

west virginia department of environmental protection

Office of Oil and Gas 601 57th Street, S.E. Charleston, WV 25304 (304) 926-0450 fax: (304) 926-0452

Austin Caperton , Cabinet Secretary www.dep.wv.gov

Tuesday, February 13, 2018 WELL WORK PERMIT Vertical / New Drill

HG ENERGY, LLC 5260 DUPONT ROAD

PARKERSBURG, WV 26101

Re: Permit approval for ROBERT FOWLER NO. 506

47-043-03581-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0450.

James A. M. Chief

Operator's Well Number: ROBERT FOWLER NO. 506

Farm Name: ANDY & REBECCA MCCLURE U.S. WELL NUMBER: 47-043-03581-00-00

Vertical / New Drill

Date Issued: 2/13/2018

Promoting a healthy environment.

PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

- 1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
- Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
- 3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
- 4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
- 5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
- 6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours
- 7. Well work activities shall not constitute a hazard to the safety of persons.
- 8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced, drilling ceased, completion of any other permitted well work and completion of the well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

FORM WW-3 (B) 1/12



1)	Date:	11/29/20	17						
2)	Operator	's Well	No.	Rob	ert Fowler 506				
3)	API Wel	l No.:	47	-	Lincoln	-	s		
			State	-	County			Permit	_
4)	UIC Perr	nit No.	UIC2I	R0430	2AP				

STATE OF WEST VIRGINIA NOTICE OF LIQUID INJECTION OR WASTE DISPOSAL WELL WORK PERMIT APPLICATION FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

5) WELL TYP		d Injectio	n 🗸	/		ction (not storage tershed: Por	ge)	/ W	aste Disposal	
6) LOCATION	I: Elevation District					unty Lincoln	lei Fork	Ouedron	gle Griffithsville 7	7.51
7) WELL OPE			C		Col	8) DESIGNA	TED ACE			.5
		260 Dupont F			-	o) DESIGNA	Addres		ont Road	
F		arkersburg, \					Addres	350 E	urg, WV 26101	
9) OIL & GAS				ED		10) DRILLIN	IC CONTR		uig, WV 20101	
,	ery Smith	KIODE	NOTIFI	ED				d Upon Approva	l of Permit	
	9 Big Tyler Road	ı				Address	De Determine	г орон Арргоча	TOT PETITIE	
	ss Lanes, WV 25					Address				
Cio	SS Lailes, WV 20	13 13				-				
11) PROPOSE12) GEOLOGI			Other p	hysical		leeper Perfo / Perfo vell (specify) Depth			/ Stimu Con	
13) Estimated	Depth of Cor	nnleted V	Vell (or a	ctual de	onth of exist	ting well): 272		Feet	10 2000 1	cci (bottom)
14) Approxima					pui oi exist		Salt		Feet	
15) Approxima			417'			_ 1 001	Dair _		1001	
16) Is coal being					No					
17) Virgin rese				on 1250	– rio psig	Source	Estimated			
18) Estimated					Pore	5			nsis	g (BHFP)
					IONS: V	olume per hou	r 25 BBL	Bottom h	nole pressure	2400 psi
									S Fresh water, p	
						prove oil recovery.				
21) FILTERS	(IF ANY)	artridge filte	rs and charc	oal bed fill	ers					
						OTHER COR	ROSION C	ONTROL		
23) CASING AN	ND TUBING I	PROGRAM	М						Offi	RECEIVED
CASING OR		SPECIFICATIONS			FOOTAGE IN	TERVALS	CEMENT	PACK	ZEDG Oll and	
TUBING TYPE	Size	Grade	Weight	New	Used	For Drilling	Left In	FILL –UP	JA	N 1 8 2018
			per ft.				Well	OR SACKS		1 0 2018
								(CU. FT.)	ENWI	Denam
Conductor									Kinds	Department of nental Protection
Fresh Water	7"	LS	17#	x		465'	465'	CTS		· Otection
Coal									Sizes	
Intermediate									2.3	75"
Production	4 1/2"	J-55	10.5#	x		2700'	2700'	150	Depths set	
Tubing	2 3/8"	J-55	4.6#	×		2470'	2470'		237	70'
Liners									Perforations	
									Тор	Bottom
24) APPLICA										
by deed _	/ 10	ease _x	/	other co	ontract	/ dated	06/18/1904	9	of r	ecord in the
Lincoln		C	ounty Cle	erk's of	fice in Lea	ise		Book 36	Pac	ge 96



