Appendix 1 – ADEQ Memo with Attachments

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733
April 14, 2008

Certified Mail/Return Receipt: 7007 2560 0002 7737 4203

Mr. Charles R. Nestrud
Chisenhall, Nestrud & Julian, P.A.
400 W. Capitol, Suite 2840
Little Rock, AR 72201

Re: Sampling and Compliance Evaluation Inspections of the D&D Properties LLC facility located in El Dorado, Arkansas (EPA ID #ARR000005025)

Dear Mr. Nestrud:

Enclosed please find two inspection reports produced by the U. S. Environmental Protection Agency (EPA), Region 6 for the D&D Properties LLC facility, located in El Dorado, Arkansas (Facility), to be shared with your client, D&D Properties LLC. One report documents the Resource Conservation and Recovery Act (RCRA) Compliance Evaluation Inspection (CEI) conducted by EPA Region 6 on July 24, 2007. The second report documents the RCRA Sampling Inspection conducted by EPA on October 28, 2007. Copies of these reports have also been sent to the Arkansas Department of Environmental Quality (ADEQ). The RCRA CEI report indicates some areas of concern (AOCs) observed during the RCRA CEI conducted on July 24, 2007 at the Facility. These AOCs are listed in the CEI report section titled, "Areas of Concern," and are currently under review by EPA Region 6.

If you have any questions, or if you would like to schedule a meeting with EPA Region 6, please contact Rebekah Reynolds in the Office of Regional Counsel at (214) 665-6605. Thank you for your cooperation.

Sincerely yours,

Rhonda Smith, Chief
Compliance Enforcement Section (6EN-HE)
Hazardous Waste Branch
Compliance Assurance & Enforcement Division

Enclosures
cc: Mr. Ryan Benefield, Chief
Hazardous Waste Division
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

EPA REGION 6
SURVEILLANCE SECTION
RCRA INSPECTION REPORT

Report Date:	August 3, 2007	
Inspection Date:	July 24, 2007	
Type of Inspection:	Compliance Evaluation Inspection	
Company Name:	D&D Properties (Formerly Columbian Chemical)	
Mailing Address:	713 Industrial Road	El Dorado, Arkansas 71730
Company Owner	D&D Properties	
Location:	713 Industrial Road	El Dorado, Arkansas
Type of Industry/SIC		
Identification Number:	No RCRA ID #	Columbian Chemical RCRA ID Number was ARR000005025
Date Put Into ICIS	July 31, 2007	

Enforcement Officer		
EPA Inspector:	David Robertson	Signature Date
Reviewed by:	Greg Valentine	Signature 8/6/07 Date

INTRODUCTION

On July 24, 2007, the inspectors met with Robert (Dee) Agerton, Sales Manager with USA Environment and Darrell Madding, Manager with USA Environment presented credentials and began the multi-media (CAA and RCRA) inspection. In addition to their affiliation with USA Environment, the two men are partners in D&D Properties LLC. D&D has leased this site – formerly Columbian Chemicals – with an option to buy.

BACKGROUND

USA Environment of Houston, Texas, has subleased a portion of the site to use as a base for an environmental cleaning service (they operate vacuum trucks, supersuckers, and a container pick up service). According to Mr. Agerton, USA Environment has been at this location since October, 2006. Mr. Agerton stated that D&D leased the property with an option to by on July 9, 2007. USA Environment is registered with ADEQ

According to Mr. Agerton, D&D plans to use existing tanks at this site to manage and mix crude oil and to process the high mercaptan petroleum product stream (natural gasoline) from Louis Dreyfus. Currently, the only operations at the site are cleaning, planned dismantling, some storage of wastes in drums and storage of the mercaptan petroleum product as will be described below. The facility plans to set up a caustic stripping operation to strip sulfur and mercaptans from the high sulfur petroleum material generated by Louis Dreyfus Olefins in Geismar, Louisiana.

Mr. Madding noted during the inspection that USA Environment has been cleaning the Lisbon Processing site in Lisbon, Louisiana. In addition, several containers of material that appeared to be waste were accumulated on-site and were identified as coming from Lisbon Processing. The facility is not registered as a RCRA transfer station or a TSD.

The old Columbian Site operated under the RCRA ID # ARR000005025. The inspector could not find a waste registration for D&D, USA Environment or any generator at the address 713 Industrial Road in El Dorado, Arkansas (other than the old Columbian Registration).

SITE DESCRIPTION

When D&D leased this site, most of the existing tanks (see table) contained heavy crude oil – referred to as CBO or Carbon Black Oil. This crude was originally purchased by Columbian to use as a feedstock to make carbon black. The carbon black operation has been shut down since approximately 2001. The CBO has been stored in the tanks since that time. According to Mr. Agerton, the CBO must be heated and agitated in order to keep it pumpable. In addition, the several years that this material has been stored has allowed the lighter ends to volatilize and made the resulting material even thicker and

heavier than normal. In order for D&D to clean the tanks, they determined that they needed a solvent to remove the CBO. The managers decided to use the high mercaptan petroleum product from Louis Dreyfus as that solvent.

Tank Contents According to Mr. Agerton			
Tank #	**CBO (bbl)**	**Solvent from Louis Dreyfus (bbl)**	**Water**
1	1319		
2	1359		½ inch
3	1400		83 bbl
4	1564	1330	
7	388	1790	

D&D elected to begin the solvent extraction with the two newest 15,000 bbl tanks (Tanks 4 and 7; Photo 1). According to Mr. Agerton, Tank 4 contains 1564 bbl CBO and 1330 bbl petroleum product from Louis Dreyfus. Tank 7 contains 388 bbl CBO and 1790 bbl petroleum product from Louis Dreyfus. The facility plans to add CBO removed from other tanks to Tank 7 in order to bring the mixture ratio to around 50%. It was unclear to the inspector why the facility was putting CBO in Tank 7 since they recently added a solvent intended to remove existing CBO from said tank.

According to Mr. Agerton, Louis Dreyfus Olefins, through Taylor Gas, provided the high mercaptan petroleum material to act as a solvent. The material was pumped into the tanks through existing water draws at the bottom of the tanks. According to Mr. Agerton, the material essentially, cut a channel through the thick material and floated to the top of the CBO. The petroleum material remains atop the CBO where it is volatilizing as can be seen using the FLIR camera and the naked eye (Photo 11). Mr. Agerton stated that the facility plans to get power to the tanks in order to turn on existing agitators to loosen the CBO.

The shipping papers indicate that the petroleum product was shipped from Louis Dreyfus in Geismar, Louisiana, to Taylor Gas or "Taylor" in El Dorado, Arkansas, and charged to the account of "Taylor" in Winnsboro, Texas (Attachment 3). Mr. Agerton and Mr. Madding confirmed that Taylor Gas was related to Lisbon Processing. Mr. Agerton stated that none of the petroleum material in tanks at their site came from Lisbon Processing, but rather directly from Louis Dreyfus. Mr. Madding later explained that D&D owns the CBO, purchased from Columbian, and the material from Louis Dreyfus belongs to Lisbon Processing.

D&D Properties applied for an ADEQ air permit on July 16, 2007 (Attachment 2). D&D Properties received the first load of material from Louis Dreyfus on July 21, 2007 according to shipping documentation (Attachment 3).

Tanks 4 and 7 contain both CBO and the high mercaptan petroleum material according to Mr. Agerton. The material in Tanks 4 and 7 appears to be a solid waste by virtue of being "abandoned" since 2001. D&D added a solvent to the solid waste in order to make that waste recoverable – this constitutes "treatment" of a solid waste under RCRA. The material resulting from the treatment of the CBO is a solid waste (spent solvent). The spent solvent will likely be a hazardous waste for flashpoint (D001) and toxic levels of benzene (D018). A generator can conduct treatment of wastes in tanks or containers under RCRA if they comply with the less than 90 day storage requirements. It appeared that the facility had complied with none of those requirements. At the time of the inspection the facility had accumulated over 40,000 lbs (5000 bbl) of hazardous waste. The facility should be regulated as a large quantity generator of hazardous waste.

The tanks sit in dirt secondary containment surrounded by a dirt berm. The tanks are closed roof with open vents. Vents from the tanks could be observed venting VOC's both with the naked eye and with the FLIR camera. A strong odor of mercaptan was noted throughout the site. The tanks had no overfill protection, appeared to be out of compliance with Subpart CC, and were not being inspected. The tanks were not marked with the words hazardous waste. The tanks did not have an engineers certification stating that they were capable of holding the material placed into them. The facility had no contingency plan. D&D had not registered with ADEQ as a generator of hazardous waste.

The facility has approximately 120 drums of what appeared to be waste accumulated at the site (Photos 2, 3, 4, 20, 21, 22, 23 and 24). One drum was labeled "Haz – condensate sludge". Mr. Madding stated that the material in that drum came from Lisbon Processing. He said that USA Environment vacuum trucks were working on site when the cease and desist operating order was delivered and the vacuum truck left the site with a small heel. The drum resulted from the cleanout of the heel. In addition, several drums of spent catalyst were identified as coming from the refinery that formerly operated on the Lisbon site (Photo 23). According to Mr. Madding, the catalyst contains nickel and the company decided that it may be valuable. USA Environment performed some dismantling at the old Lisbon Refinery. In addition, several drums containing what appeared to be used oil were not closed and were not labeled.

A high mercaptan odor was noted near Tank 6, a bolted storage tank constructed in 1951 (Photo 15). Originally Mr. Agerton stated that this tank was empty. When we visited the tank Mr. Agerton stated that Tank 6 contained the heel from 140 bbl of condensate that USA Environment had recovered from an oil field, delivered to this tank and then sold to Barnett in Eastfield, Arkansas, for processing. Mr. Agerton also stated that the tank has been used for crude oil tank bottoms from cleaning tanks at Lion Oil and other oil producers in the area. Mr. Agerton stated that good "live" crude oil is often recovered when crude oil bottoms are removed from tanks. Mr. Agerton stated that this material had been placed into Tank 6. Crude oil tank sediment from tank bottoms in petroleum refining carries the hazardous waste listing K169 when disposed. Later, Mr. Madding

stated that the only thing they had ever put into Tank 6 was good crude oil from a pipeline cleaning and removal project at Cross Oil Refinery, now Martin Refinery. Mr. Madding stated that approximately 180-300 bbl of this material had been processed through the tank. Mr. Madding further stated that placing the material into the tank rather than taking it directly to the refiner in Eastfield, Arkansas, had been a mistake. The inspectors requested that the facility provide a written account of what had been placed into Tank 6 and provide backup documentation. As of this writing, the requested material has not been received.

AREAS OF CONCERN

1. 40 CFR 262.11 – Hazardous Waste Determination

   During the inspection, it was noted that the facility treated a solid waste by adding a solvent to that solid waste which generated a "spent material". The material resulting from the treatment appears to be a hazardous waste. It was requested that the facility perform a hazardous waste determination on the spent material.

2. 40 CFR 270.1 – Permit Required

   a) During the inspection, it was noted that the facility stored hazardous waste or solid waste generated elsewhere. The facility is neither a TSD nor a transfer facility and therefore, they cannot accept hazardous waste from off-site. It was requested that the facility characterize and properly dispose of all hazardous waste on site.

   b) During the inspection, it was noted that the facility accumulated hazardous waste in tanks without complying with 262.34 (a)(1)(ii).

3. 40 CFR 262.12 – EPA Identification Numbers

   During the inspection, it was noted that the facility had generated, treated, and stored hazardous waste on site without first receiving and EPA Identification number.

4. 40 CFR 279.22 (b) – Used Oil Containers

   During the inspection, it was noted that the facility accumulated what appeared to be used oil in containers that were in poor condition.

5. 40 CFR 279.22(c) – Used Oil Labeling

   During the inspection, it was noted that the facility accumulated what appeared to be used oil in containers that were not labeled with the words "Used Oil."

D&D Properties List of Attachments

1. Map of the facility (Never received)
2. Air Permit Application
3. All shipping documentation for high sulfur petroleum material
4. Full Tank Descriptions (The facility was able to provide some of this information)
5. Any Tank Inspections
6. Columbian's Air Permit
7. Construction Information on all tanks (see Attachment #4)
8. Documentation of what is currently in each tank (Refer to Table in Report)
9. Tank Certifications (Facility was able to provide some information)
10. A written description of all material that has been placed into or taken out of Tank #6.
11. Premier Consulting's Phase 1 investigation of this site for D&D Properties (Mr. Madding stated that he would mail this following the inspection. To this date it has not been received.)
12. Profiles on all drums accumulated at the site (See RCRA 3007 information response dated November 27, 2007 sent to EPA Region 6 by Hanner, Spence & Green on behalf of D&D Properties LLC)
13. Daily inspection logs for on-site containers and tanks. (Mr. Agerton stated during the inspection that he does a daily inspection, but does not record the findings.)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 1

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Tanks 4 and 7.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 2

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Drums under tarp. The drum labeled "Haz – condensate" is vacuum truck heels from Lisbon Processing.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 3

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Approximately 120 drums accumulated under a tarp. Many of the these drums contain what appeared to be used oil. Most drums were open.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 4

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Open drum of used oil with no label.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 5

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Valve that can be used to drain the dirt berm that makes the secondary containment for Tanks 4 and 7.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 6

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Second drain from secondary containment for Tanks 4 and 7.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 7

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Pitting and rusting on Tank 7.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 8

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Spillage of material from Louis Dreyfus. According to Mr. Agerton, the material was spilled during tank loading.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 9

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Mixer on Tank 4. Because there is no power to the tank the mixer is not currently used.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 10

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Mixer on Tank 7. Because there is no power to the tank the mixer is not currently used.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 11

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Visible emissions from Tank 7. Note vapors obscuring trees.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 12

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Second Tank farm (behind office). This tank farm includes Tank 6 (furthest on left). Note drums in foreground under tarp.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 13

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Old Columbian facility that D&D plans to dismantle.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 14

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Old Columbian facility that D&D plans to dismantle.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 15

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Tank 6. A mercaptan odor was noted in the area of this tank. It was unclear what this tank contained at the time of the inspection. Mr. Agerton and Mr. Madding gave different stories as to the contents of the tank. It was requested that the facility provide a written description of what this tank has contained recently.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 16

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Tank 1. This tank shares secondary containment with Tanks 2,3,5, and 6. Tanks 1,2 and 3 contain Carbon Black Oil according to Mr. Agerton,		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 17

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Tank 2.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 18

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Debris burning as part of facility cleanup.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 19

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Debris burning as part of facility cleanup.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 20

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Drums seen in Photos 2 and 3 with tarp removed. It appeared that many of these drums were generated off-site.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 21

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Drums following tarp removal containing an oily material.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 22

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Drums following tarp removal containing an oily material.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 23

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Nickel catalyst removed from the old Arcadia Refining (now Lisbon Processing). There were three drums of this material.		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Official Photograph Log

Photo # 24

Photographer: David Robertson	Date: 7/24/07	Time:
City/County: El Dorado/ Union County		State: Arkansas
Location: D&D Properties		
Subject: Damaged drums containing what appeared to be used oil.		

ATTACHMENT 1

ATTACHMENT 2

(2)

USA
ENVIRONMENT, L.P.
713 INDUSTRIAL ROAD
EL DORADO, AR 71730
870-862-5758/FAX 870-862-5658

FAX

DATE: 17 July 2007

TOTAL PAGES: 14 pages

SUBJECT: Permit Application

ATTN: David Triplett

COMPANY: ADEQ

FAX NUMBER: 501-682-0753

MEMO:

Thank you,
USA Environment, L.P.

PERMIT APPLICATION FORM
GENERAL INFORMATION FOR MINOR SOURCES

AFIN:	New	Date:	7-16-07

1. FACILITY PHYSICAL INFORMATION		
Facility Name:	D & D Properties	
Physical Address or Location:	713 Industrial Rd.	
City, County, State, Zip:	El Dorado, AR 71730	
Contact Name and Position:	Darrell Madding Owner	
Phone and Fax Number:	(870)918-9340	(870)862-5758
Email Address:	dmadding@usaenviro.com	

2. FACILITY MAILING INFORMATION		
Organization Name:	same	
Mailing Address :		
City, State, Zip:		
Contact Name:		
Phone and Fax Number:		
Email Address:		

3. INVOICE MAILING INFORMATION		
Organization Name:	same	
Mailing Address:		
City, State, Zip:		
Contact Name:		
Phone and Fax Number:		
Email Address:		

4. PERMIT APPLICATION CONTACT INFORMATION		
Organization Name:	same	
Mailing Address:		
City, State, Zip:		
Contact Name:		
Phone and Fax Number:		
Email Address:		

GENERAL INFORMATION FOR MINOR SOURCES (CONT'D)

AFIN:	New	Date:	7-16-07

5. UTM Coordinates of Center of Plant	
UTM Zone	
UTM North (Km.00 to 2 decimal places)	E. 536370, N. 3673730
UTM West (Km.00 to 2 decimal places)	

6. NAICS Number:	N/A
NAICS Facility Description:	

7. Type of Permit Application (check one):			
	Initial Permit for New Facility	If the AFIN is not known, list the County location:	Union
	Initial Permit for Existing Facility	List permit # for any current air permits:	70-00014
	Modification	List current permit #:	Not Applicable
	De Minimis Change	List current permit #:	"
	Administrative Amendment	List current permit #:	"
	Name change	List current permit #:	"
	Transfer of Ownership	List current permit #:	"

8. Expected Date of Commencement of Construction or Reconstruction:	As soon as permitted
Expected Date of Completion of Construction or Reconstruction:	"
Anticipated Date of Operation:	

9. Is any source subject to a NSPS or NESHAP requirement? If yes, list subparts: _____	Yes ☐ No ☑

10. Would you like to subscribe to the Air Permit Branch Email list ? (A periodic email from the ADEQ Air Permit Branch of notable events and issues relating to air permits and permitting.)	Yes ☑ No ☐
If yes, list the email address(es) you wish to use: (or you can email us at **AirPermits@adeq.state.ar.us** with "subscribe" (no quotes) in the subject box	

ORGANIZATIONAL STATUS OF APPLICANT

Please check the box which appropriately describes the legal organization of the applicant.

Solely Owned Proprietorship	☐	Corporation	☑
General Partnership	☐	Joint Venture	☐
Limited Partnership	☐	Government Entity	☐

Other: Please Specify _____

If the applicant is a corporation, indicate if it is a domestic (Arkansas) corporation or a foreign (chartered outside of Arkansas) corporation.

Domestic ☑ Foreign ☐

If the applicant is a corporation, is it currently registered to do business with the Arkansas Secretary of State?

YES ☑ NO ☐

(Please note no permit will be issued to a corporation until the proper documents have been filed with the Secretary of State. Also, note that the name of the applicant must be identical to the name of the registered corporation.)

If the applicant is a partnership, then list the names and addresses of all partners involved.

Darrell Madding
206 Archer
El Dorado, AR 71730

Attach an additional sheet if necessary

If the applicant is organized as a joint venture, list the names and addresses of all of the principals involved:

Dee Agerton
101 Urbana Rd.
Urbana, AR.

Attach an additional sheet if necessary

CERTIFICATION OF APPLICATION

"Responsible official" means one of the following:

1) For a corporation: a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:

   (i) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars); or

   (ii) the delegation of authority to such representative is approved in advance by the permitting authority;

(2) For a partnership or sole proprietorship: a general partner or the proprietor, respectively;

(3) For a municipality, State, Federal, or other public agency: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA).

I certify under penalty of law that this application and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Darrell Madding	Owner
typed/printed name of responsible official	title
Darrell L. Madding	7-16-07
signature of responsible official	date

typed/printed name of person preparing application	firm or company
Address of preparer's firm	telephone number (including area code)

CONTROL EQUIPMENT OPERATING PARAMETERS

Source No: _____ Description: _____

Fabric Filter Operating Parameters: Not Applicable				
Gas/Cloth Ratio:				
Pressure Drop Across Baghouse:		in. H_2O (min)		in. H_2O (max)
Inlet Gas Temperature:		°F (min)		°F (max)
Outlet Gas Temperature:		°F (min)		°F (max)
Inlet Gas Flow Rate:				

Electrostatic Precipitator Operating Parameters: Not Applicable				
Pressure Drop:				
Inlet Gas Temperature:		°F (min)		°F (max)
Gas Velocity (through ESP):		ft/sec		
Conditioning Agent Additions:		gr/ft^3		
Voltage and Current Readings for each Transformer-Rectifier (T-R) Set:				
Example:	first 3 fields - 3 at 50 KVA (55 kV_p, 35 kV_{av}, 500 mA)			
	last 2 fields - 4 at 64 KVA (70 kV_p, 45 kV_{av}, 500 mA)			

Mechanical Collectors Operating Parameters: Not Applicable				
Gas Flow Rate:		ft^3/min		
Pressure Drop		in. H_2O (min)		in. H_2O (max)
Inlet Velocity:		ft/sec		
Inlet Gas Temperature:		°F (min)		°F (max)
Outlet Gas Temperature:		°F (min)		°F (max)

Scrubber Operating Parameters: Not Applicable				
Scrubbing Liquor:				
Gas Flow Rate		ft^3/min		
Liquor Flow Rate:		gal/min		
Gas Pressure Drop Across Unit:		in. H_2O (min)		in. H_2O (max)
Liquid Pressure Drop Across Unit:		psi (min)		Psi (max)
Inlet Gas Temperature:		°F (min)		°F (max)
Outlet Gas Temperature:		°F (min)		°F (max)
Solids Content of Recirculated Scrubber Water:				gr/gal
pH of Recirculated Scrubber Water			max	min

Oxidizer Operations Not Applicable				
Thermal Oxidizer Combustion Zone Temperature:		°F (min)		°F (max)
Catalytic Oxidizer		Catalyst Bed Inlet °F		Outlet °F

STORAGE TANK SUMMARY FORM

GENERAL INFORMATION					
Facility Name:	D&D Properties				
Source No.:	New				
Tank Capacity:	630,000	Gallons		15,000	Barrels
Tank Dimensions:	Height	40' Units	Diameter	60'	Units
	Length	Units	Width		Units

OPERATIONAL DATA				
Max. Filling Rate:	187gpm	Gallons/Hr		Barrels/Hr
Average Outage:	50%		Feet	
Average Throughput:	8,820,000	Gallons/Yr	210,000	Barrels/Yr
Turnovers per Year:	14			

TANK CHARACTERISTICS						
Tank Shape:	✓	Cylindrical		Spherical		
		Other: Please Describe:				
Roof Paint Color:		White		Specular		Gray
		Light Gray	✓	Med Gray		
		Other: Please Specify Color:				
Shell Paint Color:		White		Specular		Gray
		Light Gray	✓	Med Gray		
		Other: Please Specify Color:				
Tank Condition:	✓	Good		Fair		Poor

TANK STATUS						
Status:		New Construction	✓	Alteration		Neither

TANK TYPE					
	Underground	✓	Fixed Roof		Internal Floating Roof
	External Floating Roof		Pressure		On Top
	Internally Heated		Insulated		
	Other: Please Explain				

FIXED ROOF TANK INFORMATION					
✓	Cone Roof		Dome Roof	Roof Height 40	Feet

FLOATING ROOF TANK INFORMATION Not Applicable				
Roof Type:		Double Deck		Pontoon
		Other	Describe:	
Seal Type:		Single		Double
		Other	Describe:	
Shell Construction:		Riveted		Welded
		Other: Please Describe:		

ADDITIONAL INFORMATION					
If the tank has any other type of roof cover, describe:					
Proposed to add vapor recovery system to both tank vents, plus loading rack.					
Identify material to be stored in tank:					
Molecular Weight:	80	Density:	5.6	Lb/Gal	80 API
Storage Temperature:	60%	°F (min)	80%	°F (max)	

PETROLEUM PRODUCTS/ORGANIC MATERIALS				
Vapor Pressure:	[redacted] Lbs Reid	12-14 or PSI Absolute	100	at F
Initial Boiling Point:	N/A	°F		
Flash Point		°F (heavy petroleum products only)		

SOLUTIONS		
Solvent: Not Applicable		
Dissolved Material:		
Concentration of Dissolved Material:		Concentration of Dissolved Material:
		Percent by Weight
		Percent by Volume
		Pounds per Gallon

GAS/LIQUIFIED GAS				
Material Stored Not Applicable				
Storage Pressure:		PSI Gage at		°F

Checklist/Application Mailing

The following are required information for an application:	Initial Permit (New or Existing Facility)	Significant Modification	DeMinimis Modification	Administrative Amendment
General Information Forms	Yes	Yes	Yes	Yes
Emission Rate Tables	Yes	Yes	Yes	No
Calculations	Yes	Yes	Yes	Maybe
Control Equipment Operating Parameters	Yes	Yes	Yes	Not Applicable
Process Flow Diagram	Yes	Yes	Yes	No
Process Description	Yes	Yes	Yes	No
Area Map	Yes	Maybe[1]	Maybe[1]	No
Plot Plan	Yes	Maybe[1]	Maybe[1]	No
Operating Scenarios	Yes	Yes	Yes	No
Equipment Specifications	Yes	Maybe[1]	Maybe[1]	No
Compliance Plan and Schedule	Yes	Yes	Yes	No
Additional Information	Yes	Yes	Yes	No
List of Exempted Activities	Yes	Yes	Yes	No
Disclosure Statement	Maybe[2]	Maybe[2]	Maybe[2]	No

1 - Modifications involving new construction or modification of the manner in which the current process operates will require this attachment. Modifications involving production increases, hour of operation increases, etc. (i.e. do not involve the addition of any new equipment units or modification of the manner in which the current process operates) will not require this attachment

2 - Disclosure statements are required for all new facilities and all transfers of ownership. If a disclosure statement has been previously submitted to the Air Division or any other Division, it is not necessary to submit another one.

Copies and Mailing Instructions

Mail the original and one copy of the completed application and required attachments. If the submittal includes confidential information, mail one (1) complete (original) confidential application in addition to the non-confidential original and copies required above.

An electronic version of any or all of the application is not required, but is helpful in processing your permit. Please include with your application or email to AirPermits@adeq.state.ar.us.

Mail permit applications to:

Arkansas Department of Environmental Quality
Attention: Air Division
Post Office Box 8913
Little Rock, AR 72219-8913

Our street address for other delivery purposes is:

Attn: David Triplett
8001 National Drive
Little Rock, AR 72209
Phone Number (501) 682-0744
Fax Number (501) 682-0753

Our Email Address is:

AirPermits@adeq.state.ar.us

EMISSION RATE TABLE

DATE: PAGE ___ OF

EMISSION POINT NO.	YEAR INSTALLED OR LAST MODIFIED	PROCESS DESCRIPTION (Descriptive Name)	SCC	STACK HEIGHT (FT)	INSIDE STACK DIMENSIONS (FT)	STACK GAS TEMP. (°F)	STACK GAS VELOCITY (FT/SEC)	UTM COORDINATES	
								HORIZ. (E)	VERT. (N)

MAXIMUM OPERATING HOURS			ARE THE HOURS OF OPERATION OF THE UNIT RELIED UPON TO LIMIT THE ANNUAL POTENTIAL EMISSIONS?				HEAT INPUT CAPACITY (Boiler, Dryer, Furnace, Etc.) MMBTU/HR	FUEL HEAT VALUE MMBTU/UNIT	FUEL % S
HRS/DAY	HRS/MTH	HRS/YR							
			YES		NO				

PROPOSED MAXIMUM PRODUCTION/OPERATION RATES				RAW MATERIAL, PRODUCT, FUEL, ETC.	ARE THE HOURLY PRODUCTION/OPERATION RATES RELIED UPON TO LIMIT THE PROPOSED HOURLY MAXIMUM EMISSION RATES?
ANNUAL	MONTHLY	HOURLY	UNITS (gal, lb, ft, etc.)		
8,820,000	735,000	8200	gal	LSR Gasoline	?
					ARE THE ANNUAL PRODUCTION/OPERATION RATES RELIED UPON TO LIMIT THE PROPOSED ANNUAL MAXIMUM EMISSION RATES?

POLLUTANT (Complete the HAPs EMISSION RATE TABLE for all VOC emissions)	PROPOSED MAXIMUM EMISSIONS		Regulations (NSPS, PSD, etc.)	EMISSION CONTROL EQUIPMENT		
	LBS/HOUR	TONS/YEAR		TYPE (Scrubber, Cyclone, Etc.)	EQUIPMENT MANUFACTURER AND MODEL NUMBER(S)	% CONTROL EFFICIENCY
V.O.C.'s	39	21.35	?	Chilled Vapor Recovery	Carrier 30GT050	70%

THIS PAGE MAY BE PHOTOCOPIED AS NEEDED

HAPs EMISSION RATE TABLE

DATE: _____ PAGE _____ OF

EMISSION POINT NO.	YEAR INSTALLED OR LAST MODIFIED	Source Category	PROCESS DESCRIPTION (Descriptive Name)	SCC
?	2007	?	Chilled Vapor Recovery ?	?

POLLUTANT NAME & CAS # (Complete for each HAP pollutant. NOTE: Supporting calculations and documentation must be provided for these emission values.)	Relative Toxicity	PROPOSED MAXIMUM EMISSIONS LBS/HOUR	PROPOSED MAXIMUM EMISSIONS TONS/YEAR	Regulation	EMISSION CONTROL EQUIPMENT Type	EMISSION CONTROL EQUIPMENT % Control Efficiency
Benzene			< 2 T/yr		Chilled Vapor Recovery	90+

THIS PAGE MAY BE PHOTOCOPIED AS NEEDED

The only criteria pollutant that might be in a light stock would be benzene in .5% or less concentrations.

Benzene has a low volatility (vapor pressure) of 3.25 PSIA at 100°F and 1.75 PSIA at the unloading temperature

These facts will certainly give less than 2 Tons per year of individual and total criteria pollutant emissions.

STAEDTLER® No. 937 811E Engineer's Computation Pad

ADEQ

MAY 2 1 2007

The State of Arkansas Department of Environmental Quality
8001 National Drive, P.O. Box 8913, Little Rock, Arkansas 72219-8913
www.adeq.state.ar.us

ADEQ T.I.N.: 71-0847443
Invoice Number : TKS-084274
AFIN : 70-00014

INVOICE
(Annual)

PHONE: (501) 682-0744
Page 1 of 1

COLUMBIAN CHEMICALS COMPANY
713 INDUSTRIAL ROAD

EL DORADO, AR 71730

SUPPLIER # 50038079
VOUCHER # 364116
INVOICE # TKS-084274

Date Billed :	05/08/2007
Date Due :	06/30/2007
Total Amount Due :	**$300.00**
Late Fees after Date Due :	$20.00
Total Due after Date Due :	$320.00

Owner ID : 006599 COLUMBIAN CHEMICALS COMPANY

Important Notice: For Eligible Regulated Petroleum Storage Tank Facilities, failure to pay tank fees on or before the Date Due (above) can result in a loss of eligibility for the Arkansas Petroleum Storage Tank Trust Fund.
NOTE: REGISTRATION STICKERS WILL NOT BE MAILED UNTIL THIS INVOICE HAS BEEN FULLY PAID.

Fee Coverage Period: July 1, 2007, through June 30, 2008
Invoice for Regulated Storage Tank fees in accordance with A.C.A. 8-7-801 et seq., for the tanks at the location listed below

RST Facility: 70001661
COLUMBIAN CHEMICALS CO
713 INDUSTRIAL RD
EL DORADO, AR 71730

Item Nbr	RST Facility-Tank ID	Fee Code and Item Description		Amount Billed
001	70001661-00000001	AST	RST Aboveground Tank	75.00
002	70001661-00000002	AST	RST Aboveground Tank	75.00
003	70001661-00000003	AST	RST Aboveground Tank	75.00
004	70001661-00000004	AST	RST Aboveground Tank	75.00
			Total Amount Due :	**$300.00**

NORTH BEND

PO		CD	CC
ACCOUNT	COST	PLANT	AMOUNT
35005	330	0030	$300.00

OK
Barry Rare
OK FOR PAYMENT

For information on how to pay ADEQ invoices on-line, go to www.adeq.state.ar.us/fiscal/.

PLEASE: DETACH AND RETURN THIS STUB WITH PAYMENT. MAKE CHECK OR MONEY ORDER PAYABLE TO ADEQ. Write the invoice number on your check. Mail to ADEQ at the above address, marked "ATTN: FISCAL DIVISION."

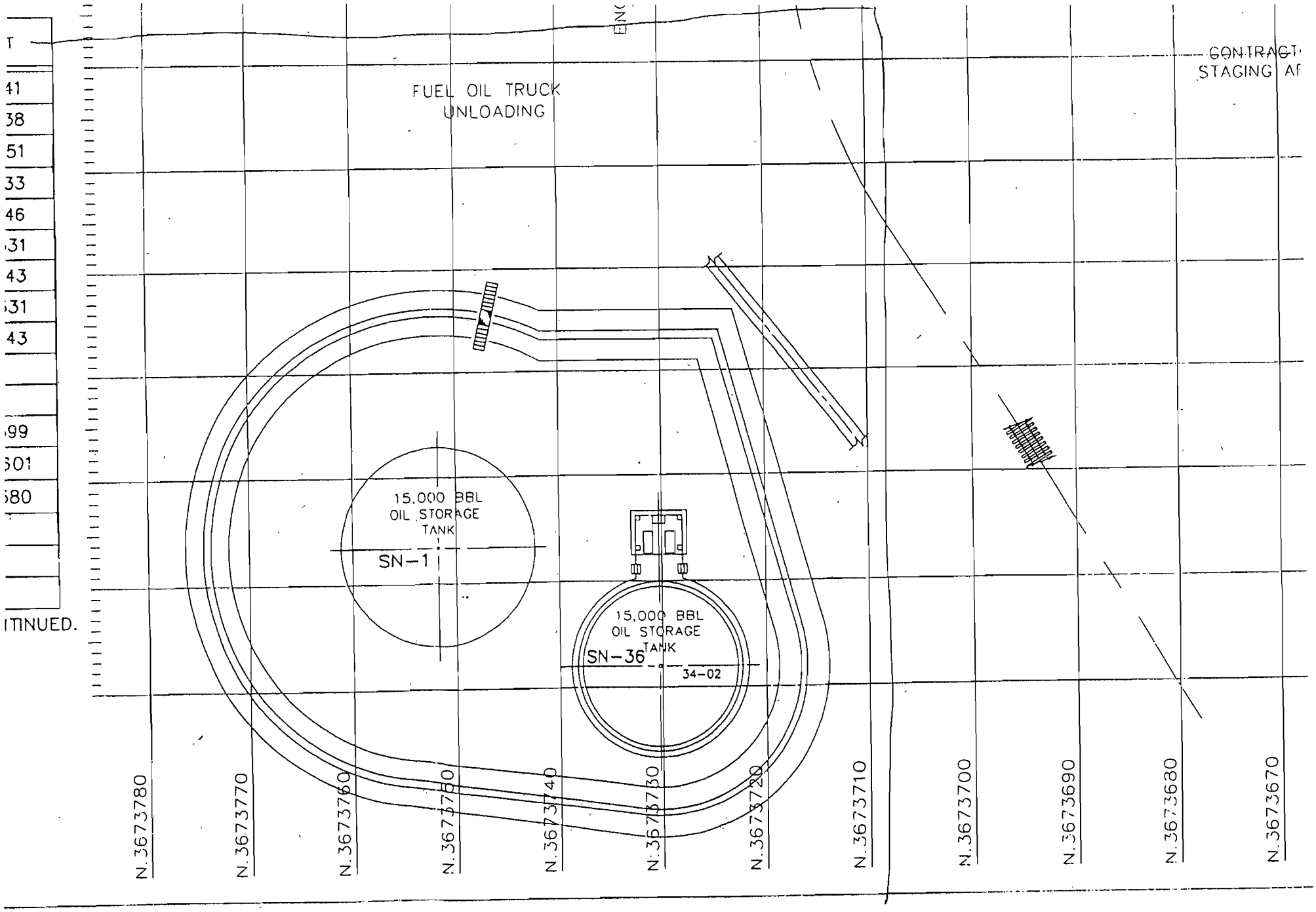
Invoice Number : TKS-084274

Enter Amount Paid: _____

AFIN : 70-00014
Owner ID : 006599
Date Billed : 05/08/2007
Date Due : 06/30/2007
Total Amount Due : $300.00

COLUMBIAN CHEMICALS COMPANY
713 INDUSTRIAL ROAD
EL DORADO, AR 71730

PRINTED ON RECYCLED PAPER WITH SOY-BASED INK.


FUEL OIL TRUCK
UNLOADING
CONTRACT
STAGING AF
15,000 BBL
OIL STORAGE
TANK
SN-1
15,000 BBL
OIL STORAGE
TANK
SN-36
34-02
N.3673780
N.3673770
N.3673760
N.3673750
N.3673740
N.3673730
N.3673720
N.3673710
N.3673700
N.3673690
N.3673680
N.3673670
41
38
51
33
46
31
43
31
43
99
01
80
ITINUED.

ATTACHMENT 3

Louis Dreyfus Olefins LLC
0334 Highway 75
Geismar, LA. 70734

(COL. 1) 4

3

tank truck order direct manifest bill of lading

(COLS. 17-23) No. 05462

(OTC 7) (KAN MVFM #45)

CONSIGNED TO: (COLS. 2-10)
TAYLOR
C. DICADO, ARK

LOADING TIME	MO.	DAY	YR.
(COLS. 11-16)	07	21	07

STARTED 02:50 PM
FINISHED 04:05 PM
SHIP ☐ P.P.D ☐ COL.

CUST. ORDER NO. LDNG 05462

SEAL NUMBERS
FROM
THRU

DESCRIPTION	GROSS GALLONS	NET GALLONS (COLS. 40-46)	TANK NO.	UPG VAPOR PRESSURE	GRAVITY	CAPACITY GALLONS	PERCENT LOADED	ADJUSTMENT TEMP.	ADJUSTMENT FACT.
☐ LIQUEFIED PETROLEUM GAS, 2.1, UN 1075 (NON CORROSIVE)									
☐ LPG MIX									
☐ PROPYLENE									
☐ PROPANE									
☐ _____ BUTANE									
☑ Flammable Liquids (Natural Gasoline), n.o.s., 3, UN 1993, PG I, RQ (Benzene)	7182	7415.00	A	13.92	.6658	7980	90%	80°	
☐ RQ, SODIUM HYDROXIDE SOLUTION, 8, UN 1824, PG II									
☐ _____									

176.55 BBLS

TRAILER | DATE | DATE
TRUCK NO. 508 | TRAILER NO. 90738 | CARRIER TAYLOR

TANK PRESSURE BEFORE LOADING ∅

SOURCE OF SHIPMENT PLANT OR LOCATION GEISMAR

This shipment shall be governed by (a) the contract between shipper and carrier, if carrier is a contract carrier; or (b) the terms of applicable bill of lading from described in National Motor Freight Classification in effect at time of shipment, supplements thereto or reissues thereof, if carrier is a common carrier; provided that, if this is an intrastate shipment by common carrier in a state where bills of lading have been legally prescribed, this shipment shall be governed by the terms of applicable bill of lading.

SPECIAL INSTRUCTIONS
NO LEAKS

ETHYL MERCAPTAN
INITIAL | C.C.S.

CC NO.

LOADER | RECEIVING DRIVER X

The carrier certifies that the cargo tank supplied for this shipment is a proper container for the transportation of this commodity as described by the shipper. "This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportation."

Louis Dreyfus Olefins LLC
SHIPPER | PER

GROSS WT. 71420
TARE WT. 30260
NET WT. 41160

Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the cosignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. Louis Dreyfus Olefins LLC.

Per _____

RECEIVED SUBJECT TO TARIFF'S AND/OR CONTRACT IN EFFECT ON THE DATE OF ISSUANCE HEREOF.

CARRIER | PER X

RECEIVED AT DESTINATION
GEISMAR PLANT

IN CASE OF EMERGENCY, CALL Chemtrec (800) 424-9300

PERMANENT POST OFFICE ADDRESS OF SHIPPER:

1 LOUIS DREYFUS | 2 WILLIAMS | 3 MOTOR CARRIER

TAYLOR PROPANE GAS, INC.

P.O. BOX 438
Winnsboro, TX 75494
903-342-1300

196752

DOT# 236068
ICC # MC 241655

EMERGENCY CONTACT CHEMTREC
1-800-424-9300

Pickup Date	Origin (Company Name)	Plant Location/Town	Picked Up For The Account Of
7-21-07	Louis Dreyfus	Gilsmar LA	TAYLOR
Delivery Date	**Destination (Company Name)**	**Plant Location/Town**	**Delivered To/The Account Of**
	Columbia Chem	El Dorado (ARK)	TAYLOR
Truck #	**Trailer #**	**Freight Charges To:**	**Special Instructions**
508	90788		

Water Capacity	Percent Loaded	Gross Gallons	Temperature F	Vapor Pressure	Specific Gravity	Vol. Correction Factor	Net Gallons at 60° F
7980	92.9			13.92	.6658		Received 7482.7415

Commodity: Gasoline No. 3, UN1993 RQ Benzene PG I

Pickup Ticket Number: 68700 RQ Benzene PG I

Liquefied Petroleum Gas/NONCOR	2.1	UN 1075
Natural Gasoline	3.	UN 1203, PG. II
Petroleum Crude Oil	3.	UN 1267, Pg. II
Petroleum Distillates, n.o.s.	3.	UN 1206

THIS IS TO CERTIFY THAT THE ABOVE ARTICLES ARE PROPERLY DESCRIBED BY NAME AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE REGULATIONS PRESCRIBED BY THE INTERSTATE COMMERCE COMMISSION.

RECEIVED THE ABOVE DESCRIBED PROPERTY IN GOOD CONDITION EXCEPT AS NOTED.

Per [signature] Shipper Receiver [signature] Date

RECEIVED SUBJECT TO THE TARIFFS IN EFFECT ON THE DATE OF ISSUANCE HEREOF

TAYLOR PROPANE GAS, INC.

Name Driver #1: Michael Franklin
Name Driver #2:

	Pickup	Delivery
Gross lbs.	71420	
Tare lbs.	30260	
Net lbs.	41160	

Loading Information	Started Loading	Completed Loading	Hours To Load	Reason For Delay
7-21-07	1:00 pm	1:45 pm	.75 HRS	WAITING TO LOAD

Loading Information	Started Unloading	Completed Unloading	Hours To Unload	Reason For Delay
7-22-07	1:45 pm	2:30 pm	.75 HRS	

SPECIAL FUEL PURCHASES — **TOTAL HOURS P/R**

DATE	INVOICE NO.	NAME OF STATION	LOCATION	HUB READING	GALLONS	AMOUNT

CHARGES

ITEM	RATE	AMT.
FREIGHT		
DEMURRAGE		

MILEAGE REPORT

LOCATION	STATE CODE	ODOMETER READING	LOADED	EMPTY		STATE MILES
St James	LA	63969			LA	267
Gilsmar	LA	63969		27	TX	
El Dorado	ARK	63969	298		AR	44
					MS	
					AL	
					TN	
					TOTAL	
TOTAL	325					

REMARKS

BANKERS PRODUCTS 800-736-3536

THIS MEMORANDUM is an acknowledgement that a bill of lading has been issued and is not the Original Bill of Lading, not a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

GOTTSON OIL, INC.
2035 EVANGELINE HWY.
JENNINGS, LA 70546

(3)

Shipper's No. 05454

(Carrier) SCAC. Carrier's No. 018764

RECEIVED, subject to individually determined rates or contracts that have been agreed upon in writing between the carrier and shipper, if applicable, otherwise to the rates, classifications and rules that have been established by the carrier and are available to the shipper, on request; and all applicable state and federal regulations;

at GEISMER, LA, date 7-21-07 from LOUIS DREYFUS

the Property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to delivery at said destination, if on its route, or otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said Property over all or any portion of said route to destination and as to each party at any time interested in all or any of said Property that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions on the back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

TO: (Mail or street address of consignee for purposes of notification only.)

Consignee TAYLOR PROPANE

Street

Destination EL DORADO, AR. Zip

Route:

FROM:

Shipper LOUIS DREYFUS

Street

Origin GEISMER, LA. Zip

Delivering Carrier GOTTSON # 123

Trailer Initial/Number #227

U.S. DOT Hazmat Reg. Number

No. of packages	HM	Description of articles, special marks, and exceptions	Hazard Class	I.D. Number	Packing Group	*Weight (subject to correction)	Class or rate	Labels required (or exemption)	Check column
1 TK	X	FLAMMABLE LIQUIDS (NATURAL GASOLINE) N.O.S., 3, UN1993, PG I R.Q. BENZENE	3	UN1993	I	19629	BBLS	UN1993	

Remit C.O.D. to:
Address:
City: State: Zip:

COD AMT: $

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of consignor)

C. O. D. FEE: Prepaid ☐ Collect ☐ $

Note. – where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____

Charges Advanced $

FREIGHT CHARGES ☐ Prepaid ☐ Collect

NOTE: Liability Limitation for loss or damage in this shipment may be applicable. See 49 U.S.C. 14706(c)(1)(A) and (B).
This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.
Per _____

PLACARDS REQUIRED UN1993

PLACARDS SUPPLIED ☐ YES ☒ NO - FURNISHED BY CARRIER

DRIVER'S SIGNATURE:

SPECIAL INSTRUCTIONS:

SHIPPER: LOUIS DREYFUS
PER: [signature] DATE: 7-21-07

CARRIER: GOTTSON OIL, INC. - 2035 EVANGELINE HWY.
PER: JENNINGS, LA 70546 DATE: 7-21-07

EMERGENCY RESPONSE TELEPHONE NUMBER: (800) 424-5571
Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (§172.604)

Permanent post office address of shipper

29-BLS-C4 970 (Rev. 11/04)

Louis Dreyfus Olefins LLC

10334 Highway 75
Geismar, LA. 70734

(COL. 1) 4

tank truck order direct manifest bill of lading

(COLS. 17-23) No. 05454

(OTC 7) (KAN MVFM #45)

CONSIGNED TO: (COLS. 2-10)

GOTTSON

LOADING TIME	MO.	DAY	YR.
(COLS. 11-16)	7	21	07
STARTED 0590			
FINISHED 0705			
SHIP ☐ P.P.D ☐ COL.			

CUST. ORDER NO. EXNG-05454

SEAL NUMBERS

FROM

THRU

DESCRIPTION	GROSS GALLONS	NET GALLONS (COLS. 40-46)	TANK NO.	UPG VAPOR PRESSURE	GRAVITY	CAPACITY GALLONS	PERCENT LOADED	ADJUSTMENT TEMP.	ADJUSTMENT FACT.
☐ LIQUEFIED PETROLEUM GAS, 2.1, UN 1075 (NON CORROSIVE)									
☐ LPG MIX									
☐ PROPYLENE									
☐ PROPANE									
☐ _____ BUTANE									
☒ Flammable Liquids (Natural Gasoline), n.o.s., 3, UN 1993, PG I, RQ (Benzene)		8244.26	B	14.33	6643	9500			
☐ RQ, SODIUM HYDROXIDE SOLUTION, 8, UN 1824, PG II									
☐ _____									

TRAILER | DATE | DATE

TRUCK NO 123 | TRAILER NO 227 | CARRIER GOTTSON

TANK PRESSURE BEFORE LOADING 0/0

SOURCE OF SHIPMENT PLANT OR LOCATION GEISMAR

This shipment shall be governed by (a) the contract between shipper and carrier, if carrier is a contract carrier; or (b) the terms of applicable bill of lading from described in National Motor Freight Classification in effect at time of shipment, supplements thereto or reissues thereof, if carrier is a common carrier; provided that, if this is an intrastate shipment by common carrier in a state where bills of lading have been legally prescribed, this shipment shall be governed by the terms of applicable bill of lading.

SPECIAL INSTRUCTIONS

NO LEAKS

ETHYL MERCAPTAN

INITIAL

CC NO.

LOADER

RECEIVING DRIVER

GROSS WT. 75060

The carrier certifies that the cargo tank supplied for this shipment is a proper container for the transportation of this commodity as described by the shipper. "This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportation."

Louis Dreyfus Olefins LLC
SHIPPER

PER

TARE WT. 29400

RECEIVED SUBJECT TO TARIFF'S AND/OR CONTRACT IN EFFECT ON THE DATE OF ISSUANCE HEREOF.

CARRIER GOTTSON

PER

NET WT. 45660

RECEIVED AT DESTINATION
GEISMAR PLANT

Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the cosignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. Louis Dreyfus Olefins LLC.

Per _____

IN CASE OF EMERGENCY, CALL Chemtrec (800) 424-9300

PERMANENT POST OFFICE ADDRESS OF SHIPPER

1 LOUIS DREYFUS 2 WILLIAMS 3 MOTOR CARRIER
4 CONSIGNEE 5 OTHER

(3)

TAYLOR PROPANE GAS, INC.
P.O. BOX 438
Winnsboro, TX 75494
903-342-1300

DOT # 236068
ICC # MC 241655

EMERGENCY CONTACT 1-800-424-9300

☐ PETROLEUM CRUDE OIL, 3, UN 1267, PG II
☒ HYDROCARBON LIQUID N.O.S., 3, UN 3295, PG II

[redacted]

BILL OF LADING OR TRUCK LOAD TICKET

OPERATOR ON FIELD LOCATION: Louisiana Oil Inc LLC	LEASE NO.
LEASE OR COMPANY NAME: Grasmar Plant	STATION NO.
FOR ACCOUNT OF: Taylor	STATION NAME: Eldorado, AR.
LEASE LEGAL DESC.	COUNTY / STATE
NAME OF RECEIVER: Taylor	TYPE OF FACILITY
FED/INDIAN LEASE NO.	DRIVER NO. 109411 / TRACTOR NO. 82431 / TRAILER NO. 34
TANK NO.	TANK SIZE / PRODUCT: Natural Gasoline / GAUGER NO.

OBS GRAVITY	OBS TEMP.	S & W %	DATE	TICKET NO.
	°F	0100	7 22 07	68360

GAUGE	OIL TEMP	OIL LEVELS FEET	INCH	QRT	TANK TABLE BARRELS	TANK BOTTOMS	REMARKS OR CALCULATIONS
HIGH	°F					INCHES	
LOW	°F						

TOTAL BARRELS → 208.21

TRUE GRAVITY | NET BARRELS →

METER

TRANSACTION NO.	METER NO.	☐ GALLONS ☐ BARRELS	10THS

OFF / ON

AVG. METER PRESS	METER FACTOR	METERED BARRELS

TEMP COMPENSATED	AVG. LINE TEMP	COMPRESSIBILITY FACTOR	NET BARRELS
☐ YES ☐ NO	°F		

ON	GAUGER: Kyle Hearn	TIME M
	OPERATORS WITNESS OR WAIVER NO.	SEAL OFF
OFF	GAUGER: Kyle Hearn	TIME M 07/22/07
	OPERATORS WITNESS OR WAIVER NO.	SEAL ON

THIS TICKET COVERS ALL CLAIMS FOR ALLOWANCE THE OIL REPRESENTED BY THIS TICKET WAS RECEIVED AND RUN AS THE PROPERTY OF
TAYLOR PROPANE GAS CO., INC.

TICKET HASH

5. COPY

FORM NO. 240499

BANKERS PRODUCTS 1-800-736-3538

Louis Dreyfus Olefins LLC

10334 Highway 75
Geismar, LA. 70734

(COL. 1) 4

tank truck order direct manifest bill of lading

(COLS 17-23) No. 05472

(OTC 7) (KAN MVFM #45)

CONSIGNED TO: (COLS. 2-10)
TAYLOR

EL DORADO, ARK

LOADING TIME	MO.	DAY	YR.
(COLS 11-16)	07	22	07

STARTED 10:45AM
FINISHED 12:05
SHIP ☐ P.P.D ☐ COL.

CUST. ORDER NO. LD 05472

SEAL NUMBERS
FROM
THRU

DESCRIPTION	GROSS GALLONS	NET GALLONS (COLS. 40-46)	TANK NO.	UPG VAPOR PRESSURE	GRAVITY	CAPACITY GALLONS	PERCENT LOADED	ADJUSTMENT TEMP.	ADJUSTMENT FACT.
☐ LIQUEFIED PETROLEUM GAS, 2.1, UN 1075 (NON CORROSIVE)									
☐ LPG MIX									
☐ PROPYLENE									
☐ PROPANE									
☐ _____ BUTANE									
☑ Flammable Liquids (Natural Gasoline), n.o.s., 3, UN 1993, PG I, RQ (Benzene)	9000	8744.92	A	14.42	.633	10000	90%		
☐ RQ, SODIUM HYDROXIDE SOLUTION, 8, UN 1824, PG II									
☐ _____									

TANK PRESSURE BEFORE LOADING: Ø

SOURCE OF SHIPMENT PLANT OR LOCATION: GEISMAR

This shipment shall be governed by (a) the contract between shipper and carrier, if carrier is a contract carrier; or (b) the terms of applicable bill of lading from described in National Motor Freight Classification in effect at time of shipment, supplements thereto or reissues thereof, if carrier is a common carrier; provided that, if this is an intrastate shipment by common carrier in a state where bills of lading have been legally prescribed, this shipment shall be governed by the terms of applicable bill of lading.

TRAILER	DATE	DATE
TRUCK NO 624 31	TRAILER NO 34	CARRIER TAYLOR

SPECIAL INSTRUCTIONS

NO LEAKS

ETHYL MERCAPTAN
INITIAL
C.C.S.

CC NO.

LOADER
RECEIVING DRIVER X

GROSS WT. 777
TARE WT. 2144
NET WT. 4334

The carrier certifies that the cargo tank supplied for this shipment is a proper container for the transportation of this commodity as described by the shipper. "This is to certify that the above named materials are properly classified, described, packaged, marked and abeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportation."

Louis Dreyfus Olefins LLC
SHIPPER
PER

RECEIVED SUBJECT TO TARIFF'S AND/OR CONTRACT IN EFFECT ON THE DATE OF ISSUANCE HEREOF

CARRIER
PER X

RECEIVED AT DESTINATION
GEISMAR PLANT

Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the cosignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. Louis Dreyfus Olefins LLC.

Per _____

IN CASE OF EMERGENCY, CALL Chemtrec (800) 424-9300

PERMANENT POST OFFICE ADDRESS OF SHIPPER

1 LOUIS DREYFUS 2 WILLIAMS 3 MOTOR CARRIER

Louis Dreyfus Olefins LLC

10334 Highway 75
Geismar, LA. 70734

(COL. 1) 4

3

tank truck order direct manifest bill of lading

(COLS 17-23) No. 05465

(OTC 7) (KAN MVFM #45)

CONSIGNED TO: (COLS. 2-10)

Gottson

LOADING TIME	MO.	DAY	YR.
(COLS. 11-16)	7	22	07
STARTED 0535			
FINISHED 0635			
SHIP ☐ P.P.D ☐ COL.			

CUST. ORDER NO. EXXNG-05465

SEAL NUMBERS

FROM

THRU

DESCRIPTION	GROSS GALLONS	NET GALLONS (COLS 40-46)	TANK NO.	UPG VAPOR PRESSURE	GRAVITY	CAPACITY GALLONS	PERCENT LOADED	ADJUSTMENT TEMP.	ADJUSTMENT FACT.
☐ LIQUEFIED PETROLEUM GAS, 2.1, UN 1075 (NON CORROSIVE)									
☐ LPG MIX									
☐ PROPYLENE									
☐ PROPANE									
☐ _____ BUTANE									
☒ Flammable Liquids (Natural Gasoline), n.o.s., 3, UN 1993, PG I, RQ (Benzene)		8204 72	B	14.65	.6637	9500			
☐ RQ, SODIUM HYDROXIDE SOLUTION, 8, UN 1824, PG II									
☐ _____									

TRAILER | DATE | DATE

TRUCK NO 123 | TRAILER NO. 227 | CARRIER Gottson

TANK PRESSURE BEFORE LOADING 0/0

SOURCE OF SHIPMENT PLANT OR LOCATION GEISMAR

This shipment shall be governed by (a) the contract between shipper and carrier, if carrier is a contract carrier; or (b) the terms of applicable bill of lading from described in National Motor Freight Classification in effect at time of shipment, supplements thereto or reissues thereof, if carrier is a common carrier; provided that, if this is an intrastate shipment by common carrier in a state where bills of lading have been legally prescribed, this shipment shall be governed by the terms of applicable bill of lading.

SPECIAL INSTRUCTIONS

NO LEAKS

ETHYL MERCAPTAN INITIAL C.C.S.

CC NO.

LOADER

RECEIVING DRIVER

GROSS WT. 74980

TARE WT. 29500

NET WT. 45400

The carrier certifies that the cargo tank supplied for this shipment is a proper container for the transportation of this commodity as described by the shipper. "This is to certify that the above named materials are properly classified, described, packaged, marked and abeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportation."

Louis Dreyfus Olefins LLC
SHIPPER

PER

RECEIVED SUBJECT TO TARIFF'S AND/OR CONTRACT IN EFFECT ON THE DATE OF ISSUANCE HEREOF.

CARRIER Gottson

PER.

RECEIVED AT DESTINATION
GEISMAR PLANT

Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the cosignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. Louis Dreyfus Olefins LLC.

Per _____

IN CASE OF EMERGENCY, CALL Chemtrec (800) 424-9300

ERMANENT POST OFFICE ADDRESS OF SHIPPER.

1 LOUIS DREYFUS 2 WILLIAMS 3 MOTOR CARRIER
4 CONSIGNEE 5 OTHER

THIS MEMORANDUM is an acknowledgement that a bill of lading has been issued and is not the Original Bill of Lading, not a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

GOTTSON OIL, INC.
2035 EVANGELINE HWY.
(Carrier) JENNINGS, LA 70546 SCAC. _____ Carrier's No. 018766

Shipper's No. _____

RECEIVED, subject to individually determined rates or contracts that have been agreed upon in writing between the carrier and shipper, if applicable, otherwise to the rates, classifications and rules that have been established by the carrier and are available to the shipper, on request; and all applicable state and federal regulations;

at GEISMER, LA, date 7-22-07 from LOUIS DREYFUS

the Property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to delivery at said destination, if on its route, or otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said Property over all or any portion of said route to destination and as to each party at any time interested in all or any of said Property that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions on the back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

TO: (Mail or street address of consignee for purposes of notification only.)	FROM:
Consignee TAYLOR PROPANE	Shipper LOUIS DREYFUS
Street	Street
Destination EL DORADO, AR Zip	Origin GEISMER, LA Zip
Route:	

Delivering Carrier GOTTSON #123 | Trailer Initial/Number #227 | U.S. DOT Hazmat Reg. Number

No. of packages	HM	Description of articles, special marks, and exceptions	Hazard Class	I.D. Number	Packing Group	*Weight (subject to correction)	Class or rate	Labels required (or exemption)	Check column
1 T/T	X	FLAMMABLE LIQUIDS (NATURAL GASOLINE) N.O.S., 3, UN1993, PG I R.Q. (BENZENE)	3	UN1993	I	19535	BBLS	UN1993	

Remit C.O.D. to:
Address:
City: State: Zip:

COD AMT: $

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of consignor)

C. O. D. FEE: Prepaid ☐ Collect ☐ $

Note. – where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____

Charges Advanced $ _____

FREIGHT CHARGES ☐ Prepaid ☐ Collect

NOTE: Liability Limitation for loss or damage in this shipment may be applicable. See 49 U.S.C. 14706(c)(1)(A) and (B). This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Per _____

PLACARDS REQUIRED UN 1993

PLACARDS SUPPLIED ☐ YES ☐ NO - FURNISHED BY CARRIER

DRIVER'S SIGNATURE

SPECIAL INSTRUCTIONS:

SHIPPER: LOUIS DREYFUS
PER: _____ DATE: 7-22-07

CARRIER: GOTTSON OIL, INC. - 2035 EVANGELINE HWY.
PER: JENNINGS, LA 70546 DATE: 7-22-07

EMERGENCY RESPONSE TELEPHONE NUMBER: (800) 424-5571
Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (§172.604).

