IN THE UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF ARKANSAS
LITTLE ROCK DIVISION

MARK MAHAN and WENDY MAHAN, and NORMAN MAHAN and MARY MAHAN, LINDA LINDSAY, and ROGER GREENE and SANDRA GREENE, and JESSE FREY and SUSAN FREY

PLAINTIFFS

v. Case 4:13-cv-184-JLH

CHESAPEAKE OPERATING, INC. and BHP BILLITON PETROLEUM (FAYETTVILLE) LLC

DEFENDANTS

AMENDED COMPLAINT

For their Amended Complaint against Chesapeake Operating, Inc. and BHP Billiton Petroleum (Fayetteville) LLC, Plaintiffs Mark Mahan and Wendy Mahan, husband and wife, and Norman Mahan and Mary Mahan, husband and wife, Linda Lindsay, Roger Greene and Sandra Greene, and Jesse Frey and Susan Frey, state:

Introduction

1. Plaintiffs Mark and Wendy Mahan, husband and wife, and Mary and Norman Mahan, husband and wife, Linda Lindsay, and Roger Greene and Sandra Greene, husband and wife, and Jesse Frey and Susan Frey, suffered damages, including property damage to their respective homes, due to Defendants' disposal-well

operations, which caused thousands of earthquakes in mini-clusters and swarms in central Arkansas in 2010 and 2011.

Parties

2. Plaintiffs Mark and Wendy Mahan, husband and wife, and Mary and Norman Mahan, husband and wife, Linda Lindsay, and Jesse Frey and Susan Frey, are residents of Faulkner County, Arkansas. Plaintiffs Roger Greene and Sandra Greene are residents of Cleburne County.

3. Defendant Chesapeake Operating, Inc. ("Chesapeake") is a foreign for-profit corporation with its principal place of business in Oklahoma City, Oklahoma. Chesapeake is also an explorer, developer, and producer of shale gas within the Fayetteville Shale in Arkansas. Chesapeake owned and operated wastewater disposal wells in Faulkner County, Arkansas that are at issue in this litigation. Since Chesapeake is represented by an attorney in this civil action, service must be made on its attorney. *See* Fed. R. Civ. P. 5(b)(1).

4. Defendant BHP Billiton (Fayetteville) LLC ("BHP") is a foreign limited liability company doing business in Arkansas. BHP operates primarily as an explorer, developer, and producer of shale gas within the Fayetteville Shale in Arkansas. BHP owns and operates wastewater disposal wells in Faulkner County, Arkansas that are at issue in this litigation. Since BHP is represented by an attorney in this civil action, service must be made on its attorney. *See* Fed. R. Civ. P. 5(b)(1).

Jurisdiction and Venue

5. This Court has jurisdiction over this civil action under 28 U.SC. § 1332(a)(1) because Plaintiffs and Defendants are citizens of different states and the amount in controversy exceeds $75,000, excluding costs and interests.

6. This Court has personal jurisdiction over Defendants because they owned and operated wastewater disposal wells in Faulkner County, Arkansas, which satisfies the Due Process Clause of the Fourteenth Amendment to the United States Constitution. *See* ARK. CODE ANN. § 16-4-101B.

7. Venue is proper in this Court because Faulkner County is where a substantial part of the events and omissions giving rise to these claims occurred and is where Plaintiffs resided at the time the events and omissions giving rise to these claims occurred. *See* Ark. Code Ann. 16-55-213(a)(1), (3)(A).

Factual Allegations

I. Factual Introduction.

8. Central Arkansas has seen an unprecedented increase in seismic activity, occurring in the vicinity of Defendants' wastewater injection wells near Greenbrier and Guy, Arkansas.

9. From about July 2010 through August 2011, well over 1000 earthquakes of a minimum magnitude of 1.0 have occurred in the area. Two earthquakes registered a magnitude of 4.0 and 4.7. Over 30 earthquakes registered a magnitude of 3.0 or above.

10. These earthquakes were a direct and proximate consequence of Defendants' oil and gas operations in Arkansas, and more specifically, their disposal of the wastewater generated during the process of extracting natural gas from the Fayetteville Shale by injecting it back into the earth in disposal wells.

11. As a result of Defendants' actions in causing thousands of earthquakes in central Arkansas, Plaintiffs have suffered damages.

II. Natural Gas Exploration and Operations in Central Arkansas

12. In Arkansas, a major source of natural gas comes from places in Faulkner County, and its surrounding counties as well, from what is called the Fayetteville Shale.

13. Although the Fayetteville Shale extends across the state of Arkansas, the majority of gas drilling and production activities are centered in Conway, Van Buren, Faulkner, Cleburne and White Counties, Arkansas.

14. The process of extracting natural gas from the Fayetteville Shale involves hydraulic fracturing or "fracking." This process requires drillers to inject pressurized water, sand, and other chemicals to create fractures deep into the ground.

15. The fracking process results in wastewater that has to be disposed of, primarily because it is contaminated with salt and other minerals.

16. Although some of this wastewater is recycled and reused, for the most part, it is disposed of by injecting it back into the ground into other wells commonly

referred to as "wastewater disposal injection wells," "disposal wells" or "injection wells."

17. Defendants owned and operated injection wells in Faulkner County, Arkansas to accomplish this end. At issue are injection wells known as the Chesapeake SRE 8-12 1-17 SWD, Permit #43266 ("Chesapeake SRE") and the Chesapeake Trammel 7-13 1-8D SWD, Permit #41079 ("Chesapeake Trammel").

18. These injection wells are located in Faulkner County, Arkansas, near Greenbrier and Guy, Arkansas.

19. For all of 2010, Chesapeake owned and operated both the Chesapeake SRE and Chesapeake Trammel wastewater disposal wells.

20. These two wastewater disposal wells were purchased by BHP from Chesapeake as part of a massive purchase of assets valued at about $4.7 billion.

21. According to the Form 8-K filed by Chesapeake with the Securities Exchange Commission on April 5, 2011, Chesapeake transferred ownership of the assets purchased by BHP to BHP on January 1, 2011.

22. Both the Chesapeake SRE and Chesapeake Trammel wastewater disposal wells were transferred as part of this purchase from Chesapeake to BHP on January 1, 2011.

23. Thus, BHP presently owns both the Chesapeake SRE and Chesapeake Trammel injections wells and has owned these two wastewater disposal wells since January 1, 2011.

24. Chesapeake, however, has been providing technical and business services to BHP regarding the purchased assets (which would include the two wastewater disposal wells at issue) for an agreed-upon fee according to the Form 8-K filed April 5, 2011.

III. Thousands of Earthquakes Hit Central Arkansas.

25. Defendants' disposal of wastewater into the Chesapeake SRE and Chesapeake Trammel wastewater disposal wells caused the sudden swarm of earthquakes in central Arkansas – including the largest quake in Arkansas' past 35 years.

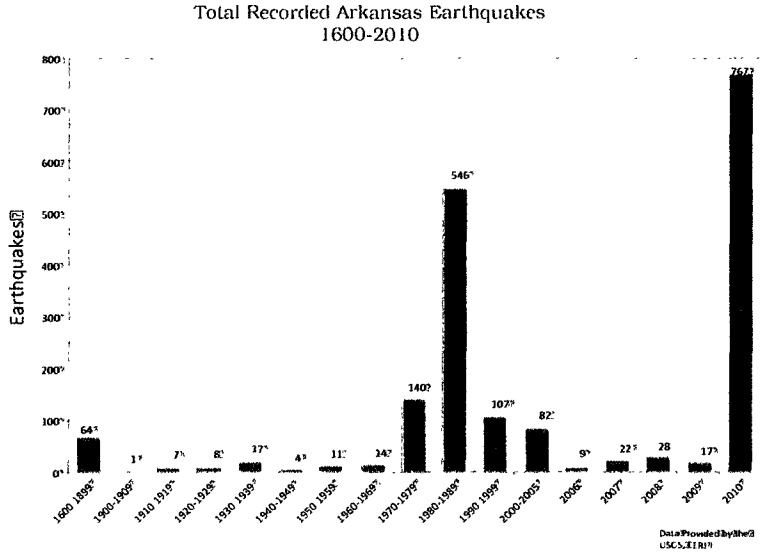
26. According to Dr. Steve Horton, an earthquake specialist at the University of Memphis Center for Earthquake Research and Information (or "CERI"), ninety percent of the swarm of earthquakes occurring in central Arkansas since 2009 were within six kilometers of wastewater disposal wells.

