



Maryland

Department of the Environment

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Ben Grumbles, Secretary
Horacio Tablada, Deputy Secretary

June 4, 2019

Ms. Jamila Chillemi
Project Manager
ExxonMobil Environmental Services
1900 East Linden Avenue, Building 28A
Linden, New Jersey 07036

**RE: APPROVAL OF SINGLE-INTERVAL SAMPLING WORK PLAN AND
MW-189D PACKER REMOVAL SAMPLING
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) completed a review of the case file for the above-referenced property, including the *MW-188D Packer Removal - Report of Results*, dated Apr. 5 2019, and the *Single-Interval Sampling Work Plan*, dated Apr. 8, 2019. The packer from MW-188D was removed from the monitoring well and 3 rounds of discrete zone HydraSleeve™ samples were collected monthly from 11 intervals. Based on the data provided, a proposal to continue discrete zone sampling on a quarterly basis was proposed.

The work was conducted in accordance with MDE's *Approval of Packer Removal from MW-188D* letter, dated Nov. 7, 2018, with one exception. Samples collected during the first sampling event were not analyzed for full-suite volatile organic compounds (VOC) using EPA Method 8260 as required; however, the groundwater samples were analyzed for full-suite VOCs during the second monthly sampling event. Per MDE's *Approval of Groundwater Monitoring Reduction and Well Abandonment Request* letter, dated Mar. 29, 2019, and the recommendations proposed in the *Report of Results*, sampling of discrete zones at MW-188D is approved on a quarterly basis.

The *Single-Interval Sampling Work Plan* includes multiple depth groundwater sampling data that have been collected by either discrete zone HydraSleeve samples, composite HydraSleeve samples, and/or FLUTE™ samples from 16 deep monitoring wells. Based on the groundwater sampling data collected during multiple intervals from each of these monitoring wells, a proposal was presented to collect 1 interval depth sample from each well. The sample will be collected from the interval with the highest concentration detected or from the middle of the screened/open interval in the well if concentrations are substantially similar across intervals, consistent with Flowchart 2 from the June 13, 2018 *Order of Resolution*.

A table with proposed sampling depths for each well with rationale was provided in the *Report of Results*. After OCP's preliminary review, a revised table was requested on May 3, 2019. Updated text and table were submitted on May 6 and 8, 2019 by email. Clarification was provided to include depths where groundwater samples were collected from the composite HydraSleeve samples and additional detail regarding the time period of the data considered in the rationale for selecting the single interval sampling proposed (copy enclosed).

The MDE approves the request to perform single interval groundwater sampling at 16 monitoring wells as proposed, contingent upon the following modifications and requirements.

1. Although interval sampling is generally approved, MDE reserves the right to request discrete zone sampling from the deep monitoring wells at any time during the project. Multi-depth discrete zone sample collection may be requested periodically during remedial efforts during and after sequential recovery well shut-down events, after remediation system shut-down and post-remedial monitoring, and/or as deemed necessary by MDE.
2. Monitoring wells MW-73C and MW-82D are pending conversion to recovery wells. Discrete zone sampling will be performed after wells are converted back to monitoring wells in accordance with the approved quarterly monitoring frequency.
3. For well MW-168, although an interval sample collection is approved, MDE prefers that groundwater be collected from the depth of 235 feet instead of the proposed mid-borehole interval of 157.5 feet. This sampling depth is based on generally higher concentration levels observed at 235 feet throughout the sampling history and more recent 3-year events.
4. Submit 2 hard copies and an updated electronic copy of the revised *Work Plan* per the May 6, 2019 email submitted and received.
5. All future reports and updated quarterly reports must include sampling depths of all groundwater samples collected on all data tables with method (HydraSleeve, grab, conventional 3-well volume, low-flow, etc.).

If you have any questions, please contact Ms. Ellen Jackson at 410-537-3482 or ellen.jackson@maryland.gov.

