## Williams Petroleum Services, LLC

One Williams Center P.O. Box 3483 Tulsa, OK 74101-3483 918/573-2600

April 24, 2008

Mr. Kenneth Herstowski Environmental Protection Agency 901 N. Fifth Street Kansas City, Kansas 66101

Re: Quarterly Update – 1<sup>st</sup> Quarter 2008

Former Augusta Refinery (FAR) RCRA Facility Investigation (RFI)

Williams Petroleum Services (WPS), LLC

Augusta, Kansas – KSD007235138

Dear Mr. Herstowski:

This letter is offered as the report of investigation activities at the Former Augusta Refinery in accordance with Section X, "Reporting," of the Administrative Order on Consent dated October 24, 2003, Docket No. RCRA-07-2004-0009. This report addresses activities occurring during the period of January 1 through March 31, 2008.

## Description of Activities

The following field activities were completed, and if appropriate, in accordance with respective Sampling and Analysis Plans (SAPs):

- January 10, arranged for transport and disposal of 74 drums of non-hazardous soil generated from field activities associated with AOCs 5 (Leaded Tank Bottom Disposal Areas), B (Former Landfill North of Effluent Oxidation Pond), and D (Asphaltic Materials Disposal Area), and SWMUs 8 (East Landfill), 9 (Industrial Landfill Cell 1-7), and 17 (Asphalt Landfill).
- January 10 and 11, collected 22 additional surface soil samples for TEL analysis to determine contamination extent associated with AOCs 1 (Surface Water Drainage Ditches), 5, C (Former Pond Areas), E (Sludge Pond), and F (Surface Staining) and SWMU 4 (East Landfarm).
- January 14 thru 16, collected As samples from AOC-5 for risk assessment and extent determination.
- Feb 29, collected 4 TEL samples from AOC-5, C, and F for determination of contamination extent.

## Summary of All Findings

An investigation progress summary for AOC 5 is included as Table 1.

Summaries of All EPA Approved Changes

None

Summaries of All Contacts

- January 23, WPS electronically forwarded to EPA a planned response to an inquiry by the City of Augusta regarding environmental site assessment progress at the Former Augusta Refinery site.
- February 1, WPS electronically forwarded to EPA the quarterly report for the period ending December 31, 2007 and requested status on EPA's review of the planned response to the inquiry from the City of Augusta on site progress.
- February 25, WPS electronically forwarded to Mr. Bill Keefer, City Manager, City of Augusta a letter report on the progress of the environmental assessment at the Former Augusta Refinery site.
- March 3, WPS electronically forwarded to KDHE the responses to KDHE comments on Phase III Work Plan – Walnut River, and Human health Risk Assessment, Former Augusta Refinery. The transmittal letter reiterated the existence of a confidential agreement between WPS and ExxonMobil for site investigation and remediation and identified work plans and reports to be submitted to EPA and KDHE in the coming months.

Summaries of Problems Encountered

None

Actions to Rectify Problems

None

Changes in key project entities

None

Projected Work for the Next Reporting Period

Completion of the SAP for the site-wide groundwater was delayed for further revision and will be finalized during the second quarter of 2008 for subsequent submittal to EPA and KDHE. Revisions to the Human health Risk assessment Work Plan will also be completed during the second quarter of 2008 for submittal to EPA and KDHE. Preparation of the River Soil Sampling and Analysis Plan will be completed and submitted to EPA and KDHE by April 30, 2008.

Field investigations for the following units will be performed or initiated during the next reporting period:

• Initiate implementation of Groundwater SAP upon concurrence from EPA.

Other Relevant Documentation

None

## Williams Petroleum Services, LLC

I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to evaluate the information submitted. I certify that the information contained in or accompanying this submittal is true, accurate, and complete. As to those identified portion(s) of this submittal for which I cannot personally verify the accuracy, I certify that this submittal and all attachments were prepared in accordance with the procedures designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those directly responsible for gathering the information, or the immediate supervisor of such person(s), 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.

Please provide all written correspondence regarding this Quarterly Update directly to Mr. Phil Roberts with Williams Petroleum Services, LLC. If you have any questions, do not hesitate to contact Mr. Roberts at (918) 573-0757.