27. Scientists have known for half a century that disposal well operations will cause earthquakes. In fact, since the late 1960s, scientists studying whether earthquakes and seismic activities can be induced by certain human actions have accepted that induced seismic activity can and does occur.[1]

28. Further, the history of earthquakes in Arkansas demonstrates that the sudden and substantial uptick in seismic activity was induced by the disposal injection

[1] *See* David Brown, *Yes, Virginia, There is Induced Seismicity*, AAPG Explorer, October 2010.

wells. The graph below, prepared by Arkansas Geological Survey ("AGS") from data provided by United States Geological Survey ("USGS") and CERI, shows that Arkansas experienced almost as many earthquakes in years following disposal well activity than it did in the previous twenty years collectively.



29. In what the USGS tagged as the "Arkansas Earthquake Swarm of October 2010," hundreds of earthquakes hit central Arkansas in October of 2010 alone.

30. Some of the earthquakes were of substantial magnitude. For example, earthquakes of 4.0 and 3.8 in magnitude were centered in the Guy/Greenbrier area on October 11th and October 15th. These two big earthquakes were felt widely across Arkansas.[2]

31. In response to this swarm of earthquakes in Arkansas, hundreds occurring between September 2010 and December of 2010, the Arkansas Oil and Gas

[2] *See* Exhibit A, United States Geological Survey's 2010-2011 Arkansas Earthquake Swarm poster.

Commission Staff, on December 1, 2010, requested that the Commission establish an immediate moratorium on any new or additional disposal wells that were not currently active in certain parts of Faulkner, Conway, Van Buren, Cleburne, and White Counties. The Commission Staff requested the moratorium remain in effect until the scheduled July 2011 Commission hearings.[3]

32. During the interim time period, the Commission, Arkansas Geological Survey ("AGS"), United States Geological Survey ("USGS"), and the Center for Earthquake Research and Information (or "CERI") collected data and conducted further studies into the earthquakes in central Arkansas.

33. The Commission Staff also requested that the Commission require operators of existing disposal wells within the moratorium area, that included the Chesapeake SRE, Chesapeake Trammel wells and another well, the E.W. Moore Estate No. 1 disposal well, operated by Deep-Six Water Disposal Services, LLC ("Deep-Six"), to submit bi-weekly reports detailing the daily amounts of barrels of water injected per zone and the maximum daily injection pressure per zone from the injection operations at each disposal well.

34. In response to the Commission Staff's request, on December 22, 2010, the Commission found that an emergency existed and entered an order granting the Commission Staff's requests to prohibit the administrative issuances of any new or

[3] *See* Exhibit B, Docket No. 606A-2010-12, Emergency Request for an Order to Prohibit the Administrative Issuance of any New or Additional Class II Commercial Disposal Well or Class II Disposal Well in Certain Areas.

additional disposal well permits within the moratorium area and to require the operators of existing disposal wells within the moratorium area provide the bi-weekly injection reports.[4]

35. Thereafter, on December 28, 2010, the Commission Staff made another request to the Commission asking for a broader moratorium area. In the request, the Staff reported that over 400 earthquakes of varying magnitudes had occurred within the proposed moratorium area, and that there was circumstantial evidence that recent earthquakes within the proposed area may be either enhanced or potentially induced by the operation of disposal wells.[5]

36. After holding another hearing in January 2011, the Commission issued a second, broader order on February 8, 2011. Under this Order, the Commission imposed an immediate moratorium on any new disposal wells in the previous moratorium area that included certain parts of Faulkner, Conway, Van Buren, Cleburne, and White Counties, at least until the July 2011 Commission hearing. The Commission found that evidence existed showing recent earthquakes within the area may have been either enhanced or induced by the operation of disposal wells. The Chesapeake SRE, Chesapeake Trammel and E.W. Moore disposal wells were within the moratorium area.[6]

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[4] *See* Exhibit C, Order No. 606A-2010-12.
[5] *See* Exhibit D, Docket No. 602A-2010-12, Amended Request for an Immediate Moratorium on Any New or Additional Class II Commercial Disposal Well or Class II Disposal Well in Certain Areas.
[6] *See* Exhibit E, Order No. 602A-2010-12.

37. In early February 2011, news reports and articles expressed the concerns of Greenbrier and Guy, Arkansas residents about recent earthquakes. Between February 13 and February 17, 2011, USGS reported more than 30 earthquakes ranging in magnitude from 1.8 to 3.8 had rattled Faulkner County. Indeed, from September 2010 through early February 2011, more than 700 earthquakes occurred in the region.

38. Then, on February 28, 2011, at 11:01 PM CST, Arkansas was hit with the largest earthquake that it had experienced in 35 years. A magnitude 4.7 earthquake centered near Greenbrier, Arkansas shook the region. USGS reported that the large quake was felt across a ten state region.[7]

39. This 4.7 main shock was followed by 3.8 and 3.4 magnitude aftershocks at 11:18 PM CST, and on February 28, 2011 at 2:46 AM PST.

40. AGS and USGS tagged the Central Arkansas seismic phenomena the "Guy Earthquake Swarm." In fact, by the end of February 2011, USGS reported well over 1000 earthquakes in the Guy/Greenbrier region of Arkansas just since September of 2010.

41. Immediately following these large February 28th quakes, the Arkansas Oil and Gas Commission ("AOGC") ordered a special hearing to be held on March 4, 2011.

42. Prior to the special hearing, however, Director Lawrence E. Bengal requested the cessation of a disposal well operated by Clarita Operating LLC

[7] *See* Exhibit F, United States Geological Survey earthquake distribution poster.

("Clarita") within the moratorium area, and also the cessation of the Chesapeake SRE disposal well.

43. Clarita Operating LLC filed for bankruptcy in the Eastern District of Oklahoma on October 14, 2011.

44. On March 4, 2011, a consent order was entered by the AOGC requiring the Chesapeake SRE disposal well to be shut down.[8] Injection operations at the Chesapeake SRE disposal well ceased that same day.

45. In June 2011, operations at the Chesapeake Trammel disposal well also ceased.

46. On July 8, 2011, the AOGC's Staff requested the Commission to issue an order establishing a permanent moratorium area for any new or additional Class II Disposal or Class II Commercial Disposal wells, and to order the cessation and the plugging and abandoning of all existing Class II Disposal and Class II Commercial Disposal wells within the permanent moratorium area. The Chesapeake SRE, Chesapeake Trammel and E.W. Moore disposal wells were within the requested moratorium area.[9]

47. Based on its investigation, the Commission Staff believed sufficient evidence showed that seismic events in the adjusted moratorium area were enhanced, induced, or triggered by the operation of disposal wells in the moratorium are,

[8] *See* Exhibit G, Docket No. 051A-2011-02 Consent Order.
[9] *See* Exhibit H, Docket No. 180A-2011-07, Request for an Order Imposing an Immediate Cessation of All Disposal Well Operations and Establishment of a Moratorium Area For any Class II or Class II Commercial Disposal Wells in a Certain Area.

including the Chesapeake SRE and Trammel disposal wells and the E.W. Moore disposal well.

48. The Commission Staff bolstered its requests through a significant examination of scientific articles addressing seismic activity induced by human activities.[10]

49. Defendants Chesapeake and BHP agreed to voluntarily cease operations of the Chesapeake SRE and Chesapeake Trammel disposal wells, and to plug and abandon them. Clarita also agreed to plug its disposal well within the moratorium area. Deep-Six, on the other hand, fought the Staff's requested order and presented evidence at a hearing before the Commission on July 26, 2011.

50. On July 26, 2011, the AOGC held a hearing and heard evidence in support of its Staff's requested order and against the requested order from Deep-Six.

51. In support of the requested order, the Staff provided both documentary proof and expert witness proof from Scott Ausbrooks of AGS and Dr. Steve Horton of CERI.

52. Deep-Six presented evidence in the form of documentary and expert proof from Dr. Haydar Al-Shukri, Dr. Hanan Mahdi, Najah Abd, and Aycan Catakli for the University of Arkansas at Little Rock.

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[10] *See,* Jon Ake, et al, *Deep-Injection and Closely Monitored Induced Seismicity at Paradox Valley, Colorado*, 95 BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA, 664-683 (April 2005); Donald L. Wells, et al, *New Empirical Relationships Among Magnitude, Rupture Length, Rupture Width, Rupture Area, and Surface Displacement*, 84 BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA, 974-1002 (August 1994); Robert B. Herrmann, et al., *The Denver Earthquakes of 1967-1968*, 71 BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA, 731-745 (June 1981); J. H. Healy, *The Denver Earthquakes*, 161 SCIENCE 1301-1310 (September 27, 1968).

