

IN THE COURT OF APPEALS OF FRANKLIN COUNTY, OHIO
Tenth Appellate District

State of Ohio, <i>ex rel.</i>)	Case No. _____
Food and Water Watch		
103 William H. Taft Rd.)	
Cincinnati, OH 45219		
)	
and		<u>VERIFIED COMPLAINT FOR</u>
)	<u>WRIT OF MANDAMUS</u>
FreshWater Accountability Project		Terry J. Lodge (0029271)
P.O. Box 473)	316 N. Michigan St.
Grand Rapids, OH 43522		Suite 520
)	Toledo, OH 43604-5627
Relators,		(419) 255-7552
)	Fax (419) 255-7552
-vs-		
)	
State of Ohio		Counsel for Relators
)	
and		
)	
Governor John R. Kasich, in his official		
capacity)	
Riffe Center, 30th Floor		
77 South High Street)	
Columbus, OH 43215-6117		
)	
and		
)	
James Zehringer, Director, in his official		
capacity)	
Ohio Department of Natural Resources		
2045 Morse Road, Bldg H-3)	
Columbus, OH 43229-6693		
)	
and		
)	
Rick Simmers, Chief, in his official capacity		
Ohio Department of Natural Resources)	
Division of Oil and Gas Resources		

Management)
2045 Morse Road, Bldg H-3)
Columbus, OH 43229-6693,)

Respondents.)

*

Relators Food and Water Watch and FreshWater Accountability Project (hereinafter “Relators”), proceeding by and through counsel, set forth their Complaint as follows:

PRELIMINARY STATEMENT

1. Relators seek a writ of mandamus to compel the Respondents State of Ohio, its Governor and officers within its Department of Natural Resources (“ODNR”) to comply with O.R.C. § 1509.22(C) by promulgating rules and regulations prior to issuance of so-called “Chief’s Orders.” Chief’s Orders are used by ODNR to allow the operation of privately-owned facilities for the storage, recycling, treatment, processing and disposal of brine and other waste substances associated with oil and gas drilling. O.R.C. § 1509.22(C) states:

(C) The chief shall adopt rules regarding storage, recycling, treatment, processing, and disposal of brine and other waste substances . *The rules shall establish procedures and requirements in accordance with which a person shall apply for a permit or order for the storage, recycling, treatment, processing, or disposal of brine and other waste substances that are not subject to a permit issued under section 1509.06 or 1509.21 of the Revised Code and in accordance with which the chief may issue such a permit or order.* (Emphasis added).

There have been no rules establishing procedures and requirements for persons applying for Chief’s Orders.

2. Relators Food and Water Watch and FreshWater Accountability Project, two nonprofit organizations with members and activities in Ohio, bring this suit on behalf of their respective

members, some of whom are individual Ohio citizens and taxpayers from Youngstown and Barnesville, Ohio, to challenge the lawfulness of the issuance of Chief's Orders by the Chief of the ODNR Division of Oil and Gas Resources Management for facilities which treat and handle solid and liquid wastes from oil and gas drilling, including those generated by hydraulic fracturing ("fracking").

3. Specifically, Relators allege that no operable procedures and requirements have been promulgated to govern issuance of Chief's Orders for facilities which handle oil and gas drilling waste substances. At least twenty-three (23) such facilities were issued Chief's Orders within the first 180 days of 2014 to handle large volumes of oil and gas drilling wastes resulting from the "fracking" method of oil and gas extraction. The list of 23 facilities for which Chief's Orders had been issued as of June 2014 is attached hereto as "Exhibit A," and its contents are incorporated fully herein as though rewritten. Upon information and belief, many more such facilities have been issued Chief's Orders to allow commencement of operations.

4. These waste handling and treatment facilities will deal with solid, semisolid and liquid oil and gas drilling wastes and will contain varying amounts of toxic chemicals, heavy metals and radioactive isotopes. Nearly all of it will be radioactively contaminated. Attached hereto as "Exhibit B" and incorporated by reference is a slide show by Julie Weatherington-Rice, an Ohio State University faculty member and geologist, explaining the radioactive nature of oil and gas drilling wastes produced from hydraulic fracturing.

5. All Chief's Orders issued by ODNR related to fracking waste facilities are illegal because they have not been issued as a result of procedures and requirements promulgated pursuant to O.R.C. § 1509.22 and O.R.C. Chapter 119, Ohio's Administrative Procedure Act.

6. On or about June 4, 2014, Relator FreshWater Accountability Project sent a letter to Respondent James Zehringer, Director of ODNR, stating that the practice of issuing Chief's Orders for oil and gas drilling waste facilities was presently unlawful, and demanding that ODNR cease issuance of them until it had complied with the requirements of the Ohio Revised Code. That letter is marked as "Exhibit C" hereto and its contents are incorporated fully herein as though rewritten.

7. On or about July 16, 2014, Relator FreshWater Accountability Project sent a letter to Respondent Ohio Governor John Kasich, a Respondent, requesting that Kasich terminate the issuance of Chief's Orders and enclosing a copy of Exhibit C. That letter is marked "Exhibit D" hereto and its contents are incorporated fully herein as though rewritten.

8. No response to Exhibit C has ever been provided to Relator FWAP or its legal counsel by Respondent Zehringer. The Governor's office responded to Exhibit D only to advise FWAP that it had sent its letter to the wrong office.

THE PARTIES

9. Relator Food and Water Watch ("FWW") is a nonprofit organization that advocates for common sense policies that will result in healthy, safe food and access to safe and affordable drinking water. FWW seeks to protect shared public resources, including watercourses, aquifers, land, and lakes. FWW maintains an Ohio office located at 103 William H. Taft Rd., Cincinnati, OH 45219. FWW has over 200 members in Ohio. Many of FWW's members also are Ohio taxpayers who object to violations of Ohio law which potentially subject the State of Ohio to fiscal liability for misfeasance and malfeasance in the form of inadequate and unlawful regulatory actions.

10. Relator FreshWater Accountability Project (“FWAP.”) is a nonprofit organization headquartered in Grand Rapids, Ohio which has 50 members in Ohio and which seeks to force corporations and governmental officials to be directly responsible and responsive to the public on energy issues which impair the commons of water and land resources. FWAP’s members also are Ohio taxpayers who object to violations of Ohio law which potentially subject the State of Ohio to fiscal liability for misfeasance and malfeasance in the form of inadequate and unlawful regulatory actions.

11. FWW and FWAP bring this suit on behalf of their member Cheryl Mshar, who resides on Donald Avenue in Youngstown, Ohio and who challenges the validity of Chief’s Order No. 2014-52 which permits Industrial Waste Control/Ground Tech., Inc. and Austin Master Services, LLC (“Ground Tech”) to operate a facility located at 240 Sinter Court, Youngstown, Ohio 44510. At that facility, Ground Tech undertakes radiological waste characterization, tank cleaning and decontamination, waste solidification, brine storage, and preparation of drilling wastes for disposal in landfills and injection wells. A copy of the Chief’s Order for Ground Tech is annexed hereto as “Exhibit E” and is incorporated fully herein by reference as though rewritten. Cheryl Mshar resides within .8 miles of Ground Tech and conducts business and recreation activities within approximately that radius. She believes that she presently is breathing air which contains chemical and/or radioactive contamination from the Ground Tech plant and that she and her friends and families are threatened with physical harm by unmeasured and unmonitored routine pollutants and radiation being released from the Ground Tech facility into air and water. Cheryl Mshar is an Ohio taxpayer who objects to violations of Ohio law which potentially subject the State of Ohio to fiscal liability for misfeasance and

malfeasance in the form of inadequate and unlawful regulatory actions.

12. Relators FWW and FWAP bring this suit on behalf of their member Hattie Wilkins, who resides on Fairmont Avenue in Youngstown, Ohio and who challenges the validity of Chief's Order No. 2014-52 approved by ODNR for Ground Tech to operate the Sinter Court, Youngstown facility. Hattie Wilkins resides within .74 miles of the facility and conducts business and the pursuit of recreation activities within that radius. She believes that she presently is breathing air which contains chemical and/or radioactive contamination from the Ground Tech plant and that she and her friends and family are threatened with physical harm by unmeasured and unmonitored routine pollutants and radiation being released from the Ground Tech facility into air and water. Ms. Wilkins is also an Ohio taxpayer who objects to violations of Ohio law which potentially subject the State of Ohio to fiscal liability for misfeasance and malfeasance in the form of inadequate and unlawful regulatory actions.

13. Relator FWAP also brings this petition on behalf of its members David Castle and Bobbie Castle, who reside on North Chestnut St., Barnesville OH 43713. They challenge the validity of Chief's Order No. 2014-08 by which ODNR permitted EnerGreen Holding Company, LLC ("EnerGreen") to operate a facility known as EnerGreen 360, which will create and fill in a 200-acre dumpsite with oil and gas drilling wastes and such additives as coal ash, to be deposited in a creek bottom located within the East Ohio Regional Industrial Park, located in Warren Township, Belmont County, Ohio, on land held by the Belmont County Port Authority. These wastes, which will be dumped on open land, will emit polycyclic aromatic hydrocarbons (PAHs), volatile organic chemicals (VOCs), radioactive radon gas, radioactive particulates, and heavy metals into air and surface and subsurface groundwater. The dumpsite is characterized by

EnerGreen 360 as a “beneficial use” which would not be required to have engineered protections such as landfill liners or monitoring wells. A copy of Chief’s Order No. 2014-08 for EnerGreen is annexed hereto as “Exhibit F” and is incorporated fully herein by reference as though rewritten.

14. FWAP members David Barton Castle and Bobbie Sue Castle reside, conduct business and recreate some 1.7 miles south of the proposed EnerGreen 360 facility in Barnesville, Ohio. They believe that if the EnerGreen dumpsite is allowed to be operate under the ODNR Chief’s Order as issued that they will be exposed to air and water contaminated with chemical and radiological emissions from the facility, and that their physical health and that of their friends and family will be threatened by such unmeasured and unmonitored pollutants and radiation. The Castles are Ohio taxpayers who object to violations of Ohio law which potentially subject the State of Ohio to fiscal liability for misfeasance and malfeasance in the form of inadequate and unlawful regulatory actions.

15. Respondent State of Ohio, through its General Assembly, is responsible for enacting State laws, and through its Office of Attorney General, is responsible for enforcing State laws.

16. Respondent John R. Kasich is sued in his official capacity as the Governor of the State of Ohio. Governor Kasich is required to ensure that all laws of the State are faithfully executed. As Ohio’s Chief Executive, Respondent Kasich is the proper respondent to actions to enjoin or invalidate a state statute. By law, Respondent Kasich is the executive official ultimately responsible for acts and omissions to act by ODNR.

