



1340 Charwood Road, Suite I  
Hanover, MD  
21076  
p| 410.850.0404  
f| 410.850.0049  
kleinfelder.com

**FEDEX: 793398883480**

March 30, 2010

Mr. John W. Grace, Chief  
Maryland Department of the Environment  
Source Protection and Appropriation Division  
Water Supply Program  
1800 Washington Boulevard, Suite 450  
Baltimore, Maryland 21230

**RE: Request for Renewal of Water Appropriations and Use Permits  
BA2006G003(02) and BA2006103(01)  
Inactive Exxon Facility #28077  
14258 Jarrettsville Pike  
Phoenix, Baltimore County, Maryland**

Dear Mr. Grace:

Kleinfelder East Inc. (Kleinfelder), on behalf of ExxonMobil Environmental Services Company (ExxonMobil), requests renewal of Water Appropriations and Use Permits (WAP) BA2006G003(02) – Green Branch Basin and BA2006103(01) – Sawmill Branch Basin. The request is for the permits to be supplemental with a combined allocation of 86,400 gpd on a yearly basis. This permit request is in accordance with the Maryland Department of the Environment's (MDE) Permit Guide section 3.15 entitled "Water Appropriation and Use Permit" (**Attachment A**).

Remediation activities, which include groundwater recovery, are being completed at this site under a Consent Decree between the State of Maryland and Exxon Mobil Corporation dated September 11, 2008, and in accordance with the Corrective Action Plan (CAP) dated January 2, 2009, which was approved by the MDE Oil Control Program on June 10, 2009. Per the CAP, groundwater recovery is being conducted at the above-referenced site (**Figure 1**) to maintain hydraulic capture and recover dissolved phase hydrocarbon constituents. To meet these goals, groundwater recovery wells withdraw water from Green Branch Basin and Sawmill Branch Basin (**Figure 2**). Currently, WAP BA2006G003(02) – Green Branch Basin allows for a yearly average withdraw of 23,200 gpd and a month of maximum use of 33,600 gpd from up to 60 recovery wells. WAP BA2006103(01) – Sawmill Branch Basin allows for a yearly average of 34,800 gpd and a month of maximum use of 50,500 gpd for the month of maximum use from up to 40 recovery wells.

Until recently, the remediation efforts have been operating in a "dry year" condition as evaluated and described in Kleinfelder's October 2006 *Request for Permit to Appropriate and Use Waters of the State*<sup>1</sup>. However, recent increases in precipitation and corresponding increases in regional groundwater elevation have created a "wet year" condition (also

<sup>1</sup> Kleinfelder, October 2006. Request for Permit to Appropriate and Use Waters of the State. Exxon RAS #2-8077, 14258 Jarrettsville Pike, Phoenix, Maryland.



evaluated and described in Kleinfelder's October 2006 permit request). The "wet year" condition has led to higher withdraw flow rates. The January and February 2010 flow rates were both above the average yearly gpd allocation, approximately 73,550 gpd (33,160 gpd for Green Branch Basin and 40,390 gpd for Sawmill Branch Basin) and 62,850 gpd (29,060 gpd for Green Branch Basin and 33,790 gpd for Sawmill Branch Basin) respectively. Similarly, the March 2010 groundwater withdraw flow rates recorded thus far average to 63,940 gpd (31,660 gpd for Green Branch Basin and 32,280 gpd for Sawmill Branch Basin).

In Kleinfelder's October 2006 *Request for Permit to Appropriate and Use Waters of the State*, the estimated average groundwater recovery rate for the "wet year" condition was 86,400 gpd. This value was based on actual groundwater recovery rates corresponding to precipitation in excess of usual quantities.

From November 2006 through November 2009, below normal precipitation in the area of the site was recorded (**Attachment B**). Beginning in December 2009, above normal precipitation has been observed. Similarly, from June 2007 through August 2009 below normal regional groundwater elevation was recorded (**Attachment C**). In September and October 2009 regional groundwater elevations were measured to be within the normal range; and more recently, beginning in November 2009, above normal regional groundwater elevation has been observed. As a result of the increase in precipitation and regional groundwater elevation, the remediation system groundwater recovery rates have also increased as more groundwater is being drawn into the pumps to meet the remediation system objectives defined in the CAP. **Attachment D** presents the monthly groundwater withdrawal rates through February 2010.