53. The AOGC found that sufficient evidence existed that the four disposal wells at issue (Clarita's Wayne L. Edgmon No1 SWD well, Chesapeake SRE, Chesapeake Trammel, and E.W. Moore) triggered the earthquakes in central Arkansas.

54. On August 2, 2011, the AOGC entered findings of facts and conclusions of law, and entered an order establishing a moratorium area (somewhat different in shape than before, but in the same general area) on any new or additional Class II Commercial Disposal Well or Class II Disposal Wells within the moratorium area, and ordering the cessation, plugging, and abandoning the Clarita Wayne L. Edgmon, Chesapeake SRE, Chesapeake Trammel, and E.W. Moore disposal wells within the moratorium area.[11]

Causes of Action

Count I – Public Nuisance

55. Plaintiffs re-allege and incorporate the foregoing paragraphs as if fully set forth word-for-word.

56. Defendants' conduct constitutes a substantial and unreasonable interference with the rights common to the general public.

57. This unreasonable interference is imposed on the community at large and on a considerable diverse number of persons and entities. It arises from Defendants' disposal well operations (a) without adequate precautions to prevent earthquakes;

[11] *See* Exhibit I, Order No. 180A-1-2011-07 and Exhibit J, Order No. 180A-2-2001-07.

and/or (b) with the knowledge that there was a substantial risk of seismic activity and problems in the State of Arkansas.

58. Plaintiffs have suffered harm as a result of Defendants' creation of a public nuisance and as described below.

59. Plaintiffs are also entitled to injunctive relief as described below.

Count II – Private Nuisance

60. Plaintiffs re-allege and incorporate the foregoing paragraphs as if fully set forth word-for-word.

61. Defendants' conduct herein at their injection-well sites disturbs the quiet use and enjoyment of Plaintiffs' properties.

62. As a result of Defendants' conduct, Plaintiffs have suffered certain and substantial injuries and damages, as described below.

63. Plaintiffs are also entitled to injunctive relief as described below.

Count III – Absolute Liability

64. Plaintiffs hereby re-allege and incorporate the foregoing paragraphs as if fully set forth herein, word-for-word.

65. Defendants' disposal well operations and actions described above are ultra-hazardous activities that necessarily involve a risk of serious harm to a person or the chattels of others that cannot be eliminated by the exercise of the utmost care and is not a matter of common usage.

66. As a direct and proximate result of Defendants' ultra-hazardous activities, Plaintiffs have sustained damage, as described below, which are the direct and proximate result of Defendants' ultra-hazardous or abnormally dangerous activities, for which Defendants are strictly liable.

67. Plaintiffs are also entitled to injunctive relief as described below.

Count IV – Negligence

68. Plaintiffs hereby re-allege and incorporate the foregoing paragraphs as if fully set forth, herein, word-for-word.

69. The Defendants owed a duty to Plaintiffs to use ordinary care and not to operate or maintain their injection wells in such a way as to cause or contribute to seismic activity. Defendants, experienced in these operations, were well aware of the connection between injection wells and seismic activity, and acted in disregard of these facts.

70. As a direct and proximate result of these facts, omissions, and fault of the Defendants, Plaintiffs have suffered damages and injuries reasonably foreseeable to the Defendants, and as described below.

71. Plaintiffs are also entitled to injunctive relief as described below.

Count V – Trespass

72. Plaintiffs hereby re-allege and incorporate the foregoing paragraphs as if fully set forth, herein, word-for-word.

73. Defendants, without Plaintiffs' consent and without legal right, intentionally engaged in activities that resulted in concussions or vibrations to enter the Plaintiffs' properties. Such unauthorized invasion of Plaintiffs' property interests by concussions or vibrations by Defendants constitutes a trespass.[12]

74. Defendants' actions of trespass have caused damages to Plaintiffs as described below.

75. Plaintiffs are also entitled to injunctive relief as described below.

Count VI – Deceptive Trade Practices

76. Plaintiffs hereby re-allege and incorporate the foregoing paragraphs as if fully set forth, herein, word-for-word.

77. The Arkansas Deceptive Trade Practices Act ("ADTPA"), Ark. Code Ann. § 4-88-101, et seq., is designed to protect Arkansans from deceptive, unfair and unconscionable trade practices. The ADTPA is a remedial statute, which is to be liberally construed.

78. The practices employed by Defendants in operating their disposal wells in an area that Defendants knew had a history of seismic activity are unfair and unconscionable under the ADTPA, and thus, violate the provisions of the ADTPA. *See* Ark. Code Ann. § 4-88-107(a)(10).

[12] *See Smith v. Lockheed Propulsion Co.*, 247 Cal. App. 2d 774 (1967) (holding actionable trespass may be committed indirectly through concussions or vibrations activated by defendant's conduct).

79. Defendants are engaged in "business, commerce, or trade," within the meaning of Ark. Code Ann. § 4-88-107(a)(10) and is a "person" within the meaning of Ark. Code Ann. § 4-88-102(5).

80. Defendants' violations of the ADTPA resulted in damages to Plaintiffs as described below. Defendants are also liable for attorneys' fees and enhanced penalties under the ADTPA.

Count VII – Outrage

81. Plaintiffs hereby re-allege and incorporate the foregoing paragraphs as if fully set forth, herein, word-for-word.

82. Defendants knew or should have known that earthquakes were the likely result of their conduct and that their conduct would cause emotional distress to area residents, including Plaintiffs.

83. Defendants' conduct in operating disposal wells in an area with a history of seismic activity while knowing that disposal well operations can and do induce seismic activity is extreme, outrageous, and intolerable.

84. Plaintiffs have suffered emotional distress because of Defendants' conduct.

85. Plaintiffs' emotional distress was so severe in nature, no reasonable person could be expected to endure it.

Damages

Plaintiffs Mark Mahan and Wendy Mahan

86. Plaintiffs Mark Mahan and Wendy Mahan have suffered damages caused by Defendants' disposal well operations and resulting earthquakes, for which Defendants are liable to the Mahans.

87. The damages suffered by the Mahans include: (1) physical damage to his home, (2) losses in the fair market value of his real estate due to earthquakes caused by Defendants' activities, and (3) emotional distress.

88. The Mahans live in their home in Wooster, Faulkner County, Arkansas. The home is located approximately 7.5 miles, from the center of the 4.7 earthquake that occurred on February 28, 2011.

89. Indeed, the thousands of earthquakes occurring in the past year in central Arkansas and due to Defendants' disposal well operations have caused damages to the Mahans' home that includes cracking in their interior walls and ceiling and cracking in swimming pool to the extent that the pool will no longer hold clean water, and damage to the swimming pool filtration system to the extent that the pool water cannot be chemically sanitized, and cracking and separation in the concrete patio surrounding the swimming pool. The Mahans have been unable to use the pool at all because of this damage.

90. Finally, the Mahans lives have also been damaged by Defendants' disposal well operations and resulting earthquakes in that they have suffered emotional distress

and increased anxiety and worry of additional and possibly more severe earthquakes that could further damage their property or injure themselves or a family member in their home.

Plaintiffs Norman Mahan and Mary Mahan

91. Plaintiffs Norman Mahan and Mary Mahan have suffered damages caused by Defendants' disposal well operations and resulting earthquakes, for which Defendants are liable to the Mahans.

92. The damages suffered by the Mahans include: (1) physical damage to their home, (2) losses in the fair market value of their real estate due to earthquakes caused by Defendants' activities, and (3) emotional distress.

93. The Mahans live in their home in Wooster, Faulkner County, Arkansas. The home is located approximately 7.75 miles from the center of the 4.7 earthquake that occurred on February 28, 2011.

94. Indeed, the thousands of earthquakes occurring in the past year in central Arkansas and due to Defendants' disposal well operations have caused damages to the the Mahans' home that include separation and cracking in their interior trim, crown molding, baseboard, walls, ceramic tile, and exterior brick walls, porches and patios, and cracks and separation in their storm cellar's concrete floor and walls.

95. Finally, the Mahans' lives have also been damaged by Defendants' disposal well operations and resulting earthquakes in that they have suffered emotional distress and increased anxiety and worry of additional and possibly more severe earthquakes

that could further damage their property or injure themselves or a family member in their home.

Plaintiff Linda Lindsay

96. Linda Lindsay has suffered damages caused by Defendants' disposal well operations and resulting earthquakes, for which Defendants are liable to Linda Lindsay.

