboratory logbook.

9. Stir the solution with a rinsed plastic tube until there is no visual evidence of undissolved Mercury (II) nitrate hydrate.

10. Pull 2 aliquots of approximately 50 ml of Mercury solution for subsequent analysis.

11. Close the 5 gallon pail with a gasketed lid and follow the requirements for Chain of Custody for the Mercury solution.

Mercury Spike Vial Preparation Procedure

1. Obtain the applicable Mercury solution and plastic vials.

2. Rinse the repipet dispenser and transfer container used for measuring Mercury nitrate solution first with DI water, then twice with a portion of the solution.

3. Transfer desired amount of the selected Mercury nitrate solution from the storage vessel to the transfer container. The concentration of the solution is dependent on which incinerator the spike vials are being prepared for.

4. Position equipment within a laboratory hood.

5. Calibrate the repipet-pump by selecting a Class A volumetric flask of the applicable size and dispensing the solution into the flask while adjusting the re-pipet pump as needed to achieve the specific volume. This calibration step should be repeated after every 100 vials are filled.

6. Number each vial needed with a label starting at number "1".

7. Using the repipet-pump, transfer the specified amount of Mercury nitrate solution into the vial. The amount of solution transferred to the vial is dependent on which incinerator the spike vials are being prepared for.

8. Document the vial number and volume on the spike vial sheet.

9. Securely seal the vial and carefully place it into a plastic storage bucket.

10. Repeat steps for number of spike vials needed.

11. When complete, close the plastic storage buckets and place in designated area. All personnel involved in preparing the vials must have their names written on the spike vial sheet.

Lead Nitrate Spike Bag Preparation Procedure

1. Obtain Lead nitrate raw material and re-closable plastic bags.

2. Position electronic scales in the selected area and zero the scales before use.

3. Put on required PPE before exposure to the Lead nitrate. Personnel directly handling Lead nitrate need dust mask, Tyvek suit, and nitrile gloves.

4. Number each plastic bag needed with a label starting at "L-1".

5. Open a bag of raw material and use scoop or equivalent device to place the specified amount of Lead nitrate into the numbered plastic bag.

6. Document the bag number and weight on the spike bag sheet.

7. Securely seal the bag and carefully place it into a plastic storage drum.

8. Repeat steps for number of spike bags needed. Re-zero the scale at least once every 100 bags.

9. When complete, close and seal the plastic storage drums and place in the designated area. All personnel involved in preparing the bags must have their names written on the spike bag sheet.

Hexachloroethane Spike Bag Preparation Procedure

1. Obtain Hexachloroethane raw material and re-closable plastic bags.

2. Position electronic scales in the selected area and zero the scales before use.

3. Put on required PPE before exposure to the Hexachloroethane. Personnel directly handling Hexachloroethane need a full-face respirator with OV/AG cartridges, Tyvek suit, and nitrile gloves.

4. Number each plastic bag needed with a permanent marker starting at "H-1".

5. Open a bag of raw material and use scoop or equivalent device to place specified amount of Hexachloroethane and/or PVC into the numbered plastic bag.

6. Document the bag number and weight on the spike bag sheet.

7. Securely seal the bag and carefully place it into a plastic storage drum.

8. Repeat steps for number of spike bags needed. Re-zero the scale at least once every 100 bags.

9. When complete, close and seal the plastic storage drums and place in the designated area. All personnel involved in preparing the bags must have their names written on the spike bag sheet.

Spike Feeding Procedures

The procedures written below are the steps taken by personnel when feeding spikes used for incinerator testing.

Feeding Procedure for Mercury, Lead and Chlorine Spikes

1. Position the Mercury nitrate spike vials, the Lead nitrate spike bags and the Hexachloroethane near the loading point on the solid charge feed conveyor.

2. Place one spike container of each chemical into each charge. Because the mercury feed rates are dependent on the incinerator, the correct spike vial must be fed to the respective incinerator.

3. Document the waste charge number, vial number and bag numbers on the charge sheet. All personnel involved in feeding the charges must have their names written on the charge sheet.

Feeding Procedures for Chromium Spike

1. Place the feeding device and selected drums of Chromic acid near the injection point on the incinerator.

2. Activate the power panel for the feeding device and zero the electronic scales.

3. Put on the Personnel Protective Equipment recommended by the MSDS for Chromic Acid and transfer the desired amount of material to the holding tank on the feeding device.

4. At the designated time, start the metering pumps and select pump settings that deliver the targeted feed rate.

5. Document scale readings and time at selected intervals on the Chromic acid feed chart to verify that the desired feed rate is being achieved during the incinerator testing period. All personnel involved in feeding the Chromic acid must have their names written on the feed chart.

ATTACHMENTS

Wego Chemical _Mineral Corp.
239 Great Neck Road
Great Neck, NY 11021
UNITED STATES
Phone: (516) 487-3510
Fax: (516) 487-3794

TECHNICAL DATA

CERTIFICATE OF ANALYSIS **Certificate Date**

Product Name: LEAD NITRATE TECH - 25 KG BAGS

Wego Tracking Number 00021321 **CAS #** 10099-74-8
File Number 56763 **Synonyms**

ITEMS	Specifications	TEST RESULTS
Batch No 2013-1-17		*Quantity* *12,800.0000 KGS*
Purity	99 % min	99.2
Water Insoluble Matter	0.02 % max	0.01
Iron	0.01 % max	0.003
Free Acid	0.10 % max	0.05
Mfg Date:	-	1/2013
Expiration Date	-	1/2014

The information set forth herein is offered as a service to our customers and is not intended to relieve a customer from its responsibility to determine the suitability of the information or of the materials described herein for purchaser's purposes, to investigate other sources of information, to comply with all laws and procedures regarding safe use of these materials and to use these materials in a safe manner. No warranty is made of the merchantability or fitness of any product, and nothing herein waives any of the Seller's conditions of sale.

Sheet No.: CHROMIC ACID Liquid (35%)
Revision: 04/21/08 WES
IMDS ID No.: 756617

Technical Information

CHROMIC ACID

Liquid (35%)

INTRODUCTION

CHROMIC ACID Liquid (35%) is a high-purity product well suited for use in chromium plating and anodizing applications. It can also be used in the manufacture of chromate conversion compounds for zinc and cadmium, bright dips for copper, brass, aluminum, and magnesium, for producing certain types of pigments, as an oxidant in organic syntheses in the pharmaceutical industry, and as a catalyst in certain petroleum refining processes.

SPECIFICATIONS

	Specification	Typical
Chromic Acid CrO3 -	57.3 oz/gal (430 g/l) Min.	60 oz/gal (450 g/l)
Sulfate (SO4) -		0.07%
Chloride (Cl) -		0.002%
Insoluble Materials -		0.002%
Sodium (Na) -		0.023%

ATOTECH

Atotech USA Inc.
Quality Control
1750 Overview drive
Rock Hill, SC 29731-2000
QC Lab Tel: (803) 817-3575 - Fax: (803) 817-3606
Customer Service: (800) 752-8464 (US Customers Only)

BRENNTAG MID SOUTH (FORMERLY GS
126 CHOUTEAU AVE
SAINT LOUIS MO 63102

Inspection Certificate

Date	07/26/2013
Article-No:	2200041-0055-4-000
Material:	LIQUID CHROMIC ACID (CH)
BATCH:	CH13F00382
Expiration Date :	06/21/2015
Atotech Order No:	5002139983
Delivery No:	5006218310
Cust.Mat.No:	
Cust.Order No:	440355

This is to certify that the product identified has been tested under controlled laboratory conditions and found to meet our specifications and quality assurance standards.

Inspection Date: 06/21/2013

Characteristic	Lower Limit	Upper Limit	Value	Unit	Method
Appearance			Clear liquid		
Color			Red		
Specific Gravity 20 deg C	1.285	1.315	1.300	g/ml	5360-PHY
Content: Chromic acid	419.3	471.5	443.0	g/l	8296-TIT

This is a controlled computer printout valid without a signature.

Quality Control Laboratory
Laboratory Manager

(THIS STATEMENT PRINTS ON A COA FOR A REGULAR SHIPMENT)

MPORTANT: All information provided is believed to be accurate and complete. The data provided is representative of the product quality n the date of analysis for the lot number indicated. This certificate of analysis may not include all of the constituents of the product. 'ersons using this information should make their own determination regarding its suitability for their particular application. This ertificate of analysis shall not in any way limit or preclude the operation and effect of the applicable terms and conditions of sale.

ATOTECH

Atotech USA Inc.
Quality Control
1750 Overview drive
Rock Hill, SC 29731-2000
QC Lab Tel: (803) 817-3575 - Fax: (803) 817-3606
Customer Service: (800) 752-8464 (US Customers Only)

BRENNTAG MID SOUTH (FORMERLY GS
126 CHOUTEAU AVE
SAINT LOUIS MO 63102

Inspection Certificate

Date	07/26/2013
Article-No:	2200041-0055-4-000
Material:	LIQUID CHROMIC ACID (CH)
BATCH:	CH13G00252
Expiration Date :	07/16/2015
Atotech Order No:	5002139983
Delivery No:	5006218310
Cust.Mat.No:	
Cust.Order No:	440355

This is to certify that the product identified has been tested under controlled laboratory conditions and found to meet our specifications and quality assurance standards.

Inspection Date: 07/16/2013

Characteristic	Lower Limit	Upper Limit	Value	Unit	Method
Appearance			Clear liquid		
Color			Red		
Specific Gravity 20 deg C	1.285	1.315	1.307	g/ml	5360-PHY
Content: Chromic acid	419.3	471.5	449.6	g/l	8296-TIT

This is a controlled computer printout valid without a signature.

Quality Control Laboratory
Laboratory Manager

(THIS STATEMENT PRINTS ON A COA FOR A REGULAR SHIPMENT)

IMPORTANT: All information provided is believed to be accurate and complete. The data provided is representative of the product quality on the date of analysis for the lot number indicated. This certificate of analysis may not include all of the constituents of the product. Persons using this information should make their own determination regarding its suitability for their particular application. This certificate of analysis shall not in any way limit or preclude the operation and effect of the applicable terms and conditions of sale.

808797

100179

ATOTECH

Atotech USA Inc.
Quality Control
1750 Overview drive
Rock Hill, SC 29731-2000
QC Lab Tel: (803) 817-3575 - Fax: (803) 817-3606
Customer Service: (800) 752-8464 (US Customers Only)

BRENNTAG MID SOUTH (FORMERLY GS
126 CHOUTEAU AVE
SAINT LOUIS MO 63102

Inspection Certificate

Date	07/30/2013
Article-No:	2200041-0055-4-000
Material:	LIQUID CHROMIC ACID (CH)
BATCH:	CH13G00385
Expiration Date :	07/25/2015
Atotech Order No:	5002139983
Delivery No:	5006218461
Cust.Mat.No:	
Cust.Order No:	440355

This is to certify that the product identified has been tested under controlled laboratory conditions and found to meet our specifications and quality assurance standards.

Inspection Date: 07/25/2013

Characteristic	Lower Limit	Upper Limit	Value	Unit	Method
Appearance			Clear liquid		
Color			Red		
Specific Gravity 20 deg C	1.285	1.315	1.303	g/ml	5360-PHY
Content: Chromic acid	419.3	471.5	448.2	g/l	8296-TIT

This is a controlled computer printout valid without a signature.

Quality Control Laboratory
Laboratory Manager

(THIS STATEMENT PRINTS ON A COA FOR A REGULAR SHIPMENT)

MPORTANT: All information provided is believed to be acc urate and complete. The data provided is representative of the product quality n the date of analysis for the lot number indicated. This certificate of analysis may not include all of the constituents of the product. ersons using this information should make their own determination regarding its suitability for their particular application. This ertificate of analysis shall not in any way limit or preclude the operation and effect of the applicable terms and conditions of sale.

ATOTECH

Atotech USA Inc.
Quality Control
1750 Overview drive
Rock Hill, SC 29731-2000
QC Lab Tel: (803) 817-3575 - Fax: (803) 817-3606
Customer Service: (800) 752-8464 (US Customers Only)

BRENNTAG MID SOUTH (FORMERLY GS
126 CHOUTEAU AVE
SAINT LOUIS MO 63102

Inspection Certificate

Repeat printout

Date	05/28/2013
Article-No:	2200041-0055-4-000
Material:	LIQUID CHROMIC ACID (CH)
BATCH:	CH13E00343
Expiration Date :	05/20/2015
Atotech Order No:	5002137274
Delivery No:	5006214295
Cust.Mat.No:	
Cust.Order No:	428441

This is to certify that the product identified has been tested under controlled laboratory conditions and found to meet our specifications and quality assurance standards.

Inspection Date: 05/20/2013

Characteristic	Lower Limit	Upper Limit	Value	Unit	Method
Appearance			Clear liquid		
Color			Red		
Specific Gravity 20 deg C	1.285	1.315	1.306	g/ml	5360-PHY
Content: Chromic acid	419.3	471.5	449.9	g/l	8296-TIT

This is a controlled computer printout valid without a signature.

Quality Control Laboratory
Laboratory Manager

(THIS STATEMENT PRINTS ON A COA FOR A REGULAR SHIPMENT)

IMPORTANT: All information provided is believed to be accurate and complete. The data provided is representative of the product quality on the date of analysis for the lot number indicated. This certificate of analysis may not include all of the constituents of the product. Persons using this information should make their own determination regarding its suitability for their particular application. This certificate of analysis shall not in any way limit or preclude the operation and effect of the applicable terms and conditions of sale.

SKYLINE CHEMICAL CORP.

P.O. Box 53663, IRVINE, CALIFORNIA 92619 (USA)

TEL: +1-800-732-5871 FAX: +1-949-653-5836 EMAIL: sales@skylinechemical.com

CERTIFICATE OF ANALYSIS

Lot No. SC/13-002 Nikkin FLUX Date FEB 5, 2013

PRODUCT	:	HEXACHLOROETHANE
FORM	:	WHITE, CRYSTALLINE POWDER (FREE-FLOWING MATERIAL)
COLOR	:	SNOW-WHITE
ODOR	:	CAMPHOR-LIKE
(1) PURITY (% BY GLC)	:	99.92%
(2) MELTING POINT	:	185 °C
(3) MOISTURE (% WT.)	:	0.015%
(4) ASH (% WT.)	:	0.1%
(5) FREE CHLORINE	:	NIL
(6) WATER SOLUBLE CHLORIDE (% NaCl)	:	0.023%
(7) GRADING	:	-18 +150 Mesh BSS

for SKYLINE CHEMICAL CORP

(DIRECTOR)

Attn. Mr. Steve Schoeffler
RE. COA for your PO# Email 6/14/13 Dt. Jun 14, 2013
Quantity 8,800 lbs. net

parchem
fine & specialty chemicals

Certificate of Analysis

HEXACHLOROETHANE

Lot/Batch #: SC/12-13/18
Customer PO #: 86000-5010088935
Parchem Order #: 22689

Test	Result
Form	White, crystalline powder (Free-flowing material)
Color	Snow-white
Odor	Camphor-like
Purity	99.96%
Melting Point	185.4°C
Moisture	0.01% wt.
Ash	0.09% wt.
Free Chlorine	NIL
Water Soluble Chloride (% NaCl)	0.002%
Grading	-18 +150 Mesh BSS

parchem

Approved By:

Quality Assurance
Jacob Klein

parchem - fine & specialty chemicals | 415 Huguenot Street New Rochelle, NY 10801 | Tel 914-654-6800 | www.parchem.com | dox@parchem.com

Certificate of Analysis

Alfa Aesar
A Johnson Matthey Company

Product No.: 14497

Product: Mercury(II) nitrate hydrate, ACS, 98.0% min

Lot No.: A28Z031

Test	Limits	Results
Assay	98.0 % min	99.50 %
Residue after reduction	0.01 % max	0.0079 %
Chloride	0.002 % max	< 0.002 %
Sulfate	0.002 % max	< 0.002 %
Iron	0.001 % max	< 0.001 %

Appearance	Off-white, crystalline lumps
Mercurous mercury (Hg)	0.12 %

This document has been electronically generated and does not require a signature.

www.alfa.com

NORTH AMERICA
Tel: +1-800-343-0660 or +1-978-521-6300
Fax: +1-800-322-4757
Email: info@alfa.com

GERMANY
Tel: 00800 4566 4566 or +49 721 84007 280
Fax: 00800 4577 4577 or +49 721 84007 300
Email: Eurosales@alfa.com

UNITED KINGDOM
Tel: 0800-801812 or +44 (0)1524-850506
Fax: +44 (0)1524-850508
Email: UKsales@alfa.com

FRANCE
Tel: 0800 03 51 47 or +33 (0)3 8862 2690
Fax: 0800 10 20 67 or +33 (0)3 8862 6864
Email: frventes@alfa.com

INDIA
Tel: +91 8008 812424 or +91 8008 812525 or +91 8008 812626
Fax: +91 8419 260060
Email: india@alfa.com

CHINA
Tel: +86 (010) 8567-8600
Fax: +86 (010) 8567-8601
Email: saleschina@alfa-asia.com

KOREA
Tel: +82-2-3140-0000
Fax: +82-2-3140-6002
Email: saleskorea@alfa-asia.com

Certificate of Analysis

EMD™

Nitric Acid

Omni*Trace*® High Purity Acid

ITEM NUMBER: NX0407
LOT NUMBER: 53099

Release Date: April 09, 2013

Test	Limit	Result
Assay (HNO_3, w/w):	67 - 70%	69%
Color	7 APHA	< 7 APHA
Density (g/mL)	1.41 - 1.42 g/mL	1.42 g/mL

Analyte	Limit	Result
Chloride (Cl^-)	0.2 ppm	< 0.2 ppm
Total Phosphorus (P)	0.01 ppm	< 0.01 ppm
Total Sulfur (S)	0.3 ppm	< 0.3 ppm

Specified Trace Metals by ICP-MS (ng/g)

Analyte	Limit (max.)	Result (in ppb)	Analyte	Limit (max.)	Result (in ppb)	Analyte	Limit (max.)	Result (in ppb)
Aluminum (Al)	1	< 0.5	Holmium (Ho)	0.1	< 0.1	Ruthenium (Ru)	0.5	< 0.1
Antimony (Sb)	0.5	< 0.1	Indium (In)	0.1	< 0.1	Samarium (Sm)	0.1	< 0.1
Arsenic (As)	0.5	< 0.1	Iron (Fe)	1	< 0.5	Scandium (Sc)	0.1	< 0.1
Barium (Ba)	0.1	< 0.1	Lanthanum (La)	0.1	< 0.1	Selenium (Se)	1	< 0.1
Beryllium (Be)	0.1	< 0.1	Lead (Pb)	0.1	< 0.1	Silver (Ag)	0.1	< 0.1
Bismuth (Bi)	0.1	< 0.1	Lithium (Li)	0.1	< 0.1	Sodium (Na)	1	< 0.3
Boron (B)	1	< 0.5	Lutetium (Lu)	0.1	< 0.1	Strontium (Sr)	0.1	< 0.1
Cadmium (Cd)	0.5	< 0.1	Magnesium (Mg)	1	< 0.2	Tellurium (Te)	0.1	< 0.1
Calcium (Ca)	1	< 0.5	Manganese (Mn)	0.1	< 0.1	Terbium (Tb)	0.1	< 0.1
Cerium (Ce)	0.1	< 0.1	Mercury (Hg)	0.1	< 0.02	Thallium (Tl)	0.1	< 0.1
Cesium (Cs)	0.1	< 0.1	Molybdenum (Mo)	0.1	< 0.1	Thorium (Th)	0.1	< 0.1
Chromium (Cr)	1	< 0.5	Neodymium (Nd)	0.1	< 0.1	Thulium (Tm)	0.1	< 0.1
Cobalt (Co)	0.5	< 0.1	Nickel (Ni)	0.5	< 0.5	Tin (Sn)	0.5	< 0.1
Copper (Cu)	0.5	< 0.2	Niobium (Nb)	0.1	< 0.1	Titanium (Ti)	0.5	< 0.1
Dysprosium (Dy)	0.1	< 0.1	Palladium (Pd)	0.5	< 0.1	Tungsten (W)	0.1	< 0.1
Erbium (Er)	0.1	< 0.1	Platinum (Pt)	0.5	< 0.1	Uranium (U)	0.1	< 0.1
Europium (Eu)	0.1	< 0.1	Potassium (K)	1	< 0.2	Vanadium (V)	0.5	< 0.1
Gadolinium (Gd)	0.1	< 0.1	Praseodymium (Pr)	0.1	< 0.1	Ytterbium (Yb)	0.1	< 0.1
Gallium (Ga)	0.1	< 0.1	Rhenium (Re)	0.1	< 0.1	Yttrium (Y)	0.1	< 0.1
Germanium (Ge)	0.1	< 0.1	Rhodium (Rh)	0.5	< 0.1	Zinc (Zn)	0.5	< 0.2
Gold (Au)	0.1	< 0.1	Rubidium (Rb)	0.1	< 0.1	Zirconium (Zr)	0.1	< 0.1
Hafnium (Hf)	0.1	< 0.1						

Other Trace Metals by ICP-MS (ng/g)

Tantalum (Ta)	< 0.1

EMD Chemicals Inc.
Affiliate of Merck KGaA, Darmstadt, Germany

Gene A. Desotelle
Quality Control Manager

For Technical Assistance Call: (800) 222-0342

Made in Canada

Effective Date: 02/02/2010 NForm1055(4)

Bottle-Top Dispenser

Operator Instructions

For capacities of

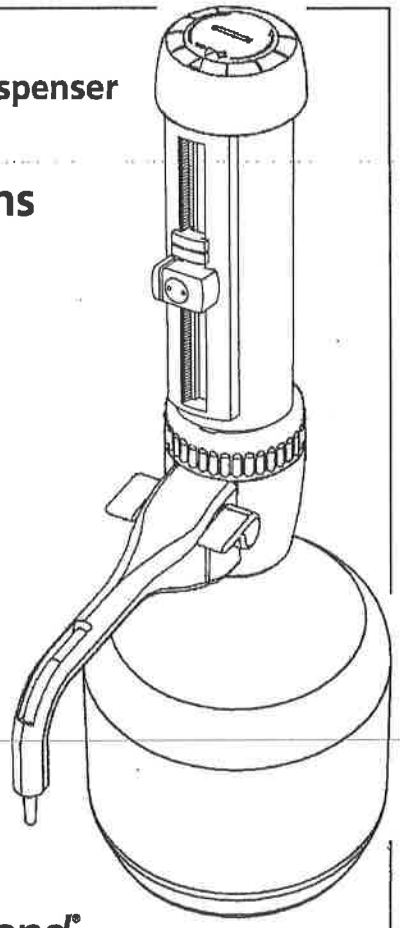
2.5ml

5ml

10ml

30ml and

50ml



Fisherbrand®

Quality Control Certificate & Instrument Warranty

GB WARRANTY

This instrument is guaranteed for 12 months. This certificate of quality control is valid for the enclosed apparatus. These test results are to ISO standard 8655 and show imprecision and inaccuracy of stated maximum nominal volume using distilled water @ 20.000 °C..

D GARANZIA

Wir leisten 12 Monate Garantie gegen Vorlage dieses Prufprotokolls. Dieses prufprotokoll wurde fur das beilegende Gerat erstellt. Dieses Testergebnisse entsprechen ISO Norm 8655 und weisen eine Ungenauigkeit des angegebenen maximalen Nenninhalts bei Verwendung von destilliertem Wasser bei 20.000 °C auf.

F GARANTIE

Nous accordons une garantie de 12 mois pour tout appareil achete en notre societe. Ce certificat a eté établi pour l'appareil suivant. Les resultats des essais son conforme a la norme ISO 8655 et font ressortir une imprecision et une inexactitude du volume dans les limites de la valuer nominale maximale admissible avec de l'eau distillée a 20.000 °C.

E GARANTIA

Concedemos contra la presentacion de este certificado 12 meses de garantía. Este certificado de control de calidad es valido para el aparato adjunto. Los resultados de estos ensayos conforman con la norma ISO 8655 y muestran la imprecision e inexactitud del volumen nominal maximo declarado usando aqua destilada a 20.000 °C.

Model	Inspector	Date	Serial No.
Fisherbrand	PARISH.J	21.02.2013	AF2572

1543 Columbia Ave,
Franklin TN 37064

Phone: (800) 846-9959 - (412) 257-8861

Test Volume (ml)	10 ML
Inaccuracy (A%)	0.0002 %
Coefficient of Variation (CV%)	0.0617 %

Quality Compliance CERTIFICATE of Conformity

These products are subject to our highest standard of quality assurance. At every stage of production this manufacturing lot of items is produced in a controlled environment and is traceable. We test every lot of these products to ensure they perform to your needs.

We guarantee that these products meet our strictest requirements as applicable for precision, clarity, warp, centrifugation and are free of detectable contamination that might affect your results. Should you find these products fail to meet our published standards please contact us for a replacement.

To receive a testing certificate for a specific lot number please contact our Customer Support Department.

Analysis Certificate

ISO 9001 Registered Quality ™

This certificate of compliance is issued to confirm that this lot of products conforms to our written material specifications and has been tested and found as applicable to be:

- Free of detectable Nuclease contaminants as confirmed by a gel assay.
- Free of Human DNA to a detection level of 1 picogram of DNA.
- If this is a sterile product this lot has been tested and found to be free of Endotoxin to a detection level of 0.05EU/mL.
- Sterile studies to detect microbial contamination are completed quarterly in compliance with AAMI/ISO 11137 and these products have an SAL between 10^{-5} and 10^{-6}.
- The resins used to produce these products have been tested for heavy metals contamination using the U.S.P. (231) method and found to have results lower than 1ppm.

Testing protocols are described on the reverse

Rev. New

Testing Protocols Used in Quality Assurance

Product Sterilization

Those products designated as Sterile are irradiated by gamma radiation. The validated dosage level for these products is in a range between 12-25 kGy.

Bioburden and Radiation Validation

Bioburden and Radiation Validation studies are performed according to the ANSI/AAMI/ISO 11137 standard. This testing is performed quarterly by an independent laboratory.