17. Respondent James Zehringer is sued in his official capacity as the Director of the Ohio Department of Natural Resources. Respondent Zehringer is required to ensure that all laws

governing activities of the ODNR are faithfully executed.

18. Respondent Rick Simmers is sued in his official capacity as the Chief of the Division of Oil and Gas Resources Management of ODNR. Chief Simmers oversees certain ODNR staff, and approved and signed the Chief's Orders of which complaint is made.

JURISDICTION

19. Jurisdiction lies with this Court pursuant to O.R.C. Chapter 2731, which governs mandamus proceedings in the courts.

20. The claims in this matter arise from Relators' clear legal rights and the clear legal duty of the ODNR Chief of the Division of Oil and Gas Resources Management, as overseen by the Director of ODNR and the Governor of the State of Ohio to consider and issue Chief's Orders which are based upon duly-promulgated requirements and regulations.

21. Relators have no plain or adequate remedy at law to appeal to correct an abuse of discretion by the ODNR in the unlawful issuance of Chief's Orders, and their bringing of this Petition for a writ of mandamus is thus appropriate.

STATUTORY AND REGULATORY FRAMEWORK

22. O.R.C. § 1509.22(B)(2)(a) prohibits persons from storing, recycling, treating, processing or disposing of "brine or other waste substances associated with the exploration, development, well stimulation, production operations, or plugging of oil and gas resources without an order or a permit issued under this section."

23. By O.R.C. § 1509.22(C), the Ohio General Assembly required the ODNR to adopt rules "regarding storage, recycling, treatment, processing, and disposal of brine and other waste substances." Subsection C also requires that "[t]he rules shall establish procedures and require-

ments in accordance with which a person shall apply for a permit or order for the storage, recycling, treatment, processing, or disposal of brine and other waste substances that are not subject to a permit issued under section 1509.06 or 1509.21 of the Revised Code and in accordance with which the chief may issue such a permit or order.”

24. The statute also requires that before ODNR may consider facility applications under O.R.C. § 1509.22, ODNR first must promulgate and publish rules which define the permit types, how one may apply, and the informational detail required for a considered decision to issue or deny Chief’s Orders. O.R.C. § 1509.03(A) requires that “(t)he chief of the division of oil and gas resources management shall adopt, rescind, and amend, in accordance with Chapter 119. of the Revised Code, rules for the administration, implementation, and enforcement of this chapter.” No rules have yet been promulgated pursuant to the mandates of O.R.C. § 1509.22(C) under Ohio’s Administrative Procedure Act, O.R.C. Chapter 119.

25. The issuance of Chief’s Orders without promulgated rules means that there is no legislative direction over the approval of oil and gas waste handling and treatment facilities, and therefore is an unconstitutional arrogation of power by an executive agency, acting *ultra vires* the legislative authorization.

26. All Chief’s Orders have been issued *ad hoc* and without the public protection and benefit of written rules and associated requirements properly promulgated in accordance with the Ohio Administrative Procedure Act.

COUNT I (WRIT OF MANDAMUS)

27. Relators restate and reiterate their previous allegations in this Petition as if fully rewritten herein.

28. The writ of mandamus is an extraordinary remedy that arose historically to deal with situations like this, where there is no other avenue for justice. It is the Court's duty in such situations to review agency action and to place limits on the exercise of discretion to ensure that discretion is not exercised arbitrarily, or abused.

29. Relators have been denied justice through ODNR's decisions to issue boilerplate Chief's Orders which impose no limitations on the operations or management of the oil and gas waste facilities they purport to regulate. The Chief's Orders do not contemplate continuing ODNR oversight nor do they empower ODNR representatives to venture onto facility property to investigate compliance. The Orders do not even contain a requirement that the facility owner must comply with the commitments the facility owner has stated in its application for the Chief's Order. Without standards routinizing the information that must be disclosed in an application, there is no uniform means by which the public or the regulator can identify regular or irregular, safe or unsafe, facility operations. There is no uniform requirement for insurance against damage to members of the public or the environment. There are no means of establishing what inspection or verification protocols might be needed, nor what records must be kept to ensure that there isn't illegal dumping or unverifiable disposal of drilling wastes. The orders are viewed as the exclusive permit required under state law for oil and gas drilling waste facilities which may have other obligations under state and Federal environmental laws governing air and water pollution, landfill construction and monitoring, and radiological emissions.

30. Consequently, issuance and approval by the ODNR Chief of Oil and Gas Resources Management of Chief's Orders are unlawful and unreasonable because the Chief has failed to incorporate any articulated or enforceable restrictions for the protection of the public health and

the environment, in violation of the requirements of Ohio law which prohibit administrative agencies from acting in an arbitrary and capricious manner.

31. Moreover, the Chief has unlawfully and unreasonably approved the orders by utilizing general, but unknown and unspecified, standards for approval that amounted to *ad hoc* “rules” as defined in Chapter 119 of the Ohio Revised Code but which were not adopted pursuant to the required procedural and substantive safeguards for rules promulgation under Ohio law.

32. The ODNR Chief also has unlawfully and unreasonably approved the orders without following the direction, criteria or standards from the Ohio General Assembly and thereby has unlawfully exercised legislative power in violation of the constitutional doctrine of separation of powers.

33. The Chief acted unlawfully and unreasonably in approving the orders by failing to incorporate into them enforceable requirements for the operation of the facilities covered, and by failing to govern the potential final products of the various treatment processes. Consequently, ODNR is allowing unregulated contamination of the environment and endangerment of human health.

34. By approving Chief’s Orders as “temporary approvals” which fail to specify a date when the open authority of the order would terminate in the event that the Chief does not adopt any regulations governing such waste management facilities, and without any but *ad hoc* regulatory criteria, the Chief cannot reasonably and lawfully conclude that the facilities he is allowing to operate will not cause adverse effects to public health and safety by contamination of water and air in the vicinity of the approved facilities.

35. The ODNR’s issuance of Chief’s Orders *ultra vires* the requirements of statute

comprises a continuing abuse of discretion that must be corrected by a specific mandate from the Court. The Court must intervene to vindicate the rights of Relators, protect Ohio citizens and the environment, and correct ODNR's multiple and ongoing abuses of discretion.

36. Relators are entitled to a writ of mandamus to compel the ODNR to comply with O.R.C. §§ 1509.03(A), 1509.22(C) and Chapter 119.

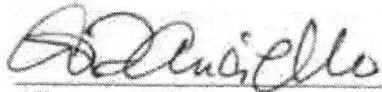
WHEREFORE, Relators pray the Court issue a writ of mandamus pursuant to R.C. Chapter 2731 which requires Respondents to comply with the requirements of statute and to promulgate formal regulatory requirements as an obligatory prerequisite to the consideration and issuance of Chief's Orders. Relators further pray the Court immediately enjoin, nullify and revoke and cancel all Chief's Orders issued to date as being fatally unlawful. Finally, Relators request to be awarded their costs and reasonable attorneys' fees in this lawsuit, and such other relief at law or in equity as the Court may deem necessary and proper in the premises.

Respectfully submitted,

/s/ Terry J. Lodge
Terry J. Lodge (0029271)
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Toledo, Ohio 43604-5627
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Counsel for Relators

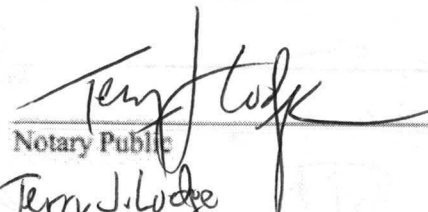
VERIFICATION

I, Alison Auciello, am Director of the Ohio office of Food and Water Watch ("FWW") and am empowered to bring the foregoing Verified Complaint for a Writ of Mandamus on behalf of FWW's members. I have reviewed the allegations in the Verified Complaint and believe them to be true to the best of my knowledge, information, and belief.


Alison Auciello

State of Ohio)
)
County of Hamilton) ss:

Sworn to before me and subscribed in my presence this 18th day of November, 2014.


Notary Public
Terry J. Lodge
Nonexpiring Commission

VERIFICATION

I, Leatra Harper, am Director of the FreshWater Accountability Project ("FWAP") and am empowered to bring the foregoing Verified Complaint for a Writ of Mandamus on behalf of FWAP's members. I have reviewed the allegations in the Verified Complaint and believe them to be true to the best of my knowledge, information, and belief.

Leatra Harper
Leatra Harper

State of Ohio)
)
County of Lucas) ss:

Sworn to before me and subscribed in my presence this 18th day of November, 2014.

Terry J. Lodge
Terry J. Lodge, Notary Public
My commission does not expire

LIST OF FACILITIES ISSUED ‘CHIEF’S ORDERS’

