



MARYLAND DEPARTMENT OF THE ENVIRONMENT

Oil Control Program, Suite 620, 1800 Washington Blvd., Baltimore MD 21230-1719

410-537-3442 410-537-3092 (fax)

1-800-633-6101, ext. 3442

Martin O'Malley
Governor

Robert M. Summers, Ph.D.
Secretary

Anthony G. Brown
Lieutenant Governor

April 8, 2014

Mr. John J. Hoban
Global Remediation SouthCentral Region
ExxonMobil Corporation
7715 Crittenden Street, #309
Philadelphia PA 19118-4421

**RE: MW-138D FLUTE™ LINER INSTALLATION AND MW-82D WELL INSTALLATION
WORK PLAN APPROVAL AND INFORMATION REQUEST**

Case No. 2006-0303-BA

Former Exxon R/S No. 2-8077

14258 Jarrettsville Pike, Phoenix

Baltimore County, Maryland

Dear Mr. Hoban:

The Oil Control Program recently completed a review of the *MW-138D FLUTE™ Liner Installation and MW-82D Well Installation Work Plan - January 15, 2014* for the above-referenced property. The *Work Plan* proposes construction details for the installation of a specially designed FLUTE™ Liner in monitoring well MW-138D. Based on the geophysical and drilling data collected and evaluated, the Department approved the proposed ten discrete zone depth intervals for FLUTE™ construction for long-term groundwater sampling (see enclosed copy of MDE Approval Email dated March 5, 2014). Please note, per the *Additional Site Characterization Work Plan* dated June 21, 2012 and MDE's *Approval Letter* dated February 20, 2014, the first round of groundwater sampling from each discrete zone must be analyzed for full-suite volatile organic compounds (VOCs) and five oxygenates in accordance with EPA Method 8260B.

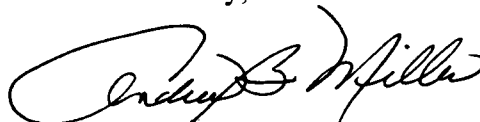
The *Work Plan* also included a proposal to install one deep "D" zone monitoring well (MW-82D) with an open borehole interval of 125 to 380 feet below grade for additional delineation based on the data collected from the deeper zone well (MW-138D), recently installed and sampled per the approved *Additional Site Characterization Work Plan*. An email to Kleinfelder was submitted by the Oil Control Program on January 29, 2014 requesting additional information regarding construction details of monitoring wells, recovery wells, and drinking water supply wells in the vicinity of the location to proposed well MW-82D (copy of email enclosed). Based on the information provided to MDE on February 5, 2014 and further discussions, a modification to the construction of MW-82D was submitted to MDE on March 11, 2014 (copies of email correspondences are enclosed). A mid-depth "B" well is proposed (MW-82B) constructed with an open borehole interval from 60 to 125 feet below grade. Based on the data collected from this interval and the discrete zone groundwater sample results from the completed FLUTE™ well MW-138D, consideration of additional deeper wells or deepening of MW-82B will be discussed with ExxonMobil.

The Department approves the scope of work for the installation of MW-82 B contingent upon the following modifications:

1. The casing depth should be modified to 50 feet in lieu of 60 feet, as proposed. This depth is based on the boring logs of surrounding wells (i.e., MW 77R drilled to 50 feet with noted PID detections and completed to 45 feet). Based on lack of data beginning at 50 feet, well 82B should be cased to the approximate depth of 50 feet and continue to 125 feet unless field observations indicate advancement of drilling to 125 feet should stop. The open borehole design for MW-82B should be 50 to 125 feet below grade.
2. During drilling, the well must be gauged at the end of each day and beginning the following day using an oil/water interface probe and checked with a clear bailer for the presence of product.
3. Per the protocol established after the casing is installed and the presence of product is confirmed to be absent, a grab sample will be collected for laboratory analysis from water accumulation at the bottom of the casing.
4. The Department approves the collection of composite shallow and deep HydraSleeve™ samples after well development is completed, which is a deviation from the purge and sample method proposed for other "B" zone wells drilled in accordance with the approved *Additional Site Characterization Work Plan*. The depth of each sampler must be recorded and noted on any summary data tables submitted.
5. Per the February 20, 2013 *Approval Letter*, the Department must be notified immediately of any detection upon receipt of the analytical data, including non-petroleum related chemical constituents and the full laboratory results submitted (email acceptable). Dependent upon the results, the Department may require subsequent samples to include analysis for full-suite VOCs, including fuel oxygenates.

