



**Maryland**  
Department of  
the Environment

Larry Hogan, Governor  
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary  
Horacio Tablada, Deputy Secretary

March 29, 2019

Ms. Jamila S. Chillemi  
Team Lead - Mid-Atlantic Project Execution  
ExxonMobil Environmental Services Company  
1900 East Linden Avenue, Building 28A  
Linden, New Jersey 07036

**RE: APPROVAL OF GROUNDWATER MONITORING REDUCTION and  
WELL ABANDONMENT REQUEST**

Case No. 2006-0303-BA  
Former Exxon R/S No. 2-8077  
14258 Jarrettsville Pike, Phoenix  
Baltimore County, Maryland

Dear Ms. Chillemi:

The Maryland Department of the Environment's (MDE) Oil Control Program (OCP) recently completed a review of the *Groundwater Monitoring Reduction and Well Abandonment Request*, dated Jan. 22, 2019. The request proposes a reduction in groundwater monitoring (i.e., groundwater sampling and/or gauging), select monitoring well abandonment, and the ceasing of monitoring at certain monitoring wells with retention for post-remedial monitoring (i.e., inactive status). The proposal is based on the decline of groundwater concentrations, the absence of liquid phase hydrocarbons since 2008, and the cleanup activities conducted since the release at the former gasoline station in 2006.

ExxonMobil's proposal requests the following:

- Abandonment of 86 monitoring wells based on groundwater concentrations that have remained below MDE groundwater standards or state action levels for at least 4 years and are not needed for gauging associated with the development of potentiometric surface maps.
- Conversion of 32 monitoring wells to gauging only status and discontinuation of groundwater sampling based on concentrations remaining below groundwater standards or being non-detect for a minimum of 6 years. Gauging will continue at these monitoring wells for potentiometric mapping purposes.

- Reduction in sampling frequency of 72 monitoring wells based on decreasing dissolved concentration trends over 13 years of monitoring. All current monthly monitoring well sampling will be eliminated with the exception of MW-188D. The packer in the well was approved for removal and discrete zone groundwater data will be collected, as approved.
- Elimination of discrete zone multi-level sampling from 10 monitoring wells based on the absence of significant differences in the concentrations among the discrete zone sampling data. A groundwater sample is to be collected in lieu of discrete zone samples.

The MDE approves the proposed schedule of monitoring well modifications and proposed abandonment of select wells with the modifications and exceptions provided in the enclosed table. The approved monitoring schedule is based on a review of the monitoring well network construction details, historical and current dissolved phase hydrocarbon concentrations, locations of the monitoring wells relative to remediation wells, and the retention of a comprehensive monitoring well network for continued monitoring during the remainder of cleanup activities and for post-remedial monitoring, when approved. A summary of the proposed and approved monitoring activities is provided below.

**Summary of Proposed/Approved Monitoring Activities and Well Abandonments**

	<b>Current Totals</b>	<b>EM Proposed Net Change</b>	<b>EM Proposed Totals</b>	<b>MDE Approved Totals</b>
Abandoned MWs	35	+86	121	85
MWs not sampled, not gauged, not regularly sampled (Inactive)	2	+12	14	41
MWs Sampled (including recovery wells)	228	-114	114	130
- Monthly Sampling	57	-56	1	1
- Quarterly Sampling	127	-51	77	99
- Semi-Annual Sampling	44	-8	36	30
Gauge Only (no sampling)	44	+16	60	53
<b>Totals</b>	<b>309</b>	<b>0</b>	<b>309</b>	<b>309</b>

The MDE requires that, of the 274 wells currently remaining, 183 wells are to be retained for continued sampling and/or gauging only at specified frequencies, 41 wells are to be retained in an inactive status (no specified sampling/gauging schedule) for potential future monitoring, and 50 monitoring wells are approved for proper abandonment. For monitoring wells that are retained for gauging only, the Department may require groundwater sampling in the future, as warranted and required for long-term post-operation monitoring.

The request to collect a groundwater sample in lieu of discrete zone samples from select monitoring wells as outlined in the proposal is conditionally approved. The Department notes that the proposal did not include a methodology for collecting representative groundwater samples. ExxonMobil must submit a work plan detailing the preferred sampling methodology to the OCP for review and approval prior to implementation. These wells must continue to be sampled via discrete zone samples and by the frequency outlined in the enclosed table until an alternative sampling plan is approved by MDE.