Permanent post office address of shipper

29-BLS-C4 970 (Rev. 11/04)

(2)

TAYLOR PROPANE GAS, INC.
P.O. BOX 438
Winnsboro, TX 75494
903-342-1300

DOT # 236068
ICC # MC 241655

EMERGENCY CONTACT 1-800-424-9300

☐ PETROLEUM CRUDE OIL, 3, UN 1267, PG III
☐ HYDROCARBON LIQUID N.O.S., 3, UN 3295, PG II

[redacted]

BILL OF LADING OR TRUCK LOAD TICKET

OPERATOR ON FIELD LOCATION: Geisner Gas Plant	LEASE NO.
LEASE OR COMPANY NAME: Louis Dreyfus	STATION NO.
FOR ACCOUNT OF: Taylor	STATION NAME: El Dorado Ark
LEASE LEGAL DESC.	COUNTY / STATE
NAME OF RECEIVER: Taylor	TYPE OF FACILITY
FED/INDIAN LEASE NO.	DRIVER NO. / TRACTOR NO. 89560 / TRAILER NO. 90762
TANK NO.	TANK SIZE / PRODUCT / GAUGER NO.
OBS GRAVITY .4607	OBS TEMP °F
S & W % 0.0004	DATE 7 23 07
TICKET NO. T2378	

GAUGE	OIL TEMP	OIL LEVELS FEET	INCH	QRT	TANK TABLE BARRELS	TANK BOTTOMS	REMARKS OR CALCULATIONS
HIGH	°F					INCHES	
LOW	°F						

TOTAL BARRELS → 185.5

TRUE GRAVITY | NET BARRELS →

TRANSACTION NO.	METER NO.	☐ GALLONS ☐ BARRELS ☐ 10THS

OFF / ON

AVG. METER PRESS	METER FACTOR	METERED BARRELS
TEMP COMPENSATED ☐ YES ☐ NO	AVG. LINE TEMP °F	COMPRESSIBILITY FACTOR

ON	GAUGER	TIME M
	OPERATORS WITNESS OR WAIVER NO.	SEAL OFF
OFF	GAUGER	TIME M 7/23/07
	OPERATORS WITNESS OR WAIVER NO.	SEAL ON

THIS TICKET COVERS ALL CLAIMS FOR ALLOWANCE THE OIL REPRESENTED BY THIS TICKET WAS RECEIVED AND RUN AS THE PROPERTY OF
TAYLOR PROPANE GAS CO., INC.

TICKET HASH

5. COPY

FORM NO. 240499 BANKERS PRODUCTS 1-800-736-3336

Louis Dreyfus Olefins LLC

10334 Highway 75
Geismar, LA. 70734

(COL. 1) 4

tank truck order direct manifest
bill of lading

(COLS. 17-23) No. 05481

(OTC 7) (KAN MVFM #45)

CONSIGNED TO: (COLS. 2-10)

TAYLOR

LOADING TIME	MO.	DAY	YR.
(COLS 11-16)	7	23	07
STARTED 0800			
FINISHED 09			
SHIP ☐ P.P.D ☐ COL.			

CUST. ORDER NO. EXXNG 05481

SEAL NUMBERS
FROM
THRU

DESCRIPTION	GROSS GALLONS	NET GALLONS (COLS. 40-46)	TANK NO.	UPG VAPOR PRESSURE	GRAVITY	CAPACITY GALLONS	PERCENT LOADED	ADJUSTMENT TEMP.	ADJUSTMENT FACT.
☐ LIQUEFIED PETROLEUM GAS, 2.1, UN 1075 (NON CORROSIVE)									
☐ LPG MIX									
☐ PROPYLENE									
☐ PROPANE									
☐ _____ BUTANE									
☒ Flammable Liquids (Natural Gasoline), n.o.s., 3, UN 1993, PG I, RQ (Benzene)		7995.38	A	14.56	6607		90%		
☐ RQ, SODIUM HYDROXIDE SOLUTION, 8, UN 1824, PG II									
☐ _____									

185.60 BBls

TRAILER	DATE	DATE
TRUCK NO 84560	TRAILER NO. 9762	CARRIER TAYLOR

TANK PRESSURE BEFORE LOADING %

SOURCE OF SHIPMENT PLANT OR LOCATION GEISMAR

This shipment shall be governed by (a) the contract between shipper and carrier, if carrier is a contract carrier; or (b) the terms of applicable bill of lading from described in National Motor Freight Classification in effect at time of shipment, supplements thereto or reissues thereof, if carrier is a common carrier; provided that, if this is an intrastate shipment by common carrier in a state where bills of lading have been legally prescribed, this shipment shall be governed by the terms of applicable bill of lading.

SPECIAL INSTRUCTIONS

NO LEAKS

ETHYL MERCAPTAN
INITIAL C.C.S.

CC NO.

LOADER

RECEIVING DRIVER

GROSS WT. 23060

TARE WT. 3020

NET WT. 20040

The carrier certifies that the cargo tank supplied for this shipment is a proper container for the transportation of this commodity as described by the shipper. "This is to certify that the above named materials are properly classified, described, packaged, marked and abeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportation."

Louis Dreyfus Olefins LLC
SHIPPER

PER

RECEIVED SUBJECT TO TARIFF'S AND/OR CONTRACT IN EFFECT ON THE DATE OF ISSUANCE HEREOF

CARRIER TAYLOR

PER

RECEIVED AT DESTINATION
GEISMAR PLANT

Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the cosignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. Louis Dreyfus Olefins LLC.

Per _____

IN CASE OF EMERGENCY, CALL Chemtrec (800) 424-9300

PERMANENT POST OFFICE ADDRESS OF SHIPPER

1 LOUIS DREYFUS 2 WILLIAMS 3 MOTOR CARRIER

Louis Dreyfus Olefins LLC
0334 Highway 75
eismar, LA. 70734

(COL. 1) 4

3

tank truck order direct manifest
bill of lading

(COLS 17-23) No. 05486

(OTC 7) (KAN MVFM #45)

CONSIGNED TO: (COLS. 2-10)
Gotham

LOADING TIME	MO.	DAY	YR.
(COLS. 11-16)	7	23	07
STARTED	1140		
FINISHED	1247		
SHIP ☐ P.P.D ☐ COL.			

CUST. ORDER NO. LDG150 [illegible]

SEAL NUMBERS
FROM
THRU

DESCRIPTION	GROSS GALLONS	NET GALLONS (COLS. 40-46)	TANK NO.	UPG VAPOR PRESSURE	GRAVITY	CAPACITY GALLONS	PERCENT LOADED	ADJUSTMENT TEMP.	ADJUSTMENT FACT.
☐ LIQUEFIED PETROLEUM GAS, 2.1, UN 1075 (NON CORROSIVE)									
☐ LPG MIX									
☐ PROPYLENE									
☐ PROPANE									
☐ _____ BUTANE									
☐ Flammable Liquids (Natural Gasoline), n.o.s., 3, UN 1993, PG I, RQ (Benzene)									
☐ RQ, SODIUM HYDROXIDE SOLUTION, 8, UN 1824, PG II									
☐ _____	8350	8396.32	A	14.56	.6657	9800	90%		

TRAILER	DATE	DATE
TRUCK NO. 710	TRAILER NO. 227	CARRIER Gotham

TANK PRESSURE BEFORE LOADING 0/0

SOURCE OF SHIPMENT PLANT OR LOCATION GEISMAR

This shipment shall be governed by (a) the contract between shipper and carrier, if carrier is a contract carrier; or (b) the terms of applicable bill of lading from described in National Motor Freight Classification in effect at time of shipment, supplements thereto or reissues thereof, if carrier is a common carrier; provided that, if this is an intrastate shipment by common carrier in a state where bills of lading have been legally prescribed, this shipment shall be governed by the terms of applicable bill of lading.

SPECIAL INSTRUCTIONS
NO LEAKS

ETHYL MERCAPTAN
INITIAL
C.C.S.

CC NO.

LOADER: [illegible]
RECEIVING DRIVER: X [illegible]

The carrier certifies that the cargo tank supplied for this shipment is a proper container for the transportation of this commodity as described by the shipper. "This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportation."

Louis Dreyfus Olefins LLC
SHIPPER
PER [illegible]

GROSS WT. 75560
TARE WT. 29420
NET WT. 46140

Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the cosignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges. Louis Dreyfus Olefins LLC.

Per _____

RECEIVED SUBJECT TO TARIFF'S AND/OR CONTRACT IN EFFECT ON THE DATE OF ISSUANCE HEREOF.
CARRIER Gotham
PER X [illegible]

RECEIVED AT DESTINATION
GEISMAR PLANT

IN CASE OF EMERGENCY, CALL Chemtrec (800) 424-9300

PERMANENT POST OFFICE ADDRESS OF SHIPPER

1 LOUIS DREYFUS 2 WILLIAMS 3 MOTOR CARRIER

THIS MEMORANDUM is an acknowledgement that a bill of lading has been issued and is not the Original Bill of Lading, not a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

GOTTSON OIL, INC.
2035 EVANGELINE HWY.
JENNINGS, LA 70546

Shipper's No. 025486

(Carrier) JENNINGS, LA 70546 SCAC. _____ Carrier's No. 018957

RECEIVED, subject to individually determined rates or contracts that have been agreed upon in writing between the carrier and shipper, if applicable, otherwise to the rates, classifications and rules that have been established by the carrier and are available to the shipper, on request; and all applicable state and federal regulations;

at Gonzales, date 7-23-07 from Louis Dreyfus

the Property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below which said company (the word company being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to delivery at said destination, if on its route, or otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said Property over all or any portion of said route to destination and as to each party at any time interested in all or any of said Property that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions on the back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

TO: (Mail or street address of consignee for purposes of notification only.)	FROM:
Consignee Taylor Propane	Shipper Louis Dreyfus Grains LLC
Street Columbia Chemicals Industrial Dr.	Street 10234 Hwy 75
Destination Eldorado, Ar. Zip	Origin Gonzales, La Zip 70734
Route:	

Delivering Carrier	Trailer Initial/Number	U.S. DOT Hazmat Reg. Number
Gottson	227	

No. of packages	HM	Description of articles, special marks, and exceptions	Hazard Class	I.D. Number	Packing Group	*Weight (subject to correction)	Class or rate	Labels required (or exemption)	Check column
1/TT	✓	Flammable Liquids (Natural Gasoline) N.O.S. RQ (Gasoline)	3	UN 1993	I	204.0	865		
		(No Backhaul)							

Remit C.O.D. to:
Address:
City: State: Zip:

COD AMT: $

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of consignor)

C. O. D. FEE: Prepaid ☐ Collect ☐ $

Note. – where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.
The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____

Charges Advanced $

FREIGHT CHARGES ☑ Prepaid ☐ Collect

NOTE: Liability Limitation for loss or damage in this shipment may be applicable. See 49 U.S.C. 14706(c)(1)(A) and (B). This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.
Per _____

PLACARDS REQUIRED UN1993

PLACARDS SUPPLIED ☐ YES ☑ NO - FURNISHED BY CARRIER

DRIVER'S SIGNATURE: [signature]

SPECIAL INSTRUCTIONS:

SHIPPER: Louis Dreyfus Grains LLC
PER: [signature] DATE: 7-23-07

CARRIER: GOTTSON OIL, INC. - 2035 EVANGELINE HWY.
PER: JENNINGS, LA 70546 DATE: 7-23-07

EMERGENCY RESPONSE TELEPHONE NUMBER: (800) 424-5571
Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (§172.604).

Permanent post office address of shipper

29-BLS-C4 970 (Rev. 11/04)

ATTACHMENT 4

Coastal Gulf & International, Inc.
Marine Cargo Surveyors

Version 2.5, 12/17/03

VESSEL: S I T 3 DATE: 6/4/07
PRODUCT: C.B.F.S TERMINAL: Columbia Chemical
SAMPLING & GAUGING PORT: El Dorado, AR

REPORT OF SAMPLING AND GAUGING

Coastal Gulf & International, Inc. Surveyor Scott Falen was in attendance at CC El Dorado on June 4 in order to sample S I T 3. At 1140 hours, our Surveyor obtained a 2 Quart Running Average sample from the AM levels of the shore tank. The samples were delivered to CGI Lab. Samples are being retained for a period of sixty (60) days unless otherwise advised.

The Shore Tank / Vessel was gauged and temperatured at the time of sampling with the results as follows:

INNAGE	TEMP	API	GROSS BARRELS	VCF	NET BARRELS
11-4 1/8	69 °F		1,400.32		

9-0 inches of water

Note: There was 92.70 Barrels of free water on top of the *product as determined by Ullage measurement.*

Innage / Ullage Sample Points were:

Upper: _____ Middle: _____
Lower: _____ Suction: _____

Gauging and Sampling were witnessed by _____ *personnel* _____.

Please note on back if there were any adverse conditions while sampling.

CGI Surveyor

Coastal Gulf & International, Inc.
Marine Cargo Surveyors

Version 2.5, 12/17/03

VESSEL:	S I T 2	*DATE:*	6/9/07
PRODUCT:	C.B.F.S	*TERMINAL:*	Columbian Chemical
	SAMPLING & GAUGING	*PORT:*	El Dorado, AR

REPORT OF SAMPLING AND GAUGING

Coastal Gulf & International, Inc. Surveyor Scott Falcon was in attendance at CC El Dorado on June 4 in order to sample S I T 2. At 1040 hours, our Surveyor obtained a 2 Quart Running Average sample from the All levels of the shore tank. The samples were delivered to CCI Lab. Samples are being retained for a period of sixty (60) days unless otherwise advised.

The Shore Tank / Vessel was gauged and temperatured at the time of sampling with the results as follows:

INNAGE	TEMP	API	GROSS BARRELS	VCF	NET BARRELS
11-0 1/8	68 °F		1,359.12		

Note: There was 5.14 Barrels of free water on top of the product as determined by Ullage measurement. 0-0 1/2 incl water

Innage / Ullage Sample Points were:

Upper: _____ Middle: _____

Lower: _____ Suction: _____

Gauging and Sampling were witnessed by _____ *personnel* _____.

Please note on back if there were any adverse conditions while sampling.

CGI Surveyor

Coastal Gulf & International, Inc.
Marine Cargo Surveyors

Version 2.5, 12/17/03

VESSEL: S I T 4 DATE: 6/4/07
PRODUCT: C.B.F.S. TERMINAL: Columbian Chemical
SAMPLING & GAUGING PORT: El Dorado, AR

REPORT OF SAMPLING AND GAUGING

Coastal Gulf & International, Inc. Surveyor Scott Falcon was in attendance at CC El Dorado on June 4 in order to sample S I T 4. At 0710 hours, our Surveyor obtained a 2 Running Average samples from the All levels of the shore tank. The samples were delivered to CGI. Samples are being retained for a period of sixty (60) days unless otherwise advised.

The Shore Tank / Vessel was gauged and temperatured at the time of sampling with the results as follows:

INNAGE	TEMP	API	GROSS BARRELS	VCF	NET BARRELS
3-1 3/8	60 °F		1,564.19		

Note: There was Ø Barrels of free water on top of the product as determined by Ullage measurement.

Innage / Ullage Sample Points were:

Upper: _____ Middle: _____
Lower: _____ Suction: _____

Gauging and Sampling were witnessed by _____ *personnel* _____.

Please note on back if there were any adverse conditions while sampling.

CGI Surveyor

Coastal Gulf & International, Inc.
Marine Cargo Surveyors

Version 2.5, 12/17/03

VESSEL: S I T 7 DATE: 6/4/07
PRODUCT: C.B.F.S TERMINAL: Columbia Chemical
SAMPLING & GAUGING PORT: El Dorado, AR

REPORT OF SAMPLING AND GAUGING

Coastal Gulf & International, Inc. Surveyor Scott Falco was in attendance at CC El Dorado on June 4 in order to sample S I T 7. At 0840 hours, our Surveyor obtained a 2 Quart Running Average sample from the All levels of the shore tank. The samples were delivered to CGI Lab. Samples are being retained for a period of sixty (60) days unless otherwise advised.

The Shore Tank / Vessel was gauged and temperatured at the time of sampling with the results as follows:

INNAGE	TEMP	API	GROSS BARRELS	VCF	NET BARRELS
1-1/4	60°F		388.14		

Note: There was Ø Barrels of free water on top of the product as determined by Ullage measurement.

Innage / Ullage Sample Points were:

Upper: Middle:
Lower: Suction:

Gauging and Sampling were witnessed by _____ *personnel* _____.

Please note on back if there were any adverse conditions while sampling.

CGI Surveyor

Coastal Gulf & International, Inc.
Marine Cargo Surveyors

Version 2.5, 12/17/03

VESSEL: S I T 1 DATE: 6/4/07
PRODUCT: C.B.F.S TERMINAL: Columbia Chemical
SAMPLING & GAUGING PORT: El Dorado, AR

REPORT OF SAMPLING AND GAUGING

Coastal Gulf & International, Inc. Surveyor Scott Falcon was in attendance at CC El Dorado on June 4 in order to sample S I T 1. At 0940 hours, our Surveyor obtained a 2 Quart Running Average sample from the All levels of the shore tank. The samples were delivered to CCI Lab. Samples are being retained for a period of sixty (60) days unless otherwise advised.

The Shore Tank / Vessel was gauged and temperatured at the time of sampling with the results as follows:

INNAGE	TEMP	API	GROSS BARRELS	VCF	NET BARRELS
10-8 1/4	70 °F		1,319.20		

Note: There was Ø Barrels of free water on top of the product as determined by Ullage measurement.

Innage / Ullage Sample Points were:

Upper: _____ Middle: _____
Lower: _____ Suction: _____

Gauging and Sampling were witnessed by _____ *personnel* _____.

Please note on back if there were any adverse conditions while sampling.

CGI Surveyor

7

No. 1, 2, & 3 OIL STORAGE TANKS

FEET	GALLONS
2	10308.0
3	15499.2
4	20690.4
5	25881.6
6	31072.8
7	36264.0
8	41455.2
9	46646.4
10	51837.6
11	57028.8
12	62220.0
13	67411.2
14	72602.4
15	77793.6
16	82984.8
17	88176.0
18	93367.2
19	98558.4
20	103749.6
21	108940.8
22	114132.0
23	119323.2
24	124514.4

INCHES	GALLONS
1/8	54.1
1/4	108.2
1/2	216.3
3/4	324.5
1	432.6
2	865.2
3	1297.8
4	1730.4
5	2163.0
6	2595.6
7	3028.2
8	3460.8
9	3893.4
10	4326.0
11	4758.6
12	5191.2

NOTE: Total Height is 24ft. 2 in.
Total Volume = 125,379.6 Gal.

BB 4

No. 4 OIL STORAGE TANK

FEET	GALLONS
2	42186
3	63279
4	84372
5	105465
6	126558
7	147651
8	168744
9	189837
10	210930
11	232023
12	253116
13	274209
14	295302
15	316395
16	337488
17	358581
18	379674
19	400767
20	421860
21	442953
22	464046
23	485139
24	506232
25	527325
26	548418
27	569511
28	590604
29	611697

INCHES	GALLONS
1/8	219.72
1/4	439.44
1/2	878.88
3/4	1318.31
1	1757.75
2	3515.50
3	5273.25
4	7031.00
5	8788.75
6	10546.50
7	12304.25
8	14062.00
9	15819.75
10	17577.50
11	19335.25
12	21093.00

NOTE: Total Height is 29 ft. 4 in.
Total Volume = 618,728 Gal.

294
26'3½
3' ½ inn

No. 7 OIL STORAGE TANK

50 ft. Dia. X 43 ft. High.; 1963.5 Cu. ft. per Foot of Cylinder, 14,688 Gal. per Foot of Cylinder.; 349.71 Barrels (42-Gal.) per Foot

FEET	GALLONS	INCHES	GALLONS
2	29376	1/8	153.00
3	44064	1/4	306.00
4	58752	1/2	612.00
5	73440	3/4	918.00
6	88128	1	1224.00
7	102816	2	2448.00
8	117504	3	3672.00
9	132192	4	4896.00
10	146880	5	6120.00
11	161568	6	7344.00
12	176256	7	8568.00
13	190944	8	9792.00
14	205632	9	11016.00
15	220320	10	12240.00
16	235008	11	13464.00
17	249696	12	14688.00
18	264384		
19	279072		
20	293760		
21	308448		
22	323136		
23	337824		
24	352512		
25	367200		
26	381888		
27	396576		
28	411264		
29	425952		
30	440640		
31	455328		
32	470016		
33	484704		
34	499392		
35	514080		
36	528768		
37	543456		
38	558144		
39	572832		
40	587520		
41	602208		
42	616896		
43	631584		

NOTE: Total Height is [redacted] 43 FT.
Total Volume = 618,728 Gal.

TYPO ?
43' = 631,584 ? RW

ATTACHMENT 5

LONGVIEW INSPECTION

Advanced Technology Group, Inc.
405 N. Eastman Rd.
Longview, TX 75607
1-800-256-5442

5

NO. 7
FEEDSTOCK
OIL TANK

Company: Columbian Chemical	Date: 10/27/98
Location: El Dorado, AR	Technician: J. Webb
Vessel Name: Carbon Black Storage	Remarks: 0° Ref. on Roof as Center Line
Vessel TNK #4 60' DIA	of Stairs Progression Clockwise. TML

Roof — was Shell wall to Center.

	0°	45°	90°	135°	180°	225°	270°	315°
2"	292	290	300	299	284	287	288	275
2'	287	284	291	300	284	290	277	280
4'	291	281	271	280	290	295	272	280
6'	280	292	280	277	282	305	274	280
8'	279	289	280	283	300	270	279	280
10'	280	290	280	282	280	275	285	275
12'	277	289	287	282	286	281	281	275
14'	284	291	283	280	280	275	292	280
16'	282	289	277	280	280	267	268	280
18'	276	282	282	285	280	273	269	275
20'	267	278	278	279	271	272	275	280
22'	266	282	300	276	275	265	280	265
24'	278	275	292	280	268	270	285	265
26'	269	282	282	286	285	187	267	265
28'	280	280	287	287	288	288	275	297
29'	292	300	310	300	285	281	280	285

* @ 26' of 225° a 1" diameter pit was located

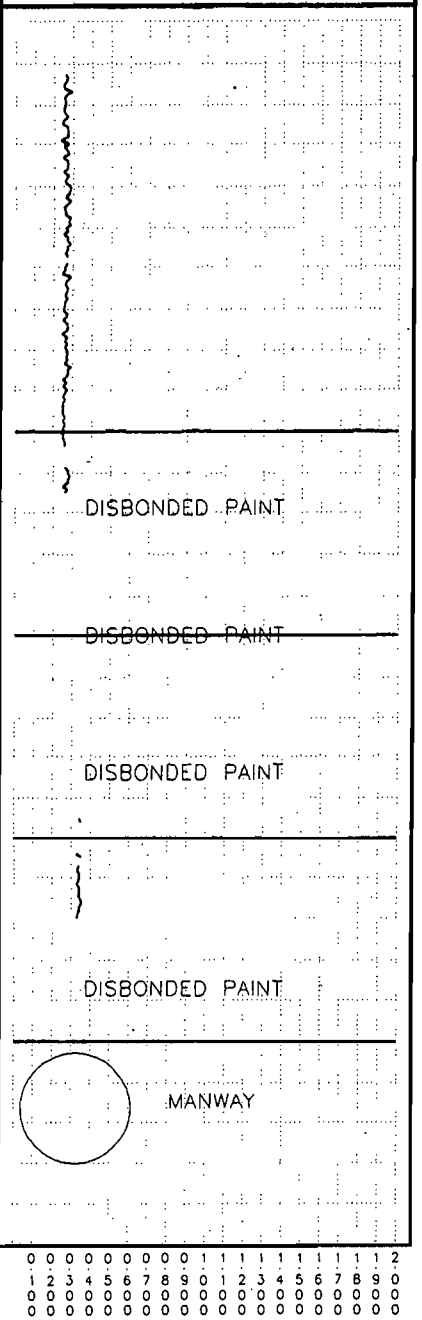
COMMENTS: HC=HEAVY CORROSION, N=NOZZLE, M/W=MANWAY, SI=STRUCTURAL INTERFERENCE, RF=TOO ROUGH
N/A=NOT ACCESSIBLE, S/I=SCAFFOLD INTERFERENCE, *=REPAD, TD=TOO DIRTY

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

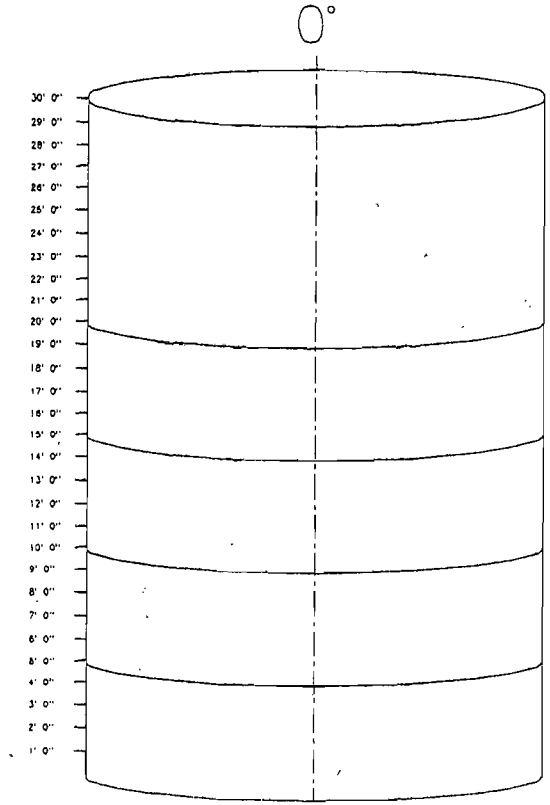
CARBON BLACK STORAGE

ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.250
28' 0"	0.235
27' 0"	0.245
26' 0"	0.250
25' 0"	0.250
24' 0"	0.245
23' 0"	0.245
22' 0"	0.250
21' 0"	0.250
20' 0"	0.250
19' 0"	0.250
18' 0"	0.000
17' 0"	0.000
16' 0"	0.000
15' 0"	0.000
14' 0"	0.000
13' 0"	0.000
12' 0"	0.000
11' 0"	0.325
10' 0"	0.325
9' 0"	0.330
8' 0"	0.330
7' 0"	0.350
6' 0"	0.000
5' 0"	0.000
4' 0"	0.000
3' 0"	0.000
2' 0"	0.000
1' 0"	0.000

COMPRESSED GRAPH



Nominal
Minimum



VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL:	CYLINDER
MANWAY:	Y
ACCESS:	GROUND
SERIAL:	
CONTENTS:	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER:	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE:	
MAXIMUM TEMPURATURE:	
MANUFACTURER:	
FABRICATOR:	
MATERIAL:	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

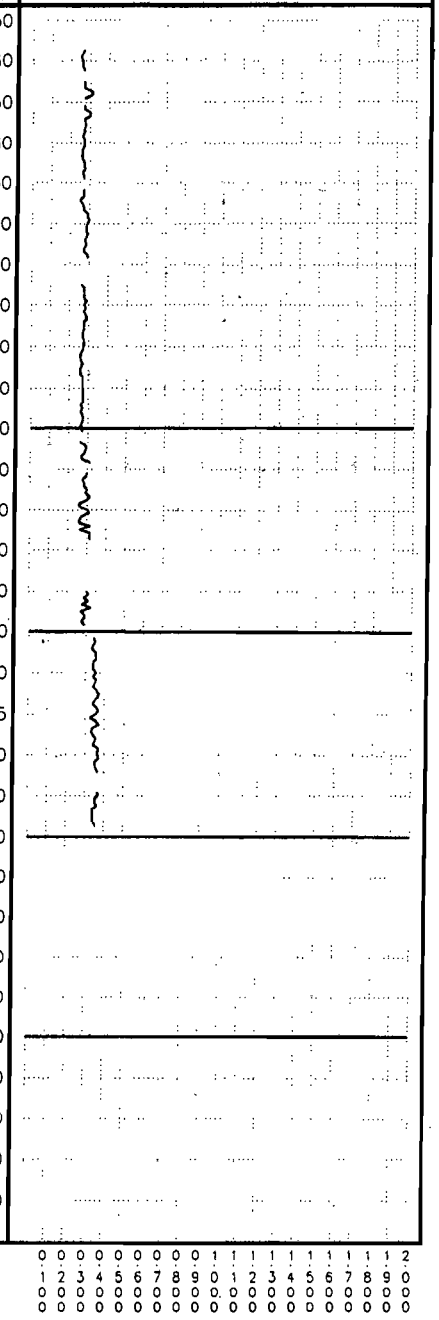
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

CARBON BLACK STORAGE

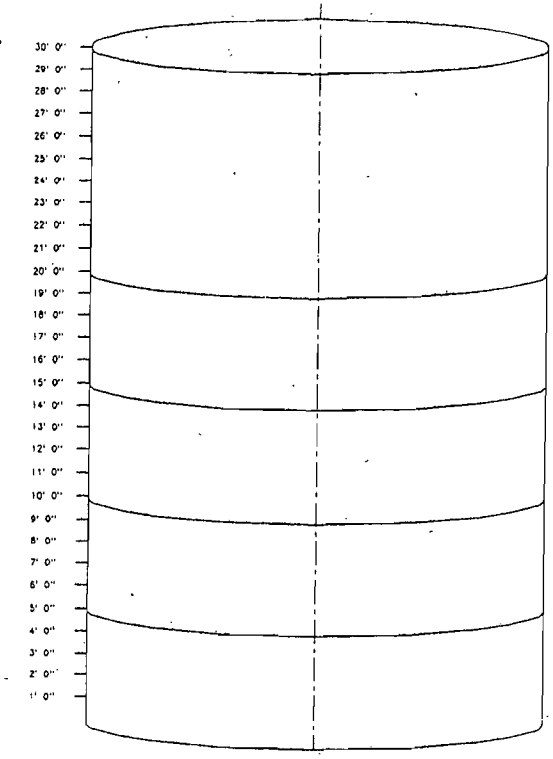
ELEVATION	LOWEST PER 1'
30' 0"	0.250
29' 0"	0.260
28' 0"	0.260
27' 0"	0.260
26' 0"	0.250
25' 0"	0.270
24' 0"	0.260
23' 0"	0.270
22' 0"	0.260
21' 0"	0.260
20' 0"	0.260
19' 0"	0.260
18' 0"	0.260
17' 0"	0.000
16' 0"	0.270
15' 0"	0.330
14' 0"	0.340
13' 0"	0.325
12' 0"	0.350
11' 0"	0.340
10' 0"	0.000
9' 0"	0.000
8' 0"	0.000
7' 0"	0.000
6' 0"	0.000
5' 0"	0.000
4' 0"	0.000
3' 0"	0.000
2' 0"	0.000
1' 0"	0.000

COMPRESSED GRAPH



Nominal
Minimum

20°



VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL:	CYLINDER
MANWAY:	Y
ACCESS:	GROUND
SERIAL:	
CONTENTS:	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER:	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE:	
MAXIMUM TEMPURATURE:	
MANUFACTURER:	
FABRICATOR:	
MATERIAL:	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

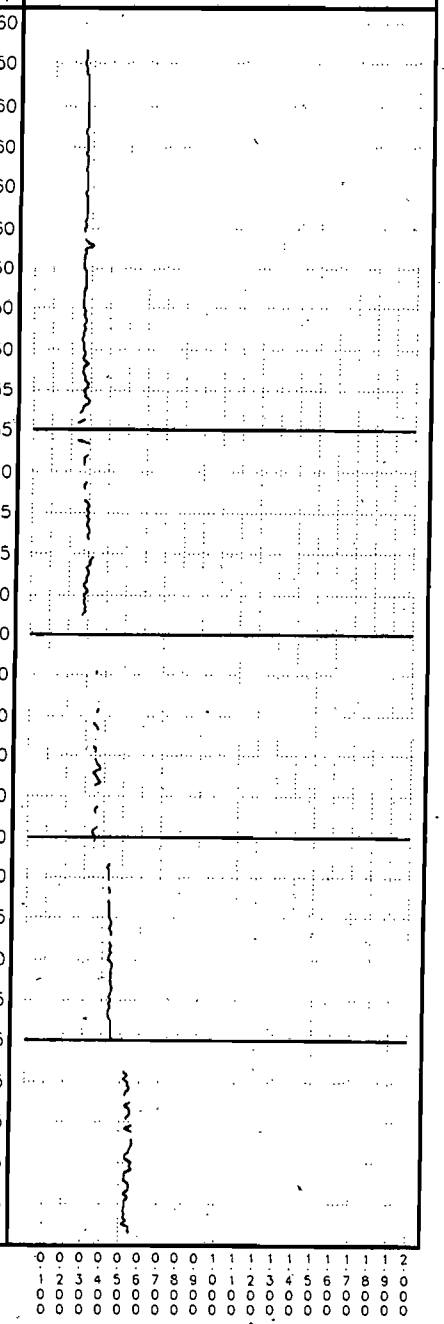
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

CARBON BLACK STORAGE

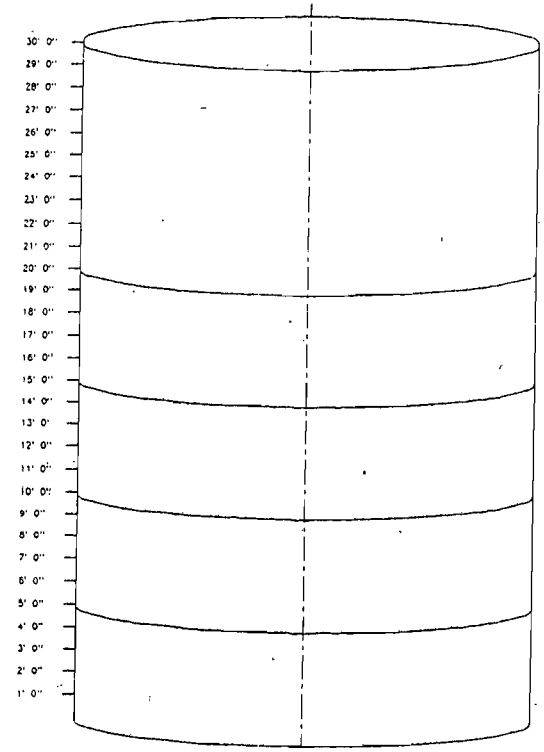
ELEVATION	LOWEST PER 1'
30' 0"	0.260
29' 0"	0.250
28' 0"	0.260
27' 0"	0.260
26' 0"	0.260
25' 0"	0.260
24' 0"	0.260
23' 0"	0.250
22' 0"	0.260
21' 0"	0.235
20' 0"	0.235
19' 0"	0.270
18' 0"	0.275
17' 0"	0.275
16' 0"	0.270
15' 0"	0.350
14' 0"	0.350
13' 0"	0.340
12' 0"	0.340
11' 0"	0.340
10' 0"	0.350
9' 0"	0.430
8' 0"	0.435
7' 0"	0.430
6' 0"	0.435
5' 0"	0.515
4' 0"	0.525
3' 0"	0.525
2' 0"	0.525
1' 0"	0.515

COMPRESSED GRAPH



Nominal
Minimum

40°



VESSEL INFORMATION

EQUIPMENT: CARBON BLACK STORAGE
SERVICE: STORAGE
VESSEL: CYLINDER
MANWAY: Y
ACCESS: GROUND
SERIAL:
CONTENTS: CARBON BLK
ORIENTATION: VERTICAL
INSULATION. NONE
HEIGHT: 30'
DIAMETER: 60'
WEIGHT:
TEST PRESSURE:
OPERATING PRESSURE:
MAXIMUM TEMPURATURE:
MANUFACTURER:
FABRICATOR:
MATERIAL: CARBON STEEL
P.O. NUMBER:
FABRICATION DATE: 1951
DATE INSTALLED: 1951
GOVERING CODE: API 653
BOARD NUMBER:
TECHNICIAN: J. WEBB

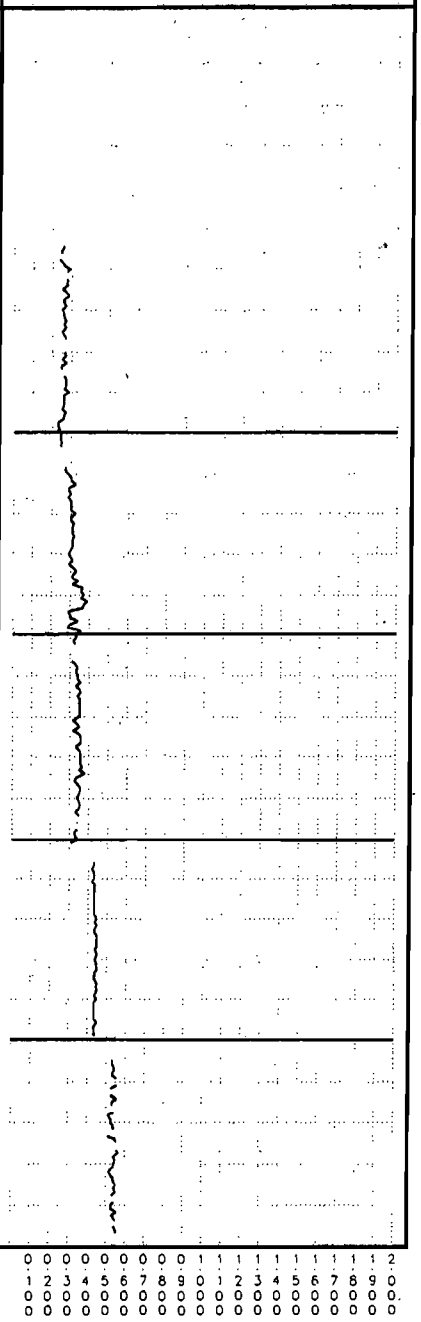
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

CARBON BLACK STORAGE

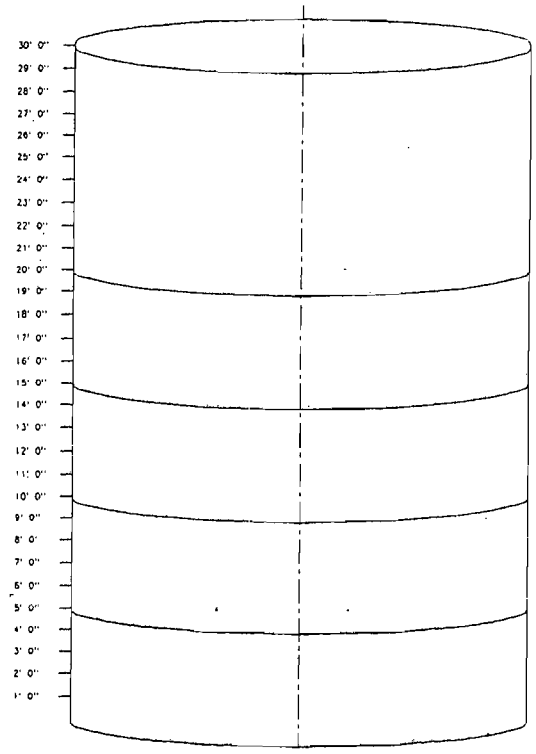
ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.000
28' 0"	0.000
27' 0"	0.000
26' 0"	0.000
25' 0"	0.235
24' 0"	0.250
23' 0"	0.250
22' 0"	0.245
21' 0"	0.230
20' 0"	0.245
19' 0"	0.285
18' 0"	0.300
17' 0"	0.290
16' 0"	0.285
15' 0"	0.300
14' 0"	0.330
13' 0"	0.315
12' 0"	0.325
11' 0"	0.325
10' 0"	0.310
9' 0"	0.420
8' 0"	0.435
7' 0"	0.435
6' 0"	0.435
5' 0"	0.530
4' 0"	0.510
3' 0"	0.510
2' 0"	0.515
1' 0"	0.525

COMPRESSED GRAPH



Nominal
Minimum

60°



VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL:	CYLINDER
MANWAY:	Y
ACCESS:	GROUND
SERIAL:	
CONTENTS:	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER:	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE:	
MAXIMUM TEMPURATURE:	
MANUFACTURER:	
FABRICATOR:	
MATERIAL	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

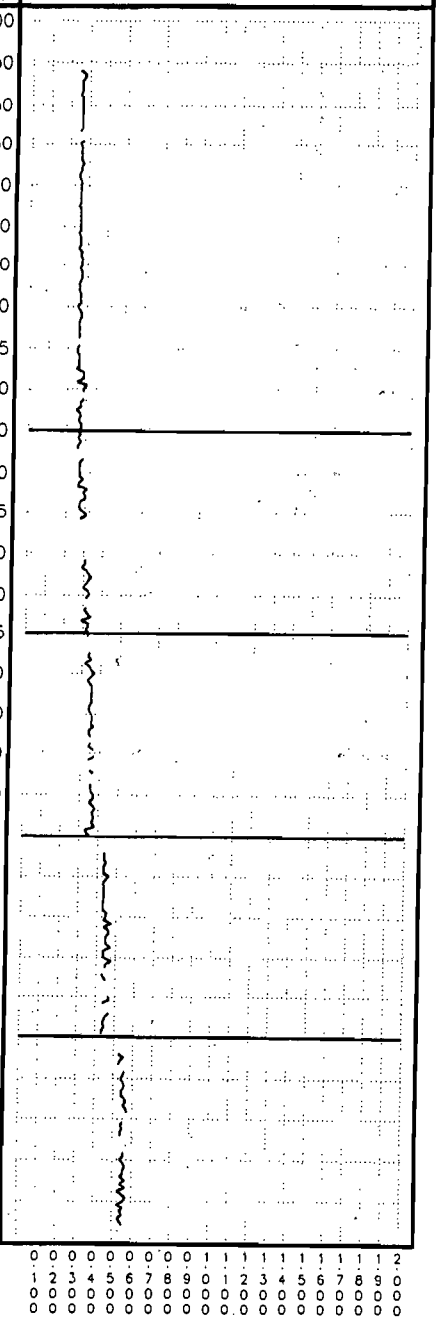
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

CARBON BLACK STORAGE

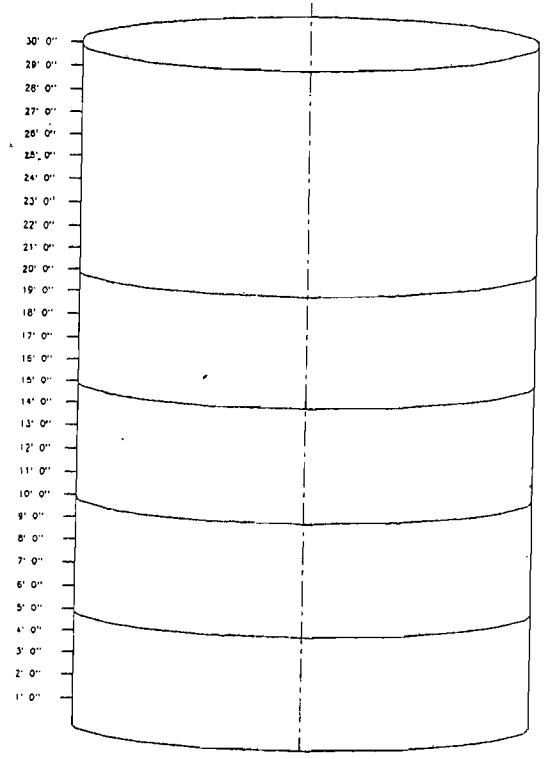
ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.250
28' 0"	0.250
27' 0"	0.250
26' 0"	0.250
25' 0"	0.250
24' 0"	0.260
23' 0"	0.250
22' 0"	0.245
21' 0"	0.250
20' 0"	0.260
19' 0"	0.260
18' 0"	0.275
17' 0"	0.290
16' 0"	0.290
15' 0"	0.315
14' 0"	0.330
13' 0"	0.340
12' 0"	0.340
11' 0"	0.330
10' 0"	0.430
9' 0"	0.430
8' 0"	0.435
7' 0"	0.430
6' 0"	0.430
5' 0"	0.525
4' 0"	0.540
3' 0"	0.540
2' 0"	0.525
1' 0"	0.525

COMPRESSED GRAPH



Nominal
Minimum

80°



VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL:	CYLINDER
MANWAY:	Y
ACCESS:	GROUND
SERIAL:	
CONTENTS:	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER:	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE:	
MAXIMUM TEMPURATURE:	
MANUFACTURER:	
FABRICATOR:	
MATERIAL:	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

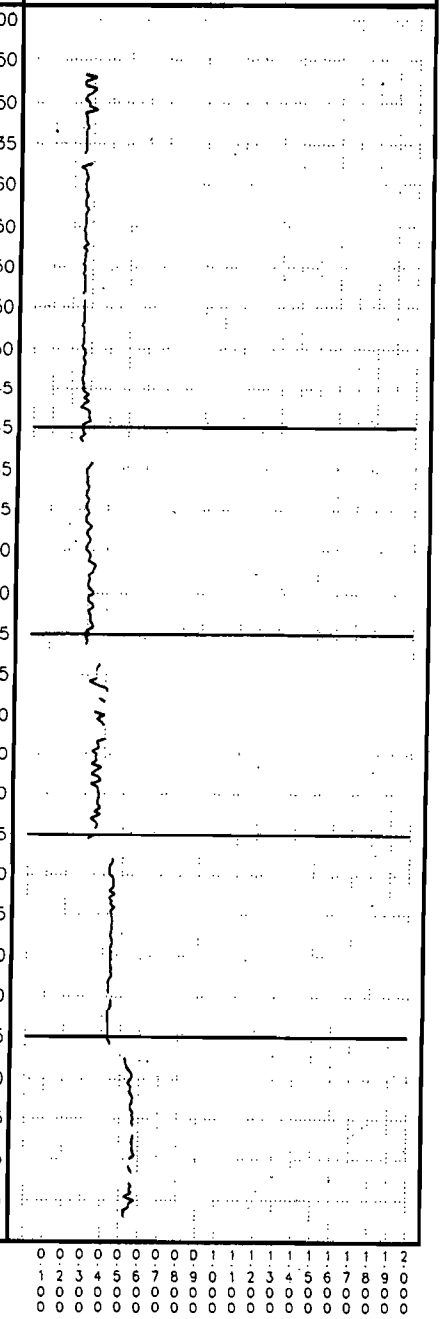
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

CARBON BLACK STORAGE

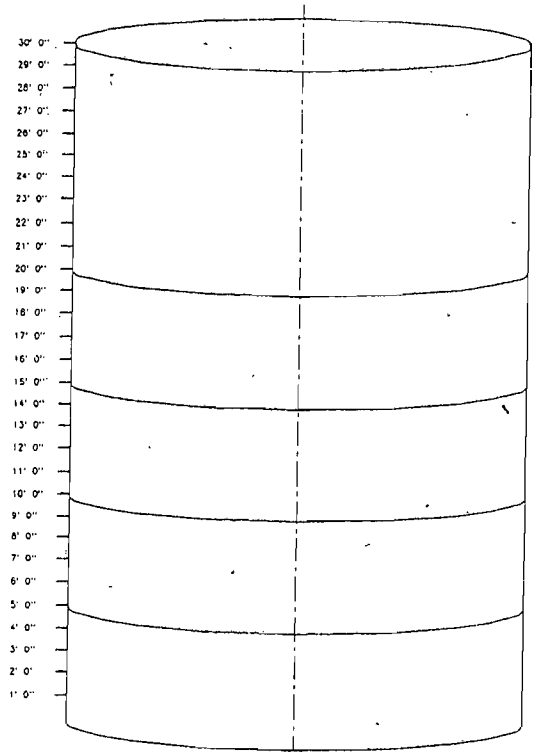
ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.250
28' 0"	0.250
27' 0"	0.235
26' 0"	0.260
25' 0"	0.250
24' 0"	0.250
23' 0"	0.250
22' 0"	0.250
21' 0"	0.245
20' 0"	0.245
19' 0"	0.285
18' 0"	0.285
17' 0"	0.290
16' 0"	0.290
15' 0"	0.285
14' 0"	0.315
13' 0"	0.330
12' 0"	0.330
11' 0"	0.330
10' 0"	0.315
9' 0"	0.430
8' 0"	0.435
7' 0"	0.430
6' 0"	0.430
5' 0"	0.435
4' 0"	0.540
3' 0"	0.565
2' 0"	0.525
1' 0"	0.525

COMPRESSED GRAPH



Nominal
Minimum

100°



VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL:	CYLINDER
MANWAY:	Y
ACCESS:	GROUND
SERIAL:	
CONTENTS:	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER:	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE:	
MAXIMUM TEMPURATURE:	
MANUFACTURER:	
FABRICATOR:	
MATERIAL:	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

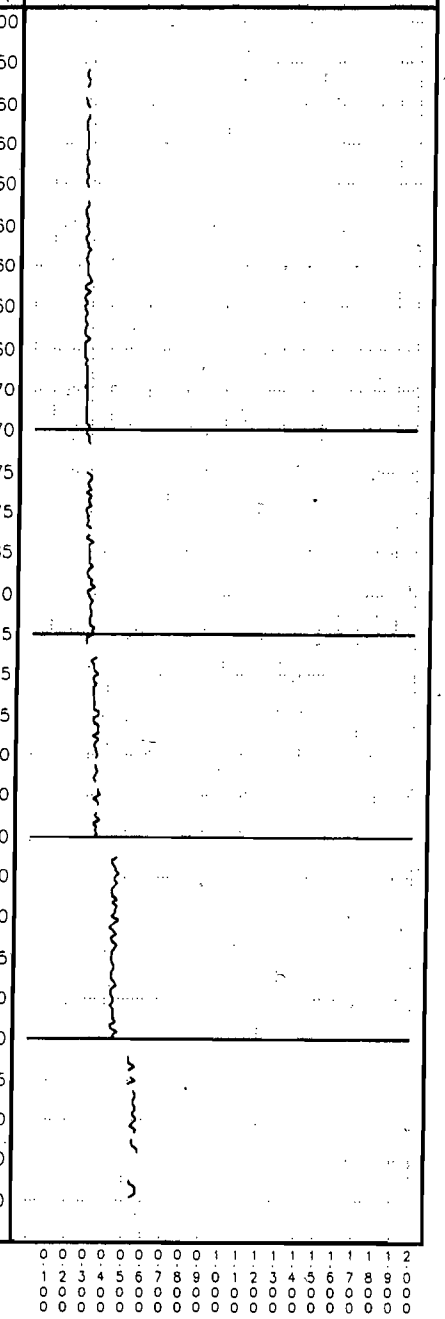
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

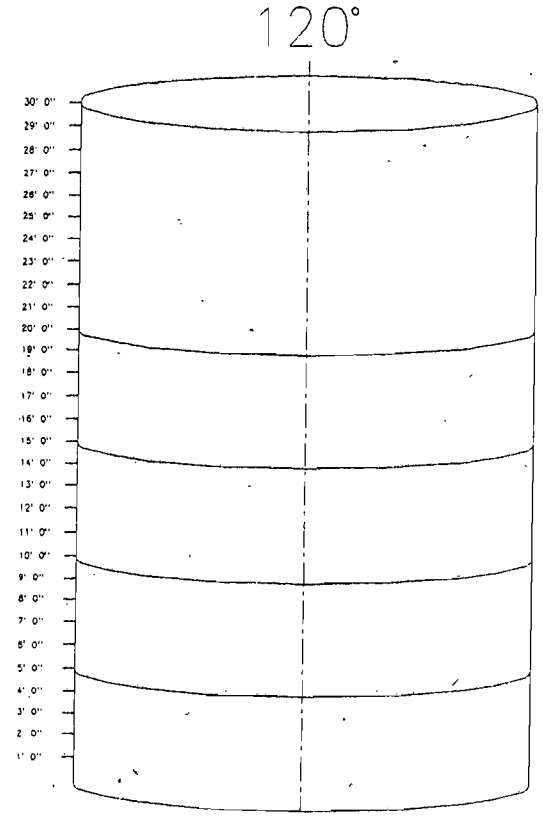
CARBON BLACK STORAGE

ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.250
28' 0"	0.260
27' 0"	0.260
26' 0"	0.260
25' 0"	0.260
24' 0"	0.260
23' 0"	0.260
22' 0"	0.260
21' 0"	0.270
20' 0"	0.270
19' 0"	0.275
18' 0"	0.275
17' 0"	0.285
16' 0"	0.290
15' 0"	0.285
14' 0"	0.325
13' 0"	0.325
12' 0"	0.330
11' 0"	0.330
10' 0"	0.430
9' 0"	0.430
8' 0"	0.420
7' 0"	0.435
6' 0"	0.430
5' 0"	0.530
4' 0"	0.525
3' 0"	0.540
2' 0"	0.540
1' 0"	0.000

COMPRESSED GRAPH



Nominal
Minimum



VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL:	CYLINDER
MANWAY:	Y
ACCESS:	GROUND
SERIAL:	
CONTENTS	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER:	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE	
MAXIMUM TEMPURATURE:	
MANUFACTURER:	
FABRICATOR:	
MATERIAL:	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

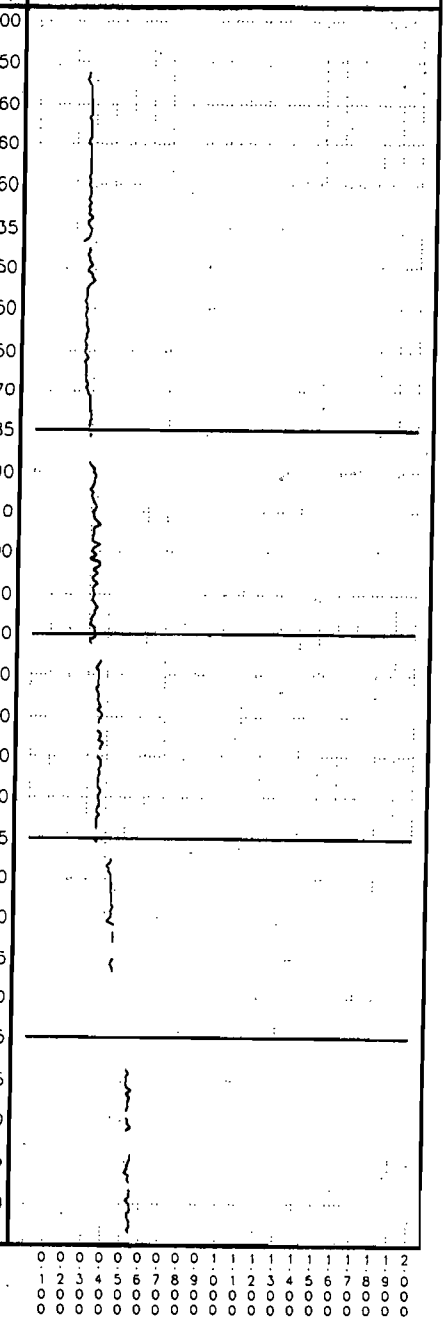
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

CARBON BLACK STORAGE

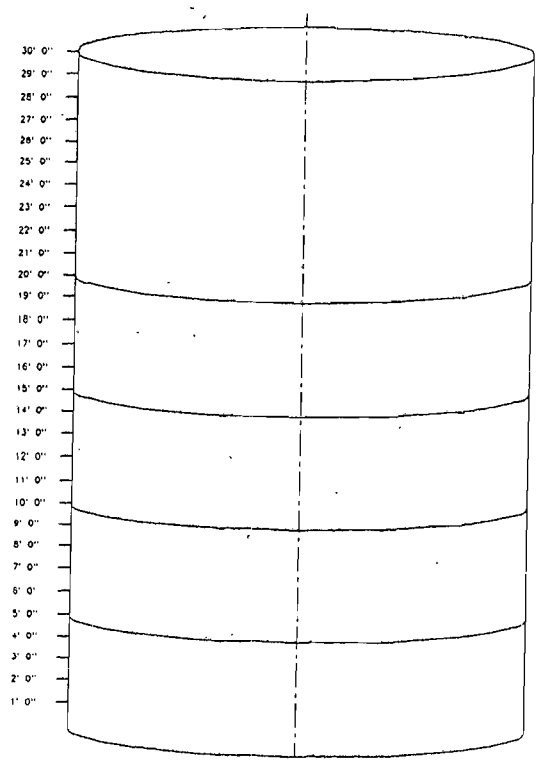
ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.250
28' 0"	0.260
27' 0"	0.260
26' 0"	0.260
25' 0"	0.235
24' 0"	0.250
23' 0"	0.250
22' 0"	0.250
21' 0"	0.270
20' 0"	0.285
19' 0"	0.290
18' 0"	0.310
17' 0"	0.300
16' 0"	0.300
15' 0"	0.300
14' 0"	0.340
13' 0"	0.350
12' 0"	0.350
11' 0"	0.350
10' 0"	0.355
9' 0"	0.430
8' 0"	0.410
7' 0"	0.435
6' 0"	0.000
5' 0"	0.525
4' 0"	0.525
3' 0"	0.530
2' 0"	0.525
1' 0"	0.540

COMPRESSED GRAPH



Nominal
Minimum

140°



VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL:	CYLINDER
MANWAY:	Y
ACCESS:	GROUND
SERIAL:	
CONTENTS:	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER:	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE:	
MAXIMUM TEMPURATURE:	
MANUFACTURER:	
FABRICATOR:	
MATERIAL:	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