Therefore, due to the recent increase in precipitation, higher than normal regional groundwater elevations, and corresponding increased groundwater recovery rates, the requested combined allocation for renewal of WAP BA2006G003(02) – Green Branch Basin and WAP BA2006103(01) – Sawmill Branch Basin is 86,400 gpd. Both permits are currently supplemental to each other and are requested to remain supplemental upon renewal. Approximately 53% (45,792 gpd) of this flow corresponds to recovery under WAP BA2006103(01) – Sawmill Branch Basin. Approximately 47% (40,608 gpd) of this flow corresponds to recovery under WAP BA2006G003(02) – Green Branch Basin. The expected peak flow rate for a "wet year" condition, as addressed in Kleinfelder's October 2006 *Request for Permit to Appropriate and Use Waters of the State*, is 124,000 gpd during the month of maximum use: 65,720 gpd for WAP BA2006103(01) – Sawmill Branch Basin and 58,280 gpd for WAP BA2006G003(02) – Green Branch Basin.

Kleinfelder, on behalf of ExxonMobil, also requests that Condition 19 of WAP BA2006G003(02) – Green Branch Basin, addressing 14240 Jarrettsville Pike (Jacksonville Animal Hospital) and 3300 Whitesworth Road (Heggie Property) be removed from the permit upon renewal. As stated in Kleinfelder's July 18, 2008 *Water Supply Investigation Results for 14240 Jarrettsville Pike*<sup>2</sup>, the investigations at 14240 Jarrettsville Pike do not support the conclusion that the nearby groundwater remediation activities have caused diminished yield from the private supply well at 14240 Jarrettsville Pike. Furthermore, the water supply issue at 14240 Jarrettsville Pike was resolved in June 2009 by increasing the storage tank capacity (see Kleinfelder's June 16, 2009 *Water Storage Capacity Upgrade for 14240 Jarrettsville Pike*<sup>3</sup>). As addressed in Kleinfelder's March 26, 2010 *Heggie Property - 4 Pond Investigation*


<sup>2</sup> Kleinfelder, July 18, 2008. *Water Supply Investigation*. Jacksonville Veterinary Hospital, 14240 Jarrettsville Pike, Phoenix, Maryland.


<sup>3</sup> Kleinfelder, June 16, 2009. *Water Storage Capacity Upgrade*. Jacksonville Veterinary Hospital, 14240 Jarrettsville Pike, Phoenix, Maryland, Permit BA2006G003(02).

*Monitoring Data Report*<sup>4</sup>, fluctuation in the pond water at 3300 Whitesworth Road is controlled by regional fluctuations in groundwater and is not a result of remediation activities. Additionally, the water levels recorded in the ponds in December 2009 were at above normal conditions, with all four ponds discharging.

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

Sincerely,  
**Kleinfelder East, Inc.**

  
Jeffery R. Hale, P.G.  
Principal Hydrogeologist

  
Mark J. Schaaf, CPG  
Project Director

## ATTACHMENTS

Figure 1 Site Location Map  
Figure 2 Topographic Map

Attachment A Application to Appropriate and Use Waters of the State – Change in Existing Permits BA2006G003(02) – Green Branch Basin and BA2006103(01) – Sawmill Branch Basin Permits