The monitoring wells approved for abandonment must be properly abandoned by a Maryland-licensed well driller in accordance with all applicable requirements of Code of Maryland Regulations (COMAR) 26.04.04.34-36. Provide copies of the required well abandonment reports to both the OCP (Attn: Ms. Ellen Jackson) and the Baltimore County Department of Environmental Protection and Sustainability (Attn: Mr. Kevin Koepenick). Notify the OCP at least 5 working days prior to performing well abandonment activities so OCP staff has an opportunity to observe the work activities.

If you have any questions, please contact Ms. Ellen Jackson at 410-537-3482 or [ellen.jackson@maryland.gov](mailto:ellen.jackson@maryland.gov).

Sincerely,



Andrew B. Miller, Chief  
Remediation and State-Lead Division  
Oil Control Program

Enclosure: Current, EM Proposed, and MDE Approved Monitoring Activities

cc: Joseph P. Perez, Esquire, ExxonMobil Corporation  
Carlos Bollar, Esquire, Archer & Greiner, P.C.  
Mr. Mark Schaaf, Kleinfelder East, Inc.  
Mr. Kevin Koepenick, Manager, Groundwater Management Section, Baltimore County DEPS  
Ms. Ellen Jackson, Northern Region Supervisor, Remediation Division, Oil Control Program  
Mr. Christopher H. Ralston, Administrator, Oil Control Program  
Stephanie Cobb Williams, Esquire, MDE Office of the Attorney General  
Ms. Kaley Laleker, Director, Land and Materials Administration

Current, EM Proposed and MDE Approved Monitoring Activities  
(sorted by well ID)

Well ID	Current Monitoring Activity	EM Proposed Monitoring Activity	MDE Approved Monitoring Activity	MDE Response / Comment
MW- 1	Quarterly	Quarterly	Quarterly	Approved
MW- 1A [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 2	Quarterly	Semi-Annual	Semi-Annual	Approved
MW- 2A [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 3 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 3P	Gauging only	Abandon	Abandon	Approved
MW- 4 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 4A	Quarterly	Semi-Annual	Semi-Annual	Approved
MW- 5	Quarterly	Semi-Annual	Semi-Annual	Approved
MW- 6 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 6P	Gauging only	Abandon	Abandon	Approved
MW- 7 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 8	Quarterly	Q Gauging only	Gauge Only	Approved
MW- 9	Quarterly	Quarterly	Quarterly	Approved
MW- 10	Already abandoned			
MW- 11	Already abandoned			
MW- 12	Quarterly	Q Gauging only	Gauge Only	Approved
MW- 13 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 13P	Gauging only	Gauging only	Gauge Only	Approved
MW- 14	Quarterly	Quarterly	Quarterly	Approved
MW- 15	Semi-Annual	Q Gauging only	Gauge Only	Approved
MW- 16 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 16R [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 17	Quarterly	Quarterly	Quarterly	Approved
MW- 18	Already abandoned			
MW- 19 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 20	Gauging only	Gauging only	Gauge Only	Approved
MW- 21 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 22 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 23 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 24	Quarterly	Abandon	Semi-Annual	Retain for post remediation monitoring
MW- 25	Quarterly	Quarterly	Quarterly	Approved
MW- 26	Quarterly	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 27 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 27B	Quarterly	Semi-Annual	Quarterly	Post remediation monitoring
MW- 27P	Gauging only	Abandon	Abandon	Approved
MW- 27R [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 28	Quarterly	Q Gauging only	Gauge Only	Approved
MW- 29	Quarterly	Semi-Annual	Semi-Annual	Approved
MW- 30	Quarterly	Semi-Annual	Semi-Annual	Approved
MW- 30P	Gauging only	Gauging only	Gauge Only	Approved
MW- 31	Gauging only	Abandon	Abandon	Approved
MW- 32	Quarterly	Semi-Annual	Quarterly	Recent RW conversion; quarterly sample for minimum of 12 months
MW- 33	Already abandoned			
MW- 33P	Gauging only	Abandon	Abandon	Approved
MW- 34	Already abandoned			
MW- 34P	Gauging only	Gauging only	Gauge Only	Approved
MW- 35	Already abandoned			
MW- 36	Quarterly	Semi-Annual	Semi-Annual	Approved
MW- 36C (HS-S)	Monthly/ Composite	Quarterly Single interval	Quarterly	Approved
MW- 36C (HS-D)				
MW- 36P	Quarterly	Quarterly	Quarterly	Approved
MW- 36R	Monthly	Quarterly	Quarterly	Approved
MW- 37 [R]	Monthly?	Quarterly	Quarterly	Approved
MW- 37P	Quarterly	Quarterly	Quarterly	Approved
MW- 38 [R]	Monthly	Quarterly	Quarterly	Approved
MW- 38B	Monthly	Semi-Annual	Quarterly	Post remediation monitoring
MW- 38C [R]	Monthly	Quarterly	Quarterly	Approved
MW- 38P	Quarterly	Quarterly	Quarterly	Approved
MW- 39	Already abandoned			