Endotoxin Detection (Pyrogen)

Samples of these products are extracted in endotoxin-free water and tested for endotoxins using the kinetic turbidimetric method of the Limulus Amoebocyte Lysate (LAL) test according to the USP standard. The minimum detection level for this test is 0.05 EU/mL.

Nuclease Detection

For RNase testing, sample products are flushed in 20pL pools containing 1µg of 7.5 kb Poly(A)-tailed RNA with a buffer containing NaCl and MgCl2. For the DNase test, product samples are flushed in 20pL pools containing of 1.0µg of l Hind III DNA with a buffer containing NaCl and MgCl2. Reactions are then incubated for 1 hour at 37° C then visualized in an agarose gel. The results are then compared to negative and positive controls. The resulting reactions must show no degradation of the DNA and RNA fragments to meet our quality standard.

Rev. New

DNA Contamination

Each product sample is extracted with sterile, DNA-free water. A portion of the extract is added to a PCR reaction containing thermostable polymerase, a primer set to amplify a mammalian gene, and dNTPs. Negative control reactions and positive control reactions (containing 1 picogram of Human Genomic DNA) are also created. All reactions are thermocycled for 40 cycles, after which the results are visualized by agarose gel electrophoresis. The absence of PCR signal in the sample reactions indicates the product is free of DNA contamination.

To receive a Testing Certificate for a specific lot number, please contact our Customer Support Department at:

800.227.1466 or ++ 1.707.766.2100
or Fax us at
800.648.4859 or ++1.707.766.2199
with the lot number of your product.

CI-CERT

Printed on Recycled Paper

The PCR process is covered by patents owned by Hoffman-La Roche Ltd.

©Copyright 2004 Labcon North America. All Rights Reserved.

MERCURY CONCENTRATION FOR MERCURY (II) NITRATE HYDRATE, LOT NO. A28Z031

From Certification of Analysis for Lot No. A28Z031:

Assay = 99.5 wt. % $Hg(NO_3)_2 \cdot x\,H_2O$ x = 1 or 2

Also contains 0.12 wt. % Mercury in 1+ oxidation state (Mercury (I) or Mercurous mercury)

Estimated Average Molecular Weight and Percent Mercury by Weight:

$Hg(NO_3)_2 \cdot H_2O$: 200.6 + 2{14.01 + (3 * 16.00)} + 18.02 = 342.6 amu

$Hg(NO_3)_2 \cdot 2\,H_2O$ 200.6 + 2{14.01 + (3 * 16.00)} + 2(18.02) = 360.7 amu

For 50/50 ratio of monohydrate/dihydrate:

200.6 / {(342.6 + 360.7) / 2} * 100 = 57.05 wt. % Mercury in $Hg(NO_3)_2 \cdot x\,H_2O$

For 99.5% assay and 0.12% Mercurous mercury of Lot No. A28Z031:

0.995 (57.05) + 0.12 = 56.88 wt. % Mercury

MERCURY SOLUTION FOR NO. 2 AND NO. 3 INCINERATORS

Targeted Mercury feed rates: 0.002 lb Mercury / hour

40 vials solution / hour @ 10 ml solution / vial *

56.88 wt. % Mercury in $Hg(NO_3)_2 \cdot x\ H_2O$

Estimated Total Solution Needed:

10 ml/vial (40 vial/hr)(4 hr/test)(3 test/incin)(2 incin) = 9600 ml = 9.6 liters

9.6 liters + safety factor = 12 liters Mercury solution

For 12 Liters of Mercury Solution:

0.002 lb Hg/hr (453.6 gm/lb) / 40 vials/hr = 0.02268 gm Hg/vial

$(0.02268\ ^{gm\ Hg}/_{vial}) / (10\ ^{ml\ sol'n}/_{vial}) \times 1000\ ^{ml}/_{lit} \times 12$ lit / 0.5688 =

47.85 gm $Hg(NO_3)_2 \cdot x\ H_2O$ in 12 liters solution

Amounts of Components for Preparation of Mercury Solution for No. 2 and No. 3 Incinerators:

47.85 gm +/. 0.05 gm $Hg(NO_3)_2 \cdot x\ H_2O$

10.8 liters de-ionized water

1.2 liters conc. Nitric acid

*Volumes may be modified based on concentrations in the native waste fed.

MERCURY SOLUTION FOR NO. 4 INCINERATOR

Targeted Mercury feed rates: 0.04 lb Mercury / hour

40 vials solution / hour @ 20 ml solution / vial*

56.88 wt. % Mercury in $Hg(NO_3)_2 \cdot x\ H_2O$

Estimated Total Solution Needed:

20 ml/vial (40 vial/hr)(4 hr/test)(3 test/incin) = 9600 ml = 9.6 liters

9.6 liters + safety factor = 12 liters Mercury solution

For 12 Liters of Mercury Solution:

0.04 lb Hg/hr (453.6 gm/lb) / 40 vials/hr = 0.4536 gm Hg/vial

$(0.4536\ ^{gm\ Hg}/_{vial}) / (20\ ^{ml\ sol'n}/_{vial}) \times 1000\ ^{ml}/_{lit} \times 12\ lit / 0.5688 =$

478.5 gm $Hg(NO_3)_2 \cdot x\ H_2O$ in 12 liters solution

Amounts of Components for Preparation of Mercury Solution for No. 4 Incinerator:

478.5 gm +/- 0.05 gm $Hg(NO_3)_2 \cdot x\ H_2O$

10.8 liters de-ionized water

1.2 liters conc. Nitric acid

*Volumes may be modified based on concentrations in the native waste fed.

REPORT TO: Jeff Mueller DK

VES / TWI NON-ROUTINE SAMPLE REPORT

RECEIVER: NA PROFILE: NA

GENERATOR:

SAMPLE #	DRUM #	As (mg/kg)	Be (mg/kg)	Cd (mg/kg)	Cr (mg/kg)	Pb (mg/kg)	Hg (mg/kg)	Date	Analyst
Low Hg 2251-67-17							2388	8/30/13	DB
Hi Hg 2251-67-20							23,550	1	1

Reviewed By: Kathleen Smith Date: 9/16/13

THIS SAMPLE WAS COLLECTED ACCORDING TO APPLICABLE SW-846 PROCEDURES

This report had been prepared for the exclusive use and benefit of Veolia Environmental Services. No representation concerning sample validity or analytical accuracy of completeness is hereby made to any other person receiving this report.

C:\Documents and Settings\Formby\My Documents\Metals Forms\~Metals Non-Routine Forms

Standards Reagents Preparation

	Name	Starting Material	Trace Number	Amount	Final Volume	Prep Date	Exp. Date	Analyst
1	5.0 ug/ml TMX/DCB	(500 ug/ml) TMX Stock Soln	2251-56-8	5 ml	500 ml	8/14/13	2/14/14	SL
2	Surrogate Standard	(500 ug/ml) DCB Stock Soln	2251-56-11	5 ml	↓	↓	↓	↓
3	in Hexane	Hexane	2184-44-10	SQ	↓	↓	↓	↓
4	1% Sodium Bicarbonate	Sodium Bicarbonate	2184-19-11	30.07g	3L	8/16/13	8/30/13	JF
5	in D. H_2O	D. H_2O	—	SQ	↓	↓	↓	↓
6	Sulfide Antioxidant	Sodium Hydroxide	2184-37-1	80.07g	1L	8/16/13	N/A	JF
7	Buffer Solution	Ascorbic Acid	2184-33-4	35.04g	↓	↓	↓	↓
8	↓	Disodium Edta	2184-18-15	67.10g	↓	↓	↓	↓
9	↓	D. H_2O	—	SQ	↓	↓	↓	↓
10	Aproximate 1,000 ug/ml Sulfide	Sulfide Antioxidant	2251-67-6	250mL	500mL	8/16/13	2/16/14	JF
11	LCS/Spike Solution	Saturated Sulfide	2251-37-8	1.2mL	↓	↓	↓	↓
12	↓	D. H_2O	—	SQ	↓	↓	↓	↓
13	2.5 N Sodium Hydroxide	Sodium Hydroxide	2184-37-1	350.00g	3.5L	8-25-13	8-25-14	SL
14	in Di H_2O	Di H_2O	—	SQ	↓	↓	↓	↓
15	1% Sodium Bicarbonate	Sodium Bicarbonate	2184-19-11	30.00g	3L	8-25-13	9/8/13	SL
16	in Di H_2O	Di H_2O	—	SQ	↓	↓	↓	↓
17	Low Mercury Matt	Mercury (II) Nitrate	2184-48-8	~~1.2~~ 47.85 FHF	8/27/13 12L	8-27-13	~~8/7~~	FHF
18	Testing Solution	Nitric Acid Trace	2184-47-17	1.2L	↓	↓	↓	↓
19	226.8 mg/kg Hg	D. H_2O	—	SQ	↓	↓	↓	↓
20	High Mercury Matt	Mercury (II) Nitrate	2184-48-9/2184-48-10	478.50	12L	↓	↓	↓
21	Testing Solution	Nitric Acid trace	2184-47-17	1.2L	↓	↓	↓	↓
22	22680.0 mg/kg	Di H_2O	—	SQ	↓	↓	↓	↓
23	Btu/lb LCS/Spike	2-chlorbenzothiazole	2184-40-16	25.0025g	~~500mL~~ 100mL	9/3/13	3/3/14	JF
24	Solution in Butyl Acetate	1-Bromo-4-Fluorobenze	2184-8-19	23.8189g	↓	↓	↓	↓
25	↓	1-Bromo-4-Fluorobenze	2184-21-7	1.1759 g	↓	↓	↓	↓
26	↓	Butyl Acetate	2184-43-30	SQ	↓	↓	↓	↓
27	1% Sodium Bicarbonate	Sodium Bicarbonate	2184-19-16	30.0240g	3L	9/8/13	9/22/13	JF
28	in D. H_2O	D. H_2O	—	SQ	↓	↓	↓	↓
29								
30		Lines # 29 + 30 NOT USED			MJ	9/10/13		

Reviewed By: Date: 9/15/13

Mercury
By Mercury Analyzer

BOOK NO. 2346

Unless otherwise noted, sample diluted to 50mL

DMA #3

Run Date	Prep Date(m/d) & Batch#	Sample ID	Receiver # Profile#	Digested Sample wt(g)	Instrument Test Wt (g)	Instrument Reading(ng)	Sample Result mg/kg	A
8/29/13	8/29/13 B1 -5	361633 ✓	43-2297	0.508	~~0.083~~ 0.250 ~~0.097~~	0.083/0.097	<0.04(0.038)	08/14
	—	0.1 ng std.	—	—	0.010	0.084	-16%	
	—	0.5 ng std.	—	—	0.050	0.48	-4%	
	—	5 ng std.	—	—	0.050	5.0	±0%	
	8/27/13 B1 -5	360735 ✓	42-9761	0.503	0.250	0.01	<0.04	
	-6	360156 ✓	42-9744	0.501	0.250	0.003	<0.04	
	-8	360572 ✓	43-0483	0.510	0.250	0.03	<0.04	
	-9	360205 ✓	42-9863	0.507	0.250	0.04	<0.04	
	-10	360141 ✓	42-9721	0.503	0.250	0.07	<0.04	
	-16	360212 ✓	42-9904	0.501	0.250	0.007	<0.04	
	-17	360210 ✓	42-9563	0.501	0.250	1.25/1.21 ✓	0.50	
	-18	360148 ✓	42-9917	0.503	0.250	0.01	<0.04	
	-19	360343 ✓	42-8802	0.502	0.250	0.01	<0.04	
	✓ -20	360146 ✓	42-9967	0.506	0.250	0.01	<0.04	
	—	0.1 ng std.	—	—	0.010	0.095	-5%	
	—	0.5 ng std.	—	—	0.050	0.46	-8%	
	—	5 ng std.	—	—	0.050	4.9	-2%	
8/30/13	—	0.1 ng std.	—	—	0.010	0.088 ~~0.080~~ DB 8/30/13	-12%	
	—	0.5 ng std.	—	—	0.050	0.47	-6%	
	—	5 ng std.	—	—	0.050	DB 8/30/13 ~~5.1~~	+2%	
	—	10 ng ICV 8/30/13	—	—	0.010	9.8	DB 8/30/13 -2%	
	—	2251-67-20 (high)	—	—	0.0106	9.42	23,550.0 mg/L	
	—	2251-67-17 (low)	—	—	0.0250	5.97	2388.0 mg/L	
	—	5 ng std	—	—	0.050	5.17	3.4 ✓	
	8/28/13 B1 -14	360209 ✓	42-4902	0.508	0.250	0.04	<0.04	
	-15	360110 ✓	42-9723	0.505	0.250	0.03	<0.04	
	-16	360119 ✓	42-9956	0.503	0.250	0.05	<0.04	
	-17	360114 ✓	42-9978	0.510	0.250	0.04 DB 8/30/13	<0.04	
	-18	360117 ✓	42-9996	0.503	0.250	0.04	<0.04	
	-19	360120 ✓	42-9976	0.505	0.250	0.02	<0.04	

Reviewed By: K Date: 9/6/13

Acceptable limits for standards: Lowest standard on curve: +30/-20
All other concentrations: +/-10%
LCS Limits: 17.8 - 27.0 mg/kg (Mean 22.4)

Current reagent trace numbers are listed in front pages of log
Theorectical Spike: 0.1mL x 100/sample wt.

Sample # : _____ Lines: _____	Sample # : _____ Lines: _____
Theor Spike: _____	Theor Spike: _____
Mean: _____	Mean: _____
RPD: _____	RPD: _____
% Recovery: _____	% Recovery: _____

→ ① lines 22-23. 2251-67-20 and 2251-67-17
MACT non-reactive samples
2251-67-20 was prepared ~~after~~ by a 25,000 dilution
and 2251-67-17 was prepared by a 10,000 dilution.
sample results were calculated based on these dilutions

~~DB 8/30/13~~

$\frac{9.42}{0.010} \times 25{,}000 \times \frac{1}{1000} = 23550.0$ mg/~~kg~~ liter KS DB 9/10/13

$\frac{5.97}{0.0250} \times 10{,}000 \times \frac{1}{1000} = 2388.0$ mg/~~kg~~ liter KS DB 9/10/13

KS / DB 8/30/13

Run Date 8/30/13 DMA-3 DB/KS

Reprinted 9/16/13

Sample listing "083013-3.d80"

Page 1 of 1

Created by "Administrator"
8/30/2013 15:16:16

Pos Nr.	Samplename Remark	Amount Date	State Date	Height	Hg [ng]	Concentr. [mg/kg]	Σ	Cal-Factor
1 (1)	Inst.	1.0000 g 8/30/13 07:11am	✓ 8/30/13 07:23am	0.0027	0.0165	0.0000		1.0000
2 (2)	Inst.	1.0000 g 8/30/13 07:11am	✓ 8/30/13 07:29am	0.0007	0.0007	0.0000		1.0000
25 (3)	0.1 ng std.	0.0100 g 8/30/13 07:45am	✓ 8/30/13 07:49am	0.0117	0.0878	0.0088		1.0000
26 (4)	0.5 ng std.	0.0500 g 8/30/13 07:48am	✓ 8/30/13 07:54am	0.0599	0.4740	0.0095		1.0000
27 (5)	5 ng std.	0.0500 g 8/30/13 07:49am	✓ 8/30/13 08:02am	0.2606	5.1009	0.1020		1.0000
28 (6)	10 ng icv 8/30/13	0.0100 g 8/30/13 08:32am	✓ 8/30/13 08:32am	0.4692	9.8071	0.9807		1.0000
25 (7)	2251-67-20 High STD	0.0100 g 8/30/13 09:43am	✓ 8/30/13 09:49am	0.4533	9.4223	0.9422		1.0000
26 (8)	2251-67-17 Low STD	0.0250 g 8/30/13 09:56am	✓ 8/30/13 09:57am	0.3016	5.9726	0.2389		1.0000
27 (9)	5 ng std.	0.0500 g 8/30/13 10:05am	✓ 8/30/13 10:06am	0.2638	5.1681	0.1034		1.0000
14 (10)	360209 8/28-b1.	0.2500 g 8/30/13 10:15am	✓ 8/30/13 10:18am	0.0059	0.0418	0.0002		1.0000
15 (11)	360110 8/28-b1.	0.2500 g 8/30/13 10:18am	✓ 8/30/13 10:23am	0.0050	0.0347	0.0001		1.0000
16 (12)	360119 8/28-b1.	0.2500 g 8/30/13 10:19am	✓ 8/30/13 10:31am	0.0064	0.0458	0.0002		1.0000
17 (13)	360114 8/28-b1.	0.2500 g 8/30/13 10:19am	✓ 8/30/13 10:39am	0.0041	0.0276	0.0001		1.0000
18 (14)	360117 8/28-b1.	0.2500 g 8/30/13 10:36am	✓ 8/30/13 10:48am	0.0055	0.0386	0.0002		1.0000
19 (15)	360120 8/28-b1.	0.2500 g 8/30/13 10:37am	✓ 8/30/13 10:56am	0.0028	0.0173	0.0001		1.0000
20 (16)	360118 8/28-b1.	0.2500 g 8/30/13 10:38am	✓ 8/30/13 11:04am	0.0077	0.0561	0.0002		1.0000
21 (17)	360115 8/28-b1.	0.2500 g 8/30/13 10:39am	✓ 8/30/13 11:12am	0.0040	0.0268	0.0001		1.0000
25 (18)	0.1 ng std.	0.0100 g 8/30/13 11:22am	✓ 8/30/13 11:26am	0.0105	0.0783	0.0078		1.0000
26 (19)	0.5 ng std.	0.0500 g 8/30/13 11:26am	✓ 8/30/13 11:31am	0.0566	0.4473	0.0089		1.0000
27 (20)	5 ng std.	0.0500 g 8/30/13 11:26am	✓ 8/30/13 11:40am	0.2510	4.9001	0.0980		1.0000
25 (21)	0.1 ng std. [redacted]	0.0100 g 8/30/13 11:53am	✓ 8/30/13 11:54am	0.0144	0.1092	0.0109		1.0000
26 (22)	0.1 ng std. [redacted]	0.0100 g 8/30/13 11:53am	✓ 8/30/13 11:59am	0.0108	0.0806	0.0081		1.0000
27 (23)	0.5 ng std.	0.0500 g 8/30/13 11:53am	✓ 8/30/13 12:07am	0.0576	0.4554	0.0091		1.0000
27 (24)	0.5 ng std [redacted]	0.0500 g 8/30/13 12:25am	✓ 8/30/13 12:26am	0.0575	0.4546	0.0091		1.0000
28 (25)	Inst.	1.0000 g 8/30/13 12:33am	✓ 8/30/13 12:33am	0.0011	0.0038	0.0000		1.0000
4 (26)	360237 8/29-b1.	0.0250 g 8/30/13 12:49am	✓ 8/30/13 12:50am	0.4629	9.6555	0.3862		1.0000
8 (27)	360516 8/29-b1.	0.2500 g 8/30/13 12:52am	✓ 8/30/13 01:03pm	0.0047	0.0323	0.0001		1.0000
9 (28)	359089 8/29-b1.	0.2500 g 8/30/13 12:53am	✓ 8/30/13 01:12pm	0.0249	0.1928	0.0008		1.0000

Documentation of steps for dispensing Mercury (Hg) solution to Vials for CPT

	Low Conc.	High Conc.
Inspect the selected bucket of Hg solution to verify integrity.	✓	✓
Break seal on selected bucket of Hg solution	✓	✓
Inspect contents of bucket to verify Hg nitrate remains in solution	✓	✓
Prepare 4 liter glass jug with one rinse DI water, 2 rinses Hg solution	✓	✓
Prepare stirring rod with rinse of Hg solution solution	✓	✓
Prepare funnel and 600 ml beaker with rinse of Hg solution	✓	✓
Stir Hg solution with stirring rod	✓	✓
Hg solution transferred from bucket to jug via beaker and funnel	✓	✓
Prepare re-pipetter with rinse of Hg solution	✓	✓
Prepare 10 ml Class A volumetric flask with rinse of Hg solution	✓	✓
Re-pipetter attached to jug and calibrated with 10 ml Class A flask	✓	✓

Trey Formby, Lab Manager

10-21-13
Date

CHAIN OF CUSTODY RECORD

Company: VEOLIA ENVIRONMENTAL SERVICES Telephone: (618) 271-2804

Address: 7 MOBILE AVE (STREET) SAUGET (CITY) ILLINOIS (STATE) 62201 (ZIP)

Collector: Sample Date / Time:

SAMPLE #	# CONTAINERS x SIZE	SAMPLE DESCRIPTION / SOURCE	ANALYSIS REQUIRED
2251-67-20	1 X 50ml	Hg Test Solution High Conc \ TWI - VES	Total Hg
2251-67-17	1 X 50ml	Hg Test Solution low Conc \ ⊥	⊥

~~Samples Submitted To:~~

CSR is IN House Testing Bill my PO for Results

Questions call Trey Formby

618-271-2804

CHAIN OF POSSESSION

Relinquished By: (Signature) (1)	Date (2):	Received By: (Signature)	Date: (2)
[signature]	8-27-13	Daniel C Barlo	8/30/13

NOTE:
(1) First "Relinquished By" signature shall be that of the sampler.
(2) Apparent gaps or breaks in the inclusive dates in the "Chain of Possession" section are covered by site receiving shipping logs.

TWI NON-ROUTINE SAMPLE REPORT -MERCURY BY DMA

RECEIVER: 2251-69-17 PROFILE: Jeff M.

GENERATOR: ∀ site generated.

SAMPLE #	DRUM #	Hg ~~(mg/kg)~~ mg/L KS 1/14/14	DATE	ANALYST
Later KS 1/16/14 2268 ~~mg/kg~~ Hg	—	2236.0	10/25/13	DB/FHF
Reagent # 2251-69-17				

Reviewed By: Date: 10-29-13

THIS SAMPLE WAS COLLECTED ACCORDING TO APPLICABLE SW-846 PROCEDURES

This report had been prepared for the exclusive use and benefit of Veolia Environmental Services. No representation concerning sample validity or analytical accuracy of completeness is hereby made to any other person receiving this report.

Standards Reagents Preparation

	Name	Starting Material	Trace Number	Amount	Final Volume	Prep Date	Exp. Date	Analyst
1	3% Sodium Bicarbonate	Sodium Bicarbonate	2184-19-14	30.006.	3L	10/16/13	11/16/13	[illegible]
2	1N Di H2O	Di H2O	—	SQ.	↓	10/16/13	11/16/13	[illegible]
3	BTU/16 LCS Spike	2-Chlorobenzothiozole	2184-40-17	25.008	100mL	10/21/13	4/17/14	JS/FHF
4	Solution 1N	1-Bromo-4 Fluorobenzene	2184-21-7	25.0063	↓	↓	↓	↓
5	Butyl Acetate	n-Butyl Acetate	2184-43-30	SQ	↓	↓	↓	↓
6	0.5 ug/ml Ar 1242 w/	50 ug/ml Ar 1242	2251-564B	1 ml	100 ml	10/17/13	10/17/16	SL
7	0.05 ug/ml TMX/DCB in	5 ug/ml TMX/DCB	2251-67-1	1 ml	↓	↓	↓	↓
8	Hexane	Hexane	2184-44-17	SQ	↓	↓	↓	↓
9	0.5 ug/ml Ar 1254 w/	50 ug/ml Ar 1254	2251-56-20	1 ml	100 ml	10/17/13	10/17/16	SL
10	0.05 ug/ml TMX/DCB in	5 ug/ml TMX/DCB	2251-67-1	1 ml	↓	↓	↓	↓
11	Hexane	Hexane	2251-44-17	SQ	↓	↓	↓	↓
12	0.085M $NaHCO_3$	$NaHCO_3$	2184-19-16	14.2805g	2L	10/22/13	11/22/13	JF
13	0.090M Na_2CO_3	Na_2CO_3	2184-23-19	19.0836g	↓	↓	↓	↓
14	in Di H_2O	Di H_2O	—	SQ	↓	↓	↓	↓
15	1:1 HCl in Di H_2O	Concentrate HCl	2184-47-26	1L	2L	10/22/13	10/22/15	JF/LT
16	↓	Di H_2O	—	1L	↓	↓	↓	↓
17	Low Mercury Meas	Mercury II Nitrate	2184-48-8	11.9598g	3L	10-24-13	NA	FHF
18	Test Solution	Nitric Acid Trace	2184-48-18	300ml	FHF 10/24/13 ~~300~~	10-24-13	↓	↓
19	2268 mg/L	Di H_2O	—	SQ	↓	10-24-13	↓	↓
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

Reviewed By: Date:

Mercury

By Mercury Analyzer

DMA #3

BOOK NO. 2352

Unless otherwise noted, sample has been microwave digested.