97. The damages suffered by Linda Lindsay include: (1) physical damage to their home, (2) losses in the fair market value of their real estate due to earthquakes caused by Defendants' activities, and (3) emotional distress.

98. Linda Lindsay lives in her home in Wooster, Faulkner County, Arkansas. The home is located approximately 8.5 miles from the center of the 4.7 earthquake that occurred on February 28, 2011.

99. Indeed, the thousands of earthquakes occurring in the past year in central Arkansas and due to Defendants' disposal well operations have caused damages to Linda Lindsay's home that include cracking or separations in the interior drywall and floors, separation of cabinets and door frames form the wall, and exterior cracks in her brick, concrete slab, porch and driveway.

100. Finally, Linda Lindsay's life has also been damaged by Defendants' disposal well operations and resulting earthquakes in that they have suffered emotional distress and increased anxiety and worry of additional and possibly more severe

earthquakes that could further damage their property or injure herself or a family member inside her home.

Plaintiffs Roger Greene and Sandra Greene

101. Plaintiffs Roger Greene and Sandra Greene have suffered damages caused by Defendants' disposal well operations and resulting earthquakes, for which Defendants are liable to the Greenes.

102. The damages suffered by the Greenes include: (1) physical damage to their home, (2) losses in the fair market value of their real estate due to earthquakes caused by Defendants' activities, and (3) emotional distress.

103. The Greenes live in their home in Quitman, Cleburne County, Arkansas. The home is located approximately 8.5 miles from the center of the 4.7 earthquake that occurred on February 28, 2011.

104. Indeed, the thousands of earthquakes occurring in the past year in central Arkansas and due to Defendants' disposal well operations have caused damages to the the Greenes' home that include damages to the foundation, pulling away of the exterior concrete porches from the home, severe cracks in exterior concrete slab porches, driveway, and garage floor, and interior cracks in the interior drywall, ceiling and floors, and severe cracks in their storm cellar that causes the storm cellar to hold water which renders the storm cellar unusable.

105. Finally, the Greenes' lives have also been damaged by Defendants' disposal well operations and resulting earthquakes in that they have suffered emotional

distress and increased anxiety and worry of additional and possibly more severe earthquakes that could further damage their property or injure themselves or a family member in their home.

Plaintiffs Jesse and Susan Frey

106. The Freys have suffered damages caused by Defendants' disposal well operations and resulting earthquakes, for which Defendants are liable to the Freys.

107. The damages suffered by the Freys include: (1) physical damage to their home, (2) losses in the fair market value of their real estate due to earthquakes caused by Defendants' activities, and (3) emotional distress.

108. The Freys live in their home in Vilonia, Faulkner County, Arkansas. The home is located approximately 17 miles from the center of the 4.7 earthquake that occurred on February 28, 2011.

109. Indeed, the thousands of earthquakes occurring in the past year in central Arkansas and due to Defendants' disposal well operations have caused damages to the Freys' home that include cracking or separations in the chimney, fireplace, outside brick wall, footing, bay window, sidewalk, patio, crown molding, trim, interior walls, ceiling, interior doors, and archways, and a television antenna's anchor point separated from the exterior brick wall.

110. Finally, the Freys' lives have also been damaged by Defendants' disposal well operations and resulting earthquakes in that they have suffered emotional distress and increased anxiety and worry of additional and possibly more severe earthquakes

that could further damage their property or injure themselves or a family member in their home.

Punitive Damages

111. Defendants' actions, in knowingly causing seismic activity as a result of their disposal well operations, constitute wanton or reckless disregard for public safety and is subject to a claim for punitive damages, for which Plaintiffs seek an amount sufficient to punish the Defendants and to deter them and others similarly situated from such conduct in the future.

Declaratory and Injunctive Relief

112. Plaintiffs are entitled to a judgment declaring Defendants' actions detailed in this complaint to be a public and private nuisance, ultra-hazardous activities, a trespass, and that their disposal well operations were also negligently performed.

113. Plaintiffs are also entitled to permanent injunctive relief consistent with the present orders of the AOGC as detailed in this complaint and attached as exhibits.

Jury Demand

114. Plaintiffs demand a jury trial.

Prayer for Relief

115. Plaintiffs request the following relief:

a. joint and several judgment against Defendants for all general and special compensatory damages caused by the conduct of the Defendants;

b. costs of litigating this case;

c. appropriate injunctive relief;

d. punitive damages;

e. attorney's fees;

f. prejudgment and post-judgment interest; and

g. all other relief to which Plaintiffs are entitled or that the Court deems just and proper.

DATED: January 9, 2014

Respectfully Submitted,

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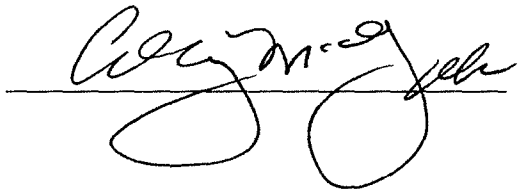
COUNSEL FOR PLAINTIFFS

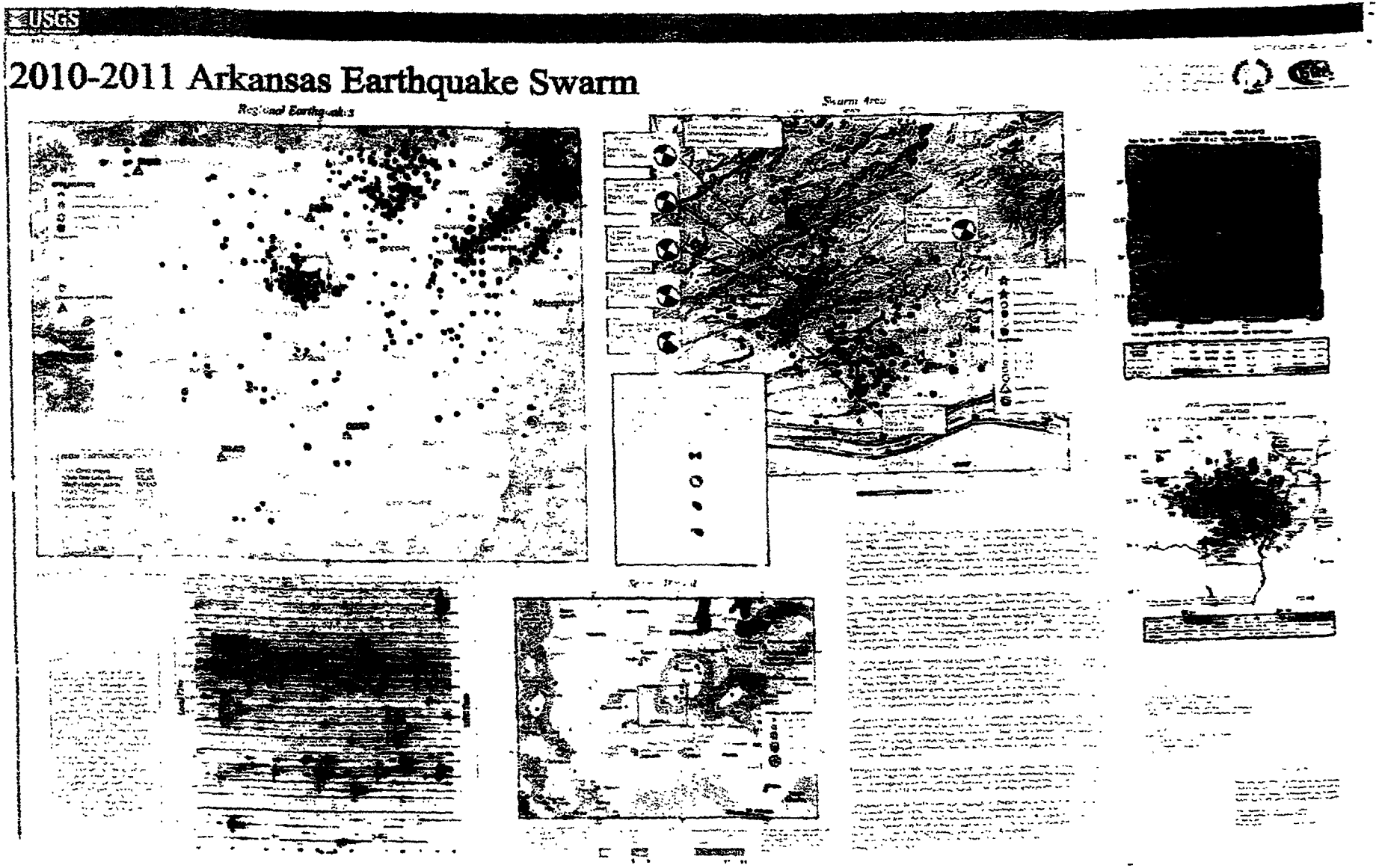
Certificate of Service

I certify that on January 9, 2014, I filed the foregoing with the Clerk of the Court, which shall send notification of such filing to all attorneys of record.