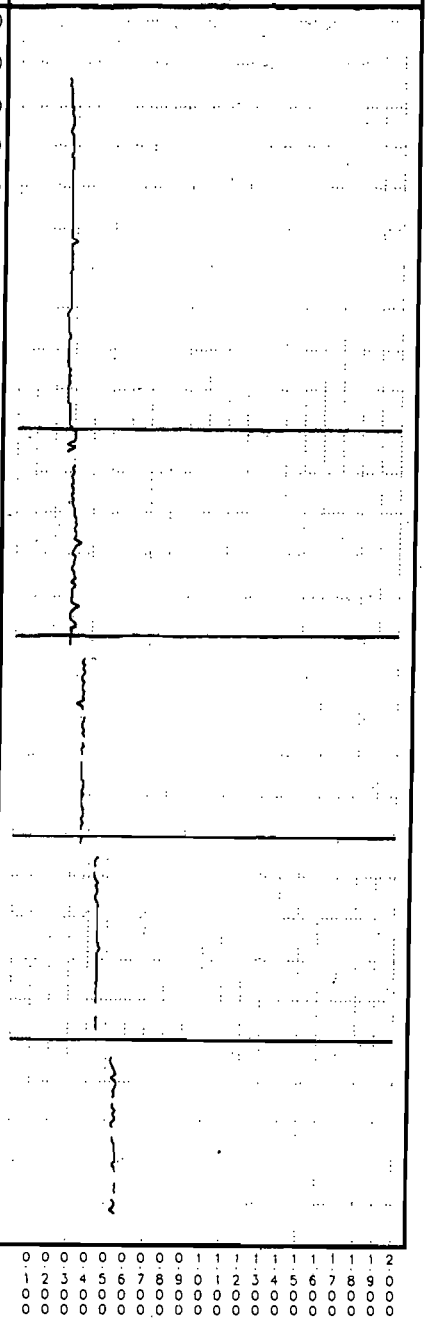
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

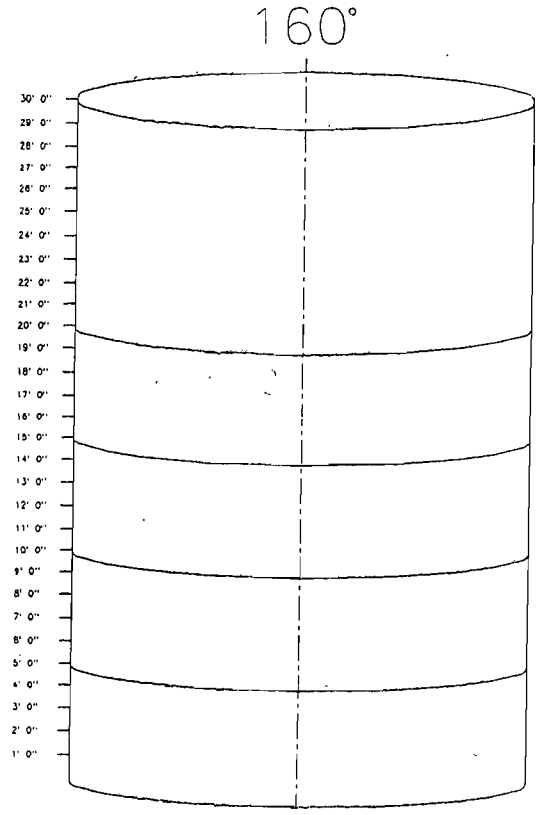
CARBON BLACK STORAGE

ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.250
28' 0"	0.260
27' 0"	0.260
26' 0"	0.270
25' 0"	0.270
24' 0"	0.260
23' 0"	0.250
22' 0"	0.260
21' 0"	0.260
20' 0"	0.260
19' 0"	0.285
18' 0"	0.300
17' 0"	0.285
16' 0"	0.285
15' 0"	0.285
14' 0"	0.325
13' 0"	0.350
12' 0"	0.355
11' 0"	0.355
10' 0"	0.355
9' 0"	0.430
8' 0"	0.445
7' 0"	0.445
6' 0"	0.445
5' 0"	0.525
4' 0"	0.540
3' 0"	0.530
2' 0"	0.540
1' 0"	0.530

COMPRESSED GRAPH



Nominal
Minimum



VESSEL INFORMATION

EQUIPMENT: CARBON BLACK STORAGE
SERVICE: STORAGE
VESSEL: CYLINDER
MANWAY: Y
ACCESS: GROUND
SERIAL:
CONTENTS: CARBON BLK
ORIENTATION: VERTICAL
INSULATION: NONE
HEIGHT: 30'
DIAMETER: 60'
WEIGHT:
TEST PRESSURE:
OPERATING PRESSURE:
MAXIMUM TEMPURATURE:
MANUFACTURER:
FABRICATOR:
MATERIAL: CARBON STEEL
P.O. NUMBER:
FABRICATION DATE: 1951
DATE INSTALLED: 1951
GOVERING CODE: API 653
BOARD NUMBER:
TECHNICIAN: J. WEBB

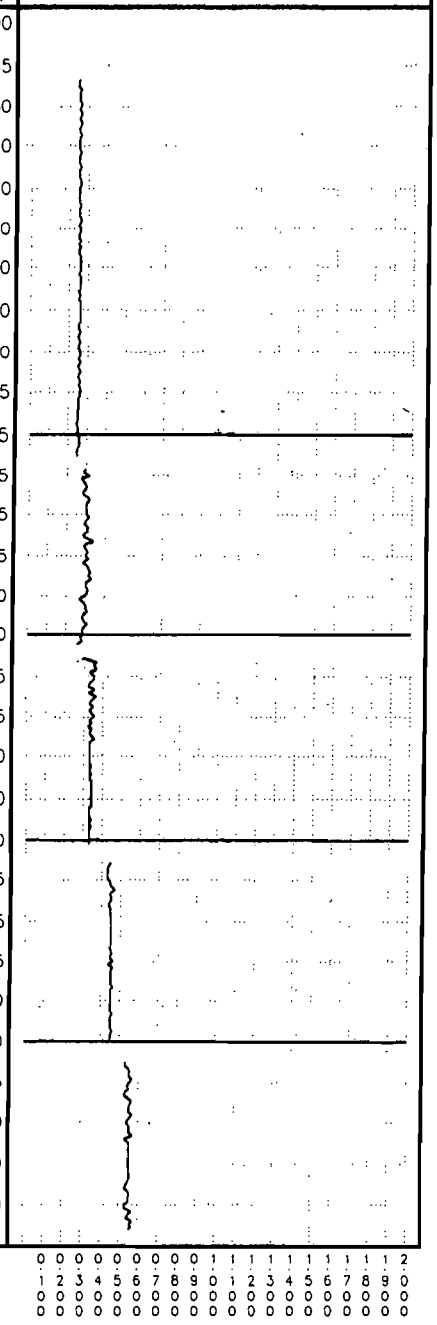
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

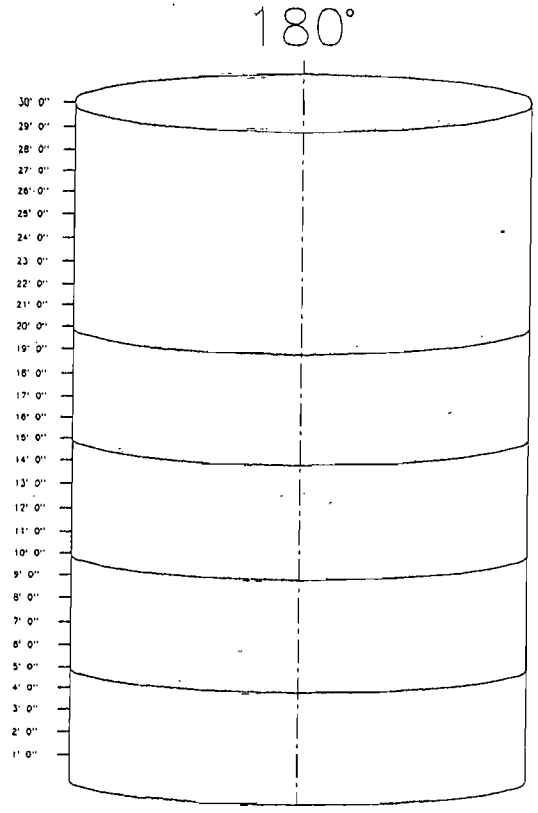
CARBON BLACK STORAGE

ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.245
28' 0"	0.250
27' 0"	0.250
26' 0"	0.250
25' 0"	0.250
24' 0"	0.250
23' 0"	0.250
22' 0"	0.250
21' 0"	0.245
20' 0"	0.245
19' 0"	0.275
18' 0"	0.285
17' 0"	0.285
16' 0"	0.270
15' 0"	0.260
14' 0"	0.325
13' 0"	0.325
12' 0"	0.330
11' 0"	0.330
10' 0"	0.330
9' 0"	0.435
8' 0"	0.445
7' 0"	0.435
6' 0"	0.450
5' 0"	0.530
4' 0"	0.525
3' 0"	0.530
2' 0"	0.530
1' 0"	0.530

COMPRESSED GRAPH



Nominal
Minimum



VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL:	CYLINDER
MANWAY:	Y
ACCESS:	GROUND'
SERIAL:	
CONTENTS:	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER:	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE:	
MAXIMUM TEMPURATURE:	
MANUFACTURER:	
FABRICATOR:	
MATERIAL.	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

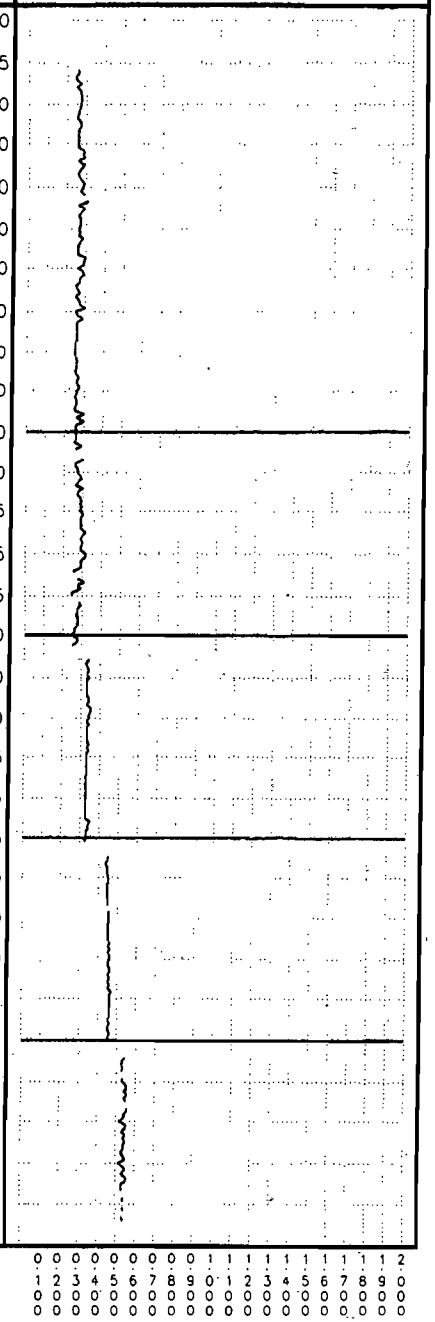
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

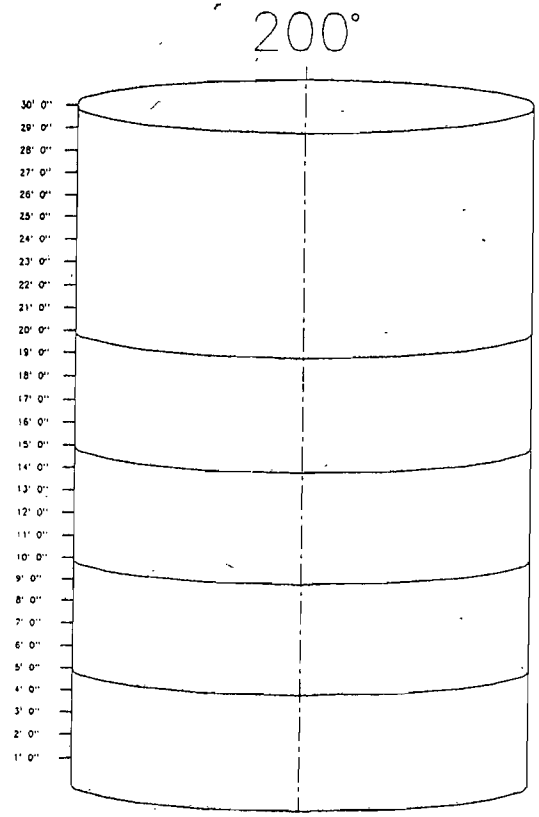
CARBON BLACK STORAGE

ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.245
28' 0"	0.250
27' 0"	0.260
26' 0"	0.260
25' 0"	0.260
24' 0"	0.250
23' 0"	0.250
22' 0"	0.250
21' 0"	0.250
20' 0"	0.250
19' 0"	0.260
18' 0"	0.285
17' 0"	0.245
16' 0"	0.245
15' 0"	0.250
14' 0"	0.330
13' 0"	0.330
12' 0"	0.325
11' 0"	0.325
10' 0"	0.325
9' 0"	0.445
8' 0"	0.450
7' 0"	0.450
6' 0"	0.450
5' 0"	0.525
4' 0"	0.530
3' 0"	0.515
2' 0"	0.515
1' 0"	0.530

COMPRESSED GRAPH



Nominal
Minimum



VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL:	CYLINDER
MANWAY:	Y
ACCESS:	GROUND
SERIAL:	
CONTENTS:	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER:	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE:	
MAXIMUM TEMPURATURE:	
MANUFACTURER:	
FABRICATOR:	
MATERIAL:	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

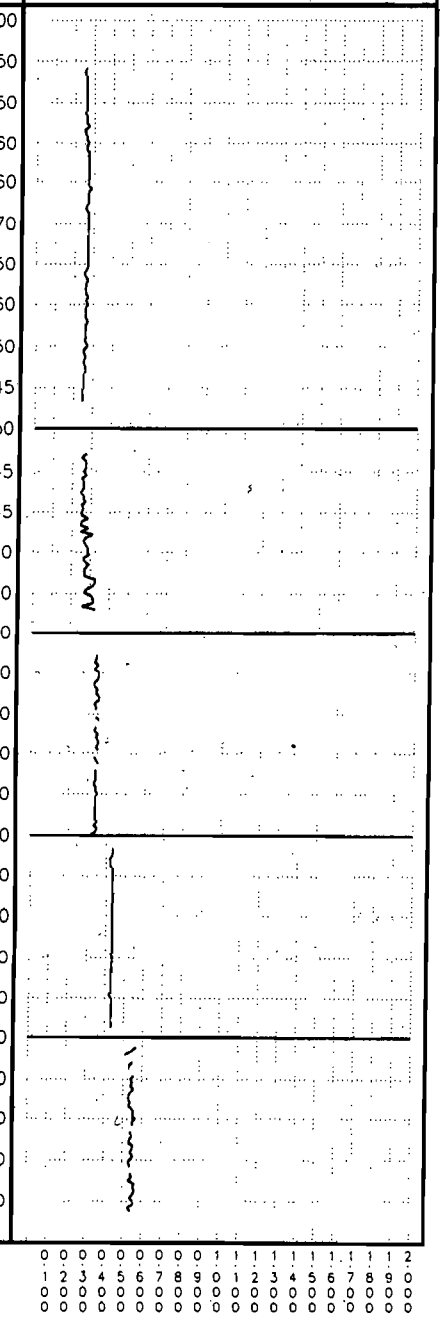
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

CARBON BLACK STORAGE

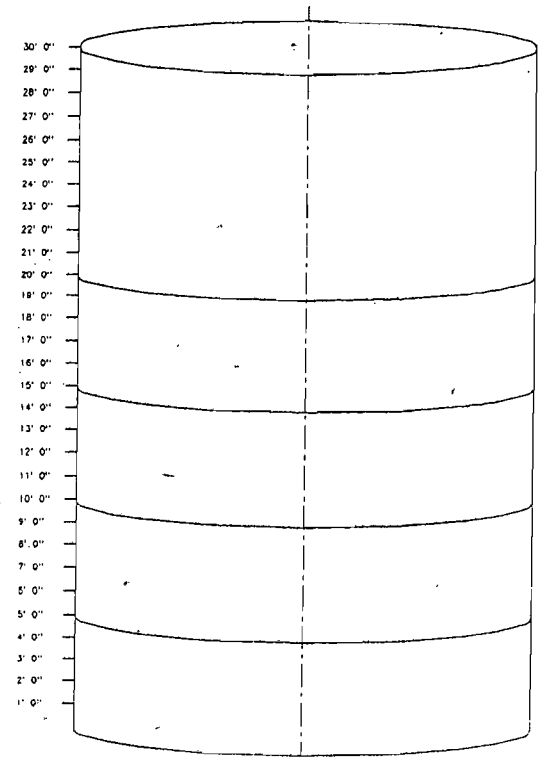
ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.250
28' 0"	0.250
27' 0"	0.260
26' 0"	0.260
25' 0"	0.270
24' 0"	0.250
23' 0"	0.260
22' 0"	0.250
21' 0"	0.245
20' 0"	0.250
19' 0"	0.245
18' 0"	0.245
17' 0"	0.260
16' 0"	0.260
15' 0"	0.330
14' 0"	0.330
13' 0"	0.330
12' 0"	0.330
11' 0"	0.330
10' 0"	0.420
9' 0"	0.430
8' 0"	0.430
7' 0"	0.420
6' 0"	0.430
5' 0"	0.510
4' 0"	0.530
3' 0"	0.530
2' 0"	0.530
1' 0"	0.530

COMPRESSED GRAPH



Nominal
Minimum

220°



VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL.	CYLINDER
MANWAY:	Y
ACCESS:	GROUND
SERIAL:	
CONTENTS:	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER:	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE:	
MAXIMUM TEMPURATURE:	
MANUFACTURER.	
FABRICATOR:	
MATERIAL:	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

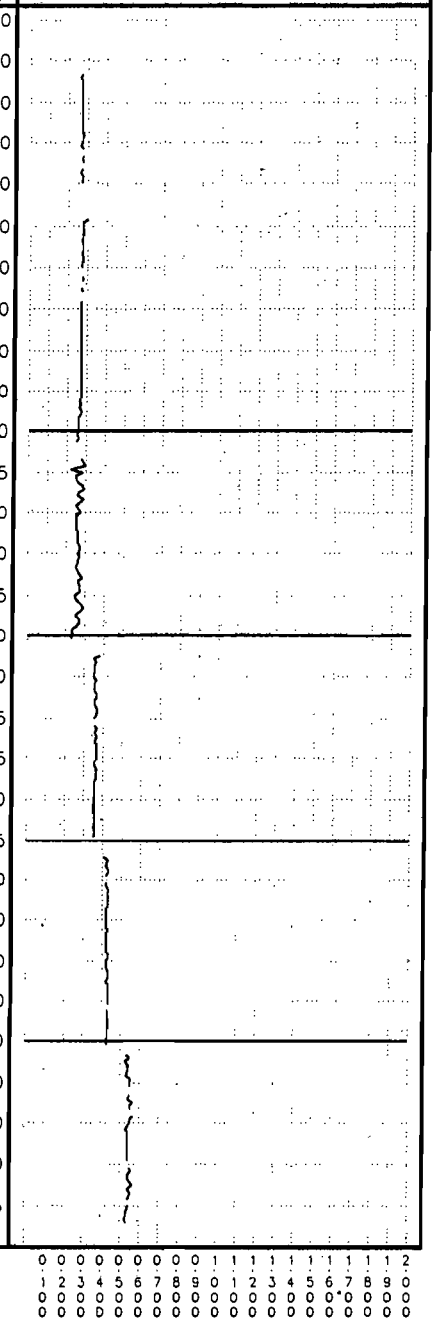
Longview Inspection.

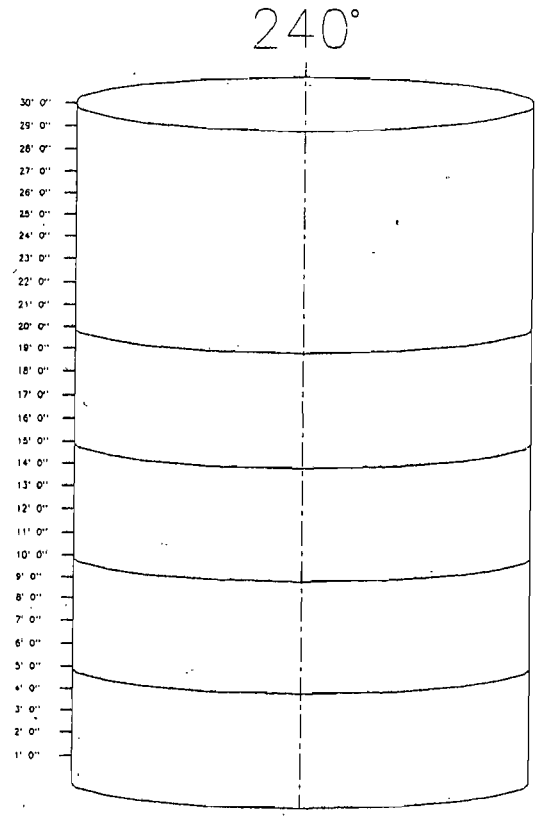
COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

CARBON BLACK STORAGE

ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.260
28' 0"	0.270
27' 0"	0.260
26' 0"	0.220
25' 0"	0.270
24' 0"	0.270
23' 0"	0.270
22' 0"	0.270
21' 0"	0.260
20' 0"	0.220
19' 0"	0.245
18' 0"	0.250
17' 0"	0.250
16' 0"	0.235
15' 0"	0.230
14' 0"	0.350
13' 0"	0.355
12' 0"	0.355
11' 0"	0.350
10' 0"	0.405
9' 0"	0.420
8' 0"	0.420
7' 0"	0.420
6' 0"	0.430
5' 0"	0.430
4' 0"	0.540
3' 0"	0.530
2' 0"	0.540
1' 0"	0.525

COMPRESSED GRAPH





Nominal
Minimum

VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL:	CYLINDER
MANWAY:	Y
ACCESS:	GROUND
SERIAL:	
CONTENTS:	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER:	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE:	
MAXIMUM TEMPURATURE:	
MANUFACTURER:	
FABRICATOR:	
MATERIAL:	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

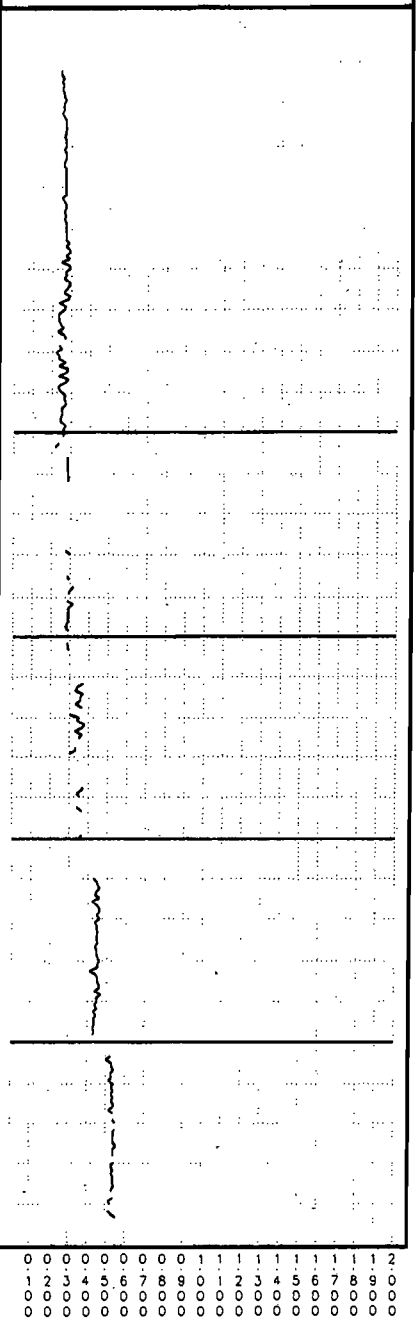
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

CARBON BLACK STORAGE

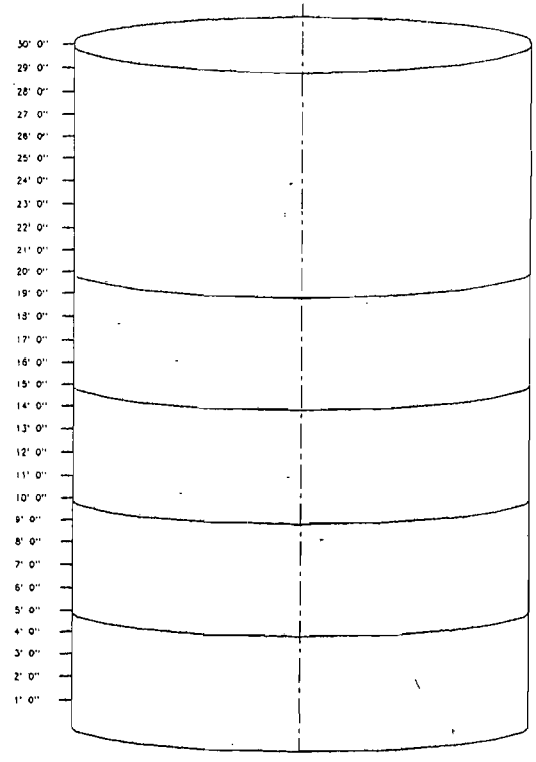
ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.245
28' 0"	0.250
27' 0"	0.260
26' 0"	0.250
25' 0"	0.245
24' 0"	0.235
23' 0"	0.230
22' 0"	0.220
21' 0"	0.245
20' 0"	0.220
19' 0"	0.285
18' 0"	0.275
17' 0"	0.275
16' 0"	0.275
15' 0"	0.285
14' 0"	0.300
13' 0"	0.300
12' 0"	0.330
11' 0"	0.285
10' 0"	0.000
9' 0"	0.420
8' 0"	0.435
7' 0"	0.410
6' 0"	0.430
5' 0"	0.500
4' 0"	0.515
3' 0"	0.540
2' 0"	0.515
1' 0"	0.515

COMPRESSED GRAPH



Nominal
Minimum

260°



VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL:	CYLINDER
MANWAY:	Y
ACCESS:	GROUND
SERIAL:	
CONTENTS:	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER:	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE:	
MAXIMUM TEMPURATURE:	
MANUFACTURER:	
FABRICATOR:	
MATERIAL:	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

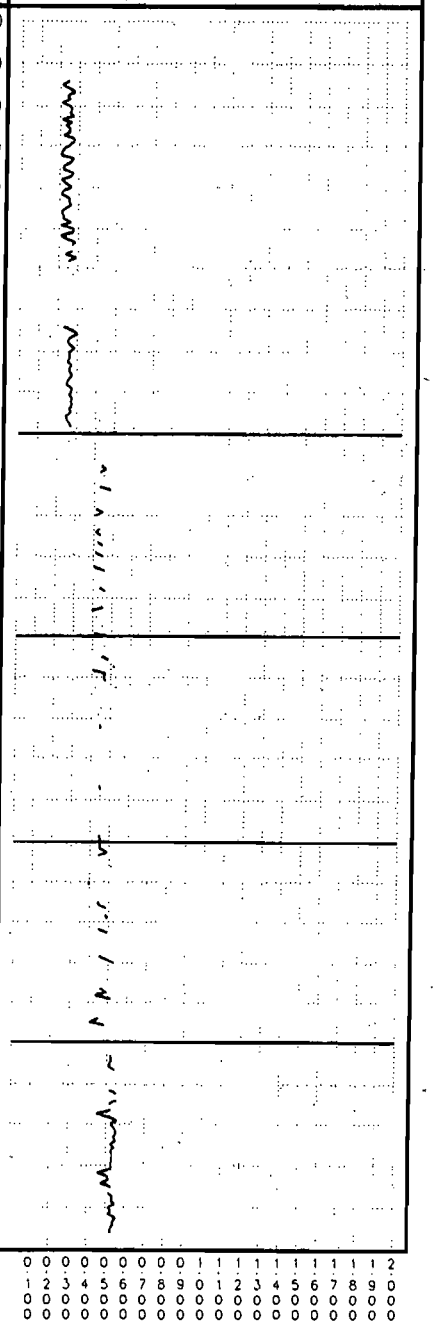
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

CARBON BLACK STORAGE

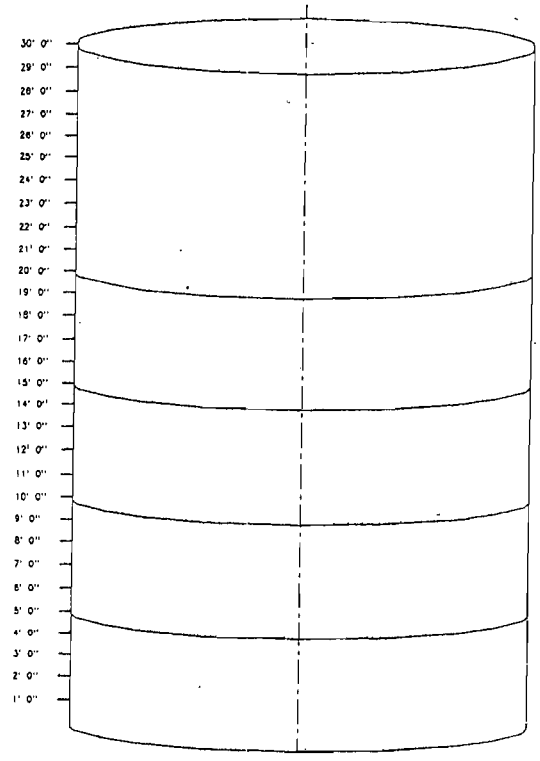
ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.210
28' 0"	0.210
27' 0"	0.205
26' 0"	0.210
25' 0"	0.210
24' 0"	0.245
23' 0"	0.230
22' 0"	0.245
21' 0"	0.245
20' 0"	0.235
19' 0"	0.410
18' 0"	0.410
17' 0"	0.405
16' 0"	0.395
15' 0"	0.405
14' 0"	0.420
13' 0"	0.445
12' 0"	0.445
11' 0"	0.445
10' 0"	0.445
9' 0"	0.395
8' 0"	0.445
7' 0"	0.435
6' 0"	0.410
5' 0"	0.430
4' 0"	0.435
3' 0"	0.525
2' 0"	0.460
1' 0"	0.515

COMPRESSED GRAPH



Nominal
Minimum

280°



VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL:	CYLINDER
MANWAY:	Y
ACCESS:	GROUND
SERIAL:	
CONTENTS:	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER:	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE:	
MAXIMUM TEMPURATURE:	
MANUFACTURER:	
FABRICATOR:	
MATERIAL:	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

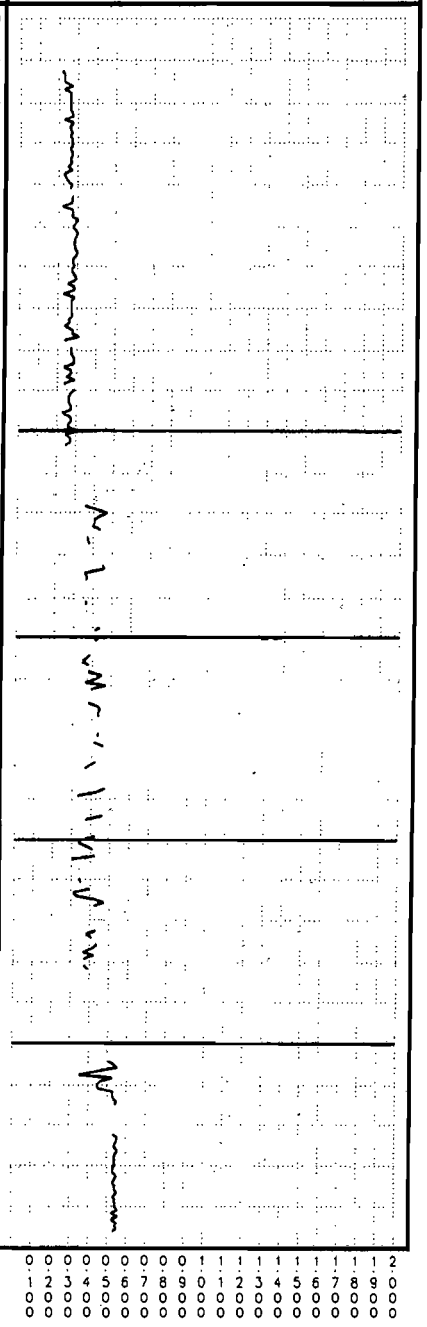
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

CARBON BLACK STORAGE

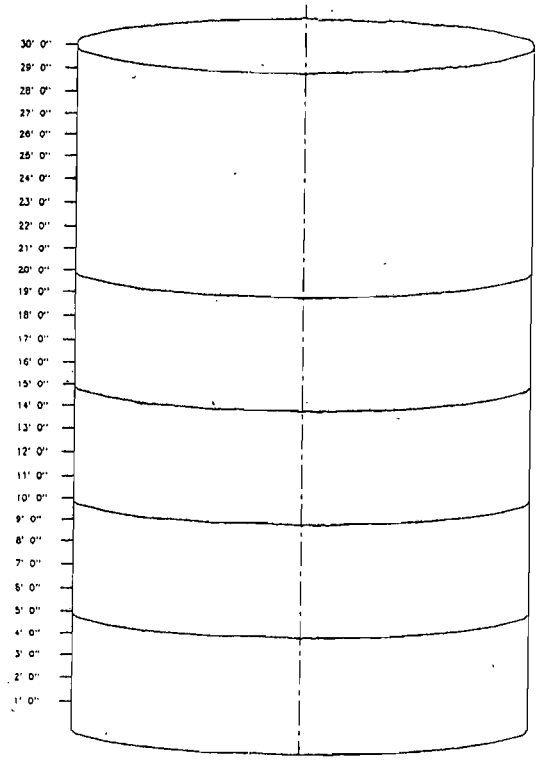
ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.220
28' 0"	0.230
27' 0"	0.230
26' 0"	0.220
25' 0"	0.275
24' 0"	0.230
23' 0"	0.235
22' 0"	0.235
21' 0"	0.230
20' 0"	0.245
19' 0"	0.355
18' 0"	0.350
17' 0"	0.355
16' 0"	0.365
15' 0"	0.350
14' 0"	0.365
13' 0"	0.340
12' 0"	0.330
11' 0"	0.370
10' 0"	0.300
9' 0"	0.310
8' 0"	0.365
7' 0"	0.370
6' 0"	0.220
5' 0"	0.350
4' 0"	0.445
3' 0"	0.530
2' 0"	0.530
1' 0"	0.525

COMPRESSED GRAPH



Nominal
Minimum

300°



VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL:	CYLINDER
MANWAY:	Y
ACCESS:	GROUND
SERIAL:	
CONTENTS:	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER:	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE:	
MAXIMUM TEMPURATURE:	
MANUFACTURER:	
FABRICATOR:	
MATERIAL:	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

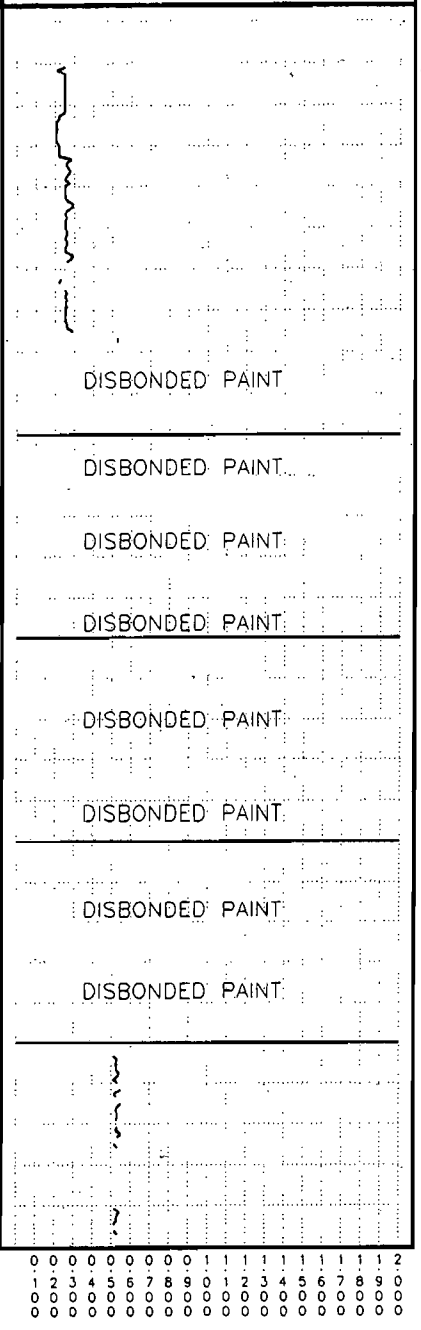
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

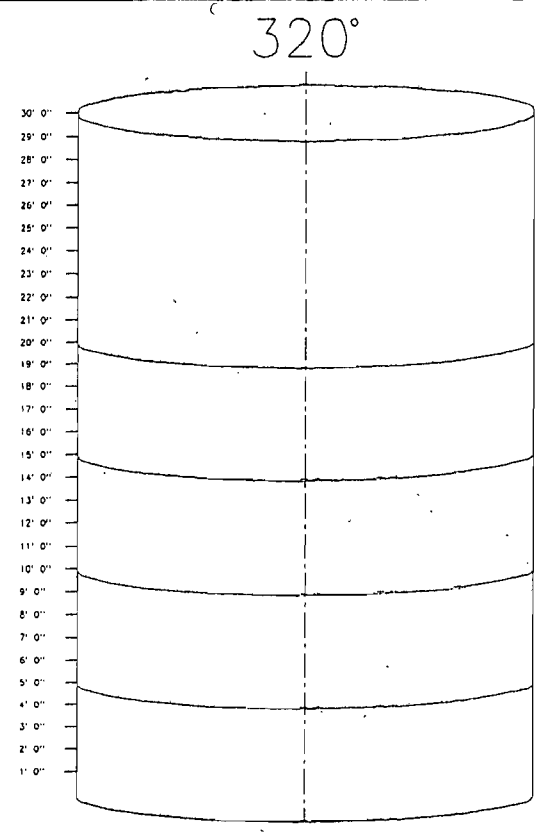
CARBON BLACK STORAGE

ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.210
28' 0"	0.205
27' 0"	0.220
26' 0"	0.250
25' 0"	0.250
24' 0"	0.220
23' 0"	0.250
22' 0"	0.000
21' 0"	0.000
20' 0"	0.000
19' 0"	0.000
18' 0"	0.000
17' 0"	0.000
16' 0"	0.000
15' 0"	0.000
14' 0"	0.000
13' 0"	0.000
12' 0"	0.000
11' 0"	0.000
10' 0"	0.000
9' 0"	0.000
8' 0"	0.000
7' 0"	0.000
6' 0"	0.000
5' 0"	0.510
4' 0"	0.515
3' 0"	0.515
2' 0"	0.540
1' 0"	0.510

COMPRESSED GRAPH



Nominal
Minimum



VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL:	CYLINDER
MANWAY:	Y
ACCESS:	GROUND
SERIAL:	
CONTENTS:	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER:	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE:	
MAXIMUM TEMPURATURE:	
MANUFACTURER:	
FABRICATOR:	
MATERIAL:	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

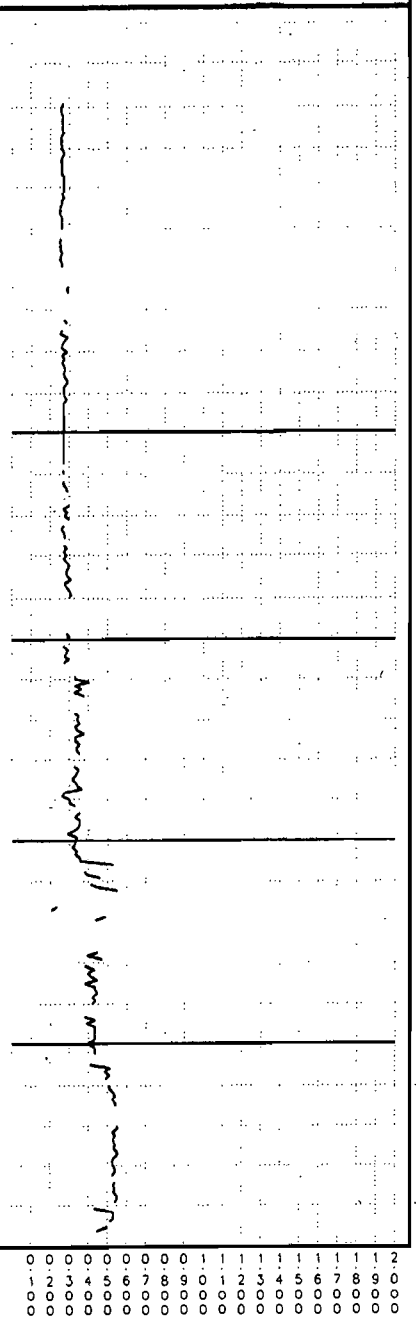
Longview Inspection.

COLUMBIAN CHEMICAL
EL DORADO,AR
10-26-98

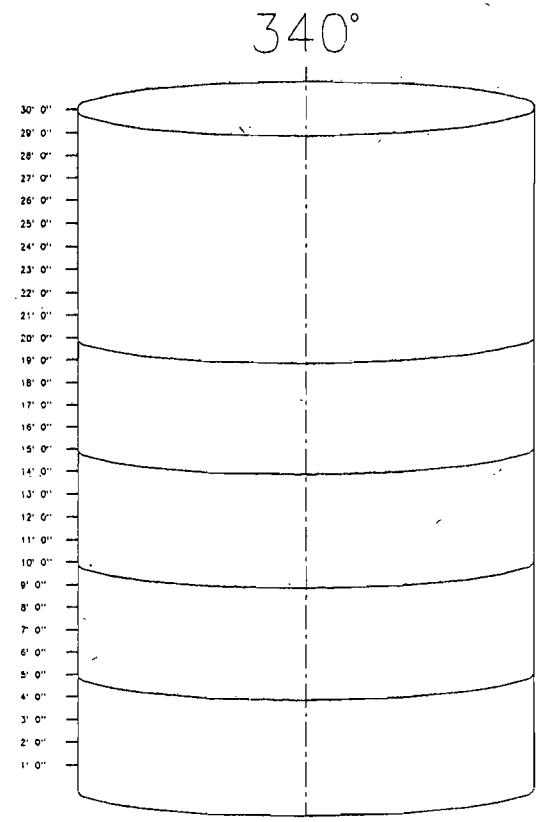
CARBON BLACK STORAGE

ELEVATION	LOWEST PER 1'
30' 0"	0.000
29' 0"	0.205
28' 0"	0.260
27' 0"	0.260
26' 0"	0.250
25' 0"	0.250
24' 0"	0.285
23' 0"	0.250
22' 0"	0.260
21' 0"	0.270
20' 0"	0.270
19' 0"	0.270
18' 0"	0.260
17' 0"	0.270
16' 0"	0.285
15' 0"	0.260
14' 0"	0.325
13' 0"	0.330
12' 0"	0.260
11' 0"	0.290
10' 0"	0.315
9' 0"	0.205
8' 0"	0.205
7' 0"	0.380
6' 0"	0.380
5' 0"	0.410
4' 0"	0.510
3' 0"	0.525
2' 0"	0.525
1' 0"	0.430

COMPRESSED GRAPH



Nominal
Minimum



VESSEL INFORMATION

EQUIPMENT:	CARBON BLACK STORAGE
SERVICE:	STORAGE
VESSEL:	CYLINDER
MANWAY:	Y
ACCESS:	GROUND
SERIAL:	
CONTENTS:	CARBON BLK
ORIENTATION:	VERTICAL
INSULATION:	NONE
HEIGHT:	30'
DIAMETER.	60'
WEIGHT:	
TEST PRESSURE:	
OPERATING PRESSURE:	
MAXIMUM TEMPURATURE:	
MANUFACTURER:	
FABRICATOR:	
MATERIAL:	CARBON STEEL
P.O. NUMBER:	
FABRICATION DATE:	1951
DATE INSTALLED:	1951
GOVERING CODE:	API 653
BOARD NUMBER:	
TECHNICIAN:	J. WEBB

Longview Inspection.

Longview Inspection

5

LONGVIEW INSPECTION
ADVANCED TECHNOLOGY GROUP, INC
405 N. Eastman Road, PO Box 8204 Longview, TX 75601

FACSIMILE TRANSMITTAL SHEET

To: Benny Bussey

From: Dan Tweedhope

c.c.

Company: Columbia Chemicals

fax number: (870) 862-~~4205~~ 0208

Total no. of pages including cover: (20)

Date: 10 / 7 / 1998

Phone number Sender's reference number:

Re: Tank Inspection

LII reference number:

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

Benny,

Please find attached.

Originals should be arriving anytime.

$ 7,700.00

+700.00 Bead addition

Corn Syrup Tanks

Best regards,
Dan

Longview Inspection -
Advanced Technology Group, Inc.

October 1, 1998 LII Proposal # 1098-1153

Columbia Chemicals Company
713 Industrial Road,
El Dorado, AR 71730-6623

Attention: ***Mr. Benny W. Bussey***, Maintenance Superintendent

RE: **INSPECTION OF (7) STORAGE TANKS**

Dear Benny,

Thank you for the time and consideration bestowed upon Longview Inspection (LII) and myself during our recent visit to your facility.

As discussed, LII is pleased to forward the following cost estimate to perform inspections upon your carbon black storage tanks. The seven (7) storage tanks will receive an external API 653 visual inspection, and ultrasonic thickness measurements will be recorded. The data will be input into our DMAP inspection database and reports generated.

Formal submittals will consist of an API 653 summary inspection report revealing inspection status. The inspection and tests will be performed in compliance with API 653, OSHA 1910.119, EPA-RPM (40 CFR 68), and state regulations. The inspection results will include an AutoCAD drawing of the tank (with inspection locations), Inspection Checklist, Component Overview, TML (Thickness Measurement Locations) Report, Calibration Report, and Static Data Report.

The DMAPS program will generate calculated data such as component minimum required thickness, corrosion rates, remaining service life, and next scheduled inspection date based on the API 653 code calculations or Risk Based Inspection default settings.

The tanks will be inspected during a twelve (12) hour shift upon a day of your selection. The inspections will be performed by a three (3) man ARTIS (tank crawler) crew, two (2) man manual Ultrasonic crew, and an API inspector. The formal inspection report will be produced at our LII laboratory in Longview Texas. A site report will be forwarded to you upon exiting your job site.

The following tanks will be inspected at your El Dorado, Arkansas facility:

1. 60' diameter x 30' high Carbon Black Storage Tank (1951)
2. 50' diameter x 43' high Carbon Black Storage Tank (1989)
3. 30' diameter x 25' high bolted CB Storage Tank (1951)
4. 30' diameter x 25' high bolted CB Storage Tank (1951)
5. 30' diameter x 25' high bolted CB Storage Tank (1951)
6. 15' diameter x 15' high bolted CB Storage Tank (1951) currently out of service
7. 15' diameter x 30' long bolted horizontal CB Storage Tank (1951)

The total estimated cost for inspecting the above tanks is $7,000.00. This includes labor, travel, per diem, equipment, materials, and final reporting.

Please refer to the attached example inspection reports for typical DMAPS report generation.

Please contact the undersigned if you have any questions regarding the quotation, or any technical inquiries.

Thank you for considering Longview Inspection for your inspection, engineering, and nondestructive examination requirements.

Sincerely,
Longview Inspection

Per: _____
Dan Tweedhope, Applications Engineer

Longview Inspection Advanced Technology Group, Inc.

Company Name: ABC Chemical Company
Location: Anytown
Inspection Date: July 12, 1998
Inspection Method: UT & VT

API 653 Report On: TNK-0048 Compliant: Yes

Equipment Name: #1 Storage Tank #1
Area: Tank Farm
Service/Product: Carbon Black Oil
Manufacturer: James Machine Works
Mfr. Dwg. No.: 5457-1
Mfr. Date: January 01, 1989
N. B. No.: -
Registration No.: -
Insurance No.: -
Risk Class: Class 1 (15 Yrs), Visual Inspection (52 wks)

Calibr. Record No.: CR-000000
Inspector: J Sims/D Parsley
Cert. Level: API, LII

Short Term			Long Term		
Max. Corr. Rate:	241.5	mils/yr	Max. Corr. Rate:	55.27	mils/yr
Avg. Corr. Rate:	38.56	mils/yr	Avg. Corr. Rate:	9.85	mils/yr
Min. Remaining Life:	0.21	years	Min. Remaining Life:	0.21	years
Avg. Remaining Life:	0.87	years	Avg. Remaining Life:	3.47	years

Thickness Insp. Due: August 19, 1998

Visual Insp. Due: July 12, 1999

(Further evaluation was required and has been performed.)

Longview Inspection Advanced Technology Group, Inc.

Company Name: ABC Chemical Company
Location: Anytown
Inspection Date: July 12, 1998
Inspection Method: UT & VT

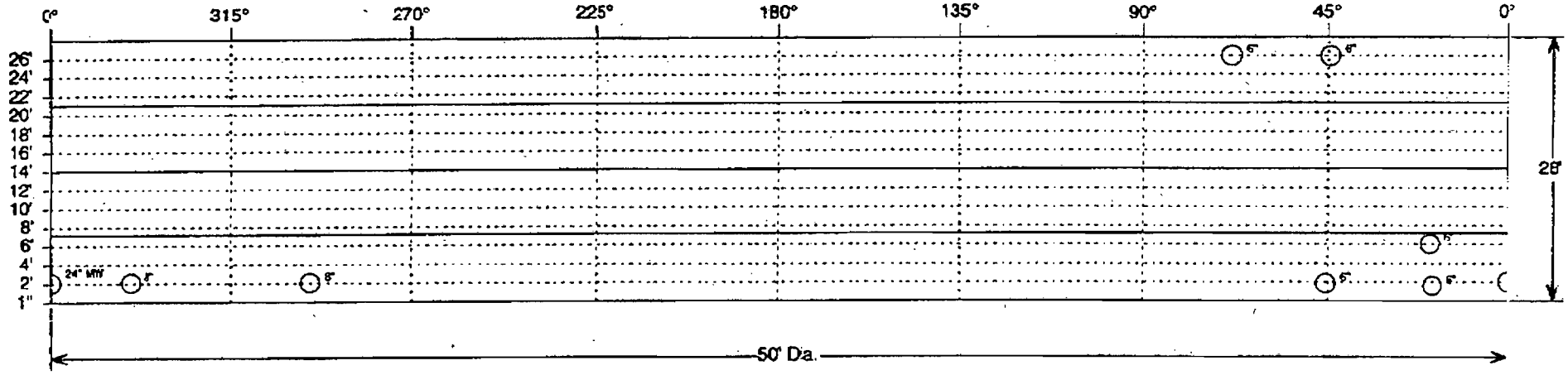
API 653 Report On: TNK-0048 — Compliant: Yes

Scope: Perform external visual observations and ultrasonic thickness values to evaluate thinning, corrosion/erosion determination, minimum required thickness, remaining service life, and time to next scheduled inspection as requested within P-4006, API 653, API 510, and LII EIP's.

Summary:
1. There are several areas of damage to the insulation weather barrier.
2. Paint failure with oxidation on the platform, manway cover, 3" nozzle and cleanout cover.
3. Paint failure under goosneck vent on the roof.
4. Corrosion & pitting up to 1/16" on roof manways flange face.
5. Several ut readings are below or approaching 50% of assumed nominal.

Results: See API Visual checklist, TML report, Component overview and drawings.
Assumptions made:
1. Design liquid level.
2. Joint eff.
3. Nominal.
4. Shell Courses.

Recommendations:
1. All damaged areas of the ins. weather barrier should be repaired.
2. All areas of paint failure should be cleaned & coated.
3. Manway flange should be cleaned & sealed to halt corrosion.
4. An internal ispection should be performed as soon as possible to evaluate the extent of corrosion & to determine actual shell courses.



	0°	45°	90°	135°	180°	225°	270°	315°
26'	0.335	0.344	0.333	0.351	0.335	0.353	-	-
24'	0.345	0.344	0.343	0.357	0.331	0.358	0.347	-
22'	0.281	0.311	0.288	0.248	0.272	0.302	0.244	-
20'	*0.177*	*0.150*	0.207	0.202	0.190	0.207	*0.186*	*0.179*
18'	0.237	0.215	0.249	0.224	0.239	0.239	0.231	0.210
16'	*0.200*	*0.173*	*0.209*	*0.202*	*0.189*	*0.201*	*0.185*	*0.166*
14'	*0.205*	0.210	*0.176*	*0.191*	*0.195*	*0.193*	0.214	*0.191*
12'	0.274	0.219	*0.209*	0.225	0.210	0.214	*0.206*	0.212
10'	0.293	0.214	0.214	*0.207*	0.257	*0.199*	0.224	0.227
8'	0.320	0.313	0.332	0.338	0.311	0.312	0.267	0.267
6'	0.367	0.377	0.392	0.395	0.388	0.382	0.351	0.338
4'	0.460	0.420	0.426	-	0.430	0.437	0.400	0.397
2'	-	0.464	0.454	-	0.452	0.456	0.439	0.454
1"	0.452	0.466	0.462	-	0.460	0.457	0.464	0.448

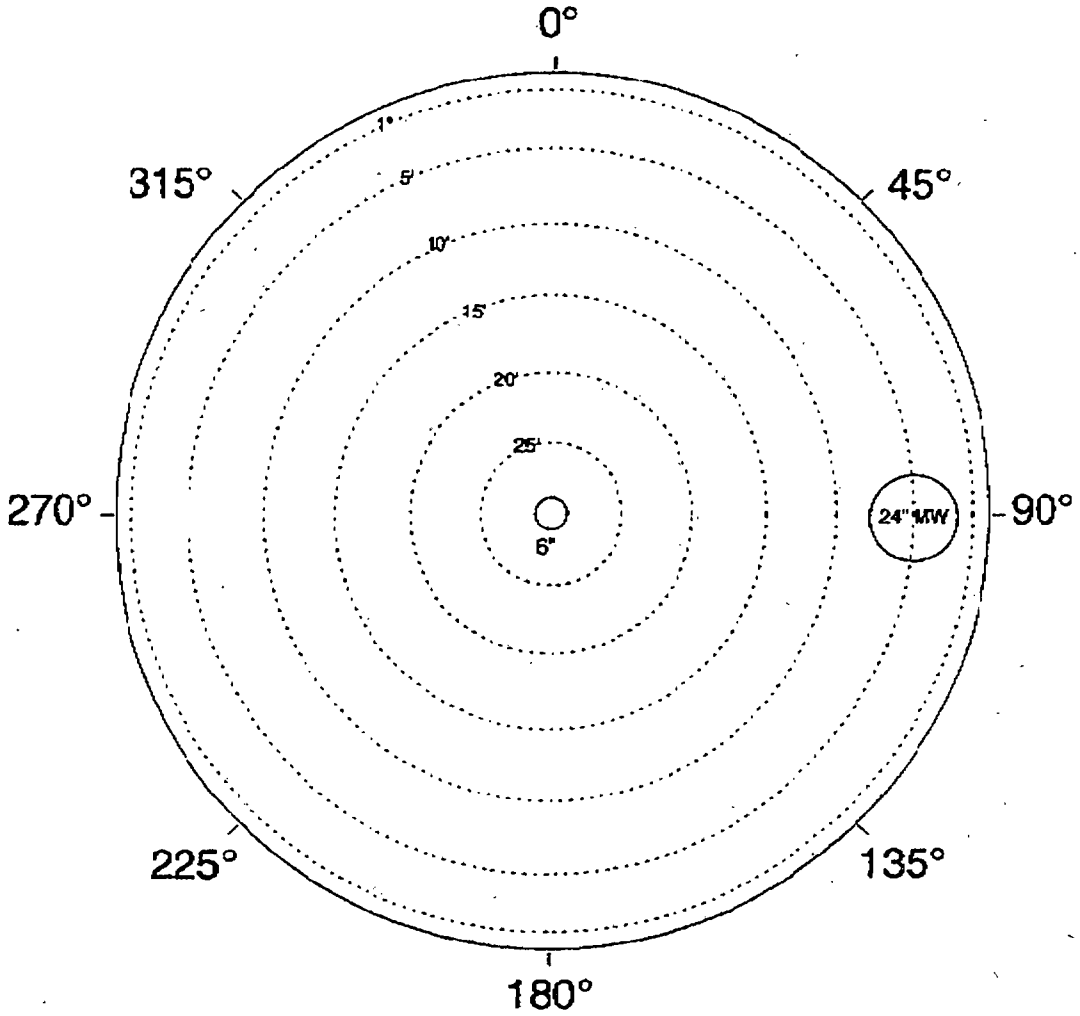
Notes:

Readings greater than: Tflag + (CorAlw / 2) are blue, normal print.

Readings greater than: Tflag but less than or equal to: Tflag + (CorAlw / 2) are green, italic print.

Readings less than or equal to: Tflag are red, bold, underlined print.

Longview Inspection	PEN LIFE (yrs) 0.21	ABC Chemical Company	SERVICE #1 Storage Tank		DWG NAME TNK-0048 Shell
	CORRATE (mils/yr) 241.50	Anytown	AREA Tank Farm	CLASS Class 1	EQUIPMENT TNK-0048	MSP DATE 7/12/98	NEXT MSP 8/19/98



Notes:

	0°	45°	90°	135°	180°	225°	270°	315°
25'	0.259	0.260	0.259	0.259	0.258	0.266	0.266	0.262
20'	0.268	0.259	0.262	0.266	0.257	0.260	0.264	0.260
15'	0.262	0.258	0.265	0.261	0.252	0.266	0.270	0.258
10'	0.264	0.259	0.262	0.287	0.256	0.264	0.266	0.264
5'	0.261	0.261	0.262	0.258	0.253	0.261	0.271	0.266
1"	0.267	0.261	0.257	0.252	0.254	0.263	0.264	0.262

Readings greater than (Tmin + .025 + CorAlw/2) are blue.

Readings greater than (Tmin + .025) but less than or equal to (Tmin + .025 + CorAlw/2) are green.

Readings less than or equal to (Tmin + .025) are red.

Longview Inspection	RDN JPE (yrs) 0.21	ABC Chemical Company	SERVICE #1 Storage Tank		DWG NAME: TNK-0048 Roof
	CORRATE (mils/yr) 241.50	Anytown	AREA: Tank Farm	Class: Class 1	EQUIPMENT: TNK-0048	INSP DATE 7/12/98	NEXT INSP 8/19/98

Longview Inspection Advanced Technology Group, Inc.