Run Date	Prep Date(m/d) & Batch#	Sample ID	Receiver # Profile#	Digested Sample wt(g)	(mL) Dil	Instrument Test Wt(g)	Instrument Reading(ng)	Sample Result mg/kg	A
1 10/24/13	—	0.5 std	2282-49-1	—	—	0.05	0.49	-2%	DB/FHF/SL
2	—	5.0 std.	2282-46-13	—	—	0.05	5.2	+4%	
3 1	SL 10-24-13 ~~10/24~~ 10 21 B2 5	362794 ✓	43-3662	0.500	50	0.25	0.58/0.56 ✓	0.23	
	6	362715 ✓	43-3342	0.501	50	0.25	0.01	<0.04	
5	7	361415 ✓	43-0463	0.502	50	0.25	0.00	<0.04	
6	8	362614 ✓	43-1983	0.511	50	0.25	0.01	<0.04	
7	9	362277 ✓	43-1963	0.504	50	0.25	0.02	<0.04	
8	10	362223 ✓	43-2705	0.509	50	0.25	0.01	<0.04	
9	11	362695 ✓	43-3522	0.510	50	0.25	0.002	<0.04	
10	12	362840 ✓	43-3200	0.506	50	0.25	0.02	<0.04	
11	13	361462 ✓	43-1615	0.500	50	0.25	0.01	<0.04	
12	14	362836 ✓	43-2338	0.508	50	0.25	0.003	<0.04	
13	15	362828 ✓	43-2411	SL 10-24-13 ~~0.502~~ 0.509	50	0.25	0.01	<0.04	
14	16	362839 ✓	43-3206	0.502	50	0.25	0.02	<0.04	
15	—	0.1 ng	2282-49-1	—	—	0.01	0.088	-12%	
16	—	0.5 ng	↓	—	—	0.05	0.50	±0%	
17	—	5 ng	2282-46-13	—	—	0.05	5.1	+2%	
18 10/25/13	—	10 ng std.	2282-46-13	—	—	0.100	10.1	+1%	DB/AF
19	10/24/13 by FHF	2268 mg/kg Hg	2251-69-17	0.02 mL (Neat) diluted	~~10,000~~ 200 DB 10/25/13	0.025	5.59	2236.0 mg/L	
20	—	10 ng std.	2282-46-13	— Only	—	0.100	10.37	+3.7%	
21	—	0.1 ng std	2282-49-1	—	—	0.01	0.11	+10%	
22	—	0.5 ng std.	↓	—	—	0.05	0.49	-2%	
23	—	5 ng std.	2282-46-13	—	—	0.05	4.7	-6%	
24	—	10 ng ICV 10/25/13	—	—	—	0.01	10.1	+1%	
25	~~10/23~~ 10/23-B1 ~~10/25/13~~ -4	362926 ✓	43-3525	0.528	50	0.25	0.01	<0.04	
26	-5	363343 ✓	43-4414	0.501	50	0.25	0.03	<0.04	
27	—	0.1 ng std.	2282-49-1	—	—	0.01	0.136	+36% out. see line 30 for RR.	
28	—	0.5 ng std.	↓	—	—	0.05	0.51	+2%	
29	—	5 ng std.	2282-46-13	—	—	0.05	5.0	±0%	
30	—	0.1 ng std RR	2282-49-1	—	—	0.01	0.091 ~~0.91~~/0.087 DB 10/25/13	-9% / ~~-13%~~ O.K. DB 10/25/13	

Reviewed By: Date: 10/27/13

LOG 2352 pg 9 notes pg KS

Acceptable limits for standards:

Lowest standard on curve: +30/-20

All other concentrations: +/-10%

LCS Limits: 21.6-28.2mg/kg (Mean 24.9)

Theoretical Spike: 0.1mL x 100/sample wt.

Sample # : _____ Lines: _____	Sample # : _____ Lines: _____
Theor Spike: _____	Theor Spike: _____
Mean: _____	Mean: _____
RPD: _____	RPD: _____
% Recovery: _____	% Recovery: _____

① KS 11/7/13 line 3 362744 433662 analyzed again on pg 15 line 2 an no Hg found, will be analyzed a third time.

KS/DB on 11/12/13. Analyzed again on 11/12 see LOG 2350 PG 44 LINE 17 and No Hg found. All results reported to CN

② Note made on KS/DB on 1/10/14 Line 19 20 uL diluted to 200mL in 200 mL flask = 10,000 dil

$\frac{5.59}{0.025} \times 1000 = 2236$ mg/L

Sample listing "102513-3.d80"

Created by "Administrator"
10/25/2013 09:09:36

Pos Nr.	Samplename Remark	Amount Date	State Date	Height	Hg [ng]	Concentr. [mg/kg]	Σ	Cal-Factor
1 (1)	boat 1	1.0000 g 10/25/13 07:46am	✓ 10/25/13 07:46am	0.0047	0.0245	0.0000		1.0000
2 (2)	boat 2	1.0000 g 10/25/13 07:46am	✓ 10/25/13 07:52am	0.0022	0.0061	0.0000		1.0000
3 (3)	boat 3	1.0000 g 10/25/13 07:46am	✓ 10/25/13 08:00am	0.0030	0.0120	0.0000		1.0000
1 (4)	boat 4	1.0000 g 10/25/13 08:28am	✓ 10/25/13 08:29am	0.0140	0.0929	0.0001		1.0000
2 (5)	boat 5	1.0000 g 10/25/13 08:28am	✓ 10/25/13 08:34am	0.0185	0.1258	0.0001		1.0000
3 (6)	boat 6	1.0000 g 10/25/13 08:28am	✓ 10/25/13 08:42am	0.0472	0.3340	0.0003		1.0000
1 (7)	10 ng std.	0.1000 g 10/25/13 08:55am	✓ 10/25/13 08:56am	0.5014	10.1006	0.1010		1.0000
2 (8)	MACT 2268 mg/kg Hg 10,100	0.0250 g 10/25/13 08:55am	✓ 10/25/13 09:01am	0.2964	5.5881	0.2235		1.0000
3 (9)	10 ng std.	0.1000 g 10/25/13 08:55am	✓ 10/25/13 09:09am	0.5126	10.3681	0.1037		1.0000

Documentation of steps for dispensing Mercury (Hg) solution to Vials for CPT

	Low Conc.	High Conc.
Inspect the selected bucket of Hg solution to verify integrity.	✓	
Break seal on selected bucket of Hg solution	NA	
Inspect contents of bucket to verify Hg nitrate remains in solution	✓	
Prepare 4 liter glass jug with one rinse DI water, 2 rinses Hg solution	✓	
Prepare stirring rod with rinse of Hg solution solution	✓	
Prepare funnel and 600 ml beaker with rinse of Hg solution	✓	
Stir Hg solution with stirring rod	✓	
Hg solution transferred from bucket to jug via beaker and funnel	✓	
Prepare re-pipetter with rinse of Hg solution	✓	
Prepare 10 ml Class A volumetric flask with rinse of Hg solution	✓	
Re-pipetter attached to jug and calibrated with 10 ml Class A flask	✓	

Trey Formby, Lab Manager

10-24-13
Date

CHAIN OF CUSTODY RECORD

Company: VEOLIA ENVIRONMENTAL SERVICES Telephone: (618) 271-2804

Address: 7 MOBILE AVE (STREET) SAUGET (CITY) ILLINOIS (STATE) 62201 (ZIP)

Collector: [signature] Sample Date / Time: 10/25/13 900 AM

SAMPLE #	# CONTAINERS x SIZE	SAMPLE DESCRIPTION / SOURCE	ANALYSIS REQUIRED
225169-17	1 x 50ml	Hg Test Solution \ TWI \ Ves	Total Hg

Samples Submitted To:

CSR is IN House Testing Bill my PO for Results

Questions call Trey Formby

618-271-2804

CHAIN OF POSSESSION

Relinquished By: (1) (Signature)	Date (2):	Received By: (Signature)	Date: (2)
[signature]	10/25/13	Daniel C Burles	10/25/13

NOTE:
(1) First "Relinquished By" signature shall be that of the sampler.
(2) Apparent gaps or breaks in the inclusive dates in the "Chain of Possession" section are covered by site receiving shipping logs.

Lead Nitrate Spike Preparation Sheets

Crew: Tony Click Don Schamel Date: 9-1-13 Scale Zeroed: yes

BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)
1	2.6	26	2.6	51	2.4	76	2.4	101	2.6
2	2.6	27	2.6	52	2.6	77	2.6	102	2.6
3	2.6	28	2.6	53	2.6	78	2.4	103	2.6
4	2.6	29	2.6	54	2.6	79	2.4	104	2.6
5	2.6	30	2.6	55	2.6	80	2.6	105	2.6
6	2.6	31	2.6	56	2.6	81	2.4	106	2.6
7	2.6	32	2.6	57	2.6	82	2.6	107	2.6
8	2.6	33	2.6	58	2.6	83	2.6	108	2.6
9	2.6	34	2.6	59	2.6	84	2.6	109	2.6
10	2.6	35	2.6	60	2.6	85	2.6	110	2.6
11	2.6	36	2.6	61	2.6	86	2.6	111	2.6
12	2.6	37	2.6	62	2.6	87	2.6	112	2.6
13	2.6	38	2.6	63	2.6	88	2.6	113	2.6
14	2.6	39	2.6	64	2.6	89	2.6	114	2.6
15	2.6	40	2.6	65	2.6	90	2.6	115	2.6
16	2.6	41	2.6	66	2.6	91	2.6	116	2.6
17	2.6	42	2.6	67	2.6	92	2.6	117	2.6
18	2.6	43	2.6	68	2.6	93	2.6	118	2.6
19	2.6	44	2.6	69	2.6	94	2.6	119	2.6
20	2.6	45	2.6	70	2.6	95	2.6	120	2.6
21	2.6	46	2.6	71	2.6	96	2.6	121	2.6
22	2.6	47	2.6	72	2.6	97	2.6	122	2.6
23	2.6	48	2.6	73	2.6	98	2.6	123	2.6
24	2.6	49	2.6	74	2.6	99	2.6	124	2.6
25	2.6	50	2.6	75	2.6	100	2.6	125	2.6

Crew: Tony Click Don Schanuel Date: 9-1-13 Scale Zeroed: yes

BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)
126	2.6	151	2.6	176	2.6	201	2.6	226	2.6
127	2.6	152	2.6	177	2.6	202	2.6	227	2.6
128	2.6	153	2.6	178	2.6	203	2.6	228	2.6
129	2.6	154	2.6	179	2.6	204	2.6	229	2.6
130	2.6	155	2.6	180	2.6	205	2.6	230	2.6
131	2.6	156	2.6	181	2.6	206	2.6	231	2.6
132	2.6	157	2.6	182	2.6	207	2.6	232	2.6
133	2.6	158	2.6	183	2.6	208	2.6	233	2.6
134	2.6	159	2.6	184	2.6	209	2.6	234	2.6
135	2.6	160	2.6	185	2.6	210	2.6	235	2.6
136	2.6	161	2.6	186	2.6	211	2.6	236	2.6
137	2.6	162	2.6	187	2.6	212	2.6	237	2.6
138	2.6	163	2.6	188	2.6	213	2.6	238	2.6
139	2.6	164	2.6	189	2.6	214	2.6	239	2.6
140	2.6	165	2.6	190	2.6	215	2.6	240	2.6
141	2.6	166	2.6	191	2.6	216	2.6	241	2.6
142	2.6	167	2.6	192	2.6	217	2.6	242	2.6
143	2.6	168	2.6	193	2.6	218	2.6	243	2.6
144	2.6	169	2.6	194	2.6	219	2.6	244	2.6
145	2.6	170	2.6	195	2.6	220	2.6	245	2.6
146	2.6	171	2.6	196	2.6	221	2.6	246	2.6
147	2.6	172	2.6	197	2.6	222	2.6	247	2.6
148	2.6	173	2.6	198	2.6	223	2.6	248	2.6
149	2.6	174	2.6	199	2.6	224	2.6	249	2.6
150	2.6	175	2.6	200	2.6	225	2.6	250	2.6

Crew: Tony Click Don Schanul Date: 9-1-13 Scale Zeroed: yes

BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)
251	2.6	276	2.6	301	2.6	326	2.6	351	2.6
252	2.6	277	2.6	302	2.6	327	2.6	352	2.6
253	2.6	278	2.6	303	2.6	328	2.6	353	2.6
254	2.6	279	2.6	304	2.6	329	2.6	354	2.6
255	2.6	280	2.6	305	2.6	330	2.6	355	2.6
256	2.6	281	2.6	306	2.6	331	2.6	356	2.6
257	2.6	282	2.6	307	2.6	332	2.6	357	2.6
258	2.6	283	2.6	308	2.6	333	2.6	358	2.6
259	2.6	284	2.6	309	2.6	334	2.6	359	2.6
260	2.6	285	2.6	310	2.6	335	2.6	360	2.6
261	2.6	286	2.6	311	2.6	336	2.6	361	2.6
262	2.6	287	2.6	312	2.6	337	2.6	362	2.6
263	2.6	288	2.6	313	2.6	338	2.6	363	2.6
264	2.6	289	2.6	314	2.6	339	2.6	364	2.6
265	2.6	290	2.6	315	2.6	340	2.6	365	2.6
266	2.6	291	2.6	316	2.6	341	2.6	366	2.6
267	2.6	292	2.6	317	2.6	342	2.6	367	2.6
268	2.6	293	2.6	318	2.6	343	2.6	368	2.6
269	2.6	294	2.6	319	2.6	344	2.6	369	2.6
270	2.6	295	2.6	320	2.6	345	2.6	370	2.6
271	2.6	296	2.6	321	2.6	346	2.6	371	2.6
272	2.6	297	2.6	322	2.6	347	2.6	372	2.6
273	2.6	298	2.6	323	2.6	348	2.6	373	2.6
274	2.6	299	2.6	324	2.6	349	2.6	374	2.6
275	2.6	300	2.6	325	2.6	350	2.6	375	2.6

Crew: Tony Click Don Schauer Date: 9-1-13 Scale Zeroed: yes

BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)
376	2.6	401	2.6	426	2.6	451	2.6	476	2.6
377		402	2.6	427	2.6	452	2.6	477	2.6
378		403	2.6	428	2.6	453	2.6	478	2.6
379		404	2.6	429	2.6	454	2.6	479	2.6
380		405	2.6	430	2.6	455	2.6	480	2.6
381		406	2.6	431	2.6	456	2.6	481	2.6
382		407	2.6	432	2.6	457	2.6	482	2.6
383		408	2.6	433	2.6	458	2.6	483	2.6
384		409	2.6	434	2.6	459	2.6	484	2.6
385		410	2.6	435	2.6	460	2.6	485	2.6
386		411	2.6	436	2.6	461	2.6	486	2.6
387		412	2.6	437	2.6	462	2.6	487	2.6
388		413	2.6	438	2.6	463	2.6	488	2.6
389		414	2.6	439	2.6	464	2.6	489	2.6
390		415	2.6	440	2.6	465	2.6	490	2.6
391		416	2.6	441	2.6	466	2.6	491	2.6
392		417	2.6	442	2.6	467	2.6	492	2.6
393		418	2.6	443	2.6	468	2.6	493	2.6
394		419	2.6	444	2.6	469	2.6	494	2.6
395		420	2.6	445	2.6	470	2.6	495	2.6
396		421	2.6	446	2.6	471	2.6	496	2.6
397		422	2.6	447	2.6	472	2.6	497	2.6
398		423	2.6	448	2.6	473	2.6	498	2.6
399		424	2.6	449	2.6	474	2.6	499	2.6
400		425	2.6	450	2.6	475	2.6	500	2.6

Crew: Tony Click Don Schaaw Date: 9-1-13 Scale Zeroed: yes

BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)
501	2.6	526	2.6	551	2.6	576	2.6	601	2.6
502	2.6	527	2.6	552	2.6	577	2.6	602	2.6
503	2.6	528	2.6	553	2.6	578	2.6	603	2.6
504	2.6	529	2.6	554	2.6	579	2.6	604	2.6
505	2.6	530	2.6	555	2.6	580	2.6	605	2.6
506	2.6	531	2.6	556	2.6	581	2.6	606	2.6
507	2.6	532	2.6	557	2.6	582	2.6	607	2.6
508	2.6	533	2.6	558	2.6	583	2.6	608	2.6
509	2.6	534	2.6	559	2.6	584	2.6	609	2.6
510	2.6	535	2.6	560	2.6	585	2.6	610	2.6
511	2.6	536	2.6	561	2.6	586	2.6	611	2.6
512	2.6	537	2.6	562	2.6	587	2.6	612	2.6
513	2.6	538	2.6	563	2.6	588	2.6	613	2.6
514	2.6	539	2.6	564	2.6	589	2.6	614	2.6
515	2.6	540	2.6	565	2.6	590	2.6	615	2.6
516	2.6	541	2.6	566	2.6	591	2.6	616	2.6
517	2.6	542	2.6	567	2.6	592	2.6	617	2.6
518	2.6	543	2.6	568	2.6	593	2.6	618	2.6
519	2.6	544	2.6	569	2.6	594	2.6	619	2.6
520	2.6	545	2.6	570	2.6	595	2.6	620	2.6
521	2.6	546	2.6	571	2.6	596	2.6	621	2.6
522	2.6	547	2.6	572	2.6	597	2.6	622	2.6
523	2.6	548	2.6	573	2.6	598	2.6	623	2.6
524	2.6	549	2.6	574	2.6	599	2.6	624	2.6
525	2.6	550	2.6	575	2.6	600	2.6	625	2.6

Crew: Tony Click Don Schaum Date: 9-01-13 Scale Zeroed: yes

BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)
626	2.6	651	2.6	676	2.6	701	2.6	726	2.6
627	2.6	652	2.6	677	2.6	702	2.6	727	2.6
628	2.6	653	2.6	678	2.6	703	2.6	728	2.6
629	2.6	654	2.6	679	2.6	704	2.6	729	2.6
630	2.6	655	2.6	680	2.6	705	2.6	730	2.6
631	2.6	656	2.6	681	2.6	706	2.6	731	2.6
632	2.6	657	2.6	682	2.6	707	2.6	732	2.6
633	2.6	658	2.6	683	2.6	708	2.6	733	2.6
634	2.6	659	2.6	684	2.6	709	2.6	734	2.6
635	2.6	660	2.6	685	2.6	710	2.6	735	2.6
636	2.6	661	2.6	686	2.6	711	2.6	736	2.6
637	2.6	662	2.6	687	2.6	712	2.6	737	2.6
638	2.6	663	2.6	688	2.6	713	2.6	738	2.6
639	2.6	664	2.6	689	2.6	714	2.6	739	2.6
640	2.6	665	2.6	690	2.6	715	2.6	740	2.6
641	2.6	666	2.6	691	2.6	716	2.6	741	2.6
642	2.6	667	2.6	692	2.6	717	2.6	742	2.6
643	2.6	668	2.6	693	2.6	718	2.6	743	2.6
644	2.6	669	2.6	694	2.6	719	2.6	744	2.6
645	2.6	670	2.6	695	2.6	720	2.6	745	2.6
646	2.6	671	2.6	696	2.6	721	2.6	746	2.6
647	2.6	672	2.6	697	2.6	722	2.6	747	2.6
648	2.6	673	2.6	698	2.6	723	2.6	748	2.6
649	2.6	674	2.6	699	2.6	724	2.6	749	2.6
650	2.6	675	2.6	700	2.6	725	2.6	750	2.6

Crew: Tony Click Don Schamel Date: 9-1-13 Scale Zeroed: yes

BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)
751	2.6	776	2.6	801	2.6	826	2.6	851	2.6
752	2.6	777	2.6	802	2.6	827	2.6	852	2.6
753	2.6	778	2.6	803	2.6	828	2.6	853	2.6
754	2.6	779	2.6	804	2.6	829	2.6	854	2.6
755	2.6	780	2.6	805	2.6	830	2.6	855	2.6
756	2.6	781	2.6	806	2.6	831	2.6	856	2.6
757	2.6	782	2.6	807	2.6	832	2.6	857	2.6
758	2.6	783	2.5	808	2.6	833	2.6	858	2.6
759	2.6	784	2.6	809	2.6	834	2.6	859	2.6
760	2.6	785	2.6	810	2.6	835	2.6	860	2.6
761	2.6	786	2.6	811	2.6	836	2.6	861	2.6
762	2.6	787	2.6	812	2.6	837	2.6	862	2.6
763	2.6	788	2.6	813	2.6	838	2.6	863	2.6
764	2.6	789	2.6	814	2.6	839	2.6	864	2.6
765	2.6	790	2.6	815	2.6	840	2.6	865	2.6
766	2.6	791	2.6	816	2.6	841	2.6	866	2.6
767	2.6	792	2.6	817	2.6	842	2.6	867	2.6
768	2.6	793	2.6	818	2.6	843	2.6	868	2.6
769	2.6	794	2.6	819	2.6	844	2.6	869	2.6
770	2.6	795	2.6	820	2.6	845	2.6	870	2.6
771	2.6	796	2.6	821	2.6	846	2.6	871	2.6
772	2.6	797	2.6	822	2.6	847	2.6	872	2.6
773	2.6	798	2.6	823	2.6	848	2.6	873	2.6
774	2.6	799	2.6	824	2.6	849	2.6	874	2.6
775	2.6	800	2.6	825	2.6	850	2.6	875	2.6

Crew: Tony Click Dow Schaum Date: 9-1-13 Scale Zeroed: yes

BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)
876	2.6	901	2.6	926	2.6	951	2.6	976	2.6
877	2.6	902	2.6	927	2.6	952	2.6	977	2.6
878	2.6	903	2.6	928	2.6	953	2.6	978	2.6
879	2.6	904	2.6	929	2.6	954	2.6	979	2.6
880	2.6	905	2.6	930	2.6	955	2.6	980	2.6
881	2.6	906	2.6	931	2.6	956	2.6	981	2.6
882	2.6	907	2.6	932	2.6	957	2.6	982	2.6
883	2.6	908	2.6	933	2.6	958	2.6	983	2.6
884	2.6	909	2.6	934	2.6	959	2.6	984	2.6
885	2.6	910	2.6	935	2.6	960	2.6	985	2.6
886	2.6	911	2.6	936	2.6	961	2.6	986	2.6
887	2.6	912	2.6	937	2.6	962	2.6	987	2.4
888	2.6	913	2.6	938	2.6	963	2.6	988	2.6
889	2.6	914	2.6	939	2.6	964	2.6	989	2.6
890	2.6	915	2.6	940	2.6	965	2.6	990	2.6
891	2.6	916	2.6	941	2.6	966	2.6	991	2.6
892	2.6	917	2.6	942	2.6	967	2.6	992	2.6
893	2.6	918	2.6	943	2.6	968	2.6	993	2.6
894	2.6	919	2.6	944	2.6	969	2.6	994	2.6
895	2.6	920	2.6	945	2.6	970	2.6	995	2.6
896	2.6	921	2.6	946	2.6	971	2.6	996	2.6
897	2.6	922	2.6	947	2.6	972	2.6	997	2.6
898	2.6	923	2.6	948	2.6	973	2.6	998	2.6
899	2.6	924	2.6	949	2.6	974	2.6	999	2.6
900	2.6	925	2.6	950	2.6	975	2.6	1000	2.6

Crew: Tony Alick Don Schamel Date: 9-7-13 Scale Zeroed: yes

BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)
1001	2.4	1026	2.4	1051	2.4	1076	2.6	1101	2.6
1002	2.6	1027	2.4	1052	2.6	1077	2.6	1102	2.6
1003	2.4	1028	2.6	1053	2.6	1078	2.6	1103	2.4
1004	2.4	1029	2.4	1054	2.6	1079	2.6	1104	2.4
1005	2.6	1030	2.6	1055	2.6	1080	2.6	1105	2.6
1006	2.4	1031	2.6	1056	2.6	1081	2.6	1106	2.6
1007	2.6	1032	2.6	1057	2.6	1082	2.6	1107	2.6
1008	2.6	1033	2.6	1058	2.6	1083	2.6	1108	2.4
1009	2.4	1034	2.6	1059	2.6	1084	2.6	1109	2.6
1010	2.6	1035	2.6	1060	2.6	1085	2.6	1110	2.6
1011	2.6	1036	2.6	1061	2.6	1086	2.6	1111	2.6
1012	2.6	1037	2.6	1062	2.6	1087	2.6	1112	2.6
1013	2.6	1038	2.6	1063	2.6	1088	2.6	1113	2.6
1014	2.6	1039	2.6	1064	2.6	1089	2.6	1114	2.6
1015	2.6	1040	2.6	1065	2.6	1090	2.6	1115	2.6
1016	2.6	1041	2.6	1066	2.6	1091	2.6	1116	2.6
1017	2.6	1042	2.6	1067	2.6	1092	2.6	1117	2.6
1018	2.6	1043	2.4	1068	2.6	1093	2.6	1118	2.6
1019	2.6	1044	2.6	1069	2.6	1094	2.6	1119	2.6
1020	2.6	1045	2.6	1070	2.6	1095	2.6	1120	2.6
1021	2.6	1046	2.6	1071	2.6	1096	2.6	1121	2.6
1022	2.6	1047	2.4	1072	2.6	1097	2.6	1122	2.6
1023	2.6	1048	2.6	1073	2.6	1098	2.6	1123	2.6
1024	2.6	1049	2.6	1074	2.6	1099	2.6	1124	2.6
1025	2.6	1050	2.4	1075	2.4	1100	2.4	1125	2.6

Crew: Tony Click Don Schamel Date: 9-1-13 Scale Zeroed: yes

BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)	BAG #	Pb(NO3)2 (lb)
1126	2.6	1151	2.6	1176	2.6	1201	2.6	1226	2.6
1127		1152		1177		1202		1227	
1128		1153		1178		1203		1228	
1129		1154		1179		1204		1229	
1130		1155		1180		1205		1230	
1131		1156		1181		1206		1231	
1132		1157		1182		1207		1232	
1133		1158		1183		1208		1233	
1134		1159		1184		1209		1234	
1135		1160		1185		1210		1235	
1136		1161		1186		1211		1236	
1137		1162		1187		1212		1237	
1138		1163		1188		1213		1238	
1139		1164		1189		1214		1239	
1140		1165		1190		1215		1240	
1141		1166		1191		1216		1241	
1142		1167		1192		1217		1242	
1143		1168		1193		1218		1243	
1144		1169		1194		1219		1244	
1145		1170		1195		1220		1245	
1146		1171		1196		1221		1246	
1147		1172		1197		1222		1247	
1148		1173		1198		1223		1248	
1149		1174		1199		1224		1249	
1150		1175		1200		1225		1250	

LEAD NITRATE SPIKE BAGS - Target Weight: 2.6 pounds

Date 10-16-13

Crew Personnel Mike Livingston, Dan Schmid, Steve Watson

Shift 1ST

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
1251	2.6	1276	2.6	1301	2.6	1326	2.6
1252		1277		1302		1327	
1253		1278		1303		1328	
1254		1279		1304		1329	
1255		1280		1305		1330	
1256		1281		1306		1331	
1257		1282		1307		1332	
1258		1283		1308		1333	
1259		1284		1309		1334	
1260		1285		1310		1335	
1261		1286		1311		1336	
1262		1287		1312		1337	
1263		1288		1313		1338	
1264		1289		1314		1339	
1265		1290		1315		1340	
1266		1291		1316		1341	
1267		1292		1317		1342	
1268		1293		1318		1343	
1269		1294		1319		1344	
1270		1295		1320		1345	
1271		1296		1321		1346	
1272		1297		1322		1347	
1273		1298		1323		1348	
1274		1299		1324		1349	
1275		1300		1325		1350	

