

Richard L. Atkinson  
221 Deer Lane  
DuBois, PA 15801  
814-583-7926  
[Marianne5@windstream.net](mailto:Marianne5@windstream.net)

RE: Windfall Oil & Gas, Inc.  
Permit # PAS2D020BCLE  
PERMITTED FACILITY: Class II-D injection well, Zelman #1

Clerk of the Board  
U.S. Environmental Protection Agency  
Environmental Appeals Board  
1200 Pennsylvania Avenue, NW  
Mail Code 1103M  
Washington, DC 20460-0001

June 23, 2015

Dear Clerk Durr,

I am submitting this MOTION FOR RECONSIDERATION OF EAB ORDER DENYING PETITIONS FOR REVIEW of UIC Permit # PAS2D020BCLE for Windfall Oil & Gas to construct and operate the Zelman #1 Class II Disposal Injection well.

This MOTION FOR RECONSIDERATION OF EAB ORDER DENYING PETITIONS FOR REVIEW of UIC Permit # PAS2D020BCLE complies with word limitations. I did participate in the public hearing and the two public comment periods regarding UIC Permit # PAS2D020BCLE.

Sincerely,

/s/ Richard L. Atkinson

Richard L. Atkinson

Home owner with a private water well 892 feet away from proposed Windfall DIW.



# Table of Contents and Authorities

## Federal Regulations:

40 CFR §124.19 (m).....	1
40 CFR §124.19 (a)(4)(i)(B).....	1
40 CFR §146.23 (a)(1).....	1

## State Laws and Regulations:

Passim – 25 PA CODE §78.73(c)

## Exhibits:

- A: Yanity DIW EPA UIC Permit title page
- B. Yanity DIW DEP public hearing notice
- C. Yanity DIW well schematic
- D. Yanity DIW well schematic showing waste fluids leakage pathway
- E. Yanity DIW Richard L. Atkinson’s comment to PA DEP (June 4, 2015)

End - Certificate of Service

## **RICHARD L. ATKINSON'S MOTION FOR RECONSIDERATION OF EAB ORDER DENYING PETITIONS FOR REVIEW**

The issue of overpressuring of the open annulus of the long string casing–surface casing by waste fluid leakage around the bottom cement seal was not raised during the public comment period.

However, I am requesting that the EAB reconsider its decision on the basis of 40 CFR §124.19(m) and 40 CFR §124.19 (a)(4)(i)(B) (“An exercise of discretion or an important policy consideration that the Environmental Appeals Board should, in its discretion, review.”).

Common sense dictates that the EPA UIC permit should include provisions to limit the maximum pressure in the long string casing-surface casing annulus in order to prevent fracturing of the confining zone adjacent to the lowermost USDW. (40 CFR §146.23 (a)(1) and the EPA UIC permit Part III B.4 )

The long string casing-surface casing annulus is different than the injection tube-long string casing annulus referred to in the Statement of Basis, the EPA UIC permit, the EPA CFR, and the EAB Order Denying Petitions for Review. (page 55, note 42)

The EPA UIC permit should specify that the long string casing-surface casing annulus be filled to the surface with freshwater-bentonite drilling mud.

The weight of the drilling mud should also be specified.

A drilling mud pressure gauge should be required on the long string casing-surface casing annulus with an automatic injection pump shut down feature, similar to the system required on the injection tube-long string casing annulus.

If (1) the long string casing-surface casing annulus is shut in, and (2) there is a slow leak bypassing the cement seal at the bottom of the long string casing, then there could be enough pressure transmitted through the virtually incompressible drilling mud to fracture the confining layer at the seat of the surface casing.

In their Yanity Class 2 Disposal injection well design (EPA permit # PAS2D013DIND), the Pennsylvania General Energy Company (PGE) has proposed the use of drilling mud in the long string casing-surface casing annulus. PGE submitted this proposal to the PA DEP in their state permit application.

The PGE engineers presented their disposal injection well design at a public hearing conducted by the PA DEP on June 1, 2015.