Sincerely,

Williams Petroleum Services, LLC

Paul V. Hunter

Vice President

Williams Petroleum Services, LLC

**Enclosures** 

c: Mark deLorimier, Shaw Environmental, Inc.

Table 1 FAR Facility Investigation Progress Summary Former Augusta Refinery, Augusta, Kansas Quarterly Status Report: 1st Quarter 2008

			Results	
AOC / SWMU ID	AOC / SWMU ID   Investigation Dates	Surface Soil	Subsurface Soil	Groundwater
AOC 5-02	10/1/2007	<ul> <li>Arsenic concentrations in the 10 aubsurface samples were greater than subsurface samples were greater than the Region 9 direct soil exposure. PRG (1.6 mg/kg). Arsenic concentrations in eight surface samples were also greater than the 95 percent UCL of the mean background concentration for arsenic (6.05 mg/kg), ranging from 6.2 to 9.8 mg/kg. The arsenic dataset was determined to be statistically greater than the background dataset.</li> <li>Arsenic concentrations in the AOC 5 subgroup collected in</li></ul>	- Arsenic concentrations in the 10 subsurface samples ranged from 2.7 to 8.8 mg/kg, less than the Region 9 PRG DAF 20 for arsenic (29 mg/kg), but greater than the Region 9 PRG DAF 1 (1.0 mg/kg). The arsenic dataset for was determined to be statistically less than the background dataset.	No groundwater samples were collected in the AOC 5 subgroup 02.
Total samples collected: 10 surface an 10 subsurface samples were collected and analyzed for arsenic. No groundwasamples were collected in the AOC 5 subgroup 02.	Total samples collected: 10 surface and 10 subsurface samples were collected and analyzed for arsenic. No groundwater samples were collected in the AOC 5 subgroup 02.			

Table 1
FAR Facility Investigation Progress Summary
Former Augusta Refinery, Augusta, Kansas
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•				
reported results of 53.6 and 110				
two temporary wells sampled with				
in groundwater samples from the				
PRG for tap water value (6.2 ug/L)			the collection of groundwater samples.	ne collection of gro
were greater than the Region 9			temporary monitor wells were installed for	emporary monitor
<ul> <li>Naphthalene concentrations</li> </ul>			ot sampled. Two	and AOC-C were not sampled. Two
ug/L.			borings that fell in the areas of SWMU-6	orings that fell in t
reported results of 0.36 and 7.4			in areas of standing surface water. Soil	nareas of standing
temporary wells sampled with			surface/sediment samples were collected	urface/sediment s
groundwater samples from the two	analyzed.	analysis of arsenic and organic lead. Only laboratory reporting limit.	and organic lead. Only	nalysis of arsenic
tap water value (0.35 ug/L) in	reporting limit in the two samples	subsurface samples were collected for the samples were less than the	s were collected for the	ubsurface sample
greater than the Region 9 PRG for	were less than the laboratory	the eight surface/sediment	amples and two	surface/sediment samples and two
- Benzene concentrations were	<ul> <li>Organic lead concentrations</li> </ul>	<ul> <li>Organic lead concentrations in</li> </ul>	cted: Eight	Total samples collected: Eight
		background dataset.		
		be statistically greater than the		
dissolved arsenic (3.63 ug/L).		arsenic dataset was determined to		
background concentration for		from 6.2 to 11.6 mg/kg. The		
the 95 percent UCL of the mean	arsenic (5.54 mg/kg).	arsenic (6.05 mg/kg), ranging		
one sample was also greater than	background concentration for	background concentration for		
dissolved arsenic concentration in	below the 95% UCL of the mean	percent UCL of the mean		
results of 3.0 and 6.5 ug/L. The	mg/kg). The arsenic results were	were also greater than the 95		
wells sampled with reported	than the Region 9 PRG DAF 1 (1.0 wells sampled with reported	six surface/sediment samples		
samples from the two temporary	arsenic (29 mg/kg), but greater	mg/kg). Arsenic concentrations in arsenic (29 mg/kg), but greater		
value (0.045 ug/L) in groundwater	the Region 9 PRG DAF 20 for	direct soil exposure PRG (1.6		
the Region 9 PRG for tap water	were 3.9 and 5.5 mg/kg, less than	were greater than the Region 9		
concentrations were greater than	two subsurface samples analyzed	eight surface/sediment samples		
<ul> <li>Dissolved arsenic</li> </ul>	Arsenic concentrations in the	<ul> <li>Arsenic concentrations in the</li> </ul>	07/20/07 - 08/03/07	AOC 5-03
Groundwater	Subsurface Soil	Surface/Sediment Soil	Investigation Dates	AOC / SWMU ID
	Kesuits			