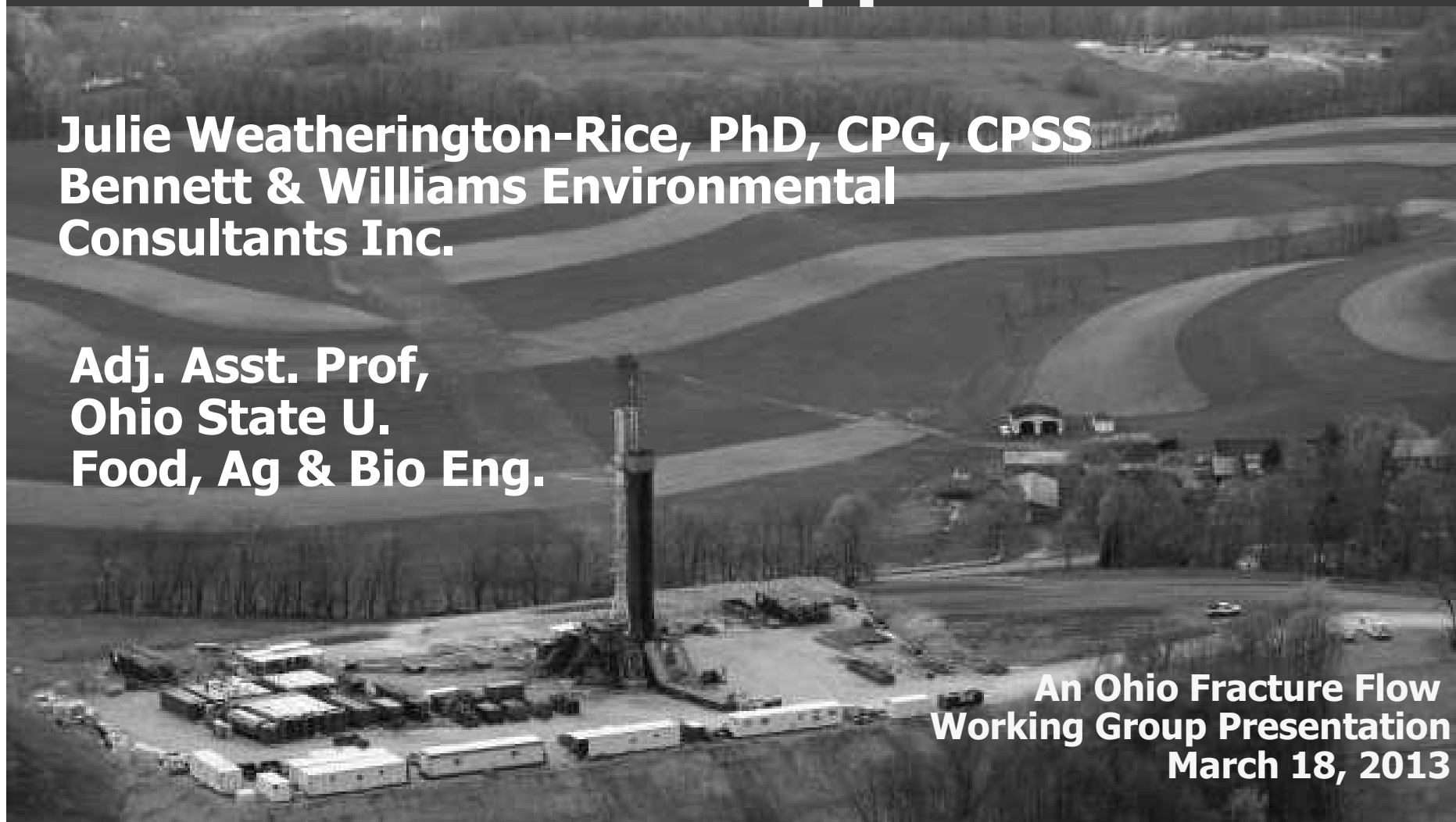
1. 4 K Industrial Park, LLC 1001 Main St. Martins Ferry, Ohio 43935	Washington County, Grandview Township	69500 Bannock Road St Clairsville, OH
2. Antero Resources Miley Pad, Noble County, Ohio	11. Halliburton energy services, Inc. Zanesville, Ohio	20. Keystone Clearwater Solutions, LLC Grunder Pad to Jenkins Pad to Ocel Pad Carroll County
3. Buckeye brine, LLC 6505 US 36 Tuscarawas, OH	12. Heckmann Water Resources Inc. 935 E. Pike Norwich Ohio	21. NuGlobal Water Solutions, LLC 44995 Dickerson Church Road Cadis, OH
4. Chesapeake Exploration LLC 9125 Dawson Road. Hopedale, OH	13. Iron Eagle Sherrodsville, LLC 20 S. Church St. Sherrodsville, OH	22. Industrial Waste Control/Ground Tech. 240 Sinter Court Youngstown, OH
5. CNX gas company LLC Cowgill Road. Sarahsville, OH	14. Liquid waste solidification LLC 440 S. 3rd St. Steubenville, Ohio	23. K&H 28333 West Belpre Pike Coolville, OH
6. Dow Cameron oil and gas. 1470 Adamsville Rd Zanesville, Ohio	15. Somerset regional water resources. 43031 Industrial Park Dr. Cadiz, OH	
7. EnerGreen 360 Holding Company LLC East Ohio regional industrial Park Belmont County, Warren Township	16. The Belden brick company. 375 Dover Rd. NW. Sugar Creek, Ohio	
8. Enviro Clean Services 515 Industrial Blvd. Wooster, Ohio	17. Weavertown Transport Leasing, Inc. 2741 Stonecreek Rd, Southwest New Philadelphia, Ohio	
9. Enviro Tank Clean. Belpre, OH	18. Warren Drilling 305 Smithson Street Dexter City, OH	
10. GreenHunter Water 50810 State Route 7	19. CMS Oilfield Services	

Shale Gas Wastes: Ohio Public Policy & Potential Impacts to Water Supplies

Julie Weatherington-Rice, PhD, CPG, CPSS
Bennett & Williams Environmental
Consultants Inc.

Adj. Asst. Prof,
Ohio State U.
Food, Ag & Bio Eng.

An Ohio Fracture Flow
Working Group Presentation
March 18, 2013



2013 Focusing on Shale Gas Wastes

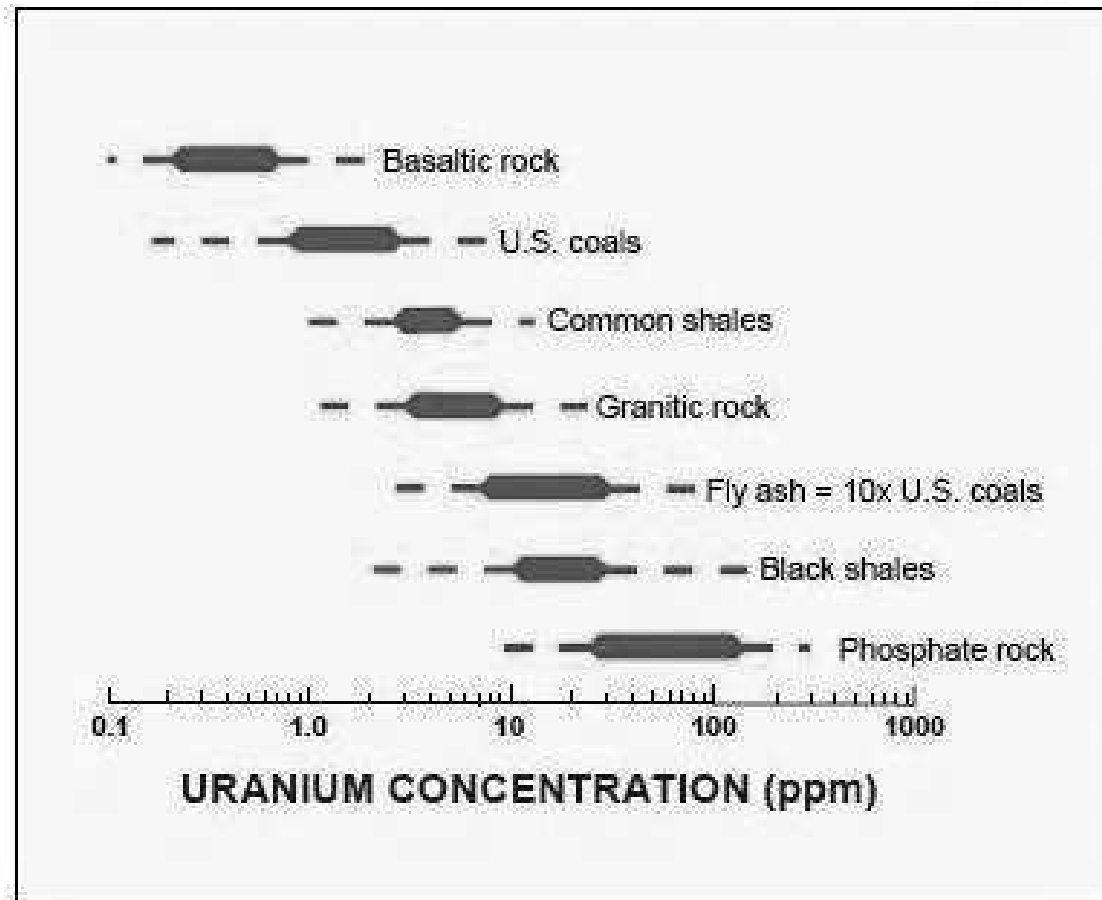
- **Ground Shale Rock:** hydrocarbons, heavy & radioactive metals, Ohio–NORM, US EPA-TENORM
- **Drilling Muds:** who knows what, TENORM?
- **Fracking Fluids:** water, sand, who knows what, if recycled, are they TENORM?
- **Brine:** salts, hydrocarbons, heavy & radioactive metals, Ohio-NORM, US EPA-TENORM
- **Drilling Site Wastes & Accidental Releases:** who knows what is being released
- **Where are they coming from?**
- **Where are they going?**

Why the Current Concern?

- **Ohio has paid for State & Local governments by taxing (tipping fees, etc.) out of state waste streams (solid, C&DD, industrial, medical, O&G, etc.) for last 20+ years**
- **Shale Gas drilling has created a big, new waste stream not addressed by surrounding states - seen as a new & easily captured revenue source by Ohio's Administration**
- **Ohio DOES NOT have magic GEOLOGY**
 - **that can swallow all wastes without repercussions**

Why the Current Concern Cont?