Attachment B Monthly Precipitation and Regional Groundwater Elevation Chart

Attachment C USGS Well BA CE 21 Chart

Attachment D Average Monthly Groundwater Recovery (gpd) Chart

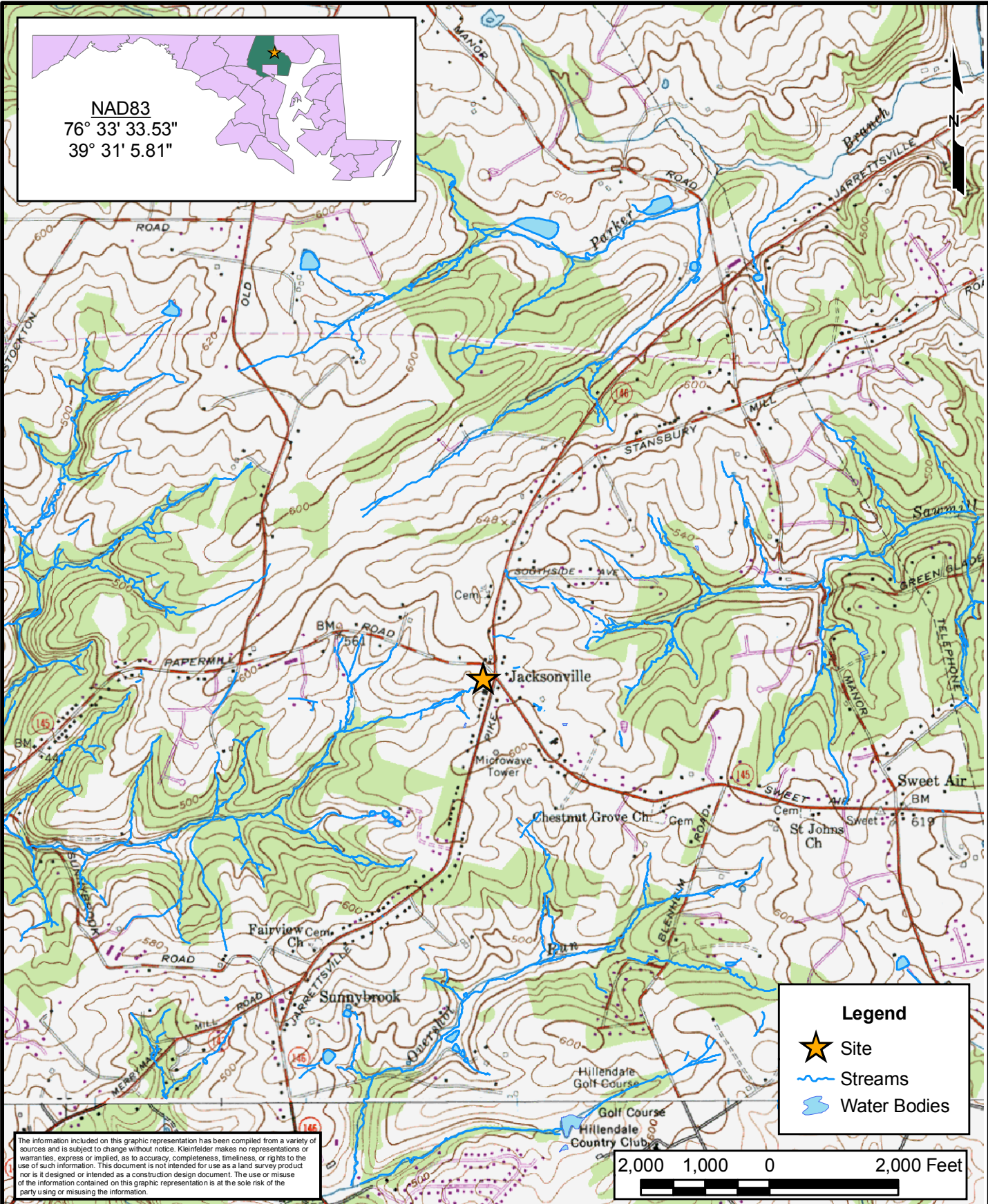
cc: Mr. James F. Medlin - Exxon Mobil Corporation (Kleinfelder File)  
Ms. Celeste S. Quiralte, Esquire - Exxon Mobil Corporation  
Mr. Chris Ralston - Maryland Department of the Environment  
Ms. Ellen Jackson - Maryland Department of the Environment  
Mr. Greg Martin - Roux Associates, Inc.  
Mr. Carlos Bollar, Esquire - Archer & Greiner, P.C.  
Ms. Sasha McNeeley, Esquire - Snyder, Weltchek & Snyder  
Mr. Theodore M. Flerlage, Esquire - Law Offices of Peter Angelos

<sup>4</sup> Kleinfelder, <<insert date when final>>. Heggie Property – 4 Pond Monitoring Investigation Data. 3300 Whitesworth Road, Phoenix, Maryland, Permit BA2006G003(02)

## FIGURES

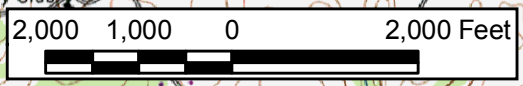


NAD83  
 76° 33' 33.53"  
 39° 31' 5.81"



**Legend**

- Site
- Streams
- Water Bodies



The information included on this graphic representation has been compiled from a variety of sources and is subject to change without notice. Kleinfelder makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a land survey product nor is it designed or intended as a construction design document. The use or misuse of the information contained on this graphic representation is at the sole risk of the party using or missing the information.