Company Name: ABC Chemical Company
Location: Anytown
Inspection Date: July 12, 1998

Equipment Number: TNK-0048
Equipment Name: #1 Storage Tank

Component Overview					Short Term [S]			Long Term [L]		
Group	Component Name	Min Rdg	Max Rdg	Avg Rdg	Avg. Corr. (mils/yr)	Max Corr. (mils/yr)	Remaining Life (yrs)	Avg. Corr. (mils/yr)	Max Corr. (mils/yr)	Remaining Life (yrs)
R01	Roof	0.252	0.287	0.263	4.67	9.61	0.208	4.67	9.61	0.208
S01	Shell	0.267	0.466	0.398	78.39	241.50	0.642	8.09	17.95	8.6
S02	Shell	0.166	0.293	0.214	40.56	87.71	0.946	17.90	55.27	1.79
S03	Shell	0.150	0.358	0.283	30.64	90.11	1.68	8.75	17.11	3.3

Readings Color Legend

- Greater than (Tflag + CorAlw / 2)
- Greater than Tflag, but less than or equal to (Tflag + CorAlw / 2)
- Less than or equal to Tflag

Corrosion Rate Color Legend

- 0 - N/A
- Greater than 0, but less than or equal to 10 (mils/yr)
- Greater than 10, but less than or equal to 20 (mils/yr)
- Greater than 20 (mils/yr)

Longview Inspection Advanced Technology Group, Inc.

Company Name: ABC Chemical Company
Location: Anytown

STORAGE TANK STATIC INFORMATION

GENERAL INFORMATION

Equip. No: TNK-0048
Equip. Name: #1 Storage Tank
Drawing No.: 5457-1
Area/Unit: Tank Farm
Service: Carbon Black Oil
Risk Class: Class 1 (15 yrs)
Manuf.: James Machine Works

Manuf. Date: Jan 01, 1989
Diameter: 50 ft.
Tank Height: 28 ft.
Capacity: 411,264 gal.
Foundation Type: Concrete
Des. Liq. Level: 28 ft.
Spec. Gravity: 1.2

Insulated: Yes
Ladder: No
Stairs: No
Leak Detect.: No
Leak Contain.: No
Cathodic Prot.: No
Overfill Prot.: No

COMPONENT DATA

ROOF INFORMATION

Install Date: Jan 01, 1989
Roof Type: Fixed Dome
Material: A-285-C
Corr. Allow.: 0.0625 in.
Nom. Thk.: 0.313 in.
Min. Thk.: 0.250 in.

FLOOR INFORMATION

Install Date: Jan 01, 1989
Annular Plate Thk.: N/A
Material: A-285-C
Corr. Allow.: 0.188 in.
Nom. Thk.: 0.438 in.
Min. Thk.: 0.350 in.

SHELL INFORMATION

Number of Courses: 3

Course Number	Install Date	Course Height	Course Length	Course Material	Allow. Stress	Joint Eff.	Thickness		Corr. Allow.	Cladding	
							Nom.	Min.		Material	Thk.
1 - Btm	Jan 01, 1989	10 ft.	N/A	A-285-C	23595	0.85	0.438"	0.112"	0.188"	N/A	N/A
2	Jan 01, 1989	10 ft.	N/A	A-285-C	23595	0.85	0.375"	0.115"	0.188"	N/A	N/A
3 - Top	Jan 01, 1989	8 ft.	N/A	A-285-C	25960	0.85	0.313"	0.093"	0.188"	N/A	N/A

Longview Inspection Advanced Technology Group, Inc.

Company Name: ABC Chemical Company
Location: Anytown
Inspection Date: July 12, 1998

Storage Tank Inspection Check List

Equipment #: TNK-0048

Item	Inspection Task	Y	N	Comments & Observations
Pre-Inspection 1	Verify tank isolated and locked out		X	External only.
7	Ensure appropiate safety equipment staged.	X		
8	Ensure appropiate personal protective equipment is been utilized.	X		
9	Ensure inspection areas have been adequately prepared.	X		
10	Ensure all personnel working on system have been briefed on potential hazards.	X		
11	Ensure Previous Inspection information has been supplied to inspectors.	X		
11.1	Minimum wall thickness	X		80% of nominal.
11.2	Nominal wall thickness	X		S01= .438" S02= .438" S03= .313" S04= .313" Roof= .313"
11.3	Previous TML location and thickness readings	X		

Storage Tank Inspection Check List

Equipment #: TNK-0048

Item	Inspection Task	Y	N	Comments & Observations
11.4	Drawing of tank	X		
11.5	Type Head/Shell etc.,	X		Roof= Dome.
11.6	Type material	X		SA-285-C
Bottom Inspection 1.1	Measure levelness of foundation and tank bottom.		X	Insulated.
1.2 (a)	Inspect for cracking, spalling, and general degradation of the concrete ring.	X		Satisfactory, but limited by insulation.
1.2 (b)	Inspect drain openings in ring and top surfaces for leaks.	X		Satisfactory, but limited by insulation.
1.6	Inspect annular plate and weldments for cracks and general corrosion / erosion. Record annular plate thickness and assess as per 2.4.8 of API 653.		X	Insulated.
External Shell Inspe 2.1 (a)	Visually inspect and record all shell course surfaces for weld and plate material integrity. Check all welded or riveted seams for indication of leakage.	X		Satisfactory, but limited by insulation viewed through UT ports.
2.1 (b)	Visually inspect and record paint / coating failures, and insulation loss. Check for associated pitting and corrosion.	X		Satisfactory, but limited by insulation viewed through UT ports
2.1 (c)	Inspect bottom angle area, and shell to annular plate welds for corrosion and thinning.		X	Insulation interference.

Storage Tank Inspection Check List

Equipment #: TNK-0048

Item	Inspection Task	Y	N	Comments & Observations
2.1 (d)	Inspect bottom to foundation seal, if any.		X	Insulation interference.
2.1 (e)	Check plumbness in accordance with 8.5.2 of API 653.		X	Insulation interference.
2.1 (g)	Check peaking in accordance with 8.5.4 of API 653.		X	Insulation interference.
2.1 (h)	Check banding in accordance with 8.5.5 of API 653.		X	Insulation interference.
2.1 (i)	Inspect insulation for evidence of weepage from leaks and possible infiltration of rain water or other liquid sources.	X		Several areas of damage to weather barrier.
2.1 (j)	Inspect all external shell anchors, attachments, stairways, ladder, handrails, platform frame and Grating, Stairway Stringers, or Rolling Ladder structural, and weldments, for corrosion pitting and deterioration.	X		Paint loss with oxidation on platform at the South side of tank.
2.1 (l)	Inspect vertical and horizontal seams for welding defects.		X	Insulation interference.
2.1 (m)	Check that supports have reinforcing pads welded to shell.	X		Satisfactory on uninsulated areas.
2.1 (n)	Inspect shell courses for arc strikes, cracks, gouges, and other mechanical / metallurgical flaws.		X	Insulation interference.
2.1 (p)	Inspect all nozzles, manways, piping manifolds and other shell appurtenances for corrosion pitting, cracks, and other anomalies. Measure wall thicknesses of components.	X		Paint loss with oxidation on 3" nozzle on East side, also on manway.cleanout covers and bolts.

Storage Tank Inspection Check List

Equipment #: TNK-0048

Item	Inspection Task	Y	N	Comments & Observations
2.1 (q)	Ultrasonically inspect for thickness for each shell course at the bottom, middle, and top of each course at (8) equidistant locations around the shell circumference. Calculate and assess as per 2.3.3 of API 653.	X		
Fixed Roof Inspectio 4.1 (a)	Visually inspect and record all roof deck plate surfaces for weld and plate material integrity. (Check edges and central rafters for thinning with UT or ball hammer prior to accessing the roof deck.)	X		Satisfactory, limited due to lime buildup.
4.1 (b)	Visually inspect and record paint / coating failures, holes, pitting and corrosion product.	X		Paint failure under gooseneck vent.
4.1 (c)	Inspect for indications of standing water where roof rafter failures may be in effect.	X		Satisfactory.
4.1 (d)	Inspect girders, supports, weldments, attachments and appurtenances for structural damage, distortion and corrosion.	X		Satisfactory.
4.1 (e)	Inspect roof scaffold supports, and walkways for corrosion.	X		Satisfactory.
4.1 (f)	Inspect all sample hatches, Gage wells, Autogages drains, vents, drains, and other roof appurtenances for corrosion.	X		Corrosion and pitting up to .063" in depth on manway flange face.
4.1 (g)	Ultrasonic test roof plate thickness at the roof center middle and edge locations upon (8) equidistant test points around the circumference of the roof.	X		

Longview Inspection Advanced Technology Group, Inc.

Company Name: ABC Chemical Company
Location: Anytown
Inspecton Date: July 12, 1998

INSPECTION CALIBRATION REPORT FOR: TNK-004B

Cal Record No.: CR-000000

Cal. Date	Cal. Time	Inspector	Cert. Level	Cal. Blk Mat	D.L. s/n:	Ducer s/n:	Couplant
July 23, 1998	07:30 AM	W Menard	IIA	C/S	93111802	298121	Ultragel II

Longview Inspection Advanced Technology Group, Inc.

Company Name: ABC Chemical Company
Location: Anytown

Equipment Number: TNK-0048
Equipment Name: #1 Storage Tank

Test Point	TML Number	T-nominal	T-flag	Corr. Rate (mils/yr)	Base Reading	Previous Reading	Current Reading	Inspection Date
001	S01-1"-000°	0.438	0.112	7.21 [S]	0.438	0.458	0.452	07/12/1998
002	S01-1"-045°	0.438	0.112	N/A	0.438	0.452	0.466	07/12/1998
003	S01-1"-090°	0.438	0.112	N/A	0.438	0.447	0.462	07/12/1998
004	S01-1"-135°	0.438	0.112	N/A	0.438	0.438	-	07/12/1998
005	S01-1"-180°	0.438	0.112	N/A	0.438	0.438	0.460	07/12/1998
006	S01-1"-225°	0.438	0.112	N/A	0.438	0.435	0.457	07/12/1998
007	S01-1"-270°	0.438	0.112	N/A	0.438	0.438	0.464	07/12/1998
008	S01-1"-315°	0.438	0.112	22.83 [S]	0.438	0.465	0.446	07/12/1998
009	S01-2'-000°	0.438	0.112	N/A	0.438	0.438	-	07/12/1998
010	S01-2'-045°	0.438	0.112	N/A	0.438	0.461	0.464	07/12/1998
011	S01-2'-090°	0.438	0.112	N/A	0.438	0.439	0.454	07/12/1998
012	S01-2'-135°	0.438	0.112	N/A	0.438	0.440	-	07/12/1998
013	S01-2'-180°	0.438	0.112	N/A	0.438	0.440	0.452	07/12/1998
014	S01-2'-225°	0.438	0.112	N/A	0.438	0.440	0.456	07/12/1998
015	S01-2'-270°	0.438	0.112	1.20 [S]	0.438	0.440	0.439	07/12/1998
016	S01-2'-315°	0.438	0.112	54.07 [S]	0.438	0.499	0.454	07/12/1998
017	S01-4'-000°	0.438	0.112	N/A	0.438	0.448	0.460	07/12/1998
018	S01-4'-045°	0.438	0.112	10.81 [S]	0.438	0.429	0.420	07/12/1998
019	S01-4'-090°	0.438	0.112	7.21 [S]	0.438	0.432	0.426	07/12/1998
020	S01-4'-135°	0.438	0.112	N/A	0.438	0.441	-	07/12/1998
021	S01-4'-180°	0.438	0.112	21.63 [S]	0.438	0.448	0.430	07/12/1998
022	S01-4'-225°	0.438	0.112	0.10 [L]	0.438	0.435	0.437	07/12/1998

Equipment Number: TNK-0048

Equipment Name: #1 Storage Tank

Test Point	TML Number	T-nominal	T-flag	Corr. Rate (mils/yr)	Base Reading	Previous Reading	Current Reading	Inspection Date
023	S01-4'-270°	0.438	0.112	38.45 [S]	0.438	0.432	0.400	07/12/1998
024	S01-4'-315°	0.438	0.112	111.74 [S]	0.438	0.490	0.397	07/12/1998
025	S01-6'-000°	0.438	0.112	99.72 [S]	0.438	0.450	0.367	07/12/1998
026	S01-6'-045°	0.438	0.112	52.87 [S]	0.438	0.421	0.377	07/12/1998
027	S01-6'-090°	0.438	0.112	37.25 [S]	0.438	0.423	0.392	07/12/1998
028	S01-6'-135°	0.438	0.112	110.54 [S]	0.438	0.487	0.395	07/12/1998
029	S01-6'-180°	0.438	0.112	79.30 [S]	0.438	0.454	0.388	07/12/1998
030	S01-6'-225°	0.438	0.112	78.10 [S]	0.438	0.447	0.382	07/12/1998
031	S01-6'-270°	0.438	0.112	142.98 [S]	0.438	0.450	0.331	07/12/1998
032	S01-6'-315°	0.438	0.112	132.16 [S]	0.438	0.448	0.338	07/12/1998
033	S01-8'-000°	0.438	0.112	117.75 [S]	0.438	0.418	0.320	07/12/1998
034	S01-8'-045°	0.438	0.112	13.12 [L]	0.438	0.316	0.313	07/12/1998
035	S01-8'-090°	0.438	0.112	40.85 [S]	0.438	0.366	0.332	07/12/1998
036	S01-8'-135°	0.438	0.112	99.72 [S]	0.438	0.421	0.338	07/12/1998
037	S01-8'-180°	0.438	0.112	129.76 [S]	0.438	0.419	0.311	07/12/1998
038	S01-8'-225°	0.438	0.112	111.74 [S]	0.438	0.405	0.312	07/12/1998
039	S01-8'-270°	0.438	0.112	206.65 [S]	0.438	0.439	0.267	07/12/1998
040	S01-8'-315°	0.438	0.112	241.50 [S]	0.438	0.468	0.267	07/12/1998
041	S02-10'-000°	0.375	0.115	8.61 [L]	0.375	0.266	0.293	07/12/1998
042	S02-10'-045°	0.375	0.115	84.10 [S]	0.375	0.284	0.214	07/12/1998
043	S02-10'-090°	0.375	0.115	55.27 [LS]	0.260	0.260	0.214	07/12/1998
044	S02-10'-135°	0.375	0.115	33.64 [S]	0.375	0.235	0.207	07/12/1998
045	S02-10'-180°	0.375	0.115	12.39 [L]	0.375	0.208	0.257	07/12/1998
046	S02-10'-225°	0.375	0.115	87.71 [S]	0.375	0.271	0.198	07/12/1998
047	S02-10'-270°	0.375	0.115	67.28 [S]	0.375	0.280	0.224	07/12/1998
048	S02-10'-315°	0.375	0.115	28.84 [S]	0.375	0.251	0.227	07/12/1998
049	S02-12'-000°	0.375	0.115	10.60 [L]	0.375	0.231	0.274	07/12/1998
050	S02-12'-045°	0.375	0.115	82.90 [S]	0.375	0.288	0.219	07/12/1998
051	S02-12'-090°	0.375	0.115	62.48 [S]	0.375	0.261	0.209	07/12/1998
052	S02-12'-135°	0.375	0.115	15.75 [L]	0.375	0.206	0.225	07/12/1998

Equipment Number: TNK-0048

Equipment Name: #1 Storage Tank

Test Point	TML Number	T-nominal	T-flag	Corr. Rate (mils/yr)	Base Reading	Previous Reading	Current Reading	Inspection Date
053	S02-12-180°	0.375	0.115	17.32 [L]	0.375	0.202	0.210	07/12/1998
054	S02-12'-225°	0.375	0.115	16.90 [L]	0.375	0.203	0.214	07/12/1998
055	S02-12'-270°	0.375	0.115	17.74 [L]	0.375	0.200	0.206	07/12/1998
056	S02-12'-315°	0.375	0.115	17.11 [L]	0.375	0.180	0.212	07/12/1998
057	S02-14'-000°	0.375	0.115	60.07 [S]	0.375	0.255	0.205	07/12/1998
058	S02-14'-045°	0.375	0.115	56.47 [S]	0.375	0.257	0.210	07/12/1998
059	S02-14'-090°	0.375	0.115	20.89 [L]	0.375	0.188	0.176	07/12/1998
060	S02-14'-135°	0.375	0.115	19.32 [L]	0.375	0.198	0.191	07/12/1998
061	S02-14'-180°	0.375	0.115	18.90 [L]	0.375	0.175	0.195	07/12/1998
062	S02-14'-225°	0.375	0.115	19.11 [L]	0.375	0.185	0.193	07/12/1998
063	S02-14'-270°	0.375	0.115	16.90 [L]	0.375	0.190	0.214	07/12/1998
064	S02-14'-315°	0.375	0.115	19.32 [L]	0.375	0.181	0.191	07/12/1998
065	S02-16'-000°	0.375	0.115	18.37 [L]	0.375	0.166	0.200	07/12/1998
066	S02-16'-045°	0.375	0.115	26.43 [S]	0.375	0.195	0.173	07/12/1998
067	S02-16'-090°	0.375	0.115	17.43 [L]	0.375	0.195	0.209	07/12/1998
068	S02-16'-135°	0.375	0.115	18.16 [L]	0.375	0.208	0.202	07/12/1998
069	S02-16'-180°	0.375	0.115	22.83 [S]	0.375	0.208	0.189	07/12/1998
070	S02-16'-225°	0.375	0.115	18.27 [L]	0.375	0.210	0.201	07/12/1998
071	S02-16'-270°	0.375	0.115	19.95 [L]	0.375	0.195	0.185	07/12/1998
072	S02-16'-315°	0.375	0.115	22.83 [S]	0.375	0.185	0.166	07/12/1998
073	S02-18'-000°	0.375	0.115	14.49 [L]	0.375	0.170	0.237	07/12/1998
074	S02-18'-045°	0.375	0.115	16.80 [L]	0.375	0.167	0.215	07/12/1998
075	S02-18'-090°	0.375	0.115	13.23 [L]	0.375	0.221	0.249	07/12/1998
076	S02-18'-135°	0.375	0.115	15.85 [L]	0.375	0.233	0.224	07/12/1998
077	S02-18'-180°	0.375	0.115	14.23 [L]	0.375	0.238	0.239	07/12/1998
078	S02-18'-225°	0.375	0.115	33.64 [S]	0.375	0.267	0.239	07/12/1998
079	S02-18'-270°	0.375	0.115	15.12 [L]	0.375	0.210	0.231	07/12/1998
080	S02-18'-315°	0.375	0.115	63.63 [S]	0.375	0.263	0.210	07/12/1998
081	S03-20'-000°	0.313	0.093	14.28 [L]	0.313	0.150	0.177	07/12/1998
082	S03-20'-045°	0.313	0.093	17.11 [L]	0.313	0.150	0.150	07/12/1998

Equipment Number: TNK-0048

Equipment Name: #1 Storage Tank

Test Point	TML Number	T-nominal	T-flag	Corr. Rate (mils/yr)	Base Reading	Previous Reading	Current Reading	Inspection Date
083	S03-20'-090°	0.313	0.093	11.13 [L]	0.313	0.181	0.207	07/12/1998
084	S03-20'-135°	0.313	0.093	11.65 [L]	0.313	0.205	0.202	07/12/1998
085	S03-20'-180°	0.313	0.093	12.91 [L]	0.313	0.194	0.190	07/12/1998
086	S03-20'-225°	0.313	0.093	11.13 [L]	0.313	0.210	0.207	07/12/1998
087	S03-20'-270°	0.313	0.093	13.33 [L]	0.313	0.173	0.186	07/12/1998
088	S03-20'-315°	0.313	0.093	14.07 [L]	0.313	0.183	0.179	07/12/1998
089	S03-22'-000°	0.313	0.093	57.67 [S]	0.313	0.329	0.281	07/12/1998
090	S03-22'-045°	0.313	0.093	37.25 [S]	0.313	0.342	0.311	07/12/1998
091	S03-22'-090°	0.313	0.093	2.62 [L]	0.313	0.264	0.288	07/12/1998
092	S03-22'-135°	0.313	0.093	6.82 [L]	0.313	0.240	0.248	07/12/1998
093	S03-22'-180°	0.313	0.093	60.07 [S]	0.313	0.322	0.272	07/12/1998
094	S03-22'-225°	0.313	0.093	40.85 [S]	0.313	0.336	0.302	07/12/1998
095	S03-22'-270°	0.313	0.093	90.11 [S]	0.313	0.319	0.244	07/12/1998
096	S03-22'-315°	0.313	0.093	N/A	0.313	0.325	-	07/12/1998
097	S03-24'-000°	0.313	0.093	N/A	0.313	0.340	0.345	07/12/1998
098	S03-24'-045°	0.313	0.093	38.45 [S]	0.313	0.376	0.344	07/12/1998
099	S03-24'-090°	0.313	0.093	44.45 [S]	0.313	0.380	0.343	07/12/1998
100	S03-24'-135°	0.313	0.093	N/A	0.313	0.352	0.357	07/12/1998
101	S03-24'-180°	0.313	0.093	20.43 [S]	0.313	0.348	0.331	07/12/1998
102	S03-24'-225°	0.313	0.093	N/A	0.313	0.350	0.358	07/12/1998
103	S03-24'-270°	0.313	0.093	N/A	0.313	0.332	0.347	07/12/1998
104	S03-24'-315°	0.313	0.093	N/A	0.313	0.360	-	07/12/1998
105	S03-26'-000°	0.313	0.093	15.62 [S]	0.313	0.348	0.335	07/12/1998
106	S03-26'-045°	0.313	0.093	N/A	0.313	0.336	0.344	07/12/1998
107	S03-26'-090°	0.313	0.093	N/A	0.313	0.328	0.333	07/12/1998
108	S03-26'-135°	0.313	0.093	7.21 [S]	0.313	0.357	0.351	07/12/1998
109	S03-26'-180°	0.313	0.093	N/A	0.313	0.335	0.335	07/12/1998
110	S03-26'-225°	0.313	0.093	N/A	0.313	0.344	0.353	07/12/1998
111	S03-26'-270°	0.313	0.093	N/A	0.313	0.339	-	07/12/1998
112	S03-26'-315°	0.313	0.093	N/A	0.313	0.341	-	07/12/1998

Equipment Number: TNK-0048

Equipment Name: #1 Storage Tank

Test Point	TML Number	T-nominal	T-flag	Corr. Rate (mils/yr)	Base Reading	Previous Reading	Current Reading	Inspection Date
113	R01-1"-000°	0.313	0.250	N/A	0.259	0.259	0.267	07/12/1998
114	R01-1"-045°	0.313	0.250	N/A	0.255	0.255	0.261	07/12/1998
115	R01-1"-090°	0.313	0.250	N/A	0.249	0.249	0.257	07/12/1998
116	R01-1"-135°	0.313	0.250	9.61 [LS]	0.260	0.260	0.252	07/12/1998
117	R01-1"-180°	0.313	0.250	N/A	0.264	0.264	0.264	07/12/1998
118	R01-1"-225°	0.313	0.250	N/A	0.246	0.246	0.263	07/12/1998
119	R01-1"-270°	0.313	0.250	N/A	0.249	0.249	0.264	07/12/1998
120	R01-1"-315°	0.313	0.250	N/A	0.250	0.250	0.262	07/12/1998
121	R01-5'-000°	0.313	0.250	N/A	0.253	0.253	0.261	07/12/1998
122	R01-5'-045°	0.313	0.250	N/A	0.258	0.258	0.261	07/12/1998
123	R01-5'-090°	0.313	0.250	N/A	0.257	0.257	0.262	07/12/1998
124	R01-5'-135°	0.313	0.250	N/A	0.258	0.258	0.258	07/12/1998
125	R01-5'-180°	0.313	0.250	2.40 [LS]	0.265	0.265	0.263	07/12/1998
126	R01-5'-225°	0.313	0.250	N/A	0.247	0.247	0.261	07/12/1998
127	R01-5'-270°	0.313	0.250	N/A	0.247	0.247	0.271	07/12/1998
128	R01-5'-315°	0.313	0.250	N/A	0.250	0.250	0.266	07/12/1998
129	R01-10'-000°	0.313	0.250	N/A	0.256	0.256	0.264	07/12/1998
130	R01-10'-045°	0.313	0.250	N/A	0.258	0.258	0.259	07/12/1998
131	R01-10'-090°	0.313	0.250	N/A	0.246	0.246	0.262	07/12/1998
132	R01-10'-135°	0.313	0.250	N/A	0.260	0.260	0.287	07/12/1998
133	R01-10'-180°	0.313	0.250	1.20 [LS]	0.267	0.267	0.266	07/12/1998
134	R01-10'-225°	0.313	0.250	N/A	0.247	0.247	0.264	07/12/1998
135	R01-10'-270°	0.313	0.250	N/A	0.248	0.248	0.266	07/12/1998
136	R01-10'-315°	0.313	0.250	N/A	0.249	0.249	0.264	07/12/1998
137	R01-15'-000°	0.313	0.250	N/A	0.258	0.258	0.263	07/12/1998
138	R01-15'-045°	0.313	0.250	N/A	0.258	0.258	0.258	07/12/1998
139	R01-15'-090°	0.313	0.250	N/A	0.246	0.246	0.265	07/12/1998
140	R01-15'-135°	0.313	0.250	N/A	0.258	0.258	0.261	07/12/1998
141	R01-15'-180°	0.313	0.250	3.60 [LS]	0.265	0.265	0.262	07/12/1998
142	R01-15'-225°	0.313	0.250	N/A	0.245	0.245	0.266	07/12/1998

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Equipment Number: TNK-0048

Equipment Name: #1 Storage Tank

Test Point	TML Number	T-nominal	T-flag	Corr. Rate (mils/yr)	Base Reading	Previous Reading	Current Reading	Inspection Date
143	R01-15'-270°	0.313	0.250	N/A	0.248	0.248	0.270	07/12/1998
144	R01-15'-315°	0.313	0.250	N/A	0.247	0.247	0.258	07/12/1998
145	R01-20'-000°	0.313	0.250	N/A	0.258	0.258	0.268	07/12/1998
146	R01-20'-045°	0.313	0.250	1.20 [LS]	0.260	0.260	0.259	07/12/1998
147	R01-20'-090°	0.313	0.250	N/A	0.245	0.245	0.262	07/12/1998
148	R01-20'-135°	0.313	0.250	N/A	0.255	0.255	0.266	07/12/1998
149	R01-20'-180°	0.313	0.250	8.41 [LS]	0.264	0.264	0.257	07/12/1998
150	R01-20'-225°	0.313	0.250	N/A	0.245	0.245	0.260	07/12/1998
151	R01-20'-270°	0.313	0.250	N/A	0.245	0.245	0.264	07/12/1998
152	R01-20'-315°	0.313	0.250	N/A	0.247	0.247	0.260	07/12/1998
153	R01-25'-000°	0.313	0.250	N/A	0.256	0.256	0.259	07/12/1998
154	R01-25'-045°	0.313	0.250	N/A	0.251	0.251	0.260	07/12/1998
155	R01-25'-090°	0.313	0.250	N/A	0.251	0.251	0.259	07/12/1998
156	R01-25'-135°	0.313	0.250	N/A	0.250	0.250	0.259	07/12/1998
157	R01-25'-180°	0.313	0.250	5.77 [LS]	0.313	0.313	0.258	07/12/1998
158	R01-25'-225°	0.313	0.250	4.93 [LS]	0.313	0.313	0.266	07/12/1998
159	R01-25'-270°	0.313	0.250	4.93 [LS]	0.313	0.313	0.266	07/12/1998
160	R01-25'-315°	0.313	0.250	N/A	0.251	0.251	0.262	07/12/1998

TML / Tflag Color Legend

TML's are colorized the same as the Reading Legend for the lowest reading on a component.

T-flag Colors
- Black for Calculated
- Purple for User Defined

Corrosion Rate Color Legend

- 0 - N/A Note: [L] = Long Term, [S] = Short Term
- Greater than 0, but less than or equal to 10 (mils/yr)
- Greater than 10, but less than or equal to 20 (mils/yr)
- Greater than 20 (mils/yr)

Readings Color Legend

- Greater than (Tflag + CorAlw / 2)
- Greater than Tflag, but less than or equal to (Tflag + CorAlw / 2)
- Less than or equal to Tflag

ATTACHMENT 6

ADEQ OPERATING AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation 26:

Permit No. : 906-AOP-R2
Renewal #1
IS ISSUED TO:
Columbian Chemicals El Dorado Plant
713 Industrial Road
El Dorado, AR 71730-6623
Union County
AFIN: 70-00014

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

AND

THE PERMITTEE IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

_____
Mike Bates
Chief, Air Division

_____
Date

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Columbian Chemicals El Dorado Plant
Permit #: 906-AOP-R2
AFIN: 70-00014

List of Acronyms and Abbreviations

A.C.A.	Arkansas Code Annotated
AFIN	ADEQ Facility Identification Number
CFR	Code of Federal Regulations
CO	Carbon Monoxide
HAP	Hazardous Air Pollutant
lb/hr	Pound Per Hour
MVAC	Motor Vehicle Air Conditioner
No.	Number
NO_x	Nitrogen Oxide
PM	Particulate Matter
PM_{10}	Particulate Matter Smaller Than Ten Microns
SNAP	Significant New Alternatives Program (SNAP)
SO_2	Sulfur Dioxide
SSM	Startup, Shutdown, and Malfunction Plan
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

SECTION I: FACILITY INFORMATION

PERMITTEE:	Columbian Chemicals El Dorado Plant
AFIN:	70-00014
PERMIT NUMBER:	906-AOP-R2
FACILITY ADDRESS:	713 Industrial Road El Dorado, AR 71730-6623
MAILING ADDRESS:	1800 West Oak Commons Court Marietta, GA 30062-2253
COUNTY:	Union
CONTACT POSITION:	Robert Vigil
TELEPHONE NUMBER:	(770) 792-9434
REVIEWING ENGINEER:	Michael H. Watt
UTM North South (Y):	Zone 15: 3673.8 km
UTM East West (X):	Zone 15: 536.5 km

SECTION II: INTRODUCTION

Summary of Permit Activity

Columbian Chemicals Company owns and operates a carbon black manufacturing facility located at 713 Industrial Road, El Dorado, Arkansas. This facility manufactures carbon black using the oil furnace process. This is the Title V Renewal Permit for this facility. The facility is updating emission calculations for particulate emissions and also removing all references to the previously permitted Unit D expansion.

Process Description

The oil furnace process is the dominant process used today in the manufacturing of carbon black. The feedstock consists primarily of an aromatic liquid hydrocarbon. The most common source of this feedstock is Gulf Coast oil refineries. Refinery cracking unit bottoms contain the condensed-ring hydrocarbons necessary for the carbon black process and can be obtained at an acceptable cost.

The first step in the production process is a cracking or pyrolysis step. The hydrocarbon feedstock is heated and injected continuously into a reactor vessel. The reactor is a specially designed furnace with injection ports located strategically around the combustion zone. The heat necessary to initiate the carbon black process in the combustion zone is provided by either the hydrocarbon feed stock or natural gas. In the reaction zone, the hydrocarbon decomposes (i.e., cracks) to form carbon black. Careful control of the process (or combustion) air is required to insure that complete combustion does not occur. The particles of carbon black generated in the reactor are carried downstream with the process gas, which is commonly referred to as Atail gas.@ This tail gas typically consists of approximately 10 to 17 percent carbon monoxide with smaller concentrations of other compounds, such as hydrogen sulfide, carbonyl sulfide, carbon disulfide, acetylene, particulate matter, sulfur dioxide, and oxides of nitrogen. The majority of the gas consists of nitrogen and contains about 40% water vapor. A portion of the tail gas is used as fuel for the dryers and boilers located at this facility. The remainder of the tail gas is currently vented to the atmosphere. Under this permit, the tail gas will be combusted in a thermal oxidizer system. In the event of routine maintenance or equipment malfunction, as provided for more specifically later in this permit, the facility will be permitted to vent a limited amount of tail gas to the atmosphere.

To stop the cracking process, water is used to cool the tail gases from the reactor to approximately 1,200 to 1,500EF (650 to 800EC). The carbon black laden tail gas is further cooled to about 450EF (230EC) by heat exchange, followed by additional injection of water.

The carbon black is separated from the tail gas by high efficiency fabric filters. Each of the three units at this facility is equipped with its own collection system.

After the separation of the tail gas and the carbon black, the carbon black is further processed to meet customer requirements. The two reactors located at Unit A produce general tread carbon

black, the reactor located at Unit B produce carcass carbon black, and the reactor located at Unit C produces specialty carbon black. A special beading process is part of the Unit A and Unit B reactor processes. Carbon black is mixed with water containing the beading binding agent and is dried in one of the unit dryers. The Unit C carbon black is beaded with a Abead oil@ to form the specialty product. Consequently, the [illegible] dryers associated with Unit C.

This facility also includes mechanical and air conveying systems that transfer the materials from the reactor/dryer system to the product storage area. The product is stored in bulk storage containers and may be shipped to the customer using one of three methods: bulk shipment in rail cars and hopper trucks, supersacks or tote bins, and smaller bags (typically 50-lb).

Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective February 15, 1999
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective December 19, 2004
Regulations of the Arkansas Operating Air Permit Program, Regulation 26, effective September 26, 2002
40 CFR Part 60, Subpart Kb New Source Performance Standards for Volatile Organic Storage Vessels
40 CFR Part 63, Subpart SS – National Emission Standards for Hazardous Air Pollutants for Process Vents.
40 CFR Part 63, Subpart YY – National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards
40 CFR Part 64, Compliance Assurance Monitoring

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The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

Emission Summary

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
Total Allowable Emissions		PM	39.70	115.00
		PM_{10}	39.7	115.0
		SO_2	1,279.4	5,417.5
		VOC	346.4	120.8
		CO	11,553.8	3,933.1
		NO_X	252.6	932.0
HAPs		Carbon Disulfide Carbonyl Sulfide Hydrogen Sulfide	11.02 1.70 14.79	43.87 6.73 58.88
Air Contaminants **		TRS**	27.61	109.55
SN	Description	Pollutant	lb/hr	tpy
12	Vapor Bag Collector Unit B	PM_{10} PM	0.6 0.60	2.6 2.60
13	Vapor Bag Collector Unit A	PM_{10} PM	0.4 0.40	1.5 1.50
14	Reject Pulsaire Collector Unit B	PM_{10} PM	1.1 1.10	4.9 4.90
15	Pulsaire Collector Unit A	PM_{10} PM	6.7 6.70	29.1 29.10
20	Air Conveying Pulsaire Unit C	PM_{10} PM	4.5 4.50	19.5 19.50
21	Twilight Tank Baghouse (Unit A & B Start-ups)	PM_{10} PM	0.2 0.20	0.7 0.70

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
23	Boilers and Dryers Combined Stack	PM_{10}	2.3	10.2
		SO_2	308.0	1,351.0
		VOC	1.4	6.2
		CO	48.1	210.0
		NO_X	37.6	165.0
		PM	2.30	10.20
		Carbon Disulfide	1.82	7.28
		Carbonyl Sulfide	0.28	1.12
		Hydrogen Sulfide	2.45	9.77
		TRS**	4.60	18.20
27	Tail gas Bypass Stack	PM_{10}	11.7	2.6
		SO_2	44.8	9.9
		VOC	334.0	73.2
		CO	11,213.0	2,455.7
		NO_X	19.6	4.3
		PM	11.70	2.60
		Carbon Disulfide	2.97	11.80
		Carbonyl Sulfide	0.46	1.81
		Hydrogen Sulfide	3.98	15.84
		TRS**	7.41	29.45
28	Natural Gas Coast Stack Unit A	PM_{10}	0.3	0.2
		SO_2	0.1	0.1
		VOC	0.2	0.1
		CO	0.5	0.3
		NO_X	3.0	1.5
		PM	0.30	0.20
29	Natural Gas Coast Stack Unit B	PM_{10}	0.3	0.2
		SO_2	0.1	0.1
		VOC	0.2	0.1
		CO	0.4	0.2
		NO_X	2.4	1.2
		PM	0.30	0.20
30	Natural Gas Coast Stack Unit C	PM_{10}	0.2	0.2
		SO_2	0.1	0.1
		VOC	0.1	0.1
		CO	0.3	0.3
		NO_X	1.5	1.5
		PM	0.20	0.20
32	Unit B Warehouse	PM_{10}	0.9	4.0
		PM	0.90	4.00

EMISSION SUMMARY				
Source Number	Description	Pollutant	Emission Rates	
			lb/hr	tpy
33	Hopper Car Unloading Vent	PM_{10}	0.9	4.0
		PM	0.90	4.00
34	Unit A Warehouse	PM_{10}	0.9	4.0
		PM	0.90	4.00
36	Feedstock Oil Tank No. 7	VOC	0.1	0.1
37	Thermal Oxidizer Stack	PM_{10}	7.1	31.0
		SO_2	926.0	4,056.0
		VOC	9.4	40.7
		CO	289.0	1,266.0
		NO_X	172.6	756.0
		PM	7.10	31.00
		Carbon Disulfide	6.23	24.79
		Carbonyl Sulfide	0.96	3.80
		Hydrogen Sulfide	8.36	33.27
		TRS**	15.60	61.90
39, 40, and 41	Unit B Reactor Vents	PM_{10}	0.7	0.1
		SO_2	0.1	0.1
		VOC	0.4	0.1
		CO	1.1	0.2
		NO_X	7.0	0.9
		PM	0.70	0.10
42 and 43	Unit C Reactor Vents	PM_{10}	0.3	0.1
		SO_2	0.1	0.1
		VOC	0.2	0.1
		CO	0.5	0.2
		NO_X	3.0	0.8
		PM	0.30	0.10
44, 45, 46, and 47	Unit A Reactor Vents	PM_{10}	0.6	0.1
		SO_2	0.1	0.1
		VOC	0.4	0.1
		CO	0.9	0.2
		NO_X	5.9	0.8
		PM	0.60	0.10

*HAPs included in the VOC totals. Other HAPs are not included in any other totals unless specifically stated.
**Air Contaminants such as ammonia, acetone, and certain halogenated solvents are not VOCs or HAPs.

SECTION III: PERMIT HISTORY

Cities Service Company owned and operated a carbon black manufacturing facility in El Dorado which began operation in the early 1950s. This facility was registered with the Department prior to July 30, 1969. In 1980, Cities Service Company formed Columbian Chemical Company as a free-standing company. With the exception of replacing outdated or uneconomical equipment, the plant operations changed little until 1989.

Permit #906-A was issued to Columbian Chemicals Company on January 18, 1989. This permit allowed the facility to make numerous modifications over a three year period. These modifications included replacing reactors on two units with newer state-of-the-art Columbian patented designs, replacing the bag filters and wet scrubbers on all units with newer technology bag filters, installing a new stack, and converting an existing natural gas fired boiler to use plant tail gas as its primary fuel.

Permit #906-A expired on December 31, 1992. An extension on this permit was granted by the Director of the Department on December 14, 1992. This extension allowed the facility to continue operation under Permit #906-A through December 31, 1993.

On November 1, 1994, this facility began operating under Consent Administrative Order (CAO) LIS-94-133.

Permit #906-AOP-R0 was issued to Columbian Chemicals Company on February 18, 1998. Columbian Chemicals proposed to install a thermal oxidizer to oxidize the unused tail gas which was previously vented to the atmosphere. Following the installation and startup of the thermal oxidizer, restrictions were placed on the use of the tail gas bypass stack, SN-27. Columbian Chemicals submitted a PSD permit application for these proposed modifications addressing emissions from all modified and affected units. The PSD section of this permit is included in Appendix A. The following are the emission changes that were included in Columbian Chemicals= PSD permit application and/or required by the Department.

1. A thermal oxidizer (SN-37) was to be installed to oxidize the uncombusted tail gas. This gas was previously routed through the tail gas bypass stack (SN-27).

2. Columbian Chemicals had the option to increase production with this permit. If the facility chooses to increase production, a new stack, SN-24, will be installed. This new stack will vent emissions from the Unit B dryers.

3. Continuous operation of source SN-27 ceased upon the installation of source SN-37.

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Permit 906-AOP-R1 was issued to Columbian Chemicals Company on August 9, 2001. Columbian Chemicals proposed to install a new unit (Unit D which involves SN-08, SN-31, SN-48, SN-49, SN-60, SN-61, and SN-63) in order to increase production of carcass carbon black and also install a new dryer stack for emissions from Unit B and Unit D (SN-24). (Note: Columbian Chemicals Company was allowed to install a separate dryer stack for Unit B under Permit #906-AOP-R0. However, the facility never installed the stack.) This was a PSD modification and the PSD section is included in Appendix B.

SECTION IV: SPECIFIC CONDITIONS

SN-12, SN-13
Vapor Bag Collectors

Source Description

These baghouses control the particulate emissions from the indirect-fired dryers located at Units A and B. (Unit C does not have a dryer.) SN-12 is located at Unit B, while SN-13 is located at Unit A. Sources SN-12 and SN-13 were both installed or last modified in 1988. These sources are permitted to run at capacity for 8,760 hours per year. Therefore, no throughput records are required to be kept for these sources.

Specific Conditions

1. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #12 and equipment limitations. [§19.501 et seq. of Regulation #19, effective December 19, 2004, and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
12	PM_{10}	0.6	2.6
13	PM_{10}	0.4	1.5

2. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #12 and equipment limitations. [§18.801 of Regulation #18, effective February 15, 1999, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
12	PM	0.60	2.60
13	PM	0.40	1.50

3. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

SN	Limit	Regulatory Citation
12	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
13	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

4. The permittee shall conduct weekly observations of the opacity from sources SN-12 and SN-13 and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. This condition only applies when the facility is operating. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN-14, SN-15, SN-20, SN-32, and SN-34
Conveying, Reject, Equipment Vent, and Warehouse Bag Collectors

Source Description

At Unit A, carbon black is pneumatically conveyed from the main unit bag collector to the conveying pulseaire bag collector (SN-15) above the dense tank. The conveying pulseaire bag collector also receives carbon black rejected from the product screens, discharge from the warehouse bag collector, and venting from the dense tank and downstream mechanical conveying equipment. The Unit A warehouse bag collector (SN-34) vents some mechanical conveying equipment, the unit=s bag packaging system, and the venting during the loading of hopper cars and trucks. Carbon black discharged from the collector is returned to the conveying pulseaire bag collector.

At Unit B, powder carbon black is mechanically conveyed by a series of screw conveyors and a bucket elevator from the main unit bag collector to the dense tank and does not require a conveying pulseaire bag collector. Also at Unit B, a reject pulseaire bag collector (SN-14) is located above the dense tank to receive carbon black rejected from the product screens, discharge from the warehouse bag collector, venting from the dense tank, and downstream mechanical conveying equipment. The Unit B warehouse bag collector (SN-32) vents some mechanical conveying equipment, the unit=s bag packaging system, and the venting during the loading of hopper cars and trucks. Carbon black discharged from the collector is returned to the reject pulseaire collector.

At Unit C, powder carbon black is pneumatically conveyed from the main unit bag collector to the conveying pulseaire bag collector (SN-20) above the dense tank. Alternatively, carbon black from Unit C may be directed to Unit A, combining with the Unit A production for beading and drying. The conveying pulseaire bag collector also receives carbon black rejected from the product screens and venting from the dense tank, downstream mechanical conveying equipment, and loading railroad hopper cars and trucks.

These sources are subject to 40 CFR 64, Compliance Assurance Monitoring. CAM for these sources will be demonstrated by the opacity requirements of Specific Condition #7

Specific Conditions

5. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #9, Plantwide Condition #12, and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
14	PM_{10}	1.1	4.9
15	PM_{10}	6.7	29.1
20	PM_{10}	4.5	19.5
32	PM_{10}	0.9	4.0
34	PM_{10}	0.9	4.0

6. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #9, Plantwide Condition #12, and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
14	PM	1.10	4.90
15	PM	6.70	29.10
20	PM	4.50	19.50
32	PM	0.90	4.00
34	PM	0.90	4.00

7. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

SN	Limit	Regulatory Citation
14	5%	§18.501 of Regulation #18, 40 CFR Part 64, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
15	5%	§18.501 of Regulation #18, 40 CFR Part 64, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
20	5%	§18.501 of Regulation #18, 40 CFR Part 64, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
32	5%	§18.501 of Regulation #18, 40 CFR Part 64, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
34	5%	§18.501 of Regulation #18, 40 CFR Part 64, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

8. The permittee shall conduct weekly observations of the opacity from sources SN-14, SN-15, SN-20, SN-32, and SN-34 and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. This condition only applies when the facility is operating. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

9. The permittee shall not exceed the limits set forth in the following table at the designated sources in any consecutive twelve month period. [' 18.1004 of Regulation #18, ' 19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. ' 8-4-203 as referenced by ' 8-4-304 and ' 8-4-311]

Source	Process Rate Units (PRUs)
32	100,604
34	138,518

10. The permittee shall maintain records which demonstrate compliance with Specific Condition #9. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request, and may be used by the Department for enforcement purposes. An annual total and each month=s individual data shall be submitted to the Department in accordance with General Provision #7. [' 19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]

SN-21
Twilight Tank Baghouse (Unit A & B Start-Ups)

Source Description

Units A and B share a twilight tank (start-up tank) which is divided into two compartments. On occasion, carbon black being reprocessed would be dense phase conveyed to the twilight tank, venting the air through the twilight tank bag collector (SN-21). Normally, the bag collector functions as a vent for the tank.

Specific Conditions

11. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #12 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	0.2	0.7

12. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Plantwide Condition #12 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.20	0.70

13. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

SN	Limit	Regulatory Citation
21	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

14. The permittee shall conduct weekly observations of the opacity from source SN-21 and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. This condition only applies when the facility is operating. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

SN-23
Boilers and Dryers Combined Stack

Source Description

This source vents emissions from the boilers and Unit A and B dryers. Emissions from this source are the result of the combustion of tail gas. The dryers and boilers are permitted to operate at capacity for 8,760 hours per year.

The following table lists the BACT Limits and Determinations for this source:

Pollutant	BACT Limit	BACT Determination
SO_2	Maximum 3% Sulfur by Weight in Blended Feedstock Oil	Fuel Limitations
NO_X	300 ppm by Volume on a Wet Basis	Good Combustion

Specific Conditions

15. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #21 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	2.3	10.2
VOC	1.4	6.2
CO	48.1	210.0

16. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #21 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	2.30	10.20
Carbon Disulfide	1.82	7.28
Carbonyl Sulfide	0.28	1.12
Hydrogen Sulfide	2.45	9.77
TRS	4.60	18.20

17. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #20 and #21, Plantwide Conditions #8 and #10, and equipment limitations. [§19.501 et seq. and §19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
SO_2	308.0	1,351.0
NO_x	37.6	165.0

18. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

SN	Limit	Regulatory Citation
23	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

19. The permittee shall conduct weekly observations of the opacity from source SN-23 and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. This condition only applies when the facility is operating. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

20. The permittee shall not emit NO_X in concentrations exceeding 300 ppm by volume on a wet basis. Compliance with this condition will be demonstrated by Specific Condition #21 and equipment limitations. [' 19.501 et seq. and ' 19.901 et seq. of Regulation 19 and 40 CFR Part 52, Subpart E]

21. The permittee shall annually conduct the following tests using the indicated test method unless another method is approved by the Department at least 15 days prior to the test taking place. This condition only applies when the facility is operating. [' 19.702 and ' 19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	EPA Reference Method
SO_2	6C
NO_X	7E
TRS	15

22. The Department reserves the right to require CEMS for sulfur dioxide and total reduced sulfur at source SN-23 if the compliance tests show that the mass balance method of calculating the amount of sulfur being emitted is inaccurate. The Department will provide the permittee the CEMS standards in the future if necessary. Inaccurate is defined, for the purposes of this specific condition, as a deviation of more than 5% from the tested emission rate. [' 19.703 and ' 19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. ' 8-4-203 as referenced by ' 8-4-304 and ' 8-4-311]

23. The permittee may propose an alternate method of demonstrating continual compliance for sulfur dioxide, oxides of nitrogen, and total reduced sulfur emissions to include monitoring flue gas temperature, oxygen content (in accordance with 40 CFR Part 60, Appendix B, Performance Specification 3), and the sulfur mass balance method. This method must demonstrate acceptability through the concurrent measurements during the first two compliance tests of this source. The first compliance test was performed prior to

the issuance of this permit. [' 19.703 and ' 19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. ' 8-4-203 as referenced by ' 8-4-304 and ' 8-4-311]

SN-27
Tail Gas Bypass Stack

Source Description

Uncombusted tail gas is vented through this source. Due to the installation of the thermal oxidizer (SN-37), this source is not permitted to operate continuously.

Specific Conditions

24. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #28 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	11.7	2.6
SO_2	44.8	9.9
VOC	334.0	73.2
CO	11,213.0	2,455.7
NO_x	19.6	4.3

25. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #28 and equipment limitations. [Regulation 18, §18.801, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	11.70	2.60
Carbon Disulfide	2.97	11.80
Carbonyl Sulfide	0.46	1.81
Hydrogen Sulfide	3.98	15.84
TRS	7.41	29.45

26. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

SN	Limit	Regulatory Citation
27	10%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

27. The permittee shall conduct weekly observations of the opacity from source SN-27 and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. This condition only applies when the facility is operating. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

28. The permittee shall not operate source SN-27 in excess of 438 hours in any consecutive twelve month period. [' 19.705 and ' 19.901et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR ' 70.6, and A.C.A. ' 8-4-203 as referenced by ' 8-4-304 and ' 8-4-311]

29. The permittee shall maintain records of the hours of operation of source SN-27 in order to demonstrate compliance with Specific Condition #28 and which may be used by the Department for enforcement purposes. These records shall be updated no later than the tenth day of the month following the month which the records represent, shall be kept on site, and shall be made available to Department personnel upon request. An annual total and each month=s individual data shall be submitted to the Department in accordance with General Provision 7. [' 19.705 and ' 19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

SN-28, SN-29, and SN-30
Natural Gas Coast Stacks

Source Description

The natural gas coast stacks for Units A, B, and C were installed in the late 1980's and early 1990's. These stacks exhaust to the reactors when natural gas is being fired to keep the units heated. There is no carbon black production during these periods.

Specific Conditions

30. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #34 and #35, and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
28	PM_{10}	0.3	0.2
	SO_2	0.1	0.1
	VOC	0.2	0.1
	CO	0.5	0.3
	NO_x	3.0	1.5
29	PM_{10}	0.3	0.2
	SO_2	0.1	0.1
	VOC	0.2	0.1
	CO	0.4	0.2
	NO_x	2.4	1.2
30	PM_{10}	0.2	0.2
	SO_2	0.1	0.1
	VOC	0.1	0.1
	CO	0.3	0.3
	NO_x	1.5	1.5

31. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #34 and #35, and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
28	PM	0.30	0.20
29	PM	0.30	0.20
30	PM	0.20	0.20

32. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

SN	Limit	Regulatory Citation
28	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
29	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
30	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

33. The permittee shall conduct weekly observations of the opacity from sources SN-28, SN-29, and SN-30 and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. This condition only applies when the facility is operating. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

34. Only emissions which are the result of the combustion of natural gas shall be vented at sources SN-28, SN-29, and SN-30. [' 18.1004 of Regulation #18, ' 19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. ' 8-4-203 as referenced by ' 8-4-304 and ' 8-4-311]

35. The permittee shall only operate sources SN-28, SN-29, and SN-30 during periods of non-production. [' 18.1004 of Regulation #18, ' 19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. ' 8-4-203 as referenced by ' 8-4-304 and ' 8-4-311]

36. The permittee shall maintain records of the hours of operation of sources SN-28, SN-29, and SN-30 and the hours of non-production at those sources in order to demonstrate compliance with Specific Condition #35 which may be used by the Department for enforcement purposes. These records shall be updated monthly, kept on site, and shall be made available to Department personnel upon request. [' 19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]

SN-33
Hopper Car Unloading Vent

Source Description

A hopper car unloading collector (SN-33) is occasionally used during the emptying of returned railroad hopper cars or hopper trucks.

Specific Conditions

37. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #41 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	0.9	4.0

38. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #41 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	0.90	4.00

39. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

SN	Limit	Regulatory Citation
33	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

40. The permittee shall conduct weekly observations of the opacity from source SN-33 and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. This condition only applies when the facility is operating. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

41. The permittee shall not process in excess of 284,700 Process Rate Units in any consecutive twelve month period. [' 18.1004 of Regulation #18, ' 19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. ' 8-4-203 as referenced by ' 8-4-304 and ' 8-4-311]

42. The permittee shall maintain records which demonstrate compliance with Specific Condition #41. The records shall be updated on a monthly basis. These records shall be kept on site, provided to Department personnel upon request, and may be used by the Department for enforcement purposes. An annual total and each month=s individual data shall be submitted to the Department in accordance with General Provision #7. [' 18.1004 of Regulation #18, ' 19.705 of Regulation #19, and 40 CFR Part 52, Subpart E]

SN-36
Feedstock Oil Tank No. 7

Source Description

The feedstock oil tank stores the raw materials which are used at this facility. The carbon black feedstock is similar to residual #6 fuel oil. The material stored in this tank has a vapor pressure less than 0.5 psia. Source SN-36 has a volume of 2384.8 m^3 (630, 000 gallons).

Therefore, under 40 CFR ' 60.110b(c), this source is exempt from most of the requirements of 40 CFR Part 60, Subpart A, and 40 CFR Part 60, Subpart Kb. The only requirements are the notification and record keeping requirements.

Specific Conditions

43. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
VOC	0.1	0.1

44. The permittee shall not store any materials at SN-36 which have a true vapor pressure in excess of 0.5 psia. [' 19.705 of Regulation #19, 40 CFR ' 70.6, and A.C.A. ' 8-4-203 as referenced by ' 8-4-304 and ' 8-4-311]

45. The permittee shall maintain records of the dimensions of SN-36 on site. These records shall be made available to Department personnel upon request. [' 19.705 of Regulation #19, 40 CFR ' 70.6, and 40 CFR Part 52, Subpart E]

SN-37
Thermal Oxidizer Stack

Source Description

The thermal oxidizer will be used to oxidize the tail gas which is not used as fuel for the product dryers and the tail gas boilers. This source is capable of oxidizing 2.58 MMSCF/hr of tail gas. The oxidizer will operate at approximately 1900EF, have a residence time of 0.4 seconds, and a destruction and removal efficiency of 98% for VOCs and CO.

The following table lists the BACT Limits and Determinations for this source:

Pollutant	BACT Limit	BACT Determination
SO_2	Maximum 3% Sulfur by Weight in Blended Feedstock Oil	Fuel Limitations
NO_X	300 ppm by Volume on a Wet Basis	Good Combustion

Specific Conditions

46. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #52 and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
PM_{10}	7.1	31.0
VOC	9.4	40.7
CO	289.0	1,266.0

47. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #52 and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Pollutant	lb/hr	tpy
PM	7.10	31.00
Carbon Disulfide	6.23	24.79
Carbonyl Sulfide	0.96	3.80
Hydrogen Sulfide	8.36	33.27
TRS	15.60	61.90

48. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Condition #52, Plantwide Conditions #8 and #10, and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Pollutant	lb/hr	tpy
SO_2	926.0	4,056.0
NO_x	172.6	756.0

49. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

SN	Limit	Regulatory Citation
37	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

50. The permittee shall conduct weekly observations of the opacity from source SN-37 and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. This condition only applies when the facility is operating. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

51. The permittee shall not emit NO_X in concentrations exceeding 300 ppm by volume on a wet basis. Compliance with this condition will be demonstrated by Specific Condition #52 and equipment limitations. [' 19.501 et seq. and ' 19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

52. The permittee shall annually conduct the following tests using the indicated test method unless another method is approved by the Department at least 15 days prior to the test taking place. This condition only applies when the facility is operating. [' 19.702 and ' 19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E.]

Pollutant	EPA Reference Method
SO_2	6C
NO_X	7E
TRS	15

53. The Department reserves the right to require CEMS for sulfur dioxide and total reduced sulfur at source SN-37 if the compliance tests show that the mass balance method of calculating the amount of sulfur being emitted is inaccurate. The Department will provide the permittee the CEMS standards in the future if necessary. Inaccurate is defined, for the purposes of this specific condition, as a deviation of more than 5% from the tested emission rate. [' 19.703 and ' 19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. ' 8-4-203 as referenced by ' 8-4-304 and ' 8-4-311]

54. The permittee may propose an alternate method of demonstrating continual compliance for sulfur dioxide, oxides of nitrogen, and total reduced sulfur emissions to include monitoring flue gas temperature, oxygen content (in accordance with 40 CFR Part 60, Appendix B, Performance Specification 3), and the sulfur mass balance method. This method must demonstrate acceptability through the concurrent measurements during the first two compliance tests of this source. The first compliance test was performed prior to

the issuance of this permit. [' 19.703 and ' 19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, and A.C.A. ' 8-4-203 as referenced by ' 8-4-304 and ' 8-4-311]

SN-39 through SN-47
Reactor Vents

Source Description

All of the reactor vents emit pollutants caused by the combustion of natural gas. The emissions are vented through the stacks only during times of non-production. During times of production, the combustion products are sent through a heat exchanger. Hourly emissions have been calculated based upon the maximum amount that could be emitted through during an hour of non-production. Annual emissions have been based upon the number of non-production hours which this facility expects to have in any consecutive twelve month period.

Two reactors are located at Unit A. There is one reactor vent before and one reactor vent after each of the heat exchangers (SN-44 through SN-47) at Unit A. Each of the natural gas combustion sources which vent through SN-44 through SN-47 has a rated capacity of 10.5 MMBTU/hr and was installed or last modified in 1966.

One reactor is located at Unit B. At Unit B, there are two reactor vents before and one reactor vent after the heat exchanger (SN-39 through SN-41). Each of the natural gas combustion sources which vent through SN-39 through SN-41 has a rated capacity of 16.5 MMBTU/hr and was installed or last modified in 1979.

One reactor is located at Unit C. Unit C has one reactor vent before and one reactor vent after the heat exchanger (SN-42 and SN-43). Each of the natural gas combustion sources which vent through SN-42 and SN-43 has a rated capacity of 10.5 MMBTU/hr and was installed or last modified in 1977.