Sincerely,



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

Ms. Jamilla Chillemi
Case No. 2006-0303-BA
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Enclosures: Emails dated May 6 and May 8, 2019.

cc: Carlos Bollar, Esquire, Archer & Greiner, P.C.
Mr. Mark Schaaf, Project Manager, 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, Program Manager, Oil Control Program
Matthew Zimmerman, Esquire, MDE Office of Attorney General
Ms. Kaley Laleker, Director, Land and Materials Administration



Ellen Jackson -MDE- <ellen.jackson@maryland.gov>

RE: Exxon Jacksonville Report Questions

1 message

Stacey Schiding <SSchiding@kleinfelder.com>

Mon, May 6, 2019 at 5:04 PM

To: Ellen Jackson -MDE- <ellen.jackson@maryland.gov>, Mark Schaaf <MSchaaf@kleinfelder.com>

Cc: "andrew.miller@maryland.gov" <andrew.miller@maryland.gov>, "Chillemi, Jamila S"

<jamila.s.chillemi@exxonmobil.com>, "chris.ralston@maryland.gov" <chris.ralston@maryland.gov>

Hi, Ellen:

Please find attached a revised Single Interval Sampling Work Plan (without the 200+ pages of historical analytical data), addressing your comments below within the table on p.2. I have corrected the FLUTE interval entry for MW-56C, and clarified the range of data on which the single intervals are proposed. Once we know what you need for hard copies, we will compile and send those.

For MW-188D, the above & below packer grab samples were collected with a bailer.

Thank you,
Stacey

From: Ellen Jackson -MDE- <ellen.jackson@maryland.gov>**Sent:** Friday, May 3, 2019 11:43 AM**To:** Mark Schaaf <MSchaaf@kleinfelder.com>; Stacey Schiding <SSchiding@kleinfelder.com>**Cc:** andrew.miller@maryland.gov; Chillemi, Jamila S <jamila.s.chillemi@exxonmobil.com>; chris.ralston@maryland.gov**Subject:** Exxon Jacksonville Report Questions

External Email.

Mark and Stacey

I reviewed the *Single Interval Sampling Work Plan-April 8, 2019* and the *MW-188D Packer Removal Report of Results-April 5, 2019* and have some comments and request additional information as listed below:

Single Interval Sampling Work Plan:

1. Regarding the table on Page 2, please include the following information: Note the depths of the HydraSleeve™ (HS) samples (Shallow, Mid (if sampled) and Deep). Moving forward in Future Quarterly Status Reports and Work Plans, as appropriate, composite HS sample depths must be included in Analytical Summary Data tables.
2. Provide details on the Justification of the single sampling depth proposed (timeline of the data used for justification, i.e., most recent sampling data point I assume is the last sampling data point presented in the analytical table?, the last 1-yr of sampling data?, historical (which would include all data collected of that interval), etc). For 36C, the recent sampling is both ND for shallow and deep, therefore I am not understanding the recommendation to continue shallow depth sampling at 32.5-ft based on the rational presented.

3. Flute sampling well 56C are discrete samples, please confirm and edit the table to reflect or clarify that composite samples are not collected, as noted. As stated above, please provide more details regarding the timeline for justifying sampling from 310-315 ft sampling interval (based on historical dataset, recent, last year?).

Update the table with the information requested above via email would be acceptable at this time for us to continue our review. I will follow-up with regard to what we will need for our file (likely an updated electronic report with the table, updated analytical datatables (also noting sampling depths, and 2 hardcopies, but I will follow-up with you.

MW-188D Packer Removal:

1. Please confirm at the samples collected above and below the packers were grab samples via bailers, and not via pumps or any other methods. If so, please provide details.

Thanks. Feel free to call if you have questions. Ellen

Ellen Jackson
Northern Region Supervisor
Remediation Division, Oil Control Program
1800 Washington Blvd, Ste. 620
Baltimore MD 21230-1719
410-537-3482 (direct)
410-537-3092(fax)

Click here to complete a three question customer experience survey.