Table 1 FAR Facility Investigation Progress Summary Former Augusta Refinery, Augusta, Kansas Quarterly Status Report: 1st Quarter 2008

			Results	
AOC / SWMU ID	AOC / SWMU ID Investigation Dates	Surface/Sediment Soil	Subsurface Soil	Groundwater
AOC 5-04	10/02/07 - 01/15/08	• Arsenic concentrations in the 20   • Arsenic concentrations in the 10   • No groundwater samples were	<ul> <li>Arsenic concentrations in the 10</li> </ul>	<ul> <li>No groundwater samples were</li> </ul>
		surface samples were greater than subsurface samples ranged from	subsurface samples ranged from	collected in the AOC 5 subgroup
		the Region 9 direct soil exposure	3.9 to 6.6 mg/kg, less than the	04.
		PRG (1.6 mg/kg). Arsenic	Region 9 PRG DAF 20 for arsenic	
		concentrations in 15 surface	(29 mg/kg), but greater than the	
		samples were also greater than	Region 9 PRG DAF 1 (1.0 mg/kg).	
		the 95 percent UCL of the mean	The arsenic dataset was	
		background concentration for	determined to be statistically less	
		arsenic (6.05 mg/kg), ranging	than the background dataset.	
		from 6.3 to 99.0 mg/kg. The		
		arsenic dataset was determined to		
		be statistically greater than the		
		background dataset.		
Total samples collec	Total samples collected: 20 surface and			
10 subsurface samples were collected	les were collected			
and analyzed for an	and analyzed for arsenic. No groundwater			
samples were collected in the AOC 5	sted in the AOC 5			
subgroup 04.				

Table 1
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			Results	
AOC / SWMU ID II	Investigation Dates	Surface Soil	Subsurface Soil	Groundwater
AOC 5-06	10/3/2007	• Arsenic concentrations in the 10 • Arsenic concentrations in the surface samples were greater than subsurface samples ranged from 6.1 to 11.2 mg/kg). Arsenic background dataset.  • Arsenic concentrations in the 10 • Arsenic concentrations in the subsurface samples ranged from 6.1 to 11.2 mg/kg). Arsenic dataset was determined to be statistically learned to be statistically greater than the background dataset.	nnic e kg):	10 • No groundwater samples were collected in the AOC 5 subgroup 06.  snic e kg).
Total samples collected: 10 surface and 10 subsurface samples were collected and analyzed for arsenic. No groundwater samples were collected in the AOC 5 subgroup 06.	d: 10 surface and s were collected nic. No groundwater d in the AOC 5			

FAR Facility Investigation Progress Summary Former Augusta Refinery, Augusta, Kansas Quarterly Status Report: 1st Quarter 2008

			Results	
AOC / SWMU ID	AOC / SWMU ID Investigation Dates	Surface/Sediment Soil	Subsurface Soil	Groundwater
AOC 5-07	07/20/07 - 08/06/07	• Arsenic concentrations in the 10 • surface samples were greater than the Region 9 direct soil exposure PRG (1.6 mg/kg). Arsenic concentrations in four surface samples ranged from 4.0 to 8.2 mg/kg, less than the Region 9 PRG DAF 20 for arsemples were also greater than the 95 percent UCL of the mean background concentration for arsenic (6.05 mg/kg), ranging from 6.6 to 10.8 mg/kg. The arsenic dataset was determined to be statistically less than the background dataset.	- Arsenic concentrations in the five subsurface samples ranged from 4.0 to 8.2 mg/kg, less than the Region 9 PRG DAF 20 for arsenic (29 mg/kg), but greater than the Region 9 PRG DAF 1 (1.0 sampled with a reported result of mg/kg). The arsenic dataset was determined to be statistically less than the background dataset. Then the background dataset. The dissolved arsenic from the background concentration for dissolved arsenic (3.63 ug/L).	was greater than the Region 9 PRG for tap water value (0.045 ug/L) in the groundwater sample from the one temporary well sampled with a reported result of 13.9 ug/L. The dissolved arsenic concentration was also greater than the 95 percent UCL of the mean background concentration for dissolved arsenic (3.63 ug/L).
Total samples collected: 10 surface/sediment and five subsurface samples were collected and analyzed f arsenic. Only surface/sediment sample were collected in areas of standing surface water. Two temporary monitor wells were installed for the collection of groundwater samples. One of the wells was dry.	Total samples collected: 10 surface/sediment and five subsurface samples were collected and analyzed for arsenic. Only surface/sediment samples were collected in areas of standing surface water. Two temporary monitor wells were installed for the collection of groundwater samples. One of the wells was dry.			