Specific Conditions

55. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #59 and #60, and equipment limitations. [§19.501 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

Source	Pollutant	lb/hr	tpy
39, 40, and 41	PM_{10}	0.7	0.1
	SO_2	0.1	0.1
	VOC	0.4	0.1
	CO	1.1	0.2
	NO_x	7.0	0.9
42 and 43	PM_{10}	0.3	0.1
	SO_2	0.1	0.1
	VOC	0.2	0.1
	CO	0.5	0.2
	NO_x	3.0	0.8
44, 45, 46, and 47	PM_{10}	0.6	0.1
	SO_2	0.1	0.1
	VOC	0.4	0.1
	CO	0.9	0.2
	NO_x	5.9	0.8

56. The permittee shall not exceed the emission rates set forth in the following table. The permittee shall demonstrate compliance with this condition by Specific Conditions #59 and #60, and equipment limitations. [§18.801 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

Source	Pollutant	lb/hr	tpy
39, 40, and 41	PM	0.70	0.10
42 and 43	PM	0.30	0.10
44, 45, 46, and 47	PM	0.60	0.10

57. Visible emissions may not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9.

SN	Limit	Regulatory Citation
39, 40, and 41	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
42 and 43	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311
44, 45, 46, and 47	5%	§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311

58. The permittee shall conduct weekly observations of the opacity from source SN-39 and keep a record of these observations. If the permittee detects visible emissions, the permittee must immediately take action to identify and correct the cause of the visible emissions. After implementing the corrective action, the permittee must document that the source complies with the visible emissions requirements. The permittee shall maintain records of the cause of any visible emissions and the corrective action taken. The permittee must keep these records onsite and make them available to Department personnel upon request. This condition only applies when the facility is operating. [§18.501 of Regulation #18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

59. Only emissions which are the result of the combustion of natural gas shall be vented at sources SN-39, through SN-47. [' 18.1004 of Regulation #18, ' 19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. ' 8-4-203 as referenced by ' 8-4-304 and ' 8-4-311]

60. The permittee shall only operate sources SN-39 through SN-47 during periods of non-production. [' 18.1004 of Regulation #18, ' 19.705 of Regulation #19, 40 CFR 70.6, and A.C.A. ' 8-4-203 as referenced by ' 8-4-304 and ' 8-4-311]

61. The permittee shall maintain records of the hours of operation of sources SN-39 through SN-47 and the hours of non-production in order to demonstrate compliance with Specific Condition #60 and which may be used by the Department for enforcement purposes. These records shall be updated monthly, kept on site, and shall be made available to Department personnel upon request. [' 19.705 of Regulation #19 and 40 CFR Part 52, Subpart E]

SECTION V: COMPLIANCE PLAN AND SCHEDULE

Columbian Chemicals El Dorado Plant will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that [illegible]

SECTION VI: PLANTWIDE CONDITIONS

1. The permittee shall notify the Director in writing within thirty (30) days after commencing construction, completing construction, first placing the equipment and/or facility in operation, and reaching the equipment and/or facility target production rate. [Regulation 19, §19.704, 40 CFR Part 52, Subpart E, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

2. If the permittee fails to start construction within eighteen months or suspends construction for eighteen months or more, the Director may cancel all or part of this permit. [Regulation 19, §19.410(B) and 40 CFR Part 52, Subpart E]

3. The permittee must test any equipment scheduled for testing, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) new equipment or newly modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start up of the permitted source or (2) operating equipment according to the time frames set forth by the Department or within 180 days of permit issuance if no date is specified. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee shall submit the compliance test results to the Department within thirty (30) days after completing the testing. [Regulation 19, §19.702 and/or Regulation 18 §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

4. The permittee must provide: [Regulation 19, §19.702 and/or Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

   a. Sampling ports adequate for applicable test methods;
   b. Safe sampling platforms;
   c. Safe access to sampling platforms; and
   d. Utilities for sampling and testing equipment.

5. The permittee must operate the equipment, control apparatus and emission monitoring equipment within the design limitations. The permittee shall maintain the equipment in good condition at all times. [Regulation 19, §19.303 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

6. This permit subsumes and incorporates all previously issued air permits for this facility. [Regulation 26 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

7. The permittee must prepare and implement a Startup, Shutdown, and Malfunction Plan (SSM). If the Department requests a review of the SSM, the permittee will make the SSM available for review. The permittee must keep a copy of the SSM at the source's location and retain all previous versions of the SSM plan for five years. [Regulation 19, §19.304 and 40 CFR 63.6(e)(3)]

8. The sulfur content of the feedstock oil may not exceed 3.0% by weight. If feedstock oil with a sulfur content greater than 3.0% by weight is received, the permittee may blend it with feedstock oil that has a lower sulfur content in order to meet the 3.0% limit. [' 19.705 and ' 19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. ' 8-4-203 as referenced by ' 8-4-304 and ' 8-4-311]

9. The permittee shall maintain records of any feedstock blending which takes place. The daily testing of the sulfur content of the feedstock oil required for the sulfur mass balance may be used to satisfy this requirement. [' 19.705 and ' 19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

10. The permittee shall use a mass balance to calculate the combined sulfur emissions from SN-23 and SN-37. The following variables shall be recorded weekly or as noted below:

    a. The sulfur content of the feedstock oil once per day at the header valve as the oil enters each unit,
    b. The sulfur content of each type of carbon black produced at each of the four units,
    c. The amount of feedstock oil processed in each of the three units,
    d. The amount of each type of carbon black produced in each unit,
    e. The amount of sulfur entering the units (This will be calculated by multiplying the sulfur content of the feedstock oil by the amount of oil processed),
    f. The amount of sulfur contained in the carbon black products (This will be calculated by multiplying the sulfur contents of each type of carbon black by the amount that was produced), and
    g. The combined amount of SO_2 emitted from sources SN-23 and SN-37 (This will be calculated by multiplying 0.98 times twice the difference between the amount of sulfur entering the units and the amount of sulfur contained in the carbon black products from the three units).

11. The permittee shall maintain records of the sulfur mass balance calculations in order to demonstrate compliance with the emission rates for sources SN-23 and SN-37 and which may be used by the Department for the enforcement purposes. The permittee shall update the sulfur mass balance records at least once per week and make these records available to Department personnel upon request. [' 19.705 and ' 19.901 et seq. of Regulation #19 and 40 CFR Part 52, Subpart E]

12. The permittee shall not produce in excess of 368,241 Process Rate Units of carbon black at this facility in any consecutive twelve month period. [' 19.705 and ' 19.901 et seq. of Regulation #19, 40 CFR Part 52, Subpart E, 40 CFR 70.6, and A.C.A. ' 8-4-203 as referenced by ' 8-4-304 and ' 8-4-311]

13. The permittee shall maintain records of the number of Process Rate Units of carbon black produced in order to demonstrate compliance with Plantwide Condition #12 and which may be used by the Department for enforcement purposes. These records shall be updated weekly, kept on site, and shall be made available to Department personnel upon request. These records shall be submitted to the Department in accordance with General Provision 7. [' 19.705 and ' 19.901 et seq. of Regulation #19, and 40 CFR Part 52, Subpart E]

MACT SS

14. This facility is considered an affected source and is subject, but not limited to, the requirements of 40 CFR Part 63, Subpart SS. [' 19.304 of Regulation #19 and 40 CFR 63, Subpart SS - National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process]

15. At least 6 months before startup of this facility, the permittee shall submit to the Department a permit modification which lists all applicable requirements and the method(s) of demonstrating compliance with those requirements. [' 19.304 of Regulation #19 and 40 CFR 63, Subpart SS - National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process]

MACT YY

16. This facility is considered an affected source and is subject, but not limited to, the requirements of 40 CFR Part 63, Subpart YY. [' 19.304 of Regulation #19 and 40 CFR 63.1103(f), Subpart YY - National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards]

17. This permittee has chosen to comply with Option ii of Table 8 listed in 40 CFR 63.1103(f). The requirements of this condition are as follows:

    Reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of §63.982(a)(2).

    The permittee shall submit a compliance plan at least 6 months before operation on the methods used to demonstrate compliance with Option ii of Table 8 and §63.982(a)(2).

Permit Shield

18. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in the following table of this condition. The permit specifically identifies the following as applicable requirements based upon the information submitted by the permittee in an application dated April 7, 2005.

Applicable Regulations

Source No.	Regulation	Description
36	40 CFR Part 60, Subpart Kb	New Source Performance Standards for Volatile Organic Storage Vessels
Facility	40 CFR Part 63, Subpart SS	National Emission Standards for Hazardous Air Pollutants for Process Vents.
Facility	40 CFR Part 63, Subpart YY	National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards
Baghouses	CAM	Compliance Assurance Monitoring

The permit specifically identifies the following as inapplicable based upon information submitted by the permittee in an application dated April 7, 2005.

Inapplicable Regulations

Source No.	Regulation	Description
Boilers	NSPS D, Db, Dc	New Source Performance Standards for Boilers

Title VI Provisions

19. The permittee must comply with the standards for labeling of products using ozone-depleting substances. [40 CFR Part 82, Subpart E]

    a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.

    b. The placement of the required warning statement must comply with the requirements pursuant to §82.108.

c. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.

d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

20. The permittee must comply with the standards for recycling and emissions reduction, except as provided for MVACs in Subpart B. [40 CFR Part 82, Subpart F]

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.

c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.

d. Persons disposing of small appliances, MVACs, and MVAC like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC like appliance" as defined at §82.152)

e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.

f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

21. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR Part 82, Subpart A, Production and Consumption Controls.

22. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC 22 refrigerant.

23. The permittee can switch from any ozone depleting substance to any alternative listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR Part 82, Subpart G.

SECTION VII: INSIGNIFICANT ACTIVITIES

The following sources are insignificant activities. Any activity that has a state or federal applicable requirement shall be considered a significant activity even if this activity meets the criteria of §26.304 of Regulation 26 or listed in the table below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated April 7, 2005.

Description	Category
Feedstock Oil Tanks (SN-01 through SN-06)	A-13
Bead oil Sludge Tank (SN-35)	A-3
Bead oil Tanks (SN-51 through SN-53)	A-3
Potassium Carbonate Solution Tank (SN-38)	A-3

SECTION VIII: GENERAL PROVISIONS

1. Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.). Any terms or conditions included in this permit which specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 et seq.) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute. [40 CFR 70.6(b)(2)]

2. This permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later. [40 CFR 70.6(a)(2) and §26.701(B) of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26), effective September 26, 2002]

3. The permittee must submit a complete application for permit renewal at least six (6) months before permit expiration. Permit expiration terminates the permittee's right to operate unless the permittee submitted a complete renewal application at least six (6) months before permit expiration. If the permittee submits a complete application, the existing permit will remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due. [Regulation 26, §26.406]

4. Where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, et seq. (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, the permit incorporates both provisions into the permit, and the Director or the Administrator can enforce both provisions. [40 CFR 70.6(a)(1)(ii) and Regulation 26, §26.701(A)(2)]

5. The permittee must maintain the following records of monitoring information as required by this permit. [40 CFR 70.6(a)(3)(ii)(A) and Regulation 26, §26.701(C)(2)]

    a. The date, place as defined in this permit, and time of sampling or measurements;
    b. The date(s) analyses performed;
    c. The company or entity performing the analyses;
    d. The analytical techniques or methods used;
    e. The results of such analyses; and
    f. The operating conditions existing at the time of sampling or measurement.

6. The permittee must retain the records of all required monitoring data and support information for at least five (5) years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. [40 CFR 70.6(a)(3)(ii)(B) and Regulation 26, §26.701(C)(2)(b)]

7. The permittee must submit reports of all required monitoring every six (6) months. If permit establishes no other reporting period, the reporting period shall end on the last day of the anniversary month of the initial Title V permit. The report is due within thirty (30) days of the end of the reporting period. Although the reports are due every six months, each report shall contain a full year of data. The report must clearly identify all instances of deviations from permit requirements. A responsible official as defined in Regulation No. 26, §26.2 must certify all required reports. The permittee will send the reports to the address below: [40 C.F.R. 70.6(a)(3)(iii)(A) and Regulation 26, §26.701(C)(3)(a)]

   Arkansas Department of Environmental Quality
   Air Division
   ATTN: Compliance Inspector Supervisor
   Post Office Box 8913
   Little Rock, AR 72219

8. The permittee shall report to the Department all deviations from permit requirements, including those attributable to upset conditions as defined in the permit.

   a. For all upset conditions (as defined in Regulation19, § 19.601), the permittee will make an initial report to the Department by the next business day after the discovery of the occurrence. The initial report my be made by telephone and shall include:

      i. The facility name and location
      ii. The process unit or emission source deviating from the permit limit,
      iii. The permit limit, including the identification of pollutants, from which deviation occurs,
      iv. The date and time the deviation started,
      v. The duration of the deviation,
      vi. The average emissions during the deviation,
      vii. The probable cause of such deviations,
      viii. Any corrective actions or preventive measures taken or being taken to prevent such deviations in the future, and
      ix. The name of the person submitting the report.

The permittee shall make a full report in writing to the Department within five (5) business days of discovery of the occurrence. The report must include, in addition to the information required by the initial report, a schedule of actions taken or planned to eliminate future occurrences and/or to minimize the amount the permit's limits were exceeded and to reduce the length of time the limits were exceeded. The permittee may submit a full report in writing (by facsimile, overnight courier, or other means) by the next business day after discovery of the occurrence, and the report will serve as both the initial report and full report.

b. For all deviations, the permittee shall report such events in semi-annual reporting and annual certifications required in this permit. This includes all upset conditions reported in 8a above. The semi-annual report must include all the information as required by the initial and full reports required in 8a.

[Regulation 19, §19.601 and §19.602, Regulation 26, §26.701(C)(3)(b), and 40 CFR 70.6(a)(3)(iii)(B)]

9. If any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity will not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable. [40 CFR 70.6(a)(5), Regulation 26, §26.701(E), and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

10. The permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation 26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. §7401, et seq. and is grounds for enforcement action; for permit termination, revocation and reissuance, for permit modification; or for denial of a permit renewal application. [40 CFR 70.6(a)(6)(i) and Regulation 26, §26.701(F)(1)]

11. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit. [40 CFR 70.6(a)(6)(ii) and Regulation 26, §26.701(F)(2)]

12. The Department may modify, revoke, reopen and reissue the permit or terminate the permit for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [40 CFR 70.6(a)(6)(iii) and Regulation 26, §26.701(F)(3)]

13. This permit does not convey any property rights of any sort, or any exclusive privilege. [40 CFR 70.6(a)(6)(iv) and Regulation 26, §26.701(F)(4)]

14. The permittee must furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee must also furnish to the Director copies of records required by the permit. For information the permittee claims confidentiality, the Department may require the permittee to furnish such records directly to the Director along with a claim of confidentiality. [40 CFR 70.6(a)(6)(v) and Regulation 26, §26.701(F)(5)]

15. The permittee must pay all permit fees in accordance with the procedures established in Regulation 9. [40 CFR 70.6(a)(7) and Regulation 26, §26.701(G)]

16. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes provided for elsewhere in this permit. [40 CFR 70.6(a)(8) and Regulation 26, §26.701(H)]

17. If the permit allows different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the operational scenario. [40 CFR 70.6(a)(9)(i) and Regulation 26, §26.701(I)(1)]

18. The Administrator and citizens may enforce under the Act all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, unless the Department specifically designates terms and conditions of the permit as being federally unenforceable under the Act or under any of its applicable requirements. [40 CFR 70.6(b) and Regulation 26, §26.702(A) and (B)]

19. Any document (including reports) required by this permit must contain a certification by a responsible official as defined in Regulation 26, §26.2. [40 CFR 70.6(c)(1) and Regulation 26, §26.703(A)]

20. The permittee must allow an authorized representative of the Department, upon presentation of credentials, to perform the following: [40 CFR 70.6(c)(2) and Regulation 26, §26.703(B)]

    a. Enter upon the permittee's premises where the permitted source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
    b. Have access to and copy, at reasonable times, any records required under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and

d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for assuring compliance with this permit or applicable requirements.

21. The permittee shall submit a compliance certification with the terms and conditions contained in the permit, including emission limitations, standards, or work practices. The permittee must submit the compliance certification annually within 30 days following the last day of the anniversary month of the initial Title V permit. The permittee must also submit the compliance certification to the Administrator as well as to the Department. All compliance certifications required by this permit must include the following: [40 CFR 70.6(c)(5) and Regulation 26, §26.703(E)(3)]

    a. The identification of each term or condition of the permit that is the basis of the certification;
    b. The compliance status;
    c. Whether compliance was continuous or intermittent;
    d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit;
    e. and Such other facts as the Department may require elsewhere in this permit or by §114(a)(3) and §504(b) of the Act.

22. Nothing in this permit will alter or affect the following: [Regulation 26, §26.704(C)]

    a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
    b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
    c. The applicable requirements of the acid rain program, consistent with §408(a) of the Act or,
    d. The ability of EPA to obtain information from a source pursuant to §114 of the Act.

23. This permit authorizes only those pollutant emitting activities addressed in this permit. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

APPENDIX A
Permit 906-AOP-R0 PSD Section

APPENDIX B
Permit 906-AOP-R1 PSD Section

APPENDIX C

40 CFR Part 60, Subpart Kb New Source Performance Standards for Volatile Organic Storage Vessels

APPENDIX D

40 CFR Part 63, Subpart SS – National Emission Standards for Hazardous Air Pollutants for Process Vents.

APPENDIX E

40 CFR Part 63, Subpart YY – National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards.

ATTACHMENT 7

ATTACHMENT 8

ATTACHMENT 9

ADEQ

9

July 06, 2007

COLUMBIAN CHEMICALS COMPANY
713 INDUSTRIAL ROAD
EL DORADO, AR 71730

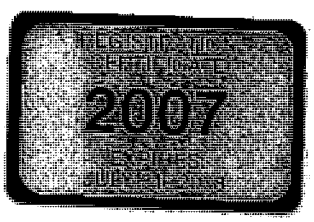
Reference: Registration Renewals for Owner ID: 006599

Dear: COLUMBIAN CHEMICALS COMPANY

Arkansas DEQ has received payment for the following Facilties under your ownership. Please find enclosed a renewal sticker for each Facility listed.

RST Facility Number	Name	Address	Number of Tanks AST	Number of Tanks UST
70001661	COLUMBIAN CHEMICALS CO	713 INDUSTRIAL RD EL DORADO, AR 71730	4	0

If you have any questions relating to the information contained within this letter, or if you require further assistance, please contact us directly.



REGULATED STORAGE TANKS DIVISION
8001 NATIONAL DRIVE / POST OFFICE BOX 8913 / LITTLE ROCK, ARKANSAS 72219-8913 / TELEPHONE 501-682-0999 / FAX 501-682-0971
www.adeq.state.ar.us

ATTACHMENT 10

D & D Properties
713 Industrial Rd.
El Dorado, Ar. 71730

Tank 6 (1000 bbl) behind the office was used to place approx. 180 bbls of crude oil which came from a pipe removal job in Smackover, Ar. The oil was in the tank for about a month. It was sent to a oil treating plant to be sold to a refinery.

Thanks,
Darrell

Dee agrees with this

ATTACHMENT 11

ATTACHMENT 12

ATTACHMENT 13

United State Environmental Protection Agency
Mail Code: 6EN-H
1445 Ross Avenue, Suite 1200
Dallas, Texas 75201

UNITED STATES POSTAGE
PITNEY BOWES
02 1M $ 11.45⁰
0004252306 APR 17 2008
MAILED FROM ZIP CODE 75202

Mr. Ryan Benefield, Chief
Hazardous Waste Division
Arkansas Department of Environmental
Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

Appendix 2 – Tank 5 & 6 Product Analytical

AMERICAN INTERPLEX CORPORATION
LABORATORIES

FCC Environmental
ATTN: Ms. Beth McGarity
1900 145th Street
Little Rock, AR 72206

This report contains the analytical results and supporting information for the sample submitted on December 12, 2012. Attached please find a copy of the Chain of Custody and/or other documents received. Note that any remaining sample will be discarded two weeks from the original report date unless other arrangements are made.

This report is intended for the sole use of the client listed above. Assessment of the data requires access to the entire document.

This report has been reviewed by the Laboratory Director or a qualified designee.

John Overbey
Laboratory Director

This document has been distributed to the following:

PDF cc: FCC Environmental
ATTN: Ms. Beth McGarity
beth.mcgarity@fccenvironmental.com

FCC Environmental
1900 145th Street
Little Rock, AR 72206

SAMPLE INFORMATION

Project Description:
One (1) oil sample(s) received on December 12, 2012
DMI-002
P.O. No. 035739

Receipt Details:
A Chain of Custody was provided with the sample(s).

Each sample container was checked for proper labeling, including date and time sampled. Sample containers were reviewed for proper type, adequate volume, integrity, temperature, preservation, and holding times. Any exceptions are noted below:

Sample Identification:

Laboratory ID	Client Sample ID	Sampled Date/Time	Notes
163288-1	DMI-002 11DEC12 11am	11-Dec-2012 1100	1

Notes:
1. Sample label was incomplete in regard to date/time of sampling

Case Narrative:
Elevated reporting limits for Volatile Organic Compounds are due to matrix interference.

Analysis of soils/sludges are reported on a dry-weight basis unless specified.

References:
"Methods for Chemical Analysis of Water and Wastes", EPA/600/4-79-020 (Mar 1983) with updates and supplements EPA/600/5-91-010 (Jun 1991), EPA/600/R-92-129 (Aug 1992) and EPA/600/R-93-100 (Aug 1993).
"Test Methods for Evaluating Solid Waste Physical/Chemical Methods (SW846)", Third Edition.
"Standard Methods for the Examination of Water and Wastewaters", 21st edition.
"American Society for Testing and Materials" (ASTM).
"Association of Analytical Chemists" (AOAC).

AMERICAN INTERPLEX CORPORATION LABORATORIES

FCC Environmental
1900 145th Street
Little Rock, AR 72206

ANALYTICAL RESULTS

AIC No. 163288-1
Sample Identification: DMI-002 11DEC12 11am

Analyte		Result	RL	Units	Qualifier
Aluminum		**36**	4	**mg/Kg**	
ICP-AES	Prep: 12-Dec-2012 1523 by 100	Analyzed: 13-Dec-2012 1219 by 305		Batch: S33652	
Arsenic		**< 5**	5	**mg/Kg**	
ICP-AES	Prep: 12-Dec-2012 1523 by 100	Analyzed: 13-Dec-2012 1219 by 305		Batch: S33652	
Cadmium		**< 0.4**	0.4	**mg/Kg**	
ICP-AES	Prep: 12-Dec-2012 1523 by 100	Analyzed: 13-Dec-2012 1219 by 305		Batch: S33652	
Calcium		**48**	10	**mg/Kg**	
ICP-AES	Prep: 12-Dec-2012 1523 by 100	Analyzed: 13-Dec-2012 1219 by 305		Batch: S33652	
Chromium		**4.4**	0.7	**mg/Kg**	
ICP-AES	Prep: 12-Dec-2012 1523 by 100	Analyzed: 13-Dec-2012 1219 by 305		Batch: S33652	
Iron		**310**	0.7	**mg/Kg**	
ICP-AES	Prep: 12-Dec-2012 1523 by 100	Analyzed: 13-Dec-2012 1219 by 305		Batch: S33652	
Lead		**15**	4	**mg/Kg**	
ICP-AES	Prep: 12-Dec-2012 1523 by 100	Analyzed: 13-Dec-2012 1219 by 305		Batch: S33652	
Silicon		**100**	10	**mg/Kg**	
ICP-AES	Prep: 12-Dec-2012 1523 by 100	Analyzed: 13-Dec-2012 1219 by 305		Batch: S33652	
Ash		**0.18**	0.01	**%**	
ASTM D482-87		Analyzed: 12-Dec-2012 1415 by 07		Batch: C15593	
Flash Point, PMCC		**169**		**deg.F**	
ASTM D93-85		Analyzed: 12-Dec-2012 1309 by 07		Batch: C15588	
Volatile Organic Compounds By EPA 5035, 8260C					
Acetone		**< 5000**	5000	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Benzene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Bromobenzene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Bromochloromethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Bromodichloromethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Bromoform		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Bromomethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
2-Butanone		**< 5000**	5000	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Carbon disulfide		**< 5000**	5000	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Carbon Tetrachloride		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	

FCC Environmental
1900 145th Street
Little Rock, AR 72206

ANALYTICAL RESULTS

AIC No. 163288-1 (Continued)
Sample Identification: DMI-002 11DEC12 11am

Analyte		Result	RL	Units	Qualifier
Volatile Organic Compounds By EPA 5035, 8260C (Continued)					
Chlorobenzene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Chloroethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
2-Chloroethyl vinyl ether		**< 5000**	5000	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Chloroform		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Chloromethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
2-Chlorotoluene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
4-Chlorotoluene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,2-Dibromo-3-chloropropane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Dibromochloromethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,2-Dibromoethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Dibromomethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,2-Dichlorobenzene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,3-Dichlorobenzene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,4-Dichlorobenzene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Dichlorodifluoromethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,1-Dichloroethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,2-Dichloroethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,1-Dichloroethene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
cis-1,2-Dichloroethene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
trans-1,2-Dichloroethene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	

FCC Environmental
1900 145th Street
Little Rock, AR 72206

ANALYTICAL RESULTS

AIC No. 163288-1 (Continued)
Sample Identification: DMI-002 11DEC12 11am

Analyte		Result	RL	Units	Qualifier
Volatile Organic Compounds By EPA 5035, 8260C (Continued)					
1,2-Dichloropropane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,3-Dichloropropane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
2,2-Dichloropropane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,1-Dichloropropene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
cis-1,3-Dichloropropene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
trans-1,3-Dichloropropene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Ethylbenzene		**79000**	13000	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 13-Dec-2012 1522 by 301		Batch: V8173	
Hexachlorobutadiene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
2-Hexanone		**< 5000**	5000	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Isopropylbenzene		**24000**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
m&p-Xylenes		**320000**	25000	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 13-Dec-2012 1522 by 301		Batch: V8173	
4-Methyl-2-pentanone		**< 5000**	5000	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Methylene chloride		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
n-Butylbenzene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
n-Propylbenzene		**100000**	13000	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 13-Dec-2012 1522 by 301		Batch: V8173	
Naphthalene		**490000**	25000	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 13-Dec-2012 1744 by 301		Batch: V8173	
o-Xylene		**150000**	13000	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 13-Dec-2012 1522 by 301		Batch: V8173	
p-Isopropyltoluene		**46000**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
sec-Butylbenzene		**33000**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Styrene		**9200**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	

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ANALYTICAL RESULTS

AIC No. 163288-1 (Continued)
Sample Identification: DMI-002 11DEC12 11am

Analyte		Result	RL	Units	Qualifier
Volatile Organic Compounds By EPA 5035, 8260C (Continued)					
tert-Butylbenzene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,1,1,2-Tetrachloroethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,1,2,2-Tetrachloroethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Tetrachloroethene		**25000**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Toluene		**110000**	13000	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 13-Dec-2012 1522 by 301		Batch: V8173	
1,2,3-Trichlorobenzene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,2,4-Trichlorobenzene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,1,1-Trichloroethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,1,2-Trichloroethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Trichloroethene		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Trichlorofluoromethane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,2,3-Trichloropropane		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
1,2,4-Trimethylbenzene		**960000**	50000	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 13-Dec-2012 1702 by 301		Batch: V8173	
1,3,5-Trimethylbenzene		**210000**	13000	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 13-Dec-2012 1522 by 301		Batch: V8173	
Vinyl acetate		**< 5000**	5000	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Vinyl chloride		**< 2500**	2500	**ug/Kg**	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Surrogate: 4-Bromofluorobenzene (85.0-120%)		105		%	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Surrogate: Dibromofluoromethane (79.2-112%)		87.0		%	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	
Surrogate: Toluene-D8 (85.0-115%)		101		%	
EPA 5035, 8260C	Prep: 12-Dec-2012 1311 by 301	Analyzed: 12-Dec-2012 2351 by 301		Batch: V8173	

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DUPLICATE RESULTS

Analyte		AIC No.	Result	RPD	RPD Limit	Preparation Date	Analysis Date	Dil	Qual
Flash Point, PMCC		163055-3	84.2 deg.F				10Dec12 1301 by 07		
	Batch: C15588	Duplicate	86.0 deg.F	2.12	20.0		10Dec12 1302 by 07		
Ash		163288-1	0.18 %				12Dec12 1415 by 07		
	Batch: C15593	Duplicate	0.18 %	2.26	10.4		12Dec12 1415 by 07		
Aluminum		163288-1	36 mg/Kg			12Dec12 1523 by 100	13Dec12 1219 by 305		
	Batch: S33652	Duplicate	36 mg/Kg	0.932	20.0	12Dec12 1524 by 100	13Dec12 1214 by 305		
Aluminum		163292-1	< 4 mg/Kg			12Dec12 1523 by 100	13Dec12 1229 by 305		
	Batch: S33652	Duplicate	< 4 mg/Kg	0.00	20.0	12Dec12 1524 by 100	13Dec12 1224 by 305		
Arsenic		163272-1	< 5 mg/Kg			12Dec12 1523 by 100	13Dec12 1209 by 305		
	Batch: S33652	Duplicate	< 5 mg/Kg	0.00	20.0	12Dec12 1524 by 100	13Dec12 1204 by 305		
Arsenic		163288-1	< 5 mg/Kg			12Dec12 1523 by 100	13Dec12 1219 by 305		
	Batch: S33652	Duplicate	< 5 mg/Kg	0.00	20.0	12Dec12 1524 by 100	13Dec12 1214 by 305		
Arsenic		163292-1	< 5 mg/Kg			12Dec12 1523 by 100	13Dec12 1229 by 305		
	Batch: S33652	Duplicate	< 5 mg/Kg	0.00	20.0	12Dec12 1524 by 100	13Dec12 1224 by 305		
Cadmium		163272-1	< 0.4 mg/Kg			12Dec12 1523 by 100	13Dec12 1209 by 305		
	Batch: S33652	Duplicate	< 0.4 mg/Kg	0.00	20.0	12Dec12 1524 by 100	13Dec12 1204 by 305		
Cadmium		163288-1	< 0.4 mg/Kg			12Dec12 1523 by 100	13Dec12 1219 by 305		
	Batch: S33652	Duplicate	< 0.4 mg/Kg	0.00	20.0	12Dec12 1524 by 100	13Dec12 1214 by 305		
Cadmium		163292-1	< 0.4 mg/Kg			12Dec12 1523 by 100	13Dec12 1229 by 305		
	Batch: S33652	Duplicate	< 0.4 mg/Kg	0.00	20.0	12Dec12 1524 by 100	13Dec12 1224 by 305		
Calcium		163288-1	48 mg/Kg			12Dec12 1523 by 100	13Dec12 1219 by 305		
	Batch: S33652	Duplicate	50 mg/Kg	4.06	20.0	12Dec12 1524 by 100	13Dec12 1214 by 305		
Chromium		163272-1	1.7 mg/Kg			12Dec12 1523 by 100	13Dec12 1209 by 305		
	Batch: S33652	Duplicate	1.7 mg/Kg	0.0844	20.0	12Dec12 1524 by 100	13Dec12 1204 by 305		
Chromium		163288-1	4.4 mg/Kg			12Dec12 1523 by 100	13Dec12 1219 by 305		
	Batch: S33652	Duplicate	4.3 mg/Kg	1.56	20.0	12Dec12 1524 by 100	13Dec12 1214 by 305		
Chromium		163292-1	< 0.7 mg/Kg			12Dec12 1523 by 100	13Dec12 1229 by 305		
	Batch: S33652	Duplicate	< 0.7 mg/Kg	0.00	20.0	12Dec12 1524 by 100	13Dec12 1224 by 305		
Iron		163272-1	360 mg/Kg			12Dec12 1523 by 100	13Dec12 1209 by 305		
	Batch: S33652	Duplicate	360 mg/Kg	1.01	20.0	12Dec12 1524 by 100	13Dec12 1204 by 305		
Iron		163288-1	310 mg/Kg			12Dec12 1523 by 100	13Dec12 1219 by 305		
	Batch: S33652	Duplicate	310 mg/Kg	1.61	20.0	12Dec12 1524 by 100	13Dec12 1214 by 305		
Iron		163292-1	1.8 mg/Kg			12Dec12 1523 by 100	13Dec12 1229 by 305		
	Batch: S33652	Duplicate	1.9 mg/Kg	5.68	20.0	12Dec12 1524 by 100	13Dec12 1224 by 305		
Lead		163272-1	14 mg/Kg			12Dec12 1523 by 100	13Dec12 1209 by 305		
	Batch: S33652	Duplicate	13 mg/Kg	1.16	20.0	12Dec12 1524 by 100	13Dec12 1204 by 305		
Lead		163288-1	15 mg/Kg			12Dec12 1523 by 100	13Dec12 1219 by 305		
	Batch: S33652	Duplicate	15 mg/Kg	0.518	20.0	12Dec12 1524 by 100	13Dec12 1214 by 305		
Lead		163292-1	< 4 mg/Kg			12Dec12 1523 by 100	13Dec12 1229 by 305		
	Batch: S33652	Duplicate	< 4 mg/Kg	0.00	20.0	12Dec12 1524 by 100	13Dec12 1224 by 305		
Silicon		163272-1	110 mg/Kg			12Dec12 1523 by 100	14Dec12 0947 by 305		
	Batch: S33652	Duplicate	110 mg/Kg	3.83	20.0	12Dec12 1524 by 100	14Dec12 0944 by 305		
Silicon		163288-1	100 mg/Kg			12Dec12 1523 by 100	13Dec12 1219 by 305		
	Batch: S33652	Duplicate	110 mg/Kg	3.07	20.0	12Dec12 1524 by 100	13Dec12 1214 by 305		
Volatile Compounds									
Acetone		163273-1	< 10 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 10 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		

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DUPLICATE RESULTS

Analyte		AIC No.	Result	RPD	RPD Limit	Preparation Date	Analysis Date	Dil	Qual
Benzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Bromobenzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Bromochloromethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Bromodichloromethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Bromoform		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Bromomethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
2-Butanone		163273-1	< 10 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 10 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Carbon disulfide		163273-1	< 10 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 10 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Carbon Tetrachloride		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Chlorobenzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Chloroethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
2-Chloroethyl vinyl ether		163273-1	< 1 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 1 mg/Kg	0.00	20.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Chloroform		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Chloromethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
2-Chlorotoluene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
4-Chlorotoluene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,2-Dibromo-3-chloropropane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Dibromochloromethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,2-Dibromoethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Dibromomethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,2-Dichlorobenzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,3-Dichlorobenzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,4-Dichlorobenzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Dichlorodifluoromethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		

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DUPLICATE RESULTS

Analyte		AIC No.	Result	RPD	RPD Limit	Preparation Date	Analysis Date	Dil	Qual
Volatile Compounds (Continued)									
1,1-Dichloroethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,2-Dichloroethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,1-Dichloroethene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
cis-1,2-Dichloroethene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
trans-1,2-Dichloroethene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,2-Dichloropropane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,3-Dichloropropane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
2,2-Dichloropropane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,1-Dichloropropene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
cis-1,3-Dichloropropene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
trans-1,3-Dichloropropene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Ethylbenzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Hexachlorobutadiene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
2-Hexanone		163273-1	< 5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Isopropylbenzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
m&p-Xylenes		163273-1	< 1 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 1 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
4-Methyl-2-pentanone		163273-1	< 5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Methylene chloride		163273-1	< 2 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 2 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
n-Butylbenzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
n-Propylbenzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Naphthalene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
o-Xylene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
p-Isopropyltoluene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		

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DUPLICATE RESULTS

Analyte		AIC No.	Result	RPD	RPD Limit	Preparation Date	Analysis Date	Dil	Qual
sec-Butylbenzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Styrene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
tert-Butylbenzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,1,1,2-Tetrachloroethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,1,2,2-Tetrachloroethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Tetrachloroethene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Toluene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,2,3-Trichlorobenzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,2,4-Trichlorobenzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,1,1-Trichloroethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,1,2-Trichloroethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Trichloroethene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Trichlorofluoromethane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,2,3-Trichloropropane		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,2,4-Trimethylbenzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
1,3,5-Trimethylbenzene		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Vinyl acetate		163273-1	< 5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 5 mg/Kg	0.00	20.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
Vinyl chloride		163273-1	< 0.5 mg/Kg			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	< 0.5 mg/Kg	0.00	30.0	12Dec12 1311 by 301	13Dec12 1434 by 301		
4-Bromofluorobenzene (85.0-120%)		163273-1	88.7 %			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	89.9 %			12Dec12 1311 by 301	13Dec12 1434 by 301		
Dibromofluoromethane (79.2-112%)		163273-1	95.6 %			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	96.0 %			12Dec12 1311 by 301	13Dec12 1434 by 301		
Toluene-D8 (85.0-115%)		163273-1	91.2 %			12Dec12 1311 by 301	13Dec12 1345 by 301		
	Batch: V8173	Duplicate	94.5 %			12Dec12 1311 by 301	13Dec12 1434 by 301		

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Analyte	Spike Amount	%	Limits	RPD	Limit	Batch	Preparation Date	Analysis Date	Dil	Qual
Aluminum	500 mg/Kg	95.8	85.0-115			S33652	12Dec12 1524 by 100	13Dec12 1155 by 305		
	500 mg/Kg	95.2	85.0-115	0.653	20.0	S33652	12Dec12 1524 by 100	13Dec12 1159 by 305		
Arsenic	500 mg/Kg	95.7	85.0-115			S33652	12Dec12 1524 by 100	13Dec12 1155 by 305		
	500 mg/Kg	95.5	85.0-115	0.242	20.0	S33652	12Dec12 1524 by 100	13Dec12 1159 by 305		
Cadmium	500 mg/Kg	94.0	85.0-115			S33652	12Dec12 1524 by 100	13Dec12 1155 by 305		
	500 mg/Kg	93.7	85.0-115	0.348	20.0	S33652	12Dec12 1524 by 100	13Dec12 1159 by 305		
Calcium	1000 mg/Kg	97.5	85.0-115			S33652	12Dec12 1524 by 100	13Dec12 1155 by 305		
	1000 mg/Kg	97.6	85.0-115	0.0477	20.0	S33652	12Dec12 1524 by 100	13Dec12 1159 by 305		
Chromium	50.0 mg/Kg	94.4	85.0-115			S33652	12Dec12 1524 by 100	13Dec12 1155 by 305		
	50.0 mg/Kg	94.6	85.0-115	0.196	20.0	S33652	12Dec12 1524 by 100	13Dec12 1159 by 305		
Iron	500 mg/Kg	96.2	85.0-115			S33652	12Dec12 1524 by 100	13Dec12 1155 by 305		
	500 mg/Kg	95.6	85.0-115	0.586	20.0	S33652	12Dec12 1524 by 100	13Dec12 1159 by 305		
Lead	500 mg/Kg	94.8	85.0-115			S33652	12Dec12 1524 by 100	13Dec12 1155 by 305		
	500 mg/Kg	94.8	85.0-115	0.00410	20.0	S33652	12Dec12 1524 by 100	13Dec12 1159 by 305		
Silicon	500 mg/Kg	87.1	85.0-115			S33652	12Dec12 1524 by 100	13Dec12 1155 by 305		
	500 mg/Kg	85.7	85.0-115	1.65	20.0	S33652	12Dec12 1524 by 100	13Dec12 1159 by 305		
Volatile Organic Compounds										
Acetone	40.0 ug/Kg	107	20.0-160			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Benzene	20.0 ug/Kg	102	75.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Bromobenzene	20.0 ug/Kg	102	65.0-120			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Bromochloromethane	20.0 ug/Kg	102	70.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Bromodichloromethane	20.0 ug/Kg	102	70.0-130			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Bromoform	20.0 ug/Kg	103	55.0-135			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Bromomethane	20.0 ug/Kg	99.8	30.0-160			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
2-Butanone	40.0 ug/Kg	102	30.0-160			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Carbon disulfide	40.0 ug/Kg	96.7	45.0-160			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Carbon tetrachloride	20.0 ug/Kg	110	65.0-135			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Chlorobenzene	20.0 ug/Kg	104	75.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Chloroethane	20.0 ug/Kg	96.3	40.0-155			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
2-Chloroethyl vinyl ether	40.0 ug/Kg	104	74.7-120			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Chloroform	20.0 ug/Kg	101	70.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Chloromethane	20.0 ug/Kg	97.8	50.0-130			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
2-Chlorotoluene	20.0 ug/Kg	102	70.0-130			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
4-Chlorotoluene	20.0 ug/Kg	102	75.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,2-Dibromo-3-chloropropane	20.0 ug/Kg	123	40.0-135			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Dibromochloromethane	20.0 ug/Kg	104	65.0-130			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,2-Dibromoethane	20.0 ug/Kg	109	70.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Dibromomethane	20.0 ug/Kg	104	75.0-130			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,2-Dichlorobenzene	20.0 ug/Kg	106	75.0-120			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,3-Dichlorobenzene	20.0 ug/Kg	105	70.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,4-Dichlorobenzene	20.0 ug/Kg	104	70.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Dichlorodifluoromethane	20.0 ug/Kg	102	35.0-135			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,1-Dichloroethane	20.0 ug/Kg	101	75.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		

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Analyte	Spike Amount	%	Limits	RPD	Limit	Batch	Preparation Date	Analysis Date	Dil	Qual
Volatile Organic Compounds (Continued)										
1,2-Dichloroethane	20.0 ug/Kg	104	70.0-135			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,1-Dichloroethene	20.0 ug/Kg	105	65.0-135			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
cis-1,2-Dichloroethene	20.0 ug/Kg	102	65.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
trans-1,2-Dichloroethene	20.0 ug/Kg	106	65.0-135			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,2-Dichloropropane	20.0 ug/Kg	102	70.0-120			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,3-Dichloropropane	20.0 ug/Kg	105	75.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
2,2-Dichloropropane	20.0 ug/Kg	98.3	65.0-135			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,1-Dichloropropene	20.0 ug/Kg	101	70.0-135			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
cis-1,3-Dichloropropene	20.0 ug/Kg	101	70.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
trans-1,3-Dichloropropene	20.0 ug/Kg	118	65.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Ethylbenzene	20.0 ug/Kg	106	75.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Hexachlorobutadiene	20.0 ug/Kg	106	55.0-140			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
2-Hexanone	40.0 ug/Kg	116	45.0-145			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Isopropylbenzene	20.0 ug/Kg	106	75.0-130			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
m&p-Xylenes	40.0 ug/Kg	104	80.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
4-Methyl-2-pentanone	40.0 ug/Kg	120	45.0-145			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Methylene chloride	20.0 ug/Kg	115	55.0-140			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
n-Butylbenzene	20.0 ug/Kg	104	65.0-140			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
n-Propylbenzene	20.0 ug/Kg	103	65.0-135			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Naphthalene	20.0 ug/Kg	101	40.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
o-Xylene	20.0 ug/Kg	106	75.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
p-Isopropyltoluene	20.0 ug/Kg	104	75.0-135			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
sec-Butylbenzene	20.0 ug/Kg	105	65.0-130			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Styrene	20.0 ug/Kg	106	75.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
tert-Butylbenzene	20.0 ug/Kg	104	65.0-130			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,1,1,2-Tetrachloroethane	20.0 ug/Kg	104	75.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,1,2,2-Tetrachloroethane	20.0 ug/Kg	105	55.0-130			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Tetrachloroethene	20.0 ug/Kg	110	65.0-140			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Toluene	20.0 ug/Kg	108	70.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,2,3-Trichlorobenzene	20.0 ug/Kg	95.2	60.0-135			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,2,4-Trichlorobenzene	20.0 ug/Kg	98.0	65.0-130			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,1,1-Trichloroethane	20.0 ug/Kg	102	70.0-135			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,1,2-Trichloroethane	20.0 ug/Kg	106	60.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Trichloroethene	20.0 ug/Kg	104	75.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Trichlorofluoromethane	20.0 ug/Kg	105	25.0-185			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,2,3-Trichloropropane	20.0 ug/Kg	106	65.0-130			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,2,4-Trimethylbenzene	20.0 ug/Kg	105	65.0-135			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
1,3,5-Trimethylbenzene	20.0 ug/Kg	104	65.0-135			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Vinyl acetate	40.0 ug/Kg	103	51.6-137			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Vinyl chloride	20.0 ug/Kg	93.0	60.0-125			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		

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LABORATORY CONTROL SAMPLE RESULTS

Analyte	Spike Amount	%	Limits	RPD	Limit	Batch	Preparation Date	Analysis Date	Dil	Qual
Volatile Organic Compounds (Continued)										
Volatile Organic Compounds Surrogates:										
4-Bromofluorobenzene	50.0 ug/Kg	100	85.0-120			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Dibromofluoromethane	50.0 ug/Kg	94.7	79.7-113			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		
Toluene-D8	50.0 ug/Kg	102	85.0-115			V8173	12Dec12 1311 by 301	12Dec12 2015 by 301		

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MATRIX SPIKE SAMPLE RESULTS

Analyte	Sample	Spike Amount	%	Limits	Batch	Preparation Date	Analysis Date	Dil	Qual
Volatile Organic Compounds									
Acetone	163273-1	40 ug/Kg	73.8	20.0-160	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Benzene	163273-1	20 ug/Kg	105	75.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Bromobenzene	163273-1	20 ug/Kg	104	65.0-120	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Bromochloromethane	163273-1	20 ug/Kg	103	70.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Bromodichloromethane	163273-1	20 ug/Kg	88.4	70.0-130	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Bromoform	163273-1	20 ug/Kg	90.2	55.0-135	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Bromomethane	163273-1	20 ug/Kg	97.1	30.0-160	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
2-Butanone	163273-1	40 ug/Kg	128	30.0-160	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Carbon disulfide	163273-1	40 ug/Kg	95.8	45.0-160	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Carbon tetrachloride	163273-1	20 ug/Kg	109	65.0-135	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Chlorobenzene	163273-1	20 ug/Kg	105	75.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Chloroethane	163273-1	20 ug/Kg	98.6	40.0-155	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
2-Chloroethyl vinyl ether	163273-1	40 ug/Kg	101	47.5-132	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Chloroform	163273-1	20 ug/Kg	113	70.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Chloromethane	163273-1	20 ug/Kg	107	50.0-130	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
2-Chlorotoluene	163273-1	20 ug/Kg	104	70.0-130	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
4-Chlorotoluene	163273-1	20 ug/Kg	104	75.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,2-Dibromo-3-chloropropane	163273-1	20 ug/Kg	134	40.0-135	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Dibromochloromethane	163273-1	20 ug/Kg	92.0	65.0-130	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,2-Dibromoethane	163273-1	20 ug/Kg	99.0	70.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Dibromomethane	163273-1	20 ug/Kg	88.2	75.0-130	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,2-Dichlorobenzene	163273-1	20 ug/Kg	106	75.0-120	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,3-Dichlorobenzene	163273-1	20 ug/Kg	107	70.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,4-Dichlorobenzene	163273-1	20 ug/Kg	106	70.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Dichlorodifluoromethane	163273-1	20 ug/Kg	118	35.0-135	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,1-Dichloroethane	163273-1	20 ug/Kg	107	75.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,2-Dichloroethane	163273-1	20 ug/Kg	99.4	70.0-135	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,1-Dichloroethene	163273-1	20 ug/Kg	99.2	65.0-135	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
cis-1,2-Dichloroethene	163273-1	20 ug/Kg	101	65.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
trans-1,2-Dichloroethene	163273-1	20 ug/Kg	98.4	65.0-135	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,2-Dichloropropane	163273-1	20 ug/Kg	102	70.0-120	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,3-Dichloropropane	163273-1	20 ug/Kg	101	75.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
2,2-Dichloropropane	163273-1	20 ug/Kg	110	65.0-135	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,1-Dichloropropene	163273-1	20 ug/Kg	111	70.0-135	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
cis-1,3-Dichloropropene	163273-1	20 ug/Kg	97.3	70.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
trans-1,3-Dichloropropene	163273-1	20 ug/Kg	113	65.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Ethylbenzene	163273-1	20 ug/Kg	99.6	75.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Hexachlorobutadiene	163273-1	20 ug/Kg	114	55.0-140	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
2-Hexanone	163273-1	40 ug/Kg	128	45.0-145	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Isopropylbenzene	163273-1	20 ug/Kg	105	75.0-130	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		

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Analyte	Sample	Spike Amount	%	Limits	Batch	Preparation Date	Analysis Date	Dil	Qual
Volatile Organic Compounds (Continued)									
m&p-Xylenes	163273-1	40 ug/Kg	105	80.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
4-Methyl-2-pentanone	163273-1	40 ug/Kg	109	45.0-145	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Methylene chloride	163273-1	20 ug/Kg	97.8	55.0-140	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
n-Butylbenzene	163273-1	20 ug/Kg	115	65.0-140	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
n-Propylbenzene	163273-1	20 ug/Kg	108	65.0-135	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Naphthalene	163273-1	20 ug/Kg	122	40.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
o-Xylene	163273-1	20 ug/Kg	104	75.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
p-Isopropyltoluene	163273-1	20 ug/Kg	120	75.0-135	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
sec-Butylbenzene	163273-1	20 ug/Kg	116	65.0-130	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Styrene	163273-1	20 ug/Kg	102	75.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
tert-Butylbenzene	163273-1	20 ug/Kg	116	65.0-130	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,1,1,2-Tetrachloroethane	163273-1	20 ug/Kg	93.8	75.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,1,2,2-Tetrachloroethane	163273-1	20 ug/Kg	101	55.0-130	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Tetrachloroethene	163273-1	20 ug/Kg	107	65.0-140	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Toluene	163273-1	20 ug/Kg	98.2	70.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,2,3-Trichlorobenzene	163273-1	20 ug/Kg	121	60.0-135	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,2,4-Trichlorobenzene	163273-1	20 ug/Kg	120	65.0-130	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,1,1-Trichloroethane	163273-1	20 ug/Kg	106	70.0-135	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,1,2-Trichloroethane	163273-1	20 ug/Kg	92.2	60.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Trichloroethene	163273-1	20 ug/Kg	99.0	75.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Trichlorofluoromethane	163273-1	20 ug/Kg	97.6	25.0-185	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,2,3-Trichloropropane	163273-1	20 ug/Kg	109	65.0-130	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,2,4-Trimethylbenzene	163273-1	20 ug/Kg	113	65.0-135	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
1,3,5-Trimethylbenzene	163273-1	20 ug/Kg	110	65.0-135	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Vinyl acetate	163273-1	40 ug/Kg	89.4	0.100-149	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Vinyl chloride	163273-1	20 ug/Kg	110	60.0-125	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Volatile Organic Compounds Surrogates:									
4-Bromofluorobenzene	163273-1	50 ug/Kg	90.0	85.0-120	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Dibromofluoromethane	163273-1	50 ug/Kg	96.8	79.2-112	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		
Toluene-D8	163273-1	50 ug/Kg	93.7	85.0-115	V8173	12Dec12 1311 by 301	13Dec12 1217 by 301		

FCC Environmental
1900 145th Street
Little Rock, AR 72206

LABORATORY BLANK RESULTS

Analyte	Result	RL	PQL	QC Sample	Preparation Date	Analysis Date	Qual
Aluminum	< 4 mg/Kg	4	4	S33652-1	12Dec12 1524 by 100	13Dec12 1149 by 305	
Arsenic	< 5 mg/Kg	5	5	S33652-1	12Dec12 1524 by 100	13Dec12 1149 by 305	
Cadmium	< 0.4 mg/Kg	0.4	0.4	S33652-1	12Dec12 1524 by 100	13Dec12 1149 by 305	
Calcium	< 10 mg/Kg	10	10	S33652-1	12Dec12 1524 by 100	13Dec12 1149 by 305	
Chromium	< 0.7 mg/Kg	0.7	0.7	S33652-1	12Dec12 1524 by 100	13Dec12 1149 by 305	
Iron	< 0.7 mg/Kg	0.7	0.7	S33652-1	12Dec12 1524 by 100	13Dec12 1149 by 305	
Lead	< 4 mg/Kg	4	4	S33652-1	12Dec12 1524 by 100	13Dec12 1149 by 305	
Silicon	< 10 mg/Kg	10	10	S33652-1	12Dec12 1524 by 100	13Dec12 1149 by 305	
Volatile Organic Compounds							
Acetone	< 4.0 ug/Kg	4.0	10	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Benzene	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Bromobenzene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Bromochloromethane	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Bromodichloromethane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Bromoform	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Bromomethane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
2-Butanone	< 1.0 ug/Kg	1.0	10	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Carbon disulfide	< 1.0 ug/Kg	1.0	10	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Carbon Tetrachloride	< 2.0 ug/Kg	2.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Chlorobenzene	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Chloroethane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
2-Chloroethyl vinyl ether	< 1.0 ug/Kg	1.0	10	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Chloroform	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Chloromethane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
2-Chlorotoluene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
4-Chlorotoluene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,2-Dibromo-3-chloropropane	< 2.0 ug/Kg	2.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Dibromochloromethane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,2-Dibromoethane	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Dibromomethane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,2-Dichlorobenzene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,3-Dichlorobenzene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,4-Dichlorobenzene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Dichlorodifluoromethane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,1-Dichloroethane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,2-Dichloroethane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,1-Dichloroethene	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
cis-1,2-Dichloroethene	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
trans-1,2-Dichloroethene	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,2-Dichloropropane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,3-Dichloropropane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
2,2-Dichloropropane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,1-Dichloropropene	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
cis-1,3-Dichloropropene	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
trans-1,3-Dichloropropene	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Ethylbenzene	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Hexachlorobutadiene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
2-Hexanone	< 2.0 ug/Kg	2.0	10	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Isopropylbenzene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
m&p-Xylenes	< 1.0 ug/Kg	1.0	10	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	

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LABORATORY BLANK RESULTS

Analyte	Result	RL	PQL	QC Sample	Preparation Date	Analysis Date	Qual
Volatile Organic Compounds							
4-Methyl-2-pentanone	< 1.0 ug/Kg	1.0	10	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Methylene chloride	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
n-Butylbenzene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
n-Propylbenzene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Naphthalene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
o-Xylene	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
p-Isopropyltoluene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
sec-Butylbenzene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Styrene	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
tert-Butylbenzene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,1,1,2-Tetrachloroethane	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,1,2,2-Tetrachloroethane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Tetrachloroethene	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Toluene	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,2,3-Trichlorobenzene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,2,4-Trichlorobenzene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,1,1-Trichloroethane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,1,2-Trichloroethane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Trichloroethene	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Trichlorofluoromethane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,2,3-Trichloropropane	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,2,4-Trimethylbenzene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
1,3,5-Trimethylbenzene	< 1.0 ug/Kg	1.0	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Vinyl acetate	< 1.0 ug/Kg	1.0	10	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Vinyl chloride	< 0.50 ug/Kg	0.50	5.0	V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Volatile Organic Compounds Surrogates:							
4-Bromofluorobenzene (85.0-120%)	101 %			V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Dibromofluoromethane (79.7-113%)	93.8 %			V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	
Toluene-D8 (85.0-115%)	102 %			V8173-1	12Dec12 1311 by 301	12Dec12 2203 by 301	

AMERICAN INTERPLEX CORPORATION
LABORATORIES

8600 Kanis Road
Little Rock, AR 72204-2322
(501) 224-5060
FAX (501) 224-5072

CHAIN OF CUSTODY / ANALYSIS REQUEST FORM

Client: FCC ENVIRONMENTAL
Project Reference: DMI-002
Project Manager: BETH McGARITY
Sampled By: BETH McGARITY

PO No. 035739

AIC CONTROL NO: 163285
AIC PROPOSAL NO:
Carrier:
Received on Ice (4°C)? YES NO

AIC No.	Sample Identification	Date/Time Collected	GRAB	COMP	SAMPLE MATRIX WATER	SAMPLE MATRIX SOIL	NO OF BOTTLES	TOTAL VOLATILES	IRON ppm LEAD ppm	CHROMIUM ppm	CADMIUM ppm	ARSENIC ppm SILICON ppm	ALUMINUM ppm	CALCIUM ppm	ASH %	FLASH-ASTM D93-85 METHOD B	Remarks
01	DMI-002	11DEC12/11am		X			1										
		Container Type	P														
		Preservative	N														

Field pH calibration on _____ @ _____
Buffer:

G = Glass P = Plastic V = VOA vials H = HCl to pH2 T = Sodium Thiosulfate
NO = none S = Sulfuric acid pH2 N = Nitric acid pH2 B = NaOH to pH12 Z = Zinc acetate

Turnaround Time Requested: (Please circle)
NORMAL or EXPEDITED IN 2 DAYS
Expedited results requested by: BETH McGARITY
Who should AIC contact with questions: BETH McGARITY
Phone: (501) 897.5764 Fax: (501) 897.5762
Report Attention to: BETH McGARITY
Report Address to:
BETH.McGARITY@FCCENVIRONMENTAL.COM

Relinquished By:	Date/Time	Received By:	Date/Time
AKG	12DEC12/10am		
Relinquished By:	Date/Time	Received in Lab By:	Date/Time
		[signature]	12-12-12 10am

Comments:

Appendix 3 – Corrective Action Report with Sample Results

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

Inspection Date: 11/14/12-11/15/12 **EPA ID Number:** ARR000005025

Facility Name: D&D Properties
Physical Location: 713 Industrial Rd, El Dorado, Arkansas 71730
Mailing Address: **Same**

Type of Ownership: _Federal _State _County _Municipal X Private/Commercial

Inspection Participants: **(name and phone number)**
Lead EPA Inspector: Bill Mansfield, 214-665-8321 **Initials (2):** BM
Other Participants: Roxanne King, Eva Steele

Facility Representative(s):
Name: Darrell Madding and Roger Williams Phone No. (870) 918-9340

Facility Description: D&D Properties 713 Industrial Rd, El Dorado, Arkansas (Facility) is an inactive former carbon black manufacturing plant.

Generator Status: Inactive
_LQG (>1000kg/mo) _SQG (100kg/mo to 1000kg/mo) _CESQG (<100kg/mo) _TSDF

Inspection Type: X EPA Lead _State Lead _CSE _CEI
_CDI X Sampling _Multi-Media _Other: Non-financial File Review

Reason for Evaluation:
_ (01) Follow up _ (02) Case Development X (03) Sampling
_ (04) Citizen Complaint X (07) General _ (16) CAV
_ (63) US/Mexico _ (65) CAV-US/Mexico

Summary of Corrective Action Inspection:

A Corrective Action Inspection (CAI) was conducted in conjunction with a Compliance Evaluation Inspection (CEI) on 11/14/12. The EPA inspection team including me (Bill Mansfield), Roxanne King, and Eva Steele addressed four primary questions with the facilities representatives during the CA inspection:

1. Have there been any spills at the facility? No.
2. Is there any ongoing CA at the facility? No, there was no ongoing CA at the Facility at the time of inspection.
3. Upon inspection of the facility, were there any CA issues found (i.e., leaks, stained soils, undocumented spills)? Surface staining was observed throughout the site, most prevalent around tank farm areas.

4. Previous Corrective Action activities (i.e., Phase I/II Site Assessment, Site Investigation)? A Phase I Site Assessment from February 28, 2007 (Appendix 1) was obtained during the inspection. A review of the February 28, 2007 Site Assessment revealed the following Areas of Concern (AOCs):
    - ASTs have impacted the soil in the tank farm areas.
    - Surface staining throughout the site, most prevalent in tank farm areas.
    - Former landfills: subsurface investigations in 1990 revealed presence of carbon black, refractory brick, feedstock oil, and miscellaneous refuse. Sampling was not conducted.
    - Lagoons and Pits: Historical records indicate 2 former ponds with no documentation regarding content, composition and characteristics of the sludge and/or fill.
    - Drains within the former process area reportedly drained to the site's remaining slurry pond. Overflow from the slurry pond and other storm water from the site drain into an intermittent stream then into culverts that run beneath the facility entrance and Industrial Road. Stained excavated material and stressed vegetation were observed from the intermittent stream to Industrial Road.