LEAD NITRATE SPIKE BAGS - Target Weight: 2.6 pounds

Date 10-16-13

Crew Personnel Mike Livingston, Don Schul, Steve Waters

Shift 1ST

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
1351	2.6	1376	2.6	1401	2.6	1426	2.6
1352		1377		1402		1427	
1353		1378		1403		1428	
1354		1379		1404		1429	
1355		1380		1405		1430	
1356		1381		1406		1431	
1357		1382		1407		1432	
1358		1383		1408		1433	
1359		1384		1409		1434	
1360		1385		1410		1435	
1361		1386		1411		1436	
1362		1387		1412		1437	
1363		1388		1413		1438	
1364		1389		1414		1439	
1365		1390		1415		1440	
1366		1391		1416		1441	
1367		1392		1417		1442	
1368		1393		1418		1443	
1369		1394		1419		1444	
1370		1395		1420		1445	
1371		1396		1421		1446	
1372		1397		1422		1447	
1373		1398		1423		1448	
1374		1399		1424		1449	
1375		1400		1425		1450	

LEAD NITRATE SPIKE BAGS - Target Weight: 2.6 pounds

Date 10-16-13

Crew Personnel MIKE LIVINGSTON Dan Shand Steve Water

Shift 1ST

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
1451	2.6	1476	2.6	1501	2.6	1526	2.6
1452		1477		1502		1527	
1453		1478		1503		1528	
1454		1479		1504		1529	
1455		1480		1505		1530	
1456		1481		1506		1531	
1457		1482		1507		1532	
1458		1483		1508		1533	
1459		1484		1509		1534	
1460		1485		1510		1535	
1461		1486		1511		1536	
1462		1487		1512		1537	
1463		1488		1513		1538	
1464		1489		1514		1539	
1465		1490		1515		1540	
1466		1491		1516		1541	
1467		1492		1517		1542	
1468		1493		1518		1543	
1469		1494		1519		1544	
1470		1495		1520		1545	
1471		1496		1521		1546	
1472		1497		1522		1547	
1473		1498		1523		1548	
1474		1499		1524		1549	
1475		1500		1525		1550	

LEAD NITRATE SPIKE BAGS - Target Weight: 2.6 pounds

Date 10-22-13

Crew Personnel Mike Livingstoal / [illegible]

Shift 1ST

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
1551	2.6	1576	2.6	1601	2.6	1626	2.6
1552		1577		1602		1627	
1553		1578		1603		1628	
1554		1579		1604		1629	
1555		1580		1605		1630	
1556		1581		1606		1631	
1557		1582		1607		1632	
1558		1583		1608		1633	
1559		1584		1609		1634	
1560		1585		1610		1635	
1561		1586		1611		1636	
1562		1587		1612		1637	
1563		1588		1613		1638	
1564		1589		1614		1639	
1565		1590		1615		1640	
1566		1591		1616		1641	
1567		1592		1617		1642	
1568		1593		1618		1643	
1569		1594		1619		1644	
1570		1595		1620		1645	
1571		1596		1621		1646	
1572		1597		1622		1647	
1573		1598		1623		1648	
1574		1599		1624		1649	
1575		1600		1625		1650	

LEAD NITRATE SPIKE BAGS - Target Weight: 2.6 pounds

Date 10-22-13

Crew Personnel Mike Livingston/Wayne [illegible]

Shift 1ST

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
1651	2.6	1676	2.6	1701	2.6	1726	2.6
1652		1677		1702		1727	
1653		1678		1703		1728	
1654		1679		1704		1729	
1655		1680		1705		1730	
1656		1681		1706		1731	
1657		1682		1707		1732	
1658		1683		1708		1733	
1659		1684		1709		1734	
1660		1685		1710		1735	
1661		1686		1711		1736	
1662		1687		1712		1737	
1663		1688		1713		1738	
1664		1689		1714		1739	
1665		1690		1715		1740	
1666		1691		1716		1741	
1667		1692		1717		1742	
1668		1693		1718		1743	
1669		1694		1719		1744	
1670		1695		1720		1745	
1671		1696		1721		1746	
1672		1697		1722		1747	
1673		1698		1723		1748	
1674		1699		1724		1749	
1675		1700		1725		1750	

LEAD NITRATE SPIKE BAGS - Target Weight: 2.6 pounds

Crew Personnel Bart Kenner

Date 10-29-13

Shift 1ST

Scale zeroed YES

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
1751	2.6	1776	2.6	1801		1826	
1752		1777		1802		1827	
1753		1778		1803		1828	
1754		1779		1804		1829	
1755		1780		1805		1830	
1756		1781		1806		1831	
1757		1782		1807		1832	
1758		1783		1808		1833	
1759		1784		1809		1834	
1760		1785		1810		1835	
1761		1786		1811		1836	
1762		1787		1812		1837	
1763		1788		1813		1838	
1764		1789		1814		1839	
1765		1790		1815		1840	
1766		1791		1816		1841	
1767		1792		1817		1842	
1768		1793		1818		1843	
1769		1794		1819		1844	
1770		1795		1820		1845	
1771		1796		1821		1846	
1772		1797		1822		1847	
1773		1798		1823		1848	
1774		1799		1824		1849	
1775		1800		1825		1850	

10/29/13

Mercuric Nitrate Spike Preparation Sheets

MERCURY NITRATE SPIKE VIALS - Target Volume: 10 milliliters

Personnel EHF C.B.

Date 9-30-13

Shift 7-330 / Day

Pump calibrated Yes 10ml

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
1	10 ml	26	10 ml	51	10 ml	76	10 ml
2		27		52		77	
3		28		53		78	
4		29		54		79	
5		30		55		80	
6		31		56		81	
7		32		57		82	
8		33		58		83	
9		34		59		84	
10		35		60		85	
11		36		61		86	
12		37		62		87	
13		38		63		88	
14		39		64		89	
15		40		65		90	
16		41		66		91	
17		42		67		92	
18		43		68		93	
19		44		69		94	
20		45		70		95	
21		46		71		96	
22		47		72		97	
23		48		73		98	
24		49		74		99	
25		50		75		100	

MERCURY NITRATE SPIKE VIALS - Target Volume: 10 milliliters

Date 9-30-13

Personnel F.H.F CB

Shift 7-3:30 Days

Pump calibrated Yes 10ml

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
101	10ml	126	10 ml	151	10ml	176	10ml
102		127		152		177	
103		128		153		178	
104		129		154		179	
105		130		155		180	
106		131		156		181	
107		132		157		182	
108		133		158		183	
109		134		159		184	
110		135		160		185	
111		136		161		186	
112		137		162		187	
113		138		163		188	
114		139		164		189	
115		140		165		190	
116		141		166		191	
117		142		167		192	
118		143		168		193	
119		144		169		194	
120		145		170		195	
121		146		171		196	
122		147		172		197	
123		148		173		198	
124		149		174		199	
125		150		175		200	

MERCURY NITRATE SPIKE VIALS - Target Volume: 10 milliliters

Date 10/1/13

Personnel F.H.F [signature] J M Jessie McCullen

C.B. Clarence Byrum

Shift 7-3:30 Days

Pump calibrated Yes 10 ml F.H.F

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
201	10 ml	226	10 ml	251	10 mL	276	10 ml
202		227		252		277	
203		228		253		278	
204		229		254		279	
205		230		255		280	
206		231		256		281	
207		232		257		282	
208		233		258		283	
209		234		259		284	
210		235		260		285	
211		236		261		286	
212		237		262		287	
213		238		263		288	
214		239		264		289	
215		240		265		290	
216		241		266		291	
217		242		267		292	
218		243		268		293	
219		244		269		294	
220		245		270		295	
221		246		271		296	
222		247		272		297	
223		248		273		298	
224		249		274		299	
225		250		275		300	

MERCURY NITRATE SPIKE VIALS - Target Volume: 10 milliliters

Personnel F.H.F Jm Jessie McCallum
CB Clarence Byrum

Date 10/1/13

Shift 7-330 DAY

Pump calibrated Yes pml F.H.F

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
301	10	326	10	351	10	376	10
302		327		352		377	
303		328		353		378	
304		329		354		379	
305		330		355		380	
306		331		356		381	
307		332		357		382	
308		333		358		383	
309		334		359		384	
310		335		360		385	
311		336		361		386	
312		337		362		387	
313		338		363		388	
314		339		364		389	
315		340		365		390	
316		341		366		391	
317		342		367		392	
318		343		368		393	
319		344		369		394	
320		345		370		395	
321		346		371		396	
322		347		372		397	
323		348		373		398	
324		349		374		399	
325		350		375		400	

MERCURY NITRATE SPIKE VIALS - Target Volume: 10 milliliters

Personnel F.H.F [signature] Jm Jesse McCollum

CB Clarence Byrum

Date 10/1/13

Shift 7-330 DAY

Pump calibrated Yes 10ml FHF

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
401	10	426	10	451	10	476	10
402		427		452		477	
403		428		453		478	
404		429		454		479	
405		430		455		480	
406		431		456		481	
407		432		457		482	
408		433		458		483	
409		434		459		484	
410		435		460		485	
411		436		461		486	
412		437		462		487	
413		438		463		488	
414		439		464		489	
415		440		465		490	
416		441		466		491	
417		442		467		492	
418		443		468		493	
419		444		469		494	
420		445		470		495	
421		446		471		496	
422		447		472		497	
423		448		473		498	
424		449		474		499	
425		450		475		500	

MERCURY NITRATE SPIKE VIALS - Target Volume: 10 milliliters

Personnel F.HF CB

Date 10-2-13

Shift 7-3:30 DAY

Pump calibrated Yes 10ml / FHF

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
501	10	526	10	551	10	576	10
502		527		552		577	
503		528		553		578	
504		529		554		579	
505		530		555		580	
506		531		556		581	
507		532		557		582	
508		533		558		583	
509		534		559		584	
510		535		560		585	
511		536		561		586	
512		537		562		587	
513		538		563		588	
514		539		564		589	
515		540		565		590	
516		541		566		591	
517		542		567		592	
518		543		568		593	
519		544		569		594	
520		545		570		595	
521		546		571		596	
522		547		572		597	
523		548		573		598	
524		549		574		599	
525		550		575		600	

MERCURY NITRATE SPIKE VIALS - Target Volume: 10 milliliters

Personnel F.HF CB

Date 10-2-13

Shift 7-3:30 DAY

Pump calibrated yes 10ml FHF

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
601	10	626	10	651	10	676	10
602		627		652		677	
603		628		653		678	
604		629		654		679	
605		630		655		680	
606		631		656		681	
607		632		657		682	
608		633		658		683	
609		634		659		684	
610		635		660		685	
611		636		661		686	
612		637		662		687	
613		638		663		688	
614		639		664		689	
615		640		665		690	
616		641		666		691	
617		642		667		692	
618		643		668		693	
619		644		669		694	
620		645		670		695	
621		646		671		696	
622		647		672		697	
623		648		673		698	
624		649		674		699	
625		650		675		700	

MERCURY NITRATE SPIKE VIALS - Target Volume: 10 milliliters

Personnel F.HF CB

Date 10-2-13

Shift 7-330 DAY

Pump calibrated yes 10ml FHF

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
701	10	726	10	751	10	776	10
702		727		752		777	
703		728		753		778	
704		729		754		779	
705		730		755		780	
706		731		756		781	
707		732		757		782	
708		733		758		783	
709		734		759		784	
710		735		760		785	
711		736		761		786	
712		737		762		787	
713		738		763		788	
714		739		764		789	
715		740		765		790	
716		741		766		791	
717		742		767		792	
718		743		768		793	
719		744		769		794	
720		745		770		795	
721		746		771		796	
722		747		772		797	
723		748		773		798	
724		749		774		799	
725		750		775		800	

MERCURY NITRATE SPIKE VIALS - Target Volume: 10 milliliters

Personnel FHF [illegible] CB CB

Date 10-2-13

Shift 7-330 DAY

Pump calibrated yes 10ml FHF

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
801	10	826	10	851	10	876	10
802		827		852		877	
803		828		853		878	
804		829		854		879	
805		830		855		880	
806		831		856		881	
807		832		857		882	
808		833		858		883	
809		834		859		884	
810		835		860		885	
811		836		861		886	
812		837		862		887	
813		838		863		888	
814		839		864		889	
815		840		865		890	
816		841		866		891	
817		842		867		892	
818		843		868		893	
819		844		869		894	
820		845		870		895	
821		846		871		896	
822		847		872		897	
823		848		873		898	
824		849		874		899	
825		850		875		900	

MERCURY NITRATE SPIKE VIALS - Target Volume: 10 milliliters

Personnel F.H.F CB CB

Date 10/4/13

Shift 7-3:30 DAY

Pump calibrated yes 10ml FHF

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
901	10	926	10	951	10	976	10
902		927		952		977	
903		928		953		978	
904		929		954		979	
905		930		955		980	
906		931		956		981	
907		932		957		982	
908		933		958		983	
909		934		959		984	
910		935		960		985	
911		936		961		986	
912		937		962		987	
913		938		963		988	
914		939		964		989	
915		940		965		990	
916		941		966		991	
917		942		967		992	
918		943		968		993	
919		944		969		994	
920		945		970		995	
921		946		971		996	
922		947		972		997	
923		948		973		998	
924		949		974		999	
925		950		975		1000	

MERCURY NITRATE SPIKE VIALS - Target Volume: 10 milliliters

Personnel F. HF. [signature] C.B [signature]

Date 10/4/13

Shift 7-3:30 Day

Pump calibrated Yes 10ml

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
1001	10	1026	10	1051	10	1076	10
1002		1027		1052		1077	
1003		1028		1053		1078	
1004		1029		1054		1079	
1005		1030		1055		1080	
1006		1031		1056		1081	
1007		1032		1057		1082	
1008		1033		1058		1083	
1009		1034		1059		1084	
1010		1035		1060		1085	
1011		1036		1061		1086	
1012		1037		1062		1087	
1013		1038		1063		1088	
1014		1039		1064		1089	
1015		1040		1065		1090	
1016		1041		1066		1091	
1017		1042		1067		1092	
1018		1043		1068		1093	
1019		1044		1069		1094	
1020		1045		1070		1095	
1021		1046		1071		1096	
1022		1047		1072		1097	
1023		1048		1073		1098	
1024		1049		1074		1099	
1025		1050		1075		1100	

MERCURY NITRATE SPIKE VIALS - Target Volume: 10 milliliters

Personnel F.HF CB

Date 10/4/13

Shift 7-330 DAY

Pump calibrated yes 10ml

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
1101	10 ml	1126	10.	1151		1176	
1102		1127		1152		1177	
1103		1128		1153		1178	
1104		1129		1154		1179	
1105		1130		1155		1180	
1106		1131		1156		1181	
1107		1132		1157		1182	
1108		1133		1158		1183	
1109		1134		1159		1184	
1110		1135		1160		1185	
1111		1136		1161		1186	
1112		1137		1162		1187	
1113		1138		1163		1188	
1114		1139		1164		1189	
1115		1140		1165		1190	
1116		1141		1166		1191	
1117		1142		1167		1192	
1118		1143		1168		1193	
1119		1144		1169		1194	
1120		1145		1170		1195	
1121		1146		1171		1196	
1122		1147		1172		1197	
1123		1148		1173		1198	
1124		1149		1174		1199	
1125		1150		1175		1200	

MERCURY NITRATE SPIKE VIALS - Target Volume: 10 milliliters

Personnel F.H.F

Date 10-29-13

Shift Day 7:30 – 4:00

Pump calibrated Yes 10ml FHF.

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
1101		1126		1151	10ml	1176	10ml
1102		1127		1152		1177	
1103		1128		1153		1178	
1104		1129		1154		1179	
1105		1130		1155		1180	
1106		1131		1156		1181	
1107		1132		1157		1182	
1108		1133		1158		1183	
1109		1134		1159		1184	
1110		1135		1160		1185	
1111		1136		1161		1186	
1112		1137		1162		1187	
1113		1138		1163		1188	
1114		1139		1164		1189	
1115		1140		1165		1190	
1116		1141		1166		1191	
1117		1142	10ml	1167		1192	
1118		1143		1168		1193	
1119		1144		1169		1194	
1120		1145		1170		1195	
1121		1146		1171		1196	
1122		1147		1172		1197	
1123		1148		1173		1198	
1124		1149		1174		1199	
1125		1150		1175		1200	

MERCURY NITRATE SPIKE VIALS - Target Volume: 10 milliliters

Personnel F.H.F

Date 10-29-13

Shift 7:30-4:00 DAY

Pump calibrated Yes

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
1201	10 ml	1226	10 ml	1251	10 ml	1276	10 ml
1202		1227		1252		1277	
1203		1228		1253		1278	
1204		1229		1254		1279	
1205		1230		1255		1280	
1206		1231		1256		1281	
1207		1232		1257		1282	
1208		1233		1258		1283	
1209		1234		1259		1284	
1210		1235		1260		1285	
1211		1236		1261		1286	
1212		1237		1262		1287	
1213		1238		1263		1288	
1214		1239		1264		1289	
1215		1240		1265		1290	
1216		1241		1266		1291	
1217		1242		1267		1292	
1218		1243		1268		1293	
1219		1244		1269		1294	
1220		1245		1270		1295	
1221		1246		1271		1296	
1222		1247		1272		1297	
1223		1248		1273		1298	
1224		1249		1274		1299	
1225		1250		1275		1300	

MERCURY NITRATE SPIKE VIALS - Target Volume: 10 milliliters

Personnel F.H.F

Date 10-29-13

Shift DAY 7:00-4:00

Pump calibrated Yes 10ml

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
1301	10ml	1326	10ml	1351		1376	
1302		1327		1352		1377	
1303		1328		1353		1378	
1304		1329		1354		1379	
1305		1330		1355		1380	
1306		1331		1356		1381	
1307		1332		1357		1382	
1308		1333		1358		1383	
1309		1334		1359		1384	
1310		1335		1360		1385	
1311		1336		1361		1386	
1312		1337		1362		1387	
1313		1338		1363		1388	
1314		1339		1364		1389	
1315		1340		1365		1390	
1316		1341		1366		1391	
1317		1342		1367		1392	
1318		1343		1368		1393	
1319		1344		1369		1394	
1320		1345		1370		1395	
1321		1346		1371		1396	
1322		1347		1372		1397	
1323		1348		1373		1398	
1324		1349		1374		1399	
1325		1350		1375		1400	

MERCURY NITRATE SPIKE VIALS - Target Volume: 20 milliliters

Date 10-21-13

Personnel F.H.E. [illegible]
J. McCollum CB CB

Shift Day 8:00 - 4:30

Pump calibrated Yes 10 ml [illegible] 10/21/13

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
2001	20	2026	20	2051	20	2076	20
2002		2027		2052		2077	
2003		2028		2053		2078	
2004		2029		2054		2079	
2005		2030		2055		2080	
2006		2031		2056		2081	
2007		2032		2057		2082	
2008		2033		2058		2083	
2009		2034		2059		2084	
2010		2035		2060		2085	
2011		2036		2061		2086	
2012		2037		2062		2087	
2013		2038		2063		2088	
2014		2039		2064		2089	
2015		2040		2065		2090	
2016		2041		2066		2091	
2017		2042		2067		2092	
2018		2043		2068		2093	
2019		2044		2069		2094	
2020		2045		2070		2095	
2021		2046		2071		2096	
2022		2047		2072		2097	
2023		2048		2073		2098	
2024		2049		2074		2099	
2025		2050		2075		2100	

MERCURY NITRATE SPIKE VIALS - Target Volume: 20 milliliters

Date 10-21-13

Personnel F.H.F. [signature]

Jessie McCallan C.B. CB

Shift DAY 8^00 - 4^30

Pump calibrated Y 10ml [signature]

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
2101	20	2126	20	2151	20	2176	20
2102		2127		2152		2177	
2103		2128		2153		2178	
2104		2129		2154		2179	
2105		2130		2155		2180	
2106		2131		2156		2181	
2107		2132		2157		2182	
2108		2133		2158		2183	
2109		2134		2159		2184	
2110		2135		2160		2185	
2111		2136		2161		2186	
2112		2137		2162		2187	
2113		2138		2163		2188	
2114		2139		2164		2189	
2115		2140		2165		2190	
2116		2141		2166		2191	
2117		2142		2167		2192	
2118		2143		2168		2193	
2119		2144		2169		2194	
2120		2145		2170		2195	
2121		2146		2171		2196	
2122		2147		2172		2197	
2123		2148		2173		2198	
2124		2149		2174		2199	
2125		2150		2175		2200	

MERCURY NITRATE SPIKE VIALS - Target Volume: 20 milliliters

Date 10

Personnel F.H.F. [signature] 10/21/13

Jessie McCullen [signature] CB

Shift DAY 8-4:30

Pump calibrated Yes 10 ml [signature]

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
2201	20	2226	20	2251	20	2276	20
2202		2227		2252		2277	
2203		2228		2253		2278	
2204		2229		2254		2279	
2205		2230		2255		2280	
2206		2231		2256		2281	
2207		2232		2257		2282	
2208		2233		2258		2283	
2209		2234		2259		2284	
2210		2235		2260		2285	
2211		2236		2261		2286	
2212		2237		2262		2287	
2213		2238		2263		2288	
2214		2239		2264		2289	
2215		2240		2265		2290	
2216		2241		2266		2291	
2217		2242		2267		2292	
2218		2243		2268		2293	
2219		2244		2269		2294	
2220		2245		2270		2295	
2221		2246		2271		2296	
2222		2247		2272		2297	
2223		2248		2273		2298	
2224		2249		2274		2299	
2225		2250		2275		2300	

MERCURY NITRATE SPIKE VIALS - Target Volume: 20 milliliters

Date 10/21/13

Personnel F.H.F [signature]

[signature] C.B CB

Shift Day 800—430

Pump calibrated Yes 10ml [signature]

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
2301	20	2326	20	2351	20	2376	20
2302		2327		2352		2377	
2303		2328		2353		2378	
2304		2329		2354		2379	
2305		2330		2355		2380	
2306		2331		2356		2381	
2307		2332		2357		2382	
2308		2333		2358		2383	
2309		2334		2359		2384	
2310		2335		2360		2385	
2311		2336		2361		2386	
2312		2337		2362		2387	
2313		2338		2363		2388	
2314		2339		2364		2389	
2315		2340		2365		2390	
2316		2341		2366		2391	
2317		2342		2367		2392	
2318		2343		2368		2393	
2319		2344		2369		2394	
2320		2345		2370		2395	
2321		2346		2371		2396	
2322		2347		2372		2397	
2323		2348		2373		2398	
2324		2349		2374		2399	
2325		2350		2375		2400	

MERCURY NITRATE SPIKE VIALS - Target Volume: 20 milliliters

Date 10-21-13

Personnel F.H.F. [signature]

Jessie [illegible] C. [illegible] CB

Shift DAY 1800-430

Pump calibrated Yes 10ml [signature]

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
2401	20	2426	20	2451	20	2476	20
2402		2427		2452		2477	
2403		2428		2453		2478	
2404		2429		2454		2479	
2405		2430		2455		2480	
2406		2431		2456		2481	
2407		2432		2457		2482	
2408		2433		2458		2483	
2409		2434		2459		2484	
2410		2435		2460		2485	
2411		2436		2461		2486	
2412		2437		2462		2487	
2413		2438		2463		2488	
2414		2439		2464		2489	
2415		2440		2465		2490	
2416		2441		2466		2491	
2417		2442		2467		2492	
2418		2443		2468		2493	
2419		2444		2469		2494	
2420		2445		2470		2495	
2421		2446		2471		2496	
2422		2447		2472		2497	
2423		2448		2473		2498	
2424		2449		2474		2499	
2425		2450		2475		2500	

MERCURY NITRATE SPIKE VIALS - Target Volume: 20 milliliters

Date 10-21-13

Personnel F.H.F. [signature]

[signature] CB [signature]

Shift Day 8 - 4:30

Pump calibrated Yes 10ml [signature] 10/21/13

VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)	VIAL #	VOLUME (ml)
2501	20	2526	20	2551	20	2576	20
2502		2527		2552		2577	
2503		2528		2553		2578	
2504		2529		2554		2579	
2505		2530		2555		2580	
2506		2531		2556		2581	
2507		2532		2557		2582	
2508		2533		2558		2583	
2509		2534		2559		2584	
2510		2535		2560		2585	
2511		2536		2561		2586	
2512		2537		2562		2587	
2513		2538		2563		2588	
2514		2539		2564		2589	
2515		2540		2565		2590	
2516		2541		2566		2591	
2517		2542		2567		2592	
2518		2543		2568		2593	
2519		2544		2569		2594	
2520		2545		2570		2595	
2521		2546		2571		2596	
2522		2547		2572		2597	
2523		2548		2573		2598	
2524		2549		2574		2599	
2525		2550		2575		2600	

Hexachloroethane Spike Preparation Sheets

HEXACHLOROETHANE SPIKE BAGS Target Weight: 5.8 pounds

Date 9-30-13

Crew Personnel DAVID HALAYONICH

TERRY DOVER

Shift 1ST

Scale zeroed YES

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
1	5.8	26	5.8	51	5.8	76	5.8
2		27		52		77	
3		28		53		78	
4		29		54		79	
5		30		55		80	
6		31		56		81	
7		32		57		82	
8		33		58		83	
9		34		59		84	
10		35		60		85	
11		36		61		86	
12		37		62		87	
13		38		63		88	
14		39		64		89	5.8 CW
15		40		65		90	
16		41		66		91	
17		42		67		92	
18		43		68		93	
19		44		69		94	
20		45		70		95	
21		46		71		96	
22		47		72		97	
23		48		73		98	
24		49		74		99	
25		50		75		100	

