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April 28, 2006

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

RE: Quarterly Update – 1st<sup>th</sup> Quarter 2006  
Williams Former Augusta Refinery RCRA Facility Investigation (RFI), 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, 2006.

#### *Description of Activities*

Sampling of temporary groundwater monitor wells installed at the background area and SWMUs 5, 6, and 15, and AOCs 4 and 6 were performed in accordance with the respective Sampling and Analysis Plans. Groundwater sampling was completed on January 6, 2006. The surveying of all temporary groundwater monitor wells was completed on January 10, 2006.

Data validation was completed on soil and groundwater analytical results as data packages were received from the laboratory. Background was evaluated to determine if sample locations are representative of background conditions and if the appropriate number of samples are being obtained from the various FAR sites for comparison to background data. Summary statistics were performed for each metals dataset as stated in Section 1.2.6 of Appendix A of the SAP. Site-specific analytical results were evaluated for SWMUs 5 and 6, SWMU 15, and AOCs 4 and 6 to determine if additional sampling is required.

Sampling and Analysis Plans for the investigation of additional FAR sites were prepared reflecting the preliminary evaluation of background samples. On January 18, 2006 field crews completed identifying soil boring locations for SWMUs 3, 4, 8, 9, 17 and Process area 1. Draft plans for the investigation at Process Area 1, and SWMUs 3 and 4 were developed. The determination was made that geophysical surveys need be incorporated into the SAPs for SWMUs 8 and 9, and SWMU 17 as well as additional areas identified as potential landfills. Development of SAPs for areas of this type will continue in subsequent quarters.

#### *Summary of All Findings*

The data validation results demonstrated that all data were useable for the project objectives except for one organic lead value. Additional samples will be collected near the related sample location to obtain usable data.



Very low levels of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs) were reported in background samples. Detected acetone is probably caused by the use of the Terracore sampling kits that use sodium bisulfate as a preservation liquid. It was determined that the likely source of the reported values for benzene and toluene in background samples is probably laboratory variability at the MDL. The presence of carbon disulfide, benzene, and toluene does not invalidate the use of the soils data for establishing background metals values.

Reported polynuclear aromatic hydrocarbons (PAHs) in background samples are probably a result of periodic burning of the vegetation in this area. All reported results are in the zero to one foot interval. No PAHs were reported in subsurface samples. This area is an agricultural field that periodically is planted with wheat. Wheat stubble is routinely burned after the wheat is harvested. It is well known that fire residues contain PAHs. Since the PAHs were only detected in surface soils the likely source of the PAHs is fire residue, not refinery activities. The presence of PAHs does not invalidate the use of the soils data for establishing background metals values.

The organic lead results in background samples were just above the MDL and well below the SQL. All of these values are indicative of method reporting variability at the MDL. If the organic lead were derived from a petroleum source it would be anticipated that the compound would group together at the same locations as reported benzene and toluene which does not occur. Therefore, as with the VOC values, the likely source of the reported values is probably laboratory variability at the MDL. The presence of organic lead does not invalidate the use of the soils data for establishing background metals values.

Sample results demonstrate that background monitoring wells BG-03 and BG-08 cannot be used to establish background groundwater metal values. Temporary monitoring well BG-03 had methyl tert-butyl ether (MTBE) at 1.44 micrograms per liter ( $\mu\text{g/L}$ ), just above the MDL of 1.0  $\mu\text{g/L}$ . Temporary monitoring well BG-08 had benzene at 499  $\mu\text{g/L}$ , ethylbenzene at 3.87  $\mu\text{g/L}$ , toluene at 37.3  $\mu\text{g/L}$  and xylenes at 106  $\mu\text{g/L}$ . Therefore, the sampling frequency for the remaining three background monitoring wells will be increased to every other month for the remainder of the year.

The summaries of analytical results for specific units as well as actions planned are presented in Table 1.

SWMU 5 area data indicate the area has been defined and the data meets the project objectives stated in Section 1.1 of the SAP. Review of the preliminary groundwater flow direction map for the area indicates that the temporary monitoring wells are located in upgradient locations, so the detected concentrations in groundwater at SWMU 5 likely come from a location further to the east.

SWMU 6 area data indicate the area has been defined and the data meets the project objectives stated in Section 1.1 of the SAP. Review of the preliminary groundwater flow direction map for the area indicates that concentrations detected in temporary monitoring wells SWMU 6-06 and SWMU 6-10 may be coming from an upgradient location such as AOC 4 or AOC 6. When the groundwater is investigated as a Unit this data will be used for consideration of additional monitor well placement.