Table 1
FAR Facility Investigation Progress Summary
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			Results	
AOC / SWMU ID	Investigation Dates	Surface/Sediment Soil	Subsurface Soil	Groundwater
AOC 5-10	07/19/07 - 01/15/08	<ul> <li>Arsenic concentrations in the 20 surface/sediment samples were</li> </ul>	<ul> <li>Arsenic concentration in one subsurface sample was 35.9</li> </ul>	<ul> <li>No groundwater samples were collected in the AOC 5 subgroup</li> </ul>
		greater than the Region 9 direct soil exposure PRG (1.6 mg/kg).	mg/kg, greater than the Region 9 PRG DAF 20 for arsenic (29	10.
		Arsenic concentrations in	mg/kg). The arsenic dataset was	
		nineteen surface/sediment samples were also greater than	determined to be statistically less than the background dataset.	
		the 95 percent UCL of the mean	•	
		background concentration for		
	-	arsenic (6.05 mg/kg), ranging		
		from 6.2 to 42.2 mg/kg. The		
		arsenic dataset was determined to		
		be statistically greater than the background dataset.		
Total samples collected: 10		<ul> <li>Organic lead concentrations in</li> </ul>	<ul> <li>Organic lead concentrations in</li> </ul>	
surface/sediment samples and seven	mples and seven	the two surface/sediment samples	the seven subsurface soil samples	
subsurface samples were collected to	were collected for the	subsurface samples were collected for the were greater than the Region 9	were less than the laboratory	
chrysene. An additional 10 surface		mg/kg) with results of 0.220 and		
samples were collected for the analysis arsenic. Only surface/sediment samples	samples were collected for the analysis of 0.430 mg/kg. arsenic. Only surface/sediment samples	0.430 mg/kg.		
were collected in areas of standing		<ul> <li>Chrysene concentrations were</li> </ul>	<ul> <li>Chrysene concentrations were</li> </ul>	
were collected in the	were collected in the AOC 5 subgroup 10.	soil samples and ranged from subsurface soil samples and	reported in three of the seven	
		the	ranged from 0.021 to 0.936 mg/kg,	
		xposure	all below the Region 9 PRG DAF 1	
			or on journ (100 mg/kg).	

Table 1 FAR Facility Investigation Progress Summary Former Augusta Refinery, Augusta, Kansas Quarterly Status Report: 1st Quarter 2008

			Results	
AOC / SWMU ID	AOC / SWMU ID Investigation Dates	Surface Soil	Subsurface Soil	Groundwater
AOC 5-11	10/3/2007 - 10/04/07	- Arsenic concentrations in the 10	• Arsenic concentrations in the 10   Arsenic concentrations in the 10   No groundwater samples were	<ul> <li>No groundwater samples were</li> </ul>
		surface samples were greater than	surface samples were greater than subsurface samples ranged from collected in the AOC 5 subgroup	collected in the AOC 5 subgroup
		the Region 9 direct soil exposure	3.8 to 9.3 mg/kg, less than the	11.
		PRG (1.6 mg/kg). Arsenic	Region 9 PRG DAF 20 for arsenic	
		concentrations in seven surface	(29 mg/kg), but greater than the	
		samples were also greater than	Region 9 PRG DAF 1 (1.0 mg/kg).	
		the 95 percent UCL of the mean	The arsenic dataset was	
		background concentration for	determined to be statistically less	
		arsenic (6.05 mg/kg), ranging	than the background dataset.	
		from 6.4 to 22.9 mg/kg. The		
		arsenic dataset was determined to		
		be statistically greater than the		
		background dataset.		
	ļ		ALL CO.	
Total samples coller	Fotal samples collected: 10 surface and			
10 subsurface samples were collected	oles were collected			
and analyzed for an	and analyzed for arsenic. No groundwater			
samples were collected in the AOC 5	sted in the AOC 5			
subgroup 11.				