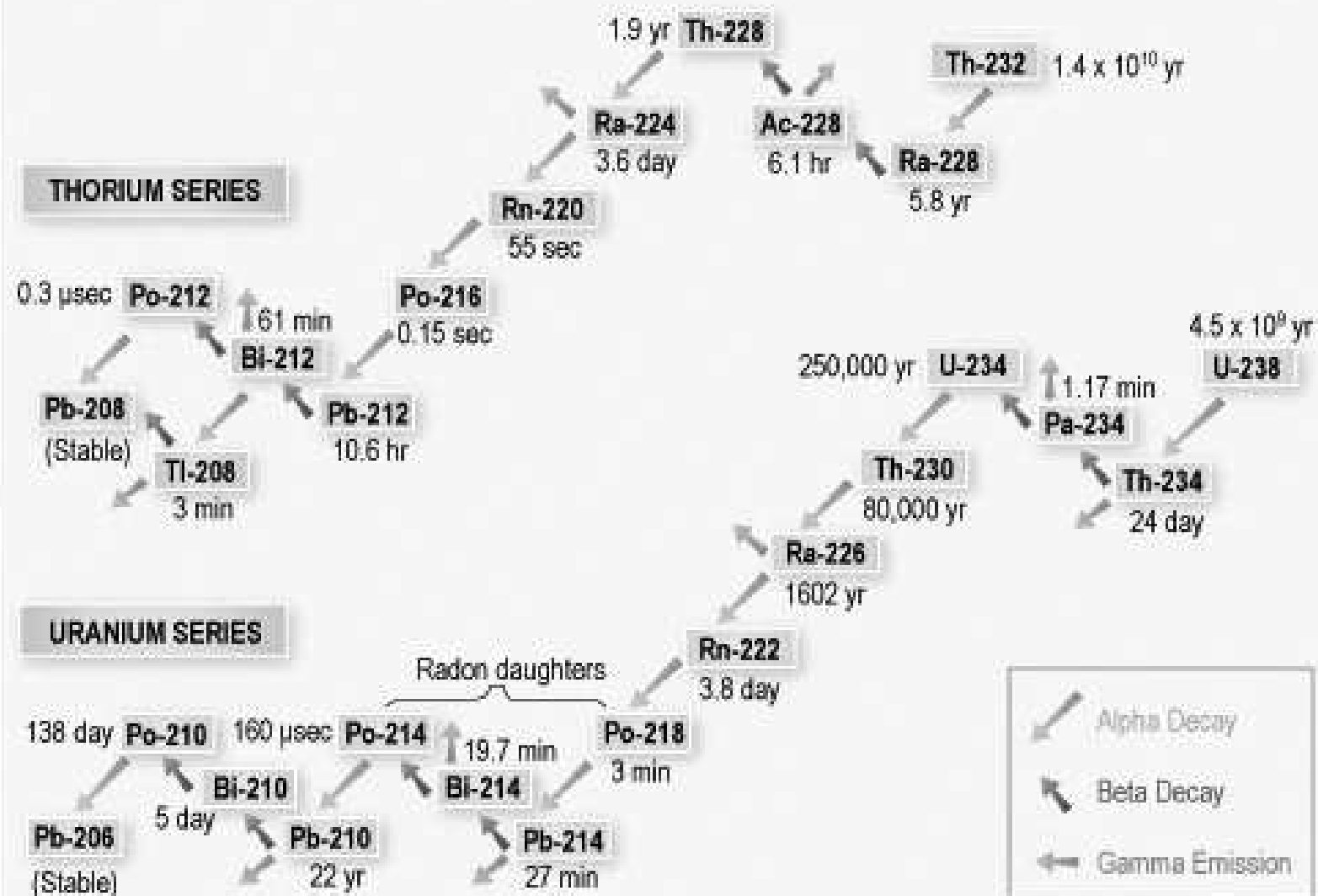
- **Black shales are early sources of Uranium ore for the “Atomic Age” (Chattanooga Shale, TN; USGS, 1961)**
- **Black shales like coal are full of heavy and radioactive metals: ^{232}Th to ^{228}Ra & ^{238}U to ^{226}Ra are most common series**
- **^{228}Ra , ^{238}U & ^{226}Ra water soluble, also in brines**
- **US EPA limit on Uranium mill tailings, 5 pCi/g because of the Radium: > LLRW Landfill, Utah or Washington State accept NORM**
- **US EPA Drinking Water MCLs 5 pCi/l for Radium**



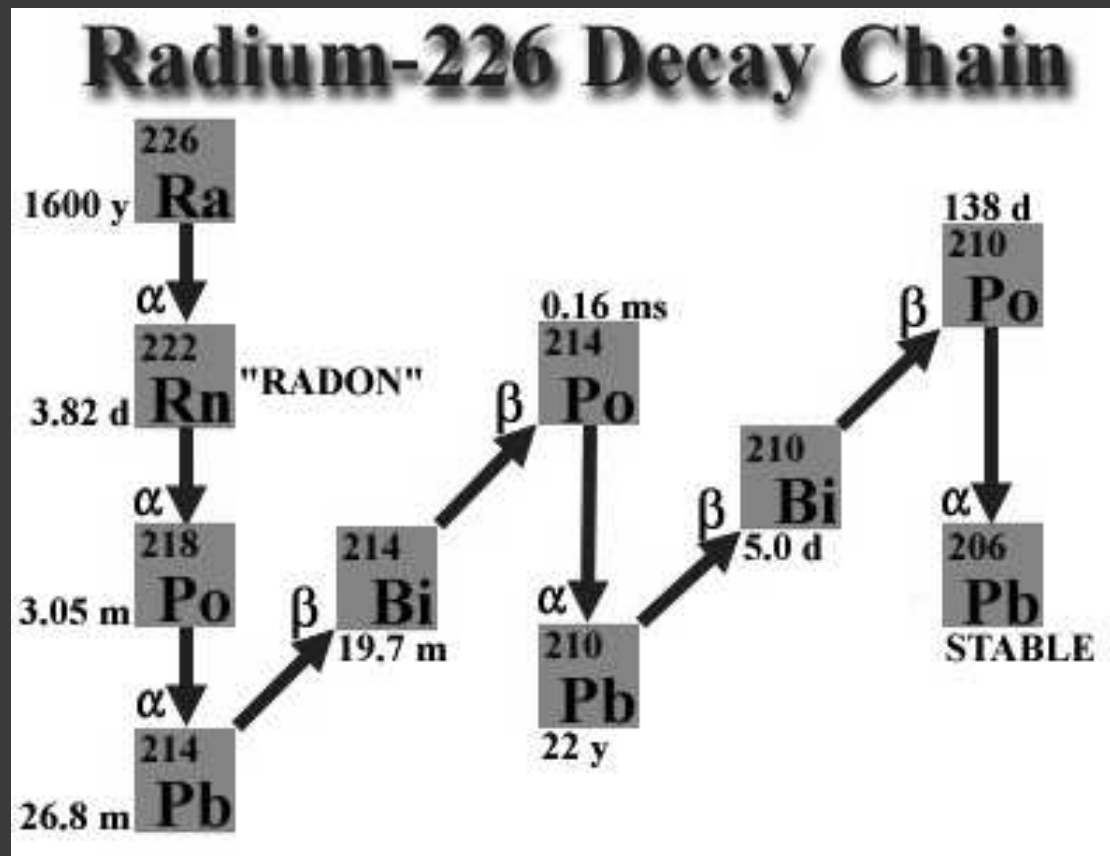
Typical range of uranium concentration in coal, fly ash, and a variety of common rocks.

Figure 1. Graph from Radioactive Elements in Coal and Fly Ash: Abundant Forms, and Environmental Significance. U.S. Geological Survey Fact Sheet FS-163-97. October, 1997

Radioactive Decay in Thorium and Uranium Series



Radium-226 Decay Chain



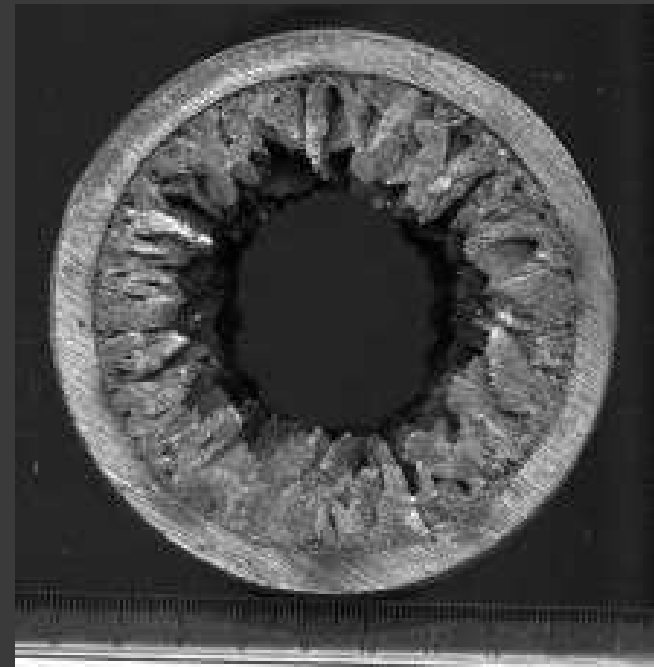
Why the Current Concern Cont?

- **No chemistry run for Ohio shales or Utica brines**
- **PA DOH Marcellus Shale uranium content: 10-100 ppm**
- **Uranium-238 content: ~3.4 to 34 pCi/g**
- **Radium-226 content: ~ 3.4 to 34 pCi/g**
- **Frac Water Ra-226: 300 to 9,000 pCi/l**
- **PA Marcellus brine chemistry up to 3,609 x MCLs for radioactivity: 5 pCi/l US EPA**

USGS reports median levels Ra > 2x PA brines from

Why the Current Concern Cont?

- **NY brine up to 15,000 pCi/L ^{226}Ra**
- **Hard scale in used drilling pipes up to 6,000 pCi/g ^{226}Ra and up to 2,000 pCi/g ^{228}Ra**
- **Ohio still contaminated from the Manhattan Project**
 - we know better now

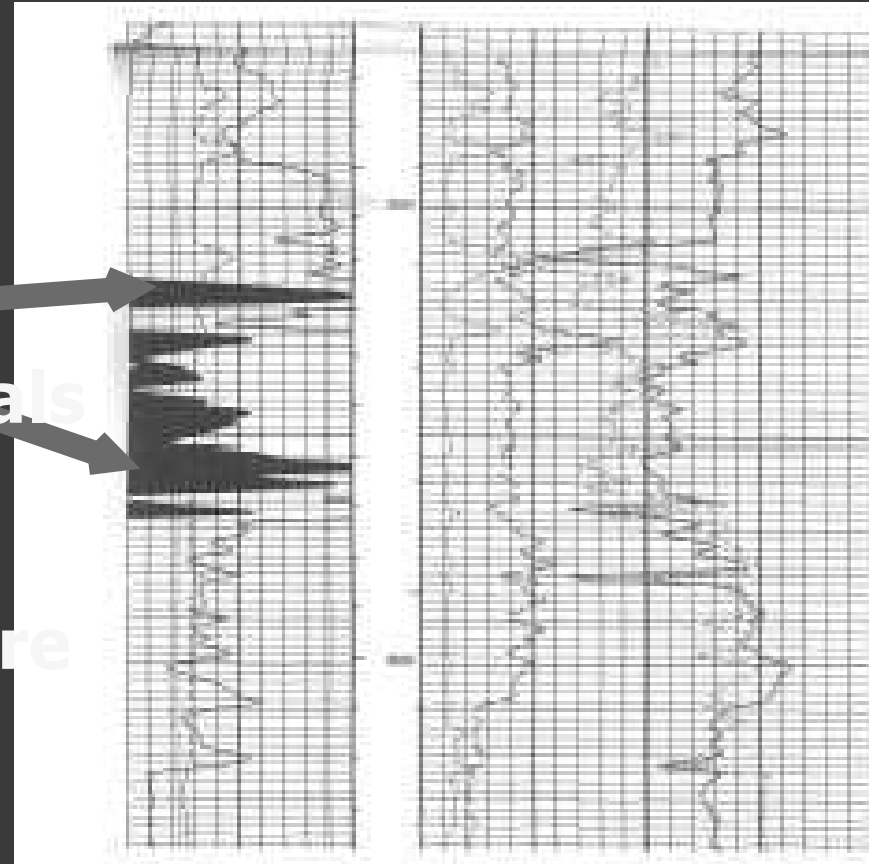


Radioactivity = TOC = Gas

" Gamma Ray signature shows highest levels of radioactivity in the shale

" Horizontal laterals installed in hottest zones

" Shale cuttings are from hottest areas



13. Sample Gamma Ray Signature of Radioactive Black Shal

5 pCi/l MCL: Why the Health Risk?