HEXACHLOROETHANE SPIKE BAGS - Target Weight: 5.8 pounds

Date 10-2-13

Crew Personnel Dennis Schlemmer
Steve Watson / SW

Shift 1

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
101	5.8 CW	126	5.8 CW	151	DS 5.8	176	DS 5.8
102		127		152		177	
103		128		153		178	
104		129		154		179	
105		130		155		180	
106		131		156		181	
107		132		157		182	
108		133		158		183	
109		134		159		184	DS 5.8
110		135		160		185	
111		136		161		186	
112		137		162		187	
113		138		163		188	
114		139		164		189	
115		140	DS 5.8	165		190	
116		141		166		191	
117		142		167		192	
118		143		168		193	
119		144		169		194	
120		145		170		195	
121		146		171		196	
122		147		172		197	
123		148		173		198	
124		149		174		199	
125		150		175		200	

HEXACHLOROETHANE SPIKE BAGS - Target Weight: 5.8 pounds

Date 10-2-13

Crew Personnel Steve Watson

Dennis Schlemmer

Shift 1

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
201	5.8	226	5.8 DS	251	5.8 CW	276	5.8 CW
202	↓	227	↓	252	↓	277	↓
203	5.8 CW	228	↓	253	↓	278	↓
204	↓	229	↓	254	↓	279	↓
205	↓	230	↓	255	↓	280	↓
206	↓	231	↓	256	↓	281	TC 5.8
207	DS 5.8	232	↓	257	↓	282	↓
208	↓	233	↓	258	↓	283	↓
209	↓	234	↓	259	↓	284	↓
210	↓	235	↓	260	↓	285	↓
211	↓	236	↓	261	↓	286	↓
212	↓	237	↓	262	↓	287	↓
213	↓	238	↓	263	↓	288	↓
214	↓	239	↓	264	↓	289	↓
215	↓	240	↓	265	↓	290	↓
216	↓	241	CW 5.8	266	↓	291	↓
217	↓	242	↓	267	↓	292	↓
218	↓	243	↓	268	↓	293	↓
219	↓	244	↓	269	↓	294	↓
220	↓	245	↓	270	↓	295	↓
221	↓	246	↓	271	↓	296	↓
222	↓	247	↓	272	↓	297	↓
223	↓	248	↓	273	↓	298	↓
224	↓	249	↓	274	↓	299	↓
225	↓	250	↓	275	↓	300	↓

HEXACHLOROETHANE SPIKE BAGS - Target Weight: 5.8 pounds

Date 9-30-13

Crew Personnel DAVID HALAVONICH

JERRY DOVER

Shift 1ST

Scale zeroed YES

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
301	DS	326	DS 5.8	351	5.8 DS	376	5.8
302	5.8	327		352		377	
303		328		353		378	
304		329		354		379	
305		330		355		380	
306		331		356		381	
307		332		357		382	
308		333		358		383	
309		334		359		384	
310		335		360		385	
311		336		361		386	
312		337		362	5.8	387	
313		338		363		388	
314		339		364		389	
315		340		365		390	
316		341		366		391	
317		342		367		392	
318		343		368		393	
319		344		369		394	
320		345		370		395	
321		346		371		396	
322		347		372		397	
323		348		373		398	
324		349		374		399	
325		350		375		400	

HEXACHLOROETHANE SPIKE BAGS Target Weight: 5.8 pounds

Date 9-30-13

Crew Personnel DAVID HALAVONICH

TERRY DOVER

Shift 1ST

Scale zeroed YES

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
401	5.8	426	5.8	451	5.8	476	5.8
402		427		452		477	
403		428		453		478	
404		429		454		479	
405		430		455		480	
406		431		456		481	
407		432		457		482	
408		433		458		483	
409		434		459		484	
410		435		460		485	
411		436		461		486	
412		437		462		487	
413		438		463		488	
414		439		464		489	
415		440		465		490	
416		441		466		491	
417		442		467		492	
418		443		468		493	
419		444		469		494	
420		445		470		495	
421	5.8	446		471		496	
422		447		472		497	
423		448		473		498	
424		449		474		499	
425		450		475		500	

HEXACHLOROETHANE SPIKE BAGS Target Weight: 5.8 pounds

Date 9-30-13

Crew Personnel DAVID HALAVONICH

TERRY DOVER

Shift 1ST

Scale zeroed YES

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
501	5.8	526	5.8	551	5.8	576	5.8
502		527		552		577	
503		528		553		578	
504		529		554		579	
505		530		555		580	
506		531		556		581	
507		532		557		582	
508		533		558		583	
509		534		559		584	
510		535		560		585	
511		536		561		586	
512		537		562		587	
513		538		563		588	
514		539		564		589	
515		540		565		590	
516		541		566		591	
517		542		567		592	
518		543		568		593	
519		544		569		594	
520		545	5.8	570		595	
521		546		571		596	
522		547		572		597	
523		548		573		598	
524		549		574		599	
525		550		575		600	

HEXACHLOROETHANE SPIKE BAGS - Target Weight: 5.8 pounds

Date 10-3-13

Crew Personnel Wayne Dunton

Shift 1

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
601	5.8	626	5.8	651	5.8 WD	676	5.8 WD
602		627		652		677	
603		628		653		678	
604		629		654		679	
605		630		655		680	
606		631		656		681	
607		632		657		682	
608		633		658		683	
609		634		659		684	
610		635		660		685	
611		636		661		686	
612		637		662		687	
613		638		663		688	
614		639		664		689	
615		640		665		690	
616		641		666		691	
617		642		667		692	
618		643		668		693	
619		644		669		694	
620		645		670		695	
621		646	5.8 WD	671		696	
622		647		672		697	
623		648		673		698	
624		649		674		699	
625		650		675		700	

HEXACHLOROETHANE SPIKE BAGS - Target Weight: 5.8 pounds

Crew Personnel Don Schanel / Darrell Schanel

Wayne Dimetulics

Date 10-3-13

Shift 1

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
701	5.8 WD	726	5.8	751	5.8	776	5.8 DS
702		727		752		777	
703		728		753		778	
704		729		754		779	
705		730		755		780	
706	5.8	731		756		781	
707		732		757		782	
708		733		758		783	
709		734		759		784	
710		735		760		785	
711		736		761		786	
712		737		762		787	
713		738		763		788	
714		739		764		789	
715		740		765		790	
716		741		766	5.8 DS	791	
717		742		767	5.8 DS	792	
718		743		768		793	
719		744		769		794	
720		745		770		795	
721		746		771		796	
722		747		772		797	
723		748		773		798	
724		749		774		799	
725		750		775		800	

HEXACHLOROETHANE SPIKE BAGS - Target Weight: 5.8 pounds

Date 10-3-13

Crew Personnel Tony Chick / Tony Chick
Don Schanuel / Don Schanuel

Shift 1

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
801	5.8 DS	826	5.8 DS	851	5.8 DS.	876	5.8 DS
802		827		852		877	
803		828		853		878	
804		829		854		879	
805		830		855		880	
806		831		856		881	
807		832		857		882	
808		833		858		883	
809		834		859		884	
810		835		860		885	
811		836		861		886	5.8 TC
812		837		862		887	
813		838		863		888	
814		839		864		889	
815		840		865		890	
816		841		866		891	
817		842		867		892	
818		843		868		893	
819		844		869		894	
820		845		870		895	
821		846		871		896	
822		847		872		897	
823		848		873		898	
824		849		874		899	
825	5.8 DS	850		875		900	

HEXACHLOROETHANE SPIKE BAGS - Target Weight: 5.8 pounds

Date 10-3-13

Crew Personnel Tony Click Tony Click

Shift 1

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
901	5.8 TC	926	5.8 TC	951	5.8 TC	976	5.8 TC
902		927		952		977	
903		928		953		978	
904		929		954		979	
905		930		955		980	
906		931		956		981	
907		932		957		982	
908		933		958		983	
909		934		959		984	
910		935		960		985	
911		936		961		986	
912		937		962		987	
913		938		963		988	
914		939		964		989	
915		940		965		990	
916		941		966		991	
917		942		967		992	
918		943		968		993	
919		944		969		994	
920		945		970		995	
921		946		971		996	
922		947	5.8 TC	972		997	
923		948		973		998	
924		949		974		999	
925		950		975		1000	

HEXACHLOROETHANE SPIKE BAGS - Target Weight: 5.8 pounds

Date 10-3-13

Crew Personnel Tony Click / Tony Click

Wayne Demetulias

Shift 1

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
1001	5.8 TC	1026	5.8 WD	1051	5.8 WD	1076	5.8 TC
1002		1027		1052		1077	
1003		1028		1053		1078	
1004		1029		1054		1079	
1005		1030		1055		1080	
1006		1031		1056		1081	
1007		1032		1057		1082	
1008		1033		1058		1083	
1009	5.8 lbs. WD	1034		1059		1084	
1010		1035		1060		1085	
1011		1036		1061		1086	
1012		1037		1062		1087	
1013		1038		1063		1088	
1014		1039		1064		1089	
1015		1040		1065		1090	
1016		1041		1066		1091	
1017		1042		1067		1092	
1018		1043		1068		1093	
1019		1044		1069	5.8 TC	1094	
1020		1045		1070		1095	
1021		1046		1071		1096	
1022		1047		1072		1097	
1023		1048		1073		1098	
1024		1049		1074		1099	
1025		1050		1075		1100	

HEXACHLOROETHANE SPIKE BAGS - Target Weight: 5.8 pounds

Date 10-4-13

Crew Personnel Tony Chek

Shift 1

Scale zeroed Ø

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
1101	5.8	1126	5.8	1151	5.8	1176	5.8
1102		1127		1152		1177	
1103		1128		1153		1178	
1104		1129		1154		1179	
1105		1130		1155		1180	
1106		1131		1156		1181	
1107		1132		1157		1182	
1108		1133		1158		1183	
1109		1134		1159		1184	
1110		1135		1160		1185	
1111		1136		1161		1186	
1112		1137		1162		1187	
1113		1138		1163		1188	
1114		1139		1164		1189	
1115		1140		1165		1190	
1116		1141		1166		1191	
1117		1142		1167		1192	
1118		1143		1168		1193	
1119		1144		1169		1194	
1120		1145		1170		1195	
1121		1146		1171		1196	
1122		1147		1172		1197	
1123		1148		1173		1198	
1124		1149		1174		1199	
1125		1150		1175		1200	

HEXACHLOROETHANE SPIKE BAGS - Target Weight: 5.8 pounds

Date 10-16-13

Crew Personnel Mike Livingston, Don Schmuel, Steve Watson

Shift 1ST

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
1201	5.8	1226	5.8	1251	5.8	1276	5.8
1202	5.8	1227	5.8	1252	5.8	1277	5.8
1203	5.8	1228	5.8	1253	5.8	1278	5.8
1204	5.8	1229	5.8	1254	5.8	1279	5.8
1205	5.8	1230	5.8	1255	5.8	1280	5.8
1206	5.8	1231	5.8	1256	5.8	1281	5.8
1207	5.8	1232	5.8	1257	5.8	1282	5.8
1208	5.8	1233	5.8	1258	5.8	1283	5.8
1209	5.8	1234	5.8	1259	5.8	1284	5.8
1210	5.8	1235	5.8	1260	5.8	1285	5.8
1211	5.8	1236	5.8	1261	5.8	1286	5.8
1212	5.8	1237	5.8	1262	5.8	1287	5.8
1213	5.8	1238	5.8	1263	5.8	1288	5.8
1214	5.8	1239	5.8	1264	5.8	1289	5.8
1215	5.8	1240	5.8	1265	5.8	1290	5.8
1216	5.8	1241	5.8	1266	5.8	1291	5.8
1217	5.8	1242	5.8	1267	5.8	1292	5.8
1218	5.8	1243	5.8	1268	5.8	1293	5.8
1219	5.8	1244	5.8	1269	5.8	1294	5.8
1220	5.8	1245	5.8	1270	5.8	1295	5.8
1221	5.8	1246	5.8	1271	5.8	1296	5.8
1222	5.8	1247	5.8	1272	5.8	1297	5.8
1223	5.8	1248	5.8	1273	5.8	1298	5.8
1224	5.8	1249	5.8	1274	5.8	1299	5.8
1225	5.8	1250	5.8	1275	5.8	1300	5.8

HEXACHLOROETHANE SPIKE BAGS - Target Weight: 5.8 pounds

Date 10-16-13

Crew Personnel Mike Livingston, Don Shrum, Steve Walter

Shift 1st

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
1301	5.8	1326	5.8	1351	5.8	1376	5.8
1302	5.8	1327	5.8	1352	5.8	1377	5.8
1303	5.8	1328	5.8	1353	5.8	1378	5.8
1304	5.8	1329	5.8	1354	5.8	1379	5.8
1305	5.8	1330	5.8	1355	5.8	1380	5.8
1306	5.8	1331	5.8	1356	5.8	1381	5.8
1307	5.8	1332	5.8	1357	5.8	1382	5.8
1308	5.8	1333	5.8	1358	5.8	1383	5.8
1309	5.8	1334	5.8	1359	5.8	1384	5.8
1310	5.8	1335	5.8	1360	5.8	1385	5.8
1311	5.8	1336	5.8	1361	5.8	1386	5.8
1312	5.8	1337	5.8	1362	5.8	1387	5.8
1313	5.8	1338	5.8	1363	5.8	1388	5.8
1314	5.8	1339	5.8	1364	5.8	1389	5.8
1315	5.8	1340	5.8	1365	5.8	1390	5.8
1316	5.8	1341	5.8	1366	5.8	1391	5.8
1317	5.8	1342	5.8	1367	5.8	1392	5.8
1318	5.8	1343	5.8	1368	5.8	1393	5.8
1319	5.8	1344	5.8	1369	5.8	1394	5.8
1320	5.8	1345	5.8	1370	5.8	1395	5.8
1321	5.8	1346	5.8	1371	5.8	1396	5.8
1322	5.8	1347	5.8	1372	5.8	1397	5.8
1323	5.8	1348	5.8	1373	5.8	1398	5.8
1324	5.8	1349	5.8	1374	5.8	1399	5.8
1325	5.8	1350	5.8	1375	5.8	1400	5.8

HEXACHLOROETHANE SPIKE BAGS - Target Weight: 5.8 pounds

Crew Personnel Mike Livingston, Don Schmid, Steve Watson

Date 10-16-13

Shift 1ST

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
1401	5.8	1426	5.8	1451	5.8	1476	5.8
1402	5.8	1427	5.8	1452	5.8	1477	5.8
1403	5.8	1428	5.8	1453	5.8	1478	5.8
1404	5.8	1429	5.8	1454	5.8	1479	5.8
1405	5.8	1430	5.8	1455	5.8	1480	5.8
1406	5.8	1431	5.8	1456	5.8	1481	5.8
1407	5.8	1432	5.8	1457	5.8	1482	5.8
1408	5.8	1433	5.8	1458	5.8	1483	5.8
1409	5.8	1434	5.8	1459	5.8	1484	5.8
1410	5.8	1435	5.8	1460	5.8	1485	5.8
1411	5.8	1436	5.8	1461	5.8	1486	5.8
1412	5.8	1437	5.8	1462	5.8	1487	5.8
1413	5.8	1438	5.8	1463	5.8	1488	5.8
1414	5.8	1439	5.8	1464	5.8	1489	5.8
1415	5.8	1440	5.8	1465	5.8	1490	5.8
1416	5.8	1441	5.8	1466	5.8	1491	5.8
1417	5.8	1442	5.8	1467	5.8	1492	5.8
1418	5.8	1443	5.8	1468	5.8	1493	5.8
1419	5.8	1444	5.8	1469	5.8	1494	5.8
1420	5.8	1445	5.8	1470	5.8	1495	5.8
1421	5.8	1446	5.8	1471	5.8	1496	5.8
1422	5.8	1447	5.8	1472	5.8	1497	5.8
1423	5.8	1448	5.8	1473	5.8	1498	5.8
1424	5.8	1449	5.8	1474	5.8	1499	5.8
1425	5.8	1450	5.8	1475	5.8	1500	5.8

HEXACHLOROETHANE SPIKE BAGS - Target Weight: 5.8 pounds

Date 10-21-13

Crew Personnel Mike Livingston / Wayne [illegible]

Shift 1ST

Scale zeroed ✓

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
1501	5.8	1526	5.8	1551	5.8	1576	5.8
1502		1527		1552		1577	
1503		1528		1553		1578	
1504		1529		1554		1579	
1505		1530		1555		1580	
1506		1531		1556		1581	
1507		1532		1557		1582	
1508		1533		1558		1583	
1509		1534		1559		1584	
1510		1535		1560		1585	
1511		1536		1561		1586	
1512		1537		1562		1587	
1513		1538		1563		1588	
1514		1539		1564		1589	
1515		1540		1565		1590	
1516		1541		1566		1591	
1517		1542		1567		1592	
1518		1543		1568		1593	
1519		1544		1569		1594	
1520		1545		1570		1595	
1521		1546		1571		1596	
1522		1547		1572		1597	
1523		1548		1573		1598	
1524		1549		1574		1599	
1525		1550		1575		1600	

HEXACHLOROETHANE SPIKE BAGS - Target Weight: 5.8 pounds

Date _____

Crew Personnel _____

Shift _____

Scale zeroed _____

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
1601	5.8	1626	5.8	1651	5.8	1676	5.8
1602		1627		1652		1677	
1603		1628		1653		1678	
1604		1629		1654		1679	
1605		1630		1655		1680	
1606		1631		1656		1681	
1607		1632		1657		1682	
1608		1633		1658		1683	
1609		1634		1659		1684	
1610		1635		1660		1685	
1611		1636		1661		1686	
1612		1637		1662		1687	
1613		1638		1663		1688	
1614		1639		1664		1689	
1615		1640		1665		1690	
1616		1641		1666		1691	
1617		1642		1667		1692	
1618		1643		1668		1693	
1619		1644		1669		1694	
1620		1645		1670		1695	
1621		1646		1671		1696	
1622		1647		1672		1697	
1623		1648		1673		1698	
1624		1649		1674		1699	
1625		1650		1675		1700	

HEXACHLOROETHANE SPIKE BAGS - Target Weight: 5.8 pounds

Date 10-22-13

Crew Personnel Mike Livingston / [illegible]

Shift 1ST

Scale zeroed ✓

MIKE LIVINGSTON

10-22-13
1ST

BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)	BAG #	WEIGHT (LBS)
1701	5.8	1726	5.8	1751	5.8	1776	5.8
1702		1727		1752		1777	
1703		1728		1753		1778	
1704		1729		1754		1779	
1705		1730		1755		1780	
1706		1731		1756		1781	
1707		1732		1757		1782	
1708		1733		1758		1783	
1709		1734		1759		1784	
1710		1735		1760		1785	
1711		1736		1761		1786	
1712		1737		1762		1787	
1713		1738		1763		1788	
1714		1739		1764		1789	
1715		1740		1765		1790	
1716		1741		1766		1791	
1717		1742		1767		1792	
1718		1743		1768		1793	
1719		1744		1769		1794	
1720		1745		1770		1795	
1721		1746		1771		1796	
1722		1747		1772		1797	
1723		1748		1773		1798	
1724		1749		1774		1799	
1725		1750		1775		1800	

Unit 2 Field Data Sheets for Lead, Mercury, and Chlorine Spikes in Containerized Solid Charges

TEST DATE: 10/8/13
TEST UNIT: No. 2
TEST START TIME: 0:12 U2 RIA

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)
SolPtl-1	88-216					SolPtl-1	88-243			
	275						250			
	274						248			
	269						245			
	273						242			
	266						249			
	272						247			
	268						244			
	265						241			
	271						240			
	270						238			
	267						234			
	264						231			
	262						239			
	258						237			
	255						233			
	263						230			
	260						236			
	262A						235			
	257						232			
	254						229			
	261						228			
	259						227			
	256						226			
	253						225			
	252						224			
	251						223			
28	246						222			56

SAMPLES: ~~L-1247~~, ~~H-1009~~, ~~Mercury vial 130~~

TEST DATE: 10-8-13
TEST UNIT: No. 2
TEST START TIME:

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
SolPrt1-1	88-221					SolPrt1-1	88-184				
	220						192				
	219						177				
	218						183				
	217						192				
	166						189				
	165						190				
AMPLE 11:50 START OK	175						191				
	171						186				
	163						185				SAMPLE
	164						188				
	168						187				
	167						181				
	179						182				
	172						197				
	176						202				
MPLE	162						204				
	161						201				
	201						193				SAMPLE
	180						203				
	169						198				
	158						200				
	159						195				1:00 PM END
	157						~~199~~				
	178						~~194~~				
	173										
AMPLE	170										
84	174										

TEST DATE: 10-8-13
TEST UNIT: No. 2
TEST START TIME: U2R18

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
1:31 SolPrt2-2	02 - 1	1248	1010	127		SolPrt2-2	02- 29	1220	1038	98	
	2	1246	1012	138			30	1212	1039	133	
	3	1250	1014	141			31	1225	1040	108	
	4	1249	1011	126			32	1227	1042	107	
	5	1242	1013	146			33	1205	1044	109	
	6	1238	1015	147			34	1210	1041	118	
	7	1241	1016	148			35	1214	1043	137	
	8	1235	1018	104			36	1228	1045	139	
	9	1245	1017	116			37	1247	1009	130	
	10	1237	1019	110			38	1222	1046	143	
	11	1240	1021	95			39	1215	1049	117	
	12	1244	1020	115			40	1218	1047	144	
	13	1233	1022	122			41	1213	1048	131	
	14	1232	1025	142			42	1217	1050	128	
	15	1229	1023	119			43	1221	1051	150	
	16	1230	1027	111			44	1219	1054	57	
	17	1206	1024	120			45	1223	1052	53	START 15:40
	18	1226	1028	134			46	1216	1053	89	SAMPLE
	19	1236	1026	112			47	1204	1057	100	
	20	1239	1029	102			48	1178	1056	54	
	21	1234	1031	105			49	1157	1058	90	
	22	1243	1030	106			50	1168	1055	101	
	23	1231	1033	114			51	1167	1068	125	
	24	1209	1032	103			52	1156	1060	121	
	25	1211	1034	149			53	1176	1061	88	
	26	1207	1035	145			54	1175	1059	132	
	27	1224	1036	140			55	1174	1062	81	SAMPLE
	28	1208	1037	113			56	1166	1063	92	

SAMPLES: H-1129, L-1164, Mercury vial 91

TEST DATE: 10-8-13
TEST UNIT: No. 2
TEST START TIME:

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
	PrtSol2-2	02-57	1165	1064	59		PRT SOL 2-2	02-85	1200	1104	63	
		58	1177	1065	78			86	1150	1103	68	
		59	1173	1066	76			87	1124	1101	135	
		60	1171	1067	84			88	1127	1102	123	
		61	1160	1128	77			89	1192	1099	70	
		62	1172	1127	60			90	1138	1100	83	
		63	1163	1126	94			91	1185	1098	65	
AMPLE		64	1170	1125	56			92	1195	1096	136	
		65	1169	1124	85			93	1143	1097	67	SAMPLE
		66	1161	1121	52			94	1121	1095	29	
		67	1153	1123	58			95	1198	1094	71	
		68	1154	1122	93			96	1131	1093	38	
		69	1147	1120	55			97	1135	1092	62	
		70	1152	1119	82			98	1134	1091	69	
		71	1141	1118	86			99	1193	1090	28	
		72	1149	1117	99			100	1194	1089	35	
		73	1140	1116	97			101	1142	1088	7	
AMPLE		74	1151	1115	75			102	1187	1087	25	
		75	1162	1114	124			103	1125	1086	5	SA
		76	1158	1113	96			104	1203	1085	13	SAMPLE
		77	1146	1112	87			105	1123	1084	26	
		78	1139	1111	74			106	1129	1083	30	
		79	1145	1110	80			107	1128	1082	33	
		80	1159	1109	73			108	1110	1080	9	
		81	1148	1108	64			109	1116	1079	48	
		82	1144	1107	129			110	1118	1078	18	
		83	1126	1106	66			111	1119	1077	17	
AMPLE		84	1155	1105	72			112	1120	1075	6	

SAMPLES: H-1081, L-1130, mercury vial 36

TEST DATE:
TEST UNIT: No. 2
TEST START TIME:

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
AMPLE	PtSo12-2	02-113	1179	1076	22		PtSo12-2	02-141	1132	726	11	SAMPLE
		114	1190	1074	20			142	1115	729	44	
		115	1191	1073	3			143	1181	732	43	
		116	1201	1071	61			144	1108	730	51	
		117	1196	1072	2			145	1117	728	19	
		118	1202	1070	34			146	1104	736	21	
		119	1197	1069	45			147	493	733	15	
		120	1184	707	16			148	492	735	37	
		121	1186	706	4			149	500	739	276	
MPLE		122	1199	708	50			150	491	731	257	
		123	1180	709	31			151	495	738	252	SAMPLE
		124	1105	711	24			152	496	734	264	
		125	1113	712	12			153	501	742	265	
		126	1122	710	27			154	488	740	268	
		127	1188	713	8			155	494	743	254	
		128	1106	714	23			156	487	737	253	
		129	1137	715	42			157	497	741	258	
		130	1136	716	47			158	498	746	261	
		131	1182	718	79			159	489	745	256	
AMPLE		132	1133	717	14			160	481	747	260	SAMPLE
		133	1114	719	49			161	499	749	272	
		134	1112	720	41			162	476	751	263	
		135	1183	724	46			163	490	748	274	
		136	1189	721	1			164	486	752	249	
		137	1107	723	40			165	479	744	255	
		138	1111	722	39			166	483	750	251	
		139	1103	725	10			167	478	753	271	
		140	1109	727	32			168	477	755	262	
								169	469	757	280	SAMPLE
								170	470	754	297	END 18:55

SAMPLES: H-756, L-480, mercury vial 279
H-760, L-467, mercury vial 299

TEST DATE: 10/9/13
TEST UNIT: No. 2
TEST START TIME:

U2R2A

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
PrtSoll-1	88-194					PrtSoll-1	88-432				
	199						430				SAMPLE
	208						431				
	211						423				
	215						429				
	206						428				
	214						422				
	205						427				
	207						425				
	212						426				
	213						421				
	210						424				SAMPLE
	209						420				
	196						419				
	454						414				
	456						412				
	455						418				
	452						413				
	448						410				
9:45 START	446						417				SAMPLE
SAMPLE	450						411				
	449						409				
	451						416				
	444						415				
	453						408				
	447						404				
	433						405				
	445						407				