No additional work will be performed at SWMUs 5 and 6. The remainder of the Units, SWMU 15 and AOCs 4 and 6 will require the installation of additional borings. The criterion used for installing additional borings was a soil concentration in the surface soil above the appropriate Region 9 PRG for



the industrial soil pathway. Compounds that were detected above the Region 9 for Migration to Groundwater DAF1 pathway will be evaluated again during the design of the FAR groundwater investigation.

*Summaries of All EPA Approved Changes*

None

*Summaries of All Contacts*

None

*Summaries of Problems Encountered*

None

*Actions to Rectify Problems*

None

*Changes in key project entities*

A change in laboratories will be finalized before the onset of additional field sampling. All field samples will now be analyzed through Accutest Laboratories, Inc. in order to advance the initial completeness of data packages and the overall result turnaround time.

*Projected Work for the Next Reporting Period*

SAPs for the investigation at Process Area 1, and SWMUs 3 and 4 will be finalized for submittal to EPA. SAPs for the following units will be developed during the next reporting period for subsequent submittal to EPA during the third quarter of 2006:

SWMU 12 – API Separator

AOC 1 and SWMU 16 – Surface Drainage Ditches and Oily water Sewer System

SWMU 17 – Asphalt Landfill

SWMU 8 and 9 – East Landfill and Industrial Landfill

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

Process Area 1

SWMU 3 & 4

SWMU 12 – API Separator

AOC 1 and SWMU 16 – Surface Drainage Ditches and Oily water Sewer System

SWMU 17 – Asphalt Landfill

Additional field investigation will be conducted at SWMU 15 and AOCs 4 and 6 as summarized above.

A project status meeting will be held at the offices of EPA Region 7 during the month of May. This meeting will address the overall approach to unit assessment as well as unit specific definition and community involvement.



*Other Relevant Documentation*

An internal technical memorandum has been developed to summarize the evaluation of data obtained during the initial investigation at SWMU 15, SWMUs 5 and 6, and AOCs 4 and 6.

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

A handwritten signature in black ink, appearing to read "Paul Hunter".

Paul V. Hunter

Attorney in Fact

Enclosures

cc: Mark deLorimier, Shaw Environmental, Inc.  
David Way, Shaw Environmental, Inc.

**Table 1. RCRA Facility Investigation Progress Summary, Former Augusta Refinery, Augusta, Kansas**  
**Quarterly Status Report: 1st Quarter 2006**

AOC / SWMU ID	Investigation Dates	Results			Actions Planned
		Surface Soil	Subsurface Soil	Groundwater	
SWMU 5	11/14/05 - 1/06/06	• Five samples were above Region 9 direct soil exposure for arsenic.	• Organic concentrations were below appropriate screening levels.	• Total and dissolved arsenic concentrations were above Region 9 PRG for tap water value.	• A comparison of arsenic data to BG levels will be performed after one year's worth of BG quality data is collected.
		• Statistical evaluation show that arsenic data distribution for SWMU 5 and BG are the same.	• Qualitative evaluation of lead and mercury concentrations were within the same range of values reported for the BG dataset.	• Naphthalene concentration in SWMU5-09 exceeded Region 9 PRG.	
SWMU 6	11/14/05 - 1/06/06	• Benzene concentration for SWMU0-03, 0-1 foot was just above the Region 9 PRG DAF1 value.	• Benzene result for SWMU 6-03, 6 to 8 feet was above Region 9 PRG DAF1 value and DAF20 value.	• Total and dissolved arsenic concentrations were above Region 9 PRG.	• Benzene will be retained as a COPC during investigation of site wide groundwater.
		• Five samples were above Region 9 direct soil exposure for arsenic.	• Qualitative evaluation of the lead and mercury concentrations shows results in the same range of values for the BG dataset.	• Total arsenic concentrations for SWMU6-01, -06, and -10 and dissolved arsenic for SWMU6-06 and -10 were above the MCL.	• A comparison of groundwater arsenic data to BG levels will be performed after one year's worth of BG quality data is collected.
		• Statistical evaluation show that arsenic data distribution for SWMU 6 and BG are the same.		• All three monitor wells had detectable concentrations of naphthalene and phenanthrene.	• Groundwater data will be used for consideration of additional well placement when the groundwater is investigated site wide.
SWMU 15	11/14/05 - 1/06/06	• Four boring locations had organic lead concentration above Region 9 PRG direct soil exposure value.	• No organic results were above Region 9 DAF20 values.	• Total and dissolved arsenic concentrations were above Region 9 PRG. Also above the MCL at 2 wells.	• Additional sampling for organic data in surface soil.
		• One boring at 2 to 4 feet had organic lead above the Region 9 PRG direct soil exposure value.	• Qualitative evaluation of detected concentrations of metals show results were generally in the same range of values reported for the BG dataset.		• Additional statistical evaluation of lead following collection of additional surface samples.
		• Lead concentration at one location was above the Region 9 PRG direct soil exposure value.			• Additional statistical evaluation of arsenic following collection of additional surface samples.