Notify the case manger at least five (5) days prior to all field activities (flute liner installation, sampling, drilling) to coordinating a field mark-out for the additional well. If measureable liquid phase hydrocarbons are detected, report the presence to the Department within two hours of discovery by calling the Oil Control Program at the Baltimore Headquarters at 410-537-3442 during standard business hours, or the Emergency Response Division hotline at 1-866-633-4686. If you have any questions, please contact the case manger, Ms. Ellen Jackson at 410-537-3482 or via email: ellen.jackson@maryland.gov.

Sincerely,



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

Mr. John Hoban
Case No. 2006-0303-BA
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cc: Carlos Bollar, Esquire (Archer & Greiner, P.C.)
Sasha McNeeley, Esquire (Snyder, Weltchek & Snyder)
Theodore Flerlage, Esquire (Law Offices of Peter Angelos)
Celeste Quiralte, Esquire (ExxonMobil Corp.)
Mr. Gregory Martin (Roux & Assoc., Inc.)
Mr. Mark Schaaf (Kleinfelder East, Inc.)
Mr. Robert Libertini (3508 Hampshire Glen Ct.)
Mr. Kevin Koepenick (Baltimore County DEPS)
Ms. Barbara Brown
Mr. Christopher Ralston
Priscilla N. Carroll, Esquire
Mr. Horacio Tablada



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

28077 - Former EM - 14258 Jarrettsville Pike - Flute interval/MW82D Workplan Modification

1 message

Mark Schaaf <MSchaaf@kleinfelder.com> Tue, Mar 11, 2014 at 3:23 PM
 To: "Ellen Jackson -MDE- (ellen.jackson@maryland.gov)" <ellen.jackson@maryland.gov>, "Chris Ralston (chris.ralston@maryland.gov)" <chris.ralston@maryland.gov>, "andrew.miller@maryland.gov" <andrew.miller@maryland.gov>, "Barbara Brown -MDE- (barbara.brown1@maryland.gov)" <barbara.brown1@maryland.gov>
 Cc: "Hoban, John J" <john.j.hoban@exxonmobil.com>, Greg Martin <gmartin@rouxinc.com>, Stacey Schiding <SSchiding@kleinfelder.com>, Jeffrey Hale <JHale@kleinfelder.com>

=====

Hi, Ellen.

As we discussed, to confirm groundwater concentrations in the B zone (60-125 feet bgs) in the area of proposed well MW-82D, we recommend changing the construction details of the proposed well and progressing this down-gradient work in a results-driven approach. We have received MDE's approval for the FLUTE intervals proposed for MW-138D. We are currently finalizing the order with FLUTE and hope to have it installed by mid-April. With MDE approval, we will concurrently install MW-82B with steel casing from surface to 60 ft bgs and openhole from 60 to 125 ft bgs. We will stop drilling, develop the well, and demob. We will sample the well with two composite hydrasleeve samplers (shallow/deep) to assess groundwater conditions in this 60-125 ft interval.

The data from the Flute intervals in MW-138D and sampling MW-82B will be presented to the MDE for discussion and consideration of whether a deeper well in the MW-82 cluster is required. Various options will be considered including: no additional wells are required, deepen MW-82B to approximately 400 ft bgs, or install a separate MW-82D.

Please respond with comments, questions and/or MDE approval to proceed.