Current, EM Proposed and MDE Approved Monitoring Activities  
(sorted by well ID)

Well ID	Current Monitoring Activity	EM Proposed Monitoring Activity	MDE Approved Monitoring Activity	MDE Response / Comment
MW- 40	Quarterly	Semi-annual	Quarterly	Post remediation monitoring
MW- 41A	Gauging only	Gauging only	Gauge Only	Approved
MW- 41B	Semi-Annual	Stop sampling	Stop Sampling / Retain	Approved.
MW- 41C (75-80)	Semi-Annual	Stop sampling	Stop Sampling / Retain	Approved.
MW- 41C (95-97)				
MW- 41C (120-130)				
MW- 41C (190-195)				
MW- 42A	Gauging only	Gauging only	Gauge Only	Approved
MW- 42B	Semi-Annual	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 42C (123)	Semi-Annual	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 42C (192)				
MW- 42C (240)				
MW- 42C (327)				
MW- 43A	Quarterly	Semi-annual	Semi-Annual	Approved
MW- 43B	Monthly	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 44	Gauging only	Gauging only	Gauge Only	Approved
MW- 45 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 45P	Quarterly	Quarterly	Quarterly	Approved
MW- 45R [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 46	Gauging only	Gauging only	Gauge Only	Approved
MW- 47A	Quarterly	Q Gauging only	Gauge Only	Approved
MW- 47B	Quarterly	Abandon	Abandon	Approved
MW- 47BB	Quarterly	Abandon	Semi-Annual	Retain for post remediation monitoring
MW- 47C (HS-S)	Monthly/ Composite	Stop sampling	Semi-Annual	Post remediation monitoring
MW- 47C (HS-D)				
MW- 48A	Semi-Annual	Q Gauging only	Gauge Only	Approved
MW- 48B	Semi-Annual	Stop sampling	Stop Sampling / Retain	Approved
MW- 48D (HS-S)	Monthly/ Composite	Stop sampling	Semi-Annual	Post remediation monitoring
MW- 48D (HS-D)				
MW- 49	Quarterly	Semi-annual	Semi-Annual	Approved
MW- 50	Gauging only	Gauging only	Gauge Only	Approved
MW- 50B	Semi-Annual	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 50C	Semi-Annual	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 51	Already abandoned	Already abandoned		
MW- 52	Quarterly	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 53A	Gauging only	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 53B	Quarterly	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 53C	Semi-Annual FLUTE	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 53C (215-220)				
MW- 53C (225-235)				
MW- 54	Monthly	Quarterly	Quarterly	Approved
MW- 54B [R]	Monthly	Quarterly	Quarterly	Approved
MW- 54C (HS-S)	Monthly/ Composite	Quarterly Single interval	Quarterly	Approved
MW- 54C (HS-D)				Approved
MW- 55	Already abandoned			
MW- 56A	Gauging only	Gauging only	Gauge Only	Approved
MW- 56B	Quarterly	Stop sampling	Stop Sampling / Retain	Approved
MW- 56C (100-110)	Quarterly FLUTE	Stop sampling	Semi-Annual	Post remediation monitoring
MW- 56C (310-315)				
MW- 56C (320-325)				
MW- 57	Quarterly	Semi-Annual	Quarterly	Recent RW conversion; quarterly sample for minimum of 12 months
MW- 57P	Quarterly	Quarterly	Quarterly	Approved
MW- 58	Quarterly	Semi-Annual	Quarterly	Post remediation monitoring
MW- 58P	Quarterly	Semi-Annual	Semi-Annual	Approved
MW- 58R	Quarterly	Semi-Annual	Quarterly	Recent RW conversion; quarterly sample for minimum of 12 months
MW- 59A	Quarterly	Semi-Annual	Semi-Annual	Approved
MW- 59B [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 59D	Quarterly	Semi-Annual	Semi-Annual	Approved