As of the time of this motion, the PA DEP has not issued a final permit for the Yanity disposal injection well.

Since the EPA Region III has primary UIC regulatory authority in PA, Region III should be the agency dictating all of the critical disposal injection well design parameters, especially the control of the pressure in the long string casing-surface casing annulus.

The EPA/Windfall permit should be remanded until the Yanity (EPA permit # PAS2D013DIND) disposal injection well has operated for a period of time that is sufficient to prove that the PGE design using drilling mud in the annulus assures that the confining layer will not be fractured.

## Certificate of Service

I, the undersigned, certify that the foregoing **MOTION FOR RECONSIDERATION OF EAB ORDER DENYING PETITIONS FOR REVIEW** of UIC Permit No. PAS2D020BCLE was filed electronically by email with the Environmental Appeals Board, the US EPA Region III, and Windfall Oil & Gas:

EAB Clerk - [Clerk\\_EAB@epamail.epa.gov](mailto:Clerk_EAB@epamail.epa.gov)

Karen Johnson  
Chief, Ground Water & Enforcement Branch  
US EPA Region III  
[Johnson.KarenD@epa.gov](mailto:Johnson.KarenD@epa.gov)

Nina Rivera Senior Assistant Regional Counsel  
Office of Regional Counsel (3RC20)  
US EPA Region III  
[Rivera.Nina@epa.gov](mailto:Rivera.Nina@epa.gov)

Windfall Oil & Gas - [mhoov16@verizon.net](mailto:mhoov16@verizon.net)

The foregoing **MOTION FOR RECONSIDERATION OF EAB ORDER DENYING PETITIONS FOR REVIEW** of UIC Permit No. PAS2D020BCLE was electronically filed by email with the following:

A Torrell <mandyrwells@yahoo.com>; B Marsh <barbaramarsh.marsh@outlook.com>; B Peoples <peeps29@verizon.net>; Brady LaBorde <patbrady2@verizon.net>; Brady Township Supervisors <bradytwp@hotmail.com>; C Thompson <cabailor@yahoo.com>; City of DuBois <bobbie.shaffer@duboispa.gov>; Clearfield Co <cccomm@clearfieldco.org>; D & C Cryster <dancinj@comcast.net>; D & T Marsh <tdmarsh@windstream.net>; D Boring <d\_boring@yahoo.com>; D Kovall <dmkovall@yahoo.org>; D Stolfer <deborahstolfer@gmail.com>; D Work <work309@comcast.net>; Diane Bernardo <honey0510@comcast.net>; E Zimmerman <ezimmerman@clearfield.org>; Harriet Moyer <hjmjm@windstream.net>; J Genevro <JohnBonnie@outlook.com>; J Greathouse <jmg\_1197@hotmail.com>; J Kaufman <jlkaufman@drmc.org>; Jack and Judy Chewing <jlchewing@comcast.net>; Joan Spafford <jdspafford@comcast.net>; John Hook <johnhook411@msn.com>; K Armagost <kdfinalle@verizon.net>; K Bojalad <kerrilynn9172@yahoo.com>; L Martinez <lesha3@windstream.net>; Lesli Swope <lesliannbarr@yahoo.com>; Loretta Slattery <lorslat2@yahoo.com>; Lorraine Shaddock <medoado@verizon.net>; M Atkinson <marianne5@windstream.net>; M Schwabenbauer <mrschwab2@comcast.net>; Monica Lockhart <qchamp1969@hotmail.com>; Nora Jenney <thejenneys@windstream.net>; P Erickson <erickson1@windstream.net>; Pauline & Robert Wells <pewdubois@yahoo.com>; R & E Stewart <maliya54@hotmail.com>; R Reitz <rockietop@verizon.net>; Ralph Hamby <Rhambyrn@yahoo.com>; Randall Baird <fairway08@windstream.net>; Rep. M Gabler <mgabler@pahousegop.com>; Ronald Greathouse <rhg\_9711@hotmail.com>; Rosemay Frizzell <rfrizzell@windstream.net>; S Zimmerman <szimmerman@clearfield.org>; Sandy Township Supervisors <info@sandytownship.org>; Stephen Way <steveway@verizon.net>; T Bodt <mittdob@hotmail.com>; Ted & Rona Cryster <ronated@comcast.net>; Terry & Carole Lawson (lawson\_carole@yahoo.com); Tom & Sue Nelen <tsdbn@verizon.net>; Travis Smith <jsmith315@windstream.net>; Valerie Powers <brickie3@comcast.net>; W Fisher <wilsonf@hessfishereng.com>; W Lockwood <wdlockwood@verizon.net>