Thanks.

mjs

Mark J. Schaaf, CPG

Project Director, VP

Kleinfelder

1340 Charwood Road, Suite I

Hanover, MD 21076

O| [410 850 0404](tel:4108500404)

D| [410 689 0785](tel:4106890785)

C| [845 325 4646](tel:8453254646)





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

FLUTe Proposal for MW-138D APPROVAL

1 message

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

Wed, Mar 5, 2014 at 9:55 AM

To: Mark Schaaf <mschaaf@kleinfelder.com>

Cc: "john.j.hoban@exxonmobil.com" <john.j.hoban@exxonmobil.com>, Stacey Schiding <sschiding@kleinfelder.com>, Barbara Brown -MDE- <barbara.brown1@maryland.gov>,

"andrew.miller@maryland.gov" <andrew.miller@maryland.gov>, Ellen Jackson <ejackson@mde.state.md.us>

Mark,

As we discussed yesterday, the Department approves of the 10 depth intervals identified for the FLUTe design at MW-138D as proposed in the *FLUTe Liner Installation and MW-82D Well Installation Work Plan*-January 15, 2014. We are preparing a response letter to the work plan, however, we have no objection in your request to proceed with ordering the liner as proposed to minimize further delay in the implementation of this phase of the Work Plan. As discussed, an email to the Department regarding the modification to the well construction for MW-82D will be submitted and will be addressed in MDE's response letter. Ellen

Ellen Jackson

Central Region Section Head

Remediation Division, Oil Control Program

1800 Washington Blvd, Ste. 620

Baltimore MD 21230-1719

[410-537-3482](tel:410-537-3482) (direct)[410-537-3092](tel:410-537-3092)(fax)



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

RE: Request for Information regarding Work Plan Submittal

1 message

Stacey Schiding <SSchiding@kleinfelder.com>

Wed, Feb 5, 2014 at 3:53 PM

To: "ellen.jackson@maryland.gov" <ellen.jackson@maryland.gov>

Cc: "barbara.brown1@maryland.gov" <barbara.brown1@maryland.gov>, "amiller@mde.state.md.us"

<amiller@mde.state.md.us>, "john.j.hoban@exxonmobil.com" <john.j.hoban@exxonmobil.com>,

"gmartin@rouxinc.com" <gmartin@rouxinc.com>, Mark Schaaf <MSchaaf@kleinfelder.com>, Sean Rochford

<SRochford@kleinfelder.com>

Ellen:

Please find attached materials responsive to your requests below:

1. A revised Figure 1 showing property addresses as well as monitoring well IDs and open borehole intervals for monitoring wells and private supply wells in the area surrounding the proposed location of MW-82D;
2. An expanded table including the total depth and open borehole intervals for potable wells surrounding the proposed location of MW-82D.

Please advise if the Department requires anything further to complete a review of the Work Plan.

Thank you,

Stacey

Stacey E. Schiding

Project Manager

1340 Charwood Road

Suite I

Hanover, MD 21076

[o| 410.689.0782](tel:410.689.0782)

[m| 443.314.0308](tel:443.314.0308)

f | 410.850.0049



From: Mark Schaaf
Sent: Wednesday, January 29, 2014 11:54 AM
To: Stacey Schiding; Sean Rochford
Subject: FW: Request for Information regarding Work Plan Submittal

Mark J. Schaaf, CPG

Kleinfelder

D | 410 689 0785

From: Ellen Jackson -MDE- [<mailto:ellen.jackson@maryland.gov>]
Sent: Wednesday, January 29, 2014 11:10 AM
To: Mark Schaaf
Cc: john.j.hoban@exxonmobil.com; andrew.miller@maryland.gov; Barbara Brown -MDE-; Chris Ralston; Sean Rochford
Subject: Request for Information regarding Work Plan Submittal

Mark,

We received the "MW-138D FLUTE liner Installation and MW-82D Well Installation Work Plan" dated January 15, 2014 ". The plan proposes to install an additional D well (MW-82D) at an open borehole interval of 125-380-ft. In order for us to complete our review, the following information should have been provided and is therefore requested:

- 1- On the map showing the location of MW-82D, all the monitoring well shown on the figure must be identified with the well numbers in addition to noting the open borehole intervals for each well. This also includes showing locations of nearby domestic wells with their borehole open interval information, if known. Property addresses should also be included on the map.
- 2) As indicated on page 4 regarding the depth of proposed well MW-82 D; the table must include depths of the surrounding potable wells and open borehole depths to demonstrate that the proposed depth of 380-feet is appropriate as proposed.