EXHIBIT

A


USGS
2010-2011 Arkansas Earthquake Swarm

EXHIBIT

B

ARKANSAS OIL AND GAS COMMISSION

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December 1, 2010

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Little Rock, AR 72205

Re: **606A-2010-12**
Emergency Request for an Order to Prohibit the Administrative Issuance of any New or Additional Class II Commercial Disposal Well or Class II Disposal Well Permits in Certain Areas

Dear Commissioners:

Staff ("Applicant") initially filed Docket No. 602A-2010-12 requesting a Commission Order imposing an immediate moratorium on any new or additional Class II Commercial Disposal Well or Class II Disposal Well which is not currently active in any formation within: all Sections within the following Townships: 6N-12W; 6N-11W; 7N-11W; 7N-12W; 7N-13W; 7N-14W; 7N-15W; 8N-11W; 8N-12W; 8N-13W; 8N-14W; 9N-11W; 9N-12W; 9N-13W; as well as Sections 7-36 in Township 8N-15W; and Sections 25-36 in Township 9N-14W, (the "proposed area"). Due to the unavailability of interested parties' expert witnesses, the Director agreed to continue Docket No. 602A-2010-12 until the regularly scheduled AOGC hearing in January.

As such, Docket Nos. 508-2010-09, a request for the issuance of a Class II Commercial Disposal Well Permit for the Poseidon No. 2 Well within the proposed area, and 597-2010-12, a request for the issuance of a Class II Disposal Well Permit for the Boy Scout Well within the proposed area, have also been continued until the regularly scheduled AOGC hearing in January.

Although by agreement, all three above docketed matter have been continued until the regularly scheduled AOGC hearing in January, Staff is seeking an affirmative order of the Commission to prohibit the administrative issuance of any other new or additional Class II Commercial Disposal Well or Class II Disposal Well pending the hearings in January.

Additionally, in an effort to further the studies of the Staff of the Arkansas Oil and Gas Commission ("AOGC"), Arkansas Geological Survey, United States Geological Survey, Center for Earthquake Research and Information ("CERI") and others, Staff also requests that the emergency order include a provision requiring all operators of existing Class II Commercial Disposal Wells or Class II Disposal Wells to submit bi-weekly reports detailing the daily amounts of barrels of water injected per zone and the maximum daily injection pressure per zone from the later of January 1, 2010 or the date injection operations commenced, and that this information continue to be provided until the regularly scheduled AOGC hearing..

Sincerely,

Lawrence E. Bengal
Director

EXHIBIT

C

ARKANSAS OIL AND GAS COMMISSION
301 NATURAL RESOURCES DRIVE
SUITE 102
LITTLE ROCK, ARKANSAS 72205

ORDER NO. 606A-2010-12 **December 22, 2010**

CLASS II COMMERCIAL DISPOSAL WELL OR
CLASS II DISPOSAL MORATORIUM
Cleburne, Conway, Faulkner, and Van Buren Counties, Arkansas

EMERGENCY REQUEST TO PROHIBIT THE ADMINISTRATIVE ISSUANCE OF ANY NEW OR ADDITIONAL CLASS II COMMERCIAL DISPOSAL WELL OR CLASS II DISPOSAL WELL PERMITS IN CERTAIN AREAS.

The Director ("Director") of the Arkansas Oil and Gas Commission ("Commission") filed an emergency application requesting an affirmative order of the Commission to prohibit the administrative issuance of any new or additional Class II Commercial Disposal Well or Class II Disposal Well permits within certain areas.

FINDINGS OF FACT

From the evidence introduced at said hearing, the Commission finds:

1. That the Director filed an emergency application requesting an affirmative order of the Commission to prohibit the administrative issuance of any new or additional Class II Commercial Disposal Well or Class II Disposal Well permits within: all Sections within the following Townships: 6N-12W; 6N-11W; 7N-11W; 7N-12W; 7N-13W; 7N-14W; 7N-15W; 8N-11W; 8N-12W; 8N-13W; 8N-14W; 9N-11W; 9N-12W; 9N-13W; as well as Sections 7-36 in Township 8N-15W; and Sections 25-36 in Township 9N-14W; (the "proposed area").

2. That the Director initially filed Docket No. 602A-2010-12 requesting a Commission Order imposing an immediate moratorium on any new or additional Class II Commercial Disposal Wells or Class II Disposal Wells which are not currently active in any formation within the proposed area.

3. That due to the unavailability of interested parties' expert witnesses, the Director agreed to continue Docket No. 602A-2010-12 until the regularly scheduled AOGC hearing in January 2011.

4. That Docket No. 508-2010-09, which requests the issuance of Class II Commercial Disposal Well permit, and Docket No. 597-2010-12, which requests the issuance of Class II Disposal Well permit, within the proposed area have also been continued to the January 2011 hearing.

5. That the Director is seeking an emergency order of the Commission to prohibit the administrative issuance of any other new or additional Class II Commercial Disposal Well or Class II Disposal Well permits in the area described in Finding No. 1 above pending the Commission hearing in January 2011.

6. That the Director also requests that the emergency order include a provision requiring all operators of existing Class II Commercial Disposal Wells or Class II Disposal Wells to submit bi-weekly reports detailing the daily amounts of barrels of water injected per zone and the maximum daily injection pressure per zone from the later of January 01, 2010 or the date injection operations commenced and that this information continue to be provided until the January 2011 hearing.

CONCLUSIONS OF LAW

1. That due notice of public hearing was given as required by law and that this Commission has

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jurisdiction over said parties and the matter herein considered.

2. That this Commission has authority to grant said application under the provisions of Act No. 105 of 1939, as amended, more specifically Ark Code Ann. § 15-71-111.

ORDER

As the Commission finds that an emergency exists, it is ordered by the Commission:

1. That the administrative issuance of any new or additional Class II Commercial Disposal Well or Class II Disposal Well permits within the proposed area described in Finding No. 1 is prohibited, pending the hearing in January 2011.

2. That all operators of existing Class II Commercial Disposal Wells or Class II Disposal Wells are required to submit bi-weekly reports detailing the daily amounts of barrels of water injected per zone and the maximum daily injection pressure per zone from the later of January 01, 2010 or the date injection operations commenced and that this information continue to be provided until the January 2011 hearing.

This Order shall be effective from and after December 22, 2010; and the Commission shall have continuing jurisdiction for the purposes of enforcement, and/or modifications or amendments to the provisions of this Order. This Order shall automatically terminate at conclusion of the next regularly scheduled hearing to be held in January 2011.

ARKANSAS OIL AND GAS COMMISSION

Lawrence E. Bengal,
Director

EXHIBIT

D

ARKANSAS OIL AND GAS COMMISSION

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Mike Beebe
Governor

Lawrence Bengal
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Fort Smith, AR 72903
Phone: (479) 646-6611
FAX: (479) 649-7656

December 28, 2010

Arkansas Oil and Gas Commission
301 Natural Resources Drive, Ste 102
Little Rock, AR 72205

Re: **602A-2010-12**
Amended Request for an Immediate Moratorium on Any New or Additional Class II Commercial Disposal Well or Class II Disposal Well in Certain Areas.

Dear Commissioners:

Staff ("Applicant") hereby requests a Commission Order imposing an immediate moratorium on any new or additional Class II Commercial Disposal Well or Class II Disposal Well which is not currently active in any formation within: all Sections within the following Townships: 6N-12W; 6N-11W; 7N-11W; 7N-12W; 7N-13W; 7N-14W; 7N-15W; 8N-11W; 8N-12W; 8N-13W; 8N-14W; 9N-11W; 9N-12W; 9N-13W; as well as Sections 7-36 in Township 8N-15W; and Sections 25-36 in Township 9N-14W; (the "proposed area"). Staff requests that the requested moratorium be in effect until the July 2011 AOGC hearings, at which point in time the Commission may consider additional evidence from the data collected and further studies conducted by the Arkansas Oil and Gas Commission ("AOGC"), Arkansas Geological Survey, United States Geological Survey, Center for Earthquake Research and Information ("CERI") or others.