G:\Projects\0507606-8077\Projects\Study Area Maps\Fig1\_Site\_Loc\_Map\_8X11.mxd

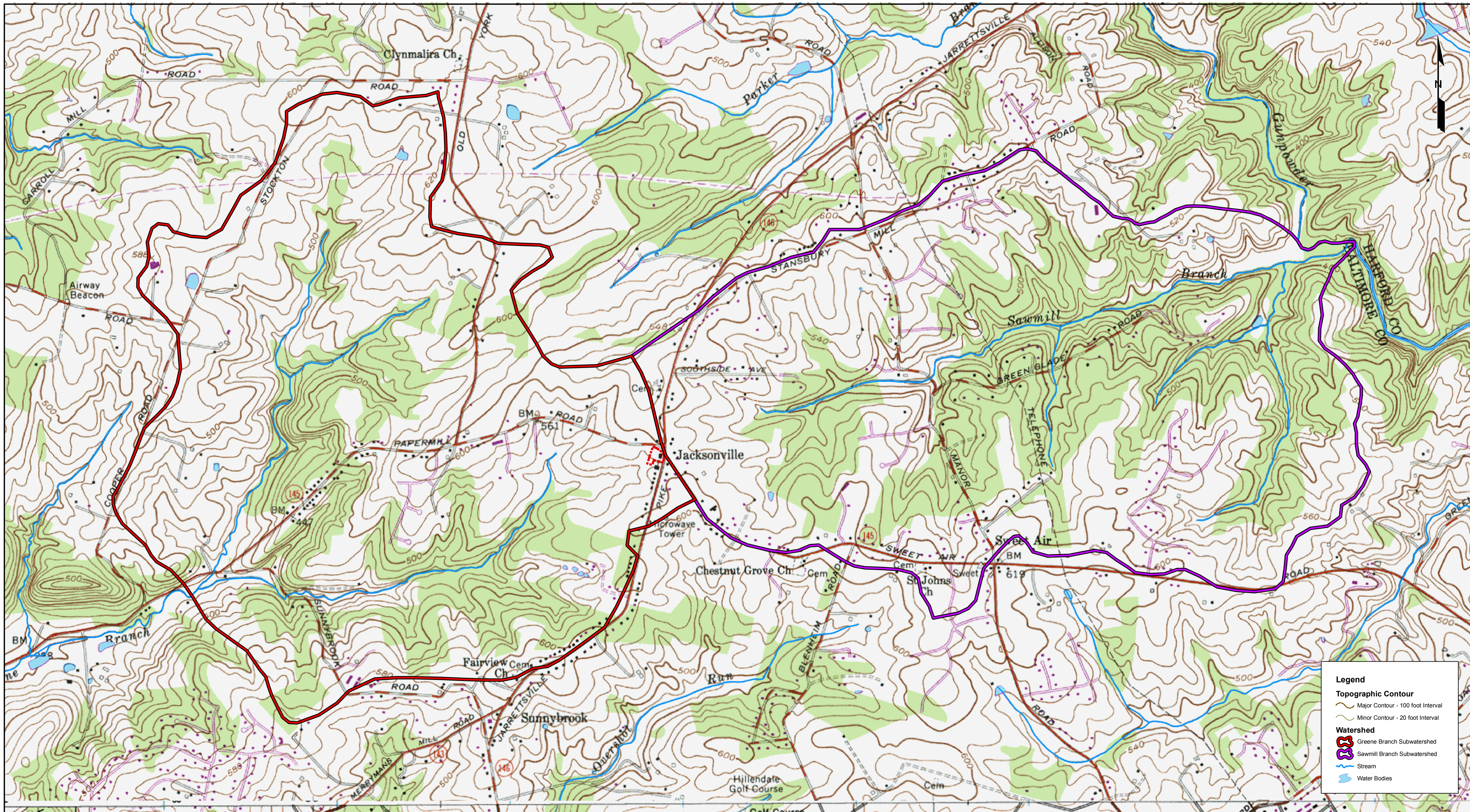
PROJECT NO.	108818
DRAWN:	03/15/10
DRAWN BY:	B. MYERS
CHECKED BY:	K. BRAUN
FILE NAME:	Fig1_Site_Loc_Map_8X11.mxd

**SITE LOCATION MAP**

INACTIVE EXXON FACILITY #28077  
 14258 JARRETTSVILLE PIKE  
 PHOENIX, MARYLAND

FIGURE  
**1**





**Legend**

**Topographic Contour**

- Major Contour - 100 foot Interval
- Minor Contour - 20 foot Interval

**Watershed**

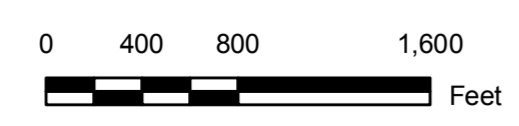
- Greene Branch Subwatershed
- Sawmill Branch Subwatershed

**Stream**

- Stream

**Water Bodies**

- Water Bodies



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 engineering or other professional services. The user assumes all responsibility for the use of this information. This document is not intended for use as a permit or license to practice engineering or other professional services. The user assumes all responsibility for the use of this information.