TEST DATE: 10-9-13
TEST UNIT: No. 2
TEST START TIME:

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
PrtSol1-1	88-401					PrtSol2-2	02-20	453	898	1138	12:00
	~~407~~						21	450	900	1118	SAMPLE
	406						22	454	904	1078	
AMPLE	398						23	456	899	1133	
	400						24	452	905	1137	
	402						25	447	903	1124	
10:53	~~397~~						26	449	901	1079	
	~~396~~						27	440	902	1127	
							28	442	906	1077	
PrtSol2-2	02-1	484	886	1108			29	444	908	1122	
	2	485	888	1111			30	461	907	1128	
	3	482	891	1136			31	446	910	1071	SAMPLE
	4	475	887	1105			32	451	909	1134	
	5	474	890	1106			33	437	911	1126	
	6	471	889	1139			34	425	912	1116	
	7	473	892	1110			35	438	913	1132	
	8	463	893	1130			36	433	915	1076	
	9	468	894	1129			37	445	916	1125	
	10	472	895	1114			38	432	914	1135	
	11	460	763	1141			39	448	919	1131	
	12	465	762	1117			40	431	917	1107	
	13	458	761	1115			41	428	918	1121	SAMPLE
	14	466	758	1123			42	443	921	1112	
	15	464	759	1140			43	439	922	1097	
	16	455	764	1113			44	434	923	1089	
	17	457	896	1120			45	441	920	1083	
	18	459	765	1109			46	430	925	1084	
	19	462	897	1119			47	436	926	1080	

TEST DATE: 10/10/13
TEST UNIT: No. 2
TEST START TIME:

U2R3A

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
PrtSoil-1	88-156					PrtSoil-1	88-127				
	152						123				
	148						129				
	155						126				
	151						122				
	147						130				SAMPLE
	154						125				
	150						121				
	146						120				
	153						118				
	149						112				
	145						119				
	144						117				
	140						111				
	136						116				SAMPLE
	143						115				
	139						110				
	135						114				
	142						113				
	138						109				
	134						106				
	141						107				
9:15 START	137						108				
SAMPLE	133						103				SAMPLE
	132						104				
	128						105				
	124						100				
	131						101				

TEST DATE: 10-10-13
TEST UNIT: No. 2
TEST START TIME:

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
	PtSd1-1	88-102					PtSd2-2	02-18	406	944	1057	
		97						19	801	691	1063	
		98						20	793	946	1054	12:30 START
		99						21	797	689	1096	SAMPLE
		397						22	785	688	1094	
SAMPLE		399						23	789	687	1087	
		396						24	796	686	1073	
		331						25	781	684	1104	
10:23		332						26	777	685	1082	
		~~335~~						27	787	683	1053	
								28	791	682	290	
12:00	PtSd2-2	02-1	427	924	1058			29	782	681	281	
		2	790	690	1065			30	778	680	289	
1:38		3	795	693	1056			31	779	679	294	SAMPLE
		4	794	694	1051			32	780	678	288	
		5	788	696	1093			33	784	677	278	
		6	800	692	1060			34	775	676	284	
		7	799	695	1061			35	770	675	285	
		8	402	699	1074			36	771	674	298	
		9	792	698	1068			37	768	673	291	
		10	413	697	1064			38	786	672	283	
		11	412	701	1100			39	776	670	270	
		12	407	703	1052			40	773	671	292	SAMPLE
		13	403	700	1062			41	772	669	295	
		14	404	702	1070			42	783	668	296	
		15	798	705	1055			43	764	666	273	
		16	405	704	1067			44	774	665	282	
		17	409	945	1059			45	765	664	293	

SAMPLES: L-762, H-667, mercury vials 286, 275

TEST DATE: 10-10-13
TEST UNIT: No. 2
TEST START TIME:

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
	PtSol 2-2	02-46	759	663	259		PtSol 2-2	02-74	752	874	232	
		47	766	662	266			75	735	876	246	
		48	763	661	287			76	750	872	220	
		49	756	660	225			77	730	873	236	SAMPLE
SAMPLE		50	757	659	244			78	734	871	221	
		51	760	658	226			79	742	868	247	
		52	754	657	237			80	732	867	207	
		53	753	656	241			81	726	869	216	
		54	758	655	208			82	727	866	227	
		55	769	654	269			83	744	865	240	
		56	748	653	213			84	729	864	217	
		57	751	652	267			85	728	863	214	
		58	747	651	219			86	724	862	206	
		59	743	650	245			87	722	861	228	SAMPLE
SAMPLE		60	749	649	212			88	720	860	277	
		61	746	648	205			89	715	859	243	
		62	740	647	210			90	721	858	215	
		63	738	646	209			91	716	857	231	
		64	767	885	204			92	718	856	235	
		65	736	884	211			93	712	855	224	
		66	761	883	203			94	723	854	218	
		67	741	881	202			95	709	853	171	
SAMPLE		68	737	880	248			96	719	852	175	SAMPLE
		69	739	878	229			97	707	851	169	
		70	731	877	239			98	706	850	181	
		71	755	882	222			99	705	849	162	
		72	733	879	242			100	708	848	187	
		73	717	875	250			101	703	847	223	

Samples: H-870, L-745, mercury vials 230, 233

TEST DATE: 10-10-13
TEST UNIT: No. 2
TEST START TIME:

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
PtSo12-2	02-102	725	846	201		PtSo12-2	02-130	574	818	170	
	103	714	845	195			131	593	817	152	
	104	711	844	180			132	576	816	184	
	105	710	843	234			133	551	814	185	
SAMPLE	106	704	842	189			134	571	815	157	SAMPLE
	107	713	841	161			135	580	813	179	
	108	702	840	156			136	555	812	166	
	109	594	839	200			137	579	810	178	
	110	601	838	165			138	590	811	183	15:40
	111	600	837	191							
	112	598	836	173							
	113	592	835	197							
	114	587	834	193							
AMPLE	115	588	831	151							
	116	596	833	159							
	117	591	832	160							
	118	586	830	154							
	119	599	829	153							
	120	573	828	182							
	121	584	827	155							
	122	585	826	192							
	123	595	825	198							
	124	578	824	199							
AMPLE	125	589	823	166							
	126	575	822	194							
	127	583	821	188							
	128	577	820	172							
	129	597	819	164							

SAMPLES: H-809, L-569, mercury vials 163, 158
H-808, L-581, mercury vials 853

TEST DATE: 10/30/13
TEST UNIT: NO. 2
TEST START TIME:

U2RSB

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
Sol Pt2-2	88 - 1	1434	1393	1342		Sol Pt2-2	88 - 29	1428	1424	1311	
	2	1432	1396	1298			30	1435	1419	1328	
	3	1444	1394	1309			31	1445	1423	1295	
	4	1447	1400	1312			32	1410	1425	1319	SAMPLE
	5	1429	1386	1332			33	1440	1428	1297	
	6	1450	1399	1325			34	1431	1431	1292	
	7	1421	1403	1330			35	1426	1432	1244	
	8	1442	1405	1333			36	1423	1430	1322	
	9	1446	1409	1300			37	1402	1439	1321	
	10	1427	1402	1308			38	1415	1438	1310	
	11	1437	1410	1302			39	1425	1440	1301	
	12	1449	1404	1337			40	1409	1435	1293	
	13	1441	1401	1315			41	1391	1434	1291	SAMPLE
	14	1438	1406	1329			42	1414	1436	1318	
	15	1439	1407	1340			43	1408	1429	1307	
	16	1420	1408	1327			44	1422	1437	1276	
	17	1436	1412	1339			45	1419	1427	1232	
	18	1412	1411	1299			46	1405	1416	1316	
	19	1417	1414	1304			47	1400	1317	1296	
	20	1413	1413	1317			48	1396	1318	1320	
12:45 START	21	1448	1416	1338			49	1398	1320	1282	
SAMPLE	22	1443	1415	1303			50	1389	1319	1306	
	23	1430	1418	1334			51	1395	1312	1238	SAMPLE
	24	1404	1422	1341			52	1397	1310	1269	
	25	1424	1417	1326			53	1411	1313	1235	
	26	1416	1421	1336			54	1406	1315	1264	
	27	1418	1420	1305			55	1403	1311	1262	
	28	1433	1426	1331			56	1384	1306	1290	

SAMPLES: H - 1433, L - 1401, merc. vial 1294

TEST DATE: 10-30-13
TEST UNIT: No. 2
TEST START TIME:

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
	SolPta2-2	88-57	1382	1309	1247		SolPta2-2	88-85	1372	1284	1277	
		58	1399	1314	1314			86	1355	1279	1245	
		59	1364	1308	1266			87	1363	1282	1257	
AMPLE		60	1381	1305	1313			88	1366	1261	1205	
		61	1383	1298	1280			89	1369	1265	1242	SAMPLE
		62	1393	1300	1287			90	1356	1278	1254	
		63	1375	1299	1323			91	1351	1276	1288	
		64	1386	1297	1289			92	1357	1275	1251	
		65	1385	1304	1233			93	1352	1262	1260	
		66	1379	1302	1281			94	1361	1266	1253	
		67	1377	1301	1284			95	1362	1267	1239	
		68	1390	1307	1324			96	1358	1271	1248	
SAMPLE		69	1392	1303	1335			97	1365	1263	1188	
		70	1380	1295	1270			98	1354	1274	1259	
		71	1378	1288	1272			99	1759	1272	1191	SAMPLE
		72	1368	1290	1268			100	1760	1264	1197	
		73	1387	1292	1265			101	1761	1273	1185	
		74	1376	1294	1278			102	1763	1269	1220	
		75	1367	1287	1283			103	1757	1268	1256	
		76	1407	1296	1271			104	1762	1270	1214	
		77	1359	1293	1279			105	1766	1259	1206	
		78	1360	1281	1274			106	1765	1258	1240	
SAMPLE		79	1371	1291	1236			107	1775	1260	1194	
		80	1370	1285	1263			108	1764	1257	1179	
		81	1388	1286	1273			109	1780	1256	1221	SAMPLE
		82	1364	1289	1286			110	1770	1255	1217	
		83	1373	1283	1267			111	1778	1252	1211	
		84	1374	1280	1275			112	1769	1251	1241	

SAMPLES: H-1277, L-1353, mrc. vial 1285

TEST DATE: 10-30-13
TEST UNIT: No. 2
TEST START TIME:

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
	SolPit2-2	88-113	1779	1253	1237		SolPit2-2	88-141	1792	1223	1170	
		114	1773	1254	1224			142	1477	1222	1216	
		115	1772	1250	1208			143	1754	1221	1186	
		116	1758	1249	1255			144	1495	1220	1210	SAMPLE
		117	1789	1241	1261							
SAMPLE		118	1783	1242	1176							
		119	1785	1243	1204							
		120	1793	1244	1202							
		121	1782	1245	1226							
		122	1774	1246	1212							
		123	1771	1248	1203							
		124	1776	1247	1246							
		125	1777	1240	1258							
		126	1781	1239	1223							
SAMPLE		127	1767	1238	1207							
		128	1768	1237	1230							
		129	1798	1228	1219							
		130	1797	1229	1215							
		131	1755	1230	1250							
		132	1790	1231	1249							
		133	1795	1232	1222							
		134	1786	1233	1231							
		135	1500	1234	1195							
		136	1796	1235	1218							
SAMPLE		137	1794	1236	1213							
		138	1788	1227	1228							
		139	1787	1226	1225							
		140	1784	1225	1198							

SAMPLES: H-1224, L-1489, mat. vial 1209
H-1219, L-1485, mat. vial 1153

Unit 2 Field Data Sheets for Chromic Acid Spiking

U2 R1B

1/2

Start BATCH # CH13F00382 595.35 Net lbs } 2 55 GAL to start
Chromic Acid -35% BATCH # CH13F00382 595.35 Net

CHROMIC ACID SPIKE FEED - Target Rate: pounds/hour Date 10-8-13

Incinerator No. 2 Test Run 1 (1B) Operator MATOESIAN

Line out Pressure

COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	
2:25 P.M.	0	1088		35	4:10 PM	1:45	1210	23		
	1	1083			4:15 PM	1:50	1188	22		
	2	1079			4:20	1:55	1171	17		
	3	1074			4:25	2:00	1148	23		
	4	1070			4:30	2:05	1127	21		
	5	1066			4:35	2:10	1104	23	33 psi	
2:35 P.M.	10	—		1 HR →	4:40	2:15	1081	23		257 lbs 1st HR
	11	1037		34 psi	4:45	2:20	1062	19		
2:40 PM	15	1020			4:50 **	2:25	1037	25		
2:45 PM	20	998			4:55	2:30	1015	22		
2:50 PM	25	974			5:00	2:35	994	21		
2:55 PM	30	949	25		5:05	2:40	973	21		
3:00 PM	35	928	21		5:10	2:45	951	22		
3:05 P.M.	40	908	20		5:15	2:50	933	18		
3:10 P.M.	45	887	21		5:20	2:55	915	18		
ADDED 55 GAL → 3:26		1407			5:25	3:00	889	26		
3:27 P.M.	60	1402			5:30	3:05	867	22		
3:30	65	1386			5:35	3:10	848	19		
3:35	1:10 (20)	1359	27	2 HR →	5:40	3:15	826	22		255
3:40 P.M.	1:15	1338	21		5:45	3:20	801	25		
3:45 *	1:20	1319	19		5:50	3:25	779	22		
3:50	1:25	1295	24		5:55	3:30	756	23		
3:55 PM	1:30	1274	21		6:00	3:35	738	18		
4:00 P.M.	1:35	1255	19		6:05	3:40	717	21		
4:05 PM	1:40	1233	22		6:10	3:45	699	20		

595.35 lbs Net per 55 GAL
Density = 10.82 lb/GAL

*1st sple taken ~ 3:42 pm
** 2nd sple taken ~ 4:47 P.M.

~ 3:26 ADDED 55 GAL chrom
595.35 lbs Net
BATCH CH13G00252

U2 R1B

2/2

CHROMIC ACID SPIKE FEED 35% - Target Rate: 250 pounds/hour

Date 10-8-13

Incinerator No. 2

Test Run 1

Operator MATESIAN

	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING
	6:15 PM	3:50	677	20	37-22 psi					
	6:20 PM	3:55	655	22						
	6:25 PM	4:00	635	20						
	6:30 PM	4:05	613	22						
	6:35	4:10	589	24						
3 HR →	6:40	4:15	569	20	25% (6)					
8:43 - END OF METALS RUN	6:45	4:20	548	21						
	6:50	4:25 ***	527	21						
	6:55	4:30	506	21						
EOR →	6:56 PM	4:31 ***	502							

*** CR sple ≈ 6:45 PM

**** CR sple

U2 R3B

CHROMIC ACID SPIKE FEED - Target Rate 250 pounds/hour

Date 10-10-13

Incinerator No. 2

Test Run 3 (3B)

Operator MATOESIAN

	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING
	11:50 AM	0	1741	—		1:50	2:00 HR	1189	21	
		1	1735	6		1:55	2:05	1168	21	
	11:55 AM	5	1715	20		2:00	2:10	1141	27	
Line out →	12 NOON	10	1695	20		2:05	2:15	1111	30	
	12:05 PM	15	1672	23		2:10	2:20	1098	13	
	12:10 PM	20	1647	25		2:15	2:25	1074	24	
	12:15 PM	25	1622	25		2:20	2:30	1045	29	
	12:20	30	1602	20		2:25	2:35	1034	11	
	12:25	35	1583	19	2 HR →	2:30	2:40	1019	15	284 lbs
SOR →	12:30 PM	40	1559	24		2:35	2:45	999	20	
	12:35	45	*1534	25		2:40	2:50	979	20	
	12:40	50	1511	23		2:45	2:55	961	18	
	12:45	55	1486	25		2:50	3:00	938	24	
	12:50	1:00 HR	1470	16		2:55	3:05	923	15	
	12:55	1:05	1450	20		3:00	3:10	900	23	
	1:00 P.M.	1:10	1433	17		3:05	3:15	877	23	
	1:05	1:15	1407	26	METALS END →	3:10	3:20	854	23	
	1:10	1:20	1386	21		3:15	3:25	***830	24	
	1:15	1:25	1366	20		3:20	3:30	807	23	
	1:20	1:30	1345	21		3:25	3:35	787	20	
	1:25	1:35	1324	21	3 HR →	3:30	3:40	766	21	253 lbs
HR →	1:30	1:40	1303	21	256 lbs	3:35	3:45	742	24	
	1:35	1:45	1251	52		3:40	3:50	717	25	END
	1:40	1:50 **	**1225	26						
	1:45	1:55	1210	15						

Emptied LAST CR DRUM into POHC tank; SAME BATCH AS yesterday, BATCH CH 13600385

* CR sample @ 12:32 (2)

** 2nd CR sple @ 1:38 (2)

*** 3rd sple @ 3:11 P.M.

1:45 PM — windy; Gusts SCALE Variations

BATTERY #3

U2 RSB

1/2

CHROMIC ACID SPIKE FEED - Target Rate 250 (35%) pounds/hour

Date 10/30/13

Incinerator No. 2

Test Run 4 (5B)

Operator MATDESIAN

COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING
12:09PM	0	1576		4 psi	2:00 PM	1:51	1084	25	
~~12:10 PM~~	~~1 min~~	~~1563~~	~~13~~		~~2:05 PM~~	~~1:56~~	~~1057~~	~~27~~	
~~12:10 PM~~	~~2~~	~~1558~~	~~5~~		~~2:10 PM~~	~~2:01~~	~~1037~~	~~20~~	
12:14PM	5	1542	16		2:15 PM	2:06	1020	17	
LINE OUT START → 12:15 PM	6	1537	5		2:20 PM	2:11	1000	20	
12:20PM	11	1520	17		2:25 PM	2:16	978	22	
12:25 PM	16	1500	20		2:30 PM	2:21	957	21	
12:30PM	21	1481	19	RESET 2:32 PM	2:35 PM	2:26	937	20	
12:35 PM	26	1451	30		2:40 PM	2:31	913	24	
12:40 PM	31	1429	22	2 lbs →	2:45 PM	2:36	894	19	284 lbs
START OF RUN → 12:45 PM	36	1409	20		2:50 PM	2:41	873	21	
12:50 PM	41*	1396	23		2:55 PM	2:46	853	20	
12:55 PM	46	1361	25		3:00 PM	2:51	833	20	
1:00 PM	51	1340	21		3:05	2:56	811	22	
1:05 PM	56 min	1320	20		3:10	3:01	787	24	
1:10 PM	1:01	1299	21		3:15	3:06	765	22	
1:15 PM	1:06	1276	23		3:20	3:11	743	22	
1:20 PM	1:11	1256	20		3:25	3:16	724	19	
1:25 PM	1:16	1235	21		3:30	3:21	704	20	← END MEA @ 15:32
1:30 PM	1:21	1213	22		3:35 PM	3:26	683	21	
1:35 PM	1:26	1193	20		3:40 PM	3:31	663	20	
1:40 PM	1:31	1171	22	3 lbs →	3:45	3:36	633	30	261 lbs
LINE → 1:45 PM	1:36	1148	23	261 lbs	3:50	3:41	614	19	
1:50 PM	1:41	1128	20		3:55	3:46	594	20	
1:55 PM	1:46	1109	19		4:00 pm	3:51	569	25	

ADDED two Drums chromic acid Net 595.35 lbs each Batch CH13600252

windy fluctuation

* 1st CR spl @ 12:48 PM

** 2nd Sample @ 2:03 PM.

*** LAST sample taken ~4:03 PM

Battery #2

U2 RSB

2/2

CHROMIC ACID SPIKE FEED - Target Rate: ~~250~~ 356 pounds/hour

Date 10/30/13

Incinerator No. 2

Test Run 4

Operator MADESIAN

	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING
END OF RUN →	4:02PM	3:53	561	8						
	4:03PM	3:54 ***	556	5						
	~~4:04PM~~	~~3:55~~								

*** LAST Cr sample

Unit 3 Field Data Sheets for Lead, Mercury, and Chlorine Spikes in Containerized Solid Charges

TEST DATE: 10-15-13
TEST UNIT: No. 3
TEST START TIME:

U3RIA

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
PtSdl-1	88-335					PtSdl-1	88-309				
	329						304				
	334						301				
	330						300				
	327						308				
	328						303				
	324						299				
	325						298				
	333						297				
	326						296				
	315						295				
	314						294				
	313						293				
	322						290				
	323						292				
	321						291				1:15
	318						289				SAMPLE
	319						288				
	317						287				
	316						286				
	320						284				
	312						285				
	311						282				
	307						283				
	305						281				
	302						280				
	310						279				SAMPLE
	306						278				

TEST DATE: 10-15-13
TEST UNIT: No. 3
TEST START TIME:

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
PrtSoil-1	88-277	~~54~~					88-361				
	276						360				
	338						371				14:25 END
	337						~~370~~				
	336										
	339										
	340					PrtSoil2-2	02-1	541	132	196	
SAMPLE	341						2	539	118	925	
	343						3	515	139	917	
	342						4	525	108	924	
	344						5	526	102	904	
	346						6	540	99	914	
	347						7	523	115	920	
	345						8	521	109	907	
	359						9	524	110	923	
	358						10	518	97	167	
	357						11	517	112	177	
	356						12	522	92	898	
AMPLE	354						13	514	105	861	
	348						14	513	94	890	
	349						15	510	136	887	
	350						16	511	95	190	
	353						17	508	91	891	
	355						18	502	100	899	
	352						19	512	96	856	
	351						20	506	90	875	
AMPLE	367						21	503	236	858	
	368						22	505	235	888	SAMPLE

TEST DATE: 10-16-13
TEST UNIT: No. 3
TEST START TIME: 4382A

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
10:45	PrtSoil-1	88-52					PrtSoil-1	88-32				
		51						31				
		56						30				
		50						29				SAMPLE
		49						25				
		55						26				
		60						27				
		59						28				
		54						13				
		58						14				
		53						15				
		57						16				
		37						20				SAMPLE
		38						19				
		39						18				
		40						17				
		44						24				
		43						23				
		42						22				
		41						21				
11:15		48						1				
SAMPLE		47						2				
		46						3				SAMPLE
		45						4				
		36						5				
		35						6				
		34						7				
		33						8				

TEST DATE: 10-16-13
TEST UNIT: No. 3
TEST START TIME:

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
PtSol1-1	88-12					PtSol2-2	02-19	683	1153	439	
	11						20	690	1155	401	2:00
	10						21	672	1154	425	
	9						22	671	1157	412	SAMPLE
SAMPLE	370						23	670	1158	403	
	365						24	684	1156	420	
	363						25	667	1159	411	
12:25	362						26	682	1162	409	
	~~361~~						27	686	1160	419	
							28	666	1163	440	
PtSol2-2	02-1	701	1134	784			29	689	1161	415	
3R2B	2	700	1137	772			30	664	1165	417	
	3	697	1139	765			31	685	1164	408	
	4	696	1141	779			32	668	1166	413	SAMPLE
	5	693	1136	770			33	680	1168	432	
	6	698	1138	764			34	681	1167	405	
	7	692	1140	792			35	669	1169	402	
	8	695	1142	759			36	677	1172	407	
	9	691	1143	445			37	657	1170	410	
	10	688	1145	775			38	679	1171	423	
	11	678	1144	820			39	665	1173	404	
	12	675	1146	779			40	656	1175	418	
	13	687	1147	781			41	661	1176	424	
	14	694	1148	755			42	654	1177	449	SAMPLE
	15	673	1149	753			43	649	1178	447	
	16	674	1151	450			44	658	1180	446	
	17	699	1150	782			45	655	1179	448	
	18	676	1152	422			46	660	1183	436	

SAMPLES: mercurry vial 421, H-1174, L-663

TEST DATE: 10-16-13
TEST UNIT: No. 3
TEST START TIME:

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
	PtSol2-2	02-47	651	1184	431		PtSol2-2	02-75	622	409	372	
		48	648	1181	416			76	617	422	375	
		49	652	1182	429			77	627	416	360	
		50	647	1185	444			78	616	414	363	
SAMPLE		51	662	1186	442			79	624	406	369	
		52	653	1188	441			80	631	397	354	
		53	650	1187	414			81	623	418	379	SAMPLE
		54	659	1189	443			82	620	400	382	
		55	646	1191	406			83	618	417	359	
		56	640	1192	437			84	614	396	374	
		57	638	1190	435			85	615	394	400	
		58	641	1193	438			86	612	408	396	
		59	639	1196	434			87	608	402	399	
SAMPLE		60	642	1194	428			88	611	395	395	
		61	636	1195	427			89	604	398	371	SAMPLE
		62	637	1197	426			90	619	410	373	
		63	633	1198	433			91	613	385	357	
		64	635	1199	430			92	602	393	387	
		65	634	1200	362			93	609	405	385	
		66	644	412	366			94	605	390	381	
		67	632	421	365			95	607	377	377	
		68	628	411	356			96	610	384	388	
		69	630	407	361			97	603	404	378	
SAMPLE		70	625	403	351			98	606	391	380	SAMPLE
		71	626	419	367			99	589	380	386	
		72	621	413	370			100	980	381	390	
		73	645	401	352			101	981	386	398	
		74	643	420	358			102	974	388	391	

SAMPLES: L-629, H-415, mercury vial 364

TEST DATE: 10-16-13
TEST UNIT: No. 3
TEST START TIME:

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
	PtSol2-2	02-103	972	382	392		PtSol2-2	02-131	945	355	348	
		104	965	378	389			132	943	356	303	
		105	963	392	394			133	940	359	349	
		106	962	399	393			134	938	349	324	
		107	976	379	384			135	935	352	319	
		108	961	387	383			136	944	350	315	SAMPLE
		109	956	376	397			137	948	354	312	
AMPLE		110	967	389	355			138	954	351	306	
		111	955	383	353			139	939	301	326	
		112	952	373	368			140	942	299	305	
		113	966	374	376			141	931	298	311	
		114	994	372	323			142	929	297	310	
		115	978	371	314			143	941	294	317	
		116	970	369	307			144	937	293	333	
SAMPLE		117	969	375	332			145	933	296	322	SAMPLE
		118	973	363	329			146	930	295	321	
		119	968	368	344			147	927	291	313	
		120	964	367	320							
		121	959	366	302							
		122	957	365	301							
		123	953	370	308							
		124	951	362	328							
		125	958	364	343							
		126	960	360	350							
SAMPLE		127	949	357	330							
		128	950	361	337							
		129	946	358	334							
		130	947	353	346							