Current, EM Proposed and MDE Approved Monitoring Activities  
(sorted by well ID)

Well ID	Current Monitoring Activity	EM Proposed Monitoring Activity	MDE Approved Monitoring Activity	MDE Response / Comment
MW- 60	Quarterly	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 61A	Semi-Annual	Q Gauging only	Gauge Only	Approved
MW- 61B	Quarterly	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 62A	Quarterly	Abandon	Abandon	Approved
MW- 62B	Semi-Annual	Abandon	Abandon	Approved
MW- 63	Gauging only	Gauging only	Gauge Only	Approved
MW- 64	Already abandoned			
MW- 65	Gauging only	Abandon	Abandon	Approved
MW- 66	Gauging only	Gauging only	Gauge Only	Approved
MW- 67	Gauging only	Gauging only	Gauge Only	Approved
MW- 68	Gauging only	Gauging only	Gauge Only	Approved
MW- 69	Gauging only	Gauging only	Gauge Only	Approved
MW- 70	Gauging only	Abandon	Abandon	Approved
MW- 71	Semi-Annual	Q Gauging only	Gauge Only	Approved
MW- 72	Quarterly	Quarterly	Quarterly	Approved
MW- 73	Monthly	Q Gauging only	Gauge Only	Approved
MW- 73C AP/(HS-S)	Monthly/ Composite	Quarterly Single interval	Quarterly	Approved
MW- 73C BP/(HS-D)				
MW- 74 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 75 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 76	Quarterly	Semi-Annual	Quarterly	Recent RW conversion; quarterly sample for minimum of 12 months
MW- 76P	Gauging only	Gauging only	Gauge Only	Approved
MW- 77A	Quarterly	Semi-Annual	Quarterly	Recent RW conversion; quarterly sample for minimum of 12 months
MW- 77B	Quarterly	Semi-Annual	Quarterly	Recent RW conversion; quarterly sample for minimum of 12 months
MW- 77R	Quarterly	Semi-Annual	Quarterly	Recent RW conversion; quarterly sample for minimum of 12 months
MW- 78A	Semi-Annual	Q Gauging only	Gauge Only	Approved
MW- 78B	Quarterly	Abandon	Abandon	Approved
MW- 78C	Quarterly/ Interval	Abandon	Semi-Annual	Retain for post remediation monitoring
MW- 78C (69)				
MW- 78C (95)				
MW- 78C (134)				
MW- 78C (157)				
MW- 78C (192)				
MW- 78C (227)				
MW- 78C (290)				
MW- 78R	Quarterly	Abandon	Abandon	Approved
MW- 79	Gauging only	Abandon	Abandon	Approved
MW- 80A	Quarterly	Quarterly	Quarterly	Approved
MW- 80B	Quarterly	Quarterly	Quarterly	Approved
MW- 81	Quarterly	Q Gauging only	Gauge Only	Approved
MW- 82	Quarterly	Semi-Annual	Quarterly	Recent RW conversion; quarterly sample for minimum of 12 months
MW- 82B [R]	Monthly?	Monthly?	Quarterly	Approved
MW- 82D (HS-S)	Monthly Composite	Quarterly Single-Interval	Quarterly	Approved
MW- 82D (HS-M)				
MW- 82D (HS-D)				
MW- 82R [R]	Monthly	Quarterly	Quarterly	Approved
MW- 83	Quarterly	Q Gauging only	Gauge Only	Approved
MW- 83R	Semi-Annual	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 84	Quarterly	Semi-Annual	Quarterly	Recent RW conversion; quarterly sample for minimum of 12 months
MW- 84P	Quarterly	Quarterly	Quarterly	Approved
MW- 85	Quarterly	Semi-Annual	Quarterly	Recent RW conversion; quarterly sample for minimum of 12 months
MW- 85P	Gauging only	Gauging only	Quarterly	Approved
MW- 86	Quarterly	Semi-Annual	Semi-Annual	Approved
MW- 86P	Gauging only	Abandon	Abandon	Approved

Current, EM Proposed and MDE Approved Monitoring Activities  
(sorted by well ID)