 **28077_Single-Interval Sampling Work Plan FINAL r1.pdf**
97K



Via Email

May 6, 2019
Kleinfelder Project No.: 20193011.001A

Mr. Christopher Ralston
Maryland Department of the Environment
1800 Washington Boulevard
Baltimore, Maryland 21230

**SUBJECT: SINGLE-INTERVAL SAMPLING WORK PLAN – Revision 1
Inactive Exxon Facility #28077
14258 Jarrettsville Pike, Phoenix, Maryland
MDE Case No. 2006-0303-BA2**

Dear Mr. Ralston:

ExxonMobil Environmental & Property Solutions (ExxonMobil) is in receipt of the Maryland Department of the Environment's (MDE) March 29, 2019 "Approval of Groundwater Monitoring Reduction and Well Abandonment Request" (Approval Letter). The Approval Letter conditionally approves single-interval sampling for ten wells and requests a work plan detailing the preferred sampling methodology for wells previously sampled via discrete-interval methods (FLUTe™ or HydraSleeve™). In addition to the ten wells conditionally approved for single-interval sampling, MDE is requiring continued sampling of six wells originally proposed for abandonment. Single-interval sampling methodology is also proposed for these six wells, for a total of 16 monitoring wells.

Proposed Sampling Methodology

HydraSleeve™

For wells currently sampled via discrete-interval or composite HydraSleeve™ at multiple depths, Kleinfelder, on behalf of ExxonMobil, proposes to collect samples from the interval with the highest concentration or, if concentrations are substantially the same across intervals, from the middle of the screened/open interval in the well. This proposal is consistent with Flowchart 2 from the June 13, 2018 Order of Resolution.¹ The table below provides the proposed sampling depth for 15 HydraSleeve™ wells. Historical analytical data can be found in attached Table 1.

¹ Circuit Court of Maryland for Baltimore County, Order of Resolution of Petitioner's Petition for Enforcement of Consent Decree and for Judicial Review, June 13, 2018.

Well ID	Current # of HydraSleeve™ Intervals	Proposed Depth of Single HydraSleeve™ Sample	Justification for Depth Selection
MW-36C	2 (composite) HS-S = 274.5' HS-D = 424'	Middle of open interval (274.5')	Comparable results in both intervals over the last 12 months
MW-47C	2 (composite) HS-S = 212.5' HS-D = 300.0'	Middle of open interval (212.5')	1-4 ppb in both intervals over the last 12 months
MW-48D	2 (composite) HS-S = 229.0' HS-D = 400.0'	Middle of open interval (229')	ND-3 ppb in both intervals over the last 12 months
MW-54C	2 (composite) HS-S = 212.5' HS-D = 300.0'	Middle of open interval (212.5')	Comparable results in both intervals over the last 12 months
MW-73C	2 (composite) HS-S = 212.5' HS-D = 300.0'	Middle of open interval (212.5')	J-flag to 2 ppb in both intervals over the last 12 months
MW-78C	7 (interval)	Middle of open interval (180')	ND in all intervals over the last 12 months
MW-82D	3 (composite) HS-S = 210.0' HS-M = 295.0' HS-D = 380.0'	Middle of open interval (252.5')	Comparable concentrations in all intervals over the last 12 months
MW-146C	2 (composite) HS-S = 212.5' HS-D = 300.0'	Middle of open interval (212.5')	Comparable concentrations in both intervals over the last 12 months
MW-168	6 (interval)	Middle of open interval (157.5')	Comparable concentrations in all intervals over the last 12 months
MW-171C	2 (composite) HS-S = 270' HS-D = 415.0'	Middle of open interval (207.5')	Comparable concentrations in both intervals over the last 12 months
MW-177	5 (interval)	Middle of open interval (187.75')	Comparable concentrations in all intervals over the last 12 months
MW-179C	2 (composite) HS-S = 165.0' HS-D = 250.0'	HS-D (250')	Historically higher concentrations over the last 12 months
MW-180C	2 (composite) HS-S = 212.5' HS-D = 300.0'	Middle of open interval (212.5')	Comparable concentrations in both intervals over the last 12 months
MW-181C	8 (interval)	Middle of open interval (212.5')	Comparable concentrations in all intervals over the last 12 months
MW-182	2 (composite) HS-S = 200.0' HS-D = 300.0'	Middle of open interval (200')	Comparable concentrations in both intervals over the last 12 months