Once this information is received, the Department will complete our review and respond accordingly. Feel free to contact me if you should have any questions with regard to our request. Ellen

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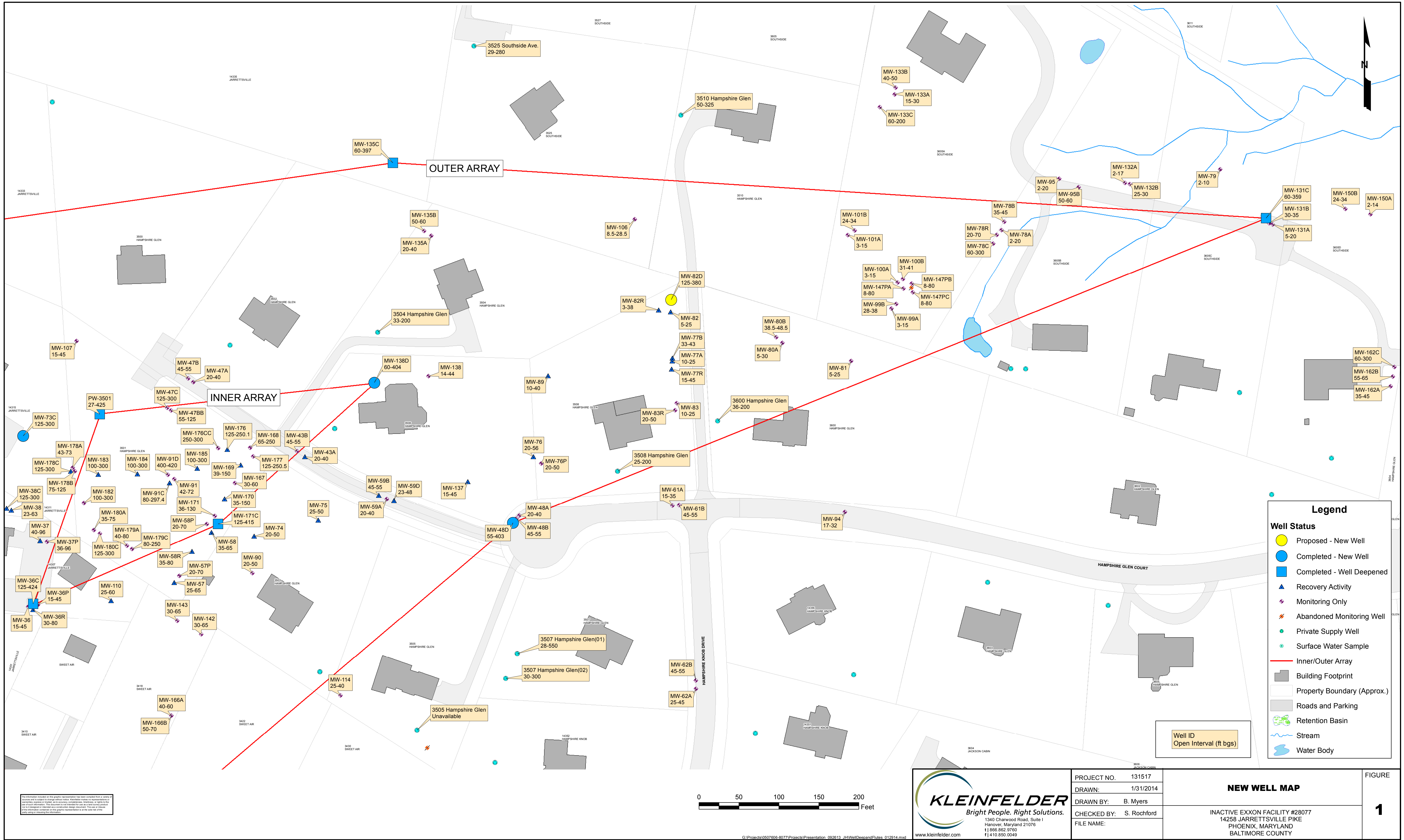
Ellen Jackson
Central Region Section Head
Remediation Division, Oil Control Program
1800 Washington Blvd, Ste. 620
Baltimore MD 21230-1719
[410-537-3482](tel:410-537-3482) (direct)
[410-537-3092](tel:410-537-3092)(fax)