Table 1
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			Results	
AOC / SWMU ID I	Investigation Dates	Surface Soil	Subsurface Soil	Groundwater
AOC 5-12 (	07/19/07 - 08/02/07	- Arsenic concentrations in the 10	- Arsenic concentrations in the 10	Dissolved arsenic
		3		concentrations were greater than
		the Region 9 direct soil exposure PRG (1.6 mg/kg). <b>Arsenic</b>	3.6 to 6.7 mg/kg, less than the Region 9 PRG DAF 20 for arsenic	the Region 9 PRG for tap water value (0.045 ug/L) in groundwater
		concentrations in three surface		samples from the two temporary
		samples were also greater than	۳	wells sampled with reported
		the 95 percent UCL of the mean	The arsenic dataset was	results of 30.9 and 64.0 ug/L. The
		background concentration for	ess	dissolved arsenic concentrations
		arsenic (6.05 mg/kg), ranging from 6.4 to 6.8 mg/kg. The arsenic	than the background dataset.	in both samples were also greater than the 95 percent UCL of the
		dataset was determined to be		mean background concentration
		statistically less than the		for dissolved arsenic (3.63 ug/L).
		background dataset.		
Total samples collected: 10 surface and		Organic lead concentrations in	જ	- Benzene concentrations were
the analysis of arsenic and organic lead.		than the Region 9 PRG direct soil	subsurface samples collected,	tap water value (0.35 ug/L) in
Two temporary monitor wells were				groundwater samples from the two
installed for the collection of groundwater		results of 0.100 and 0.240 mg/kg.	SOI	temporary wells sampled with
samples.			laboratory reporting limit.	reported results or zzoo and zezo
				Xylene concentrations were
				greater than the Region 9 PRG for
				tap water value (210 ug/L) in
•				the temperary wells campled with
				a reported result of 926 ug/L.
				Naphthalene concentrations
				PRG for tap water value (6.2 µg/l.)
				in groundwater samples from the
				two temporary wells sampled with
<del></del>				reported results of 54.3 and 60.0
				ug/L.

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			Results	
AOC / SWMU ID	Investigation Dates	Surface Soil	Subsurface Soil	Groundwater
AOC 5-13	07/18/07 - 01/15/08	- Arsenic concentrations in the 20 - Arsenic concentrations in the	- Arsenic concentrations in the	- Dissolved arsenic concentration
		surface samples were greater than nine subsurface samples ranged	nine subsurface samples ranged	was greater than the Region 9
		the Region 9 direct soil exposure	from 3.8 to 8.5 mg/kg, less than	PRG for tap water value (0.045
		PRG (1.6 mg/kg). Arsenic	the Region 9 PRG DAF 20 for	ug/L) in the groundwater sample
		concentrations in 18 surface	arsenic (29 mg/kg), but greater	
		samples were also greater than	than the Region 9 PRG DAF 1 (1.0	
		the 95 percent UCL of the mean	mg/kg). The arsenic dataset was	40.0 ug/L. The dissolved arsenic
		background concentration for	determined to be statistically less	concentration was also greater
		arsenic (6.05 mg/kg), ranging	than the background dataset.	than the 95 percent UCL of the
		from 6.3 to 42.6 mg/kg. The		mean background concentration
		arsenic dataset was determined to		for dissolved arsenic (3.63 ug/L).
		be statistically greater than the		
		background dataset.		
Total samples colle	Fotal samples collected: 10 surface and	- Organic lead concentrations in	<ul> <li>Organic lead concentrations in</li> </ul>	Benzene concentration was
nine subsurface sai	nine subsurface samples were collected	_	the nine subsurface soil samples	greater than the Region 9 PRG for
for the analysis of a	for the analysis of arsenic, chrysene, and	than the Region 9 PRG direct soil	collected were all less than the	tap water value (0.35 ug/L) in the
organic lead. An additional 10 arsenic	ditional 10 arsenic	exposure (0.062 mg/kg), with	laboratory reporting limit.	groundwater sample from the one
and two organic lead surface samples	d surface samples	results of 0.087 to 0.160 mg/kg.		temporary well with a reported
were collected. One	were collected. One temporary monitor			result of 0.57 ug/L.
well was installed for	well was installed for the collection of a	<ul> <li>Chrysene concentrations were</li> </ul>	<ul> <li>Chrysene concentrations were</li> </ul>	<ul> <li>2-methylnaphthalene</li> </ul>
groundwater sample	ë	reported in the 10 surface soil	reported in four of the nine	concentration was greater than the
		samples and ranged from 0.0307	subsurface soil samples and	Region 9 PRG for tap water value
		to 11.3 mg/kg, all below the	ranged from 0.0159 to 0.493	(150 ug/L) in the groundwater
		Region 9 PRG direct soil exposure mg/kg, all below the Region 9	mg/kg, all below the Region 9	sample from the one temporary
		for chrysene (210 mg/kg).	PRG DAF 1 for chrysene (160	well sampled with a reported result
			mg/kg).	of 196 ug/L.
				<ul> <li>Naphthalene concentration was</li> </ul>
				greater than Region 9 PRG for tap
				water value (6.2 ug/L) in
				groundwater sample from the one
				temporary well sampled with a
				leborted result of 65.5 ug/L.