Sampling was conducted at six locations on site during the inspection.

Figure 1

- Surface water from the slurry pond (Figure 1)
  Lead was above the regional screening level of 15ug/L at 37.8ug/L.

- Sediment sample from the slurry pond (Figure 2)
  Benzo(a)pyrene was above the regional screening level of 0.21mg/kg at 3.28mg/kg
  Arsenic was above the regional screening level of 1.6mg/kg at 2.1mg/kg.
- Sediment sample from the north bank of the slurry pond
  No contaminants above regional screening levels were found.

- Sediment sample from the secondary containment of tanks 5 and 6 (Figure 3).
  Benzo(a)pyrene was above the regional screening level of 0.21mg/kg at 4.57mg/kg.

- Sediment sample from the alternate draining location from sump on the east side of the former process area (Figure 4)
  Arsenic was above the regional screening level of 1.6mg/kg at 3.5mg/kg.

- Sediment sample from drainage culvert on south side of site (Figure 5)
  Arsenic was above the regional screening level of 1.6mg/kg at 4.6mg/kg.

Conclusions:
Sampling results indicate that contamination has occurred and exists on site, however the extent of contamination is unknown. Sampling was limited to surface water and sediment/soil samples in the areas believed to have the most contamination. Historical records of groundwater monitoring were not available during the inspection and may not exist.

Recommendations:
Soil sample from the secondary containment of tanks 5&6 showed evidence of hazardous constituent benzo(a)pyrene above regional screening levels. Tanks 5&6, along with the other tanks in this secondary containment, are known to have contained feed stock oil for the carbon black process. If the former landfills/pits described in the February 28, 2007 Phase I ESA were found to contain feedstock oil during investigations in 1990, then further sampling of soil and groundwater should be strongly considered to determine nature and extent of contamination in the landfills/pits as well as the secondary containment area of tanks 5&6.

Soil sample from the bank of the slurry pond showed hazardous constituent benzo(a)pyrene above regional screening levels. The slurry pond overflows through a pipe that drains into an intermittent stream on the west side of the slurry pond, therefore, it is strongly recommended that additional soil/sediment sampling be conducted in the intermittent stream up gradient and down gradient from the overflow pipe.

Checklists Completed: None

Peer Reviewed by: _____ **Date:** 1-22-13

Appendices

Appendix 1: Phase I Environmental Site Assessment
Of
Columbian Chemicals Company Facility
713 Industrial Road
El Dorado, Arkansas
Project No. 207040.00
February 28, 2007

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 6 Laboratory
Environmental Services Branch
10625 Fallstone Road, Houston, TX 77099
Phone: (281)983-2100 Fax: (281)983-2248

Final Analytical Report

Site Name ----------D & D Properties

Sample Collection Date(s)-- 11/14/12 - 11/15/12

Contact---------- Roxanne King (6EN-HE)

Report Date---------- 01/04/13

Project #---------- 13RCRA019

Work Order(s)---------- 1211006
1211008

Analyses included in this report:

ABN 8270 Low Level	ABN 8270 Routine List
Metals ICP 6010B	Metals ICP 6010-Ext Solids
Metals ICP-MS 6020	Metals ICP-MS 6020-Ext Solids
Metals Mercury 7470A/7471A	Metals Mercury 7470A/7471A-Ext Solids
Solids, Dry Weight	VOA 8260 Routine List

Report Narrative

Volatile solids:

Several analytes fail low in the BS/MS/MSD. Reporting limits were raised in associated samples for analytes that fail signficantly low (<50%) so that non-detects are accurate. RLs were raised in the source sample based on MS/MSD recoveries; other samples used the BS recoveries. Absence or presence at the lower RL could not be verified.

Semi-volatile liquid:

Extra volume was not supplied for performing matrix spikes. A BS/BSD was substituted for the MS/MSD.

Benzoic acid is qualified as estimated in the sample due to chromatography problems with calibration.

Semi-volatile solids:

Report Narrative (cont'd)

Benzo(b)fluoranthene is qualified as estimated in sample 1211006-02 due to lack of resolution from its isomer Benzo(k)fluoranthene. The integration was estimated. Benzo(k)fluoranthene was <RL.

The surrogate 1,2-Dichlorobenzene-d4 fails low in several samples and the MSD due to volatile losses during the concentration step. Reporting limits were raised for the more volatile analytes in the affected samples to ensure non-detects are accurate. Absence or presence at the lower RL could not be verified.

Three recoveries fail low in the MSD that are also due to volatile losses in the concentration step. The MS did not have any low recoveries. This difference in recoveries caused 12 RPDs to fail for the pair. No additional qualifications were done on the source sample because the RLs were already raised in that sample. None of the failures in the MSD were found in any sample.

Metals ICP-MS:

Batch B2K2802 /B2K2806:

MS1/MSD1: Antimony spike recoveries are outside the acceptance limits; the sample results are qualified and are estimated.

Metals ICP:

Batch B2K2705:

BLK1: Iron was found in the prep blank at a negligible level; the sample results are also greater than 10x the concentration of the blank. Has no affect on the sample results.

MS1/MSD1: The sample concentration for aluminum and iron exceed the spike added concentration by a factor of four or more and cannot be reliably calculated.

Batch B2K2805:

The sample concentration for aluminum and iron exceed the spike added concentration by a factor of four or more and cannot be reliably calculated.

Mercury:

Batch B2K3004:

MS1/MSD1: The RPD exceeds the acceptance limits due to a difficult sample matrix to homogenize.

Standard procedures for quality assurance and quality control were followed in the analysis and reporting of the sample results. The results apply only to the samples tested. This final report should only be reproduced in full.

Reporting limits are adjusted for sample size and matrix interference.

Report Approvals:

Richard McMillin Region 6 Laboratory Manager	David Neleigh Region 6 Laboratory Branch Chief

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6 Environmental Services Branch Laboratory

10625 Fallstone Road
Houston, Texas 77099

Sample Receipt and Disposal

Site Name: D & D Properties Project Number: 13RCRA019

Data Management Coordinator: Christy Warren

/ /

Data Management Coordinator Signature Date

Date Transmitted: _____/_____/_____

Please have the U.S. EPA Project Manager/Officer call the Data Management Coordinator at 3-2137 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Christy Warren
Data Management Coordinator
Region 6 Laboratory
6MD-HS

_____/_____/_____

Received by and Date

Comments:

The laboratory routinely disposes of samples 90 days after all analyses have been completed. If you have a need to hold these samples in custody longer than 90 days, please sign below.

_____ _____

Signature Date

Please provide a reason for holding:

Environmental Protection Agency

Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
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ANALYTICAL REPORT FOR SAMPLES

Station ID	Laboratory ID	Sample Type	Date Collected	Date Received
01	1211006-01	Liquid	11/14/12 14:00	11/15/12 09:30
02	1211006-02	Solid	11/14/12 14:00	11/15/12 09:30
03	1211006-03	Solid	11/14/12 15:50	11/15/12 09:30
04	1211008-01	Solid	11/15/12 9:30	11/16/12 09:30
05	1211008-02	Solid	11/15/12 9:43	11/16/12 09:30
06	1211008-03	Solid	11/15/12 10:00	11/16/12 09:30

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Volatiles by EPA Method 8260 - GC/MS

Lab ID: 1211006-01 **Station ID: 01**

Batch: B2K2102 Date Collected: 11/14/12
Sample Type: Liquid Sample Vol: 5ml Sample Qualifiers:

Surrogates

Analyte	Result µg/L	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	52.0		104	81-124	11/19/12	11/19/12
Toluene-d8	50.5		101	86-115	"	"
4-Bromofluorobenzene	50.2		100	76-115	"	"

Targets

Analyte (CAS Number)	Result µg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		5.0	1	11/19/12	11/19/12
Chloromethane (74-87-3)	U		5.0	"	"	"
Vinyl chloride (75-01-4)	U		2.0	"	"	"
Bromomethane (74-83-9)	U		5.0	"	"	"
Chloroethane (75-00-3)	U		2.0	"	"	"
Trichlorofluoromethane (75-69-4)	U		2.0	"	"	"
1,1-Dichloroethene (75-35-4)	U		2.0	"	"	"
Carbon disulfide (75-15-0)	U		2.0	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		2.0	"	"	"
Acetone (67-64-1)	U		10.0	"	"	"
Methylene chloride (75-09-2)	U		2.0	"	"	"
Methyl acetate (79-20-9)	U		2.0	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		2.0	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		2.0	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		2.0	"	"	"
1,1-Dichloroethane (75-34-3)	U		2.0	"	"	"
2-Butanone (78-93-3)	U		5.0	"	"	"
Chloroform (67-66-3)	U		2.0	"	"	"
1,2-Dichloroethane (107-06-2)	U		2.0	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		2.0	"	"	"
Cyclohexane (110-82-7)	U		2.0	"	"	"
Carbon tetrachloride (56-23-5)	U		2.0	"	"	"
Benzene (71-43-2)	U		2.0	"	"	"
Trichloroethene (79-01-6)	U		2.0	"	"	"
Methylcyclohexane (108-87-2)	U		2.0	"	"	"
1,2-Dichloropropane (78-87-5)	U		2.0	"	"	"
Bromodichloromethane (75-27-4)	U		2.0	"	"	"
cis-1,3-Dichloropropene (10061-01-5)	U		2.0	"	"	"
trans-1,3-Dichloropropene (10061-02-6)	U		2.0	"	"	"

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Volatiles by EPA Method 8260 - GC/MS

Lab ID: 1211006-01 **Station ID: 01**

Batch: B2K2102 Date Collected: 11/14/12
Sample Type: Liquid Sample Vol: 5ml Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
1,1,2-Trichloroethane (79-00-5)	U		2.0	1	11/19/12	11/19/12
Dibromochloromethane (124-48-1)	U		2.0	"	"	"
Bromoform (75-25-2)	U		2.0	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		5.0	"	"	"
Toluene (108-88-3)	U		2.0	"	"	"
Tetrachloroethene (127-18-4)	U		2.0	"	"	"
2-Hexanone (591-78-6)	U		5.0	"	"	"
1,2-Dibromoethane (106-93-4)	U		2.0	"	"	"
Chlorobenzene (108-90-7)	U		2.0	"	"	"
Ethylbenzene (100-41-4)	U		2.0	"	"	"
meta-/para-Xylene (na)	U		4.0	"	"	"
ortho-Xylene (95-47-6)	U		2.0	"	"	"
Styrene (100-42-5)	U		2.0	"	"	"
Isopropylbenzene (98-82-8)	U		2.0	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		2.0	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		2.0	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		2.0	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		2.0	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		5.0	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		5.0	"	"	"

This sample was received at pH 6.
If biological activity is present, then aromatics may be biased low.

ng

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Semivolatiles by EPA Method 8270 - GC/MS (Low Level)

Lab ID: 1211006-01 **Station ID: 01**

Batch: B2K1909 Date Collected: 11/14/12
Sample Type: Liquid Sample Vol: 984ml Sample Qualifiers: **A**

Surrogates

Analyte	Result µg/L	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
2-Fluorophenol	6.97		91.5	39-109	11/19/12	11/20/12
Phenol-d5	6.48		85.1	41-107	"	"
2-Chlorophenol-d4	6.22		81.6	45-104	"	"
1,2-Dichlorobenzene-d4	3.64		71.6	34-100	"	"
Nitrobenzene-d5	4.54		89.4	41-128	"	"
2-Fluorobiphenyl	4.40		86.6	46-108	"	"
2,4,6-Tribromophenol	8.50		111	51-143	"	"
Terphenyl-d14	5.23		103	60-133	"	"

Targets

Analyte (CAS Number)	Result µg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Acenaphthene (83-32-9)	U		0.5	1	11/19/12	11/20/12
Acenaphthylene (208-96-8)	U		0.5	"	"	"
Acetophenone (98-86-2)	U		0.5	"	"	"
Anthracene (120-12-7)	U		0.5	"	"	"
Atrazine (1912-24-9)	U		0.5	"	"	"
Benzaldehyde (100-52-7)	U		1.0	"	"	"
Benzoic acid (65-85-0)	**32.2**	**J**	5.1	"	"	"
Benzo (a) anthracene (56-55-3)	U		0.5	"	"	"
Benzo (a) pyrene (50-32-8)	U		0.5	"	"	"
Benzo (b) fluoranthene (205-99-2)	U		0.5	"	"	"
Benzo (g,h,i) perylene (191-24-2)	U		0.5	"	"	"
Benzo (k) fluoranthene (207-08-9)	U		0.5	"	"	"
Benzyl alcohol (100-51-6)	U		0.5	"	"	"
1,1'-Biphenyl (92-52-4)	U		0.5	"	"	"
Bis(2-chloroethoxy)methane (111-91-1)	U		0.5	"	"	"
Bis(2-chloroethyl)ether (111-44-4)	U		0.5	"	"	"
Bis(2-chloro-1-methylethyl)ether (108-60-1)	U		0.5	"	"	"
Bis(2-ethylhexyl)phthalate (117-81-7)	U		5.1	"	"	"
4-Bromophenyl phenyl ether (101-55-3)	U		0.5	"	"	"
Butyl benzyl phthalate (85-68-7)	U		5.1	"	"	"
Carbazole (86-74-8)	U		0.5	"	"	"
Caprolactam (105-60-2)	U		1.0	"	"	"
4-Chloroaniline (106-47-8)	U		0.5	"	"	"
2-Chloronaphthalene (91-58-7)	U		0.5	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS (Low Level)

Lab ID: 1211006-01 **Station ID: 01**

Batch: B2K1909 Date Collected: 11/14/12
Sample Type: Liquid Sample Vol: 984ml Sample Qualifiers: **A**

Targets (Continued)

Analyte (CAS Number)	Result µg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
2-Chlorophenol (95-57-8)	U		0.5	1	11/19/12	11/20/12
4-Chlorophenyl phenyl ether (7005-72-3)	U		0.5	"	"	"
4-Chloro-3-methylphenol (59-50-7)	U		0.5	"	"	"
Chrysene (218-01-9)	U		0.5	"	"	"
Dibenzofuran (132-64-9)	U		0.5	"	"	"
Dibenz (a,h) anthracene (53-70-3)	U		0.5	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		0.5	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		0.5	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		0.5	"	"	"
3,3´-Dichlorobenzidine (91-94-1)	U		0.5	"	"	"
2,4-Dichlorophenol (120-83-2)	U		0.5	"	"	"
Diethyl phthalate (84-66-2)	U		5.1	"	"	"
2,4-Dimethylphenol (105-67-9)	U		1.0	"	"	"
Dimethyl phthalate (131-11-3)	U		5.1	"	"	"
2,4-Dinitrophenol (51-28-5)	U		5.1	"	"	"
2,4-Dinitrotoluene (121-14-2)	U		1.0	"	"	"
2,6-Dinitrotoluene (606-20-2)	U		1.0	"	"	"
4,6-Dinitro-2-methylphenol (534-52-1)	U		5.1	"	"	"
Di-n-butyl phthalate (84-74-2)	U		5.1	"	"	"
Di-n-octyl phthalate (117-84-0)	U		5.1	"	"	"
Fluoranthene (206-44-0)	U		0.5	"	"	"
Fluorene (86-73-7)	U		0.5	"	"	"
Hexachlorobenzene (118-74-1)	U		0.5	"	"	"
Hexachlorobutadiene (87-68-3)	U		5.1	"	"	"
Hexachlorocyclopentadiene (77-47-4)	U		5.1	"	"	"
Hexachloroethane (67-72-1)	U		5.1	"	"	"
Indeno (1,2,3-cd) pyrene (193-39-5)	U		0.5	"	"	"
Isophorone (78-59-1)	U		0.5	"	"	"
2-Methylnaphthalene (91-57-6)	U		0.5	"	"	"
2-Methylphenol (95-48-7)	U		0.5	"	"	"
3 &/or 4-Methylphenol (106-44-5)	U		0.5	"	"	"
Naphthalene (91-20-3)	U		0.5	"	"	"
2-Nitroaniline (88-74-4)	U		1.0	"	"	"
3-Nitroaniline (99-09-2)	U		1.0	"	"	"
4-Nitroaniline (100-01-6)	U		1.0	"	"	"
Nitrobenzene (98-95-3)	U		0.5	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS (Low Level)

Lab ID: 1211006-01 **Station ID: 01**

Batch: B2K1909 Date Collected: 11/14/12
Sample Type: Liquid Sample Vol: 984ml Sample Qualifiers: **A**

Targets (Continued)

Analyte (CAS Number)	Result µg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
2-Nitrophenol (88-75-5)	U		0.5	1	11/19/12	11/20/12
4-Nitrophenol (100-02-7)	U		5.1	"	"	"
N-Nitrosodiphenylamine (86-30-6)	U		0.5	"	"	"
N-Nitrosodi-n-propylamine (621-64-7)	U		0.5	"	"	"
Pentachlorophenol (87-86-5)	U		1.0	"	"	"
Phenanthrene (85-01-8)	U		0.5	"	"	"
Phenol (108-95-2)	U		0.5	"	"	"
Pyrene (129-00-0)	U		0.5	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		0.5	"	"	"
2,4,5-Trichlorophenol (95-95-4)	U		0.5	"	"	"
2,4,6-Trichlorophenol (88-06-2)	U		0.5	"	"	"

DS

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Metals by EPA Method 6010 - ICP

Lab ID: 1211006-01 **Station ID: 01**

Batch: B2K2805 Date Collected: 11/14/12
Sample Type: Liquid Sample Vol: 50ml Sample Qualifiers:

Targets

Analyte (CAS Number)	Result µg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	**27,400**		100	1	11/28/12	12/05/12
Barium (7440-39-3)	**374**		10.0	"	"	"
Beryllium (7440-41-7)	U		5.0	"	"	"
Cadmium (7440-43-9)	U		5.0	"	"	"
Calcium (7440-70-2)	**7,350**		150	"	"	"
Chromium (7440-47-3)	**15.9**		10.0	"	"	"
Cobalt (7440-48-4)	U		20.0	"	"	"
Copper (7440-50-8)	**78.6**		20.0	"	"	"
Iron (7439-89-6)	**26,800**		25.0	"	"	"
Magnesium (7439-95-4)	**4,190**		150	"	"	"
Manganese (7439-96-5)	**248**		5.0	"	"	"
Nickel (7440-02-2)	**167**		20.0	"	"	"
Potassium (7440-09-7)	**3,870**		1,000	"	"	"
Silver (7440-22-4)	U		10.0	"	"	"
Sodium (7440-23-5)	**42,400**		500	"	"	"
Vanadium (7440-62-2)	**43.5**		20.0	"	"	"
Zinc (7440-66-6)	**472**		20.0	"	"	"

ts

Metals by EPA Method 7470A/7471 - CVAAS

Lab ID: 1211006-01 **Station ID: 01**

Batch: B2K3003 Date Collected: 11/14/12
Sample Type: Liquid Sample Vol: 25ml Sample Qualifiers:

Targets

Analyte (CAS Number)	Result µg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.200	1	11/29/12	11/29/12

cj

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Metals by EPA Method 6020 - ICP MS

Lab ID: 1211006-01 **Station ID: 01**

Batch: B2K2806 Date Collected: 11/14/12
Sample Type: Liquid Sample Vol: 50ml Sample Qualifiers:

Targets

Analyte (CAS Number)	Result µg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U	J	5.0	10	11/28/12	11/29/12
Arsenic (7440-38-2)	**9.4**		5.0	"	"	"
Lead (7439-92-1)	**37.8**		5.0	"	"	"
Selenium (7782-49-2)	U		5.0	"	"	"
Thallium (7440-28-0)	U		5.0	"	"	"

KD

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Volatiles by EPA Method 8260 - GC/MS

Lab ID: 1211006-02 **Station ID: 02**

Batch: B2K2103 Date Collected: 11/14/12
Sample Type: Solid Sample Wt: 5.098g Sample Qualifiers:

Surrogates

Analyte	Result µg/L	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	51.5		103	82-120	11/20/12	11/20/12
Toluene-d8	49.0		98.0	81-116	"	"
4-Bromofluorobenzene	48.4		96.8	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		245	50	11/20/12	11/20/12
Chloromethane (74-87-3)	U		245	"	"	"
Vinyl chloride (75-01-4)	U		98.1	"	"	"
Bromomethane (74-83-9)	U	RL	981	"	"	"
Chloroethane (75-00-3)	U	RL	588	"	"	"
Trichlorofluoromethane (75-69-4)	U	RL	981	"	"	"
1,1-Dichloroethene (75-35-4)	U		98.1	"	"	"
Carbon disulfide (75-15-0)	U		98.1	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U	RL	196	"	"	"
Acetone (67-64-1)	U	RL	1,470	"	"	"
Methylene chloride (75-09-2)	U		98.1	"	"	"
Methyl acetate (79-20-9)	U		245	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		98.1	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		98.1	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		98.1	"	"	"
1,1-Dichloroethane (75-34-3)	U		98.1	"	"	"
2-Butanone (78-93-3)	U		245	"	"	"
Chloroform (67-66-3)	U		98.1	"	"	"
1,2-Dichloroethane (107-06-2)	U		98.1	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		98.1	"	"	"
Cyclohexane (110-82-7)	U		98.1	"	"	"
Carbon tetrachloride (56-23-5)	U		98.1	"	"	"
Benzene (71-43-2)	U		98.1	"	"	"
Trichloroethene (79-01-6)	U		98.1	"	"	"
Methylcyclohexane (108-87-2)	U		98.1	"	"	"
1,2-Dichloropropane (78-87-5)	U		98.1	"	"	"
Bromodichloromethane (75-27-4)	U		98.1	"	"	"
cis-1,3-Dichloropropene (10061-01-5)	U		98.1	"	"	"
trans-1,3-Dichloropropene (10061-02-6)	U		98.1	"	"	"

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Volatiles by EPA Method 8260 - GC/MS

Lab ID: 1211006-02 **Station ID: 02**

Batch: B2K2103 Date Collected: 11/14/12
Sample Type: Solid Sample Wt: 5.098g Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
1,1,2-Trichloroethane (79-00-5)	U		98.1	50	11/20/12	11/20/12
Dibromochloromethane (124-48-1)	U		98.1	"	"	"
Bromoform (75-25-2)	U		98.1	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		245	"	"	"
Toluene (108-88-3)	U		98.1	"	"	"
Tetrachloroethene (127-18-4)	U		98.1	"	"	"
2-Hexanone (591-78-6)	U		245	"	"	"
1,2-Dibromoethane (106-93-4)	U		98.1	"	"	"
Chlorobenzene (108-90-7)	U		98.1	"	"	"
Ethylbenzene (100-41-4)	U		98.1	"	"	"
meta-/para-Xylene (na)	U		196	"	"	"
ortho-Xylene (95-47-6)	U		98.1	"	"	"
Styrene (100-42-5)	U		98.1	"	"	"
Isopropylbenzene (98-82-8)	U		98.1	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		98.1	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		98.1	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		98.1	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		98.1	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		245	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		245	"	"	"

ng

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1211006-02 **Station ID: 02**

Batch: B2K1910
Sample Type: Solid

Date Collected: 11/14/12
Sample Wt: 10.573g
%Solids: 61.88

Sample Qualifiers:

Surrogates

Analyte	Result µg/kg (dry)	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
2-Fluorophenol	6,520		56.9	38-101	11/19/12	11/21/12
Phenol-d5	8,970		78.3	42-105	"	"
2-Chlorophenol-d4	6,990		61.0	40-100	"	"
1,2-Dichlorobenzene-d4	2,260		29.6 #	37-100	"	"
Nitrobenzene-d5	4,420		57.9	42-108	"	"
2-Fluorobiphenyl	6,460		84.5	51-103	"	"
2,4,6-Tribromophenol	10,600		92.5	55-115	"	"
Terphenyl-d14	7,790		102	55-125	"	"

Targets

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Acenaphthene (83-32-9)	U		306	1	11/19/12	11/21/12
Acenaphthylene (208-96-8)	U		306	"	"	"
Acetophenone (98-86-2)	U		764	"	"	"
Anthracene (120-12-7)	U		306	"	"	"
Atrazine (1912-24-9)	U		764	"	"	"
Benzaldehyde (100-52-7)	U		764	"	"	"
Benzoic acid (65-85-0)	U		1,530	"	"	"
Benzo (a) anthracene (56-55-3)	U		764	"	"	"
Benzo (a) pyrene (50-32-8)	**3,280**		764	"	"	"
Benzo (b) fluoranthene (205-99-2)	**963**	**J**	764	"	"	"
Benzo (g,h,i) perylene (191-24-2)	**1,120**		764	"	"	"
Benzo (k) fluoranthene (207-08-9)	U		764	"	"	"
Benzyl alcohol (100-51-6)	U		764	"	"	"
1,1'-Biphenyl (92-52-4)	U		764	"	"	"
Bis(2-chloroethoxy)methane (111-91-1)	U		764	"	"	"
Bis(2-chloroethyl)ether (111-44-4)	U		764	"	"	"
Bis(2-chloro-1-methylethyl)ether (108-60-1)	U		764	"	"	"
Bis(2-ethylhexyl)phthalate (117-81-7)	U		764	"	"	"
4-Bromophenyl phenyl ether (101-55-3)	U		764	"	"	"
Butyl benzyl phthalate (85-68-7)	U		764	"	"	"
Carbazole (86-74-8)	U		764	"	"	"
Caprolactam (105-60-2)	U		764	"	"	"
4-Chloroaniline (106-47-8)	U		764	"	"	"
2-Chloronaphthalene (91-58-7)	U		764	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1211006-02 **Station ID: 02**

Batch: B2K1910
Sample Type: Solid

Date Collected: 11/14/12
Sample Wt: 10.573g
%Solids: 61.88

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
2-Chlorophenol (95-57-8)	U		764	1	11/19/12	11/21/12
4-Chlorophenyl phenyl ether (7005-72-3)	U		764	"	"	"
4-Chloro-3-methylphenol (59-50-7)	U		764	"	"	"
Chrysene (218-01-9)	**3,340**		764	"	"	"
Dibenzofuran (132-64-9)	U		764	"	"	"
Dibenz (a,h) anthracene (53-70-3)	U		764	"	"	"
1,2-Dichlorobenzene (95-50-1)	U	RL	3,060	"	"	"
1,3-Dichlorobenzene (541-73-1)	U	RL	3,060	"	"	"
1,4-Dichlorobenzene (106-46-7)	U	RL	3,060	"	"	"
3,3´-Dichlorobenzidine (91-94-1)	U		764	"	"	"
2,4-Dichlorophenol (120-83-2)	U		764	"	"	"
Diethyl phthalate (84-66-2)	U		764	"	"	"
2,4-Dimethylphenol (105-67-9)	U		764	"	"	"
Dimethyl phthalate (131-11-3)	U		764	"	"	"
2,4-Dinitrophenol (51-28-5)	U		3,060	"	"	"
2,4-Dinitrotoluene (121-14-2)	U		764	"	"	"
2,6-Dinitrotoluene (606-20-2)	U		764	"	"	"
4,6-Dinitro-2-methylphenol (534-52-1)	U		3,060	"	"	"
Di-n-butyl phthalate (84-74-2)	U		764	"	"	"
Di-n-octyl phthalate (117-84-0)	U		764	"	"	"
Fluoranthene (206-44-0)	U		306	"	"	"
Fluorene (86-73-7)	U		306	"	"	"
Hexachlorobenzene (118-74-1)	U		764	"	"	"
Hexachlorobutadiene (87-68-3)	U	RL	3,060	"	"	"
Hexachlorocyclopentadiene (77-47-4)	U		764	"	"	"
Hexachloroethane (67-72-1)	U	RL	764	"	"	"
Indeno (1,2,3-cd) pyrene (193-39-5)	U		3,060	"	"	"
Isophorone (78-59-1)	U		764	"	"	"
2-Methylnaphthalene (91-57-6)	U		306	"	"	"
2-Methylphenol (95-48-7)	U		764	"	"	"
3 &/or 4-Methylphenol (106-44-5)	U		764	"	"	"
Naphthalene (91-20-3)	U		306	"	"	"
2-Nitroaniline (88-74-4)	U		1,220	"	"	"
3-Nitroaniline (99-09-2)	U		1,220	"	"	"
4-Nitroaniline (100-01-6)	U		1,220	"	"	"
Nitrobenzene (98-95-3)	U		764	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1211006-02 **Station ID: 02**

Batch: B2K1910
Sample Type: Solid

Date Collected: 11/14/12
Sample Wt: 10.573g
%Solids: 61.88

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
2-Nitrophenol (88-75-5)	U		764	1	11/19/12	11/21/12
4-Nitrophenol (100-02-7)	U		1,990	"	"	"
N-Nitrosodiphenylamine (86-30-6)	U		764	"	"	"
N-Nitrosodi-n-propylamine (621-64-7)	U		764	"	"	"
Pentachlorophenol (87-86-5)	U		764	"	"	"
Phenanthrene (85-01-8)	U		306	"	"	"
Phenol (108-95-2)	U		764	"	"	"
Pyrene (129-00-0)	**584**		306	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U	RL	3,060	"	"	"
2,4,5-Trichlorophenol (95-95-4)	U		764	"	"	"
2,4,6-Trichlorophenol (88-06-2)	U		764	"	"	"

DS

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Metals by EPA Method 6010 - ICP

Lab ID: 1211006-02 **Station ID: 02**

Batch: B2K2705
Sample Type: Solid

Date Collected: 11/14/12
Sample Wt: 0.507g
%Solids: 74.13

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	**4,220**		13.3	1	11/27/12	12/05/12
Barium (7440-39-3)	**153**		1.3	"	"	"
Beryllium (7440-41-7)	U		0.7	"	"	"
Cadmium (7440-43-9)	U		0.7	"	"	"
Calcium (7440-70-2)	**712**		20.0	"	"	"
Chromium (7440-47-3)	**4.2**		1.3	"	"	"
Cobalt (7440-48-4)	U		2.7	"	"	"
Copper (7440-50-8)	**3.2**		2.7	"	"	"
Iron (7439-89-6)	**8,410**		3.3	"	"	"
Magnesium (7439-95-4)	**424**		20.0	"	"	"
Manganese (7439-96-5)	**46.1**		0.7	"	"	"
Nickel (7440-02-2)	**14.1**		2.7	"	"	"
Potassium (7440-09-7)	**291**		133	"	"	"
Silver (7440-22-4)	U		1.3	"	"	"
Sodium (7440-23-5)	**259**		66.5	"	"	"
Vanadium (7440-62-2)	**12.8**		2.7	"	"	"
Zinc (7440-66-6)	**26.3**		2.7	"	"	"

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Metals by EPA Method 7470A/7471 - CVAAS

Lab ID: 1211006-02 **Station ID: 02**

Batch: B2K3004
Sample Type: Solid

Date Collected: 11/14/12
Sample Wt: 0.103g
%Solids: 74.13

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.08	1	11/29/12	11/29/12

cj

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Metals by EPA Method 6020 - ICP MS

Lab ID: 1211006-02 **Station ID: 02**

Batch: B2K2802
Sample Type: Solid

Date Collected: 11/14/12
Sample Wt: 0.507g
%Solids: 74.13

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U	J	0.7	10	11/27/12	11/29/12
Arsenic (7440-38-2)	**2.1**		0.7	"	"	"
Lead (7439-92-1)	**7.7**		0.7	"	"	"
Selenium (7782-49-2)	U		0.7	"	"	"
Thallium (7440-28-0)	U		0.7	"	"	"

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Volatiles by EPA Method 8260 - GC/MS

Lab ID: 1211006-03 **Station ID: 03**

Batch: B2K2103 Date Collected: 11/14/12
Sample Type: Solid Sample Wt: 5.024g Sample Qualifiers:

Surrogates

Analyte	Result µg/L	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	53.3		107	82-120	11/20/12	11/20/12
Toluene-d8	50.2		100	81-116	"	"
4-Bromofluorobenzene	49.3		98.6	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		249	50	11/20/12	11/20/12
Chloromethane (74-87-3)	U		249	"	"	"
Vinyl chloride (75-01-4)	U		99.5	"	"	"
Bromomethane (74-83-9)	U	RL	746	"	"	"
Chloroethane (75-00-3)	U	RL	398	"	"	"
Trichlorofluoromethane (75-69-4)	U	RL	697	"	"	"
1,1-Dichloroethene (75-35-4)	U		99.5	"	"	"
Carbon disulfide (75-15-0)	U		99.5	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		99.5	"	"	"
Acetone (67-64-1)	U		498	"	"	"
Methylene chloride (75-09-2)	U		99.5	"	"	"
Methyl acetate (79-20-9)	U		249	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		99.5	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		99.5	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		99.5	"	"	"
1,1-Dichloroethane (75-34-3)	U		99.5	"	"	"
2-Butanone (78-93-3)	U		249	"	"	"
Chloroform (67-66-3)	U		99.5	"	"	"
1,2-Dichloroethane (107-06-2)	U		99.5	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		99.5	"	"	"
Cyclohexane (110-82-7)	U		99.5	"	"	"
Carbon tetrachloride (56-23-5)	U		99.5	"	"	"
Benzene (71-43-2)	U		99.5	"	"	"
Trichloroethene (79-01-6)	U		99.5	"	"	"
Methylcyclohexane (108-87-2)	U		99.5	"	"	"
1,2-Dichloropropane (78-87-5)	U		99.5	"	"	"
Bromodichloromethane (75-27-4)	U		99.5	"	"	"
cis-1,3-Dichloropropene (10061-01-5)	U		99.5	"	"	"
trans-1,3-Dichloropropene (10061-02-6)	U		99.5	"	"	"

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Volatiles by EPA Method 8260 - GC/MS

Lab ID: 1211006-03 **Station ID: 03**

Batch: B2K2103 Date Collected: 11/14/12
Sample Type: Solid Sample Wt: 5.024g Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
1,1,2-Trichloroethane (79-00-5)	U		99.5	50	11/20/12	11/20/12
Dibromochloromethane (124-48-1)	U		99.5	"	"	"
Bromoform (75-25-2)	U		99.5	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		249	"	"	"
Toluene (108-88-3)	U		99.5	"	"	"
Tetrachloroethene (127-18-4)	U		99.5	"	"	"
2-Hexanone (591-78-6)	U		249	"	"	"
1,2-Dibromoethane (106-93-4)	U		99.5	"	"	"
Chlorobenzene (108-90-7)	U		99.5	"	"	"
Ethylbenzene (100-41-4)	U		99.5	"	"	"
meta-/para-Xylene (na)	U		199	"	"	"
ortho-Xylene (95-47-6)	U		99.5	"	"	"
Styrene (100-42-5)	U		99.5	"	"	"
Isopropylbenzene (98-82-8)	U		99.5	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		99.5	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		99.5	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		99.5	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		99.5	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		249	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		249	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1211006-03 **Station ID: 03**

Batch: B2K1910
Sample Type: Solid

Date Collected: 11/14/12
Sample Wt: 10.897g
%Solids: 75.28

Sample Qualifiers:

Surrogates

Analyte	Result µg/kg (dry)	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
2-Fluorophenol	5,880		64.3	38-101	11/19/12	11/21/12
Phenol-d5	7,280		79.6	42-105	"	"
2-Chlorophenol-d4	5,750		62.9	40-100	"	"
1,2-Dichlorobenzene-d4	1,940		31.9 #	37-100	"	"
Nitrobenzene-d5	3,760		61.7	42-108	"	"
2-Fluorobiphenyl	4,830		79.2	51-103	"	"
2,4,6-Tribromophenol	7,240		79.1	55-115	"	"
Terphenyl-d14	6,180		101	55-125	"	"

Targets

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Acenaphthene (83-32-9)	U		244	1	11/19/12	11/21/12
Acenaphthylene (208-96-8)	U		244	"	"	"
Acetophenone (98-86-2)	U		609	"	"	"
Anthracene (120-12-7)	U		244	"	"	"
Atrazine (1912-24-9)	U		609	"	"	"
Benzaldehyde (100-52-7)	U		609	"	"	"
Benzoic acid (65-85-0)	U		1,220	"	"	"
Benzo (a) anthracene (56-55-3)	U		609	"	"	"
Benzo (a) pyrene (50-32-8)	U		609	"	"	"
Benzo (b) fluoranthene (205-99-2)	U		609	"	"	"
Benzo (g,h,i) perylene (191-24-2)	U		609	"	"	"
Benzo (k) fluoranthene (207-08-9)	U		609	"	"	"
Benzyl alcohol (100-51-6)	U		609	"	"	"
1,1'-Biphenyl (92-52-4)	U		609	"	"	"
Bis(2-chloroethoxy)methane (111-91-1)	U		609	"	"	"
Bis(2-chloroethyl)ether (111-44-4)	U		609	"	"	"
Bis(2-chloro-1-methylethyl)ether (108-60-1)	U		609	"	"	"
Bis(2-ethylhexyl)phthalate (117-81-7)	U		609	"	"	"
4-Bromophenyl phenyl ether (101-55-3)	U		609	"	"	"
Butyl benzyl phthalate (85-68-7)	U		609	"	"	"
Carbazole (86-74-8)	U		609	"	"	"
Caprolactam (105-60-2)	U		609	"	"	"
4-Chloroaniline (106-47-8)	U		609	"	"	"
2-Chloronaphthalene (91-58-7)	U		609	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1211006-03 **Station ID: 03**

Batch: B2K1910
Sample Type: Solid

Date Collected: 11/14/12
Sample Wt: 10.897g
%Solids: 75.28

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
2-Chlorophenol (95-57-8)	U		609	1	11/19/12	11/21/12
4-Chlorophenyl phenyl ether (7005-72-3)	U		609	"	"	"
4-Chloro-3-methylphenol (59-50-7)	U		609	"	"	"
Chrysene (218-01-9)	U		609	"	"	"
Dibenzofuran (132-64-9)	U		609	"	"	"
Dibenz (a,h) anthracene (53-70-3)	U		609	"	"	"
1,2-Dichlorobenzene (95-50-1)	U	RL	1,830	"	"	"
1,3-Dichlorobenzene (541-73-1)	U	RL	1,830	"	"	"
1,4-Dichlorobenzene (106-46-7)	U	RL	1,830	"	"	"
3,3´-Dichlorobenzidine (91-94-1)	U		609	"	"	"
2,4-Dichlorophenol (120-83-2)	U		609	"	"	"
Diethyl phthalate (84-66-2)	U		609	"	"	"
2,4-Dimethylphenol (105-67-9)	U		609	"	"	"
Dimethyl phthalate (131-11-3)	U		609	"	"	"
2,4-Dinitrophenol (51-28-5)	U		2,440	"	"	"
2,4-Dinitrotoluene (121-14-2)	U		609	"	"	"
2,6-Dinitrotoluene (606-20-2)	U		609	"	"	"
4,6-Dinitro-2-methylphenol (534-52-1)	U		2,440	"	"	"
Di-n-butyl phthalate (84-74-2)	U		609	"	"	"
Di-n-octyl phthalate (117-84-0)	U		609	"	"	"
Fluoranthene (206-44-0)	U		244	"	"	"
Fluorene (86-73-7)	U		244	"	"	"
Hexachlorobenzene (118-74-1)	U		609	"	"	"
Hexachlorobutadiene (87-68-3)	U	RL	1,830	"	"	"
Hexachlorocyclopentadiene (77-47-4)	U		609	"	"	"
Hexachloroethane (67-72-1)	U	RL	1,830	"	"	"
Indeno (1,2,3-cd) pyrene (193-39-5)	U		609	"	"	"
Isophorone (78-59-1)	U		609	"	"	"
2-Methylnaphthalene (91-57-6)	U		244	"	"	"
2-Methylphenol (95-48-7)	U		609	"	"	"
3 &/or 4-Methylphenol (106-44-5)	U		609	"	"	"
Naphthalene (91-20-3)	U		244	"	"	"
2-Nitroaniline (88-74-4)	U		975	"	"	"
3-Nitroaniline (99-09-2)	U		975	"	"	"
4-Nitroaniline (100-01-6)	U		975	"	"	"
Nitrobenzene (98-95-3)	U		609	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1211006-03 **Station ID: 03**

Batch: B2K1910
Sample Type: Solid

Date Collected: 11/14/12
Sample Wt: 10.897g
%Solids: 75.28

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
2-Nitrophenol (88-75-5)	U		609	1	11/19/12	11/21/12
4-Nitrophenol (100-02-7)	U		1,580	"	"	"
N-Nitrosodiphenylamine (86-30-6)	U		609	"	"	"
N-Nitrosodi-n-propylamine (621-64-7)	U		609	"	"	"
Pentachlorophenol (87-86-5)	U		609	"	"	"
Phenanthrene (85-01-8)	U		244	"	"	"
Phenol (108-95-2)	U		609	"	"	"
Pyrene (129-00-0)	U		244	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U	RL	1,830	"	"	"
2,4,5-Trichlorophenol (95-95-4)	U		609	"	"	"
2,4,6-Trichlorophenol (88-06-2)	U		609	"	"	"

DS

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Metals by EPA Method 6010 - ICP

Lab ID: 1211006-03 **Station ID: 03**

Batch: B2K2705
Sample Type: Solid

Date Collected: 11/14/12
Sample Wt: 0.568g
%Solids: 75.28

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	**3,260**		11.7	1	11/27/12	12/05/12
Barium (7440-39-3)	**62.5**		1.2	"	"	"
Beryllium (7440-41-7)	U		0.6	"	"	"
Cadmium (7440-43-9)	U		0.6	"	"	"
Calcium (7440-70-2)	**596**		17.5	"	"	"
Chromium (7440-47-3)	**1.9**		1.2	"	"	"
Cobalt (7440-48-4)	U		2.3	"	"	"
Copper (7440-50-8)	U		2.3	"	"	"
Iron (7439-89-6)	**2,870**		2.9	"	"	"
Magnesium (7439-95-4)	**594**		17.5	"	"	"
Manganese (7439-96-5)	**26.8**		0.6	"	"	"
Nickel (7440-02-2)	**8.1**		2.3	"	"	"
Potassium (7440-09-7)	**342**		117	"	"	"
Silver (7440-22-4)	U		1.2	"	"	"
Sodium (7440-23-5)	**242**		58.5	"	"	"
Vanadium (7440-62-2)	**4.0**		2.3	"	"	"
Zinc (7440-66-6)	**24.0**		2.3	"	"	"

ts

Metals by EPA Method 7470A/7471 - CVAAS

Lab ID: 1211006-03 **Station ID: 03**

Batch: B2K3004
Sample Type: Solid

Date Collected: 11/14/12
Sample Wt: 0.147g
%Solids: 75.28

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.06	1	11/29/12	11/29/12

cj

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Metals by EPA Method 6020 - ICP MS

Lab ID: 1211006-03 **Station ID: 03**

Batch: B2K2802
Sample Type: Solid

Date Collected: 11/14/12
Sample Wt: 0.568g
%Solids: 75.28

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.6	10	11/27/12	11/29/12
Arsenic (7440-38-2)	U		0.6	"	"	"
Lead (7439-92-1)	**4.7**		0.6	"	"	"
Selenium (7782-49-2)	U		0.6	"	"	"
Thallium (7440-28-0)	U		0.6	"	"	"

KD

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Volatiles by EPA Method 8260 - GC/MS

Lab ID: 1211008-01 **Station ID: 04**

Batch: B2K2103 Date Collected: 11/15/12
Sample Type: Solid Sample Wt: 5.031g Sample Qualifiers:

Surrogates

Analyte	Result µg/L	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	51.5		103	82-120	11/20/12	11/20/12
Toluene-d8	48.9		97.8	81-116	"	"
4-Bromofluorobenzene	48.8		97.6	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		248	50	11/20/12	11/20/12
Chloromethane (74-87-3)	U		248	"	"	"
Vinyl chloride (75-01-4)	U		99.4	"	"	"
Bromomethane (74-83-9)	U	RL	745	"	"	"
Chloroethane (75-00-3)	U	RL	398	"	"	"
Trichlorofluoromethane (75-69-4)	U	RL	696	"	"	"
1,1-Dichloroethene (75-35-4)	U		99.4	"	"	"
Carbon disulfide (75-15-0)	U		99.4	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		99.4	"	"	"
Acetone (67-64-1)	U		497	"	"	"
Methylene chloride (75-09-2)	U		99.4	"	"	"
Methyl acetate (79-20-9)	U		248	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		99.4	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		99.4	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		99.4	"	"	"
1,1-Dichloroethane (75-34-3)	U		99.4	"	"	"
2-Butanone (78-93-3)	U		248	"	"	"
Chloroform (67-66-3)	U		99.4	"	"	"
1,2-Dichloroethane (107-06-2)	U		99.4	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		99.4	"	"	"
Cyclohexane (110-82-7)	U		99.4	"	"	"
Carbon tetrachloride (56-23-5)	U		99.4	"	"	"
Benzene (71-43-2)	U		99.4	"	"	"
Trichloroethene (79-01-6)	U		99.4	"	"	"
Methylcyclohexane (108-87-2)	U		99.4	"	"	"
1,2-Dichloropropane (78-87-5)	U		99.4	"	"	"
Bromodichloromethane (75-27-4)	U		99.4	"	"	"
cis-1,3-Dichloropropene (10061-01-5)	U		99.4	"	"	"
trans-1,3-Dichloropropene (10061-02-6)	U		99.4	"	"	"

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Volatiles by EPA Method 8260 - GC/MS

Lab ID: 1211008-01 **Station ID: 04**

Batch: B2K2103 Date Collected: 11/15/12
Sample Type: Solid Sample Wt: 5.031g Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
1,1,2-Trichloroethane (79-00-5)	U		99.4	50	11/20/12	11/20/12
Dibromochloromethane (124-48-1)	U		99.4	"	"	"
Bromoform (75-25-2)	U		99.4	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		248	"	"	"
Toluene (108-88-3)	U		99.4	"	"	"
Tetrachloroethene (127-18-4)	U		99.4	"	"	"
2-Hexanone (591-78-6)	U		248	"	"	"
1,2-Dibromoethane (106-93-4)	U		99.4	"	"	"
Chlorobenzene (108-90-7)	U		99.4	"	"	"
Ethylbenzene (100-41-4)	U		99.4	"	"	"
meta-/para-Xylene (na)	U		199	"	"	"
ortho-Xylene (95-47-6)	U		99.4	"	"	"
Styrene (100-42-5)	U		99.4	"	"	"
Isopropylbenzene (98-82-8)	U		99.4	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		99.4	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		99.4	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		99.4	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		99.4	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		248	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		248	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1211008-01 **Station ID: 04**

Batch: B2K1910
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 2.101g
%Solids: 54.03

Sample Qualifiers:

Surrogates

Analyte	Result µg/kg (dry)	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
2-Fluorophenol	48,700		73.6	38-101	11/19/12	11/21/12
Phenol-d5	56,700		85.7	42-105	"	"
2-Chlorophenol-d4	50,300		76.2	40-100	"	"
1,2-Dichlorobenzene-d4	27,600		62.7	37-100	"	"
Nitrobenzene-d5	33,600		76.3	42-108	"	"
2-Fluorobiphenyl	40,700		92.5	51-103	"	"
2,4,6-Tribromophenol	69,500		105	55-115	"	"
Terphenyl-d14	45,900		104	55-125	"	"

Targets

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Acenaphthene (83-32-9)	U		1,760	1	11/19/12	11/21/12
Acenaphthylene (208-96-8)	U		1,760	"	"	"
Acetophenone (98-86-2)	U		4,400	"	"	"
Anthracene (120-12-7)	U		1,760	"	"	"
Atrazine (1912-24-9)	U		4,400	"	"	"
Benzaldehyde (100-52-7)	U		4,400	"	"	"
Benzoic acid (65-85-0)	U		8,810	"	"	"
Benzo (a) anthracene (56-55-3)	U		4,400	"	"	"
Benzo (a) pyrene (50-32-8)	**4,570**		4,400	"	"	"
Benzo (b) fluoranthene (205-99-2)	U		4,400	"	"	"
Benzo (g,h,i) perylene (191-24-2)	U		4,400	"	"	"
Benzo (k) fluoranthene (207-08-9)	U		4,400	"	"	"
Benzyl alcohol (100-51-6)	U		4,400	"	"	"
1,1'-Biphenyl (92-52-4)	U		4,400	"	"	"
Bis(2-chloroethoxy)methane (111-91-1)	U		4,400	"	"	"
Bis(2-chloroethyl)ether (111-44-4)	U		4,400	"	"	"
Bis(2-chloro-1-methylethyl)ether (108-60-1)	U		4,400	"	"	"
Bis(2-ethylhexyl)phthalate (117-81-7)	U		4,400	"	"	"
4-Bromophenyl phenyl ether (101-55-3)	U		4,400	"	"	"
Butyl benzyl phthalate (85-68-7)	U		4,400	"	"	"
Carbazole (86-74-8)	U		4,400	"	"	"
Caprolactam (105-60-2)	U		4,400	"	"	"
4-Chloroaniline (106-47-8)	U		4,400	"	"	"
2-Chloronaphthalene (91-58-7)	U		4,400	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1211008-01 **Station ID: 04**

Batch: B2K1910
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 2.101g
%Solids: 54.03

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
2-Chlorophenol (95-57-8)	U		4,400	1	11/19/12	11/21/12
4-Chlorophenyl phenyl ether (7005-72-3)	U		4,400	"	"	"
4-Chloro-3-methylphenol (59-50-7)	U		4,400	"	"	"
Chrysene (218-01-9)	**12,800**		4,400	"	"	"
Dibenzofuran (132-64-9)	U		4,400	"	"	"
Dibenz (a,h) anthracene (53-70-3)	U		4,400	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		4,400	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		4,400	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		4,400	"	"	"
3,3´-Dichlorobenzidine (91-94-1)	U		4,400	"	"	"
2,4-Dichlorophenol (120-83-2)	U		4,400	"	"	"
Diethyl phthalate (84-66-2)	U		4,400	"	"	"
2,4-Dimethylphenol (105-67-9)	U		4,400	"	"	"
Dimethyl phthalate (131-11-3)	U		4,400	"	"	"
2,4-Dinitrophenol (51-28-5)	U		17,600	"	"	"
2,4-Dinitrotoluene (121-14-2)	U		4,400	"	"	"
2,6-Dinitrotoluene (606-20-2)	U		4,400	"	"	"
4,6-Dinitro-2-methylphenol (534-52-1)	U		17,600	"	"	"
Di-n-butyl phthalate (84-74-2)	U		4,400	"	"	"
Di-n-octyl phthalate (117-84-0)	U		4,400	"	"	"
Fluoranthene (206-44-0)	U		1,760	"	"	"
Fluorene (86-73-7)	U		1,760	"	"	"
Hexachlorobenzene (118-74-1)	U		4,400	"	"	"
Hexachlorobutadiene (87-68-3)	U		4,400	"	"	"
Hexachlorocyclopentadiene (77-47-4)	U		4,400	"	"	"
Hexachloroethane (67-72-1)	U		4,400	"	"	"
Indeno (1,2,3-cd) pyrene (193-39-5)	U		4,400	"	"	"
Isophorone (78-59-1)	U		4,400	"	"	"
2-Methylnaphthalene (91-57-6)	U		1,760	"	"	"
2-Methylphenol (95-48-7)	U		4,400	"	"	"
3 &/or 4-Methylphenol (106-44-5)	U		4,400	"	"	"
Naphthalene (91-20-3)	U		1,760	"	"	"
2-Nitroaniline (88-74-4)	U		7,050	"	"	"
3-Nitroaniline (99-09-2)	U		7,050	"	"	"
4-Nitroaniline (100-01-6)	U		7,050	"	"	"
Nitrobenzene (98-95-3)	U		4,400	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1211008-01 **Station ID: 04**

Batch: B2K1910
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 2.101g
%Solids: 54.03

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
2-Nitrophenol (88-75-5)	U		4,400	1	11/19/12	11/21/12
4-Nitrophenol (100-02-7)	U		11,500	"	"	"
N-Nitrosodiphenylamine (86-30-6)	U		4,400	"	"	"
N-Nitrosodi-n-propylamine (621-64-7)	U		4,400	"	"	"
Pentachlorophenol (87-86-5)	U		4,400	"	"	"
Phenanthrene (85-01-8)	U		1,760	"	"	"
Phenol (108-95-2)	U		4,400	"	"	"
Pyrene (129-00-0)	U		1,760	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		4,400	"	"	"
2,4,5-Trichlorophenol (95-95-4)	U		4,400	"	"	"
2,4,6-Trichlorophenol (88-06-2)	U		4,400	"	"	"

DS

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Metals by EPA Method 6010 - ICP

Lab ID: 1211008-01 **Station ID: 04**

Batch: B2K2705
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 0.552g
%Solids: 54.03

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	**4,920**		16.8	1	11/27/12	12/05/12
Barium (7440-39-3)	**160**		1.7	"	"	"
Beryllium (7440-41-7)	U		0.8	"	"	"
Cadmium (7440-43-9)	U		0.8	"	"	"
Calcium (7440-70-2)	**3,890**		25.1	"	"	"
Chromium (7440-47-3)	**28.9**		1.7	"	"	"
Cobalt (7440-48-4)	**7.5**		3.4	"	"	"
Copper (7440-50-8)	**23.5**		3.4	"	"	"
Iron (7439-89-6)	**12,100**		4.2	"	"	"
Magnesium (7439-95-4)	**745**		25.1	"	"	"
Manganese (7439-96-5)	**72.3**		0.8	"	"	"
Nickel (7440-02-2)	**6.4**		3.4	"	"	"
Potassium (7440-09-7)	**649**		168	"	"	"
Silver (7440-22-4)	U		1.7	"	"	"
Sodium (7440-23-5)	**234**		83.8	"	"	"
Vanadium (7440-62-2)	**9.9**		3.4	"	"	"
Zinc (7440-66-6)	**219**		3.4	"	"	"

ts

Metals by EPA Method 7470A/7471 - CVAAS

Lab ID: 1211008-01 **Station ID: 04**

Batch: B2K3004
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 0.164g
%Solids: 54.03

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	**0.07**		0.07	1	11/29/12	11/29/12

cj

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Metals by EPA Method 6020 - ICP MS

Lab ID: 1211008-01 **Station ID: 04**

Batch: B2K2802
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 0.552g
%Solids: 54.03

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.8	10	11/27/12	11/29/12
Arsenic (7440-38-2)	**1.1**		0.8	"	"	"
Lead (7439-92-1)	**77.7**		0.8	"	"	"
Selenium (7782-49-2)	U		0.8	"	"	"
Thallium (7440-28-0)	U		0.8	"	"	"

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Volatiles by EPA Method 8260 - GC/MS

Lab ID: 1211008-02 **Station ID: 05**

Batch: B2K2103 Date Collected: 11/15/12
Sample Type: Solid Sample Wt: 5.056g Sample Qualifiers:

Surrogates

Analyte	Result µg/L	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	51.5		103	82-120	11/20/12	11/20/12
Toluene-d8	49.4		98.7	81-116	"	"
4-Bromofluorobenzene	49.3		98.6	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		247	50	11/20/12	11/20/12
Chloromethane (74-87-3)	U		247	"	"	"
Vinyl chloride (75-01-4)	U		98.9	"	"	"
Bromomethane (74-83-9)	U	RL	742	"	"	"
Chloroethane (75-00-3)	U	RL	396	"	"	"
Trichlorofluoromethane (75-69-4)	U	RL	692	"	"	"
1,1-Dichloroethene (75-35-4)	U		98.9	"	"	"
Carbon disulfide (75-15-0)	U		98.9	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		98.9	"	"	"
Acetone (67-64-1)	U		494	"	"	"
Methylene chloride (75-09-2)	U		98.9	"	"	"
Methyl acetate (79-20-9)	U		247	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		98.9	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		98.9	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		98.9	"	"	"
1,1-Dichloroethane (75-34-3)	U		98.9	"	"	"
2-Butanone (78-93-3)	U		247	"	"	"
Chloroform (67-66-3)	U		98.9	"	"	"
1,2-Dichloroethane (107-06-2)	U		98.9	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		98.9	"	"	"
Cyclohexane (110-82-7)	U		98.9	"	"	"
Carbon tetrachloride (56-23-5)	U		98.9	"	"	"
Benzene (71-43-2)	U		98.9	"	"	"
Trichloroethene (79-01-6)	U		98.9	"	"	"
Methylcyclohexane (108-87-2)	U		98.9	"	"	"
1,2-Dichloropropane (78-87-5)	U		98.9	"	"	"
Bromodichloromethane (75-27-4)	U		98.9	"	"	"
cis-1,3-Dichloropropene (10061-01-5)	U		98.9	"	"	"
trans-1,3-Dichloropropene (10061-02-6)	U		98.9	"	"	"

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Volatiles by EPA Method 8260 - GC/MS

Lab ID: 1211008-02 **Station ID: 05**

Batch: B2K2103 Date Collected: 11/15/12
Sample Type: Solid Sample Wt: 5.056g Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
1,1,2-Trichloroethane (79-00-5)	U		98.9	50	11/20/12	11/20/12
Dibromochloromethane (124-48-1)	U		98.9	"	"	"
Bromoform (75-25-2)	U		98.9	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		247	"	"	"
Toluene (108-88-3)	U		98.9	"	"	"
Tetrachloroethene (127-18-4)	U		98.9	"	"	"
2-Hexanone (591-78-6)	U		247	"	"	"
1,2-Dibromoethane (106-93-4)	U		98.9	"	"	"
Chlorobenzene (108-90-7)	U		98.9	"	"	"
Ethylbenzene (100-41-4)	U		98.9	"	"	"
meta-/para-Xylene (na)	U		198	"	"	"
ortho-Xylene (95-47-6)	U		98.9	"	"	"
Styrene (100-42-5)	U		98.9	"	"	"
Isopropylbenzene (98-82-8)	U		98.9	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		98.9	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		98.9	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		98.9	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		98.9	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		247	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		247	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1211008-02 **Station ID: 05**

Batch: B2K1910
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 10.608g
%Solids: 66.81

Sample Qualifiers:

Surrogates

Analyte	Result µg/kg (dry)	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
2-Fluorophenol	6,010		56.8	38-101	11/19/12	11/21/12
Phenol-d5	8,010		75.7	42-105	"	"
2-Chlorophenol-d4	6,440		60.9	40-100	"	"
1,2-Dichlorobenzene-d4	2,120		30.1 #	37-100	"	"
Nitrobenzene-d5	3,950		56.0	42-108	"	"
2-Fluorobiphenyl	5,790		82.1	51-103	"	"
2,4,6-Tribromophenol	9,660		91.3	55-115	"	"
Terphenyl-d14	8,100		115	55-125	"	"