Periodic Table of the Elements

IA

1
H
1.0079

3
Li
6.941

11
Na
22.990

19
K
39.098

37
Rb
85.468

55
Cs
132.91

87
Fr
(223)

IIA

4
Be
9.0122

12
Mg
24.305

20
Ca
40.08

38
Sr
87.62

56
Ba
137.33

88
Ra
226.03

IIIB

21
Sc
44.956

39
Y
88.906

57
La
138.91

71
Lu
174.97

IVB

22
Ti
47.90

40
Zr
91.22

58
Ce
140.12

72
Hf
178.49

VB

23
V
50.941

41
Nb
92.906

59
Pr
140.91

73
Ta
180.95

VIB

24
Cr
51.996

42
Mo
95.94

60
Nd
144.24

74
W
183.85

VII B

25
Mn
54.938

43
Tc
(98)

61
Pm
(145)

75
Re
186.21

VIII B

26
Fe
55.847

44
Ru
101.07

62
Sm
150.4

76
Os
190.2

27
Co
58.933

45
Rh
102.91

63
Eu
151.96

77
Ir
192.22

28
Ni
58.71

46
Pd
106.4

64
Gd
157.25

78
Pt
195.09

29
Cu
63.546

47
Ag
107.87

65
Tb
158.93

79
Au
196.97

IIB

30
Zn
65.38

48
Cd
112.41

66
Dy
162.50

80
Hg
200.59

III A

5
B
10.81

13
Al
26.982

31
Ga
69.72

49
In
114.82

67
Ho
164.93

85
At
(210)

IVA

6
C
12.011

14
Si
28.086

32
Ge
72.59

50
Sn
118.69

68
Er
167.26

86
Rn
(222)

V A

7
N
14.007

15
P
30.974

33
As
74.922

51
Sb
121.75

69
Tm
168.93

87
Fr
(223)

VIA

8
O
15.999

16
S
32.06

34
Se
78.96

52
Te
127.60

70
Yb
173.04

VII A

9
F
18.998

17
Cl
35.453

35
Br
79.904

53
I
126.90

81
Bi
208.98

VIIIA

2
He
4.0026

10
Ne
20.179

18
Ar
39.948

36
Kr
83.80

54
Xe
131.30

82
Po
(210)

Alkali Metals

Alkaline Earth Metals

Transition Metals

Other Metals

Nonmetals

Noble Gases

Inner Transition Metals

E Gaseous State

E Liquid State

E Solid State

E Synthetically Prepared

Lanthanide Series

57 La 138.91

58 Ce 140.12

59 Pr 140.91

60 Nd 144.24

61 Pm (145)

62 Sm 150.4

63 Eu 151.96

64 Gd 157.25

65 Tb 158.93

66 Dy 162.50

67 Ho 164.93

68 Er 167.26

69 Tm 168.93

70 Yb 173.04

Actinide Series

89 Ac (227)

90 Th 232.04

91 Pa 231.04

92 U 238.03

93 Np 237.05

94 Pu (244)

95 Am (243)

96 Cm (247)

97 Bk (247)

98 Cf (251)

99 Es (254)

100 Fm (257)

101 Md (258)

102 No (259)

Name Not Officially Assigned

Because water-soluble Radium replaces Calcium in your bones if you drink it

Shale Gas Wastes: A Growth Industry for Ohio

- **Wastes coming into Ohio by road, rails & soon by river barge, port Washington Co. in place**
- **Over 52% 2012 injections in Class II wells came from out of state, mostly PA & WV**
- **Dedicated out-of-state Class II wells being installed in SE Ohio (new one Athens Co.)**
- **No Public Hearings being held for anyone**
- **With NY still to be decided & barge ports for Ohio River/Gulf wastes coming on line**
 - **may be up to 80% out of state wastes in a few years**

Shale Gas Wastes: A Growth Industry for Ohio cont.

- **ODNR Div. Oil & Gas Resources calls the shots; OEPA and ODH are second**
- **Ground Shale Rock with drilling muds to Solid Waste and C&DD Landfills; no records of how much or where, just listed as “solid wastes”; used as daily cover, not buried**
- **All Fracking Fluids & Brines to be injected in Class II wells except when spread on roads (brines), “solidified” and put in landfills or other management processes yet to be determined**

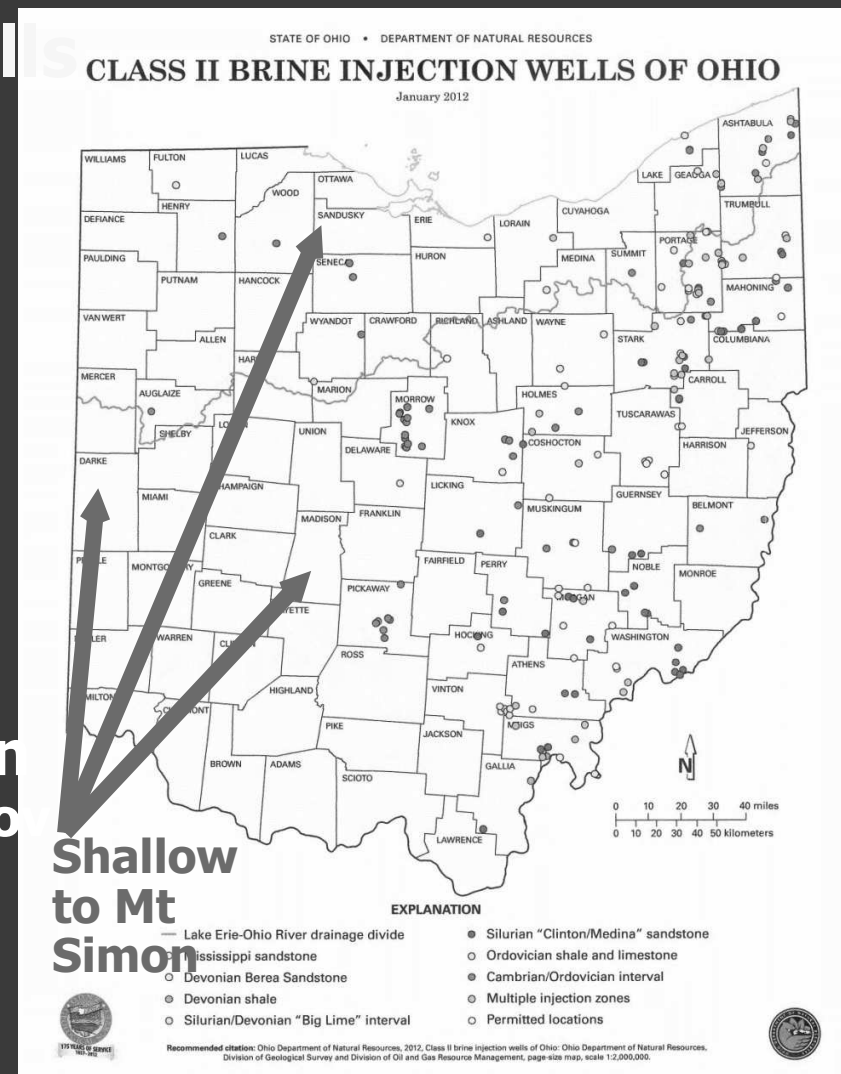
New ODNR OEPA ODH Regulation Chart

- **Waste Streams Generated During the Exploration and Production for Oil and Natural Gas**
- **Summary of Potential Regulatory Oversight, January 2013**
- [www.epa.state.oh.us/portals/34/document/NewsPDFs/Oil-Gas Waste Matrix Jan20132.pdf](http://www.epa.state.oh.us/portals/34/document/NewsPDFs/Oil-Gas%20Waste%20Matrix%20Jan20132.pdf)
- **Check it out**

Class II Injection Wells

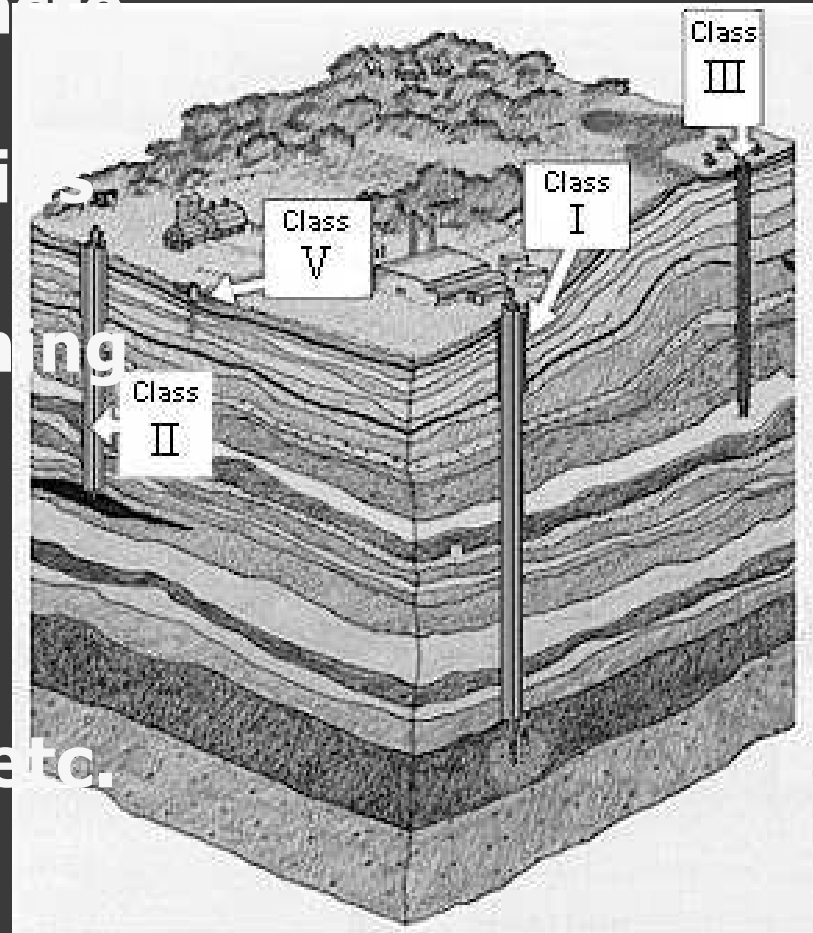
" **Class II Injection Wells**
Revisions
 (above Pre-Cambrian
 basement rock now)
 Seismic rules added by
 emergency in 2012 to lift
 moratorium, 30+ waiting
 applications being
 processed & approved