**KLEINFELDER**  
Bright People. Right Solutions.

1340 Charwood Road, Suite 1  
Hanover, Maryland 21076  
11866.962.9700  
1410.850.0049

www.kleinfelder.com

PROJECT NO.	108818
DRAWN:	03/15/10
CHECKED BY:	B. Myers
FILE NAME:	Fig2_TopoMap_WaterShed_36x22.mxd

<b>TOPOGRAPHIC MAP</b>	
INACTIVE EXXON FACILITY #28077 14258 JARRETTSVILLE PIKE PHOENIX, MARYLAND BALTIMORE COUNTY	

FIGURE  
**2**



## **ATTACHMENT A**

Renewal BA2006G003(02) - Green Branch Basin (Supplemental to Sawmill Branch Basin BA2006G103(01))

**APPLICATION TO APPROPRIATE AND USE WATERS OF THE STATE**

New Application       Change in Existing Permit      Application Number \_\_\_\_\_

<b>APPLICATION</b>	
Exxon Mobil Corporation c/o James F. Medlin	843-238-0865
(Owners Name)	(Daytime Phone Number)
1413 Highway 17 South, 183	Surfside Beach, South Carolina 29575-6090
(Mailing Address)      (Street)	(City)      (State)      (Zip Code)
<p align="center"><b>WITHDRAWAL of GROUNDWATER</b></p> Appropriate and use an annual average of <u>40,608</u> Gallons per day, and (Total Annual Use / 365) <u>58,280</u> gallons per day during (Highest Monthly Use / 30 ) month of maximum use, from <u>60</u> wells, having a diameter of <u>2-6</u> inches, and a depth of <u>48 (average)</u> feet (Estimate)      (Estimate)	<p align="center"><b>WITHDRAWAL of SURFACE WATER</b></p> Appropriate and use an annual average of _____gallons per day, and a maximum use (Total Annual Use / 365) of _____gallons in any one day, from _____ (Name of Stream or Waterway ) _____ (Exact Location of Intake)
<b>PROJECT LOCATION</b>	
14258 Jarrettsville Pike, Phoenix, MD	Tax Map 35, Grid 24, Parcel 185
(STREET ADDRESS – MAP DIRECTIONS – ADC PAGE/GRID – TAX MAP PAGE/GRID/PARCEL)	
County <u>Baltimore</u> Subdivision or Town <u>Phoenix</u>	Phone Number <u>410-850-0404</u>
Name and Type of Business <u>ExxonMobil Corporation Groundwater Remediation Facility</u>	
<b>SUBDIVISIONS MUST INCLUDE PLAT - ALL PROJECTS MUST INCLUDE LOCATION MAP</b>	
<p><b>PURPOSE</b></p> The water will be used for: <input type="checkbox"/> Community Water Supply <input type="checkbox"/> Non-Potable Supply (sanitary non Drinking Water) <input type="checkbox"/> Potable Supply <input type="checkbox"/> Cooling Water <input type="checkbox"/> Irrigation <input type="checkbox"/> Process Water <input checked="" type="checkbox"/> Other, explain <u>Groundwater Remediation</u>	<p align="center"><b>WASTEWATER TREATMENT AND DISPOSAL</b></p> <input type="checkbox"/> Public Sewer <input type="checkbox"/> Groundwater <input type="checkbox"/> Subsurface (Tilefield, Seepage Pit etc.) <input type="checkbox"/> Spray Irrigation <input type="checkbox"/> Other, Explain _____ <input checked="" type="checkbox"/> Surface Water <u>unnamed tributary of Green Branch Basin</u> (Name of stream) DISCHARGE PERMIT # 2008-OGR-9826 NPDES# MDG919826
<p><b>SIGNATURE</b> <u>James F. Medlin</u></p> James F. Medlin      Project Manager <u>3/29/0</u> PRINT      (NAME)      (TITLE)      (DATE)	<p><b>THIS APPLICATION WILL NOT BE                  PROCESSED WITHOUT A SIGNATURE                  AND LOCATION MAP</b></p>
<b>REVIEW BY COUNTY ENVIRONMENTAL HEALTH OR DESIGNATED AGENCY</b>	
<b>THIS SECTION NOT TO BE COMPLETED BY APPLICANT</b>	
IS PROJECT CONSISTANT WITH THE COUNTY WATER AND SEWER PLAN AND LOCAL PLANNING AND ZONING?	
<input type="checkbox"/> YES <input type="checkbox"/> NO, Explain _____	
Signature of County Representative _____	
(Signature)	(Title)      (Date)