Well ID	Current Monitoring Activity	EM Proposed Monitoring Activity	MDE Approved Monitoring Activity	MDE Response / Comment
<b>MW- 87</b>	<b>Monthly</b>	<b>Semi-Annual</b>	<b>Quarterly</b>	<b>Recent RW conversion; quarterly sample for minimum of 12 months</b>
MW- 87P	Gauging only	Gauging only	Gauge Only	Approved
MW- 88	Quarterly	Semi-Annual	Semi-Annual	Approved
MW- 88P	Gauging only	Abandon	Abandon	Approved
MW- 89 [R]	Monthly	Quarterly	Quarterly	Approved
<b>MW- 90</b>	<b>Quarterly</b>	<b>Q Gauging only</b>	<b>Semi-Annual</b>	<b>Post remediation monitoring</b>
MW- 91	Monthly	Quarterly	Quarterly	Approved
MW- 91C [R]	Monthly	Quarterly	Quarterly	Approved
MW- 91D	Monthly	Semi-Annual	Semi-Annual	Approved
MW- 92	Semi-Annual	Abandon	Abandon	Approved
MW- 92A	Quarterly	Q Gauging only	Gauge Only	Approved
MW- 92C (73)	Quarterly/ Interval	Abandon	Abandon	Approved
MW- 92C (103-105)				
MW- 92C (203)				
MW- 92C (210-215)				
MW- 92C (315)				
MW- 93	Semi-Annual	Abandon	Abandon	Approved
MW- 93B	Semi-Annual	Abandon	Abandon	Approved
MW- 93C	Quarterly/ Interval	Abandon	Abandon	Approved
MW- 93C (92)				
MW- 93C (143)				
MW- 93C (171)				
MW- 93C (185)				
MW- 93C (237)				
MW- 93C (288)				
MW- 94	Semi-Annual	Q Gauging only	Gauge Only	Approved
MW- 95	Quarterly	Q Gauging only	Gauge Only	Approved
MW- 95B	Quarterly	Abandon	Abandon	Approved
MW- 96A	Gauging only	Gauging only	Gauge Only	Approved
MW- 96B	Semi-Annual	Abandon	Abandon	Approved
MW- 97	Gauging only	Gauging only	Gauge Only	Approved
MW- 98A	Already abandoned			
MW- 98B	Already abandoned			
MW- 99A	Gauging only	Gauging only	Gauge Only	Approved
MW- 99B	Gauging only	Abandon	Abandon	Approved
MW- 100A	Quarterly	Abandon	Abandon	Approved
<b>MW- 100B</b>	<b>Quarterly</b>	<b>Abandon</b>	<b>Stop Sampling / Retain</b>	<b>Retain for potential post remediation monitoring</b>
MW- 101A	Quarterly	Q Gauging only	Gauge Only	Approved
MW- 101B	Quarterly	Abandon	Abandon	Approved
MW- 102	Already abandoned			
MW- 103	Quarterly	Q Gauging only	Gauge Only	Approved
MW- 104	Gauging only	Gauging only	Gauge Only	Approved
<b>MW- 105</b>	<b>Quarterly</b>	<b>Abandon</b>	<b>Semi-Annual</b>	<b>Retain for post remediation monitoring</b>
MW- 106	Quarterly	Q Gauging only	Gauge Only	Approved
MW- 107	Quarterly	Q Gauging only	Gauge Only	Approved
MW- 108	Monthly	Q Gauging only	Gauge Only	Approved
<b>MW- 109</b>	<b>Quarterly</b>	<b>Q Gauging only</b>	<b>Semi-Annual</b>	<b>Post remediation monitoring</b>
<b>MW- 110</b>	<b>Quarterly</b>	<b>Semi-Annual</b>	<b>Quarterly</b>	<b>Recent RW conversion; quarterly sample for minimum of 12 months</b>
MW- 111	Already abandoned			
MW- 112	Already abandoned			
MW- 113	Already abandoned			
MW- 114	Semi-Annual	Abandon	Abandon	Approved
MW- 115	Already abandoned			
MW- 116	Already abandoned			
MW- 117	Already abandoned			
MW- 118	Quarterly	Abandon	Abandon	Approved
MW- 119	Semi-Annual	Q Gauging only	Gauge Only	Approved
MW- 120	Gauging only	Abandon	Abandon	Approved
MW- 121 [R]	Quarterly	Quarterly	Quarterly	Approved