" **Check new web site often**
www.oilandgas.ohiodnr.gov

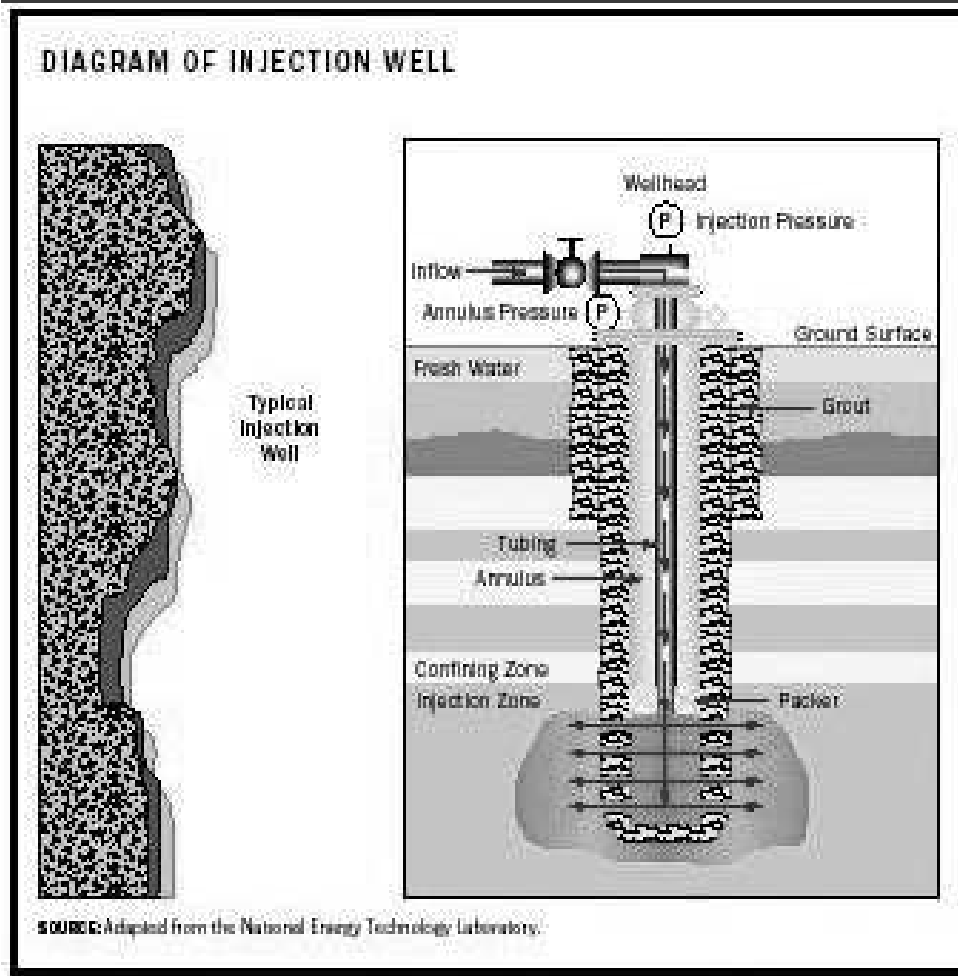


What are Class II Injection Wells?

- " Class I – Hazardous Waste
- " Class II – Oil & Gas Fluids
- " Class III – Solution Mining of Minerals
- " Class IV – now banned
- " Class V – Stormwater, etc.
- " Class IV – CO2 Sequestration



Why Do We Have Them in the First Place?



" Originally used to rehabilitate old O&G fields

" Converted production wells in field to be rehabbed

" Brine & other fluids injected back into field to force out remaining product
Called "Flooding"

How Do They Fail?

- " **Limited Site Visits by Operators**
can be operated 24-7-365
- " **Surface & Near Surface Spills**
from valves, lines & tanks
- " **Compromised Spill Protection**
Systems
- " **Structural Failure Over Time**
Casings and Cement
- " **Earthquakes, increases w/ increase**
in pressure

(National Resources Council rept.,
www.nap.edu/catalog.php?record_id=13355)



Do We Even Need Them?

- **Important for SS & LS O&G well field rehabilitation**
 - but not for shale gas production
- **All other uses**
 - long term, probably not
- **Planning now for the short term & intermediate futures**

Landfilling the Wastes

Legal disposal for
shale rock cuttings,
drilling muds and
associated wastes
Currently HB 59
requires
downblending if Ra
levels above MCLs
for TENORM only

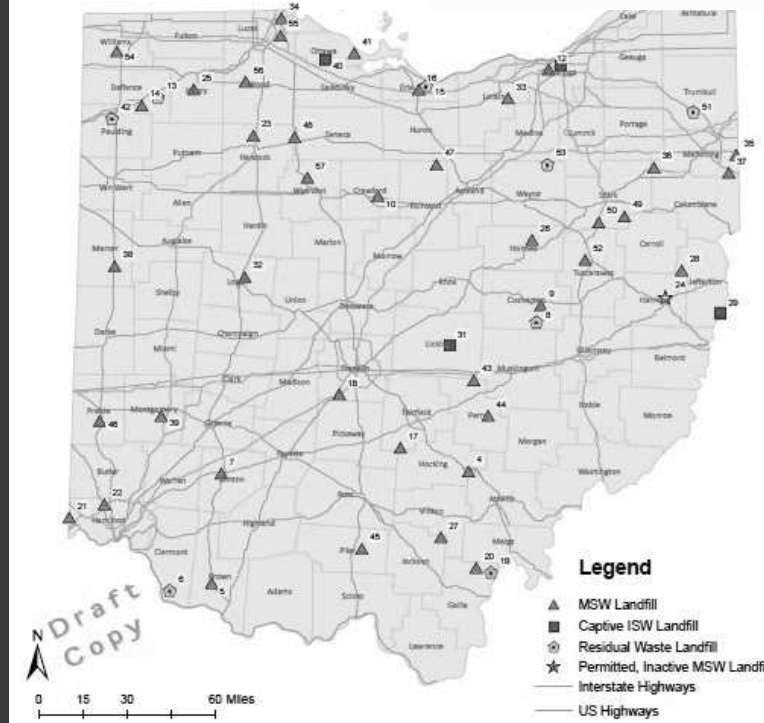
Press releases do not
indicate that chemical
binding of radioactive
materials to dilution
materials must occur

Ohio's debris landfills

The Ohio Environmental Protection Agency found high levels of pollutants in the water in 30 debris landfills.



Ohio Solid Waste Landfills: License



But are they LLRW Landfills?

" No solid waste and C&DD waste landfills in Ohio meet our siting & design criteria for LLRW disposal

" OSU Extension Research "Low-Level Radioactive Waste Fact Sheet Series" (RER-00) explains why



Cement vaults above ground, wastes drummed, overpacked and sealed

Ohioline.osu.edu/rer-fact/

Other Solutions for Brine Disposal Sure to Reach the Water



**Use for deicing on
winter roads
still legal in parts of Ohio**

**Dump it down a storm drain!
Ben Lupo, president D&L
Energy/Hardrock Excavation
admits to at least 250,000 gallons
of brine & oil-based muds
dumped into the Mahoning River
2012-2013**



No one told Beaver Falls, PA

Recycling of Fracking Fluids

- **Chesapeake in Carroll County, Ohio**
- **Range Resources in PA**
- **Consol/Epiphany/PMC Biotech solar powered recycling pilot plant started in July 2012 in PA**
- **Number of others as well**
- **Why? Because they need the water for the next well & savings on reclaimed chemicals**

Potential Problems from Recycling

- **Recycled fracking fluids need to be filtered**
 - to remove sand, rock cuttings, etc. before being reused
- **Filtered materials go to landfills**
- **Reusing the fluid increases the levels of Radium each time through, not removed**
- **Eventually TDS etc. so high that fluid must be disposed of in Class II wells anyway**
- **Ohio not collecting information on Recyclers**
 - who/where they are, how they collect fluids, how dispose of wastes

Repurposing of O&G Brine

- **Almost everything in O&G brine has an industrial application & a current market**
- **Already “mine” salts in Ohio for industrial applications**
- **DOE/GE working on process to remove Radium-228 and 226 from brine**
- **Technology already exists to break O&G brine down, working on economics**
- **Why dispose of resources we need & would have to make/extract in other ways for other costs?**
- **Ohio could still extract “tax” for out-of-state brine if reprocessed here, real jobs for Ohio**

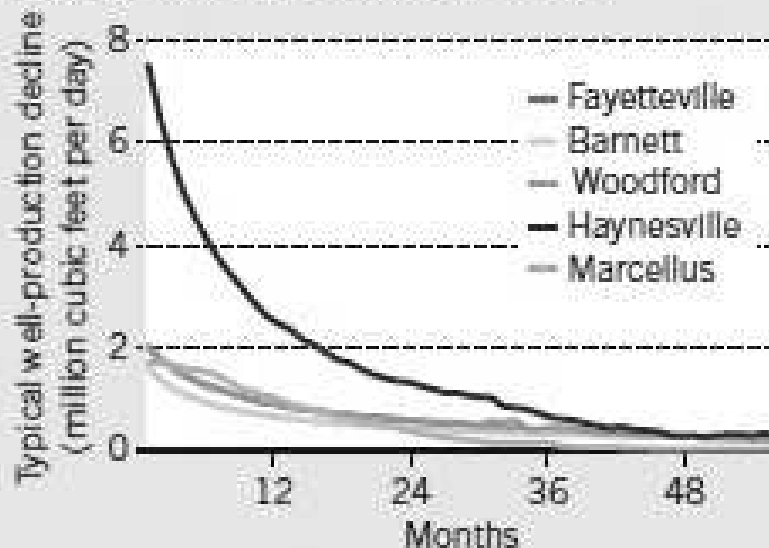
Communities Working to Ban Drilling or Injection Wells

- **By Nov. 2012 elections, 30 communities in Ohio had some form of ban in place, more communities interested**
- **Athens updated Wellhead Protection Plan to exclude injection wells**
- **City of Cincinnati has banned all injection wells city-wide, threats of earthquakes & landslides**
- **Mansfield and Yellow Springs passed Charter Amendments**
- **City of Dayton considering actions related to groundwater protection & public safety**

Even Without Disposal Issues, Does it Make Current Economic Sense to Drill?

TOP FIVE SHALE PLAYS

Five US fields produce 80% of shale gas. The output of a typical well drops 80–95% in its first three years (top). Average well output across a field peaks and then falls as prime spots are used up (middle). Total field production falls 30–50% per year without new drilling (bottom).