FORM WW-3 (A) 1/12



1)	Date:	December	1, 2017					
2)	Operato	r's Well	No.	Robert I	Fowler 506			
3)	API We	ll No.:	47	-		-		
			State		County	_	Permit	_
4)	UIC Per	mit No.	UIC2F	R04302AF				

STATE OF WEST VIRGINIA NOTICE OF LIQUID INJECTION OF WASTE DISPOSAL WELL WORK PERMIT APPLICATION FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS,

TONTH	E DEI ARTHER TOT EN TROPIN	LI VIIIL II	to i Le i ioi i, i	office of one and one,		
5) Surface Own	ner(S) To Be Served	7) (a) Coal	Operator			
(a) Name	Andy & Becky McClure	Name	NA			
Address	109 Coon Whistle Hollow	Address	-			
	Yawkey, WV 25573	_				
(b) Name		7) (b) Coal	Owner(S) With D	eclaration Of Record		
Address		Name	NA			
		Address				
(c) Name	7	Name	NA			
Address		Address				
6) Inspector	Jeffery Smith	7) (c) Coal	Lessee with Decla	ration Of Record		
Address	5369 Big Tyler Road	Name	NA			
	Cross Lanes, WV 25313	Address	10000000			
Telephone	681-313-6743		61			
(1) The Appliparties inv (2) The plat (s	ERSONS NAMED ABOVE: You slication For A Liquid Injection or Waste volved in the drilling or other work; surveyor's map) showing the well location trustion and Baslamatica Plan on Form W	Disposal We on Form WV	II Work Permit or V-6; and	n Form WW-3(B), which sets out the		
	truction and Reclamation Plan on Form Worsion and sediment control and for reclam					
The date	proposed for the first injection or wast	e disposal is		20 17 .		
APPLICATION	YOU HAVE RECEIVED THESE DO WHICH ARE SUMMARIZED IN THE TION [(FORM WW-3(B)] DESIGNATE LL.	E "INSTRUC	TIONS" ON THE	REVERSE SIDE OF THE COPY OF		
Notice and App West Virginia Application and and Reclamation	t under Chapter 22-6 of the West Virginia plication and accompanying documents to Department of Environmental Protection depicted on the attached Form WW-6. In Plan have been mailed by registered or in certain circumstances) on or before the contract of	or a Well Wo n, with respect Copies of this certified mai	ork Permit with the ct to a well at the s Notice, the Appl I or delivered by I	e Chief of the Office of Oil and Gas, e location described on the attached ication, the plat, and the Construction and to the person(s) named above (or		
	The person signing this docum	nent shall ma	ake the following	g certification:		
			Well Operator	JAN 18 2010		
	penalty of law that I have personally exam		Address	HG Energy, LLC 5260 Dupont Road WV Department of Parkersburg, WV 26101 Parkersburg, WV 26101		
	h the information submitted in this document that have done my inquiry of those individual		Address	Parkershurg WV 26101		
	that, based on my inquiry of those individually the information. It		Devi			
	sponsible for obtaining the information, I be is true, accurate and complete. I am awar		By:	Diane White		
			Its:	Agent		
	are significant penalties for submitting false information, including the possibility of fine and imprisonment. Signature:					

WW-2B1	
(5-12)	

Well No. Robert Fowler 506

West Virginia Department of Environmental Protection Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name Sampling Contractor		Sturm Environmental Lab	
		Sturm Environmental Lab	
			Office of Oil and Gas
Well Operator	HG Energy, LL0	<u></u>	JAN 1 8 2018
Address	5260 Dupont Ro	ad	- W/C
	Parkersburg, W	V 26101	Environmental C
Telephone	34-420-1119		Environmental Frotection

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

* No water sources within 1000 feet. There is a water (Andy and Becky McClure) which has been recently tested approximately 1200 feet from the proposed site.