Renewal BA2006G103(01) - Sawmill Branch Basin (Supplemental to Green Branch Basin BA2006G003(02))

**APPLICATION TO APPROPRIATE AND USE WATERS OF THE STATE**

New Application       Change in Existing Permit

Application Number \_\_\_\_\_

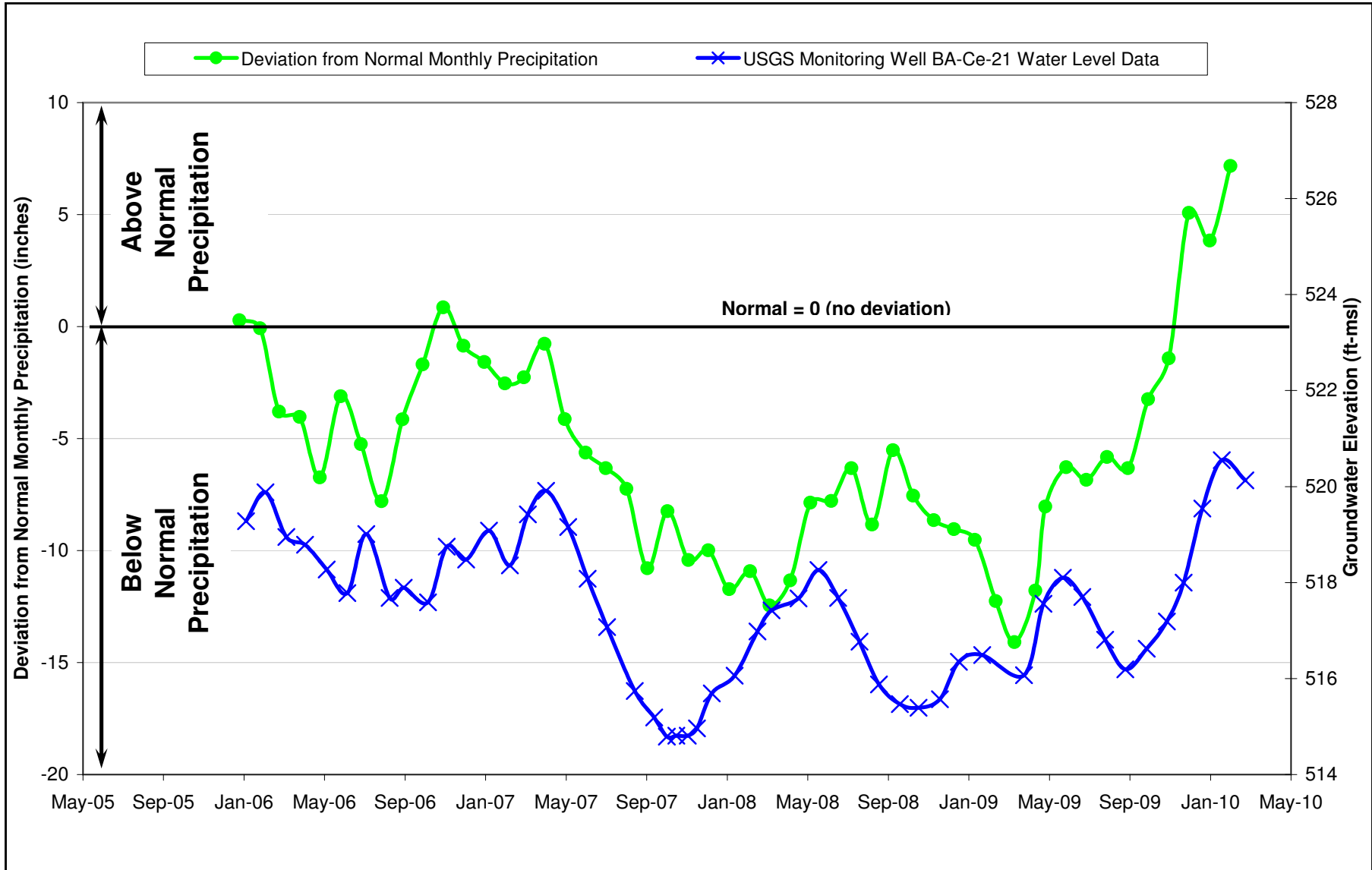
<b>APPLICATION</b>	
Exxon Mobil Corporation c/o James F. Medlin	843-238-0865
(Owners Name)	(Daytime Phone Number)
1413 Highway 17 South, 183	Surfside Beach, South Carolina 29575-6090
(Mailing Address)      (Street)	(City)      (State)      (Zip Code)
<p><b>WITHDRAWAL of GROUNDWATER</b>                  Appropriate and use an annual average of  <u>45,792</u> Gallons per day, and                  (Total Annual Use / 365)  <u>65,720</u> gallons per day during                  (Highest Monthly Use / 30 )                  month of maximum use, from <u>40</u> wells, having a                  diameter of <u>2-10</u> inches, and a depth of <u>62 (average)</u> feet                  (Estimate)      (Estimate)</p>	<p><b>WITHDRAWAL of SURFACE WATER</b>                  Appropriate and use an annual average of                  _____gallons per day, and a maximum use                  (Total Annual Use / 365)                  of _____gallons in any one day, from                  _____                  (Name of Stream or Waterway )                  _____                  (Exact Location of Intake)</p>
<b>PROJECT LOCATION</b>	
14258 Jarrettsville Pike, Phoenix, MD	Tax Map 35, Grid 24, Parcel 185
(STREET ADDRESS – MAP DIRECTIONS – ADC PAGE/GRID – TAX MAP PAGE/GRID/PARCEL)	
County <u>Baltimore</u>	Subdivision or Town <u>Phoenix</u> Phone Number <u>410-850-0404</u>
Name and Type of Business <u>ExxonMobil Corporation Groundwater Remediation Facility</u>	
<b>SUBDIVISIONS MUST INCLUDE PLAT - ALL PROJECTS MUST INCLUDE LOCATION MAP</b>	