" **Drilling Costs
>\$42 Billion/yr to
maintain
production**

" **Dry Gas Sales
~\$33 Billion/yr**

" **Some additional
value from wet gases**

JD Hughes, 2013, Nature vol. 494

Contacts for this presentation & Ohio Journal of Science Papers

OFFWG, Dr. Julie Weatherington-Rice, B&W, OSU
FABE, weatherington-ri.1@osu.edu

OFFWG, Dr. Ann Christy, OSU FABE,
christy.14@osu.edu

Bennett & Williams, Linda Aller RS,
Laller@bennettandwilliams.com

Ohio Journal of Science Web Link at OSU,
<https://kb.osu.edu/dspace/handle/1811/686>

Ohio EPA Division of Drinking and Ground Waters
Source Water Assessment and Protection
Program,

www.epa.ohio.gov/ddagw/swap_ssa.aspx



Keeping Ohio's Water Clean
Ohio Fracture Flow Working
Group

How long to Protect from human interaction if use Michigan's 50 pCi/g limit

- 50 pCi/g Radium-226 (1,609 yrs/1/2 life) to 5 pCi/g is 3+ half lives, ~5,000 yrs, beginning of Egypt's pyramids
- 50 pCi/g Uranium-238 (4.468 Billion yr/1/2 life, from almost the birth of the earth until now 1 1/2 life) to 5 pCi/g, so 3+ half-lives, back to the beginning of the Universe
- 50 pCi/g Thorium-232 (14.05 Billion yr/1/2 life, longer than the age of the Universe until now 1 1/2 life) to 5 pCi/g, ~45 Billion years, more than the diameter of the visible universe

Law Office
TERRY JONATHAN LODGE

316 N. Michigan Street, Suite 520
Toledo, Ohio 43604-5627

Phone (419) 255-7552
Fax (419) 255-7552
lodgelaw@yahoo.com

June 3, 2014

James Zehringer, Director
Ohio Department of Natural Resources
2045 Morse Road
Columbus, OH 43229-6693
Via certified mail and email

RE: Demand for revocation of Chief's Orders for drilling waste disposal facilities

Dear Mr. Zehringer:

I am writing on behalf of citizens in Youngstown and in the Barnesville area, who are actively challenging the operations of fracking waste facilities, to demand an immediate end to a flagrant violation of state law. I am referring to the illegality of the Department of Natural Resources' issuances of Chief's Orders to create twenty-three (23) drilling waste treatment and disposal facilities across Ohio. Noncompliance with the explicit requirements of O.R.C. § 1509.22 requires the immediate revocation and cancellation of all Chief's Orders issued since January 1, 2014, because all of them have been improvidently issued.

Attached is a list of the facilities which have, to the best of our knowledge, each been issued a Chief's Order. Each of the orders contains boilerplate wording and contains zero conditions to assure workers' or the public's health and safety. The process culminating in issuance of these orders by the ODNR Chief of Oil and Gas Resources Management violates mandatory requirements of the Ohio Revised Code.

We learned of ODNR's facility approvals only by dedicated pursuit of public records requests. The unfortunate concealment of these public regulatory decisions may relate to the very nature of the facilities themselves. They all seek to handle, process, treat and/or dispose of oil and gas drilling wastes from horizontal hydraulic fracturing ("fracking") wells. The hundreds of thousands of tons of solid wastes, and millions of gallons of liquid wastes which result from fracking, are rife with radiation, heavy metals, and toxic chemicals used to extract oil and gas from deep shale formations. ODNR elicits almost no information from the facility applicants aimed at disclosure of their processes and technologies. But from even the little information provided to the Department, the facilities are obviously handling radioactive fracking wastes, and that requires far more regulatory involvement and stringency than the Department provides.

O.R.C. § 1509.22(C) states:

(C) The chief shall adopt rules regarding storage, recycling, treatment, processing, and disposal of brine and other waste substances . *The rules shall establish procedures and requirements in accordance with which a person shall apply for a permit or order for the storage, recycling, treatment, processing, or disposal of brine and other waste substances that are not subject to a permit issued under section 1509.06 or 1509.21 of the Revised Code and in accordance with which the chief may issue such a permit or order.*

(Emphasis supplied). This statute requires that before ODNR may consider facility applications, ODNR first must promulgate and publish rules which define the permit types, how one may apply, and the informational detail required for a considered decision to issue or deny such orders. But those rules do not exist; nothing can be found in the Ohio Administrative Code which has been promulgated pursuant to Ohio's Administrative Procedure Act (O.R.C. Chapter 119). According to O.R.C. § 1509.03(A),¹ the APA must be obligatorily followed.

If, as we have concluded, these orders are being issued without rules, then there is no legislative direction over the approval of these facilities, and the statute allowing them is void for unconstitutionally delegating legislative power to an executive agency. We submit that as to all 23 of the fracking waste facilities covered by Chief's Orders, Chief Simmers' decisions are unlawful, and his orders cannot stand. Accordingly, we urgently demand that the ODNR immediately revoke and cancel all of these orders in favor of undertaking the requisite Chapter 119 rulemaking(s) to comply with the obligations imposed by O.R.C. § 1509.22.

Please respond within twenty (20) days of receipt of this letter, indicating that ODNR is nullifying the existing chief's orders. Otherwise, we will consider ourselves free to pursue other options.

Thank you very much.

Very truly yours,

/s/ Terry J. Lodge
Terry J. Lodge

cc: Rick Simmers
Mike DeWine, Esq.

¹Which states: "(A) The chief of the division of oil and gas resources management shall adopt, rescind, and amend, in accordance with Chapter 119. of the Revised Code, rules for the administration, implementation, and enforcement of this chapter."

LIST OF FACILITIES ISSUED ‘CHIEF’S ORDERS’

1. 4 K Industrial Park, LLC 1001 Main St. Martins Ferry, Ohio 43935	Washington County, Grandview Township 11. Halliburton energy services, Inc. Zanesville, Ohio	69500 Bannock Road St Clairsville, OH 20. Keystone Clearwater Solutions, LLC Grunder Pad to Jenkins Pad to Ocel Pad Carroll County
2. Antero Resources Miley Pad, Noble County, Ohio	12. Heckmann Water Resources Inc. 935 E. Pike Norwich Ohio	21. NuGlobal Water Solutions, LLC 44995 Dickerson Church Road Cadis, OH
3. Buckeye brine, LLC 6505 US 36 Tuscarawas, OH	13. Iron Eagle Sherrodsville, LLC 20 S. Church St. Sherrodsville, OH	22. Industrial Waste Control/Ground Tech. 240 Sinter Court Youngstown, OH
4. Chesapeake Exploration LLC 9125 Dawson Road. Hopedale, OH	14. Liquid waste solidification LLC 440 S. 3rd St. Steubenville, Ohio	23. K&H 28333 West Belpre Pike Coolville, OH
5. CNX gas company LLC Cowgill Road. Sarahsville, OH	15. Somerset regional water resources. 43031 Industrial Park Dr. Cadiz, OH	
6. Dow Cameron oil and gas. 1470 Adamsville Rd Zanesville, Ohio	16. The Belden brick company. 375 Dover Rd. NW. Sugar Creek, Ohio	
7. EnerGreen 360 Holding Company LLC East Ohio regional industrial Park Belmont County, Warren Township	17. Weavertown Transport Leasing, Inc. 2741 Stonecreek Rd, Southwest New Philadelphia, Ohio	
8. Enviro Clean Services 515 Industrial Blvd. Wooster, Ohio	18. Warren Drilling 305 Smithson Street Dexter City, OH	
9. Enviro Tank Clean. Belpre, OH	19. CMS Oilfield Services	
10. GreenHunter Water 50810 State Route 7		



Preserving and protecting our precious freshwater

July 16, 2014

Governor's Office
Riffe Center, 30th Floor
77 South High Street
Columbus, Ohio 43215-6117

ATTN: Governor John Kasich

SUBJ: Request for Immediate Intervention into ODNR Frack Waste Facility Authorizations


Dear Governor Kasich:

FreshWater Accountability Ohio is a small grassroots organization, and you have heard from us before. We are writing once again to urgently request your attention and intervention to protect Ohioans from environmental harm and adverse public health effects caused by the temporary, toxic and highly unregulated industry of horizontal hydraulic fracturing (fracking). Specifically, we are requesting that your office investigate the issuance of "Chief's Orders" for the operation of frack waste treatment, recycling and processing facilities per the enclosed letter sent 6/4/14 to your direct report at the ODNR, Director Zehringer, with a list of the facilities involved.

Governor Kasich, we know that you know what the fracking industry and its massive waste problem is doing to Ohioan's health, property values and long-term economic growth. We know that you could intervene in order to avoid the destruction of our drinking water, the contamination of our air, and the clean-up costs that will be visited upon future generations of Ohioans once the fracking industry leaves the state. We specifically ask that you review our enclosed appeal to the USEPA and do what needs to be done to remove the permitting authority of the ODNR before the USEPA does, or a challenge through the courts is made.

Through the information you have and what has been provided in the past, we know that you are fully aware of the hazards of the industry. We aim to hold those accountable who would look the other way while our air and water are polluted with toxic and radioactive frack waste. There are some laws and criminal statutes left in Ohio's dismantled regulatory environment that can be used to hold the frack industry polluters and their upstream and downstream suppliers accountable. Those who hide behind dismantled regulations to exploit the frack industry's opportunity to turn Ohio into an industrial wasteland can still be imprisoned once the damage is realized. Those who seek to make huge, temporary profits through their LLC's thinking they can just disband their operations and abandon their investors can still be brought to justice. In the longer term, history will look back on your governorship and questions will be asked about how Ohio could have so readily been sacrificed for a temporary, toxic industry that exploited valuable natural resources, destroying air and water, just to make huge corporate profits by shipping their ill-gotten spoils overseas to the highest bidders.

Examples are apparent from the information provided by the ODNR through a public records request contained in the enclosed CD. These are the files we received that were used to justify the



“Chief’s Orders” issued by the ODNR to allow temporary authorization for toxic frack waste facilities to operate without adequate oversight that can lead to disaster. A good example are the Chief’s Orders issued to allow the Enviro-Tank company at Belpre, Ohio to operate, where an explosion burned three workers, one critically, in June. If the records provided us are complete, the company was authorized to operate without even naming the chemicals it would be handling. The order letter fails even to commit the company to implement the sparse statements made in its application for the order. As a result, these waste facilities, which handle radioactive and chemically toxic material containing acids and corrosives and are flammable, operate using secretive processes. We suspect that even the ODNR cannot accurately identify the process steps at a facility such as Enviro-Tank from the application information so routinely approved. And the ODNR lacks legal inspection authority which would allow any of its representatives to go into the plant. A fair reading of the Enviro-Tank order leads to the conclusion that all materials handling processes, necessary equipment, and staff training were left entirely to the discretion of the company owner. The rubber-stamped approval of such incomplete, inadequate and unregulated facilities to operate to handle such hazardous materials insures that there will be more industrial tragedies in the future. It is your personal responsibility to hold your political appointee, Director Zehringer, accountable for authorizing such facilities that could allow such disasters to happen.