Current, EM Proposed and MDE Approved Monitoring Activities  
(sorted by well ID)

Well ID	Current Monitoring Activity	EM Proposed Monitoring Activity	MDE Approved Monitoring Activity	MDE Response / Comment
MW- 122	Gauging only	Gauging only	Gauge Only	Approved
MW- 123	Already abandoned			
MW- 124	Already abandoned			
MW- 125	Quarterly	Quarterly	Quarterly	Approved
MW- 126	Already abandoned			
MW- 127	Already abandoned			
MW- 128A	Already abandoned			
MW- 128B	Already abandoned			
MW- 128C	Already abandoned			
MW- 129A	Already abandoned			
MW- 129B	Already abandoned			
MW- 130	Gauging only	Gauging only	Gauge Only	Approved
MW- 131A	Monthly	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 131B	Monthly	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 131C (67)	Quarterly/ Interval	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 131C (147)				
MW- 131C (250)				
MW- 131C (270)				
MW- 131C (310)				
MW- 131C (329.5)				
MW- 131C (350)				
MW- 131C (HS-S)	Monthly/ Composite			
MW- 131C (HS-D)				
MW- 132A	Quarterly	Q Gauging only	Gauge Only	Approved
MW- 132B	Quarterly	Abandon	Abandon	Approved
MW- 133A	Semi-Annual	Q Gauging only	Gauge Only	Approved
MW- 133B	Semi-Annual	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 133C (76)	Quarterly/ Interval	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 133C (107)				
MW- 133C (170)				
MW- 134A	Semi-Annual	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 134B	Semi-Annual	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 135A	Semi-Annual	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 135B	Semi-Annual	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 135C (113.5)	Quarterly/ Interval	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 135C (136)				
MW- 135C (177)				
MW- 135C (200)				
MW- 135C (288)				
MW- 135C (292.5)				
MW- 135C (358)				
MW- 135C (378)				
MW- 135C (388.5)				
MW- 135C (HS-S)	Monthly/ Composite			
MW- 135C (HS-D)				
MW- 136	Semi-Annual	Q Gauging only	Gauge Only	Approved
MW- 137	Quarterly	Semi-Annual	Quarterly	Recent RW conversion; quarterly sample for minimum of 12 months
MW- 138	Quarterly	Semi-Annual	Quarterly	Post remediation monitoring
MW- 138D (77-82)	Monthly Interval	Quarterly	Quarterly	Approved
MW- 138D (95-100)				
MW- 138D (120-125)				
MW- 138D (151-156)				
MW- 138D (190-200)				
MW- 138D (217-222)				
MW- 138D (250-255)				
MW- 138D (288-293)				
MW- 138D (332-337)				
MW- 138D (379-384)				
MW- 139	Quarterly	Quarterly	Quarterly	Approved
MW- 140A	Gauging only	Gauging only	Gauge Only	Approved



Current, EM Proposed and MDE Approved Monitoring Activities  
(sorted by well ID)