June 23, 2015

/s/ Richard L. Atkinson  
Richard L. Atkinson  
221 Deer Lane  
DuBois, PA 15801

814-583-7926

Richard L. Atkinson~221 Deer Lane, DuBois, PA 15801 [marianne5@windstream.net](mailto:marianne5@windstream.net) Windfall/Zelman #1 DIW~Permit # PAS2D020BCLE

GRANT TWP PERMIT EPA  
YANITY DIW

2014  
EXHIBIT A



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

**INJECTION CONTROL PERMIT NUMBER PAS2D013BIND**  
**AUTHORIZATION TO OPERATE CLASS II-D INJECTION WELLS**

In compliance with provisions of the Safe Drinking Water Act, as amended, 42 U. S. C. §§ 300f et seq ( SDWA) and the SDWA implementing regulations promulgated by the U. S. Environmental Protection Agency at Parts 144 -147 of Title 40 of the Code of Federal Regulations, this permit authorizes

Pennsylvania General Energy Company, LLC  
120 Market Street  
Warren, Pennsylvania 16365

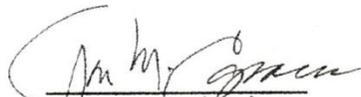
to convert the Marjorie C. Yanity 1025 production well into a Class II-D brine disposal Injection Well (hereinafter, "Injection Well or Facility") and to operate the Injection Well for the purpose of injecting fluids produced in association with Pennsylvania General Energy's (PGE) oil and gas production operations into the Huntersville Chert Formation, in accordance with the provisions of this permit. The Injection Well will be located in Grant Township, Indiana County, Pennsylvania. The coordinates for the Injection Well are: Latitude 40° 44' 43.00" and Longitude -78° 55' 34.00".

All references to Title 40 of the Code of Federal Regulations are to all regulations that are in effect on the date that this permit is effective.

This permit shall become effective on March 19, 2014.

This permit shall remain in effect until midnight March 19, 2024, when operations shall cease and the plugging and abandonment shall be complete.

Signed this 19<sup>th</sup> day of March, 2014.

  
Jon M. Capacasa, Director  
Water Protection Division

GRANT TWP DEP PUBLIC NOTICE

MAY 2015  
YANITY DIW

EXHIBIT B

NOTICE

Notice of Public Hearing Pennsylvania Department of Environmental Protection Notice is hereby given that the Pennsylvania Department of Environmental Protection (DEP) will hold a public meeting and public hearing from 6:00 P.M. to 8:00P.M. on June 1st, 2015, at the East Run Sportsman's Association facility located at 1668 Sebring Road, Marion Center, PA 15759.

The purpose of this meeting/ hearing is to provide information and take testimony concerning Pennsylvania General Energy Company's (PGE) application to reclassify the Marjorie C. Yanity 11025 well (API#: 063-31807), located in Grant Township, Indiana County, from a production well to a disposal well. The U.S. Environmental Protection Agency (EPA) issued an Underground Injection Control Permit (PAS2D013BIND) on March 19, 2014 to authorize the operation of the Class II-D Injection Well. The DEP will accept and record testimony concerning PGE's application to reclassify the well. Those wishing to present testimony during the hearing should contact Community Relations Coordinator, John Pojster, at 412-442-4203 before noon on June 1, 2015 to reserve time to present testimony. Individuals who do not register may also present