Since the beginning of 2010, there have been over 400 earthquakes of varying magnitudes within the proposed area. Based upon the studies conducted by the Arkansas Geological Survey, there is no evidence that these earthquakes are related to the drilling, or completion (including fracture stimulation) of production wells. However, there appears to be circumstantial evidence that recent earthquakes within the proposed area may be either enhanced or potentially induced by the operation of Class II Commercial Disposal wells and Class II Disposal wells.

Currently there are three (3) Class II Commercial Disposal Wells and five (5) Class II Disposal wells that are permitted within the proposed area. All such wells that are permitted are currently active, except the Poseidon No. 2 well which has not yet been drilled, and is to be located in Sec. 15-T9N-R13W in Van Buren County. Staff requests that the moratorium also apply to the Poseidon No. 2 Well. Additionally, Staff has received a Form 36 application for the proposed Boy Scout Class II Disposal Well to be located in Sec. 9-T8N-R14W in Conway County. This application has not yet been granted administratively, and Staff requests that this moratorium also apply to the Boy Scout Class II Disposal well.

Additionally, in an effort to further the studies of the Staff of the Arkansas Oil and Gas Commission ("AOGC"), Arkansas Geological Survey, United States Geological Survey, Center for Earthquake Research and Information ("CERI") and others, Staff also requests that the order include a provision requiring all operators of existing Class II Commercial Disposal Wells or Class II Disposal Wells to submit bi-weekly reports detailing the daily amounts of barrels of water injected per zone and the maximum daily injection pressure per zone from the later of January 1, 2010 or the date injection operations commenced, and that this information continue to be provided to the AOGC until further notice is given.

Sincerely,

Lawrence E. Bengal
Director

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EXHIBIT

E

Case 4:13-cv-00184-JLH Document 21-11 Filed 01/07/13 Page 38 of 53

ARKANSAS OIL AND GAS COMMISSION
301 NATURAL RESOURCES DRIVE
SUITE 102
LITTLE ROCK, ARKANSAS 72205

ORDER NO. 602A-2010-12 **February 08, 2011**

CLASS II COMMERCIAL DISPOSAL WELL OR
CLASS II DISPOSAL MORATORIUM
Cleburne, Conway, Faulkner, and Van Buren Counties, Arkansas

REQUEST FOR AN IMMEDIATE MORATORIUM ON ANY NEW OR ADDITIONAL CLASS II COMMERCIAL DISPOSAL WELL OR CLASS II DISPOSAL WELL PERMITS IN CERTAIN AREAS.

After due notice and public hearing in Fort Smith, Arkansas, on January 25, 2011, the Arkansas Oil and Gas Commission, in order to prevent waste, carry out an orderly program of development and protect the correlative rights of each owner in the common source(s) of supply, has found the following facts and issued the following Order.

STATEMENT OF CASE

The Director ("Director") of the Arkansas Oil and Gas Commission ("Commission") filed an application requesting an immediate moratorium on any new or additional Class II Commercial Disposal Well or Class II Disposal Well permits within certain areas.

FINDINGS OF FACT

From the evidence introduced at said hearing, the Arkansas Oil and Gas Commission (hereinafter referred to as AOGC) finds:

1. That the Director filed an application requesting an immediate moratorium on any new or additional Class II Commercial Disposal Well or Class II Disposal Well permits within all Sections within the following Townships: 6N-12W; 6N-11W; 7N-11W; 7N-12W; 7N-13W; 7N-14W; 7N-15W; 8N-11W; 8N-12W; 8N-13W; 8N-14W; 9N-11W; 9N-12W; 9N-13W; as well as Sections 7-36 in Township 8N-15W; and Sections 25-36 in Township 9N-14W; (the "proposed area").

2. Based upon the studies conducted by the Arkansas Geological Survey, there is no evidence that these earthquakes are related to the drilling, or completion (including fracture stimulation) of production wells. However, there appears to be circumstantial evidence that recent earthquakes within the proposed area may be either enhanced or potentially induced by the operation of Class II Commercial Disposal wells and Class II Disposal wells.

3. That the Director requested that the moratorium be in effect until the July 2011 hearing, at which point in time the Commission may consider additional evidence from the data collected and further studies conducted by the Arkansas Oil and Gas Commission ("AOGC"), Arkansas Geological Survey, United States Geological Survey, Center for Earthquake Research and Information ("CERI") or others.

4. That the Director was granted Emergency Order No. 606A-2010-12 by the Commission to prohibit the administrative issuance of any other new or additional Class II Commercial Disposal Well or Class II Disposal Well permits in the area described in Finding No. 1 above pending the Commission hearing in January 2011.

5. That the Director also requests that the emergency order include a provision requiring all operators of existing Class II Commercial Disposal Wells or Class II Disposal Wells to submit bi-weekly reports detailing the daily amounts of barrels of water injected per zone and the maximum daily injection pressure per zone from the later of January 01, 2010 or the date injection operations commenced and

that this information continue to be provided until the July 2011 AOGC hearing.

6. That the Director also requested that Docket Nos. 508-2010-09 and 597-2010-12, which are requests for approval of Class II Disposal Wells or Class II Commercial Disposal Wells within the proposed area, be continued until the July 2011 AOGC hearing.

CONCLUSIONS OF LAW

1. That due notice of public hearing was given as required by law and that this Commission has jurisdiction over said parties and the matter herein considered.

2. That this Commission has authority to grant or deny said application under the provisions of Act No. 105 of 1939, as amended.

ORDER

It is, therefore, ordered by the Commission:

1. That an immediate moratorium is in effect for any new or additional Class II Commercial Disposal Well or Class II Disposal Wells within the proposed area described in Finding No. 1 until the earlier of the AOGC hearing in July 2011, or the Commission votes to amend the provisions of this Order.

2. That all operators of existing Class II Commercial Disposal Wells or Class II Disposal Wells are required to submit bi-weekly reports detailing the daily amounts of barrels of water injected per zone and the maximum daily injection pressure per zone from the later of January 01, 2010 or the date injection operations commenced and that this information continue to be provided until the July 2011 AOGC hearing.

3. That both Docket Nos. 508-2010-09 and 597-2010-12 are continued until the July 2011 AOGC hearing.

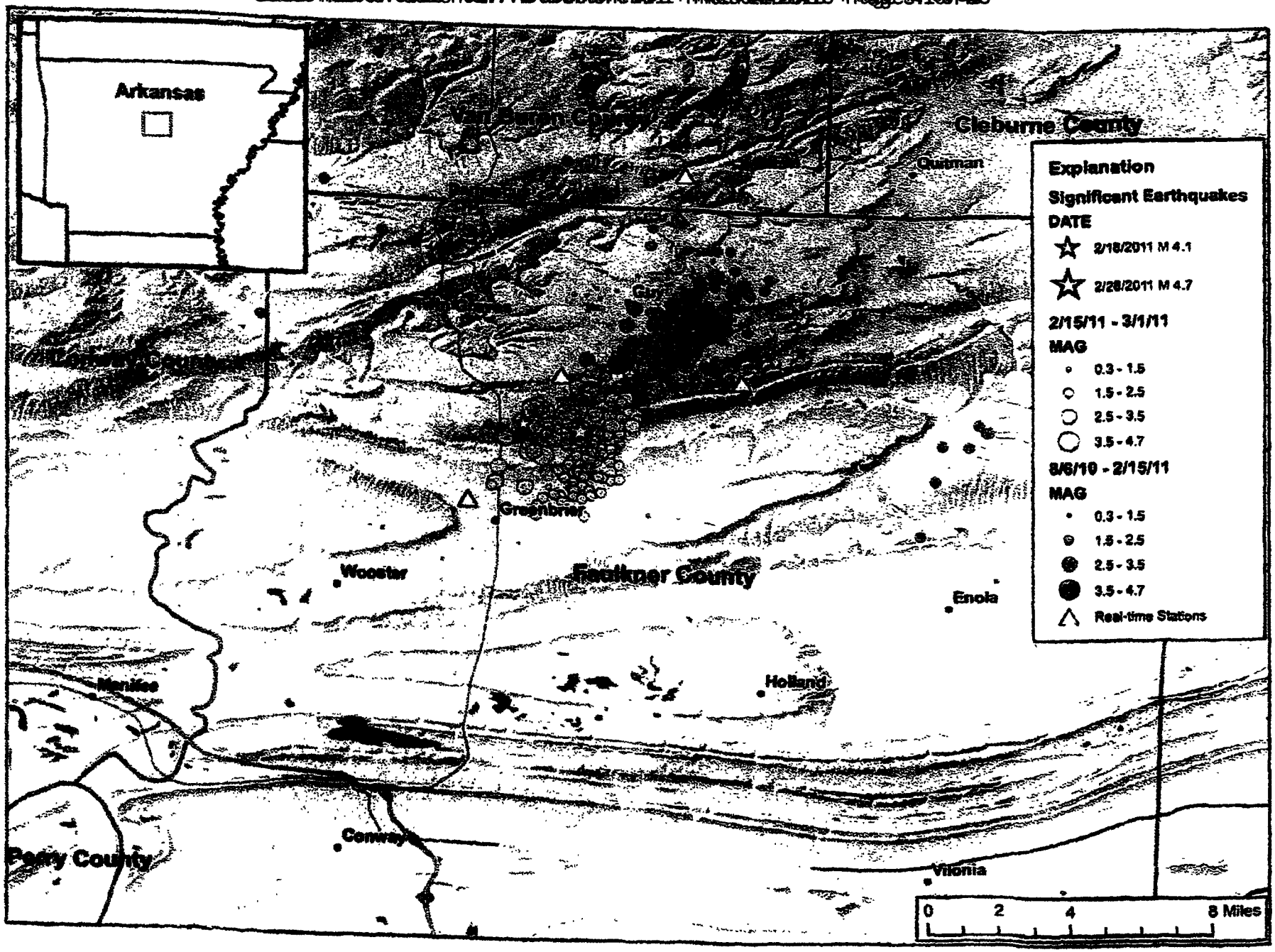
This Order shall be effective from and after February 08, 2011; and the Commission shall have continuing jurisdiction for the purposes of enforcement, and/or modifications or amendments to the provisions of this Order.

