IN THE SUPREME COURT
STATE OF NORTH DAKOTA

Casey Voigt, Appellant, vs. North Dakota Public Service Commission and Coyote Creek Mining Company, L.L.C., Appellees.	)	Supreme Court Case No.: 20160046 Burleigh County District Court Case No.: 08-2015-CV-1056

Appeal from Judgment Entered on January 28, 2016
By the District Court,
South Central Judicial District, County of Burleigh

BRIEF OF APPELLEE COYOTE CREEK MINING COMPANY, L.L.C.

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STATEMENT OF THE ISSUE

1. Was the Public Service Commission's determination of no alluvial valley floor within the Coyote Creek valley supported by a preponderance of the evidence?

STATEMENT OF THE FACTS

2. Casey Voigt had a great deal of experience in coal mining operations. He worked for approximately six years for a blasting company which did work at coal mines. He was then hired by Knife River Coal to work at the Beulah mine in the vicinity of his ranch. He worked there for 12 years. (Transcript pp. 25,26) As a result, prior to entering into a surface and coal lease with North American Coal Royalty Company in 2010, he had firsthand knowledge not only of coal mining operations but also reclamation operations. Mr. Voigt further indicated that he knew that upon execution of a surface and coal lease, that the company may mine his land at some point in the future (Transcript p. 91). Mr. Voigt also acknowledged that in the negotiating of his surface and coal lease that he was represented by an attorney. (Transcript pp. 69,70)

3. Mr. James Melchior, President of Coyote Creek Mining Company, LLC (hereinafter, "Coyote Creek Mine"), testified at the Public Service Commission (PSC) hearing that he negotiated the surface and coal lease on behalf of North American Coal Royalty Company with Mr. Voigt and his attorney. (Transcript, p. 362) (CCMC Appendix, pp. 16-25)

4. After execution of the surface and coal lease, it was subleased by North American Coal Royalty Company to Coyote Creek Mine.

5. Prior to submitting a mining application to the PSC, Coyote Creek Mine had prepared a report entitled "Alluvial Valley Floor Evaluation Report Coyote Creek Mining Company,

LLC, Coyote Creek Mine, Mercer County, North Dakota," dated March 2013 and revised August 2013, as prepared by Dr. David Bickel. (CCMC Appendix, pp. 26-70)

6. After review of Dr. Bickel's report, the PSC's Reclamation Division staff prepared a Memorandum which detailed the field investigation they had conducted. (Voigt Appendix, pp. 109-119) By letter dated August 26, 2013, the Director of the Reclamation Division of the PSC stated it had completed its review of the alluvial valley floor report by Dr. Bickel. The Director indicated that based upon the information submitted with the report and a field investigation conducted by members of the Reclamation Division staff, it was determined that the area studied did not constitute an alluvial valley floor. (Voigt Appendix, p. 118)

7. On November 1, 2013, Coyote Creek Mine submitted an application for a mining permit to the PSC. The application encompassed 8,091.51 acres located in Mercer County, North Dakota, southwest of the City of Beulah, North Dakota, including the lands leased by Mr. Voigt.

8. On October 22, 2014, the Commission issued Permit No. NACC-1302 to Coyote Creek Mine to engage in surface coal mining and reclamation operations. (Voigt Appendix, pp. 1-14) With respect to an alluvial valley floor determination, the permit provides as follows:

> Finding No. 5. The proposed mining operations will not interrupt, discontinue, or preclude farming on alluvial valley floors that are irrigated or naturally sub-irrigated or materially damage the quantity or quality of water in surface or underground water systems that supply these alluvial valley floors. (N.D.C.C. 38-14.1-21(3)(e).
>
> Based on an examination of the geologic and geomorphic characteristics, soils, land use, and the water quality and quantity of streams occurring within or adjacent to the permit area, it has been determined that there are no alluvial valley floors within or adjacent to the permit area. In addition portions of Coyote Creek near the permit area were previously evaluated for alluvial valley floor potential and Commission staff determined that this

> creek does not have the characteristics to be considered an alluvial valley floor. Detailed alluvial valley floor investigation reports and determinations are on file with the Commission. *Id.* at p. 4.

9. On November 24, 2014, Casey Voigt requested a formal hearing before the PSC. On November 25, 2014, the PSC issued a Notice of Formal Hearing indicating the issues raised by Mr. Voigt as follows: "Mr. Voigt has concerns with the size of the permit area, and the reclamation practices that would be used on the land to be mined, and his loss in agricultural production." (Transcript, p. 7)

10. At the PSC hearing there was considerable discussion with respect to Coyote Creek Mine's reclamation practices, and the PSC's regulations on revegetation standards. However, for this appeal Mr. Voigt has only focused on the issue of whether an alluvial valley floor exists within the Coyote Creek valley.