YANITY DIW

EXHIBIT C



**Pennsylvania General Energy Company, LLC**

Indiana County, Grant Township, Well # 1025, API #: 37-063-31807

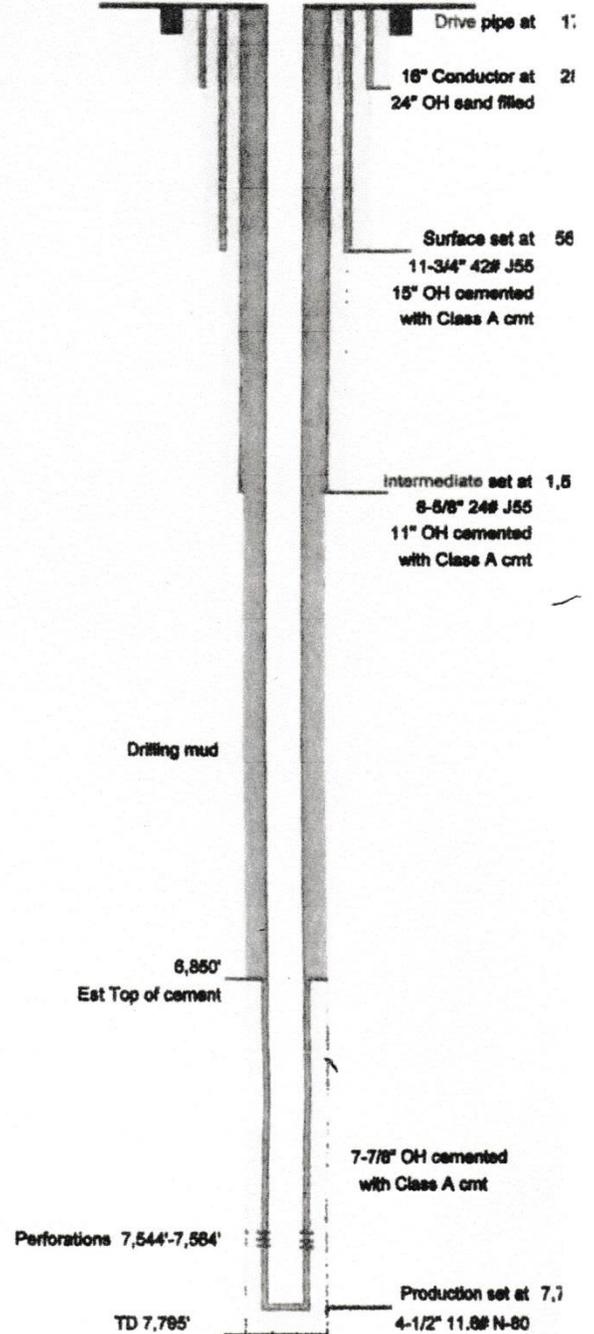
As Drilled Report

Longitude: 78° 55' 34"

Latitude: 40° 44' 43"