<p><b>PURPOSE</b>                  The water will be used for:  <input type="checkbox"/> Community Water Supply  <input type="checkbox"/> Non-Potable Supply (sanitary non Drinking Water)  <input type="checkbox"/> Potable Supply  <input type="checkbox"/> Cooling Water  <input type="checkbox"/> Irrigation  <input type="checkbox"/> Process Water  <input checked="" type="checkbox"/> Other, explain <u>Groundwater Remediation</u></p>	<p><b>WASTEWATER TREATMENT AND DISPOSAL</b>  <input type="checkbox"/> Public Sewer  <input type="checkbox"/> Groundwater  <input type="checkbox"/> Subsurface (Tilefield, Seepage Pit etc.)  <input type="checkbox"/> Spray Irrigation  <input type="checkbox"/> Other, Explain _____  <input checked="" type="checkbox"/> Surface Water <u>unnamed tributary of Sawmill Branch Basin</u>                  (Name of stream)                  DISCHARGE PERMIT # 2008-OGR-9826 NPDES# MDG919826</p>
<p><b>SIGNATURE</b> <u>James F. Medlin</u>                  James F. Medlin      Project Manager      <u>3/29/10</u>                  PRINT      (NAME)      (TITLE)      (DATE)</p>	<p><b>THIS APPLICATION WILL NOT BE                  PROCESSED WITHOUT A SIGNATURE                  AND LOCATION MAP</b></p>
<b>REVIEW BY COUNTY ENVIRONMENTAL HEALTH OR DESIGNATED AGENCY</b>	
<b>THIS SECTION NOT TO BE COMPLETED BY APPLICANT</b>	
IS PROJECT CONSISTANT WITH THE COUNTY WATER AND SEWER PLAN AND LOCAL PLANNING AND ZONING?	
<input type="checkbox"/> YES <input type="checkbox"/> NO, Explain _____	
Signature of County Representative _____ (Signature)      (Title)      (Date)	



**ATTACHMENT B**



**Attachment B**  
**Monthly Precipitation and Regional Groundwater Elevation**  
 Inactive Exxon Facility #28077  
 14258 Jarrettsville Pike  
 Phoenix, Maryland