11. A public hearing was held over three separate days in December of 2014 and January 2015.

12. After the public hearing, the PSC issued its Findings of Fact, Conclusions of Law and Order (Order) dated April 14, 2015, concluding that the alluvium along Coyote Creek is not an alluvial valley floor. (Voigt App., pp. 15-32).

STATEMENT OF THE CASE

13. Mr. Voigt appealed the Order of the PSC to the District Court of Burleigh County on May 14, 2015.

14. On January 19, 2016, the District Court issued an order concluding that "the PSC's decision was supported by the weight of the evidence from the record and the order affirming the PSC's conditional approval of Permit No. NACC-1302 is affirmed." (Voigt Appendix, pp. 391-400).

15. On January 19, 2016, Casey Voigt appealed the District Court's order to this Court. (Voigt Appendix, pp. 406-412)

ARGUMENT

STANDARD OF REVIEW

16. The PSC is an administrative agency, and its procedures with respect to issuance of a mine permit are governed in part by the Administrative Agencies Practice Act, N.D.C.C. Ch. 28-32.

17. This Court has stated on several occasions that "it is well established that courts exercise a limited review in appeals from decisions by administrative agencies." *North Dakota State Board of Medical Examiners v. Hsu*, 2007 N.D. 9, ¶ 11, 726 N.W.2d 216. Under N.D.C.C. § 28-32-46, a District Court must affirm an administrative agency order unless:

> 1. The order is not in accordance with the law.
> 2. The order is in violation of the constitutional rights of the appellant.
> 3. The provisions of this chapter have not been complied with in the proceedings before the agency.
> 4. The rules or procedure of an agency have not afforded the appellant a fair hearing.
> 5. The findings of fact made by the agency are not supported by a preponderance of the evidence.
> 6. The conclusions of law and order of the agency are not supported by its findings of fact.
> 7. The findings of fact made by the agency do not sufficiently address the evidence presented to the agency by the appellant.
> 8. The conclusions of law and order of the agency do not sufficiently explain the agency's rationale for not adopting any contrary recommendations by a hearing officer or an administrative law judge.

Id.

18. The preponderance of the evidence standard applies to appeals of administrative agency decisions. *Frokjer, DDS v. North Dakota Board of Dental Examiners*, 2009 N.D. 79, ¶ 18, 764 N.W.2d 657 ("the preponderance of the evidence standard established by N.D.C.C. §

28-32-46(5) is both an appellate standard of review for the court and an evidentiary standard of proof for the administrative agency"). This Court has described the preponderance of the evidence standard as a deferential standard of review of an administrative agency's findings of fact:

> In construing the "preponderance of the evidence" standard to permit us to apply the weight of the evidence test to the factual findings of an administrative agency, we do not make independent findings of fact or substitute our judgment for that of the agency. We determine only whether a reasoning mind reasonably could have determined that the factual conclusions reached were proved by the weight of the evidence from the entire record. In doing so we conclude that we are not exercising a non-judicial function. . . .nor are we violating any separation of powers doctrine inherent in the North Dakota constitution.

Hsu, 2007 N.D. 9, ¶ 11, 726 N.W.2d 216 (quoting *Power Fuels, Inc. v. Elkin*, 283 N.W.2d 214, 220 (N.D. 1979)).

19. When reviewing an agency decision, a court is not to make independent findings of fact or substitute its judgment for that of the agency. *Risovi v. Job Service North Dakota*, 2014 ND 60, ¶ 7, 845 N.W.2d 15. If facts are disputed, a deferential standard of review is applied to the findings of fact, and a court is only to determine whether a reasoning mind could have determined that the factual conclusions were proved by the weight of the evidence. *Id.*

20. In addition, a court is not "to act as a super board when reviewing decisions by an administrative agency." *Coteau Properties Co. v. Oster*, 2000 N.D. 23, ¶ 5, 606 N.W.2d 876 (quoting *Singha v. North Dakota State Bd. of Medical Examiners*, 1998 ND 42, ¶¶ 13-14, 574 N.W.2d 838). Instead, its role is to "decide only whether a reasoning mind reasonably could have decided [that an agency's] factual conclusions were proved by the weight of the evidence from the entire record." *Id.*

21. In technical or complex coal regulatory matters involving the expertise of the Public Service Commission, this Court has acknowledged that the PSC's decisions are entitled to appreciable deference. *Id.* The determination of whether an alluvial valley floor exists is clearly a matter requiring great technical expertise, involving investigative studies followed by reports prepared by qualified engineers or hydrologists.