Surface Elevation: 1,820 ft

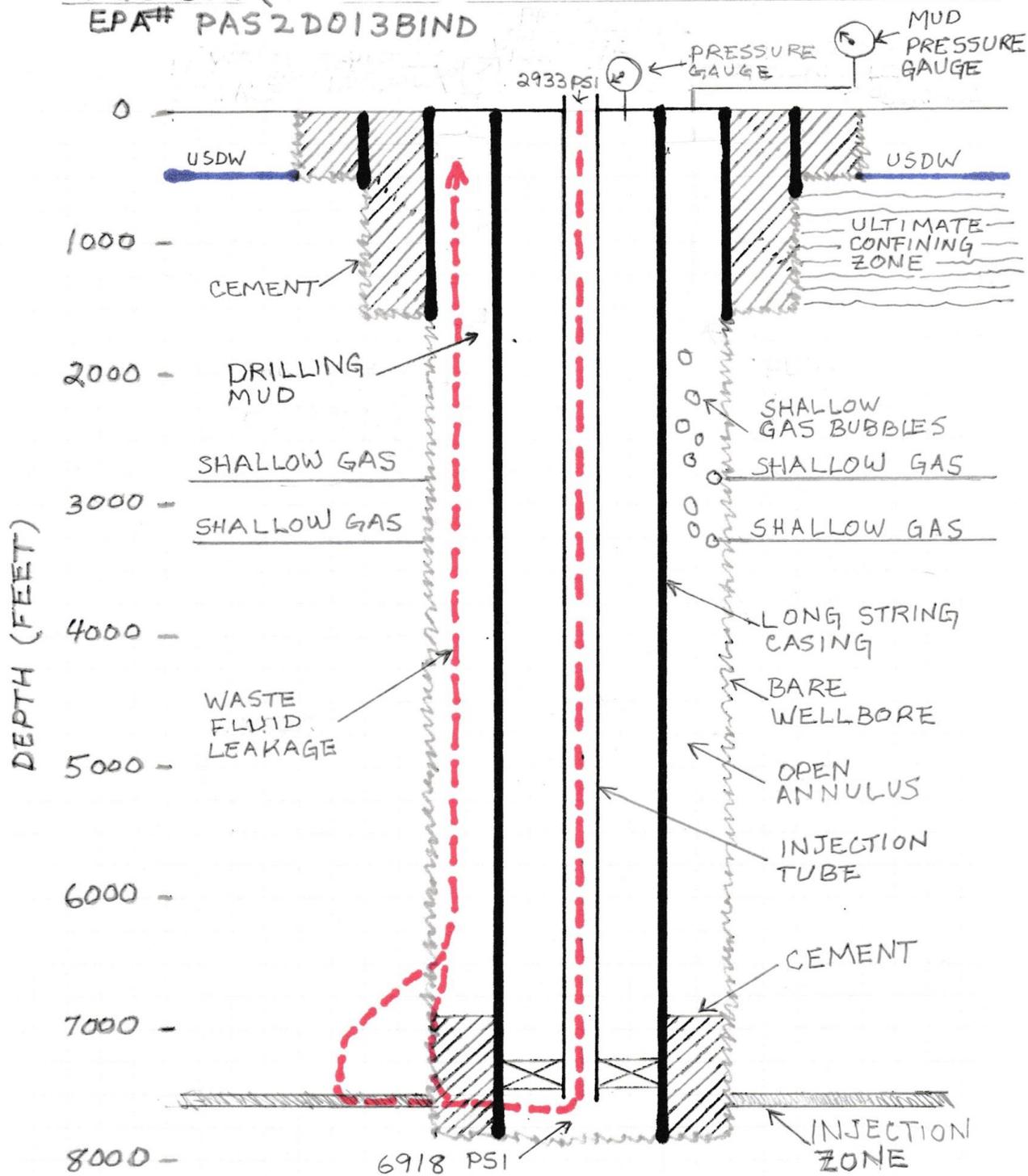
Log of formations					
Formation Name	Top	Bottom	Oil/Gas	Water	Coal
Strip Fill & Gray Shale	0'	27'			
Gray Shale & Coal	27'	83'			
Sand, Shale, & Coal	83'	127'		83'	
Shale	127'	128'			127'
Sand & Shale	128'	258'		130'	162,258'
Sand & Shale	258'	440'			258,338'
Sand & Shale	440'	1,040'			
Sand & Shale	1,040'	1,228'			
Red Rock & Shale	1,228'	1,412'			
Sand & Shale	1,412'	1,789'			
Sand & Shale	1,789'	2,950'			
Sand & Shale	2,950'	3,300'			
Shale	3,300'	4,800'			
Shale	4,800'	6,859'			
Tully Limestone	6,859'	6,937'			
Shale	6,937'	7,430'			
Marcellus Shale	7,430'	7,522'			
Onondaga Limestone	7,522'	7,532'			
Huntersville Chert	7,532'	7,622'	7,544'		
Oriskany Sandstone	7,622'	7,630'			
Limestone	7,630'	7,795'			
TD		7,795'			