WW-9 (2/15)

API Number 47	-
Operator's Well No.	Robert Fowler 506

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN
Operator Name HG Energy, LLC OP Code 494497948
Watershed (HUC 10) Porter Fork Quadrangle Griffithsville 7.5'
Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No Vill a pit be used? Yes No Fluids encountered while drilling production well
Proposed Disposal Method For Treated Pit Wastes: Land Application Underground Injection (UIC Permit Number) Reuse (at API Number) Off Site Disposal (Supply form WW-9 for disposal location) Other (Explain_No land application of fluids
Will closed loop system be used? If so, describe: NA
Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. Air, freshwater
-If oil based, what type? Synthetic, petroleum, etc. NA
Additives to be used in drilling medium? Water, soap, KCI
Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Remove offsite to approved facility
-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) NA
-Landfill or offsite name/permit number?
Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant, penalties for submitting false information, including the possibility of fine or imprisonment.
Company Official Signature Environmental Signature
Company Official (Typed Name) Diane White Diane White
Company Official Title Agent
Subscribed and sworn before me this 1st day of December , 20 17 Notary Public STATE OF WEST WIND MARK J SCHALL MG Energy LLC PO Box 55 19, Vienna, W 2810 My Commission Expires 11 / 2 / 20 2 Wy Commission Expires November 2

Form WW-9

HG Energy, LLC		Operators w	Vell No. Robert Fowler 506
Proposed Revegetation Trea	atment: Acres Disturbed 1.0	Prevegetation pl	Н Н
Lime	3 Tons/acre or to correct to p	_{oH} 6.5	
Fertilizer type 10-	-20-20 ±		
Fertilizer amount_	500	_lbs/acre	
Mulch_ Straw	2 _{Tons}	s/acre	
	Se	eed Mixtures	
T	emporary	Perma	nnent
Seed Type	lbs/acre	Seed Type	lbs/acre
Tall Fescue	40	Tall Fescue	40
Ladino Clover	5	Ladino Clover	5
. 1 1)	, 1	application (unless engineered plans in	cluding this info have been
Photocopied section of invo	olved 7.5' topographic sheet.	application (unless engineered plans in	cluding this info have been
Photocopied section of invo	Sedinent Can	trol to be remov	
Plan Approved by:	olved 7.5' topographic sheet.		Critice of Oil and Ga
Photocopied section of invo	Sedinent Can		FECEIVED Citice of Oil and G