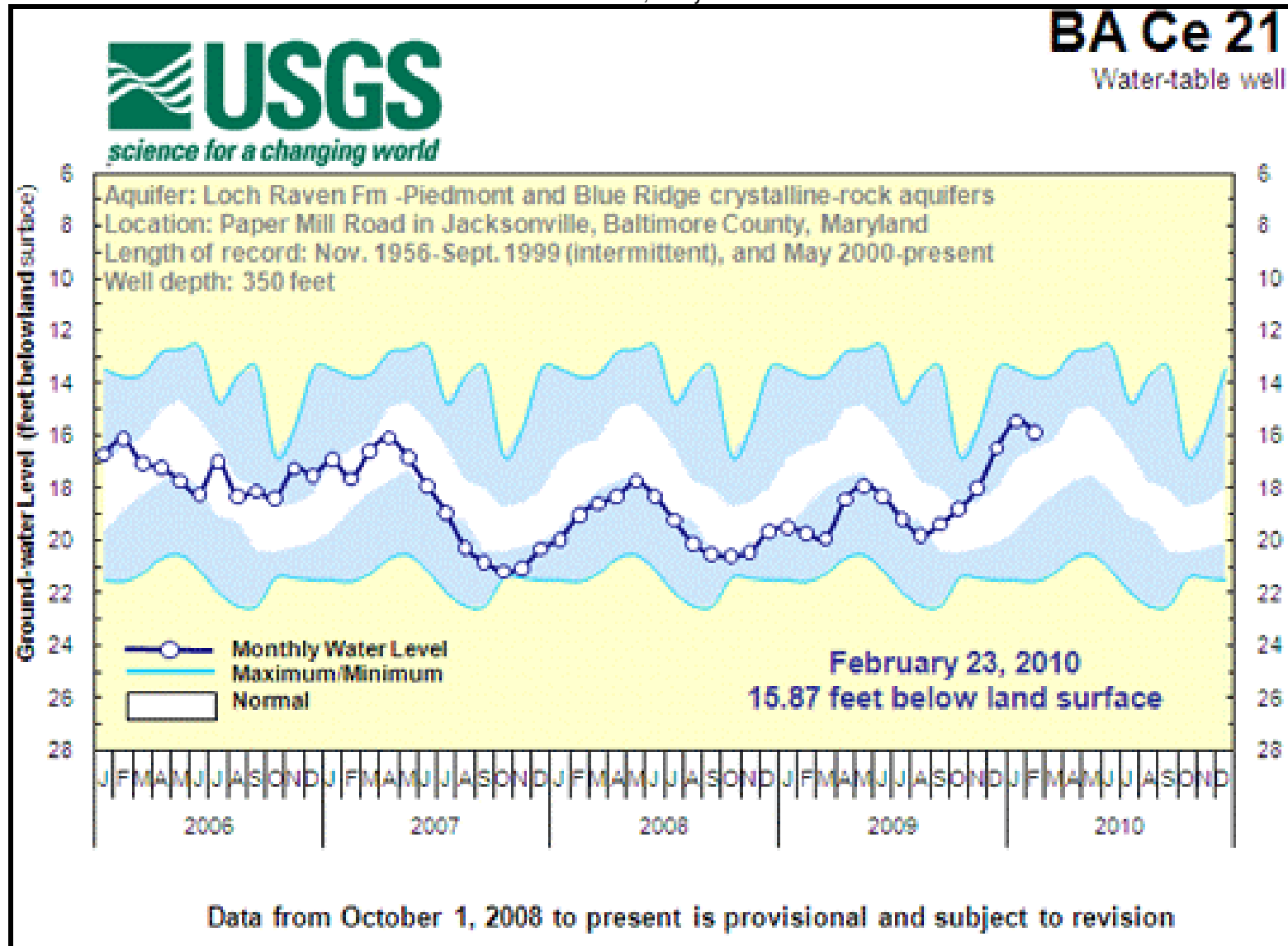




## **ATTACHMENT C**



Attachment C  
USGS Well BA CE 21  
Inactive Exxon Facility #28077  
14258 Jarrettsville Pike  
Phoenix, Maryland



**ATTACHMENT D**



Attachment D  
Average Monthly Groundwater Recovery (gpd)  
BA2006G003 and BA2006G103  
Inactive Exxon Facility #28077  
14258 Jarrettsville Pike  
Phoenix, Maryland