Well ID	Current Monitoring Activity	EM Proposed Monitoring Activity	MDE Approved Monitoring Activity	MDE Response / Comment
MW- 140B	Semi-Annual	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 141A	Quarterly	Abandon	Abandon	Approved
MW- 141B	Quarterly	Abandon	Abandon	Approved
MW- 141C	Quarterly	Abandon	Abandon	Approved
MW- 141C (103)				
MW- 141C (155)				
MW- 142	Quarterly	Q Gauging only	Gauge Only	Approved
MW- 143	Quarterly	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 144	Quarterly	Quarterly	Quarterly	Approved
MW- 145P	Gauging only	Gauging only	Gauge Only	Approved
MW- 146	Quarterly	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 146B	Semi-Annual	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 146C (HS-S)	Semi-Annual	Abandon	Semi-Annual	Retain for post remediation monitoring
MW- 146C (HS-D)				
MW- 147	Once	Abandon	Abandon	Approved
MW- 147PA	Gauging only	Abandon	Abandon	Approved
MW- 147PB	Quarterly	Abandon	Abandon	Approved
MW- 147PC	Gauging only	Abandon	Abandon	Approved
MW- 148A	Semi-Annual	Abandon	Abandon	Approved
MW- 148B	Semi-Annual	Abandon	Abandon	Approved
MW- 149	Already abandoned			
MW- 150A	Semi-Annual	Q Gauging only	Gauge Only	Approved
MW- 150B	Semi-Annual	Abandon	Abandon	Approved
MW- 151 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 152 [R]	Quarterly	Quarterly	Quarterly	Approved
MW- 153A	Already abandoned			
MW- 153B	Already abandoned			
MW- 154	Semi-Annual	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 155	Gauging only	Abandon	Abandon	Approved
MW- 156	Semi-Annual	Stop sampling	Stop Sampling / Retain	Approved
MW- 157P	Gauging only	Gauging only	Gauge Only	Approved
MW- 158P	Already abandoned			
MW- 159	Quarterly	Quarterly	Quarterly	Approved
MW- 160	Quarterly	Quarterly	Quarterly	Approved
MW- 161	Already abandoned			
MW- 162A	Quarterly	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 162B	Quarterly	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 162C (148)	Quarterly/ Interval	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring
MW- 162C (153)				
MW- 162C (206)				
MW- 162C (254)				
MW- 163B	Already abandoned			
MW- 164B	Quarterly	Abandon	Abandon	Approved
MW- 165C (68)	Quarterly/ Interval	Abandon	Abandon	Approved
MW- 165C (78)				
MW- 165C (90)				
MW- 165C (100)				
MW- 165C (138)				
MW- 165C (150)				
MW- 165C (210)				
MW- 165C (383)				
MW- 166A	Quarterly	Q Gauging only	Gauge Only	Approved
MW- 166B	Quarterly	Abandon	Abandon	Approved
MW- 166C (148)	Quarterly/ Interval	Stop sampling	Stop Sampling / Retain	Approved
MW- 166C (200)				
MW- 166C (307)				
MW- 166C (377)				
MW- 166C (393)				
MW- 166C (435)				
MW- 167	Monthly	Semi-Annual	Semi-Annual	Approved
MW- 168 (67)				

**Current, EM Proposed and MDE Approved Monitoring Activities**  
(sorted by well ID)

<b>Well ID</b>	<b>Current Monitoring Activity</b>	<b>EM Proposed Monitoring Activity</b>	<b>MDE Approved Monitoring Activity</b>	<b>MDE Response / Comment</b>
MW- 168 (75)	Monthly/ Interval	Quarterly Single-Interval	Quarterly	Approved
MW- 168 (87)				
MW- 168 (115)				
MW- 168 (148)				
MW- 168 (235)				
MW- 169 [R]	Monthly	Quarterly	Quarterly	Approved
MW- 170 [R]	Monthly	Quarterly	Quarterly	Approved
MW- 171	Monthly	Semi-Annual	Semi-Annual	Approved
MW- 171C (HS-S)	Monthly/ Composite	Quarterly Single-Interval	Quarterly	Approved
MW- 171C (HS-D)				
MW- 172C	Already abandoned			
MW- 173B	Quarterly	Abandon	Abandon	Approved
MW- 173C (86)	Quarterly/ Interval	Abandon	Abandon	Approved
MW- 173C (100-130)				
MW- 173C (166.5)				
MW- 173C (190)				
MW- 173C (284)				
MW- 173C (338)				
MW- 173C (393)				
MW- 173C (490)				
MW- 174B	Semi-Annual	Abandon	Abandon	Approved
MW- 174C (88)	Semi-Annual	Abandon	Abandon	Approved
MW- 174C (180)				
MW- 174C (271)				
MW- 174C (295)				
MW- 175C (61)	Semi-Annual	Abandon	Abandon	Approved
MW- 175C (103)				
MW- 175C (125)				
MW- 175C (199-202)				
MW- 175C (294)				
MW- 175C (330)				
MW- 175C (374)				
MW- 176 [R]	Monthly	Quarterly	Quarterly	Approved
<b>MW- 176CC</b>	<b>Monthly</b>	<b>Stop sampling</b>	<b>Semi-Annual</b>	<b>Post remediation monitoring</b>
MW- 177 (130)	Quarterly/ Interval	Quarterly/ Interval	Quarterly	Approved
MW- 177 (143)				
MW- 177 (220)				
MW- 177 (228)				
MW- 177 (236)				
MW- 177 (HS-S)	Monthly/ Composite			
MW- 177 (HS-D)				
MW- 178A	Monthly	Q Gauging only	Gauge Only	Approved
MW- 178B	Monthly	Quarterly	Quarterly	Approved
MW- 178C [R]	Monthly	Quarterly	Quarterly	Approved
<b>MW- 179A</b>	<b>Monthly</b>	<b>Q Gauging only</b>	<b>Semi-Annual</b>	<b>Post remediation monitoring</b>
MW- 179C (HS-S)	Monthly/ Composite	Quarterly Single-Interval	Quarterly	Approved
MW- 179C (HS-D)				
<b>MW- 180A</b>	<b>Monthly</b>	<b>Q Gauging only</b>	<b>Semi-Annual</b>	<b>Post remediation monitoring</b>
<b>MW- 180C (HS-S)</b>	<b>Monthly/ Composite</b>	<b>Abandon</b>	<b>Semi-Annual</b>	<b>Retain for post remediation monitoring</b>
<b>MW- 180C (HS-D)</b>				
MW- 181A [R]	Monthly	Quarterly	Quarterly	Approved
MW- 181B	Monthly	Quarterly	Quarterly	Approved
MW- 181C (126)	Monthly Composite Quarterly/ Interval	Quarterly Single-Interval	Quarterly	Approved
MW- 181C (179)				
MW- 181C (187)				
MW- 181C (215)				
MW- 181C (221)				
MW- 181C (259.5)				
MW- 181C (284.5)				
MW- 181C (291)				
MW- 181C (HS-S)	Monthly/ Composite			

