



111 Corning Road, Suite 116
Cary, North Carolina 27518
United States
T +1.919.859.5001
www.jacobs.com



May 31, 2019

Delivered via FedEx Overnight Delivery

Ms. Bobbi Coleman
South Carolina Department of Health and Environmental Control
Assessment Section, UST Management Division
Bureau of Land and Waste Management
2600 Bull Street
Columbia, South Carolina 29201



**Subject: Monitoring, Reporting, and Product Recovery Plan (April 1, 2019 through March 31, 2020)
Plantation Pipe Line Company
Lewis Drive Remediation Site
Belton, South Carolina
Site ID #18693, "Kinder Morgan Belton Pipeline Release"**

Dear Ms. Coleman,

On behalf of Plantation Pipe Line Company (Plantation), CH2M HILL Engineers, Inc. (Jacobs), has prepared this correspondence to summarize monitoring, reporting, and product recovery activities to be conducted at the Lewis Drive site between April 1, 2019 and March 31, 2020. This letter was discussed at our meeting held on May 17, 2019 between Plantation and the South Carolina Department of Health and Environmental Control (DHEC). This plan addresses comments contained in a letter from DHEC to Plantation dated May 3, 2019. A full response to the May 3 letter is forthcoming. This plan supersedes any monitoring and reporting requirements laid out in previous correspondence, any version of the Corrective Action Plan, and the Interim Free Product Recovery Plan, Revision 4. This plan will expire on March 31, 2020 with a replacement plan to be discussed and agreed upon by Plantation and DHEC for the next year.

Groundwater and surface water samples will be collected in accordance with the most recent Site Quality Assurance Project Plan (QAPP) and Table 1, which is attached. A brief quarterly data submittal will be submitted summarizing the previous quarterly data with key figures and tables. An Annual Report will be produced summarizing the period from April 1, 2019 and March 31, 2020.

If you have any further questions or concerns, please call me at (919) 859-5789, or Mr. Jerry Aycock/Plantation at (770) 751-4165.

Regards,

William M. Waldron, P.E.
Program Manager

Ms. Bobbi Coleman

May 31, 2019

Page 2 of 2

JACOBS

Copies to: Jerry Aycock, Plantation (Digital, Jerry_Aycock@kindermorgan.com)
Mary Clair Lyons, Esq., Plantation (Digital, Mary_Lyons@kindermorgan.com)
Richard Morton, Esq., Womble Bond Dickinson, LLP (Digital, ric.morton@wbd-us.com)
File

Attachments:

Table 1 – Monitoring, Reporting, and Product Recovery Plan (April 1, 2019 to March 31, 2020)

Table 1. Monitoring, Reporting, and Product Recovery Plan (April 1, 2019 to March 31, 2020)

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Frequency ^a :	Sampling and Gauging			Biodegradation Evaluation	Product Gauging and Recovery	
	Monthly	Mid-Quarterly	Quarterly	Annually	Quarterly	Semiannually
Analytes:	BTEX, MTBE, Naphthalene (and 1,2-DCA for Groundwater Samples Only) ^b			Nitrate ^c , Sulfate ^c , Ferrous Iron ^{c,d} , Carbon Dioxide ^c , Methane ^c , Alkalinity ^c , and DO ^{c,d}	Not Analyzed	Not Analyzed
Well ID						
Brown's Creek Protection Zone						
MW-12			Y	Y		
MW-12B			Y			
MW-15			Y	Y		
MW-15B		Y	Y			
MW-24			Y			
MW-24B			Y			
MW-25			Y	Y		
MW-25B			Y			
MW-28			Y	Y		
MW-34		Y	Y			
MW-35			Y	Y		
MW-37		Y	Y			
MW-38		Y	Y			
MW-39		Y	Y			
MW-40		Y	Y	Y		
MW-41		Y	Y			
MW-42			Y	Y		
MW-43			Y			
MW-43B			Y			

Table 1. Monitoring, Reporting, and Product Recovery Plan (April 1, 2019 to March 31, 2020)