SAMPLES: mercury vial 304, H-300, L-936
mercury vial 318, H-292, L-924

TEST DATE: 10-17-13
TEST UNIT: No. 3
TEST START TIME: U3R3A

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
PrtSoil-1	88-364					PrtSoil-1	88-2				
	366						3				
	369						4				
	380						5				
	379						6				
	381						7				SAMPLE
	382						8				
	378						9				
	373						10				
	383						11				
	376						12				
	375						13				
	372						14				SAMPLE
	374						15				
	377						16				
	395						17				
	391						18				
	388						19				
	384						20				
	386						21				
9:50	394						22				
SAMPLE	390						23				
	389						24				SAMPLE
	392						25				
	393						26				
	385						27				
	387						28				
	1						29				

TEST DATE: 10-17-13
TEST UNIT: No. 3
TEST START TIME:

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
PtSol1-1	88 - 30	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~		PtSol2-2	02-22	907	323	564	SAMPLE
	31						23	908	324	325	
	32						24	909	329	553	
AMPLE	33						25	904	331	586	
	34						26	918	316	588	
							27	917	330	580	
							28	292	320	327	
PtSol2-2	02-1	928	348	341			29	298	317	569	SAMPLE
	2	923	342	335			30	300	315	568	
13R33	3	921	343	340			31	294	327	562	
	4	925	345	336			32	299	319	572	
	5	934	347	342			33	296	312	566	
	6	915	344	309			34	293	318	557	
	7	920	341	347			35	297	310	594	
	8	926	339	338			36	291	309	331	
	9	932	346	339			37	288	308	573	
	10	919	336	345			38	281	321	595	
	11	916	340	598			39	276	314	570	SAMPLE
	12	911	338	575			40	279	313	567	
	13	910	333	599			41	289	302	551	
	14	914	334	316			42	290	311	556	
	15	922	332	592			43	283	303	558	
	16	912	337	587			44	274	304	561	
	17	906	328	554			45	285	305	571	
	18	913	335	560			46	295	306	596	
	19	905	326	591			47	282	183	574	
12:30	20	902	325	563			48	287	182	589	
	21	903	323	552			49	284	176	600	

SAMPLES : H-307, L-286, mercury vial 585

TEST DATE: 10-17-13
TEST UNIT: No. 3
TEST START TIME:

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
SAMPLE	PtSd2-2	02-50	265	180	582		PtSd2-2	02-78	241	158	532	
		51	272	175	583			79	278	159	578	SAMPLE
		52	267	181	590			80	249	152	541	
		53	275	179	597			81	255	151	529	
		54	269	177	593			82	251	145	527	
		55	257	178	584			83	247	143	547	
		56	273	174	525			84	237	140	520	
		57	270	171	539			85	254	149	504	
		58	268	173	519			86	239	148	518	
		59	259	170	555			87	230	147	545	
SAMPLE		60	261	172	565			88	234	142	534	
		61	271	167	576			89	250	141	524	SAMPLE
		62	260	161	546			90	248	290	542	
		63	280	162	544			91	258	289	515	
		64	277	168	530			92	220	288	512	
		65	264	163	535			93	228	287	536	
		66	262	169	537			94	216	286	550	
		67	252	166	543			95	227	285	526	
		68	253	165	517			96	238	284	514	
SAMPLE		69	263	156	549			97	231	283	579	
		70	256	164	533			98	207	282	540	SAMPLE
		71	246	160	548			99	224	281	503	
		72	244	153	538			100	212	280	516	
		73	266	157	528			101	202	279	508	
		74	243	150	522			102	210	278	507	
		75	233	146	581			103	204	277	511	
		76	236	154	577			104	225	276	500	
		77	240	155	513			105	242	275	521	

SAMPLES: H-144, L-235, mercury vial 559

TEST DATE: 10-17-13
TEST UNIT: No. 3
TEST START TIME:

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
	PrtSol2-2	02-106	245	274	502		PrtSol2-2	02-134	90	249	506	
SAMPLE		107	219	273	523			135	89	246	478	
		108	218	272	492			136	71	247	495	SAMPLE
		109	232	271	531			137	87	242	473	
		110	211	270	498			138	84	245	474	
		111	229	269	480			139	82	241	488	
		112	226	267	494			140	80	560	466	
		113	213	268	497			141	95	548	487	
		114	214	264	501			142	86	557	479	
		115	215	266	509			143	88	553	489	
		116	222	261	482			144	81	551	483	
SAMPLE		117	206	262	490			145	75	547	484	SAMPLE
		118	221	265	491			146	77	575	460	
		119	201	260	486			147	74	552	461	
		120	223	259	477			148	85	42	454	
		121	217	263	456			149	73	555	469	15:55
		122	205	257	455							
		123	208	255	453							
		124	209	258	452							
		125	203	253	505							
		126	98	252	472							
SAMPLE		127	96	256	468							
		128	93	254	499							
		129	94	243	463							
		130	100	244	464							
		131	91	248	457							
		132	92	250	496							
		133	97	251	493							

SAMPLES: L-99, H-568, mercury vial 458
L-76, H-559, mercury vial 462
L-72, H-569, mercury vial 481, 713, 467

TEST DATE: 10-18-13
TEST UNIT: No. 3
TEST START TIME:

U3R43

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
PtSb12-2	02-1	54	545	451		PtSb12-2	02-29	47	76	735	
	2	83	554	471			30	41	37	727	
	3	70	546	459			31	43	28	730	
	4	69	549	510			32	35	39	733	SAMPLE
	5	78	562	470			33	42	72	704	
	6	66	550	475			34	40	576	701	
	7	68	574	465			35	53	30	739	
	8	65	566	485			36	38	27	732	
	9	64	74	476			37	39	71	731	
	10	60	572	743			38	36	29	744	
	11	63	558	721			39	34	33	740	
	12	59	556	734			40	37	26	729	
	13	56	564	736			41	33	31	708	
	14	58	573	711			42	25	64	702	
	15	57	567	747			43	31	67	750	SAMPLE
	16	62	35	748			44	16	69	717	
	17	50	73	723			45	24	70	714	
	18	48	570	712			46	26	65	705	
	19	45	40	746			47	30	68	707	
	20	79	565	742			48	27	473	745	
	21	55	36	741			49	29	472	716	
9:35	22	67	34	738			50	28	445	720	
	23	52	563	728			51	18	475	710	
	24	61	32	726			52	12	481	718	
SAMPLE	25	46	571	706			53	19	474	709	SAMPLE
	26	51	38	738			54	22	476	725	
	27	44	561	719			55	15	477	724	
	28	49	41	749			56	10	478	715	

SAMPLES : L-32, H-66, mercury vial 703

TEST DATE: 10-18-13
TEST UNIT: NO. 3
TEST START TIME:

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
	PtSb12-2	02-57	23	467	722		PtSb12-2	88-85	375	454	693	
		58	6	479	683			86	388	440	694	
		59	8	480	684			87	386	446	687	
		60	3	468	681			88	384	442	689	
AMPLE		61	4	464	627			89	396	451	635	
		62	20	471	686			90	383	437	682	
		63	14	470	678			91	380	452	636	SAMPLE
		64	13	450	691			92	387	441	630	
		65	21	447	692			93	379	432	645	
		66	5	482	698			94	378	438	688	
		67	17	483	697			95	381	436	637	
		68	7	458	699			96	371	439	676	
		69	11	466	679			97	369	444	663	
		70	9	459	695			98	393	435	643	
		71	2	460	690			99	374	433	629	
		72	1	461	632			100	368	424	638	
IMPLE		73	401	463	685			101	367	429	639	SAMPLE
		74	390	462	700			102	366	425	646	
		75	399	456	628			103	360	427	647	
		76	398	448	696			104	377	426	670	
		77	397	469	677			105	370	431	633	
		78	392	453	631			106	373	423	640	
		79	395	457	626			107	359	428	649	
		80	391	449	680			108	361	54	641	
		88-81	389	434	642			109	363	46	617	
MPLE		82	394	443	650			110	376	44	665	
		83	385	465	634			111	362	55	672	SAMPLE
		84	400	455	648			112	355	51	625	

SAMPLES: L-382, H-430, missing vial 644

TEST DATE: 10-18-13
TEST UNIT: No. 3
TEST START TIME:

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
PrEb012-2	88-113	358	53	623		PrEb012-2	88-141	332	16	662	
	114	365	62	607			142	327	20	618	
	115	356	24	652			143	320	12	608	
	116	351	57	660			144	318	13	615	
	117	364	60	800			145	319	6	664	
	118	372	58	878			146	313	19	604	
	119	354	56	758			147	321	80	612	
	120	353	59	841			~~148~~	~~330~~	~~2~~	~~602~~	SAMPLE
PLE	121	352	50	655							
	122	344	63	699							
	123	347	47	656							
	124	350	61	622							
	125	346	49	611							
	126	343	14	606							
	127	349	48	651							
	128	340	43	668							
	129	357	52	674							
PLE	130	345	10	666							
	131	342	25	667							
	132	341	45	654							
	133	336	22	621							
	134	338	17	616							
	135	337	9	673							
	136	339	23	671							
	137	335	8	601							
	138	333	21	620							
MPLE	139	334	11	614							
	140	331	15	609							

SAMPLES: L-348, H-75, mercury vial 658
L-316, H-2, mercury vial 659

Unit 3 Field Data Sheets for Chromic Acid Spiking

U3 R2B

CHROMIC ACID SPIKE FEED - Target Rate: 250 pounds/hour (35%)

Date 10-16-13

Incinerator No. 3 Test Run 2 (2B) Operator MATOESIAN

COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING
1:25 PM	0	1713		34 PSI	3:20 PM	1:55	1223	21	34 PSI
1:27 P.M.	2	1709	4		3:25 PM	2:00	1202	21	
1:29 P.M.	4	1702	7		3:30 P.M.	2:05	1181	21	
1:31 P.M.	6	1691	11		3:35 PM	2:10	1160	21	
1:35	10	1671	20		3:40 P.M.	2:15	1139	21	
1:40	15	1646	25		3:45 PM	2:20	1118	21	
1:45	20	1626	20		3:50 PM	2:25	1096	22	
1:50	25	1605	21		3:55 PM	2:30	1072	24	
1:55 P.M.	30	1585	20	2nd HOUR →	4:00 PM	2:35	1051	21	256 lbs
2:00 P.M.	35	1565	20		4:05 PM	2:40	1029	22	
2:05 P.M.	40*	1542	23		4:10 PM	2:45	1006	23	
2:10 P.M.	45	1520	22		4:15 PM	2:50	982	24	
2:15 P.M.	50	1491	29		4:20 PM	2:55	960	22	
2:20 P.M.	55	1473	18		4:25 PM	3:00	938	22	
2:25	1:00 (60)	1456	17		4:30	3:05	918	20	
2:30	1:05	1433	23		4:35	3:10	898	20	
2:35	1:10	1410	23		4:40	3:15	877	21	
2:40	1:15	1390	20		4:45	3:20	857	20	
2:45	1:20	1370	20	METALS END →	4:50	3:25***	833	24	
2:50	1:25	1349	21		4:55	3:30	811	22	
2:55	1:30	1328	21	3RD HOUR →	5:00	3:35	788	23	263 lbs
3:00	1:35	1307	21	258 lbs	5:05	3:40	768	20	
3:05	1:40*	1286	21		5:10	3:45	748	20	
3:10	1:45	1264	22		5:15	3:50	727	21	
3:15 P.M.	1:50	1244	20	EOR →	5:20	3:55	705	22	

Start line out 1:30 P.M.

5 O.R. 1 PM

2 HR

ADDED two DRUMS chromic ACID BATCH No's CH 13E00343 (BOTH DRUMS) Net 695 lbs each.

BATTERY #2 Some wind

*1st CR sple @ 2:01 P.M.

**2nd CR sple taken @ 3:03 PM

*** 3RD CR sple taken 4:48 PM

**** 4th CR sple taken @ 5:21 PM

U3 R35

1/2

CHROMIC ACID SPIKE FEED - Target Rate 250 (35%) pounds/hour

Date 10/9/13

Incinerator No. 3

Test Run 3 (3.0)

Operator MADEIAN

	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING
	11:55 AM	0	1536		34 psi	1:50 PM	1:55	1041	22	
	11:57 AM	2	1525	11		1:55 PM	2:00	1017	24	
	11:59	4	1520	5		2:00 PM	2:05	996	21	
TIME IT START	12:00 NOON	5	1516	4		2:05 PM	2:10	975	21	
	12:05 PM	10	1487	29		2:10 PM	2:15	953	22	
	12:10 P.M.	15	1466	21		2:15 P.M.	2:20	931	22	
	12:15	20	1447	19		2:20 P.M.	2:25	910	21	
	12:20	25	1424	23		2:25 P.M.	2:30	889	21	
	12:25	30	1401	23	2nd Hour →	2:30 PM	2:35	868	21	256 lbs
S.O.R. →	12:30 P.M.	35	1380	21		2:35 PM	2:40	846	22	
	12:35 P.M.	40 *	1359	21		2:40 PM	2:45	824	22	
	12:40 PM	45	1338	21		2:45 PM	2:50	802	22	
	12:45 P.M.	50	1309	29		2:50 PM	2:55	780	22	
	12:50 P.M.	55	1288	21		2:55 PM	3:00	758	22	
	12:55 P.M.	1:00 (60)	1267	21		3:00 PM	3:05	737	21	131
	1:00 PM	1:05	1247	20		3:05 PM	3:10	715	22	
	1:05 P.M.	1:10	1227	20		3:10 PM	3:15	694	21	
	1:10 P.M.	1:15	1205	22		3:15 PM	3:20	673	21	
	1:15 P.M.	1:20	1184	21		3:20 PM	3:25 **	648	25	TAKING Samples
	1:20 PM	1:25	1164	20	METALS END →	3:25 PM	3:30	630	18	
	1:25 PM	1:30	1145	19	3rd Hour →	3:30 PM	3:35	609	21	259 lbs
3 Hour →	1:30 P.M.	1:35	1124	21	256 lbs	3:35 PM	3:40	589	20	
	1:35 PM	1:40	1105	19		3:40 PM	3:45	568	21	
	1:40	1:45 **	1083	22		3:45 PM	3:50	547	21	
	1:45	1:50	1063	20		3:50 PM	3:55	526	21	

Put in 1 Drum CR plus Partial of another Drum ≈ 200 lbs ± BATCH CH13E00345
Both Drums SAME BATCH As yesterday (10/10/13) 595.35 NET lbs per Drum

Battery #2

* 1st CR sple taken 12:21 P.M. (1)

** 2nd CR sple taken @ 1:36 P.M. (1)

~2:40 PM windy

**** 4th sple taken ~3:57 PM

U3 R35

2/2

CHROMIC ACID SPIKE FEED - Target Rate 35% 20 pounds/hour

Date 10/17/13

Incinerator No. 3

Test Run 3 (Continued)

Operator MADESIAN

	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING
EOB →	3:55 PM	4:00	506	20	34%					
	3:56 PM	4:01	500							

U3 R4B

1/2

35%

CHROMIC ACID SPIKE FEED - Target Rate: 250 pounds/hour Date 10-18-13

Incinerator No. 3 Test Run 1* (4B) Operator MATOESIAN

* Repeat Run 11 D/F, Hg, HCl, CR, Pb
@ 10/15/13

	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING
CR START →	8:55 AM	0	1456	—	34 psi	10:25 AM	1:30	1063	21	34 psi
	8:56 AM	1 MIN	1447	9		10:30 AM	1:35	1040	23	
	8:57 AM	2	1441	6	1 HR →	10:35	1:40	1019	21	255 lbs
START LINE 9A OUT →	9:00 AM	5	1424	17		10:40	1:45	999	20	
	9:05 AM	10	1404	20		10:45	1:50	979	20	
	9:10 A.M.	15	1381	23		10:50	1:55	956	23	
	9:15 A.M.	20	1358	23		10:55	2:00	930	26	
	9:20 AM	25	1337	21		11:00	2:05	907	23	
	9:25 A.M.	30	1317	20		11:05	2:10	886	21	
	9:30 A.M.	35	1295	22		11:10	2:15	865	21	
	9:31 A.M.	36	1291	4		11:15	2:20	843	22	
	9:32 A.M.	37	1287	4		11:20	2:25	821	22	
	9:33 A.M.	38	1282	5		11:25	2:30	800	21	
	9:34 A.M.	39	1279	3		11:30	2:35	782	18	
S.O.R START 2 → 9:35 AM	9:35 A.M.	40	1274	5	2ND HR →	11:35	2:40	762	20	257 lbs
	9:36 A.M.	41	1270	4		11:40	2:45	743	19	
	9:40 AM	45	*1252	18		11:45 AM	2:50	725	18	
	9:45 A.M.	50	1231	21		11:50 AM	2:55	702	23	
	9:50 A.M.	55 MIN	1208	23		11:55 AM	3:00	680	22	
	9:55 A.M.	1:00 HR	1186	22		12:00 PM	3:05	657	23	
	10:00 A.M.	1:05	1165	21		12:05 PM	3:10	635	22	
	10:05 A.M.	1:10	1145	20		12:10 PM	3:15	614	21	
	10:10 A.M.	1:15	1125	20		12:15 PM	3:20	593	21	
	10:15 A.M.	1:20	1103	22	METALS END →	12:20 PM	3:25***	572	21	
	10:20 A.M.	1:25	1084	19		12:25 PM	3:30	551	21	

FILLED POLYC TANK WITH ≈1½ DRUMS REMAINING CHROMIC ACID BATCH CH13E00343
EACH DRUM CONTAINED 595 lbs NET WHEN FULL.

BATTERY #2
WINDY

* 1ST CR sple taken ~ 9:36 A.M.
** 2ND CR sple taken ~
*** 3RD sple @ 2:19 PM

U3 R4B

2/2

35%

CHROMIC ACID SPIKE FEED - Target Rate: 250 pounds/hour

Date 10-18-13

Incinerator No. 3

Test Run 1*

*REPEAT RUN 1 (DIF, Hg, Cl, Cr, Pb) ON 10/17/13

Operator MATDESIAN

	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING
	12:30PM	3:35	529	22						
RP Hour	12:35PM	3:40	508	21	2.54 lb					
	12:40 PM	3:45	488	20						
	12:45 PM	3:50	466	22						
EOR →	12:50 PM	3:55	445	21						

Unit 4 Field Data Sheets for Lead, Mercury, and Chlorine Spikes in Containerized Solid Charges

TEST DATE: 10-23-13
TEST UNIT: No. 4
TEST START TIME: 4RIA

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
PrtSd1-1	1					PrtSd1-1	29				
	2						30				
	3						31				
	4						32				
	5						34				
	6						35				
	7						36				
	8						37				SAMPLE
	9						38				
	10						39				
	11						40				
	12						41				
	13						42				
	14						41				
	15						42				
	16						43				
	17						44				
	18						45				
	19						46				
	20						47				SAMPLE
	21						48				
09:30	22						49				
	23						50				
	24						51				
	25						52				
	26						53				
SAMPLE	27						54				
	28						55				

TEST DATE: 10-23-13
TEST UNIT: No. 4
TEST START TIME:

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
PitSoil-1	56					PitSoil3-3	16	1557	1771	2561	
	57						17	1565	1773	2580	
	58						18	1551	1785	2564	
	59						19	1555	1782	2572	
	60						20	1586	1792	2573	
	61						21	1557	1781	2561	
	62						22	1584	1777	2567	
	63						23	1582	1772	2578	
	64						24	1564	1789	2576	
	65						25	1570	1791	2579	
	66						26	1574	1774	2571	
	67						27	1562	1784	2552	
	68						28	1583	1786	2570	
PitSoil3-3	1	1552	1763	2549			29	1581	1776	2560	12:36
	2	1561	1769	2551			30	1572	1780	2575	
	3	1559	1770	2558			31	1593	1779	2574	
	4	1553	1764	2568			32	1585	1775	2553	SAMPLE
	5	1556	1766	2566			33	1589	1787	2506	
	6	1560	1758	2550			34	1588	1783	2500	
	7	1554	1757	2555			35	1605	1778	2524	
	8	1558	1760	2564			36	1599	1800	2507	
	9	1573	1761	2559			37	1595	1798	2512	
	10	1569	1759	2563			38	1568	1799	2509	
	11	1563	1762	2557			39	1571	1796	2510	
	12	1580	1765	2556			40	1587	1795	2514	
	13	1575	1767	2565			41	1597	1797	2519	
	14	1556	1788	2562			42	1579	1794	2521	SAMPLE
	15	1567	1768	2577			43	1606	1793	2503	

SAMPLES - H-1790, L-1594, mercury vials 2528, 2502

TEST DATE: 10-23-13
TEST UNIT: No. 4
TEST START TIME:

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
	Sol Pt3-3	44	1590	1710	2533		Sol Pt3-3	72	1632	1719	2541	
		45	1610	1695	2538			73	1621	1720	2543	
		46	1576	1696	2536			74	1616	1722	2529	
		47	1578	1714	2526			75	1620	1727	2516	
		48	1592	1712	2501			76	1617	1732	2523	
		49	1599	1713	2545			77	1623	1725	2511	
AMPLE		50	1607	1693	2532			78	1619	1723	2513	
		51	1596	1697	2499			79	1643	1729	2522	
		52	1600	1698	2505			80	1631	1735	2518	
		53	1598	1694	2537			81	1627	1733	2479	
		54	1604	1703	2546			82	1653	1731	2445	
		55	1601	1708	2544			83	1645	1730	2439	
		56	1603	1716	2548			84	1635	1743	2475	
		57	1608	1707	2534			85	1622	1736	2474	
		58	1609	1699	2530			86	1638	1740	2442	
		59	1611	1706	2540			87	1640	1737	2477	
Sample		60	1614	1700	2542			88	1633	1738	2484	SAMPLE
		61	1613	1705	2539			89	1636	1742	2443	
		62	1612	1702	2547			90	1629	1734	2444	
		63	1602	1709	2531			91	1639	1749	2447	
		64	1618	1704	2517			92	1644	1748	2491	
		65	1615	1715	2515			93	1648	1739	2492	
		66	1616	1724	2508			94	1642	1741	2425	
		67	1624	1711	2520			95	1637	1750	2435	
		68	1628	1721	2525			96	1649	1744	2488	
		69	1625	1726	2527			97	1654	1746	2427	
SAMPLE		70	1630	1717	2535			98	1660	1753	2429	SAMPLE
		71	1626	1718	2504			99	1634	1755	2430	

SAMPLES: CL - H - 1728
Pb - L - 1641
Hg - 2441

TEST DATE: 10-23-13
TEST UNIT: No. 4
TEST START TIME:

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
SciPt3-3	100	1647	1752	2438		SciPt3-3	128	1700	1653	2480	
	101	1657	1754	2436			129	1678	1655	2490	
	102	1656	1751	2428			130	1689	1645	2459	
	103	1651	1745	2448			131	1687	1656	2451	
	104	1667	1756	2496			132	1682	1660	2450	
	105	1650	1747	2437			133	1686	1654	2321	
	106	1664	1629	2483			134	1672	1659	2462	
AMPLE	107	1652	1631	2446			135	1701	1651	2461	
	108	1658	1630	2434			136	1663	1677	237	SAMPLE
	109	1666	1632	2481			137	1674	1658	2309	
	110	1665	1636	2440			138	1671	1657	2456	
	111	1670	1634	2278			139	1691	1662	2319	
	112	1655	1638	2495			140	1690	1671	2449	
	113	1659	1633	2485			141	1677	1661	2468	
	114	1662	1635	2426			142	1695	1670	2464	
	115	1675	1639	2432			143	1685	1682	2470	
	116	1661	1637	2482			144	1703	1666	2454	
	117	1668	1640	2431			145	1697	1667	2466	
Sample	118	1679	1643	2476			146	1693	1676	2458	SAMPLE
	119	1673	1650	2433			147	1706	1673	2323	
	120	1676	1642	2494			148	1694	1679	2315	
	121	1669	1648	2497			~~149~~	~~1713~~	~~1669~~	~~2312~~	
	122	1698	1644	2424							
	123	1699	1646	2487							
	124	1692	1647	2489							
	125	1680	1652	2486							
SAMPLE	126	1688	1641	2498							
	127	1681	1649	2493							

SAMPLES: H-1672, L-1684, mercury vial 2467
H-1675, L-1713, mercury vial 2469

TEST DATE: 10-24-13
TEST UNIT: No. 4
TEST START TIME:

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
SdPrt1-1	57					SdPrt3-3	18	1732	1506	2313	
	58						19	1719	1686	2463	
	59						20	1715	1664	2472	
SAMPLE	60						21	1716	1507	2475	
	61						22	1721	1684	2318	
	62						23	1717	1505	2311	
	63						24	1725	1510	2471	
	64						25	1724	1508	2305	12:35
	65						26	1735	1509	2300	
	66						27	1733	1511	2452	
AMPLE	67						28	1741	1512	2453	
SdPrt3-3	1	1683	1690	2307			29	1738	1513	2460	
24R23	2	1696	1692	2316			30	1729	1515	2326	
	3	1705	1683	2299			31	1730	1514	2334	
	4	1704	1663	2304			32	1728	1503	2332	SAMPLE
	5	1712	1674	2308			33	1737	1504	2413	
	6	1709	1678	2465			34	1744	1516	2417	
	7	1718	1685	2302			35	1743	1560	2342	
	8	1707	1681	2303			36	1749	1517	2423	
	9	1714	1689	2312			37	1727	1502	2327	
	10	1711	1687	2320			38	1736	1563	2331	
	11	1708	1691	2310			39	1748	1561	2341	
	12	1722	1688	2306			40	1747	1564	2348	
	13	1710	1668	2322			41	1742	1529	2333	
	14	1702	1665	2301			42	1734	1531	2337	
	15	1720	1701	2314			43	1731	1532	2418	
	16	1723	1680	2455			44	1739	1530	2411	
	17	1726	1669	2457			45	1740	1533	2421	

