

STATE OF INDIANA )  
 ) SS:  
COUNTY OF GIBSON )

IN THE GIBSON CIRCUIT COURT  
TERM, 2010

CAUSE NO. 26C01-0909-PL-0013

UNITED MINERALS COMPANY, )  
LLC, )  
Petitioner )  
 )  
VS. )  
 )  
DEPARTMENT OF NATURAL )  
RESOURCES, )  
Respondent )

**FILED**

JUN 11 2010

*Lesly Woodhouse*  
Clerk Gibson Circuit Court

**ORDER ON PETITION FOR JUDICIAL REVIEW**

This matter having come before the Court on the Petition For Judicial Review of the petitioner, United Minerals Company, LLC (“UMC”) and the Court having considered the Petition For Judicial Review and the Answer of the respondent, Department of Natural Resources (“DNR”) and having considered the Record of Administrative Proceedings, the legal briefs, and oral arguments of the parties, now makes the following findings, conclusions, and order:

**I. FINDINGS**

The findings of fact in this cause are undisputed in that both parties moved for summary judgment at the administrative level which resulted in the Findings Of Fact And Conclusions Of Law With Final Order Of The Administrative Law Judge under Administrative Cause No. 07-186R. In the findings of fact found in the ruling at the administrative level, the Administrative Law Judge (“ALJ”) drew certain inferences and conclusions which are subject to the review of this Court as questions of law.

*Handwritten initials*

The Trial Court makes particular reference to the following findings of fact which are identified by the paragraph numbers set out in the Findings Of Fact And Conclusions Of Law With Final Order Of The Administrative Law Judge (with citations to the Record made by the ALJ omitted):

11. United operates Black Beauty Coal Company's Somerville Mine, Pit #6  
*("Somerville Mine")*.
12. United maintains that the seismograph reading that resulted in the Department's issuance of the NOV is an "aberration" that cannot be relied upon because ground vibrations as a general rule dissipate over distance and seismograph readings associated with the same blast recorded by units located nearer to the blast location were lower than those recorded by the Department's seismograph installed at the Nolan residence.<sup>1</sup> (This seismograph will hereinafter be referred to as the "Nolan #1 seismograph.>"). United supports its position with evidence that the Nolan #1 seismograph was not properly installed in that one of its geophones was not sufficiently embedded in the soil and that it was located in or near the root base of a green mound juniper. United adds support by noting that according to an approved scaled distance equation the peak particle velocity (*"PPV"*) reading should have been 0.35 inch/second and further that the blast complied with the blast level chart set forth at 312 IAC 25-6-32(h)(4).
14. On August 2, 2007, United was issued the NOV on the basis that the Department's "seismograph located at the Nolan residence recorded a peak

---

<sup>1</sup> Throughout the evidence provided in the parties' summary judgment briefs and evidentiary material, this seismograph unit is referred to as DOR #1 (Nolan), IDNR #1 and IDOR #1.

particle velocity reading of 1.09 inch/second” with respect to a blast that occurred on February 23, 2007 at 9:04 a.m. C.S.T. at the Somerville Mine.

15. For the same blast, United’s seismograph, located at the Bruce residence recorded a PPV reading of .73 inch/second.<sup>2</sup> (This seismograph will hereinafter be referred to as the “Bruce #1 seismograph”.)
16. United’s blast in question was located at N294590, E426115 and the Bruce #1 seismograph was located at N296137, E427496.
17. The Nolan #1 seismograph is located at N297778, E427655 and is approximately 3,540 feet from the blast location. [DNR’s seismograph.]
18. The Nolan #1 seismograph is approximately 640 – 650 feet further away from the blast location than was the Bruce #1 seismograph. [UMC’s seismograph.]
20. The Nolan[d] #1 seismograph was installed adjacent to the east side of a large green mound juniper.
21. The blast in question was “in compliance with the modified scaled distance equation” approved by the Department to address a malfunctioning seismograph unit at the Pflug residence.
22. The 1.09 PPV reading taken from the Nolan #1 seismograph on February 23, 2007 was in compliance with the blast level chart.
24. The Nolan[d] #1 seismograph was installed “approximately 10 inches from the end of one of the green mound juniper overlying branches.”
26. The Department installed seismograph unit #486 on the Nolan property on

---

<sup>2</sup> Throughout the evidence provided in the parties’ summary judgment briefs and evidentiary material, this seismograph unit is referred to as UMI #1 (Bruce), UMI #1 and United Minerals Bruce #1.

May 22, 2007<sup>3</sup> on the west side of the green mound juniper. (This seismograph will hereinafter be referred to as the “Nolan #2 seismograph”).