WW-9- GPP Rev. 5/16

Page	of
API Number 47 -	•
Operator's Well No. Rot	pert Fowler 506

STATE OF WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OFFICE OF OIL AND GAS GROUNDWATER PROTECTION PLAN

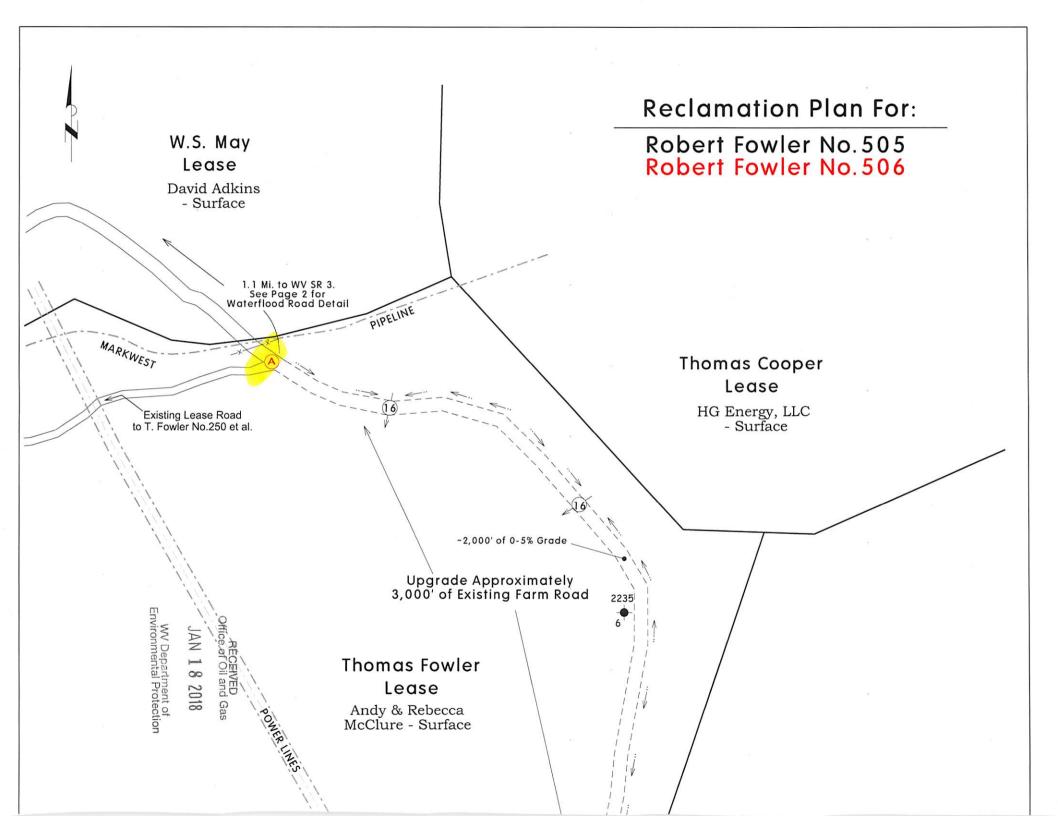
GROUNDWAT	TER PROTECTION PLAN
perator Name: HG Energy, LLC	
atershed (HUC 10): Porter Fork	Quad: Griffithsville 7.5'
rm Name: Robert Fowler	
List the procedures used for the treatment and discha groundwater.	arge of fluids. Include a list of all operations that could contaminate the
NA - No land application of fluids	
Describe procedures and equipment used to protect gr	roundwater quality from the list of potential contaminant sources above.
NA	
List the closest water body, distance to closest water discharge area.	er body, and distance from closest Well Head Protection Area to the
NA	
	RECEIVED
	Office of Oil and Gas
Summarize all activities at your facility that are alread	JAN 18 2018
Summing the decrease of the summer that are direct	WV Department of Environmental Protection
NA	