ARKANSAS OIL AND GAS COMMISSION

Lawrence E. Bengal,
Director

EXHIBIT

F


Arkansas
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Significant Earthquakes
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2.5 - 3.5
3.5 - 4.7
Real-time Stations
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2
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8 Miles

EXHIBIT

G

ARKANSAS OIL AND GAS COMMISSION

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NOTICE TO ATTENDEES OF AOGC SPEACIAL HEARING – MARCH 4, 2011

DOCKET NO. 051A-2011-02 - CONSENT ORDER

Chesapeake Operating Inc. ("Chesapeake") and Clarita Operating LLC ("Clarita") will comply with the emergency application request sought by the Director, Lawrence E. Bengal, of the Arkansas Oil and Gas Commission ("AOGC") to immediately cease all injection operations in the SRE 8-12 1-17 SWD Well in Sec. 17-T8N-R12W, and the Wayne L. Edgmon No. 1 SWD Well in Sec. 6-T7N-R12W, both in Faulkner County, through the last day of the regularly scheduled AOGC hearing in March.

Accordingly, the special hearing of the AOGC scheduled for today, March 4, 2011, will only be a short procedural hearing for the Commission to enter the order presented by Staff and accepted by both Chesapeake and Clarita. No witnesses will testify for any of the parties, and only evidence required for this procedural hearing will be introduced at today's hearing. However, Staff of the AOGC will file an application requesting further relief from the Commission at the regularly scheduled AOGC hearing beginning on March 29, 2011.

ARKANSAS OIL AND GAS COMMISSION
Lawrence E. Bengal, Director

EXHIBIT

H

ARKANSAS OIL AND GAS COMMISSION

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FAX: (479) 649-7656

July 8, 2011

Arkansas Oil and Gas Commission
301 Natural Resources Drive, Ste 102
Little Rock, AR 72205

Re: **180A-2011-07**

Request for an Order Imposing an Immediate Cessation of All Disposal Well Operations and Establishment of a Moratorium Area For Any Class II or Class II Commercial Disposal Wells in a Certain Area.

Dear Commissioners:

Staff of the Arkansas Oil and Gas Commission ("Applicant") hereby requests a Commission Order requiring the following enumerated items:

(1) Establishment of a Moratorium Area for any new or additional Class II Disposal or Class II Commercial Disposal well in any of the Sections identified in Exhibit 1A that is to remain in effect until the Commission adopts a General Rule establishing a permanent moratorium area; and

(2) Immediate Cessation and the plugging and abandoning of all existing Class II Disposal and Class II Commercial Disposal wells in the area described in Exhibit 1A, i.e. the SRE 8-12 1-17 Class II Disposal Well (Permit No. 43266); the Trammel Class II Disposal well (Permit No. 41079); Wayne L. Edgmon No. 1 Class II Commercial Disposal well (Permit No. 36380); and the Moore, W E Estate No. 1 Class II Commercial Disposal well (Permit No. 39487).

In Order Nos. 602A-2010-12 and 606A-2010-12, this Commission approved applications filed by the Applicant imposing the immediate and continued moratorium on any new or additional Class II Disposal or Class II Commercial Disposal Wells within: all Sections within the following Townships: 6N-12W; 6N-11W; 7N-11W; 7N-12W; 7N-13W; 7N-14W; 7N-15W; 8N-11W; 8N-12W; 8N-13W; 8N-14W; 9N-11W; 9N-12W; 9N-13W; as well as Sections 7-36 in Township 8N-15W; and Sections 25-36 in Township 9N-14W. This moratorium was to remain in effect until the earlier of: the AOGC hearing in July 2011, or the Commission voted to amend the provisions of the Order. As a condition of this Order, all operators of existing Class II Disposal or Class II Commercial Disposal Wells were required to submit bi-weekly reports detailing the daily amounts of barrels of water injected per zone and the maximum daily injection pressure per zone from the later

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of January 01, 2010 or the date injection operations commenced and that this information continue to be provided until the July 2011 AOGC hearing.

Additionally, in a series of Orders, beginning with Order No. 051A-2011-02, this Commission approved the Applicant's request for an Order immediately ceasing all injection operations in both the SRE and Edgmon Disposal wells. These requests were agreed to by the operators of these wells. Per the repeated and voluntary agreement by the operators, the cessation of all operations in these two disposal wells remains in effect until the conclusion of the Commission's July 2011 hearing.

The establishment of the initial moratorium period provided the necessary time for an investigation to be conducted by the AOGC, the Arkansas Geological Survey (AGS), and the Center for Earthquake Research and Information (CERI), as to whether there was a potential correlation between the seismic activity and disposal well operations in the initial moratorium area.

The investigation has reached a point which requires a regulatory response, as the seismic activity occurring within the initial moratorium area has revealed a previously unknown or unmapped fault system. This fault system, highlighted by the recent activity associated with the Guy-Greenbrier Earthquake Swarm, indicate a general northeast-southwest (approximately N30°E) trending deeper fault system which displaces the Lower Ordovician through Precambrian strata. The proposed moratorium is based upon an area approximately 5 miles to the east and west of the fault system trends indicated by the seismic activity in the area.

Further, it is the opinion of the Applicant, based upon research by the AGS and the CERI, that there is sufficient evidence to support the request identified in No. 2 above, as it appears that seismic events in the proposed moratorium area are being enhanced, induced, or triggered by the operation of the disposal wells identified above.

Therefore, based on the analysis of the data collected by the Applicant, AGS and CERI, it is the Director's conclusion that sufficient evidence exists to supports all enumerated items above.

Sincerely,

Lawrence E. Bengal
Director

EXHIBIT

I

ARKANSAS OIL AND GAS COMMISSION
301 NATURAL RESOURCES DRIVE
SUITE 102
LITTLE ROCK, ARKANSAS 72205

ORDER NO. 180A-1-2011-07 **August 02, 2011**

General Rule B-43 Well Spacing Area
Faulkner County, Arkansas

REQUEST FOR AN IMMEDIATE CESSATION OF DISPOSAL OPERATIONS AND ORDER TO PLUG A CLASS II COMMERCIAL DISPOSAL WELL.

After due notice and public hearing in El Dorado, Arkansas, beginning on July 26, 2011, the Arkansas Oil and Gas Commission ("AOGC"), based on the evidence and testimony presented at the hearing and in order to prevent waste, carry out an orderly program of development, protect the correlative rights of each owner in the common source(s) of supply, prevent the pollution of fresh water supplies and unnecessary damage to property, soil, animals, or aquatic life by oil, gas or salt water, and to protect the health and welfare of the public, has found the following facts and issued the following Order.