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			Results	
AOC / SWMU ID	Investigation Dates	Surface Soil	Subsurface Soil	Groundwater
AOC 5-14	07/18/07 - 01/11/08	• Arsenic concentrations in the 10 • Arsenic concentrations in the 1 subsurface samples ranged from the Region 9 direct soil exposure PRG (1.6 mg/kg). Arsenic concentrations in three surface samples were also greater than the sackground concentration for arsenic (6.05 mg/kg), ranging from 6.1 to 9.9 mg/kg). The arsenic dataset was determined to be statistically less than the background dataset.	• Arsenic concentrations in the 10 subsurface samples ranged from 2.8 to 18.4 mg/kg, less than the Region 9 PRG DAF 20 for arsenic (29 mg/kg), but greater than the Region 9 PRG DAF 1 (1.0 mg/kg). The arsenic dataset was determined to be statistically less than the background dataset. The dissolved arsenic concentration was also greater than the background dataset. The dissolved arsenic for dissolved arsenic (3.63 ug/L).	10 • Dissolved arsenic concentration  m was greater than the Region 9  PRG for tap water value (0.045  nic ug/L) in the groundwater sample from the one temporary well  g). sampled with a reported result of 8.0 ug/L. The dissolved arsenic concentration was also greater than the 95 percent UCL of the mean background concentration for dissolved arsenic (3.63 ug/L).
Total samples collected: 10 surface 10 subsurface samples were collect the analysis of arsenic and organic An additional three organic lead susamples were collected. Two temporary monitor wells were installed for the collection of groundwater samples.	and ted for lead. rface orary	<ul> <li>Organic lead concentrations in eight surface samples were greater than the Region 9 PRG direct soil exposure (0.062 mg/kg) with results ranging from 0.100 and 7.10 mg/kg.</li> </ul>	• Organic lead concentrations were reported in one of the subsurface samples collected with a result of 0.026 mg/kg. All other subsurface soil samples were less than the laboratory reporting limit.  • Benzene concentration was greater than the Region 9 PRG to tap water value (0.35 ug/L) in the groundwater sample from the one temporary well sampled with a reported result of 15.6 ug/L.	• Benzene concentration was greater than the Region 9 PRG for tap water value (0.35 ug/L) in the groundwater sample from the one temporary well sampled with a reported result of 15.6 ug/L.
Product was observ	Product was observed in one of the wells,			