WINDFALL DIW # PAS2D020BCLE EXHIBIT D

PGE DIW (MARJORIE C. YANITY # 1025 (API # 063-31807))

EPA # PAS2D013BIND



R.L. ATKINSON 221 DEER LANE DUBOIS PA 15801

(814) 583-7926 marianne5@windstream.net

COMMENT TO PA DEP EMAILED 6-04-15  
EXHIBIT E  
P. 1

**PGE - Marjorie C. Yanity #1025 well (API#:063-31807)**

The EPA UIC permit makes no mention of drilling mud in the open annulus of the disposal injection well. No specification for the composition of the drilling mud has been given to the public.

For the purpose of this comment, it will be assumed that the drilling mud will consist of fresh water and bentonite and has the appearance of chocolate milk.

If the drilling mud completely fills the annular space between the 1539 foot surface casing and the long string casing, then 25PaCode78.73(c) will be violated. To not violate that regulation, the annular space could not be more than 80% full of fresh water, let alone drilling mud.

The drilling mud may be intended to form a mud cake seal in the formation pores exposed in the wellbore, thereby protecting USDWs from contamination.

Assume that the mud has a pressure gradient of .5 psi/foot. Then the mud pressure at the top of the cement seal at 6850 feet would be 3425 psi. That means that the cement seal must defeat a pressure difference of 6918 psi – 3425 psi = 3493 psi, with the help of gravity. From the bottom hole at 7544 feet to the top of the cement at 6850 feet, gravity will produce a pressure difference of (1.22)(.433 psi/foot)(7544 feet – 6850 feet) = 367 psi.

Therefore, if the cement seal at the bottom of the long string casing is going to leak, the waste fluid pressure will be 6918-367 = 6551 psi, which is too high for the drilling mud to stop the leak.

There is one advantage of having the annulus filled with drilling mud; the liquid mud is virtually incompressible. The pressure produced by the leak minus the pressure due to the weight of the drilling mud will be transmitted immediately to the surface gauge.

If the drilling mud is pressurized, then the possibility of fracturing the confining layer adjacent to the lowermost USDW comes into play. (EPA UIC Permit Part III B.4.)

It turns out that the fracturing will occur when the mud surface pressure (SP) is equal to the difference of the fracture pressure gradient (FPG) and the mud pressure gradient (MPG) times the depth (D) at the seat of the 1540 foot surface casing:  $SP = (FPG - MPG) D$

For example, if the fracture pressure gradient is .7 psi/foot and the mud pressure gradient is .5 psi/foot, then fracturing at 1539 feet would occur when the mud gauge reads 308 psi.

Although it is not required in the EPA UIC permit, one would assume that the injection pump should automatically shut down if the mud pressure exceeds a specified level.

Richard L. Atkinson ~ 221 Deer Lane, DuBois, PA 15801 (814-583-7926)  
[marianne5@windstream.net](mailto:marianne5@windstream.net)

**PGE - Marjorie C. Yanity #1025 well (API#:063-31807)**

Potential problems with the PGE design are as follows:

1. There may not be enough bentonite in the drilling mud, since it does not circulate as it does during the drilling process, to adequately seal the pores in the formation at the seat of the 1539 foot casing. The drilling record shows sand and shale at that depth.
2. Assume that .1% of the waste fluid leaks into the wellbore at a disposal rate of 30,000 barrels/month. In that case, potentially 30 barrels/month of drilling fluid will have to be removed from the annulus.

The opinion of this commenter is that PGE should be required to drill a monitoring water well. This well should be 562 feet deep into the lowermost USDW. It should be less than 100 feet away from the disposal injection well. The monitoring well water should be tested 4 times a year to detect any contamination.

The best way to operate a disposal injection well with a section of open wellbore would be to have provisions to measure the pressure at the seat of the surface casing and to pump out and reinject any leakage.

Surely the drilling industry has the resources and expertise to develop the wellhead, casing design, transducer, and pump required to solve this disposal injection well leakage problem.