Mr. Christopher Ralston
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FLUTe™

For the one FLUTe™ well (MW-56C) conditionally approved for single-interval sampling, samples will be collected from the existing FLUTe™ apparatus at the interval below. The FLUTe™ liner will remain in-place until this well is approved for abandonment.

MW-56C	3 (interval)	310-315'	Slightly higher concentration over last 12 months
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Upon MDE approval, the above sampling method will be initiated on a quarterly schedule for the wells listed above.

LIMITATIONS

Kleinfelder performed the services for this project under the Enabling Agreement with Procurement, a division of ExxonMobil Global Services Company (signed on November 28, 2012). Kleinfelder states that the services provided are consistent with professional of care defined as that level of services provided by similar professionals under like circumstances. This report is based on the regulatory standards in effect on the date of the report. It has been produced for the primary benefit of ExxonMobil Global Services Company and its affiliates.

Please contact the undersigned with any questions or requests for additional information.

Sincerely,

KLEINFELDER

Stacey Schiding
Project Manager

Mark J. Schaaf, C.P.G.
Project Director

cc: Ms. Ellen Jackson – MDE Oil Control Program
Mr. Andrew Miller – MDE Oil Control Program
Stephanie Cobb Williams, Esq. – Office of the Attorney General
Ms. Jamila Chillemi – ExxonMobil (project file)
Carlos Bollar, Esq. – Archer & Greiner

TABLES

Mr. Christopher Raiston
Maryland Department of the Environment
Oil Control Program
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1 **Historical Groundwater Analytical Data**



Ellen Jackson -MDE- <ellen.jackson@maryland.gov>

RE: Exxon Jacksonville Report Questions

1 message

Stacey Schiding <SSchiding@kleinfelder.com>

Wed, May 8, 2019 at 2:11 PM

To: Ellen Jackson -MDE- <ellen.jackson@maryland.gov>

Cc: Mark Schaaf <MSchaaf@kleinfelder.com>, "andrew.miller@maryland.gov" <andrew.miller@maryland.gov>, "Chillemi, Jamila S" <jamila.s.chillemi@exxonmobil.com>, "chris.ralston@maryland.gov" <chris.ralston@maryland.gov>

Hi, Ellen:

For MW-177, HS-S is set at 187.75', HS-D is set at 250'

For MW-181C, HS-S is set at 212.5', HS-D is set at 300'

Thank you,
Stacey**From:** Ellen Jackson -MDE- <ellen.jackson@maryland.gov>**Sent:** Wednesday, May 8, 2019 1:34 PM**To:** Stacey Schiding <SSchiding@kleinfelder.com>**Cc:** Mark Schaaf <MSchaaf@kleinfelder.com>; andrew.miller@maryland.gov; Chillemi, Jamila S <jamila.s.chillemi@exxonmobil.com>; chris.ralston@maryland.gov**Subject:** Re: Exxon Jacksonville Report Questions**External Email.**

Thanks Stacey-

Could you provide the Shallow and Deep Hydrasleeve intervals for wells MW-177 and MW-181C. Composite HS samplers were used in addition to the discrete zone interval as noted in the table. Thanks, Ellen

Ellen Jackson
Northern Region Supervisor
Remediation Division, Oil Control Program
1800 Washington Blvd, Ste. 620
Baltimore MD 21230-1719
410-537-3482 (direct)
410-537-3092(fax)

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