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			Results	
AOC / SWIMU ID	AOC / SWMU ID Investigation Dates	Surface Soil	Subsurface Soil	Groundwater
AOC 5-15	07/17/07 - 01/16/08	<ul> <li>Arsenic concentrations in the 20 - Arsenic concentrations in the 10 - Dissolved arsenic</li> </ul>	<ul> <li>Arsenic concentrations in the 10</li> </ul>	- Dissolved arsenic
		surface samples were greater than subsurface samples ranged from	subsurface samples ranged from	concentrations were greater than
		the Region 9 direct soil exposure	3.9 to 17.7 mg/kg, less than the	the Region 9 PRG for tap water
		PRG (1.6 mg/kg). Arsenic	Region 9 PRG DAF 20 for arsenic value (0.045 ug/L) in groundwater	value (0.045 ug/L) in groundwater
		concentrations in nine surface	(29 mg/kg), but greater than the	samples from the two temporary
		samples were also greater than	Region 9 PRG DAF 1 (1.0 mg/kg).   wells sampled with reported	wells sampled with reported
		the 95 percent UCL of the mean	The arsenic dataset was	results of 9.6 and 39.5 ug/L. The
		background concentration for	determined to be statistically less	dissolved arsenic concentration in
		arsenic (6.05 mg/kg) with results	than the background dataset.	one sample was also greater than
				the 95 percent UCL of the mean
		arsenic dataset was determined to		background concentration for
		be statistically less than the		dissolved arsenic (3.63 ug/L).
		background dataset.		
Total samples collec	fotal samples collected: 10 surface and	<ul> <li>Organic lead concentrations in</li> </ul>	Organic lead concentrations	Benzene concentrations were
10 subsurface samp	10 subsurface samples were collected for	six surface samples were greater	were reported in two of the	greater than the Region 9 PRG for
the analysis of arser	he analysis of arsenic and organic lead.	than the Region 9 PRG direct soil	subsurface samples collected with  tap water value (0.35 ug/L) in the	tap water value (0.35 ug/L) in the
An additional 10 surface samples were	face samples were	exposure (0.062 mg/kg) with	results of 0.032 and 0.094 mg/kg.	groundwater samples from the two
collected for the ans	collected for the analysis of arsenic. Two	results ranging from 0.075 to 4.30	All other subsurface soil samples	temporary wells sampled with
temporary monitor w	ō	r mg/kg.	n the laboratory	reported results of 20.5 and 167
tne collection of groundwater samples.	undwater samples.		reporting limit.	UQ/L.

Table 1
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	• Lead concentration in four subsurface samples were greater than the 95 percent UCL of the mean background concentration for lead (11.36 mg/kg) with results ranging from 12.8 to 118 mg/kg. The lead dataset was determined to be statistically greater than the background dataset.	• Lead concentrations were reported in the 10 surface soil samples and ranged from 13.9 to 472 mg/kg, all below the Region 9 PRG direct soil exposure for lead (800 mg/kg).	monitor wells, and no groundwater samples were collected in the AOC 5 subgroup 16.	monitor wells, an samples were consubgroup 16.
	• Organic lead concentrations were reported in three of the subsurface samples collected with results ranging from 0.029 and 0.150 mg/kg. All other subsurface soil samples were less than the laboratory reporting limit.	• Organic lead concentrations in seven surface samples were greater than the Region 9 PRG direct soil exposure (0.062 mg/kg) with results ranging from 0.072 to 3.60 mg/kg.	Total samples collected: 10 surface and 10 subsurface samples were collected for the analysis of arsenic, lead, and organic lead. An additional three surface samples were collected for the analysis of organic lead. Two temporary monitor wells were installed for the collection of groundwater samples. Product was detected in both	Total samples of 10 subsurface s the analysis of a lead. An addition were collected for lead. Two temporatalled for the samples. Produ
monitor wells, and no groundwater samples were collected in AOC 5 subgroup 16.	subsurface samples ranged from 3.7 to 5.5 mg/kg, less than the Region 9 PRG DAF 20 for arsenic (29 mg/kg), but greater than the Region 9 PRG DAF 1 (1.0 mg/kg). The arsenic dataset was determined to be statistically less than the background dataset.	surface samples were greater than subsurface samples ranged fro the Region 9 direct soil exposure PRG (1.6 mg/kg). <b>Arsenic</b> concentrations in two surface samples were also greater than the samples were also greater than the packground concentration for arsenic (6.05 mg/kg) with results of 6.5 and 6.7 mg/kg. The arsenic dataset was determined to be statistically less than the background dataset.		
<ul> <li>Product was detected in both</li> </ul>	• Arsenic concentrations in the 10	Arsenic concentrations in nine	07/16/07 - 02/28/08	AOC 5-16
Groundwater	Subsurface Soil	Surface Soil	ID   Investigation Dates	AOC / SWMU ID
	Results			