**Current, EM Proposed and MDE Approved Monitoring Activities**  
(sorted by well ID)

Well ID	Current Monitoring Activity	EM Proposed Monitoring Activity	MDE Approved Monitoring Activity	MDE Response / Comment				
MW- 181C (HS-D)	Monthly/ Composite							
MW- 182 (HS-S)	Monthly/ Composite	Quarterly Single-Interval	Quarterly	Approved				
MW- 182 (HS-D)								
MW- 183 [R]	Monthly	Quarterly	Quarterly	Approved				
MW- 184 [R]	Monthly	Quarterly	Quarterly	Approved				
MW- 185 [R]	Monthly	Quarterly	Quarterly	Approved				
MW- 186D AP/(HS-S)	Monthly/ Composite	Abandon	Stop Sampling / Retain	Retain for potential post remediation monitoring				
MW- 186D BP/(HS-D)								
MW- 187A [R]	Monthly	Quarterly	Quarterly	Approved				
MW- 187B [R]	Monthly	Quarterly	Quarterly	Approved				
MW- 187C [R]	Monthly	Quarterly	Quarterly	Approved				
MW- 188D (AP)	Monthly Interval	Monthly Interval	Monthly	Approved				
MW- 188D (BP)								
MW- 189D (79)	Monthly/ Interval	Quarterly interval	Quarterly	Approved				
MW- 189D (91.5)								
MW- 189D (117-119)								
MW- 189D (122)								
MW- 189D (138-140)								
MW- 189D (161)								
MW- 189D (216)								
MW- 189D (256-258)								
MW- 189D (278)								
MW- 189D (315)								
MW- 189D (357)								
MW- 189D (374)								
PW- 14311 (38.5-40)					Quarterly/ Interval	Stop sampling	Stop Sampling / Retain	Approved
PW- 14311 (49-51)								
PW- 14311 (59-61)								
PW- 14311 (110.5-113)								
PW- 14311 (117)								
PW- 14311 (136)								
PW- 14311 (155.5)								
PW- 14311 (237)								
PW- 14311 (280)								
PW- 3501 (56-57.5)	Quarterly/ Interval	Stop Sampling	Stop Sampling / Retain	Approved				
PW- 3501 (69-70.5)								
PW- 3501 (88.5)								
PW- 3501 (131)								
PW- 3501 (147-148.5)								
PW- 3501 (153)								
PW- 3501 (220)								
PW- 3501 (290)								
PW- 3501 (300)								
PW- 3501 (333)								
PW- 3501 (361)								
PW- 3501 (391.5)								
PW- 3501 (413)								
PW- 3501 AP/(HS-S)	Monthly/ Composite							
PW- 3501 BP/(HS-D)								
SVE- 1 [R]	Monthly	Quarterly	Quarterly	Approved				
SVE- 2 [R]	Quarterly	Quarterly	Quarterly	Approved				
SVE- 3 [R]	Monthly	Quarterly	Quarterly	Approved				