STATEMENT OF CASE

The Staff of the Arkansas Oil and Gas Commission ("Applicant") requests an order requiring the immediate cessation of disposal operations in the Moore, W.E. Estate No. 1 Class II Commercial Disposal well (Permit No. 39487), operated by Deep-Six Water Disposal Services, LLC ("Deep Six"), and the plugging of said well by September 30, 2011.

FINDINGS OF FACT

From the evidence introduced at said hearing, the AOGC finds:

1. That in Order No. 63-2008-01, the Director of the AOGC was ordered to issue a permit granting ***Deep-Six Water Disposal Services, LLC***, authority to operate the E.W. Moore Estate No. 1 Disposal well (Permit No. 39487), located in Section 22, Township 7 North, Range 12 West, Faulkner County, Arkansas, subject to certain conditions as particularly described in said Order, and summarized below:

   a. That Deep Six had to provide proof of liability insurance of sufficient amount, prior to commencement of operations, and in January of each succeeding year; and

   b. That the Director had the authority to amend, revoke, or otherwise modify any aspect of the disposal permit as deemed necessary; and

   c. That Deep Six was to conduct a pressure fall-off test prior to commencement of operations; and

   d. That Deep Six was to install the seismic monitoring array stations, as detailed at the time of hearing in February of 2008, and agreed to by Deep Six;

   e. That Deep Six was required to share all data acquired, due to the monitoring array, with the University of Arkansas at Little Rock and the Commission.

   f. That Deep Six was required to cycle the disposal program to determine if operations caused an increase in seismic activity.

2. That Order No. 063-2008-01 (Appeal), entered after a hearing on June 24, 2008, upheld the Director's Decision that the sufficient amount of liability insurance was a minimum of twenty-five

million dollars.

3. That seismic activity has been enhanced, induced, or triggered in other areas of the country in the past.

4. That seismic activity occurring within the moratorium area established by Order Nos. 606A-2010-12 and 602A-2010-12 revealed a previously unknown or unmapped fault system.

5. That the particular fault highlighted by the seismic activity may be capable of producing additional earthquakes of similar or greater magnitude as have already occurred.

6. That this fault system, highlighted by the recent activity associated with the Guy-Greenbriar Earthquake Swarm, indicates a general northeast-southwest (approximately N30°E) trending fault system which displaces the Lower Ordovician through Precambrian strata, and may be present near the Deep Six E.W. Moore Estate No. 1 Disposal well (Permit No. 39487).

7. That the Deep Six E.W. Moore Estate No. 1 Disposal well (Permit No. 39487) is located very near to the Morrilton Fault.

8. That disposal operations in the Deep Six E.W. Moore Estate No. 1 Disposal well (Permit No. 39487), should be permanently ceased, and said disposal well should be plugged as seismic events may be enhanced, induced, or triggered by the operation of said disposal well.

9. That in order to prevent waste, carry out an orderly program of development, protect the correlative rights of each owner in the common source(s) of supply, prevent the pollution of fresh water supplies and unnecessary damage to property, soil, animals, or aquatic life by oil, gas or salt water, and to protect the health and welfare of the public, the request of the Applicant should be granted.

10. That Deep Six was present and represented by counsel, Robert M. Honea.

CONCLUSIONS OF LAW

1. That due notice of public hearing was given as required by law and that this Commission has jurisdiction over said parties and the matter herein considered.

2. That this Commission has authority to grant or deny said application under the provisions of Act No. 105 of 1939, as amended.

ORDER

It is, therefore, ordered by the Commission:

1. That disposal operations in the Deep Six E.W. Moore Estate No. 1 Disposal well (Permit No. 39487), shall be immediately ceased.

2. That the Deep Six E.W. Moore Estate No. 1 Disposal well (Permit No. 39487) said well shall be properly plugged by September 30, 2011.

3. That Deep six is to continue to report the hourly / bi-hourly pressures in the same manner and on the same form previously prescribed by the Director for a period of two weeks following the effective date of this Order, and thereafter Deep Six shall report the daily pressure data to be submitted on a bi-weekly basis until the well is properly plugged.

4. If Deep Six seeks judicial review of this decision, then the order to properly plug the Deep Six E.W. Moore Estate No. 1 Disposal well (Permit No. 39487) by September 30, 2011 shall be stayed until the review process is complete.

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This Order shall be effective from and after August 02, 2011; and the Commission shall have continuing jurisdiction for the purposes of enforcement, and/or modifications or amendments to the provisions of this Order.

ARKANSAS OIL AND GAS COMMISSION

Lawrence E. Bengal,
Director

EXHIBIT

J

ARKANSAS OIL AND GAS COMMISSION
301 NATURAL RESOURCES DRIVE
SUITE 102
LITTLE ROCK, ARKANSAS 72205

ORDER NO. 180A-2-2011-07 **August 02, 2011**

CLASS II COMMERCIAL DISPOSAL WELL OR
CLASS II DISPOSAL WELL MORATORIUM
Cleburne, Conway, Faulkner, and Van Buren Counties, Arkansas

REQUEST FOR AN IMMEDIATE MORATORIUM ON ANY NEW OR ADDITIONAL CLASS II COMMERCIAL DISPOSAL WELL OR CLASS II DISPOSAL WELL PERMITS IN CERTAIN AREAS.

After due notice and public hearing in El Dorado, Arkansas, on July 26, 2011, the Arkansas Oil and Gas Commission, in order to prevent waste, carry out an orderly program of development, protect the correlative rights of each owner in the common source(s) of supply, prevent the pollution of fresh water supplies and unnecessary damage to property, soil, animals, or aquatic life by oil, gas or salt water, and to protect the health and welfare of the public, has found the following facts and issued the following Order.

STATEMENT OF CASE

The Staff of the Arkansas Oil and Gas Commission ("Applicant") filed an application requesting an immediate moratorium on any new or additional Class II Commercial Disposal Well or Class II Disposal Well permits in any of the Sections identified in Exhibit 1A or 1B of the Application, that is to remain in effect until the Commission adopts a General Rule establishing a permanent moratorium area

FINDINGS OF FACT

From the evidence introduced at said hearing, the Arkansas Oil and Gas Commission (hereinafter referred to as AOGC) finds:

1. That the Director filed an application requesting an immediate moratorium on any new or additional Class II Commercial Disposal Well or Class II Disposal Well permits in any of the Sections identified in Exhibit 1A or 1B of the application ("moratorium area"), that is to remain in effect until the Commission adopts a General Rule establishing a permanent area.

2. That seismic activity has been enhanced, induced, or triggered in other areas of the country in the past.

3. That seismic activity occurring within the moratorium area has revealed a previously unknown or unmapped fault system.

4. That the particular fault highlighted by the seismic activity may be capable of producing additional earthquakes of similar or greater magnitude as have already occurred.

5. That this fault system, highlighted by the recent activity associated with the Guy-Greenbrier Earthquake Swarm, indicates a general northeast-southwest (approximately N30°E) trending fault system which displaces the Lower Ordovician through Precambrian strata.

6. That, at the time of the hearing, there were four Disposal wells within the moratorium area. However, the permit holder of both the SRE 8-12 1-17 Class II Disposal Well (Permit No. 43266) and the Trammel Class II Disposal well (Permit No. 41079), and the permit holder of the Wayne L. Edgmon No. 1 Class II Commercial Disposal well (Permit No. 36380), agreed to immediately and permanently cease all disposal operations in both disposal wells, and to properly plug the subject disposal wells by

September 30, 2011. The remaining Class II Commercial Disposal Well, the Moore, W E Estate No. 1 Class II Commercial Disposal well (Permit No. 39487), is subject to the provisions of Order No. 180A-1-2011-07.

7. That no objects were filed in relation to Docket No. 180A-1-2011-07.

CONCLUSIONS OF LAW

1. That due notice of public hearing was given as required by law and that this Commission has jurisdiction over said parties and the matter herein considered.

2. That this Commission has authority to grant or deny said application under the provisions of Act No. 105 of 1939, as amended.

ORDER

It is, therefore, ordered by the Commission: that an immediate moratorium is in effect for any new or additional Class II Commercial Disposal Well or Class II Disposal Wells within the moratorium area described in the application, more specifically, as described or depicted in Exhibits 1A and 1B of Docket No. 180A-2011-07, that shall remain in effect until the Commission adopts a General Rule establishing a permanent moratorium area.

This Order shall be effective from and after August 02, 2011; and the Commission shall have continuing jurisdiction for the purposes of enforcement, and/or modifications or amendments to the provisions of this Order.

ARKANSAS OIL AND GAS COMMISSION

Lawrence E. Bengal,
Director