Table 1
FAR Facility Investigation Progress Summary
Former Augusta Refinery, Augusta, Kansas
Quarterly Status Report: 1st Quarter 2008

			Results	
AOC / SWIMU ID	AOC / SWMU ID Investigation Dates	Surface Soil	Subsurface Soil	Groundwater
AOC 5-17, 18, and	10/4/2007	<ul> <li>Arsenic concentrations in the 10</li> </ul>	<ul> <li>Arsenic concentrations in the 10 - Arsenic concentrations in the 10 No groundwater samples were</li> </ul>	No groundwater samples were
19		surface samples were greater than	surface samples were greater than subsurface samples ranged from  collected in AOC 5 subgroups 17,	collected in AOC 5 subgroups 17,
		the Region 9 direct soil exposure	3.8 to 10.2 mg/kg, all less than the 18, and 19.	18, and 19.
		PRG (1.6 mg/kg). Arsenic	Region 9 PRG DAF 20 for arsenic	
		concentrations in seven surface	(29 mg/kg), but greater than the	
		samples were also greater than	Region 9 PRG DAF 1 (1.0 mg/kg).	
		the 95 percent UCL of the mean	The arsenic dataset was	
		background concentration for	determined to be statistically less	
		arsenic (6.05 mg/kg), ranging	than the background dataset.	
		from 2.1 to 43.1 mg/kg. The		
		arsenic dataset was determined to		
		be statistically greater than the		
		background dataset for arsenic.		
Total camples College	Total camples collected: 10 curtace and			
10 cubenifico complee wore collected	olect. To surface and			
10 subsuilace saill	Nes were collected			
and analyzed for an	and analyzed for arsenic. No groundwater			
samples were collected in AOC 5	sted in AOC 5			
subgroups 17, 18, and 19.	nd 19.			

Table 1
FAR Facility Investigation Progress Summary
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			Results	
AOC / SWMU ID Investigation Dates	Investigation Dates	Surface Soil	Subsurface Soil	Groundwater
AÖC 5-20	0/4/2007 to 10/05/07	• Arsenic concentrations in the 10 subsurface samples were greater than subsurface samples ranged from 6.7 to 8.5 mg/kg). The arsenic dataset was background dataset.  • Arsenic concentrations in the 10 subsurface samples ranged from 8.4 to 6.7 mg/kg, all less than the samples were also greater than the 95 percent UCL of the mean background concentration for arsenic (6.05 mg/kg), ranging from 6.7 to 8.5 mg/kg). The arsenic dataset was determined to be statistically less than the background dataset.	10 10 mm nic (g).	No groundwater samples were collected in AOC 5 subgroup 20.
Total samples collected: 10 surface and 10 subsurface samples were collected and analyzed for arsenic. No groundwarsamples were collected in AOC 5 subgroup 20.	Total samples collected: 10 surface and 10 subsurface samples were collected and analyzed for arsenic. No groundwater samples were collected in AOC 5 subgroup 20.			

Table 1 FAR Facility Investigation Progress Summary Former Augusta Refinery, Augusta, Kansas Quarterly Status Report: 1st Quarter 2008

			Results	
AOC / SWMU ID	AOC / SWMU ID Investigation Dates	Surface Soil	Subsurface Soil	Groundwater
AOC 5-21	10/4/2007 to 10/05/07	10/4/2007 to 10/05/07 • Arsenic concentrations in the 10 surface samples were greater than the Region 9 direct soil exposure PRG (1.6 mg/kg). Arsenic concentrations in six surface samples were also greater than the 95 percent UCL of the mean background concentration for arsenic dataset was determined to be statistically less than the background dataset.	• Arsenic concentrations in the 10 subsurface samples ranged from 3.3 to 20.0 mg/kg, all less than the Region 9 PRG DAF 20 for arsenic (29 mg/kg), but greater than the Region 9 PRG DAF 1 (1.0 mg/kg). The arsenic dataset was determined to be statistically less than the background dataset.	No groundwater samples were collected in AOC 5 subgroup 21.
Total samples collected: 10 surface an 10 subsurface samples were collected and analyzed for arsenic. No groundw samples were collected in AOC 5 subgroup 21.	Total samples collected: 10 surface and 10 subsurface samples were collected and analyzed for arsenic. No groundwater samples were collected in AOC 5 subgroup 21.			

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