27. On May 23, 2007, United installed seismograph #2036<sup>4</sup> on the Bruce property approximately 100 feet west of the Nolan #1A and Nolan #2 seismographs and “at approximately the same distance from the blasting operations.”
28. For nearly every instance from June 1, 2007 through August 1, 2007 the Nolan #1A seismograph registered seismic readings “at amplitudes in excess of 0.3 ips” that were “significantly greater” than both the Department’s Nolan #2 seismograph or United’s Bruce #2 seismograph.
29. United maintains that the 1.09 PPV in/sec reading received by the Nolan #1 seismograph on February 23, 2007 was an aberration. In support of this position, Mr. Wiegand states:

...DNR SJ Response shows seismic readings from 25 shots between 5/23/07 and 7/30/07. This exhibit shows readings from DNR seismograph unit #2849 (Nolan #1A), located on the east side and adjacent to the juniper, to be equal to or greater than the readings from unit #468 (Nolan #2), located on the west side and adjacent to the juniper, for 20 out of 25 shots. While these seismograph units were only about 20 feet apart, according to DNR’s First Discovery Response (Interrogatory #4), the readings for the east DNR unit #2849 are significantly higher than the reading for the west DNR unit #468. In one case the vibration reading difference is more than doubled from the east side of the juniper to the west side.

30. The installation of a seismograph within a plant’s root system commonly

---

<sup>3</sup> Throughout the evidence provided in the parties’ summary judgment briefs and evidentiary material, this seismograph unit is also referred to as DOR #2 (Nolan), IDNR #2 and IDOR #2.

<sup>4</sup> This is the same seismograph unit that was removed from the Bruce property on 3/21/07 and replaced with seismograph unit #2654. It was reinstalled at a different location on May 23, 2007. Throughout the evidence provided in the parties’ summary judgment briefs and evidentiary material, this seismograph unit is referred to as UMI #2 and UMI North Bruce.

results in poor coupling of the seismograph to the soil and this can cause exaggerated ground vibration readings.

33. The Department, in conducting seismic monitoring for the Somerville Mine has determined that on three occasions the placement of seismograph units in loose soils or soils underlaid by septic system components resulted in artificially high readings.
36. At the time the Nolan #1 seismograph was removed it was determined that only three of the four sides of the geophone were coupled with the soil. "The fourth side was slightly pulled away from the soil due to wetness."
38. Even properly calibrated seismograph units can record inaccurate PPV readings when coupling between the geophone and the ground is insufficient.
39. The proposition that insufficient coupling caused the higher PPV readings is also undermined by the fact that the Nolan #1A continues to give consistently higher readings than the Nolan #2 seismograph unit and the Bruce #2 seismograph unit. This is further bolstered by the fact that other seismograph units located at greater distances from the blast location also show lower readings than the Nolan #1A.
40. It was the location of the Nolan #1 seismograph that caused the 1.09 PPV in/sec. recording on February 23, 2007.
41. Seismic waves do normally decay over distance *February 26, 2009 Affidavit of John Wiegand, paragraph 9*, but that general rule is not without variation.
42. In addition to the fact that the Nolan 1A seismograph unit continues to record higher PPVs than the Nolan #2 and the Bruce #2 seismographs that are

located at generally the same distance from the blast location, other seismograph units have on occasion recorded elevated PPVs at greater distances from the blast location than were recorded by seismograph units located closer to the blast location.

## II. CONCLUSIONS OF LAW

1. This Court has jurisdiction over this matter pursuant to I.C. §4-21.5-5-1 et seq.
2. This Petition For Judicial Review of the decision of the ALJ involves only questions of law, there being no disputed facts. In that the reviewing Court is addressing only questions of law, the Court is not bound by the conclusions of law and the interpretations of the law by the ALJ. Developmental Services Alternatives, Inc. v. Indiana Family And Social Services Administration, 915 N.E.2d 169 (Ind.App.2009).
3. In addition to issues of law, the reviewing Court has the responsibility to determine if the decision of the ALJ is supported by substantial evidence I.C. §4-21.5-5-14(d); Oriental Health Spa v. City of Ft. Wayne, 526 N.E.2d 1019 (Ind.App.1991).
4. This matter concerns the accuracy of seismograph readings made by the parties at virtually the same time on February 23, 2007 when DNR's seismograph, being 3,540 feet from the blast, registered 1.09 in./sec. and UMC's seismograph, being 2,897 feet from the same blast (or 643 feet closer) registered a seismograph reading of .73 in./sec. The seismograph reading of 1.09 in./sec. of the DNR is .09 greater than the maximum allowable ground vibration found in 312 IAC 25-6-32(h), being 1.00 in./sec.
5. The following factors demonstrate that the ALJ's decision in favor of the DNR is unsupported by substantial evidence and contrary to law:
  - a). As in the case of Solar Sources, Inc. v. Department of Natural