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Frequency ^a :	Sampling and Gauging			Biodegradation Evaluation	Product Gauging and Recovery	
	Monthly	Mid-Quarterly	Quarterly	Annually	Quarterly	Semiannually
Analytes:	BTEX, MTBE, Naphthalene (and 1,2-DCA for Groundwater Samples Only) ^b			Nitrate ^c , Sulfate ^c , Ferrous Iron ^{c,d} , Carbon Dioxide ^c , Methane ^c , Alkalinity ^c , and DO ^{c,d}	Not Analyzed	Not Analyzed
Well ID						
MW-49			Y			
Brown's Creek Subtotal:		7	20	7	0	0
Cupboard Creek Protection Zone						
MW-19			Y	Y		
MW-20		Y	Y	Y		
MW-23		Y	Y			
MW-23B			Y			
MW-26		Y	Y			
MW-26B			Y			
MW-29			Y			
MW-46		Y	Y			
MW-56		Y				
MW-57		Y				
Cupboard Creek Subtotal:		6	8	2	0	0
Hayfield Zone						
MW-02			Y	Y		
MW-02B			Y			
MW-03			Y	Y		
MW-04			Y	Y		
MW-05			Y			

Table 1. Monitoring, Reporting, and Product Recovery Plan (April 1, 2019 to March 31, 2020)

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

	Sampling and Gauging			Biodegradation Evaluation	Product Gauging and Recovery	
Frequency ^a :	Monthly	Mid-Quarterly	Quarterly	Annually	Quarterly	Semiannually
Analytes:	BTEX, MTBE, Naphthalene (and 1,2-DCA for Groundwater Samples Only) ^b			Nitrate ^c , Sulfate ^c , Ferrous Iron ^{c,d} , Carbon Dioxide ^c , Methane ^c , Alkalinity ^c , and DO ^{c,d}	Not Analyzed	Not Analyzed
Well ID						
MW-06			Y			
MW-06B			Y			
MW-07		Y	Y			
MW-08			Y	Y		
MW-09			Y	Y		
MW-09B			Y			
MW-10			Y	Y		
MW-13			Y			
MW-13B			Y			
MW-14			Y			
MW-14B			Y			
MW-16			Y	Y		
MW-17			Y			
MW-17B		Y	Y			
MW-18			Y	Y		
MW-21			Y			
MW-30			Y			
MW-31			Y			
MW-31B						
MW-32			Y	Y		

Table 1. Monitoring, Reporting, and Product Recovery Plan (April 1, 2019 to March 31, 2020)

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

	Sampling and Gauging			Biodegradation Evaluation	Product Gauging and Recovery	
Frequency ^a :	Monthly	Mid-Quarterly	Quarterly	Annually	Quarterly	Semiannually
Analytes:	BTEX, MTBE, Naphthalene (and 1,2-DCA for Groundwater Samples Only) ^b			Nitrate ^c , Sulfate ^c , Ferrous Iron ^{c,d} , Carbon Dioxide ^c , Methane ^c , Alkalinity ^c , and DO ^{c,d}	Not Analyzed	Not Analyzed
Well ID						
MW-33						
MW-33T			Y			
MW-36		Y	Y			
MW-36B			Y			
MW-45			Y			
MW-45B			Y			
MW-47			Y			
MW-48B			Y			
MW-50B			Y			
MW-51		Y				
MW-52		Y				
MW-53		Y				
MW-54		Y				
MW-55		Y				
Hayfield Subtotal:		8	32	9	0	0
Shallow Bedrock Zone						
MW-01			Y	Y		
MW-01B			Y			
MW-11			Y	Y		
MW-22			Y	Y		

Table 1. Monitoring, Reporting, and Product Recovery Plan (April 1, 2019 to March 31, 2020)

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Frequency ^a :	Sampling and Gauging			Biodegradation Evaluation	Product Gauging and Recovery	
	Monthly	Mid-Quarterly	Quarterly	Annually	Quarterly	Semiannually
Analytes:	BTEX, MTBE, Naphthalene (and 1,2-DCA for Groundwater Samples Only) ^b			Nitrate ^c , Sulfate ^c , Ferrous Iron ^{c,d} , Carbon Dioxide ^c , Methane ^c , Alkalinity ^c , and DO ^{c,d}	Not Analyzed	Not Analyzed
Well ID						
MW-27			Y			
MW-27B			Y			
MW-44			Y			
MW-44B			Y			
Shallow Bedrock Subtotal:		0	8	3	0	0
Surface Water						
SW-01 ^e	Y	Y	Y			
SW-02 ^e	Y	Y	Y			
SW-03 ^e	Y	Y	Y			
SW-04	Y	Y	Y			
SW-05 ^e	Y	Y	Y			
SW-07	Y	Y	Y			
SW-08 ^e	Y	Y	Y			
SW-09	Y	Y	Y			
SW-10 ^e	Y	Y	Y			
SW-11	Y	Y	Y			
SW-12	Y	Y	Y			
SW-13	Y	Y	Y			
SW-14	Y	Y	Y			
Surface Water Subtotal:	13	13	13	0	0	0