Targets

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Acenaphthene (83-32-9)	U		282	1	11/19/12	11/21/12
Acenaphthylene (208-96-8)	U		282	"	"	"
Acetophenone (98-86-2)	U		705	"	"	"
Anthracene (120-12-7)	U		282	"	"	"
Atrazine (1912-24-9)	U		705	"	"	"
Benzaldehyde (100-52-7)	U		705	"	"	"
Benzoic acid (65-85-0)	U		1,410	"	"	"
Benzo (a) anthracene (56-55-3)	U		705	"	"	"
Benzo (a) pyrene (50-32-8)	U		705	"	"	"
Benzo (b) fluoranthene (205-99-2)	U		705	"	"	"
Benzo (g,h,i) perylene (191-24-2)	U		705	"	"	"
Benzo (k) fluoranthene (207-08-9)	U		705	"	"	"
Benzyl alcohol (100-51-6)	U		705	"	"	"
1,1'-Biphenyl (92-52-4)	U		705	"	"	"
Bis(2-chloroethoxy)methane (111-91-1)	U		705	"	"	"
Bis(2-chloroethyl)ether (111-44-4)	U		705	"	"	"
Bis(2-chloro-1-methylethyl)ether (108-60-1)	U		705	"	"	"
Bis(2-ethylhexyl)phthalate (117-81-7)	**1,970**		705	"	"	"
4-Bromophenyl phenyl ether (101-55-3)	U		705	"	"	"
Butyl benzyl phthalate (85-68-7)	U		705	"	"	"
Carbazole (86-74-8)	U		705	"	"	"
Caprolactam (105-60-2)	U		705	"	"	"
4-Chloroaniline (106-47-8)	U		705	"	"	"
2-Chloronaphthalene (91-58-7)	U		705	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1211008-02 **Station ID: 05**

Batch: B2K1910
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 10.608g
%Solids: 66.81

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
2-Chlorophenol (95-57-8)	U		705	1	11/19/12	11/21/12
4-Chlorophenyl phenyl ether (7005-72-3)	U		705	"	"	"
4-Chloro-3-methylphenol (59-50-7)	U		705	"	"	"
Chrysene (218-01-9)	U		705	"	"	"
Dibenzofuran (132-64-9)	U		705	"	"	"
Dibenz (a,h) anthracene (53-70-3)	U		705	"	"	"
1,2-Dichlorobenzene (95-50-1)	U	RL	2,120	"	"	"
1,3-Dichlorobenzene (541-73-1)	U	RL	2,120	"	"	"
1,4-Dichlorobenzene (106-46-7)	U	RL	2,120	"	"	"
3,3´-Dichlorobenzidine (91-94-1)	U		705	"	"	"
2,4-Dichlorophenol (120-83-2)	U		705	"	"	"
Diethyl phthalate (84-66-2)	U		705	"	"	"
2,4-Dimethylphenol (105-67-9)	U		705	"	"	"
Dimethyl phthalate (131-11-3)	U		705	"	"	"
2,4-Dinitrophenol (51-28-5)	U		2,820	"	"	"
2,4-Dinitrotoluene (121-14-2)	U		705	"	"	"
2,6-Dinitrotoluene (606-20-2)	U		705	"	"	"
4,6-Dinitro-2-methylphenol (534-52-1)	U		2,820	"	"	"
Di-n-butyl phthalate (84-74-2)	U		705	"	"	"
Di-n-octyl phthalate (117-84-0)	U		705	"	"	"
Fluoranthene (206-44-0)	U		282	"	"	"
Fluorene (86-73-7)	U		282	"	"	"
Hexachlorobenzene (118-74-1)	U		705	"	"	"
Hexachlorobutadiene (87-68-3)	U	RL	2,120	"	"	"
Hexachlorocyclopentadiene (77-47-4)	U		705	"	"	"
Hexachloroethane (67-72-1)	U	RL	2,120	"	"	"
Indeno (1,2,3-cd) pyrene (193-39-5)	U		705	"	"	"
Isophorone (78-59-1)	U		705	"	"	"
2-Methylnaphthalene (91-57-6)	U		282	"	"	"
2-Methylphenol (95-48-7)	U		705	"	"	"
3 &/or 4-Methylphenol (106-44-5)	U		705	"	"	"
Naphthalene (91-20-3)	U		282	"	"	"
2-Nitroaniline (88-74-4)	U		1,130	"	"	"
3-Nitroaniline (99-09-2)	U		1,130	"	"	"
4-Nitroaniline (100-01-6)	U		1,130	"	"	"
Nitrobenzene (98-95-3)	U		705	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1211008-02 **Station ID: 05**

Batch: B2K1910
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 10.608g
%Solids: 66.81

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
2-Nitrophenol (88-75-5)	U		705	1	11/19/12	11/21/12
4-Nitrophenol (100-02-7)	U		1,830	"	"	"
N-Nitrosodiphenylamine (86-30-6)	U		705	"	"	"
N-Nitrosodi-n-propylamine (621-64-7)	U		705	"	"	"
Pentachlorophenol (87-86-5)	U		705	"	"	"
Phenanthrene (85-01-8)	U		282	"	"	"
Phenol (108-95-2)	U		705	"	"	"
Pyrene (129-00-0)	U		282	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U	RL	2,120	"	"	"
2,4,5-Trichlorophenol (95-95-4)	U		705	"	"	"
2,4,6-Trichlorophenol (88-06-2)	U		705	"	"	"

DS

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Metals by EPA Method 6010 - ICP

Lab ID: 1211008-02 **Station ID: 05**

Batch: B2K2705
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 0.55g
%Solids: 66.81

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	**6,510**		13.6	1	11/27/12	12/05/12
Barium (7440-39-3)	**698**		1.4	"	"	"
Beryllium (7440-41-7)	U		0.7	"	"	"
Cadmium (7440-43-9)	**0.8**		0.7	"	"	"
Calcium (7440-70-2)	**5,060**		20.4	"	"	"
Chromium (7440-47-3)	**24.2**		1.4	"	"	"
Cobalt (7440-48-4)	**4.2**		2.7	"	"	"
Copper (7440-50-8)	**32.0**		2.7	"	"	"
Iron (7439-89-6)	**11,900**		3.4	"	"	"
Magnesium (7439-95-4)	**906**		20.4	"	"	"
Manganese (7439-96-5)	**237**		0.7	"	"	"
Nickel (7440-02-2)	**36.0**		2.7	"	"	"
Potassium (7440-09-7)	**840**		136	"	"	"
Silver (7440-22-4)	U		1.4	"	"	"
Sodium (7440-23-5)	**1,410**		68.0	"	"	"
Vanadium (7440-62-2)	**10.1**		2.7	"	"	"
Zinc (7440-66-6)	**340**		2.7	"	"	"

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Metals by EPA Method 7470A/7471 - CVAAS

Lab ID: 1211008-02 **Station ID: 05**

Batch: B2K3004
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 0.167g
%Solids: 66.81

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	**0.3**		0.06	1	11/29/12	11/29/12

cj

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Metals by EPA Method 6020 - ICP MS

Lab ID: 1211008-02 **Station ID: 05**

Batch: B2K2802
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 0.55g
%Solids: 66.81

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		1.4	20	11/27/12	11/29/12
Arsenic (7440-38-2)	**3.5**		1.4	"	"	"
Lead (7439-92-1)	**35.7**		1.4	"	"	"
Selenium (7782-49-2)	U		1.4	"	"	"
Thallium (7440-28-0)	U		1.4	"	"	"

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Volatiles by EPA Method 8260 - GC/MS

Lab ID: 1211008-03 **Station ID: 06**

Batch: B2K2103 Date Collected: 11/15/12
Sample Type: Solid Sample Wt: 5.057g Sample Qualifiers:

Surrogates

Analyte	Result µg/L	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
1,2-Dichloroethane-d4	51.9		104	82-120	11/20/12	11/20/12
Toluene-d8	49.3		98.6	81-116	"	"
4-Bromofluorobenzene	49.4		98.8	80-116	"	"

Targets

Analyte (CAS Number)	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Dichlorodifluoromethane (75-71-8)	U		247	50	11/20/12	11/20/12
Chloromethane (74-87-3)	U		247	"	"	"
Vinyl chloride (75-01-4)	U		98.9	"	"	"
Bromomethane (74-83-9)	U	RL	742	"	"	"
Chloroethane (75-00-3)	U	RL	395	"	"	"
Trichlorofluoromethane (75-69-4)	U	RL	692	"	"	"
1,1-Dichloroethene (75-35-4)	U		98.9	"	"	"
Carbon disulfide (75-15-0)	U		98.9	"	"	"
1,1,2-Trichloro-1,2,2-trifluoroethane (76-13-1)	U		98.9	"	"	"
Acetone (67-64-1)	U		494	"	"	"
Methylene chloride (75-09-2)	U		98.9	"	"	"
Methyl acetate (79-20-9)	U		247	"	"	"
trans-1,2-Dichloroethene (156-60-5)	U		98.9	"	"	"
cis-1,2-Dichloroethene (156-59-2)	U		98.9	"	"	"
Methyl tert-butyl ether (1634-04-4)	U		98.9	"	"	"
1,1-Dichloroethane (75-34-3)	U		98.9	"	"	"
2-Butanone (78-93-3)	U		247	"	"	"
Chloroform (67-66-3)	U		98.9	"	"	"
1,2-Dichloroethane (107-06-2)	U		98.9	"	"	"
1,1,1-Trichloroethane (71-55-6)	U		98.9	"	"	"
Cyclohexane (110-82-7)	U		98.9	"	"	"
Carbon tetrachloride (56-23-5)	U		98.9	"	"	"
Benzene (71-43-2)	U		98.9	"	"	"
Trichloroethene (79-01-6)	U		98.9	"	"	"
Methylcyclohexane (108-87-2)	U		98.9	"	"	"
1,2-Dichloropropane (78-87-5)	U		98.9	"	"	"
Bromodichloromethane (75-27-4)	U		98.9	"	"	"
cis-1,3-Dichloropropene (10061-01-5)	U		98.9	"	"	"
trans-1,3-Dichloropropene (10061-02-6)	U		98.9	"	"	"

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Volatiles by EPA Method 8260 - GC/MS

Lab ID: 1211008-03 **Station ID: 06**

Batch: B2K2103 Date Collected: 11/15/12
Sample Type: Solid Sample Wt: 5.057g Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
1,1,2-Trichloroethane (79-00-5)	U		98.9	50	11/20/12	11/20/12
Dibromochloromethane (124-48-1)	U		98.9	"	"	"
Bromoform (75-25-2)	U		98.9	"	"	"
4-Methyl-2-pentanone (108-10-1)	U		247	"	"	"
Toluene (108-88-3)	U		98.9	"	"	"
Tetrachloroethene (127-18-4)	U		98.9	"	"	"
2-Hexanone (591-78-6)	U		247	"	"	"
1,2-Dibromoethane (106-93-4)	U		98.9	"	"	"
Chlorobenzene (108-90-7)	U		98.9	"	"	"
Ethylbenzene (100-41-4)	U		98.9	"	"	"
meta-/para-Xylene (na)	U		198	"	"	"
ortho-Xylene (95-47-6)	U		98.9	"	"	"
Styrene (100-42-5)	U		98.9	"	"	"
Isopropylbenzene (98-82-8)	U		98.9	"	"	"
1,1,2,2-Tetrachloroethane (79-34-5)	U		98.9	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		98.9	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		98.9	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		98.9	"	"	"
1,2-Dibromo-3-chloropropane (96-12-8)	U		247	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		247	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1211008-03 **Station ID: 06**

Batch: B2K1910
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 5.559g
%Solids: 66.46

Sample Qualifiers:

Surrogates

Analyte	Result µg/kg (dry)	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
2-Fluorophenol	12,600		62.3	38-101	11/19/12	11/21/12
Phenol-d5	15,400		75.6	42-105	"	"
2-Chlorophenol-d4	13,400		65.8	40-100	"	"
1,2-Dichlorobenzene-d4	6,780		50.1	37-100	"	"
Nitrobenzene-d5	8,800		65.0	42-108	"	"
2-Fluorobiphenyl	11,300		83.2	51-103	"	"
2,4,6-Tribromophenol	21,000		103	55-115	"	"
Terphenyl-d14	16,300		121	55-125	"	"

Targets

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Acenaphthene (83-32-9)	U		541	1	11/19/12	11/21/12
Acenaphthylene (208-96-8)	U		541	"	"	"
Acetophenone (98-86-2)	U		1,350	"	"	"
Anthracene (120-12-7)	U		541	"	"	"
Atrazine (1912-24-9)	U		1,350	"	"	"
Benzaldehyde (100-52-7)	U		1,350	"	"	"
Benzoic acid (65-85-0)	U		2,710	"	"	"
Benzo (a) anthracene (56-55-3)	U		1,350	"	"	"
Benzo (a) pyrene (50-32-8)	U		1,350	"	"	"
Benzo (b) fluoranthene (205-99-2)	U		1,350	"	"	"
Benzo (g,h,i) perylene (191-24-2)	U		1,350	"	"	"
Benzo (k) fluoranthene (207-08-9)	U		1,350	"	"	"
Benzyl alcohol (100-51-6)	U		1,350	"	"	"
1,1'-Biphenyl (92-52-4)	U		1,350	"	"	"
Bis(2-chloroethoxy)methane (111-91-1)	U		1,350	"	"	"
Bis(2-chloroethyl)ether (111-44-4)	U		1,350	"	"	"
Bis(2-chloro-1-methylethyl)ether (108-60-1)	U		1,350	"	"	"
Bis(2-ethylhexyl)phthalate (117-81-7)	U		1,350	"	"	"
4-Bromophenyl phenyl ether (101-55-3)	U		1,350	"	"	"
Butyl benzyl phthalate (85-68-7)	U		1,350	"	"	"
Carbazole (86-74-8)	U		1,350	"	"	"
Caprolactam (105-60-2)	U		1,350	"	"	"
4-Chloroaniline (106-47-8)	U		1,350	"	"	"
2-Chloronaphthalene (91-58-7)	U		1,350	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1211008-03 **Station ID: 06**

Batch: B2K1910
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 5.559g
%Solids: 66.46

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
2-Chlorophenol (95-57-8)	U		1,350	1	11/19/12	11/21/12
4-Chlorophenyl phenyl ether (7005-72-3)	U		1,350	"	"	"
4-Chloro-3-methylphenol (59-50-7)	U		1,350	"	"	"
Chrysene (218-01-9)	U		1,350	"	"	"
Dibenzofuran (132-64-9)	U		1,350	"	"	"
Dibenz (a,h) anthracene (53-70-3)	U		1,350	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		1,350	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		1,350	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		1,350	"	"	"
3,3´-Dichlorobenzidine (91-94-1)	U		1,350	"	"	"
2,4-Dichlorophenol (120-83-2)	U		1,350	"	"	"
Diethyl phthalate (84-66-2)	U		1,350	"	"	"
2,4-Dimethylphenol (105-67-9)	U		1,350	"	"	"
Dimethyl phthalate (131-11-3)	U		1,350	"	"	"
2,4-Dinitrophenol (51-28-5)	U		5,410	"	"	"
2,4-Dinitrotoluene (121-14-2)	U		1,350	"	"	"
2,6-Dinitrotoluene (606-20-2)	U		1,350	"	"	"
4,6-Dinitro-2-methylphenol (534-52-1)	U		5,410	"	"	"
Di-n-butyl phthalate (84-74-2)	U		1,350	"	"	"
Di-n-octyl phthalate (117-84-0)	U		1,350	"	"	"
Fluoranthene (206-44-0)	U		541	"	"	"
Fluorene (86-73-7)	U		541	"	"	"
Hexachlorobenzene (118-74-1)	U		1,350	"	"	"
Hexachlorobutadiene (87-68-3)	U		1,350	"	"	"
Hexachlorocyclopentadiene (77-47-4)	U		1,350	"	"	"
Hexachloroethane (67-72-1)	U		1,350	"	"	"
Indeno (1,2,3-cd) pyrene (193-39-5)	U		1,350	"	"	"
Isophorone (78-59-1)	U		1,350	"	"	"
2-Methylnaphthalene (91-57-6)	U		541	"	"	"
2-Methylphenol (95-48-7)	U		1,350	"	"	"
3 &/or 4-Methylphenol (106-44-5)	U		1,350	"	"	"
Naphthalene (91-20-3)	U		541	"	"	"
2-Nitroaniline (88-74-4)	U		2,170	"	"	"
3-Nitroaniline (99-09-2)	U		2,170	"	"	"
4-Nitroaniline (100-01-6)	U		2,170	"	"	"
Nitrobenzene (98-95-3)	U		1,350	"	"	"

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1211008-03 **Station ID: 06**

Batch: B2K1910
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 5.559g
%Solids: 66.46

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
2-Nitrophenol (88-75-5)	U		1,350	1	11/19/12	11/21/12
4-Nitrophenol (100-02-7)	U		3,520	"	"	"
N-Nitrosodiphenylamine (86-30-6)	U		1,350	"	"	"
N-Nitrosodi-n-propylamine (621-64-7)	U		1,350	"	"	"
Pentachlorophenol (87-86-5)	U		1,350	"	"	"
Phenanthrene (85-01-8)	U		541	"	"	"
Phenol (108-95-2)	U		1,350	"	"	"
Pyrene (129-00-0)	**1,030**		541	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		1,350	"	"	"
2,4,5-Trichlorophenol (95-95-4)	U		1,350	"	"	"
2,4,6-Trichlorophenol (88-06-2)	U		1,350	"	"	"

DS

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Metals by EPA Method 6010 - ICP

Lab ID: 1211008-03 **Station ID: 06**

Batch: B2K2705
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 0.503g
%Solids: 66.46

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	**4,300**		15.0	1	11/27/12	12/05/12
Barium (7440-39-3)	**2,380**		1.5	"	"	"
Beryllium (7440-41-7)	**1.1**		0.7	"	"	"
Cadmium (7440-43-9)	U		0.7	"	"	"
Calcium (7440-70-2)	**4,860**		22.4	"	"	"
Chromium (7440-47-3)	**24.3**		1.5	"	"	"
Cobalt (7440-48-4)	**7.0**		3.0	"	"	"
Copper (7440-50-8)	**38.0**		3.0	"	"	"
Iron (7439-89-6)	**20,300**		3.7	"	"	"
Magnesium (7439-95-4)	**641**		22.4	"	"	"
Manganese (7439-96-5)	**203**		0.7	"	"	"
Nickel (7440-02-2)	**18.7**		3.0	"	"	"
Potassium (7440-09-7)	**602**		150	"	"	"
Silver (7440-22-4)	U		1.5	"	"	"
Sodium (7440-23-5)	**217**		74.8	"	"	"
Vanadium (7440-62-2)	**12.9**		3.0	"	"	"
Zinc (7440-66-6)	**226**		3.0	"	"	"

ts

Metals by EPA Method 7470A/7471 - CVAAS

Lab ID: 1211008-03 **Station ID: 06**

Batch: B2K3004
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 0.13g
%Solids: 66.46

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	**0.07**		0.07	1	11/29/12	11/29/12

cj

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Metals by EPA Method 6020 - ICP MS

Lab ID: 1211008-03 **Station ID: 06**

Batch: B2K2802
Sample Type: Solid

Date Collected: 11/15/12
Sample Wt: 0.503g
%Solids: 66.46

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		1.5	20	11/27/12	11/29/12
Arsenic (7440-38-2)	**4.6**		1.5	"	"	"
Lead (7439-92-1)	**22.3**		1.5	"	"	"
Selenium (7782-49-2)	U		1.5	"	"	"
Thallium (7440-28-0)	U		1.5	"	"	"

KD

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Percent Solids - Quality Control

Duplicate (B2K1911-DUP1)

Source: 1211008-03 Prepared: 11/19/2012 Analyzed: 11/20/2012

Targets

ANALYTE	Result %	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	RPD	RPD Limit
% Solids	66.08				66.46	0.57	20

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2102 **Sample Type: Liquid**

Blank (B2K2102-BLK1)
Prepared: 11/19/2012 Analyzed: 11/19/2012

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	49.6		50.0	99.2	81-124
Toluene-d8	48.9		50.0	97.9	86-115
4-Bromofluorobenzene	47.9		50.0	95.8	76-115

Blank (B2K2102-BLK1)
Prepared: 11/19/2012 Analyzed: 11/19/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit
Dichlorodifluoromethane	U		5.0
Chloromethane	U		5.0
Vinyl chloride	U		2.0
Bromomethane	U		5.0
Chloroethane	U		2.0
Trichlorofluoromethane	U		2.0
1,1-Dichloroethene	U		2.0
Carbon disulfide	U		2.0
1,1,2-Trichloro-1,2,2-trifluoroethane	U		2.0
Acetone	U		10.0
Methylene chloride	U		2.0
Methyl acetate	U		2.0
trans-1,2-Dichloroethene	U		2.0
cis-1,2-Dichloroethene	U		2.0
Methyl tert-butyl ether	U		2.0
1,1-Dichloroethane	U		2.0
2-Butanone	U		5.0
Chloroform	U		2.0
1,2-Dichloroethane	U		2.0
1,1,1-Trichloroethane	U		2.0
Cyclohexane	U		2.0

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2102 **Sample Type: Liquid**

Blank (B2K2102-BLK1)

Prepared: 11/19/2012 Analyzed: 11/19/2012

Targets (Continued)

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit
Carbon tetrachloride	U		2.0
Benzene	U		2.0
Trichloroethene	U		2.0
Methylcyclohexane	U		2.0
1,2-Dichloropropane	U		2.0
Bromodichloromethane	U		2.0
cis-1,3-Dichloropropene	U		2.0
trans-1,3-Dichloropropene	U		2.0
1,1,2-Trichloroethane	U		2.0
Dibromochloromethane	U		2.0
Bromoform	U		2.0
4-Methyl-2-pentanone	U		5.0
Toluene	U		2.0
Tetrachloroethene	U		2.0
2-Hexanone	U		5.0
1,2-Dibromoethane	U		2.0
Chlorobenzene	U		2.0
Ethylbenzene	U		2.0
meta-/para-Xylene	U		4.0
ortho-Xylene	U		2.0
Styrene	U		2.0
Isopropylbenzene	U		2.0
1,1,2,2-Tetrachloroethane	U		2.0
1,3-Dichlorobenzene	U		2.0
1,4-Dichlorobenzene	U		2.0
1,2-Dichlorobenzene	U		2.0
1,2-Dibromo-3-chloropropane	U		5.0
1,2,4-Trichlorobenzene	U		5.0

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2102 **Sample Type: Liquid**

LCS (B2K2102-BS1)
Prepared: 11/19/2012 Analyzed: 11/19/2012

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	49.3		50.0	98.6	81-124
Toluene-d8	49.7		50.0	99.4	86-115
4-Bromofluorobenzene	49.7		50.0	99.3	76-115

LCS (B2K2102-BS1)
Prepared: 11/19/2012 Analyzed: 11/19/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Dichlorodifluoromethane	67.3			50.0	135	64-176
Chloromethane	58.6			50.0	117	70-168
Vinyl chloride	56.1			50.0	112	69-153
Bromomethane	40.3			50.0	80.5	73-155
Chloroethane	37.7			50.0	75.3	68-137
Trichlorofluoromethane	55.1			50.0	110	74-137
1,1-Dichloroethene	51.7			50.0	103	71-142
Carbon disulfide	51.4			50.0	103	58-155
1,1,2-Trichloro-1,2,2-trifluoroethane	52.0			50.0	104	85-142
Acetone	32.1			50.0	64.2	46-159
Methylene chloride	47.8			50.0	95.6	75-126
Methyl acetate	53.4			50.0	107	70-137
trans-1,2-Dichloroethene	51.0			50.0	102	73-127
cis-1,2-Dichloroethene	52.2			50.0	104	83-121
Methyl tert-butyl ether	52.0			50.0	104	82-124
1,1-Dichloroethane	51.3			50.0	103	81-123
2-Butanone	37.5			50.0	74.9	57-153
Chloroform	51.0			50.0	102	83-119
1,2-Dichloroethane	50.5			50.0	101	81-120
1,1,1-Trichloroethane	51.1			50.0	102	82-124
Cyclohexane	50.7			50.0	101	77-141

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2102 **Sample Type: Liquid**

LCS (B2K2102-BS1)

Prepared: 11/19/2012 Analyzed: 11/19/2012

Targets (Continued)

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Carbon tetrachloride	52.4			50.0	105	81-124
Benzene	51.7			50.0	103	80-122
Trichloroethene	52.8			50.0	106	79-121
Methylcyclohexane	52.9			50.0	106	86-126
1,2-Dichloropropane	51.1			50.0	102	82-119
Bromodichloromethane	52.4			50.0	105	82-118
cis-1,3-Dichloropropene	53.8			50.0	108	78-120
trans-1,3-Dichloropropene	55.2			50.0	110	75-123
1,1,2-Trichloroethane	52.3			50.0	105	81-116
Dibromochloromethane	52.2			50.0	104	79-112
Bromoform	53.2			50.0	106	76-120
4-Methyl-2-pentanone	54.5			50.0	109	79-130
Toluene	51.3			50.0	103	81-122
Tetrachloroethene	52.7			50.0	105	81-120
2-Hexanone	42.2			50.0	84.3	69-138
1,2-Dibromoethane	53.3			50.0	107	81-117
Chlorobenzene	49.8			50.0	99.6	82-119
Ethylbenzene	51.0			50.0	102	79-126
meta-/para-Xylene	102			100	102	73-131
ortho-Xylene	51.7			50.0	103	79-124
Styrene	52.6			50.0	105	65-126
Isopropylbenzene	51.7			50.0	103	82-128
1,1,2,2-Tetrachloroethane	50.6			50.0	101	81-117
1,3-Dichlorobenzene	51.1			50.0	102	82-119
1,4-Dichlorobenzene	50.3			50.0	101	82-120
1,2-Dichlorobenzene	50.4			50.0	101	81-117
1,2-Dibromo-3-chloropropane	54.4			50.0	109	74-122
1,2,4-Trichlorobenzene	54.4			50.0	109	78-119

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2102 **Sample Type: Liquid**

Matrix Spike (B2K2102-MS1)

Source: 1211006-01 Prepared: 11/19/2012 Analyzed: 11/19/2012

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	50.3		50.0	101	81-124
Toluene-d8	50.2		50.0	100	86-115
4-Bromofluorobenzene	49.6		50.0	99.1	76-115

Matrix Spike (B2K2102-MS1)

Source: 1211006-01 Prepared: 11/19/2012 Analyzed: 11/19/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Dichlorodifluoromethane	65.3			50.0		131	50-150
Chloromethane	54.1			50.0	0.4	107	50-150
Vinyl chloride	53.6			50.0		107	70-130
Bromomethane	44.6			50.0	1.2	86.9	50-150
Chloroethane	40.3			50.0		80.6	70-130
Trichlorofluoromethane	56.2			50.0		112	70-130
1,1-Dichloroethene	52.0			50.0		104	61-145
Carbon disulfide	51.4			50.0		103	70-130
1,1,2-Trichloro-1,2,2-trifluoroethane	52.5			50.0		105	70-130
Acetone	31.7			50.0	0.7	62.1	50-150
Methylene chloride	48.1			50.0		96.2	70-130
Methyl acetate	50.3			50.0		101	70-130
trans-1,2-Dichloroethene	51.5			50.0		103	70-130
cis-1,2-Dichloroethene	50.7			50.0		101	70-130
Methyl tert-butyl ether	50.0			50.0		100	70-130
1,1-Dichloroethane	49.7			50.0		99.3	70-130
2-Butanone	35.4			50.0		70.7	50-150
Chloroform	49.8			50.0		99.6	70-130
1,2-Dichloroethane	49.4			50.0		98.7	70-130
1,1,1-Trichloroethane	49.8			50.0		99.7	70-130
Cyclohexane	47.8			50.0		95.7	70-130

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2102 **Sample Type: Liquid**

Matrix Spike (B2K2102-MS1)

Source: 1211006-01 Prepared: 11/19/2012 Analyzed: 11/19/2012

Targets (Continued)

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Carbon tetrachloride	50.6			50.0		101	70-130
Benzene	49.9			50.0		99.8	76-127
Trichloroethene	51.2			50.0		102	71-120
Methylcyclohexane	50.9			50.0		102	70-130
1,2-Dichloropropane	49.5			50.0		99.0	70-130
Bromodichloromethane	51.2			50.0		102	70-130
cis-1,3-Dichloropropene	51.6			50.0		103	70-130
trans-1,3-Dichloropropene	53.1			50.0		106	70-130
1,1,2-Trichloroethane	50.3			50.0		101	70-130
Dibromochloromethane	51.0			50.0		102	70-130
Bromoform	51.3			50.0		103	70-130
4-Methyl-2-pentanone	50.2			50.0		100	70-130
Toluene	49.3			50.0		98.5	76-125
Tetrachloroethene	51.5			50.0		103	70-130
2-Hexanone	38.9			50.0		77.7	70-130
1,2-Dibromoethane	50.8			50.0		102	70-130
Chlorobenzene	48.8			50.0		97.5	75-130
Ethylbenzene	49.4			50.0		98.8	70-130
meta-/para-Xylene	98.8			100		98.8	70-130
ortho-Xylene	50.3			50.0		101	70-130
Styrene	51.4			50.0		103	70-130
Isopropylbenzene	49.7			50.0		99.5	70-130
1,1,2,2-Tetrachloroethane	47.0			50.0		94.1	70-130
1,3-Dichlorobenzene	49.8			50.0	0.1	99.4	70-130
1,4-Dichlorobenzene	49.2			50.0	0.1	98.1	70-130
1,2-Dichlorobenzene	49.5			50.0	0.1	98.7	70-130
1,2-Dibromo-3-chloropropane	49.1			50.0		98.1	50-150
1,2,4-Trichlorobenzene	52.2			50.0	0.2	104	70-130

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2102 **Sample Type: Liquid**

Matrix Spike Dup (B2K2102-MSD1)

Source: 1211006-01 Prepared: 11/19/2012 Analyzed: 11/19/2012

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	50.0		50.0	99.9	81-124
Toluene-d8	50.1		50.0	100	86-115
4-Bromofluorobenzene	49.7		50.0	99.3	76-115

Matrix Spike Dup (B2K2102-MSD1)

Source: 1211006-01 Prepared: 11/19/2012 Analyzed: 11/19/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Dichlorodifluoromethane	67.4			50.0		135	50-150	3.10	20
Chloromethane	55.7			50.0	0.4	111	50-150	2.93	20
Vinyl chloride	55.3			50.0		111	70-130	3.20	20
Bromomethane	39.4			50.0	1.2	76.3	50-150	12.6	20
Chloroethane	36.9			50.0		73.8	70-130	8.70	20
Trichlorofluoromethane	55.6			50.0		111	70-130	1.13	20
1,1-Dichloroethene	53.3			50.0		107	61-145	2.47	14
Carbon disulfide	52.4			50.0		105	70-130	2.02	20
1,1,2-Trichloro-1,2,2-trifluoroethane	53.2			50.0		106	70-130	1.33	20
Acetone	34.2			50.0	0.7	67.0	50-150	7.43	20
Methylene chloride	48.3			50.0		96.6	70-130	0.44	20
Methyl acetate	54.1			50.0		108	70-130	7.27	20
trans-1,2-Dichloroethene	52.8			50.0		106	70-130	2.49	20
cis-1,2-Dichloroethene	51.4			50.0		103	70-130	1.20	20
Methyl tert-butyl ether	51.6			50.0		103	70-130	3.15	20
1,1-Dichloroethane	50.4			50.0		101	70-130	1.42	20
2-Butanone	37.8			50.0		75.6	50-150	6.62	20
Chloroform	50.6			50.0		101	70-130	1.63	20
1,2-Dichloroethane	50.5			50.0		101	70-130	2.24	20
1,1,1-Trichloroethane	50.7			50.0		101	70-130	1.77	20
Cyclohexane	49.5			50.0		99.0	70-130	3.39	20

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2102 **Sample Type: Liquid**

Matrix Spike Dup (B2K2102-MSD1)

Source: 1211006-01 Prepared: 11/19/2012 Analyzed: 11/19/2012

Targets (Continued)

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Carbon tetrachloride	51.8			50.0		104	70-130	2.38	20
Benzene	50.7			50.0		101	76-127	1.69	11
Trichloroethene	52.2			50.0		104	71-120	1.76	14
Methylcyclohexane	52.2			50.0		104	70-130	2.46	20
1,2-Dichloropropane	49.8			50.0		99.7	70-130	0.66	20
Bromodichloromethane	51.4			50.0		103	70-130	0.39	20
cis-1,3-Dichloropropene	52.3			50.0		105	70-130	1.50	20
trans-1,3-Dichloropropene	54.0			50.0		108	70-130	1.70	20
1,1,2-Trichloroethane	51.5			50.0		103	70-130	2.34	20
Dibromochloromethane	51.9			50.0		104	70-130	1.69	20
Bromoform	52.8			50.0		106	70-130	2.96	20
4-Methyl-2-pentanone	54.4			50.0		109	70-130	8.02	20
Toluene	50.5			50.0		101	76-125	2.53	13
Tetrachloroethene	52.5			50.0		105	70-130	1.85	20
2-Hexanone	42.5			50.0		85.0	70-130	8.99	20
1,2-Dibromoethane	52.1			50.0		104	70-130	2.60	20
Chlorobenzene	49.6			50.0		99.2	75-130	1.73	13
Ethylbenzene	50.7			50.0		101	70-130	2.64	20
meta-/para-Xylene	101			100		101	70-130	2.46	20
ortho-Xylene	51.2			50.0		102	70-130	1.83	20
Styrene	52.0			50.0		104	70-130	1.14	20
Isopropylbenzene	51.2			50.0		102	70-130	2.95	20
1,1,2,2-Tetrachloroethane	49.8			50.0		99.6	70-130	5.74	20
1,3-Dichlorobenzene	50.8			50.0	0.1	101	70-130	2.01	20
1,4-Dichlorobenzene	50.0			50.0	0.1	99.7	70-130	1.67	20
1,2-Dichlorobenzene	50.5			50.0	0.1	101	70-130	2.02	20
1,2-Dibromo-3-chloropropane	54.1			50.0		108	50-150	9.79	20
1,2,4-Trichlorobenzene	53.8			50.0	0.2	107	70-130	3.02	20

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2103 **Sample Type: Solid**

Blank (B2K2103-BLK1)
Prepared: 11/20/2012 Analyzed: 11/20/2012

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	51.0		50.0	102	82-120
Toluene-d8	49.2		50.0	98.4	81-116
4-Bromofluorobenzene	48.0		50.0	96.1	80-116

Blank (B2K2103-BLK1)
Prepared: 11/20/2012 Analyzed: 11/20/2012

Targets

ANALYTE	Result µg/Kg	Analyte Qualifiers	Reporting Limit
Dichlorodifluoromethane	U		250
Chloromethane	U		250
Vinyl chloride	U		99.9
Bromomethane	U		250
Chloroethane	U		99.9
Trichlorofluoromethane	U		99.9
1,1-Dichloroethene	U		99.9
Carbon disulfide	U		99.9
1,1,2-Trichloro-1,2,2-trifluoroethane	U		99.9
Acetone	U		499
Methylene chloride	U		99.9
Methyl acetate	U		250
trans-1,2-Dichloroethene	U		99.9
cis-1,2-Dichloroethene	U		99.9
Methyl tert-butyl ether	U		99.9
1,1-Dichloroethane	U		99.9
2-Butanone	U		250
Chloroform	U		99.9
1,2-Dichloroethane	U		99.9
1,1,1-Trichloroethane	U		99.9
Cyclohexane	U		99.9

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2103 **Sample Type: Solid**

Blank (B2K2103-BLK1)

Prepared: 11/20/2012 Analyzed: 11/20/2012

Targets (Continued)

ANALYTE	Result µg/Kg	Analyte Qualifiers	Reporting Limit
Carbon tetrachloride	U		99.9
Benzene	U		99.9
Trichloroethene	U		99.9
Methylcyclohexane	U		99.9
1,2-Dichloropropane	U		99.9
Bromodichloromethane	U		99.9
cis-1,3-Dichloropropene	U		99.9
trans-1,3-Dichloropropene	U		99.9
1,1,2-Trichloroethane	U		99.9
Dibromochloromethane	U		99.9
Bromoform	U		99.9
4-Methyl-2-pentanone	U		250
Toluene	U		99.9
Tetrachloroethene	U		99.9
2-Hexanone	U		250
1,2-Dibromoethane	U		99.9
Chlorobenzene	U		99.9
Ethylbenzene	U		99.9
meta-/para-Xylene	U		200
ortho-Xylene	U		99.9
Styrene	U		99.9
Isopropylbenzene	U		99.9
1,1,2,2-Tetrachloroethane	U		99.9
1,3-Dichlorobenzene	U		99.9
1,4-Dichlorobenzene	U		99.9
1,2-Dichlorobenzene	U		99.9
1,2-Dibromo-3-chloropropane	U		250
1,2,4-Trichlorobenzene	U		250

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2103 **Sample Type: Solid**

LCS (B2K2103-BS1)

Prepared: 11/20/2012 Analyzed: 11/20/2012

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	49.2		50.0	98.5	82-120
Toluene-d8	49.8		50.0	99.6	81-116
4-Bromofluorobenzene	49.3		50.0	98.7	80-116

LCS (B2K2103-BS1)

Prepared: 11/20/2012 Analyzed: 11/20/2012

Targets

ANALYTE	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Dichlorodifluoromethane	2,930		250	2,500	117	39-124
Chloromethane	2,740		250	2,500	110	36-152
Vinyl chloride	2,510		99.9	2,500	101	34-138
Bromomethane	951		250	2,500	38.1	35-127
Chloroethane	557		99.9	2,500	22.3 #	51-148
Trichlorofluoromethane	379		99.9	2,500	15.2 #	18-136
1,1-Dichloroethene	1,890		99.9	2,500	75.6	55-160
Carbon disulfide	2,140		99.9	2,500	85.7	60-142
1,1,2-Trichloro-1,2,2-trifluoroethane	1,890		99.9	2,500	75.7	67-148
Acetone	1,260		499	2,500	50.4	46-138
Methylene chloride	2,190		99.9	2,500	87.8	72-151
Methyl acetate	2,550		250	2,500	102	67-161
trans-1,2-Dichloroethene	2,410		99.9	2,500	96.6	61-153
cis-1,2-Dichloroethene	2,580		99.9	2,500	103	66-137
Methyl tert-butyl ether	2,460		99.9	2,500	98.7	82-137
1,1-Dichloroethane	2,470		99.9	2,500	99.1	68-141
2-Butanone	1,570		250	2,500	62.9	38-147
Chloroform	2,510		99.9	2,500	100	78-136
1,2-Dichloroethane	2,490		99.9	2,500	99.8	73-141
1,1,1-Trichloroethane	2,430		99.9	2,500	97.3	77-136
Cyclohexane	2,390		99.9	2,500	95.7	62-142

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2103 **Sample Type: Solid**

LCS (B2K2103-BS1)

Prepared: 11/20/2012 Analyzed: 11/20/2012

Targets (Continued)

ANALYTE	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Carbon tetrachloride	2,470		99.9	2,500	98.9	73-136
Benzene	2,490		99.9	2,500	99.8	63-141
Trichloroethene	2,560		99.9	2,500	103	67-136
Methylcyclohexane	2,540		99.9	2,500	102	51-137
1,2-Dichloropropane	2,490		99.9	2,500	99.8	77-130
Bromodichloromethane	2,530		99.9	2,500	101	83-129
cis-1,3-Dichloropropene	2,600		99.9	2,500	104	65-132
trans-1,3-Dichloropropene	2,680		99.9	2,500	107	67-132
1,1,2-Trichloroethane	2,500		99.9	2,500	100	72-137
Dibromochloromethane	2,530		99.9	2,500	101	76-126
Bromoform	2,480		99.9	2,500	99.4	63-135
4-Methyl-2-pentanone	2,720		250	2,500	109	82-131
Toluene	2,510		99.9	2,500	101	69-132
Tetrachloroethene	2,590		99.9	2,500	104	63-133
2-Hexanone	2,000		250	2,500	80.0	49-141
1,2-Dibromoethane	2,550		99.9	2,500	102	68-130
Chlorobenzene	2,480		99.9	2,500	99.3	68-139
Ethylbenzene	2,520		99.9	2,500	101	58-138
meta-/para-Xylene	5,040		200	4,990	101	59-138
ortho-Xylene	2,590		99.9	2,500	104	52-143
Styrene	2,600		99.9	2,500	104	55-142
Isopropylbenzene	2,560		99.9	2,500	103	57-143
1,1,2,2-Tetrachloroethane	2,460		99.9	2,500	98.4	71-137
1,3-Dichlorobenzene	2,540		99.9	2,500	102	65-140
1,4-Dichlorobenzene	2,510		99.9	2,500	100	66-139
1,2-Dichlorobenzene	2,530		99.9	2,500	101	65-139
1,2-Dibromo-3-chloropropane	2,660		250	2,500	107	74-130
1,2,4-Trichlorobenzene	2,700		250	2,500	108	70-132

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2103 **Sample Type: Solid**

Matrix Spike (B2K2103-MS1)

Source: 1211006-02 Prepared: 11/20/2012 Analyzed: 11/20/2012

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	49.6		50.0	99.1	82-120
Toluene-d8	49.7		50.0	99.4	81-116
4-Bromofluorobenzene	50.4		50.0	101	80-116

Matrix Spike (B2K2103-MS1)

Source: 1211006-02 Prepared: 11/20/2012 Analyzed: 11/20/2012

Targets

ANALYTE	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Dichlorodifluoromethane	1,460		249	2,490		58.7	50-150
Chloromethane	2,050		249	2,490	28.9	81.2	50-150
Vinyl chloride	1,850		99.4	2,490		74.5	70-130
Bromomethane	679		249	2,490	38.3	25.8 #	50-150
Chloroethane	473		99.4	2,490		19.0 #	70-130
Trichlorofluoromethane	257		99.4	2,490		10.3 #	70-130
1,1-Dichloroethene	1,410		99.4	2,490		56.7 #	59-172
Carbon disulfide	1,600		99.4	2,490		64.2 #	70-130
1,1,2-Trichloro-1,2,2-trifluoroethane	1,260		99.4	2,490		50.9 #	70-130
Acetone	1,000		497	2,490		40.3 #	50-150
Methylene chloride	1,930		99.4	2,490	11.8	77.3	70-130
Methyl acetate	2,030		249	2,490		81.9	70-130
trans-1,2-Dichloroethene	2,060		99.4	2,490		82.9	70-130
cis-1,2-Dichloroethene	2,370		99.4	2,490		95.5	70-130
Methyl tert-butyl ether	2,270		99.4	2,490		91.4	70-130
1,1-Dichloroethane	2,170		99.4	2,490		87.2	70-130
2-Butanone	1,510		249	2,490		60.7	50-150
Chloroform	2,310		99.4	2,490		92.8	70-130
1,2-Dichloroethane	2,300		99.4	2,490		92.4	70-130
1,1,1-Trichloroethane	2,180		99.4	2,490		87.8	70-130
Cyclohexane	1,980		99.4	2,490		79.6	70-130

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2103 **Sample Type: Solid**

Matrix Spike (B2K2103-MS1)

Source: 1211006-02 Prepared: 11/20/2012 Analyzed: 11/20/2012

Targets (Continued)

ANALYTE	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Carbon tetrachloride	2,140		99.4	2,490		86.3	70-130
Benzene	2,310		99.4	2,490		92.8	66-142
Trichloroethene	2,330		99.4	2,490		93.9	62-137
Methylcyclohexane	2,110		99.4	2,490		85.0	70-130
1,2-Dichloropropane	2,370		99.4	2,490		95.4	70-130
Bromodichloromethane	2,350		99.4	2,490		94.7	70-130
cis-1,3-Dichloropropene	2,460		99.4	2,490		99.0	70-130
trans-1,3-Dichloropropene	2,520		99.4	2,490		101	70-130
1,1,2-Trichloroethane	2,350		99.4	2,490		94.6	70-130
Dibromochloromethane	2,320		99.4	2,490		93.3	70-130
Bromoform	2,200		99.4	2,490		88.7	70-130
4-Methyl-2-pentanone	2,320		249	2,490		93.2	70-130
Toluene	2,300		99.4	2,490		92.5	59-139
Tetrachloroethene	2,290		99.4	2,490		92.2	70-130
2-Hexanone	1,660		249	2,490		66.7 #	70-130
1,2-Dibromoethane	2,340		99.4	2,490		94.0	70-130
Chlorobenzene	2,290		99.4	2,490		92.0	60-133
Ethylbenzene	2,290		99.4	2,490		92.1	70-130
meta-/para-Xylene	4,570		199	4,970	5.9	91.9	70-130
ortho-Xylene	2,350		99.4	2,490		94.7	70-130
Styrene	2,400		99.4	2,490		96.7	70-130
Isopropylbenzene	2,300		99.4	2,490		92.6	70-130
1,1,2,2-Tetrachloroethane	2,130		99.4	2,490	6.4	85.4	70-130
1,3-Dichlorobenzene	2,350		99.4	2,490	7.4	94.4	70-130
1,4-Dichlorobenzene	2,320		99.4	2,490	7.8	93.1	70-130
1,2-Dichlorobenzene	2,350		99.4	2,490	7.4	94.2	70-130
1,2-Dibromo-3-chloropropane	2,120		249	2,490		85.2	50-150
1,2,4-Trichlorobenzene	2,500		249	2,490	10.8	100	70-130

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2103 **Sample Type: Solid**

Matrix Spike Dup (B2K2103-MSD1)

Source: 1211006-02 Prepared: 11/20/2012 Analyzed: 11/20/2012

Surrogates

ANALYTE	Result µg/l	Analyte Qualifier	Spike Level	%REC	%REC Limits
1,2-Dichloroethane-d4	48.9		50.0	97.9	82-120
Toluene-d8	49.9		50.0	99.8	81-116
4-Bromofluorobenzene	50.7		50.0	101	80-116

Matrix Spike Dup (B2K2103-MSD1)

Source: 1211006-02 Prepared: 11/20/2012 Analyzed: 11/20/2012

Targets

ANALYTE	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Dichlorodifluoromethane	1,190		248	2,480		48.1 #	50-150	20.2	30
Chloromethane	1,980		248	2,480	28.9	78.8	50-150	3.20	30
Vinyl chloride	1,780		99.1	2,480		71.9	70-130	3.89	30
Bromomethane	692		248	2,480	38.3	26.4 #	50-150	1.83	30
Chloroethane	420		99.1	2,480		17.0 #	70-130	11.8	30
Trichlorofluoromethane	252		99.1	2,480		10.2 #	70-130	2.09	30
1,1-Dichloroethene	1,160		99.1	2,480		46.9 #	59-172	19.3	22
Carbon disulfide	1,420		99.1	2,480		57.5 #	70-130	11.3	30
1,1,2-Trichloro-1,2,2-trifluoroethane	1,060		99.1	2,480		42.9 #	70-130	17.2	30
Acetone	946		495	2,480		38.2 #	50-150	5.84	30
Methylene chloride	1,790		99.1	2,480	11.8	71.6	70-130	8.02	30
Methyl acetate	1,830		248	2,480		73.8	70-130	10.7	30
trans-1,2-Dichloroethene	1,930		99.1	2,480		77.8	70-130	6.63	30
cis-1,2-Dichloroethene	2,230		99.1	2,480		90.1	70-130	6.18	30
Methyl tert-butyl ether	2,130		99.1	2,480		85.9	70-130	6.54	30
1,1-Dichloroethane	2,060		99.1	2,480		83.2	70-130	5.01	30
2-Butanone	1,450		248	2,480		58.6	50-150	3.83	30
Chloroform	2,200		99.1	2,480		89.0	70-130	4.61	30
1,2-Dichloroethane	2,200		99.1	2,480		88.7	70-130	4.45	30
1,1,1-Trichloroethane	2,110		99.1	2,480		85.3	70-130	3.29	30
Cyclohexane	1,910		99.1	2,480		77.0	70-130	3.61	30

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Volatiles by EPA Method 8260 - GC/MS - Quality Control

Batch: B2K2103 **Sample Type: Solid**

Matrix Spike Dup (B2K2103-MSD1)

Source: 1211006-02 Prepared: 11/20/2012 Analyzed: 11/20/2012

Targets (Continued)

ANALYTE	Result µg/Kg	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Carbon tetrachloride	2,090		99.1	2,480		84.5	70-130	2.35	30
Benzene	2,220		99.1	2,480		89.7	66-142	3.78	21
Trichloroethene	2,260		99.1	2,480		91.3	62-137	3.19	24
Methylcyclohexane	2,060		99.1	2,480		83.0	70-130	2.74	30
1,2-Dichloropropane	2,290		99.1	2,480		92.4	70-130	3.47	30
Bromodichloromethane	2,280		99.1	2,480		92.1	70-130	3.12	30
cis-1,3-Dichloropropene	2,370		99.1	2,480		95.5	70-130	3.96	30
trans-1,3-Dichloropropene	2,410		99.1	2,480		97.4	70-130	4.42	30
1,1,2-Trichloroethane	2,250		99.1	2,480		90.8	70-130	4.43	30
Dibromochloromethane	2,240		99.1	2,480		90.4	70-130	3.47	30
Bromoform	2,110		99.1	2,480		85.2	70-130	4.29	30
4-Methyl-2-pentanone	2,260		248	2,480		91.3	70-130	2.38	30
Toluene	2,220		99.1	2,480		89.8	59-139	3.30	21
Tetrachloroethene	2,250		99.1	2,480		90.8	70-130	1.89	30
2-Hexanone	1,620		248	2,480		65.4 #	70-130	2.30	30
1,2-Dibromoethane	2,250		99.1	2,480		90.9	70-130	3.67	30
Chlorobenzene	2,210		99.1	2,480		89.2	60-133	3.45	21
Ethylbenzene	2,230		99.1	2,480		90.1	70-130	2.53	30
meta-/para-Xylene	4,430		198	4,950	5.9	89.3	70-130	3.18	30
ortho-Xylene	2,290		99.1	2,480		92.3	70-130	2.90	30
Styrene	2,330		99.1	2,480		94.2	70-130	2.98	30
Isopropylbenzene	2,240		99.1	2,480		90.4	70-130	2.81	30
1,1,2,2-Tetrachloroethane	2,040		99.1	2,480	6.4	81.9	70-130	4.53	30
1,3-Dichlorobenzene	2,290		99.1	2,480	7.4	92.3	70-130	2.62	30
1,4-Dichlorobenzene	2,260		99.1	2,480	7.8	90.8	70-130	2.81	30
1,2-Dichlorobenzene	2,300		99.1	2,480	7.4	92.4	70-130	2.32	30
1,2-Dibromo-3-chloropropane	2,000		248	2,480		80.9	50-150	5.54	30
1,2,4-Trichlorobenzene	2,460		248	2,480	10.8	98.9	70-130	1.74	30

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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B2K1910 **Sample Type: Solid**

Blank (B2K1910-BLK1)
Prepared: 11/19/2012 Analyzed: 11/21/2012

Surrogates

ANALYTE	Result µg/Kg dry	Analyte Qualifier	Spike Level	%REC	%REC Limits
2-Fluorophenol	6,120		7,490	81.7	38-101
Phenol-d5	6,790		7,490	90.6	42-105
2-Chlorophenol-d4	5,690		7,490	76.0	40-100
1,2-Dichlorobenzene-d4	2,940		4,990	58.9	37-100
Nitrobenzene-d5	3,670		4,990	73.5	42-108
2-Fluorobiphenyl	4,020		4,990	80.5	51-103
2,4,6-Tribromophenol	5,880		7,490	78.5	55-115
Terphenyl-d14	4,870		4,990	97.6	55-125

Blank (B2K1910-BLK1)
Prepared: 11/19/2012 Analyzed: 11/21/2012

Targets

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit
Acenaphthene	U		200
Acenaphthylene	U		200
Acetophenone	U		499
Anthracene	U		200
Atrazine	U		499
Benzaldehyde	U		499
Benzoic acid	U		999
Benzo (a) anthracene	U		499
Benzo (a) pyrene	U		499
Benzo (b) fluoranthene	U		499
Benzo (g,h,i) perylene	U		499
Benzo (k) fluoranthene	U		499
Benzyl alcohol	U		499
1,1'-Biphenyl	U		499
Bis(2-chloroethoxy)methane	U		499
Bis(2-chloroethyl)ether	U		499

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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B2K1910 **Sample Type: Solid**

Blank (B2K1910-BLK1)

Prepared: 11/19/2012 Analyzed: 11/21/2012

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit
Bis(2-chloro-1-methylethyl)ether	U		499
Bis(2-ethylhexyl)phthalate	U		499
4-Bromophenyl phenyl ether	U		499
Butyl benzyl phthalate	U		499
Carbazole	U		499
Caprolactam	U		499
4-Chloroaniline	U		499
2-Chloronaphthalene	U		499
2-Chlorophenol	U		499
4-Chlorophenyl phenyl ether	U		499
4-Chloro-3-methylphenol	U		499
Chrysene	U		499
Dibenzofuran	U		499
Dibenz (a,h) anthracene	U		499
1,2-Dichlorobenzene	U		499
1,3-Dichlorobenzene	U		499
1,4-Dichlorobenzene	U		499
3,3´-Dichlorobenzidine	U		499
2,4-Dichlorophenol	U		499
Diethyl phthalate	U		499
2,4-Dimethylphenol	U		499
Dimethyl phthalate	U		499
2,4-Dinitrophenol	U		2,000
2,4-Dinitrotoluene	U		499
2,6-Dinitrotoluene	U		499
4,6-Dinitro-2-methylphenol	U		2,000
Di-n-butyl phthalate	U		499
Di-n-octyl phthalate	U		499
Fluoranthene	U		200
Fluorene	U		200

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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B2K1910 **Sample Type: Solid**

Blank (B2K1910-BLK1)

Prepared: 11/19/2012 Analyzed: 11/21/2012

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit
Hexachlorobenzene	U		499
Hexachlorobutadiene	U		499
Hexachlorocyclopentadiene	U		499
Hexachloroethane	U		499
Indeno (1,2,3-cd) pyrene	U		499
Isophorone	U		499
2-Methylnaphthalene	U		200
2-Methylphenol	U		499
3 &/or 4-Methylphenol	U		499
Naphthalene	U		200
2-Nitroaniline	U		799
3-Nitroaniline	U		799
4-Nitroaniline	U		799
Nitrobenzene	U		499
2-Nitrophenol	U		499
4-Nitrophenol	U		1,300
N-Nitrosodiphenylamine	U		499
N-Nitrosodi-n-propylamine	U		499
Pentachlorophenol	U		499
Phenanthrene	U		200
Phenol	U		499
Pyrene	U		200
1,2,4-Trichlorobenzene	U		499
2,4,5-Trichlorophenol	U		499
2,4,6-Trichlorophenol	U		499

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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B2K1910 **Sample Type: Solid**

LCS (B2K1910-BS1)
Prepared: 11/19/2012 Analyzed: 11/21/2012

Surrogates

ANALYTE	Result µg/Kg dry	Analyte Qualifier	Spike Level	%REC	%REC Limits
2-Fluorophenol	6,030		7,480	80.7	38-101
Phenol-d5	6,560		7,480	87.7	42-105
2-Chlorophenol-d4	5,760		7,480	77.1	40-100
1,2-Dichlorobenzene-d4	3,060		4,990	61.4	37-100
Nitrobenzene-d5	3,810		4,990	76.4	42-108
2-Fluorobiphenyl	4,090		4,990	82.0	51-103
2,4,6-Tribromophenol	6,560		7,480	87.7	55-115
Terphenyl-d14	4,490		4,990	90.0	55-125

LCS (B2K1910-BS1)
Prepared: 11/19/2012 Analyzed: 11/21/2012

Targets

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Acenaphthene	4,230		199	4,990	84.9	47-101
Acenaphthylene	4,170		199	4,990	83.7	49-102
Acetophenone	4,320		499	4,990	86.6	42-100
Anthracene	4,510		199	4,990	90.5	51-114
Atrazine	4,720		499	4,990	94.6	61-126
Benzaldehyde	3,850		499	4,990	77.2	30-100
Benzoic acid	3,150		997	4,990	63.1	10-125
Benzo (a) anthracene	4,940		499	4,990	99.1	59-121
Benzo (a) pyrene	4,750		499	4,990	95.3	65-124
Benzo (b) fluoranthene	4,550		499	4,990	91.2	60-119
Benzo (g,h,i) perylene	4,480		499	4,990	89.8	54-139
Benzo (k) fluoranthene	5,020		499	4,990	101	57-130
Benzyl alcohol	4,770		499	4,990	95.6	42-102
1,1'-Biphenyl	4,210		499	4,990	84.5	41-107
Bis(2-chloroethoxy)methane	4,210		499	4,990	84.4	47-100
Bis(2-chloroethyl)ether	3,830		499	4,990	76.8	37-100

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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B2K1910 **Sample Type: Solid**

LCS (B2K1910-BS1)

Prepared: 11/19/2012 Analyzed: 11/21/2012

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Bis(2-chloro-1-methylethyl)ether	4,490		499	4,990	90.1	41-100
Bis(2-ethylhexyl)phthalate	5,480		499	4,990	110	59-146
4-Bromophenyl phenyl ether	4,230		499	4,990	84.9	50-109
Butyl benzyl phthalate	5,280		499	4,990	106	65-124
Carbazole	4,710		499	4,990	94.5	59-124
Caprolactam	5,000		499	4,990	100	55-142
4-Chloroaniline	3,050		499	4,990	61.1	37-100
2-Chloronaphthalene	4,120		499	4,990	82.7	45-101
2-Chlorophenol	3,900		499	4,990	78.3	41-100
4-Chlorophenyl phenyl ether	4,580		499	4,990	91.9	47-113
4-Chloro-3-methylphenol	4,530		499	4,990	91.0	47-114
Chrysene	4,880		499	4,990	97.9	58-122
Dibenzofuran	4,370		499	4,990	87.6	49-104
Dibenz (a,h) anthracene	4,800		499	4,990	96.2	61-137
1,2-Dichlorobenzene	3,200		499	4,990	64.3	35-100
1,3-Dichlorobenzene	2,930		499	4,990	58.8	36-100
1,4-Dichlorobenzene	3,130		499	4,990	62.9	32-100
3,3´-Dichlorobenzidine	4,770		499	4,990	95.7	56-149
2,4-Dichlorophenol	4,060		499	4,990	81.5	49-101
Diethyl phthalate	4,880		499	4,990	98.0	45-136
2,4-Dimethylphenol	3,580		499	4,990	71.8	26-100
Dimethyl phthalate	4,550		499	4,990	91.3	53-111
2,4-Dinitrophenol	4,210		1,990	4,990	84.4	13-127
2,4-Dinitrotoluene	4,740		499	4,990	95.1	54-112
2,6-Dinitrotoluene	4,570		499	4,990	91.7	53-112
4,6-Dinitro-2-methylphenol	4,880		1,990	4,990	97.8	19-136
Di-n-butyl phthalate	5,350		499	4,990	107	57-139
Di-n-octyl phthalate	5,420		499	4,990	109	66-127
Fluoranthene	4,900		199	4,990	98.4	58-120
Fluorene	4,490		199	4,990	90.1	49-112