5. Discuss any existing groundwater quality data for your facility or an adjacent property.

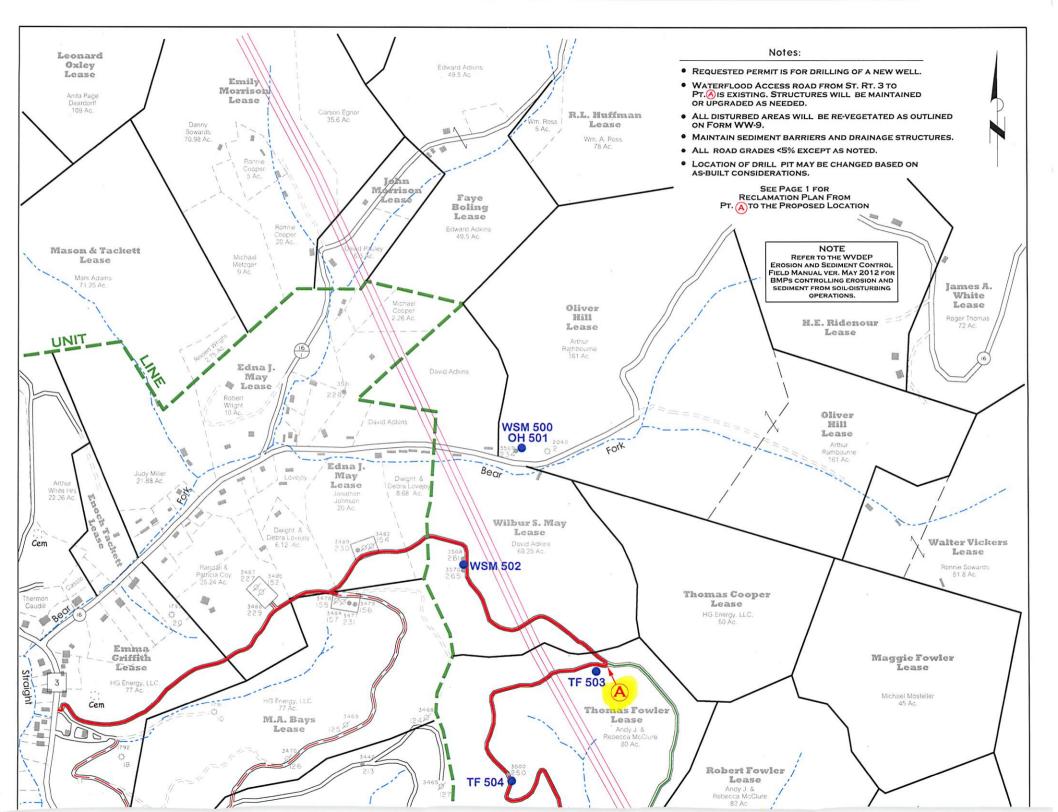
WW-9- GPP API Number 47 -Rev. 5/16 Operator's Well No. Robert Fowler 506 NA 6. Provide a statement that no waste material will be used for deicing or fill material on the property. NA 7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination. NA

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

	• •
NA	Office of Dil and Gas
	Office of Dil and Gas JAN 1 8 2018
	₩ V Department of Environmental Protection
Signature: Diane White	
Date: December 1, 2017	



4704303581





GRIIFTHSVILLE WATERFLOOD

Lincoln County, W.Va.

RECLAMATION PLAN SHOWING ROAD SYSTEMS TO BE USED FOR 2018 **DRILLING PROGRAM**

PAGE 2

- 1. REFER TO THE WVDEP EROSION AND SEDIMENTATION CONTROL MANUAL (VER. MAY 20, 2013) FOR BMP'S CONTROLLING **EROSION AND SEDIMENTATION FROM ALL** SOIL-DISTURBING OPERATIONS.
- 2. SEE PAGE ONE OF RECLAMATION PLAN FOR DETAILS OF NEW ROAD CONSTRUCTION AND ROAD UPGRADES FROM POINT A TO DRILL SITE LOCATION.
- 3. EXISTING WATERFLOOD ACCESS ROADS WILL BE MAINTAINED IN PRESENT CONDITION. THESE ROADS WERE CONSTRUCTED UNDER CONDITIONS SET FORTH IN VARIOUS DRILLING PERMITS ISSUED BY WVDEP-OOG PRIOR TO 2015 (As Shown). SEE PERMITS ON FILE FOR MORE DETAIL.

ROADS TO BE USED.

170430

OTHER EXISTING MAIN WATERFLOOD ROADS (Possible Access).

EXISTING LEASE OR FARM ROADS TO BE UPGRADED.

NEW ROADS TO BE CONSTRUCTED.

RF 505 LOCATION FOR PROPOSED WELLS

> POTENTIAL WATER SUPPLY SOURCE TO BE SAMPLED (LOC. APPROX.)

NOVEMBER 14, 2017