22. Mr. Voigt has limited his appeal to only whether an alluvial valley floor exists within the Coyote Creek valley. The PSC made the determination that no alluvial valley floor exists after reviewing reports compiled by several experts. At the PSC hearing, Mr. Voigt also provided testimony from his own expert, Mr. Charles Norris; however, Mr. Norris acknowledged during his testimony that he completed no studies, made no alluvial valley floor determination for the Coyote Creek valley, and did not even set foot on the ground in the area of Coyote Creek. (Transcript p. 195) As found by a substantial preponderance of the evidence, the PSC determined that no alluvial valley floor exists within the Coyote Creek valley. (Voigt Appendix, p. 31) This determination involving great technical expertise is entitled to appreciable deference and should be affirmed.

ALLUVIAL VALLEY FLOOR DETERMINATION

23. With the enactment of the Surface Mining Control and Reclamation Act of 1977 30 U.S.C. § 1201 et. seq. (SMCRA) the federal government assumed control of surface coal mining operations in the United States. Congress established the federal Office of Surface Mining Reclamation and Enforcement (OSM) to regulate surface coal mining throughout the country. Pursuant to SMCRA, individual states can assume primacy over surface coal mining operations by adopting statutes, regulations and programs required by SMCRA. North Dakota has a state approved program as administered by the PSC. 30 C.F.R. §

934.10. However, OSM retains oversite authority over all state approved programs. 30 U.S.C. § 1267.

24. North Dakota Century Code § 38-14.1-21(3)(e) provides in part that no permit application may be approved unless the applicant affirmatively demonstrates that the proposed surface mining operation would "not interrupt, discontinue, or preclude farming on alluvial valley floors that are irrigated or naturally subirrigated, but, excluding undeveloped rangelands which are not significant to farming on said alluvial valley floors and those lands to which the Commission finds that if the farming that will be interrupted, discontinued, or precluded is of such small acreage as to be a negligible impact on the farms agricultural production."

25. The Century Code defines an alluvial valley floor as:

> the unconsolidated stream-laid deposits holding streams where water availability is sufficient for subirrigation or flood irrigation agricultural activities but does not include upland areas which are generally overlaying by a thin veneer of colluvial deposits composed chiefly of sediment from sheet erosion, deposits by unconcentrated runoff or slope wash, together with talus, other mass movement accumulation, and windblown deposits. N.D.C.C. §38-14.1-02(1)

26. In the context of an alluvial valley floor determination, PSC regulations define "agricultural activities" as:

> the use of any tract of land for the production of animal or vegetable life, where the use is enhanced or facilitated by subirrigation or flood irrigation associated with alluvial valley floors. These uses include the pasturing, grazing, or watering of livestock, and the cropping, cultivation, or harvesting of plants whose production is aided by the availability of water from subirrigation or flood irrigation. Those uses do not include agricultural practices which do not benefit from the availability of water from subirrigation or flood irrigation.

N.D.A.C. § 69-05.2-01-02(3). (emphasis added)

27. A PSC regulation also sets forth the types of data that can be utilized to determine if an alluvial valley floor exists:

69-05.2-08-13. Permit applications - Permit area - Alluvial valley floor determination.

1. Before applying for a permit to conduct operations within a valley holding a stream or in a location where the adjacent area includes any stream, the applicant shall either affirmatively demonstrate, based on available data, the presence of an alluvial valley floor, or submit the results of a field investigation of the permit and adjacent areas. The investigations must include sufficiently detailed geologic, hydrologic, land use, soils, and vegetation studies on areas required to be investigated by the commission, after consultation with the applicant, to enable the commission to make an evaluation regarding the existence of the probable alluvial valley floor in the permit or adjacent area and to determine which areas, if any, require more detailed study in order to make a final determination regarding the existence of an alluvial valley floor. Studies performed during the investigation by the applicant or subsequent studies required of the applicant must include an appropriate combination, adapted to site-specific conditions, of:

a. Mapping of the probable alluvial valley floor including geologic maps of unconsolidated deposits, delineating the streamlaid deposits, maps of streams, delineation of surface watersheds and directions of shallow ground water flows through and into the unconsolidated deposits, topography showing local and regional terrace levels, and topography of terraces, floodplains, and channels showing surface drainage patterns.

b. Mapping of all lands included in the area used for agricultural activities, showing the different types of agricultural lands and accompanied by measurements of vegetation productivity and type.

c. Topographic maps of all lands that are or were historically flood-irrigated, showing the location of each diversion structure, ditch, dam, and related reservoir.

d. Documentation that areas identified in this section are, or are not, subirrigated, based on ground water monitoring data, representative water quality, soil moisture measurements, and measurements of rooting depth, soil mottling, and water requirements of vegetation.

e. Documentation, based on representative sampling, that areas identified under this subdivision are, or are not, flood irrigable, based on streamflow, water quality, water yield, soils measurements, and topographic characteristics.

f. Analysis of a series of aerial photographs, including color infrared imagery capable of showing any late summer and fall differences

between upland and valley floor vegetative growth and of a scale adequate for reconnaissance identification of areas that may be alluvial valley floors.