Table 1. Monitoring, Reporting, and Product Recovery Plan (April 1, 2019 to March 31, 2020)

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Frequency ^a :	Sampling and Gauging			Biodegradation Evaluation	Product Gauging and Recovery	
	Monthly	Mid-Quarterly	Quarterly	Annually	Quarterly	Semiannually
Analytes:	BTEX, MTBE, Naphthalene (and 1,2-DCA for Groundwater Samples Only) ^b			Nitrate ^c , Sulfate ^c , Ferrous Iron ^{c,d} , Carbon Dioxide ^c , Methane ^c , Alkalinity ^c , and DO ^{c,d}	Not Analyzed	Not Analyzed
Well ID						
Product Recovery Feature						
RW-01					Y	Y
RW-02					Empty	Empty
RW-03					Empty	Empty
RW-04					Empty	Empty
RW-05					Empty	Empty
RW-06					Y	Y
RW-07					Empty	Empty
RW-08					Y	Y
RW-09					Y	Y
RW-10					Empty	Empty
RW-11					Y	Y
RW-12					Y	Y
RW-14					Y	Y
RW-15					Empty	Empty
RT-1					Empty	Empty
RS-01					Empty	Empty
RS-02					Empty	Empty
RS-04						Y
RS-05					Empty	Empty

Table 1. Monitoring, Reporting, and Product Recovery Plan (April 1, 2019 to March 31, 2020)

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

Frequency ^a :	Sampling and Gauging			Biodegradation Evaluation	Product Gauging and Recovery	
	Monthly	Mid-Quarterly	Quarterly	Annually	Quarterly	Semiannually
Analytes:	BTEX, MTBE, Naphthalene (and 1,2-DCA for Groundwater Samples Only) ^b			Nitrate ^c , Sulfate ^c , Ferrous Iron ^{c,d} , Carbon Dioxide ^c , Methane ^c , Alkalinity ^c , and DO ^{c,d}	Not Analyzed	Not Analyzed
Well ID						
RS-06						Y
RS-07						Y
RS-08						Empty
RS-09						Y
RS-10						Empty
RS-11						Y
RS-12						Y
RS-13						Y
RS-14					Empty	Empty
RS-15						Y
RS-16						Y
RS-17						Empty
RS-18						Y
RS-20						Y
Product Recovery Subtotal:					19	33
Grand Totals:	13	34	81	21	19	33

Table 1. Monitoring, Reporting, and Product Recovery Plan (April 1, 2019 to March 31, 2020)

Plantation Pipe Line Company

Lewis Drive Remediation Site, Belton, South Carolina

Site ID #18693 "Kinder Morgan Belton Pipeline Release"

	Sampling and Gauging			Biodegradation Evaluation	Product Gauging and Recovery	
Frequency ^a :	Monthly	Mid-Quarterly	Quarterly	Annually	Quarterly	Semiannually
Analytes:	BTEX, MTBE, Naphthalene (and 1,2-DCA for Groundwater Samples Only) ^b			Nitrate ^c , Sulfate ^c , Ferrous Iron ^{c,d} , Carbon Dioxide ^c , Methane ^c , Alkalinity ^c , and DO ^{c,d}	Not Analyzed	Not Analyzed
Well ID						

Notes:

^a Frequency: Any alterations to the monitoring frequency after the first year will be proposed to the South Carolina Department of Health and Environmental Control prior to March 31, 2020.

^b Sampling and Gauging: BTEX, MTBE, naphthalene, and 1,2-DCA by EPA Method 8260B.

^c Biodegradation Evaluation: Nitrate by EPA Method SM2320B, sulfate by EPA Method D516-9002, ferrous iron by EPA Method SM3500 FE D, carbon dioxide and methane by EPA Method RSK-175, and alkalinity by Method SM2320B.

^d Parameter collected in the field.

^e Surface water location to be gauged at staff gauge.

1,2-DCA = 1,2-dichloroethane

BTEX = benzene, toluene, ethylbenzene, and xylenes

DO = dissolved oxygen

Empty = product recovery features that contain a product recovery canister or sock

EPA = U.S. Environmental Protection Agency

MTBE = methyl tertiary butyl ether

Y = yes