Because of the silence from your office and the ODNR on so many fracking-related issues, Ohio citizens have formally petitioned the Administrator of the U.S. Environmental Protection Agency for a public trial on the question of whether the federal agency should nullify the contract between Ohio EPA and the US EPA for the state agency to administer the federal Clean Air and Clean Water Acts. The legislative changes over the past four years which have largely terminated Ohio EPA’s mandatory oversight of fracking waste disposal are legally unsupportable and threaten the environment and public health throughout the state. Since your agencies no longer consistently protect the public, the environment and industry worker health and safety, we are taking necessary action ourselves.

We look to you for leadership and responsibility to give direction to the regulatory agencies under your charge that are allowing disastrous consequences to Ohio citizens to unfold at future exorbitant taxpayer cost for cleanup and remediation (if even possible). As the industry continues to externalize its costs to the public and Ohio increasingly becomes the oil and gas waste dumping ground of choice for other states as well, we ask that you as our elected representative fulfill your obligations to citizens of the state and intervene to remove the ODNR’s permitting authority for horizontal hydraulic fracturing operations and its waste handling and disposal facilities. Thank you for your immediate attention to this serious situation.

Sincerely,

Leatra (Lea) Harper
Managing Director
FreshWater Accountability Project
(419) 450-7042

cc: State Attorney General Michael DeWine



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Richard J. Simmers, Chief
Division of Oil and Gas Resources Management
2045 Morse Road – Bldg. F-2
Columbus, OH 43229-6693
Phone: (614) 265-6922, Fax: (614) 265-6910

ORDER BY THE CHIEF

March 6, 2014

ORDER NO. 2014-52

TO: Industrial Waste Control/Ground Tech., Inc.
240 Sinter Court
Youngstown, Ohio 44510

RE: IWC/Ground Tech. Facility

SUBJECT: Temporary Authorization to Operate Facility Pursuant to R.C. 1509.22

Pursuant to Ohio Revised Code Section 1509.22, the Chief of the Division of Oil and Gas Resources Management ("Chief" or "Division") issues the following Order:

BACKGROUND:

- (1) Industrial Waste Control/Ground Tech., Inc. ("IWC/Ground Tech.") proposes to operate the IWC/Ground Tech. Facility located at 240 Sinter Court, Youngstown, Ohio ("IWC/Ground Tech. Facility"). The IWC/Ground Tech. Facility will perform radiological waste characterization, tank cleaning and decontamination, waste solidification, brine storage, and preparation for disposal operations. The radiological waste characterization and handling at the IWC/Ground Tech. Facility will be performed by Austin Master Services, LLC, who has been issued License for Radioactive Material No. 03219 510000 by the Ohio Department of Health.
- (2) Division (B)(2)(a) of R.C. 1509.22 states, in pertinent part, that "On and after January 1, 2014, no person shall store, recycle, treat, process, or dispose of in this state brine or other waste substances associated with the exploration, development, well stimulation, production operations, or plugging of oil and gas resources without an order or a permit issued under this section or section 1509.06 or 1509.21 of the Revised Code or rules adopted under any of those sections."
- (3) On February 7, 2014, the Division received an application from IWC/Ground Tech. requesting to operate the IWC/Ground Tech. Facility. In its application, IWC/Ground Tech. supplied the Division with information and details regarding its operations.

~~Exhibit B~~

Chief's Order No. 2014-52

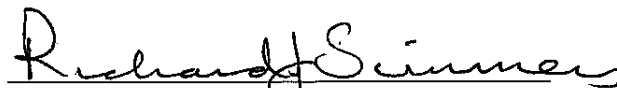
Industrial Waste Control/Ground Tech., Inc.
IWC/Ground Tech. Facility
Page 2 of 3

ORDER:**IT IS HEREBY ORDERED:**

IWC/Ground Tech. has temporary approval to operate the IWC/Ground Tech. Facility in the State of Ohio, subject to the following conditions:

- (1) IWC/Ground Tech. shall conduct all operations in compliance with R.C. Chapter 1509 and Ohio Adm.Code 1501:9.
- (2) Brine shall not be disposed of in a manner not specified in R.C. 1509.22(C)(1)(a) through R.C. 1509.22(C)(1)(c). Disposal of brine pursuant to R.C. 1509.22(C)(1)(d) requires separate written approval by the Chief.
- (3) This Chief's Order shall terminate upon any of the following, whichever occurs first:
 - a) The Division issues a permit to IWC/Ground Tech. for the IWC/Ground Tech. Facility pursuant to rules promulgated under to R.C. 1509.22(C);
 - b) The Division denies a permit to IWC/Ground Tech. for the IWC/Ground Tech. Facility pursuant to rules promulgated under R.C. 1509.22(C); or
 - c) Six months after the effective date of rules adopted under R.C. 1509.22(C).

3/5/14
Date


Richard J. Simmers, Chief
Division of Oil and Gas Resources Management

Addressee is hereby notified that this action is final and effective and may be appealed pursuant to Section 1509.36 of the Ohio Revised Code. If the Order is appealed to the Ohio Oil and Gas Commission, the appeal must be in writing and must set forth the Orders complained of and the grounds upon which the appeal is based. Such appeal must be filed with the Oil and Gas Commission, 2045 Morse Road, Building H-3, Columbus, Ohio 43229-6693, within thirty (30) days after receipt of this Order.

In addition, within three (3) days after the appeal is filed with the Oil and Gas Commission, notice of the filing must be submitted to Richard J. Simmers, Chief, Division of Oil and Gas Resources Management, Ohio Department of Natural Resources, 2045 Morse Road, Building F, Columbus, Ohio 43229-6693.

Industrial Waste Control/Ground Tech., Inc.
IWC/Ground Tech. Facility
Page 3 of 3

Chief's Order No. 2014-52

CERTIFIED MAIL No: 91 7199 9991 7030 3133 1449

cc: Eric Vendel, Legal Counsel, DOGRM
Tom Hill, Region Supervisor
Steve Opritza, Permitting Manager
Erica Freeman, Surety Section
Engineering Section
John Fleming, Mahoning County Oil and Gas Inspector



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Richard J. Simmers, Chief
Division of Oil and Gas Resources Management
2045 Morse Road – Bldg. F-2
Columbus, OH 43229-6693
Phone: (614) 265-6922, Fax: (614) 265-6910

ORDER BY THE CHIEF

January 3, 2014

ORDER NO. 2014-08

TO: EnerGreen 360 Holding Company LLC
6908 Lakebrook Blvd,
Columbus, Ohio 43235

RE: EnerGreen 360 Facility

SUBJECT: Temporary Authorization to Operate Facility Pursuant to R.C. 1509.22

Pursuant to Ohio Revised Code Section 1509.22, the Chief of the Division of Oil and Gas Resources Management ("Chief" or "Division") issues the following Order:

BACKGROUND:

- (1) EnerGreen 360 LLC ("EnerGreen") operates a treatment facility located at the East Ohio Regional Industrial Park, Warren Township, Belmont County, Ohio ("EnerGreen 360 Facility"). EnerGreen receives drill cuttings, processes the drill cuttings, and reuses the drill cuttings at the facility. Any drill cuttings that cannot be reused will be disposed of at a landfill.
- (2) Division (B)(2)(a) of R.C. 1509.22 states, in pertinent part, that "On and after January 1, 2014, no person shall store, recycle, treat, process, or dispose of in this state brine or other waste substances associated with the exploration, development, well stimulation, production operations, or plugging of oil and gas resources without an order or a permit issued under this section or section 1509.06 or 1509.21 of the Revised Code or rules adopted under any of those sections."
- (3) On December 27, 2013, the Division received an application from EnerGreen requesting to operate the EnerGreen 360 Facility. In its application, EnerGreen supplied the Division with information and details regarding its operations.

ORDER:

IT IS HEREBY ORDERED:

EnerGreen has temporary approval to operate the EnerGreen 360 Facility in the State of Ohio, subject to the following **conditions**:

- (1) EnerGreen shall conduct all operations in compliance with R.C. Chapter 1509 and Ohio Adm.Code 1501:9.
- (2) Brine shall not be disposed of in a manner not specified in R.C. 1509.22(C)(1)(a) through R.C. 1509.22(C)(1)(c). Disposal pursuant to R.C. 1509.22(C)(1)(d) requires separate written approval by the Chief.
- (3) This Chief's Order shall terminate upon any of the following, whichever occurs first:
 - a) The Division issues a permit to EnerGreen for the EnerGreen 360 Facility pursuant to rules promulgated under to R.C. 1509.22(C);
 - b) The Division denies a permit to EnerGreen for the EnerGreen 360 Facility pursuant to rules promulgated under R.C. 1509.22(C); or
 - c) Six months after the effective date of rules adopted under R.C. 1509.22(C).

1/3/14
Date

Jon Rayfield, Deputy Chief
Richard J. Simmers, Chief
Division of Oil and Gas Resources Management

Addressee is hereby notified that this action is final and effective and may be appealed pursuant to Section 1509.36 of the Ohio Revised Code. If the Order is appealed to the Ohio Oil and Gas Commission, the appeal must be in writing and must set forth the Orders complained of and the grounds upon which the appeal is based. Such appeal must be filed with the Oil and Gas Commission, 2045 Morse Road, Building H-3, Columbus, Ohio 43229-6693, within thirty (30) days after receipt of this Order.

In addition, within three (3) days after the appeal is filed with the Oil and Gas Commission, notice of the filing must be submitted to Richard J. Simmers, Chief, Division of Oil and Gas Resources Management, Ohio Department of Natural Resources, 2045 Morse Road, Building F, Columbus, Ohio 43229-6693.

EnerGreen 360 Holding Company LLC
EnerGreen 360 Facility
Page 3 of 3

Chief's Order No. 2014-08

CERTIFIED MAIL No:

91 7199 9991 7030 3103 6597

cc: Eric Vendel, Legal Counsel, DOGRM
Rocky King, Region Supervisor
Steve Opritza, Permitting Manager
Erica Freeman, Surety Section
Engineering Section
Andrew Corder, Belmont County Oil and Gas Inspector