Resources, VII CADDNAR 68 (February 8, 1995), the difference in the readings of the respective seismographs is greater than twenty percent (20%) which supports the conclusion made in Solar, supra, that the reading of the DNR seismograph was an aberration.

b). The ALJ improperly disregarded the principle of attenuation that ground vibrations die out and decay over distance; the basis for disregarding the principle of attenuation by the ALJ is found in Findings Of Fact 46 through 48 of the Findings Of Fact And Conclusions Of Law With Final Order Of The Administrative Law Judge. The ALJ justified this disregard of the principle of attenuation by concluding that the geographical area surrounding the Somerville Mine was an anomaly. The ALJ expressly found that the DNR had no responsibility to provide evidence of such anomaly. Neither the record nor the ALJ's findings of fact contain substantial evidence to justify the conclusion of the ALJ that the geography of the Somerville Mine was an anomaly. For example, there was no evidence that the contour of the earth or the mineral formations of the substrata accounted for the anomaly. There was no justification under the law to relieve the DNR from providing a reasonable and cogent explanation for the anomaly.

c). The ALJ improperly disregarded the undisputed evidence concerning the positioning of DNR's seismograph next to the green mound juniper which was 15 to 20 feet in width and 15 inches high in the center; Courts take notice of natural facts, and the ALJ failed to take notice that such a green mound juniper of that size would have a substantial root system which could affect the reading of the DNR's seismograph. Filter Specialists, Inc. v. Brooks, 879 N.E.2d 558, 571-72 (Ind.App.2007).

d). The ALJ failed to give proper evidentiary weight to the fact that DNR's geophone was slightly separated from the soil at the time of the seismograph reading, which UMC's expert, John Wiegand, stated could provide reason for substantial deviation in DNR's seismograph reading.

e). The ALJ failed to give proper evidentiary weight to the undisputed fact that DNR's seismograph on the west side of the green mound juniper on several occasions registered lower readings than the seismograph on the east side of the green mound juniper.

f). The ALJ failed to give proper evidentiary weight to the site specific attenuation study conducted by UMC's expert, John Wiegand, which study demonstrated that the reading of DNR's seismograph of 1.09 in./sec. peak particle velocity was inconsistent with the attenuation study in that the DNR reading of 1.09 in./sec. is 211.42% higher than the level calculated from the study and should have registered 0.35 in./sec. (Affidavit In Support Of Motion For Summary Judgment, Record, p. 000280, par. 10).

g). It was improper for the ALJ and contrary to law for the ALJ to disregard the fact that DNR's seismograph reading complied with the blast level chart and complied with the scaled distance equation, either one of which provides an independent method of measuring a blast and determining if the blast presented a risk of injury to persons, damage to property, or damage to water courses. In that the blast in this case was not in violation pursuant to these two methods, the blast level chart and the scaled distance equation, the blast did not pose the harm that compliance with the regulations governing blasts are designed to prevent, consistent with the reasoning of the



trial judge in Solar Sources, Inc. v. Indiana Department of Natural Resources, VII CADDNAR 83 (January 26, 1996), which reasoning was affirmed in Indiana Department of Natural Resources v. Solar Sources, Inc., 701 N.E.2d 1244 (Ind.App.1998).

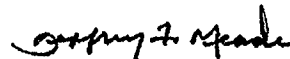
6. Each of the above factors, i.e., the greater than 20% variation in the respective seismograph readings, the principle of attenuation, the green mound juniper, the geophone separation from the soil, the disparate readings of DNR's seismograph on either side of the juniper, the site specific attenuation study, the seismograph readings being in compliance with the blast level chart, and the scaled distance equation, collectively demonstrate that DNR's seismograph reading of 1.09 in./sec. was inaccurate and that the ALJ's conclusions and order were not supported by substantial evidence and was contrary to law.

### III. ORDER AND JUDGMENT

IT IS, THEREFORE, ORDERED, ADJUDGED AND DECREED as follows:

1. The Notice of Violation is vacated;
2. The Petition For Judicial Review of United Minerals Company, LLC is granted.
3. The decision of the ALJ dated August 26, 2009, from which judicial review was taken, is hereby set aside.

All of which is ordered this 11 day of JUNE, 2010.



---

Jeffrey F. Meade, Judge  
Gibson Circuit Court