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AOC / SWMU ID	Investigation Dates	Results			Actions Planned
		Surface Soil	Subsurface Soil	Groundwater	
AOC 4		<ul style="list-style-type: none"> <li>• Arsenic concentration at seven locations were above the 95% UCL of the mean BG concentration.</li> </ul>			<ul style="list-style-type: none"> <li>• A comparison of groundwater arsenic data to BG levels will be performed after one year's worth of BG quality data is collected.</li> </ul>
		<ul style="list-style-type: none"> <li>• 6 of 10 benzene concentrations were above Region 9 PRG DAF1 value.</li> </ul>	<ul style="list-style-type: none"> <li>• All benzene results were above both Region 9 PRG DAF1 and DAF20 values.</li> </ul>	<ul style="list-style-type: none"> <li>• Total and dissolved arsenic concentrations were above Region 9 PRG. Also above the MCL.</li> </ul>	<ul style="list-style-type: none"> <li>• Benzene will be retained as a COPC during investigation of site wide groundwater.</li> </ul>
		<ul style="list-style-type: none"> <li>• 5 samples were above the 95% UCL of the mean BG concentration for arsenic.</li> </ul>	<ul style="list-style-type: none"> <li>• Qualitative evaluation of mercury and lead concentrations shows they were generally in the same range of values for BG dataset.</li> </ul>	<ul style="list-style-type: none"> <li>• Detectable organics in three monitor wells with some concentrations above Region 9 PRG.</li> </ul>	<ul style="list-style-type: none"> <li>• Additional sampling for organic data in surface soil.</li> </ul>
					<ul style="list-style-type: none"> <li>• Additional statistical evaluation of arsenic following collection of additional surface samples.</li> </ul>
					<ul style="list-style-type: none"> <li>• A comparison of groundwater arsenic data to BG levels will be performed after one year's worth of BG quality data is collected.</li> </ul>
					<ul style="list-style-type: none"> <li>• Groundwater data will be used for consideration of additional well placement when the groundwater is investigated site wide.</li> </ul>
AOC 6	11/14/05 - 1/06/06	<ul style="list-style-type: none"> <li>• 9 of 10 benzene concentrations were above Region 9 PRG DAF1 value.</li> </ul>	<ul style="list-style-type: none"> <li>• Methylene chloride results in 2 samples were above Region 9 PRG DAF20 value.</li> </ul>	<ul style="list-style-type: none"> <li>• Total and dissolved arsenic concentrations were above Region 9 PRG. Also above the MCL.</li> </ul>	<ul style="list-style-type: none"> <li>• Benzene and methylene chloride will be retained as a COPCs during investigation of site wide groundwater.</li> </ul>
		<ul style="list-style-type: none"> <li>• 8 of 10 samples were above the 95% UCL of the mean BG concentration for arsenic.</li> </ul>	<ul style="list-style-type: none"> <li>• All benzene results were above both Region 9 PRG DAF1 And DAF20 values.</li> <li>Qualitative evaluation of mercury and lead concentrations shows they were generally in the same range of values reported for BG dataset.</li> </ul>	<ul style="list-style-type: none"> <li>• Benzene and naphthalene concentrations were above Region 9 PRG and MCL.</li> </ul>	<ul style="list-style-type: none"> <li>• Additional sampling for organic data in surface soil.</li> <li>• Additional statistical evaluation of arsenic following collection of additional surface samples.</li> </ul>

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		Surface Soil	Subsurface Soil	Groundwater	
					<ul style="list-style-type: none"><li>• A comparison of groundwater arsenic data to BG levels will be performed after one year's worth of BG quality data is collected.</li><li>• Groundwater data will be used for consideration of additional well placement when the groundwater is investigated site wide.</li></ul>