SAMPLES : H-1562, L-197, mercury vials 2420

TEST DATE: 10-24-13
TEST UNIT: No. 4
TEST START TIME:

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
	SolPt3-3	46	1745	1534	2343		SolPt3-3	74	172	1557	2415	
		47	1746	1536	2340			75	171	1555	2335	
		48	1750	1535	2328			76	164	1550	2408	
		49	198	1539	2416			77	174	1553	2399	
SAMPLE		50	199	1559	2330			78	167	1526	2405	
		51	191	1538	2245			79	165	1554	2365	
		52	196	1537	2325			80	153	1551	2370	SAMPLE
		53	188	1527	2347			81	168	1528	2362	
		54	193	1558	2406			82	159	1567	2366	
		55	192	1523	2412			83	162	1552	2392	
		56	194	1524	2338			84	154	1566	2382	
		57	186	1540	2324			85	173	1565	2360	
		58	200	1541	2344			86	166	1569	2372	
		59	182	1542	2346			87	161	1617	2380	
SAMPLE		60	185	1521	2339			88	163	1571	2397	SAMPLE
		61	187	1522	2336			89	158	1568	2377	
		62	189	1519	2329			90	157	1579	2388	
		63	183	1545	2407			91	177	1570	2389	
		64	195	1543	2409			92	152	1574	2391	
		65	184	1544	2401			93	150	1577	2383	
		66	190	1518	2404			94	155	1573	2373	
		67	176	1546	2403			95	138	1572	2367	
SAMPLE		68	181	1520	2410			96	146	1580	2371	
		69	179	1547	2414			97	145	1581	2384	
		70	175	1548	2400			98	143	1582	2381	SAMPLE
		71	180	1525	2402			99	137	1575	2376	
		72	178	1549	2419			100	166	1583	2393	
		73	170	1556	2422			101	151	1578	2394	

Sample = H 1501 L 169 Hg 2398

TEST DATE: 10-24-13
TEST UNIT: No. 4
TEST START TIME:

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
	SolPrt3-3	102	134	1576	2357		SolPrt3-3	130	120	1611	2292	
		103	139	1584	2365			131	115	1621	2273	
		104	144	1585	2355			132	122	1622	2278	
		105	142	1586	2374			133	126	1618	2248	
		106	149	1587	2396			134	114	1624	2275	
		107	141	1588	2387			135	104	1599	2256	
AMPLE		108	129	1589	2368			136	117	1626	2286	SAMPLE
		109	133	1590	2359			137	101	1602	2284	
		110	148	1591	2369			138	127	1600	2296	
		111	125	1607	2375			139	106	1625	2257	
		112	118	1594	2385			140	109	1601	2288	
		113	124	1595	2361			141	119	1628	2279	
		114	116	1596	2351			142	105	1627	2252	
		115	140	1597	2364			143	135	1604	2265	SAMPLE 1514
		116	156	1608	2395			~~144~~	~~102~~	~~1605~~	~~2269~~	
		117	123	1593	2386			~~145~~	~~128~~	~~1603~~	~~2261~~	
		118	147	1592	2378			~~146~~	~~103~~	~~1615~~	~~2259~~	
		119	132	1610	2350							
		120	136	1609	2390							
		121	131	1613	2379							
		122	130	1612	2354							
		123	110	1598	2356							
		124	121	1616	2352							
		125	113	1606	2349							
SAMPLE		126	111	1614	2358							
		127	108	1619	2353							
		128	112	1623	2294							
		129	107	1620	2289							

SAMPLES: L-330, H-502, metaquial 2266
L-102, H-1605, vial 2224

TEST DATE: 10-25-13
TEST UNIT: No. 4
TEST START TIME: U4R3A

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
SolPrtl-1	1					SolPrtl-1	29				
	2						30				
	3						31				
	4						32				SAMPLE
	5						33				
	6						34				
	7						35				
	8						36				
	9						37				
	10						38				
	11						39				
	12						40				
	13						41				
	14						42				SAMPLE
	15						43				
	16						44				
	17						45				
	18						46				
	19						47				
	20						48				
	21						49				
	22						50				SAMPLE
	23						51				
	24						52				
	25						53				
	26						54				
	27						55				
	28						56				

09:35

TEST DATE: 10-25-13
TEST UNIT: No. 4
TEST START TIME:

	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
	PrtSdll-1	57					PrtSdll-1	85				
		58						86				SAMPLE
		59						87				
MPLE		60						88				
		61						89				
		62						90				
		63						91				
		64						92				
		65						93				
		66						94				
		67						95				
0:40		68						96				SAMPLE
		69						97				
AMPLE		70						98				
		71						99				
RGA 0:50		72						100				
		73						101				
		74						102				
		75						103				
		76						104				
		77						105				
AMPLE		78						106				SAMPLE
		79						107				
		80						108				
		81						109				
		82						110				
		83						111				
		84						~~112~~ 113				
								114				SAMPLE

38

TEST DATE: ~~[illegible]~~ 10-25-13
TEST UNIT: No. 4
TEST START TIME: 4R33

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
SolPA3-3	1	103	78	2285		SolPA3-3	29	1256	536	2253	
	2	315	82	2291			30	1265	500	2287	
	3	128	4	2290			31	1261	540	2282	
	4	325	79	2277			32	1251	539	2212	SAMPLE
	5	324	1	2293			33	1262	537	2201	
	6	329	7	2276			34	1257	531	2211	
	7	326	77	2274			35	1264	527	2270	
	8	328	18	2272			36	1269	520	2235	
	9	310	81	2251			37	1259	543	2225	
	10	314	5	2281			38	1267	491	2217	
	11	317	1603	2297			39	1270	493	2207	
	12	306	1615	2283			40	1266	533	2236	
	13	308	3	2267			41	1268	530	2237	
	14	309	510	2280			42	1263	523	2229	SAMPLE
	15	323	505	2298			43	1255	532	2232	
	16	304	541	2295			44	1279	519	2234	
	17	303	504	2250			45	1280	534	2222	
	18	311	509	2259			46	1273	525	2231	
	19	312	503	2261			47	1272	544	2244	
	20	322	508	2268			48	1277	522	2271	
	21	305	501	2254			49	1276	512	2245	
	22	302	506	2262			50	1283	524	2242	SAMPLE
	23	307	507	2255			51	1275	514	2239	
	24	301	526	2264			52	1299	516	2220	
13:35	25	1253	542	2258			53	1291	528	2223	
	26	1254	529	2263			54	1285	521	2233	
	27	1252	538	2260			55	1271	517	2240	
	28	1258	535	2269			56	1287	513	2215	

SAMPLES: L-1281, H-496, Hg vial 2219

TEST DATE: 10-25-13
TEST UNIT: No.4
TEST START TIME:

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)		Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
Sol Prt 3-3	57	1260	515	2200		Sol Prt 3-3	85	1314	1453	2170	
	58	1293	511	2243			86	1300	1454	2169	
	59	1288	498	2247			87	1320	1455	2173	
	60	1284	497	2241			88	1315	1458	2151	SAMPLE
	61	1278	495	2238			89	1322	1459	2159	
	62	1290	494	2230			90	1326	1460	2154	
	63	1283	499	2226			91	1327	1461	2161	
	64	1296	486	2227			92	1316	1464	2165	
	65	1295	490	2221			93	1319	1457	2153	
	66	1286	489	2203			94	1324	1469	2149	
	67	1274	518	2218			95	1323	1468	2150	
	68	1297	485	2202			96	1311	1462	2155	
	69	1298	492	2206			97	1312	1471	2171	
	70	1292	487	2214			98	1325	1475	2184	
	71	1301	484	2216			99	1321	1463	2156	SAMPLE
	72	1294	489	2208			100	1342	1479	2174	
	73	1289	1443	2249			101	1339	1482	2195	
	74	1303	1441	2228			102	1331	1481	2158	
	75	1302	1442	2246			103	1336	1478	2167	
	76	1307	1444	2209			104	1337	1470	2166	
	77	1308	1445	2204			105	1334	1466	2157	
	78	1309	1446	2199			106	1330	1474	2160	
	79	1310	1447	2205			107	1328	1467	2178	
	80	1304	1448	2210			108	1335	1473	2152	
	81	1305	1449	2176			109	1329	1472	2182	SAMPLE
	82	1306	1450	2213			110	1338	1477	2191	
	83	1317	1451	2187			111	1333	1465	2181	
	84	1318	1452	2163			112	1332	1491	2193	

SAMPLES: L-1313, H-1456, Hg vial 2164

TEST DATE: 10-25-13
TEST UNIT: No. 4
TEST START TIME:

91

Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	Receiver #	Charge #	Pb Spike (2.6 lbs.)	Cl Spike (5.8 lbs.)	Hg Spike (10 ml)	
SolPt 3-3	113	1343	1487	2180	SolPt 3-3	141	1482	1388	2104	
	114	1344	1492	2188		142	1479	1384	2107	
	115	1354	1486	2183		143	1467	1385	2113	SAMPLE 1641
	116	1349	1490	2197		~~144~~	~~1466~~	~~1386~~	~~2112~~	
	117	1350	1484	2162		~~145~~	~~1468~~	~~1394~~	~~2103~~	
	118	1348	1483	2196		~~146~~	~~1464~~	~~1393~~	~~2106~~	
AMPLE	119	1347	1485	2175		~~147~~	~~1462~~	~~1389~~	~~2115~~	
	120	1345	1480	2172						
	121	1341	1488	2194						
	122	1340	1489	2177						
	123	1346	1476	2186						
	124	1453	1383	2130						
	125	1461	1500	2177						
	126	1458	1381	2120						
AMPLE	127	1469	1494	2192						
	128	1451	1387	2131						
	129	1460	1499	2190						
	130	1452	1498	2185						
	131	1476	1495	2168						
	132	1457	1382	2189						
	133	1459	1496	2198						
	134	1456	1497	2116						
	135	1455	1493	2179						
	136	1465	1392	2081						
AMPLE	137	1475	1395	2101						
	138	1480	1398	2105						
	139	1470	1390	2102						
	140	1463	1391	2122						

SAMPLES: L-1471, H-1397, Hg vial 2139
L-1464, H-1389, Hg vial 2103

Unit 4 Field Data Sheets for Chromic Acid Spiking

U4 R13

1/2

CHROMIC ACID SPIKE FEED - Target Rate: 250 pounds/hour (35%)

Date 10-23-13

Incinerator No. 4 Test Run 1 (1B) Operator MATDESIAN

COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	
11:57A	0	1614		40psi	1:17P.M.	1:20	1254	24		
11:58A	1	1607	7		1:22PM	1:25	1234	20		
12:00N	3	1591	16		1:27P.M.	1:30	1217	17		
12:02PM	5	1580	11		1:32P.M.	1:35	1196	21		
12:04PM	7	1571	9	1st HR →	1:36P.M.	1:39PM	1176	20		258lbs
12:07PM	10	1560	11		1:41P.M.	1:44**	1155	21		
12:12PM	15	1540	20	45psi	1:46PM	1:49	1134	21		
12:17P.M.	20	1518	22		1:51P.M.	1:54	1112	22		
12:22PM	25	1495	23		1:56P.M.	1:59	1091	21		
12:27P.M.	30	1474	21		2:01P.M.	2:04	1069	22		
12:30P.M.	33	1461	13		2:06P.M.	2:09	1048	21		128
12:31P.M.	34	1456	5		2:11P.M.	2:14PM	1026	22		
12:32PM	35	1452	4		2:16P.M.	2:19	1005	21		
12:33PM	36	1448	4		2:21P.M.	2:24	984	21		
12:34PM	37	1443	5		2:26	2:29	962	22		
12:35P.M.	38	1439	4		2:31	2:34	941	21		
12:36P.M.	39	1434	5	2HR →	2:36	2:39	919	22		257lbs
12:40PM	43 *	1416	18		2:41	2:44	898	21		
12:45P.M.	48	1394	22		2:46	2:49	877	21		
12:47P.M.	50	1386	8		2:51	2:54	856	21		
12:52P.M.	55	1364	22		2:56	2:59	835	21		
12:57	60(1:00)	1342	22		3:01	3:04	814	21		
1:02PM	65(1:05)	1321	21		3:06	3:09	793	21		126
1:07P.M.	1:10	1299	22		3:11PM	3:14	772	21		
1:12P.M.	1:15	1278	21		3:16PM	3:19***	750	22		

ADDED TWO 55 GAL DRUMS CROMIC ACID 595.35 NET lbs EACH BATCH CH13E00343 (BOTH)

* 1st CR. sple ~12:37P.M.

** 2nd CR sple @ 1:40 PM.

*** 3rd CR sple @ ~3:18 PM.

U4 RIB

3/2

35 lb.

CHROMIC ACID SPIKE FEED - Target Rate: 250 pounds/hour

Date 10-23-13

Incinerator No. 4

Test Run 1

Operator MATOESIAN

	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING
METALS NO @ 15:20	3:21 PM***	3:24	728	22						
	3:26 PM	3:29	706	22						
	3:31 PM	3:34	684	22						
FED HOUR	3:36 PM	3:39	663	21	256 lb					
	3:41 PM	3:44	641	22						
	3:46 PM	3:49	620	21						
EOR	3:50 PM	3:53	603	17						

*** 3rd CR sple @ ~3:18 PM

U4 R2B

35%

CHROMIC ACID SPIKE FEED - Target Rate: 250 pounds/hour

Date 10-24-13

Incinerator No. 4

Test Run 2 (2B)

Operator MATOESIAN

	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING
	11:55 Am	0	1506		46 psi	1:55 PM	2:00	995	20	46 Psi
	11:56 Am	1	1503	3		2:00 PM	2:05	974	21	
LINE OUT HCL →	12:00 NOON	5 MIN	1486	17		2:05 PM	2:10	953	21	
	12:05 P.M.	10 MIN	1465	21		2:10 PM	2:15	932	21	
	12:10 PM	15 MIN	1443	22		2:15 PM	2:20	911	21	
	12:15 PM	20	1421	22		2:20 PM	2:25	889	22	
	12:20 P.M.	25	1399	22		2:25 PM	2:30	867	22	
	12:25 P.M.	30	1377	22		2:30 PM	2:35	846	21	
	12:30 P.M.	35	1355	22	2 HR →	2:35 PM	2:40	824	22	254 lbs
START IOR →	12:35 P.M.	40	1333	22		2:40	2:45	803	21	
	12:40 PM	45	1311*	22		2:45 PM	2:50	780	23	
	12:45 PM	50	1289	22		2:50 PM	2:55	758	22	
	12:50 PM	55	1267	22		2:55 PM	3:00	741	17	
	12:55 PM	1:00 HR	1246	21		3:00 P.M.	3:05	718	23	
	1:00 P.M.	1:05	1224	22		3:05 PM	3:10	696	22	128
	1:05 PM	1:10	1203	21		3:10 PM	3:15	678	18	
	1:10 PM	1:15	1182	21	METALS END →	3:15 PM	3:20	648	30	
	1:15 PM	1:20	1161	21		3:20 PM	3:25	624	24	
	1:20 PM	1:25	1141	20		3:25 PM	3:30	602	22	
	1:25 PM	1:30	1120	21		3:30 PM	3:35	577	25	
	1:30 P.M.	1:35	1099	21	3RD HR →	3:35 PM	3:40	565	12	259 lbs
R →	1:35 P.M.	1:40	1078	21	255 lb	3:40 PM	3:45	546	19	
	1:40 P.M.	** 1:45	1056	22	EOR →	3:45 PM	3:50	525	21	
	1:45 PM	1:50	1036	20						
	1:50 PM.	1:55	1015	21						

LOADED 1 DRUM AND ABOUT 1/2 of ANOTHER 55 GAL DRUM BATCH CH13E00343 FOR BOTH DRUMS

* 1ST CR sample @ 12:36 P.M. 3RD CR ~~***~~ Sple @ ~3:16 PM

** 2ND CR sample @ 1:37 P.M

~ 3 PM wind picking up - Gusts Getting windy

u4 R3B

1/2

35%

CHROMIC ACID SPIKE FEED - Target Rate: 250 pounds/hour

Date 10/25/13

Incinerator No. 4

Test Run 3 (3B)

Operator MATUESIAN

	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING
	1:55 PM	0	1395	–	50 pct	2:55 PM	2:00	881	20	
	1:57 PM	2	1386	9		3:00 PM	2:05	861	20	
	1:00 PM	5	1373	13		3:05 PM	2:10	840	21	
START INPUT →	1:05 PM	10	1351	22	RESTART 3:11 PM	3:10 PM	2:15	818	22	
	1:10 PM	15	1330	21		3:15 PM	2:20	797	21	
	1:15 PM	20	1309	21		3:20 PM	2:25	776	21	
	1:20 PM	25	1287	22		3:25 PM	2:30	755	21	
	1:25 PM	30	1266	21		3:30 PM	2:35	731	24	
	1:30 PM	35	1244	22	2 HR →	3:35 PM	2:40	710	21	255 lbs
S.O.R. →	1:35 PM	40	1222	22		3:40 PM	2:45	687	23	
	1:40 PM	45 *	1200	22		3:45 PM	2:50	666	21	
	1:45 PM	50	1180	20		3:50 PM	2:55	647	19	
	1:50 PM	55	1160	20		3:55 PM	3:00	626	21	
	1:55 PM	1:00	1140	20		4:00 PM	3:05	606	20	
	2:00 PM	1:05	1118	22		4:05 PM	3:10	585	21	
	2:05 PM	1:10	1094	24	METALS END @ 16:11 →	4:10 PM	3:15	561	24	
	2:10 PM	1:15	1072	22		4:15 PM	3:20	539	22	
	2:15 PM	1:20	1050	22		4:20 PM	3:25	516	23	
	2:20 PM	1:25	1029	21		4:25 PM	3:30	495	21	
	2:25 PM	1:30	1008	21		4:30 PM	3:35	475	20	
	2:30 PM	1:35	987	21	3 HR →	4:35 PM	3:40	454	21	256 lbs
HR →	2:35 PM	1:40	965	22	257 lbs	4:40 PM	3:45 ***	433	21	
	2:40 PM	1:45 **	943	22	END OF RUN →	4:41 PM	3:46	429	4	
	2:45 PM	1:50	919	24		4:42 PM	3:47	425	4	
	2:50 PM	1:55	901	18		4:43	3:48	420	5	

Filled Chrome Tank Remaining 1/2 DRUM ~300 lbs BATCH CH13E00343 + 1 FULL DRUM BATCH CH13G00252. 595.35 lbs NET EACH 55 GAL DRUM.

* 1st CR sple @ 1:39 PM

** 2nd CR sple ~ 1:37 PM

*** 3rd CR sple @ 4:36 PM

LAST Chrome Sample ~ 4:50 PM

U4 R3B

2/2

CHROMIC ACID SPIKE FEED - Target Rate 250 (356) pounds/hour

Date 10/25/13

Incinerator No. 4

Test Run 3

Operator MATOESIAN

COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING	COMPUTER TIME	STOP WATCH TIME	SCALE (LBS)	CHROMIC FED (LBS)	PUMP SETTING
4:44	3:49	416	4						
4:45	3:50	412	4						
4:46	3:51	407	5						
4:47	3:52	402	5						
4:48	3:53	396	6						

LAST Chrome Sample ~ 4:50 pm

5404 Jedmed Ct. - St. Louis, MO 63129
Business: (314) 845-7778 - Fax: (314) 845-7779

ACCURATE SUPERIOR SCALE

Scale Inspection Report

ISO/IEC 17025:2005

Customer: VEOLIA ENVIRONMENTAL SERVICES (
#7 MOBILE AVENUE
SAUGET, IL 62201

escription: Class I
Serial No: 11925184
Scale No: N/A
Divisions: 0.01 g

Location: N/A
MFG / Model: Mettler / PG 802

Scale Type: Balance
Capacity: 810 g

Scale was found In Tolerance: [X] yes [ ] no

Shift Test Sides / Corners / Sections	Weights Applied	Scale Reading (As found)	Error (+/-)	Tolerance Maintenance	Scale Reading After Adjustment (As Left)	Accept / Reject
X	X	X	X	X	X	X

Buildup Weight	Weights Applied	Scale Reading (As found)	Error (+/-)	Tolerance Maintenance	Scale Reading After Adjustment (As Left)	Accept / Reject
	0.50 g	0.50 g	+0.00 g	+/- 0.01 g		ACCEPT
	~~1.00 g~~	~~1.00 g~~	~~+0.00 g~~	~~+/- 0.01 g~~		ACCEPT
	2.00 g	2.00 g	+0.00 g	+/- 0.01 g		ACCEPT
	5.00 g	5.00 g	+0.00 g	+/- 0.01 g		ACCEPT
	100.00 g	100.00 g	+0.00 g	+/- 0.01 g		ACCEPT
	200.00 g	200.00 g	+0.00 g	+/- 0.01 g		ACCEPT
	500.00 g	500.01 g	+0.01 g	+/- 0.01 g		ACCEPT
	700.00 g	700.02 g	+0.02 g	+/- 0.02 g		ACCEPT

Test Procedure follows QSP-09-002

Traceable to SI through NIST #: MO: 822/259883-98 39598 822/274998-07
Rice Lake: 822/278785-10 681/280058-10

Cal Date: 08/23/2013 **Next Cal due:** 08/30/2014

Calibration Dates: APR

Service Technician Registration #: 0005IL/30023MO

Calibrated By Service Technician: Bill Mckinnis

Job Queue#: LT224711 **Report ID:** 68962680

Uncertainty of Measurement provided on request

FOR CUSTOMER USE ONLY

Reviewed By ______________________ Date Reviewed ______________________

This document shall not be reproduced, except in full, without the approval of Accurate Superior Scale Company

Form 030 , Rev 10, 08/14/13

5404 Jedmed Ct. - St. Louis, MO 63129
Business: (314) 845-7778 - Fax: (314) 845-7779

ACCURATE SUPERIOR SCALE

Scale Inspection Report

ISO/IEC 17025:2005

Customer: VEOLIA ENVIRONMENTAL SERVICES (
#7 MOBILE AVENUE
SAUGET, IL 62201

escription: Class III
Serial No: 1386300044
Scale No: N/A
Divisions: .1 lb

Location: N/A
MFG / Model: Ricelake 320I

Scale Type: Bench
Capacity: 100 lb

Scale was found in Tolerance: [X] yes [ ] no

Shift Test Sides / Corners / Sections	Weights Applied	Scale Reading (As found)	Error (+/-)	Tolerance Maintenance	Scale Reading After Adjustment (As Left)	Accept / Reject
X	X	X	X	X	X	X

Buildup Weight	Weights Applied	Scale Reading (As found)	Error (+/-)	Tolerance Maintenance	Scale Reading After Adjustment (As Left)	Accept / Reject
	25.0 lb	25.0 lb	+0.0 lb	+/- 0.1 lb		ACCEPT
	50.0 lb	50.0 lb	+0.0 lb	+/- 0.1 lb		ACCEPT
	100.0 lb	100.0 lb	+0.0 lb	+/- 0.2 lb		ACCEPT

Test Procedure follows QSP-09-002

Traceable to SI through NIST #: MO: 822/259883-98 39598 822/274998-07
Rice Lake: 822/276785-10 681/280058-10

Cal Date: 08/23/2013 **Next Cal due:** 08/30/2014 **Calibration Dates:** APR
Service Technician Registration #: 0005IL/30023MO
Calibrated By Service Technician: Bill Mckinnis **Job Queue#:** LT224711 **Report ID:** 68966903

Uncertainty of Measurement provided on request

FOR CUSTOMER USE ONLY

Reviewed By ____________________ Date Reviewed ____________________

This document shall not be reproduced, except in full, without the approval of Accurate Superior Scale Company

Form 030, Rev 18, 06/14/13

5404 Jedmed Ct. - St. Louis, MO 63129
Business: (314) 845-7778 - Fax: (314) 845-7779

Accurate Superior Scale

Scale Inspection Report

ISO/IEC 17025:2005

Customer: VEOLIA ENVIRONMENTAL SERVICES (
#7 MOBILE AVENUE
SAUGET, IL 62201

escription: Class III
Serial No: 1386300045
Scale No: N/A
Divisions: .1 lb

Location: N/A
MFG / Model: Ricelake 320I

Scale Type: Bench
Capacity: 100 lb

Scale was found In Tolerance: [X] yes [ ] no

Shift Test Sides / Corners / Sections	Weights Applied	Scale Reading (As found)	Error (+/-)	Tolerance Maintenance	Scale Reading After Adjustment (As Left)	Accept / Reject
X	X	X	X	X	X	X

Buildup Weight	Weights Applied	Scale Reading (As found)	Error (+/-)	Tolerance Maintenance	Scale Reading After Adjustment (As Left)	Accept / Reject
	25.0 lb	25.0 lb	+0.0 lb	+/- 0.1 lb		ACCEPT
	50.0 lb	50.0 lb	+0.0 lb	+/- 0.1 lb		ACCEPT
	100.0 lb	100.0 lb	+0.0 lb	+/- 0.2 lb		ACCEPT

Test Procedure follows QSP-09-002

Traceable to SI through NIST #: MO: 822/259883-98 39598 822/274998-07
Rice Lake: 822/278785-10 681/280058-10

Cal Date: 06/23/2013 **Next Cal due:** 06/30/2014

Calibration Dates: APR

Service Technician Registration #: 0005IL/30023MO

Calibrated By Service Technician: Bill Mckinnis

Job Queue#: LT224711

Report ID: 68966904

Uncertainty of Measurement provided on request

FOR CUSTOMER USE ONLY

Reviewed By ______________________ Date Reviewed ______________________

This document shall not be reproduced, except in full, without the approval of Accurate Superior Scale Company

Form 030 , Rev 18, 06/14/13