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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B2K1910 **Sample Type: Solid**

LCS (B2K1910-BS1)

Prepared: 11/19/2012 Analyzed: 11/21/2012

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Hexachlorobenzene	4,230		499	4,990	84.8	48-111
Hexachlorobutadiene	3,350		499	4,990	67.3	42-101
Hexachlorocyclopentadiene	3,740		499	4,990	75.0	25-108
Hexachloroethane	3,340		499	4,990	67.0	35-100
Indeno (1,2,3-cd) pyrene	4,760		499	4,990	95.5	61-137
Isophorone	4,280		499	4,990	85.8	47-100
2-Methylnaphthalene	3,880		199	4,990	77.8	47-101
2-Methylphenol	4,180		499	4,990	83.8	44-100
3 &/or 4-Methylphenol	4,610		499	4,990	92.5	45-100
Naphthalene	3,610		199	4,990	72.3	44-100
2-Nitroaniline	4,560		798	4,990	91.5	53-112
3-Nitroaniline	3,940		798	4,990	79.1	50-117
4-Nitroaniline	4,160		798	4,990	83.5	61-137
Nitrobenzene	3,870		499	4,990	77.6	43-100
2-Nitrophenol	3,830		499	4,990	76.8	46-101
4-Nitrophenol	5,450		1,300	4,990	109	47-130
N-Nitrosodiphenylamine	4,210		499	4,990	84.4	53-112
N-Nitrosodi-n-propylamine	4,540		499	4,990	91.0	43-100
Pentachlorophenol	3,410		499	4,990	68.5	16-122
Phenanthrene	4,500		199	4,990	90.3	51-113
Phenol	4,340		499	4,990	87.1	40-101
Pyrene	4,810		199	4,990	96.5	51-119
1,2,4-Trichlorobenzene	3,460		499	4,990	69.3	40-100
2,4,5-Trichlorophenol	4,360		499	4,990	87.4	50-108
2,4,6-Trichlorophenol	4,160		499	4,990	83.4	48-105

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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B2K1910 **Sample Type: Solid**

Matrix Spike (B2K1910-MS1)

Source: 1211006-03 Prepared: 11/19/2012 Analyzed: 11/21/2012

Surrogates

ANALYTE	Result µg/Kg dry	Analyte Qualifier	Spike Level	%REC	%REC Limits
2-Fluorophenol	6,920		9,220	75.1	38-101
Phenol-d5	7,930		9,220	85.9	42-105
2-Chlorophenol-d4	6,860		9,220	74.4	40-100
1,2-Dichlorobenzene-d4	3,610		6,150	58.8	37-100
Nitrobenzene-d5	4,550		6,150	74.0	42-108
2-Fluorobiphenyl	5,140		6,150	83.6	51-103
2,4,6-Tribromophenol	9,060		9,220	98.3	55-115
Terphenyl-d14	5,690		6,150	92.5	55-125

Matrix Spike (B2K1910-MS1)

Source: 1211006-03 Prepared: 11/19/2012 Analyzed: 11/21/2012

Targets

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Acenaphthene	5,350		246	6,150		87.0	34-107
Acenaphthylene	5,310		246	6,150		86.3	48-111
Acetophenone	5,180		615	6,150		84.2	36-110
Anthracene	5,540		246	6,150		90.2	53-123
Atrazine	6,000		615	6,150		97.6	63-133
Benzaldehyde	4,460		615	6,150		72.6	21-102
Benzoic acid	5,420		1,230	6,150	73.6	86.9	10-115
Benzo (a) anthracene	6,050		615	6,150		98.4	58-129
Benzo (a) pyrene	5,790		615	6,150	37.3	93.5	69-125
Benzo (b) fluoranthene	5,620		615	6,150		91.5	65-126
Benzo (g,h,i) perylene	5,510		615	6,150		89.6	50-137
Benzo (k) fluoranthene	6,380		615	6,150		104	59-135
Benzyl alcohol	5,760		615	6,150		93.7	44-106
1,1'-Biphenyl	5,300		615	6,150		86.2	40-118
Bis(2-chloroethoxy)methane	5,110		615	6,150		83.1	48-103
Bis(2-chloroethyl)ether	4,450		615	6,150		72.5	31-104

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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B2K1910 **Sample Type: Solid**

Matrix Spike (B2K1910-MS1)

Source: 1211006-03 Prepared: 11/19/2012 Analyzed: 11/21/2012

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Bis(2-chloro-1-methylethyl)ether	5,090		615	6,150		82.7	36-102
Bis(2-ethylhexyl)phthalate	6,960		615	6,150	30.4	113	56-153
4-Bromophenyl phenyl ether	5,620		615	6,150		91.5	55-116
Butyl benzyl phthalate	6,670		615	6,150		108	59-140
Carbazole	6,010		615	6,150		97.7	61-133
Caprolactam	6,190		615	6,150		101	48-156
4-Chloroaniline	3,600		615	6,150		58.5	35-102
2-Chloronaphthalene	5,230		615	6,150		85.0	48-105
2-Chlorophenol	4,740		615	6,150		77.1	28-94
4-Chlorophenyl phenyl ether	5,880		615	6,150		95.7	48-119
4-Chloro-3-methylphenol	5,830		615	6,150		94.8	38-126
Chrysene	6,150		615	6,150	36.6	99.5	58-128
Dibenzofuran	5,550		615	6,150		90.3	50-111
Dibenz (a,h) anthracene	5,890		615	6,150		95.8	62-135
1,2-Dichlorobenzene	3,750		615	6,150		61.0	39-97
1,3-Dichlorobenzene	3,440		615	6,150		55.9	38-95
1,4-Dichlorobenzene	3,630		615	6,150		59.1	27-83
3,3´-Dichlorobenzidine	5,160		615	6,150		84.0	54-148
2,4-Dichlorophenol	5,160		615	6,150		83.9	50-117
Diethyl phthalate	6,110		615	6,150		99.3	51-136
2,4-Dimethylphenol	5,090		615	6,150		82.8	28-111
Dimethyl phthalate	5,820		615	6,150		94.6	56-117
2,4-Dinitrophenol	5,520		2,460	6,150		89.8	10-129
2,4-Dinitrotoluene	5,880		615	6,150		95.7	38-123
2,6-Dinitrotoluene	5,850		615	6,150		95.2	56-120
4,6-Dinitro-2-methylphenol	6,080		2,460	6,150		99.0	10-130
Di-n-butyl phthalate	6,530		615	6,150		106	51-148
Di-n-octyl phthalate	6,950		615	6,150		113	61-138
Fluoranthene	5,980		246	6,150		97.3	60-130
Fluorene	5,820		246	6,150		94.7	51-116

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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B2K1910 **Sample Type: Solid**

Matrix Spike (B2K1910-MS1)

Source: 1211006-03 Prepared: 11/19/2012 Analyzed: 11/21/2012

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Hexachlorobenzene	5,580		615	6,150		90.7	55-116
Hexachlorobutadiene	4,180		615	6,150		67.9	47-102
Hexachlorocyclopentadiene	4,560		615	6,150		74.2	21-113
Hexachloroethane	3,930		615	6,150		64.0	36-96
Indeno (1,2,3-cd) pyrene	5,750		615	6,150		93.5	62-133
Isophorone	5,260		615	6,150		85.6	49-103
2-Methylnaphthalene	4,880		246	6,150		79.3	50-105
2-Methylphenol	5,250		615	6,150		85.4	43-102
3 &/or 4-Methylphenol	5,810		615	6,150		94.5	46-106
Naphthalene	4,420		246	6,150		71.9	46-102
2-Nitroaniline	5,820		984	6,150		94.7	53-124
3-Nitroaniline	4,790		984	6,150		77.9	51-122
4-Nitroaniline	4,990		984	6,150		81.1	62-140
Nitrobenzene	4,660		615	6,150		75.9	44-105
2-Nitrophenol	4,560		615	6,150		74.2	44-114
4-Nitrophenol	7,050		1,600	6,150		115	35-138
N-Nitrosodiphenylamine	5,490		615	6,150		89.3	56-120
N-Nitrosodi-n-propylamine	5,410		615	6,150		88.1	29-97
Pentachlorophenol	4,400		615	6,150		71.6	10-126
Phenanthrene	5,860		246	6,150		95.4	52-121
Phenol	5,150		615	6,150		83.8	32-96
Pyrene	6,080		246	6,150		98.9	39-129
1,2,4-Trichlorobenzene	4,230		615	6,150		68.8	24-105
2,4,5-Trichlorophenol	5,740		615	6,150		93.4	52-121
2,4,6-Trichlorophenol	5,610		615	6,150		91.3	48-113

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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B2K1910 **Sample Type: Solid**

Matrix Spike Dup (B2K1910-MSD1)

Source: 1211006-03 Prepared: 11/19/2012 Analyzed: 11/21/2012

Surrogates

ANALYTE	Result µg/Kg dry	Analyte Qualifier	Spike Level	%REC	%REC Limits
2-Fluorophenol	4,620		9,320	49.6	38-101
Phenol-d5	5,900		9,320	63.3	42-105
2-Chlorophenol-d4	4,840		9,320	51.9	40-100
1,2-Dichlorobenzene-d4	2,280		6,210	36.7 #	37-100
Nitrobenzene-d5	3,200		6,210	51.6	42-108
2-Fluorobiphenyl	4,380		6,210	70.5	51-103
2,4,6-Tribromophenol	9,250		9,320	99.2	55-115
Terphenyl-d14	5,910		6,210	95.1	55-125

Matrix Spike Dup (B2K1910-MSD1)

Source: 1211006-03 Prepared: 11/19/2012 Analyzed: 11/21/2012

Targets

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Acenaphthene	4,780		249	6,210		76.9	34-107	11.2	31
Acenaphthylene	4,710		249	6,210		75.8	48-111	11.9	30
Acetophenone	3,750		621	6,210		60.3	36-110	32.0 #	30
Anthracene	5,390		249	6,210		86.8	53-123	2.74	30
Atrazine	6,060		621	6,210		97.5	63-133	0.95	30
Benzaldehyde	2,930		621	6,210		47.2	21-102	41.3 #	30
Benzoic acid	4,900		1,240	6,210	73.6	77.6	10-115	10.1	30
Benzo (a) anthracene	6,050		621	6,210		97.3	58-129	0.01	30
Benzo (a) pyrene	5,860		621	6,210	37.3	93.7	69-125	1.30	30
Benzo (b) fluoranthene	6,320		621	6,210		102	65-126	11.7	30
Benzo (g,h,i) perylene	5,680		621	6,210		91.4	50-137	3.00	30
Benzo (k) fluoranthene	5,770		621	6,210		92.9	59-135	9.96	30
Benzyl alcohol	4,470		621	6,210		72.0	44-106	25.1	30
1,1'-Biphenyl	4,600		621	6,210		74.0	40-118	14.2	30
Bis(2-chloroethoxy)methane	3,880		621	6,210		62.5	48-103	27.3	30
Bis(2-chloroethyl)ether	2,860		621	6,210		46.1	31-104	43.5 #	30

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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B2K1910 **Sample Type: Solid**

Matrix Spike Dup (B2K1910-MSD1)

Source: 1211006-03 Prepared: 11/19/2012 Analyzed: 11/21/2012

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Bis(2-chloro-1-methylethyl)ether	3,350		621	6,210		53.9	36-102	41.2 #	30
Bis(2-ethylhexyl)phthalate	7,240		621	6,210	30.4	116	56-153	3.94	30
4-Bromophenyl phenyl ether	5,390		621	6,210		86.7	55-116	4.28	30
Butyl benzyl phthalate	7,090		621	6,210		114	59-140	6.10	30
Carbazole	5,940		621	6,210		95.6	61-133	1.05	30
Caprolactam	5,890		621	6,210		94.8	48-156	4.95	30
4-Chloroaniline	2,770		621	6,210		44.6	35-102	25.8	30
2-Chloronaphthalene	4,470		621	6,210		71.9	48-105	15.7	30
2-Chlorophenol	3,330		621	6,210		53.6	28-94	35.0	37
4-Chlorophenyl phenyl ether	5,480		621	6,210		88.1	48-119	7.17	30
4-Chloro-3-methylphenol	5,300		621	6,210		85.2	38-126	9.51	36
Chrysene	6,230		621	6,210	36.6	99.6	58-128	1.19	30
Dibenzofuran	5,030		621	6,210		81.0	50-111	9.81	30
Dibenz (a,h) anthracene	5,970		621	6,210		96.1	62-135	1.33	30
1,2-Dichlorobenzene	2,420		621	6,210		38.9 #	39-97	43.2 #	30
1,3-Dichlorobenzene	2,190		621	6,210		35.2 #	38-95	44.3 #	30
1,4-Dichlorobenzene	2,310		621	6,210		37.1	27-83	44.5 #	36
3,3´-Dichlorobenzidine	3,420		621	6,210		55.0	54-148	40.6 #	30
2,4-Dichlorophenol	4,340		621	6,210		69.8	50-117	17.3	30
Diethyl phthalate	5,890		621	6,210		94.8	51-136	3.64	30
2,4-Dimethylphenol	4,450		621	6,210		71.6	28-111	13.5	30
Dimethyl phthalate	5,430		621	6,210		87.5	56-117	6.78	30
2,4-Dinitrophenol	5,450		2,490	6,210		87.7	10-129	1.23	30
2,4-Dinitrotoluene	5,630		621	6,210		90.7	38-123	4.35	32
2,6-Dinitrotoluene	5,440		621	6,210		87.6	56-120	7.29	30
4,6-Dinitro-2-methylphenol	5,900		2,490	6,210		94.9	10-130	3.12	30
Di-n-butyl phthalate	6,570		621	6,210		106	51-148	0.56	30
Di-n-octyl phthalate	7,110		621	6,210		114	61-138	2.28	30
Fluoranthene	6,090		249	6,210		98.1	60-130	1.82	30
Fluorene	5,420		249	6,210		87.2	51-116	7.25	30

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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B2K1910 **Sample Type: Solid**

Matrix Spike Dup (B2K1910-MSD1)

Source: 1211006-03 Prepared: 11/19/2012 Analyzed: 11/21/2012

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Hexachlorobenzene	5,480		621	6,210		88.2	55-116	1.75	30
Hexachlorobutadiene	2,910		621	6,210		46.9 #	47-102	35.6 #	30
Hexachlorocyclopentadiene	3,540		621	6,210		57.0	21-113	25.2	30
Hexachloroethane	2,410		621	6,210		38.8	36-96	47.9 #	30
Indeno (1,2,3-cd) pyrene	5,850		621	6,210		94.1	62-133	1.66	30
Isophorone	4,240		621	6,210		68.3	49-103	21.4	30
2-Methylnaphthalene	3,920		249	6,210		63.1	50-105	21.7	30
2-Methylphenol	4,090		621	6,210		65.8	43-102	24.8	30
3 &/or 4-Methylphenol	4,620		621	6,210		74.3	46-106	22.9	30
Naphthalene	3,210		249	6,210		51.6	46-102	31.8 #	30
2-Nitroaniline	5,400		994	6,210		86.9	53-124	7.51	30
3-Nitroaniline	4,180		994	6,210		67.3	51-122	13.5	30
4-Nitroaniline	4,510		994	6,210		72.6	62-140	9.95	30
Nitrobenzene	3,280		621	6,210		52.8	44-105	34.7 #	30
2-Nitrophenol	3,480		621	6,210		56.0	44-114	26.9	30
4-Nitrophenol	6,550		1,620	6,210		105	35-138	7.35	39
N-Nitrosodiphenylamine	5,310		621	6,210		85.5	56-120	3.28	30
N-Nitrosodi-n-propylamine	4,090		621	6,210		65.7	29-97	28.0	33
Pentachlorophenol	3,810		621	6,210		61.4	10-126	14.4	45
Phenanthrene	5,720		249	6,210		92.0	52-121	2.53	30
Phenol	3,910		621	6,210		62.9	32-96	27.5	38
Pyrene	6,300		249	6,210		101	39-129	3.52	34
1,2,4-Trichlorobenzene	3,050		621	6,210		49.0	24-105	32.5	34
2,4,5-Trichlorophenol	5,430		621	6,210		87.4	52-121	5.47	30
2,4,6-Trichlorophenol	5,190		621	6,210		83.5	48-113	7.84	30

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Semivolatiles by EPA Method 8270 - GC/MS (Low Level) - Quality Control

Batch: B2K1909 **Sample Type: Liquid**

Blank (B2K1909-BLK1)
Prepared: 11/19/2012 Analyzed: 11/20/2012

Surrogates

ANALYTE	Result µg/L	Analyte Qualifier	Spike Level	%REC	%REC Limits
2-Fluorophenol	7.05		7.50	94.0	39-109
Phenol-d5	6.77		7.50	90.3	41-107
2-Chlorophenol-d4	6.44		7.50	85.9	45-104
1,2-Dichlorobenzene-d4	3.44		5.00	68.8	34-100
Nitrobenzene-d5	4.51		5.00	90.2	41-128
2-Fluorobiphenyl	4.37		5.00	87.4	46-108
2,4,6-Tribromophenol	7.10		7.50	94.7	51-143
Terphenyl-d14	4.63		5.00	92.6	60-133

Blank (B2K1909-BLK1)
Prepared: 11/19/2012 Analyzed: 11/20/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit
Acenaphthene	U		0.5
Acenaphthylene	U		0.5
Acetophenone	U		0.5
Anthracene	U		0.5
Atrazine	U		0.5
Benzaldehyde	U		1.0
Benzoic acid	U		5.0
Benzo (a) anthracene	U		0.5
Benzo (a) pyrene	U		0.5
Benzo (b) fluoranthene	U		0.5
Benzo (g,h,i) perylene	U		0.5
Benzo (k) fluoranthene	U		0.5
Benzyl alcohol	U		0.5
1,1'-Biphenyl	U		0.5
Bis(2-chloroethoxy)methane	U		0.5
Bis(2-chloroethyl)ether	U		0.5

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Semivolatiles by EPA Method 8270 - GC/MS (Low Level) - Quality Control

Batch: B2K1909 **Sample Type: Liquid**

Blank (B2K1909-BLK1)

Prepared: 11/19/2012 Analyzed: 11/20/2012

Targets (Continued)

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit
Bis(2-chloro-1-methylethyl)ether	U		0.5
Bis(2-ethylhexyl)phthalate	U		5.0
4-Bromophenyl phenyl ether	U		0.5
Butyl benzyl phthalate	U		5.0
Carbazole	U		0.5
Caprolactam	U		1.0
4-Chloroaniline	U		0.5
2-Chloronaphthalene	U		0.5
2-Chlorophenol	U		0.5
4-Chlorophenyl phenyl ether	U		0.5
4-Chloro-3-methylphenol	U		0.5
Chrysene	U		0.5
Dibenzofuran	U		0.5
Dibenz (a,h) anthracene	U		0.5
1,2-Dichlorobenzene	U		0.5
1,3-Dichlorobenzene	U		0.5
1,4-Dichlorobenzene	U		0.5
3,3´-Dichlorobenzidine	U		0.5
2,4-Dichlorophenol	U		0.5
Diethyl phthalate	U		5.0
2,4-Dimethylphenol	U		1.0
Dimethyl phthalate	U		5.0
2,4-Dinitrophenol	U		5.0
2,4-Dinitrotoluene	U		1.0
2,6-Dinitrotoluene	U		1.0
4,6-Dinitro-2-methylphenol	U		5.0
Di-n-butyl phthalate	U		5.0
Di-n-octyl phthalate	U		5.0
Fluoranthene	U		0.5
Fluorene	U		0.5

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Semivolatiles by EPA Method 8270 - GC/MS (Low Level) - Quality Control

Batch: B2K1909 **Sample Type: Liquid**

Blank (B2K1909-BLK1)

Prepared: 11/19/2012 Analyzed: 11/20/2012

Targets (Continued)

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit
Hexachlorobenzene	U		0.5
Hexachlorobutadiene	U		5.0
Hexachlorocyclopentadiene	U		5.0
Hexachloroethane	U		5.0
Indeno (1,2,3-cd) pyrene	U		0.5
Isophorone	U		0.5
2-Methylnaphthalene	U		0.5
2-Methylphenol	U		0.5
3 &/or 4-Methylphenol	U		0.5
Naphthalene	U		0.5
2-Nitroaniline	U		1.0
3-Nitroaniline	U		1.0
4-Nitroaniline	U		1.0
Nitrobenzene	U		0.5
2-Nitrophenol	U		0.5
4-Nitrophenol	U		5.0
N-Nitrosodiphenylamine	U		0.5
N-Nitrosodi-n-propylamine	U		0.5
Pentachlorophenol	U		1.0
Phenanthrene	U		0.5
Phenol	U		0.5
Pyrene	U		0.5
1,2,4-Trichlorobenzene	U		0.5
2,4,5-Trichlorophenol	U		0.5
2,4,6-Trichlorophenol	U		0.5

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Semivolatiles by EPA Method 8270 - GC/MS (Low Level) - Quality Control

Batch: B2K1909 **Sample Type: Liquid**

LCS (B2K1909-BS1)
Prepared: 11/19/2012 Analyzed: 11/20/2012

Surrogates

ANALYTE	Result µg/L	Analyte Qualifier	Spike Level	%REC	%REC Limits
2-Fluorophenol	7.24		7.50	96.5	39-109
Phenol-d5	7.29		7.50	97.2	41-107
2-Chlorophenol-d4	6.85		7.50	91.3	45-104
1,2-Dichlorobenzene-d4	3.62		5.00	72.4	34-100
Nitrobenzene-d5	4.79		5.00	95.8	41-128
2-Fluorobiphenyl	4.59		5.00	91.8	46-108
2,4,6-Tribromophenol	8.12		7.50	108	51-143
Terphenyl-d14	4.10		5.00	82.0	60-133

LCS (B2K1909-BS1)
Prepared: 11/19/2012 Analyzed: 11/20/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Acenaphthene	9.1		0.5	10.0	90.9	61-116
Acenaphthylene	9.5		0.5	10.0	94.8	70-121
Acetophenone	10.2		0.5	10.0	102	63-134
Anthracene	9.8		0.5	10.0	97.7	68-122
Atrazine	10.9		0.5	10.0	109	74-127
Benzaldehyde	9.6		1.0	10.0	96.5	53-136
Benzoic acid	7.0		5.0	10.0	70.3	41-134
Benzo (a) anthracene	10.0		0.5	10.0	100	76-125
Benzo (a) pyrene	10.1		0.5	10.0	101	75-125
Benzo (b) fluoranthene	11.2		0.5	10.0	112	70-130
Benzo (g,h,i) perylene	10.0		0.5	10.0	99.6	67-142
Benzo (k) fluoranthene	9.3		0.5	10.0	93.0	68-136
Benzyl alcohol	10.2		0.5	10.0	102	67-119
1,1'-Biphenyl	9.0		0.5	10.0	90.4	60-129
Bis(2-chloroethoxy)methane	9.5		0.5	10.0	94.7	66-126
Bis(2-chloroethyl)ether	9.3		0.5	10.0	93.0	62-125

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Semivolatiles by EPA Method 8270 - GC/MS (Low Level) - Quality Control

Batch: B2K1909 **Sample Type: Liquid**

LCS (B2K1909-BS1)

Prepared: 11/19/2012 Analyzed: 11/20/2012

Targets (Continued)

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Bis(2-chloro-1-methylethyl)ether	9.3		0.5	10.0	93.2	51-138
Bis(2-ethylhexyl)phthalate	10.9		5.0	10.0	109	79-138
4-Bromophenyl phenyl ether	9.2		0.5	10.0	91.8	64-123
Butyl benzyl phthalate	10.6		5.0	10.0	106	77-132
Carbazole	10.3		0.5	10.0	103	71-124
Caprolactam	10.6		1.0	10.0	106	56-124
4-Chloroaniline	8.7		0.5	10.0	87.0	54-122
2-Chloronaphthalene	8.7		0.5	10.0	87.0	62-122
2-Chlorophenol	9.6		0.5	10.0	96.3	66-115
4-Chlorophenyl phenyl ether	9.5		0.5	10.0	94.5	63-130
4-Chloro-3-methylphenol	10.1		0.5	10.0	101	63-119
Chrysene	9.4		0.5	10.0	93.8	76-125
Dibenzofuran	9.3		0.5	10.0	93.2	67-123
Dibenz (a,h) anthracene	10.4		0.5	10.0	104	61-145
1,2-Dichlorobenzene	7.2		0.5	10.0	72.5	48-100
1,3-Dichlorobenzene	6.7		0.5	10.0	67.3	36-100
1,4-Dichlorobenzene	6.4		0.5	10.0	64.5	36-100
3,3´-Dichlorobenzidine	6.6		0.5	10.0	66.5	40-139
2,4-Dichlorophenol	9.8		0.5	10.0	97.6	69-125
Diethyl phthalate	9.5		5.0	10.0	95.0	72-124
2,4-Dimethylphenol	8.8		1.0	10.0	88.0	48-136
Dimethyl phthalate	9.6		5.0	10.0	95.8	71-122
2,4-Dinitrophenol	8.3		5.0	10.0	83.0	42-152
2,4-Dinitrotoluene	10.8		1.0	10.0	108	61-121
2,6-Dinitrotoluene	10.0		1.0	10.0	100	68-128
4,6-Dinitro-2-methylphenol	9.2		5.0	10.0	92.0	46-146
Di-n-butyl phthalate	10.9		5.0	10.0	109	75-136
Di-n-octyl phthalate	10.9		5.0	10.0	109	64-134
Fluoranthene	10.7		0.5	10.0	107	74-123
Fluorene	9.8		0.5	10.0	97.9	65-129

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Semivolatiles by EPA Method 8270 - GC/MS (Low Level) - Quality Control

Batch: B2K1909 **Sample Type: Liquid**

LCS (B2K1909-BS1)

Prepared: 11/19/2012 Analyzed: 11/20/2012

Targets (Continued)

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Hexachlorobenzene	9.1		0.5	10.0	91.1	67-121
Hexachlorobutadiene	4.3		5.0	10.0	43.4	29-112
Hexachlorocyclopentadiene	5.2		5.0	10.0	51.6	32-122
Hexachloroethane	4.8		5.0	10.0	48.3	24-100
Indeno (1,2,3-cd) pyrene	10.5		0.5	10.0	105	65-143
Isophorone	10.0		0.5	10.0	99.9	67-125
2-Methylnaphthalene	8.5		0.5	10.0	85.3	64-117
2-Methylphenol	9.4		0.5	10.0	93.6	60-131
3 &/or 4-Methylphenol	9.8		0.5	10.0	97.6	57-136
Naphthalene	8.9		0.5	10.0	88.7	65-115
2-Nitroaniline	10.2		1.0	10.0	102	65-126
3-Nitroaniline	9.9		1.0	10.0	99.2	57-136
4-Nitroaniline	10.6		1.0	10.0	106	64-137
Nitrobenzene	9.7		0.5	10.0	96.8	68-126
2-Nitrophenol	9.9		0.5	10.0	98.6	62-137
4-Nitrophenol	9.4		5.0	10.0	93.8	52-132
N-Nitrosodiphenylamine	9.2		0.5	10.0	92.2	66-125
N-Nitrosodi-n-propylamine	10.0		0.5	10.0	99.5	61-123
Pentachlorophenol	8.6		1.0	10.0	86.0	49-134
Phenanthrene	9.4		0.5	10.0	94.3	69-121
Phenol	9.3		0.5	10.0	93.5	62-115
Pyrene	9.3		0.5	10.0	92.9	58-134
1,2,4-Trichlorobenzene	7.0		0.5	10.0	69.9	40-100
2,4,5-Trichlorophenol	10.1		0.5	10.0	101	68-127
2,4,6-Trichlorophenol	10.0		0.5	10.0	100	65-128

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Semivolatiles by EPA Method 8270 - GC/MS (Low Level) - Quality Control

Batch: B2K1909 **Sample Type: Liquid**

LCS Dup (B2K1909-BSD1)
Prepared: 11/19/2012 Analyzed: 11/20/2012

Surrogates

ANALYTE	Result µg/L	Analyte Qualifier	Spike Level	%REC	%REC Limits
2-Fluorophenol	7.41		7.50	98.8	39-109
Phenol-d5	7.15		7.50	95.3	41-107
2-Chlorophenol-d4	6.96		7.50	92.8	45-104
1,2-Dichlorobenzene-d4	3.79		5.00	75.8	34-100
Nitrobenzene-d5	4.80		5.00	96.0	41-128
2-Fluorobiphenyl	4.76		5.00	95.2	46-108
2,4,6-Tribromophenol	8.18		7.50	109	51-143
Terphenyl-d14	4.57		5.00	91.4	60-133

LCS Dup (B2K1909-BSD1)
Prepared: 11/19/2012 Analyzed: 11/20/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Acenaphthene	9.2		0.5	10.0		92.0	61-116	1.14	30
Acenaphthylene	9.7		0.5	10.0		96.8	70-121	2.09	30
Acetophenone	10.3		0.5	10.0		103	63-134	0.97	30
Anthracene	9.9		0.5	10.0		98.7	68-122	1.09	30
Atrazine	10.9		0.5	10.0		109	74-127	0.37	30
Benzaldehyde	9.6		1.0	10.0		96.2	53-136	0.29	30
Benzoic acid	6.7		5.0	10.0		67.5	41-134	4.07	30
Benzo (a) anthracene	10.2		0.5	10.0		102	76-125	1.75	30
Benzo (a) pyrene	10.2		0.5	10.0		102	75-125	0.36	30
Benzo (b) fluoranthene	11.6		0.5	10.0		116	70-130	3.55	30
Benzo (g,h,i) perylene	10.0		0.5	10.0		99.6	67-142	0.01	30
Benzo (k) fluoranthene	9.0		0.5	10.0		90.4	68-136	2.86	30
Benzyl alcohol	10.4		0.5	10.0		104	67-119	1.75	30
1,1'-Biphenyl	9.3		0.5	10.0		92.8	60-129	2.58	30
Bis(2-chloroethoxy)methane	9.6		0.5	10.0		95.5	66-126	0.87	30
Bis(2-chloroethyl)ether	9.5		0.5	10.0		94.7	62-125	1.89	30

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Semivolatiles by EPA Method 8270 - GC/MS (Low Level) - Quality Control

Batch: B2K1909 **Sample Type: Liquid**

LCS Dup (B2K1909-BSD1)

Prepared: 11/19/2012 Analyzed: 11/20/2012

Targets (Continued)

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Bis(2-chloro-1-methylethyl)ether	9.4		0.5	10.0		93.6	51-138	0.45	30
Bis(2-ethylhexyl)phthalate	11.3		5.0	10.0		113	79-138	3.24	30
4-Bromophenyl phenyl ether	9.6		0.5	10.0		96.0	64-123	4.42	30
Butyl benzyl phthalate	11.1		5.0	10.0		111	77-132	4.91	30
Carbazole	10.1		0.5	10.0		101	71-124	2.22	30
Caprolactam	10.5		1.0	10.0		105	56-124	1.59	30
4-Chloroaniline	8.6		0.5	10.0		85.6	54-122	1.71	30
2-Chloronaphthalene	8.9		0.5	10.0		89.4	62-122	2.65	30
2-Chlorophenol	9.6		0.5	10.0		95.6	66-115	0.75	30
4-Chlorophenyl phenyl ether	9.5		0.5	10.0		94.9	63-130	0.41	30
4-Chloro-3-methylphenol	9.9		0.5	10.0		99.0	63-119	2.13	30
Chrysene	9.6		0.5	10.0		96.2	76-125	2.61	30
Dibenzofuran	9.4		0.5	10.0		93.8	67-123	0.56	30
Dibenz (a,h) anthracene	10.2		0.5	10.0		102	61-145	1.49	30
1,2-Dichlorobenzene	7.0		0.5	10.0		69.8	48-100	3.72	30
1,3-Dichlorobenzene	6.4		0.5	10.0		64.1	36-100	4.93	30
1,4-Dichlorobenzene	6.3		0.5	10.0		62.8	36-100	2.73	30
3,3´-Dichlorobenzidine	6.7		0.5	10.0		67.0	40-139	0.67	30
2,4-Dichlorophenol	9.7		0.5	10.0		97.0	69-125	0.59	30
Diethyl phthalate	9.5		5.0	10.0		94.7	72-124	0.39	30
2,4-Dimethylphenol	8.7		1.0	10.0		87.0	48-136	1.21	30
Dimethyl phthalate	9.6		5.0	10.0		96.1	71-122	0.25	30
2,4-Dinitrophenol	8.2		5.0	10.0		82.0	42-152	1.24	30
2,4-Dinitrotoluene	10.7		1.0	10.0		107	61-121	0.23	30
2,6-Dinitrotoluene	10.1		1.0	10.0		101	68-128	1.30	30
4,6-Dinitro-2-methylphenol	9.1		5.0	10.0		90.8	46-146	1.32	30
Di-n-butyl phthalate	10.9		5.0	10.0		109	75-136	0.29	30
Di-n-octyl phthalate	11.3		5.0	10.0		113	64-134	3.77	30
Fluoranthene	10.5		0.5	10.0		105	74-123	1.98	30
Fluorene	9.8		0.5	10.0		98.1	65-129	0.19	30

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Semivolatiles by EPA Method 8270 - GC/MS (Low Level) - Quality Control

Batch: B2K1909 **Sample Type: Liquid**

LCS Dup (B2K1909-BSD1)

Prepared: 11/19/2012 Analyzed: 11/20/2012

Targets (Continued)

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Hexachlorobenzene	9.5		0.5	10.0		95.1	67-121	4.30	30
Hexachlorobutadiene	4.2		5.0	10.0		41.6	29-112	4.24	30
Hexachlorocyclopentadiene	5.9		5.0	10.0		58.6	32-122	12.9	30
Hexachloroethane	4.5		5.0	10.0		44.8	24-100	7.57	30
Indeno (1,2,3-cd) pyrene	10.5		0.5	10.0		105	65-143	0.85	30
Isophorone	9.9		0.5	10.0		99.2	67-125	0.77	30
2-Methylnaphthalene	8.4		0.5	10.0		84.4	64-117	1.05	30
2-Methylphenol	9.4		0.5	10.0		94.2	60-131	0.70	30
3 &/or 4-Methylphenol	9.7		0.5	10.0		97.5	57-136	0.08	30
Naphthalene	8.6		0.5	10.0		86.4	65-115	2.71	30
2-Nitroaniline	10.5		1.0	10.0		105	65-126	2.88	30
3-Nitroaniline	9.7		1.0	10.0		97.1	57-136	2.16	30
4-Nitroaniline	10.3		1.0	10.0		103	64-137	3.08	30
Nitrobenzene	9.6		0.5	10.0		95.8	68-126	1.10	30
2-Nitrophenol	10.0		0.5	10.0		99.8	62-137	1.24	30
4-Nitrophenol	9.0		5.0	10.0		90.1	52-132	4.02	30
N-Nitrosodiphenylamine	9.5		0.5	10.0		94.6	66-125	2.64	30
N-Nitrosodi-n-propylamine	9.8		0.5	10.0		98.2	61-123	1.29	30
Pentachlorophenol	8.6		1.0	10.0		86.2	49-134	0.23	30
Phenanthrene	9.5		0.5	10.0		95.0	69-121	0.73	30
Phenol	9.4		0.5	10.0		94.1	62-115	0.62	30
Pyrene	10.2		0.5	10.0		102	58-134	8.91	30
1,2,4-Trichlorobenzene	6.8		0.5	10.0		68.1	40-100	2.68	30
2,4,5-Trichlorophenol	10.2		0.5	10.0		102	68-127	0.29	30
2,4,6-Trichlorophenol	10.3		0.5	10.0		103	65-128	2.36	30

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Metals by EPA Method 6010 - ICP - Quality Control

Batch: B2K2705 **Sample Type: Solid**

Blank (B2K2705-BLK1)

Prepared: 11/27/2012 Analyzed: 12/5/2012

Targets

ANALYTE	Result mg/kg wet	Analyte Qualifiers	Reporting Limit
Aluminum	U		10.0
Barium	U		1.0
Beryllium	U		0.5
Cadmium	U		0.5
Calcium	U		15.0
Chromium	U		1.0
Cobalt	U		2.0
Copper	U		2.0
Iron	3.0		2.5
Magnesium	U		15.0
Manganese	U		0.5
Nickel	U		2.0
Potassium	U		100
Silver	U		1.0
Sodium	U		50.0
Vanadium	U		2.0
Zinc	U		2.0

LCS (B2K2705-BS1)

Prepared: 11/27/2012 Analyzed: 12/5/2012

Targets

ANALYTE	Result mg/kg wet	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Aluminum	100		10.0	100	100	75-125
Barium	182		1.0	200	91.1	75-125
Beryllium	4.7		0.5	5.00	94.4	75-125
Cadmium	4.5		0.5	5.00	89.9	75-125
Calcium	9,110		15.0	10,000	91.1	75-125
Chromium	36.8		1.0	40.0	92.1	75-125

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Metals by EPA Method 6010 - ICP - Quality Control

Batch: B2K2705 **Sample Type: Solid**

LCS (B2K2705-BS1)

Prepared: 11/27/2012 Analyzed: 12/5/2012

Targets (Continued)

ANALYTE	Result mg/kg wet	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Cobalt	17.9		2.0	20.0	89.6	75-125
Copper	37.6		2.0	40.0	93.9	75-125
Iron	92.8		2.5	100	92.8	75-125
Magnesium	9,470		15.0	10,000	94.7	75-125
Manganese	36.1		0.5	40.0	90.2	75-125
Nickel	34.5		2.0	40.0	86.2	75-125
Potassium	9,840		100	10,000	98.4	75-125
Silver	4.6		1.0	5.00	91.3	75-125
Sodium	9,410		50.0	10,000	94.1	75-125
Vanadium	38.2		2.0	40.0	95.4	75-125
Zinc	87.1		2.0	100	87.1	75-125

Matrix Spike (B2K2705-MS1)

Source: 1211006-02 Prepared: 11/27/2012 Analyzed: 12/5/2012

Targets

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Aluminum	11,700		15.0	150	4,220	NR #	75-125
Barium	406		1.5	301	153	83.9	75-125
Beryllium	7.3		0.8	7.52	0.2	94.9	75-125
Cadmium	6.6		0.8	7.52	0.04	86.7	75-125
Calcium	14,500		22.6	15,000	712	91.7	75-125
Chromium	60.7		1.5	60.2	4.2	93.9	75-125
Cobalt	28.7		3.0	30.1	1.8	89.4	75-125
Copper	60.1		3.0	60.2	3.2	94.6	75-125
Iron	10,300		3.8	150	8,410	NR #	75-125
Magnesium	15,000		22.6	15,000	424	96.7	75-125
Manganese	99.1		0.8	60.2	46.1	88.0	75-125
Nickel	64.1		3.0	60.2	14.1	83.1	75-125

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Metals by EPA Method 6010 - ICP - Quality Control

Batch: B2K2705 **Sample Type: Solid**

Matrix Spike (B2K2705-MS1)

Source: 1211006-02 Prepared: 11/27/2012 Analyzed: 12/5/2012

Targets (Continued)

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Potassium	15,200		150	15,000	291	99.3	75-125
Silver	6.8		1.5	7.52	0.07	90.0	75-125
Sodium	14,600		75.2	15,000	259	95.1	75-125
Vanadium	74.0		3.0	60.2	12.8	102	75-125
Zinc	156		3.0	150	26.3	86.4	75-125

Matrix Spike Dup (B2K2705-MSD1)

Source: 1211006-02 Prepared: 11/27/2012 Analyzed: 12/5/2012

Targets

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Aluminum	10,100		14.5	145	4,220	NR #	75-125	14.4	20
Barium	445		1.4	290	153	101	75-125	9.28	20
Beryllium	7.0		0.7	7.24	0.2	94.5	75-125	4.14	20
Cadmium	6.3		0.7	7.24	0.04	86.2	75-125	4.35	20
Calcium	13,900		21.7	14,500	712	91.1	75-125	4.18	20
Chromium	60.8		1.4	57.9	4.2	97.8	75-125	0.21	20
Cobalt	27.7		2.9	29.0	1.8	89.4	75-125	3.56	20
Copper	57.9		2.9	57.9	3.2	94.4	75-125	3.86	20
Iron	9,700		3.6	145	8,410	886 #	75-125	6.41	20
Magnesium	14,300		21.7	14,500	424	96.1	75-125	4.30	20
Manganese	105		0.7	57.9	46.1	101	75-125	5.60	20
Nickel	64.5		2.9	57.9	14.1	87.1	75-125	0.73	20
Potassium	14,600		145	14,500	291	98.9	75-125	4.11	20
Silver	6.6		1.4	7.24	0.07	89.6	75-125	4.23	20
Sodium	14,000		72.4	14,500	259	94.7	75-125	4.17	20
Vanadium	71.7		2.9	57.9	12.8	102	75-125	3.22	20
Zinc	154		2.9	145	26.3	87.9	75-125	1.77	20

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Metals by EPA Method 6010 - ICP - Quality Control

Batch: B2K2705 **Sample Type: Solid**

Reference (B2K2705-SRM1)

Prepared: 11/27/2012 Analyzed: 12/5/2012

Targets

ANALYTE	Result mg/kg wet	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Aluminum	96.8		10.0	117		82.8	47.6-152		
Barium	1.3		1.0	1.63		78.7	62.5-137		
Beryllium	4.5		0.5	4.98		90.2	61.2-138		
Cadmium	8.9		0.5	11.1		80.1	70.6-128		
Calcium	40,800		15.0	44,900		90.9	68.6-131		
Chromium	23.3		1.0	27.5		84.8	68.3-131		
Cobalt	31.7		2.0	38.0		83.5	64.7-135		
Copper	1,490		2.0	1,800		82.8	74.6-126		
Iron	5,630		2.5	6,570		85.7	66.2-133		
Magnesium	26,200		15.0	29,700		88.3	70.2-129		
Manganese	51.5		0.5	62.0		83.0	68.2-132		
Nickel	13.3		2.0	16.6		80.1	55.2-145		
Potassium	38.9		100	40.3		96.5	0-215		
Silver	7.7		1.0	5.99		128	45.8-154		
Sodium	25.7		50.0	73.7		34.9	0-298		
Vanadium	15.8		2.0	17.9		88.1	65.9-134		
Zinc	36.2		2.0	48.3		74.9	43.2-156		

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Metals by EPA Method 6010 - ICP - Quality Control

Batch: B2K2805 **Sample Type: Liquid**

Blank (B2K2805-BLK1)
Prepared: 11/28/2012 Analyzed: 12/5/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit
Aluminum	U		100
Barium	U		10.0
Beryllium	U		5.0
Cadmium	U		5.0
Calcium	U		150
Chromium	U		10.0
Cobalt	U		20.0
Copper	U		20.0
Iron	U		25.0
Magnesium	U		150
Manganese	U		5.0
Nickel	U		20.0
Potassium	U		1,000
Silver	U		10.0
Sodium	U		500
Vanadium	U		20.0
Zinc	U		20.0

LCS (B2K2805-BS1)
Prepared: 11/28/2012 Analyzed: 12/5/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Aluminum	990		100	1,000	99.0	75-125
Barium	1,800		10.0	2,000	90.2	75-125
Beryllium	46.4		5.0	50.0	92.7	75-125
Cadmium	44.1		5.0	50.0	88.2	75-125
Calcium	91,800		150	100,000	91.8	75-125
Chromium	365		10.0	400	91.3	75-125

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Metals by EPA Method 6010 - ICP - Quality Control

Batch: B2K2805 **Sample Type: Liquid**

LCS (B2K2805-BS1)

Prepared: 11/28/2012 Analyzed: 12/5/2012

Targets (Continued)

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Cobalt	176		20.0	200	88.1	75-125
Copper	370		20.0	400	92.6	75-125
Iron	909		25.0	1,000	90.9	75-125
Magnesium	95,000		150	100,000	95.0	75-125
Manganese	358		5.0	400	89.6	75-125
Nickel	340		20.0	400	85.1	75-125
Potassium	97,900		1,000	100,000	97.9	75-125
Silver	45.1		10.0	50.0	90.2	75-125
Sodium	95,100		500	100,000	95.1	75-125
Vanadium	377		20.0	400	94.1	75-125
Zinc	859		20.0	1,000	85.9	75-125

Matrix Spike (B2K2805-MS1)

Source: 1211006-01 Prepared: 11/28/2012 Analyzed: 12/5/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Aluminum	42,200		100	1,000	27,400	NR #	75-125
Barium	2,140		10.0	2,000	374	88.1	75-125
Beryllium	47.8		5.0	50.0	2.1	91.3	75-125
Cadmium	45.3		5.0	50.0	2.4	85.7	75-125
Calcium	98,100		150	100,000	7,350	90.7	75-125
Chromium	375		10.0	400	15.9	89.8	75-125
Cobalt	186		20.0	200	14.7	85.7	75-125
Copper	439		20.0	400	78.6	90.0	75-125
Iron	25,700		25.0	1,000	26,800	NR #	75-125
Magnesium	99,200		150	100,000	4,190	95.0	75-125
Manganese	577		5.0	400	248	82.2	75-125
Nickel	476		20.0	400	167	77.3	75-125

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Metals by EPA Method 6010 - ICP - Quality Control

Batch: B2K2805 **Sample Type: Liquid**

Matrix Spike (B2K2805-MS1)

Source: 1211006-01 Prepared: 11/28/2012 Analyzed: 12/5/2012

Targets (Continued)

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Potassium	99,900		1,000	100,000	3,870	96.0	75-125
Silver	45.3		10.0	50.0	0.6	89.5	75-125
Sodium	133,000		500	100,000	42,400	90.6	75-125
Vanadium	414		20.0	400	43.5	92.6	75-125
Zinc	1,250		20.0	1,000	472	77.9	75-125

Matrix Spike Dup (B2K2805-MSD1)

Source: 1211006-01 Prepared: 11/28/2012 Analyzed: 12/5/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Aluminum	44,000		100	1,000	27,400	NR #	75-125	4.21	20
Barium	2,160		10.0	2,000	374	89.5	75-125	1.30	20
Beryllium	48.4		5.0	50.0	2.1	92.7	75-125	1.40	20
Cadmium	45.7		5.0	50.0	2.4	86.5	75-125	0.81	20
Calcium	99,400		150	100,000	7,350	92.0	75-125	1.34	20
Chromium	380		10.0	400	15.9	90.9	75-125	1.20	20
Cobalt	189		20.0	200	14.7	86.9	75-125	1.30	20
Copper	445		20.0	400	78.6	91.7	75-125	1.48	20
Iron	26,400		25.0	1,000	26,800	NR #	75-125	2.96	20
Magnesium	101,000		150	100,000	4,190	96.3	75-125	1.38	20
Manganese	586		5.0	400	248	84.5	75-125	1.55	20
Nickel	480		20.0	400	167	78.3	75-125	0.77	20
Potassium	103,000		1,000	100,000	3,870	98.6	75-125	2.58	20
Silver	45.5		10.0	50.0	0.6	89.8	75-125	0.31	20
Sodium	133,000		500	100,000	42,400	90.9	75-125	0.20	20
Vanadium	419		20.0	400	43.5	93.8	75-125	1.24	20
Zinc	1,270		20.0	1,000	472	79.4	75-125	1.21	20

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Metals by EPA Method 7470A/7471 - CVAAS - Quality Control

Batch: B2K3003 **Sample Type: Liquid**

Blank (B2K3003-BLK1)
Prepared: 11/29/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit
Mercury	U		0.200

LCS (B2K3003-BS1)
Prepared: 11/29/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Mercury	0.993		0.200	1.00	99.3	75-125

Matrix Spike (B2K3003-MS1)
Source: 1211006-01 Prepared: 11/29/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Mercury	1.30		0.200	1.00	0.122	118	75-125

Matrix Spike Dup (B2K3003-MSD1)
Source: 1211006-01 Prepared: 11/29/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Mercury	1.14		0.200	1.00	0.122	102	75-125	13.1	20

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Metals by EPA Method 7470A/7471 - CVAAS - Quality Control

Batch: B2K3004 **Sample Type: Solid**

Blank (B2K3004-BLK1)

Prepared: 11/29/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result mg/kg wet	Analyte Qualifiers	Reporting Limit
Mercury	U		0.06

LCS (B2K3004-BS1)

Prepared: 11/29/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result mg/kg wet	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Mercury	0.4		0.06	0.400	95.0	75-125

Matrix Spike (B2K3004-MS1)

Source: 1211006-02 Prepared: 11/29/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Mercury	0.5		0.08	0.490	0.01	94.0	75-125

Matrix Spike Dup (B2K3004-MSD1)

Source: 1211006-02 Prepared: 11/29/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Mercury	0.7		0.1	0.610	0.01	108	75-125	34.3 #	20

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Metals by EPA Method 7470A/7471 - CVAAS - Quality Control

Batch: B2K3004 **Sample Type: Solid**

Reference (B2K3004-SRM1)

Prepared: 11/29/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result mg/kg wet	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Mercury	3.1		0.6	3.59		86.3	51.8-148		

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Metals by EPA Method 6020 - ICP MS - Quality Control

Batch: B2K2802 **Sample Type: Solid**

Blank (B2K2802-BLK1)

Prepared: 11/27/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result mg/kg wet	Analyte Qualifiers	Reporting Limit
Antimony	U		0.5
Arsenic	U		0.5
Lead	U		0.5
Selenium	U		0.5
Thallium	U		0.5

LCS (B2K2802-BS1)

Prepared: 11/27/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result mg/kg wet	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Antimony	20.4		0.5	20.0	102	85-115
Arsenic	21.4		0.5	20.0	107	85-115
Lead	20.1		0.5	20.0	100	85-115
Selenium	21.1		0.5	20.0	106	85-115
Thallium	19.3		0.5	20.0	96.5	85-115

Matrix Spike (B2K2802-MS1)

Source: 1211006-02 Prepared: 11/27/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Antimony	12.6		0.7	28.9	0.07	43.5 #	75-125
Arsenic	31.4		0.7	28.9	2.1	102	75-125
Lead	37.5		0.7	28.9	7.7	103	75-125
Selenium	27.9		0.7	28.9	0.1	96.5	75-125
Thallium	27.6		0.7	28.9	0.1	95.1	75-125

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Metals by EPA Method 6020 - ICP MS - Quality Control

Batch: B2K2802 **Sample Type: Solid**

Matrix Spike Dup (B2K2802-MSD1)

Source: 1211006-02 Prepared: 11/27/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result mg/kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit
Antimony	13.5		0.8	31.1	0.07	43.1	#	75-125	6.62	20
Arsenic	34.1		0.8	31.1	2.1	103		75-125	8.08	20
Lead	40.3		0.8	31.1	7.7	105		75-125	7.15	20
Selenium	31.0		0.8	31.1	0.1	99.5		75-125	10.4	20
Thallium	30.2		0.8	31.1	0.1	96.7		75-125	9.02	20

Reference (B2K2802-SRM1)

Prepared: 11/27/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result mg/kg wet	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Antimony	70.7		2.5	66.0		107	41.8-157		
Arsenic	258		2.5	253		102	60.8-139		
Lead	56.0		2.5	56.9		98.4	72.7-127		
Selenium	10.8		2.5	10.0		108	41-159		
Thallium	9.5		2.5	9.50		100	30.5-169		

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Metals by EPA Method 6020 - ICP MS - Quality Control

Batch: B2K2806 **Sample Type: Liquid**

Blank (B2K2806-BLK1)
Prepared: 11/28/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit
Antimony	U		5.0
Arsenic	U		5.0
Lead	U		5.0
Selenium	U		5.0
Thallium	U		5.0

LCS (B2K2806-BS1)
Prepared: 11/28/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	%REC	%REC Limits
Antimony	206		5.0	200	103	85-115
Arsenic	210		5.0	200	105	85-115
Lead	204		5.0	200	102	85-115
Selenium	215		5.0	200	107	85-115
Thallium	200		5.0	200	99.9	85-115

Matrix Spike (B2K2806-MS1)
Source: 1211006-01 Prepared: 11/28/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Antimony	96.0		5.0	200	0.3	47.9 #	70-130
Arsenic	210		5.0	200	9.4	100	70-130
Lead	240		5.0	200	37.8	101	70-130
Selenium	206		5.0	200	0.3	103	70-130
Thallium	197		5.0	200	0.8	98.0	70-130

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Metals by EPA Method 6020 - ICP MS - Quality Control

Batch: B2K2806 **Sample Type: Liquid**

Matrix Spike Dup (B2K2806-MSD1)

Source: 1211006-01 Prepared: 11/28/2012 Analyzed: 11/29/2012

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Antimony	91.8		5.0	200	0.3	45.7 #	70-130	4.48	20
Arsenic	215		5.0	200	9.4	103	70-130	2.61	20
Lead	240		5.0	200	37.8	101	70-130	0.20	20
Selenium	208		5.0	200	0.3	104	70-130	0.90	20
Thallium	198		5.0	200	0.8	98.6	70-130	0.57	20

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ENVIRONMENTAL PROTECTION AGENCY
OFFICIAL CHAIN OF CUSTODY RECORD

PROJ. NO.
PROJECT NAME: D+D Properties
SAMPLERS (Signature):

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	8260-B	8270-C	6010/6020	REMARKS
01	11/14/12	2:00p		✓	DD-PS-M-1-A				X	Station 1 @ Depth Gauge
01	11/14/12	2:00p		✓	DD-PS-M-1-B				X	Station 2 @ Back
01	11/14/12	2:00p		✓	DD-PS-VOA-1-A		X			Station 3 @ N End
01	11/14/12	2:00p		✓	DD-PS-VOA-1-B		X			
01	11/14/12	2:00p		✓	DD-PS-VOA-1-C		X			
01	11/14/12	2:00p		✓	DD-PS-SVOA-1			X		
02	11/14/12	2:00p		✓	DD-PB-VOA-1		X			
02	11/14/12	2:00p		✓	DD-PB-SVOA-1			X		
02	11/14/12	2:00p		✓	DD-PB-M-1				X	
03	11/14/12	3:50p		✓	DD-PB-VOA-2		X			
03	11/14/12	3:50p		✓	DD-PB-SVOA-2			X		
03	11/14/12	3:50p		✓	DD-PB-M-2				X	

	Date / Time		Date / Time		Date / Time
Relinquished by: (Signature)	11/14/12 1740	Received by: (Signature)		Relinquished by: (Signature)	
Relinquished by: (Signature)		Received by: (Signature)		Relinquished by: (Signature)	
Relinquished by: (Signature)		Received for Laboratory by: (Signature)	11/16/12 9:30	Remarks: * SAMPLES ACTUALLY RECEIVED 11/15/12 @ 9:30 Cooler Temp 6°C MJF	
Shipped by:		Airbill Number:			

Received by: (Signature) — Received by: (Signature) — Received by: (Signature)

6 — 07852 11/16/12

Distribution: White Accompanies Shipment; Pink to Coordinator Field Files; Green to Report; Yellow Returns with Warrant

EPA 7500-53 (11/06)

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ENVIRONMENTAL PROTECTION AGENCY

OFFICIAL CHAIN OF CUSTODY RECORD

PROJ. NO.

PROJECT NAME: D+D Properties

SAMPLERS: (Signature)

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS	6010/6020	8260B	8270C	REMARKS
04	11/15/12	9:30A		✓	DD-SED-VOA-04		✓			Station 04 at Secondary
04	11/15/12	9:30A		✓	DD-SED-M-04		✓			Containment of Tanks 1,2,3,5,6.
04	11/15/12	9:30A		✓	DD-SED-SVOA-04			✓		Station 05 at Sump NE area of Facility
05	11/15/12	9:45A		✓	DD-SED-VOA-05		✓			Station 06 at Drainage ditch South side of Facility.
05	11/15/12	9:45A		✓	DD-SED-M-05			✓		
05	11/15/12	9:45A		✓	DD-SED-SVOA-05			✓		
06	11/15/12	10:00A		✓	DD-SED-VOA-06			✓		
06	11/15/12	10:00A		✓	DD-SED-M-06			✓		
06	11/15/12	10:00A		✓	DD-SED-SVOA-06			✓		

Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
	11/15/12 11:15A					
Relinquished by: (Signature)	Date / Time	Received by: (Signature)	Date / Time	Relinquished by: (Signature)	Date / Time	Received by: (Signature)
Relinquished by: (Signature)	Date / Time	Received for Laboratory by: (Signature)	Date / Time	Remarks		
			11/16/12 9:30	Cooler Temp = 4° C.		
Shipped by:		Airbill Number:				

Distribution: White Accompanies Shipment; Pink to Coordinator Field Files; Green to Report; Yellow Returns with Warrant

EPA 7500-53 (11/96)

6- 10105

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Environmental Protection Agency

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Notes and Definitions

The units for surrogates on VOA solid samples are reported in µg/L instead of the expected µg/Kg for a solid sample. The difference is because the surrogate spiking procedure is a post sample preparation addition, and the units are based on the concentration of the surrogate in the diluted extract, not the solid sample.

RL	The reporting limit for this analyte was raised because absence or presence at the routine or lower value could not be verified"
J	The identification of the analyte is acceptable; the reported value is an estimate.
A	This sample was extracted at a single acid pH.
HTS	Sample was prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.
ABN	Acid Base Neutrals (Semivolatile Compounds)
AES	Atomic Emission Spectrometer
BS	Blank Spike
CVAA	Cold Vapor Atomic Absorption
DCB	Decachlorobiphenyl
ECD	Electron Capture Detector
GC	Gas Chromatograph
ICP	Inductively Coupled Plasma
ISTD	Internal Standard
LCS	Laboratory Control Sample
MS	Mass Spectrometer
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NA	Not Applicable
NPD	Nitrogen Phosphorous Detector
NR	Not Reported
PCB	Polychlorinatedbiphenyl
RL	Reporting Limit
RT	Retention Time

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TCLP	Toxicity Characteristic Leaching Procedure
TCMX	Tetrachloro-meta-xylene
U	Undetected
VOA	Volatile Organic Analysis
#	Out of QC limits

Initial pressure in air analyses is the pressure at which the canister was received in psia (pounds *per* square inch absolute pressure).

The pH reported for Volatile liquid samples was tested using a 0-14 pH indicator strip for the purpose of verifying chemical preservation.

The statistical software used for the reporting of toxicity data is ToxCalc 5.0.32, Environmental Toxicity Data Analysis System 1994-2007 Tidepool Scientific Software.