2 attachments**28077 MW-138D Work Plan - Revised Figure 1.pdf**

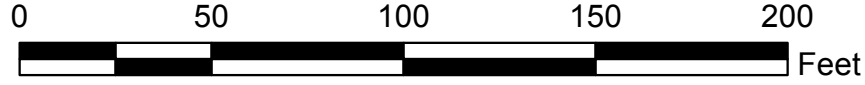
500K

**Total Depth and Open Borehole Intervals of Potable Wells Around MW-82D.pdf**

65K



The information included on this graphic representation has been compiled from a variety of sources and is subject to change without notice. It is intended for informational purposes only and should not be used as a basis for any legal or financial decision. The user of this information is advised to verify the accuracy of the information and to consult with the appropriate authorities for any and all requirements. This document is not intended to be used as a warranty, contract, or any other legal instrument. It is the property of Kleinfelder and its use is restricted to the project and site identified herein. Any reuse or modification of this document is prohibited by the laws of the state.



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PROJECT NO.	131517
DRAWN:	1/31/2014
CHECKED BY:	B. Myers
DRAWN BY:	S. Rochford
FILE NAME:	

NEW WELL MAP

INACTIVE EXXON FACILITY #28077
14258 JARRETTVILLE PIKE
PHOENIX, MARYLAND
BALTIMORE COUNTY



**Total Depth and Open Borehole Intervals
Potable Wells Surrounding Proposed MW-82D**

Well ID	Ground Surface Elevation (ft-msl)	Total Depth of Well (ft-bgs)	Current Elevation at Bottom of Well (ft-msl)	Target Elevation at Bottom of Well (ft-msl)	Target Total Depth of Well (ft-bgs)	Open Interval (ft-bgs)
MW-91D	586.94	420	166.94	167	-	-
MW-82D	547.42	NA	NA	167 ¹	380 ²	-
3504 Hampshire Glen Ct.	572.44	200	372.44	NA	NA	33-200
3505 Hampshire Glen Ct.	587.49	250	337.49	NA	NA	Unavailable ³
3506 Hampshire Glen Ct.	573.61	200	373.61	NA	NA	32-200
3507 Hampshire Glen Ct. (Well 1)	581.88	550	31.88	NA	NA	28-550
3507 Hampshire Glen Ct. (Well 2)	583.64	300	283.64	NA	NA	30-300
3508 Hampshire Glen Ct.	564.5	200	364.5	NA	NA	25-200
3510 Hampshire Glen Ct.	554.24	325	229.24	NA	NA	50-325
3600 Hampshire Glen Ct.	555.84	200	355.84	NA	NA	36-200
3525 Southside Ave.	568.26	280	288.26	NA	NA	29-280
3605 Southside Ave.	563.81	150	413.81	NA	NA	Unavailable ³
3605A Southside Ave.	553.26	250	303.26	NA	NA	51-250

Notes:

- 1.) Target bottom elevation for proposed well based on bottom elevation of MW 91D
 - 2.) Ground surface elevation for MW-82 used to approximate target depth of MW-82D.
 - 3.) Handwritten well completion report unreadable as to open interval at time of installation
- NA = not applicable, monitoring well not installed to date
ft-msl = feet above mean sea level
ft-bgs = feet below ground surface



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

Request for Information regarding Work Plan Submittal

1 message

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

Wed, Jan 29, 2014 at 11:09 AM

To: Mark Schaaf <mschaaf@kleinfelder.com>

Cc: "john.j.hoban@exxonmobil.com" <john.j.hoban@exxonmobil.com>, "andrew.miller@maryland.gov" <andrew.miller@maryland.gov>, Barbara Brown -MDE- <barbara.brown1@maryland.gov>, Chris Ralston <chris.ralston@maryland.gov>, Sean Rochford <srochford@kleinfelder.com>

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

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Ellen Jackson
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