2. Based on the investigations conducted under subsection 1, the commission will determine the extent of any alluvial valley floors within the study area and whether any stream in the study area may be excluded from further consideration. The commission will determine that an alluvial valley floor exists if:

a. Unconsolidated streamlaid deposits holding streams are present; and

b. There is sufficient water to support agricultural activities as shown by:

(1)The existence of flood irrigation in the area or its historical use;

(2) The capability to be flood-irrigated, based on streamflow water yield, soils, water quality, and topography; or

(3) Subirrigation of the lands from the ground water system of the valley floor.

28. Thus, a mining company is required to determine whether an alluvial valley floor exists prior to the filing of the permit application. That was done in this case.

29. Of major significance in the preparation of an alluvial valley floor report is the Alluvial Valley Floor Identification and Study Guidelines issued by the US Office of Surface Mining Reclamation and Enforcement dated August 1983 (OSM Guidelines) (Voigt Appendix, pp. 139-333).

30. The OSM Guidelines indicate that the identification of an alluvial valley floor is best accomplished in two phases. The first is a reconnaissance phase which allows the applicant to identify areas clearly not alluvial valley floors, as well as probable alluvial valley floors. The second phase is detailed studies if the applicant wishes to demonstrate that any probable alluvial valley floors should not have that status. (*Id*. at pp. 157-160).

31. According to the OSM Guidelines, "whether alluvial valley floors can be mined depends on their significance to agriculture." As a consequence, the Guidelines recognize two exemptions, the first being undeveloped rangeland which is not significant to farming, and the second is small acreages, which if disturbed, would cause negligible impact to farming operations. *Id.* at p. 159.

32. The OSM Guidelines stress that "stream valleys which do not have any agricultural importance or whose importance is not related to the greater water availability of the valleys are not alluvial valley floors." *Id.* at p. 161.

33. The OSM Guidelines then suggest a three step process for identifying alluvial valley floors. First, the applicant uses readily obtainable data, including regional data collecting, to make initial identifications. Second, the regulatory authority can make an initial determination of the existence of an alluvial valley floor on the basis of the data submitted by the applicant. And third, the applicant has the opportunity to conduct more detailed studies if there is disagreement with the regulatory authority's findings. This last step is optional. *Id.* at p. 162.

34. The OSM Guidelines recognize that the definition of an alluvial valley floor is an integration of concepts of geology, hydrology and agricultural land use. *Id.* at p. 165.

35. In adopting SMCRA in 1977, Congress intended to protect certain types of valleys with special importance to agricultural operations. The OSM Guidelines quote Congressional testimony as follows:

> Of special importance in the arid and semi-arid coal mining areas are alluvial valley floors which are the productive lands that form the backbone of the agricultural and cattle ranching economy of these areas. For instance, in the Powder River Basin of eastern Montana and Wyoming, agricultural and ranching operations which form the basis of the existing economic system of the region could not survive without hay production from the

> naturally subirrigated and flood irrigated meadows located on the alluvial valley floors. *Id.* at p. 167

The OSM Guidelines go on to state that "the understanding of an alluvial valley floor is well described in this statement and has been consistently understood in the subsequent passage and implementation of the SMCRA." *Id.*

36. The OSM Guidelines also indicate that "some low-lying areas have greater vegetation productivity than adjacent uplands merely because of better soils, snowdrift accumulation, or occasional flood overflow. These areas are not considered to be subirrigated, and one of the tasks of identification studies is to distinguish those valley areas whose productivity is a result of subirrigation, and not a result of water from some other source. The water availability criterion excludes areas that could be developed for subirrigation; e.g., by establishing deep rooting alfalfa to tap ground water not presently used by native vegetation." *Id.* at pp. 169-170. (emphasis added)

37. Mr. Voigt throughout his brief continues to assert that his alfalfa fields adjacent to the creek are proof of an alluvial valley floor. However, as demonstrated by the OSM guidelines set forth above, and also the testimony of Coyote Creek Mine's expert, Dr. Bickel, alfalfa is excluded from a determination of subirrigation. (Transcript p. 423).

38. With respect to the role of the PSC, the OSM Guidelines provide that "(t)he role of the regulatory authority is to review data presented by the applicant or obtained from other sources and to make defensible written determinations within a reasonable timeframe." (Voigt Appendix, pp. 150-151)

39. What is an alluvial valley floor to a geologist is different in the context of SMCRA. The OSM Guidelines state "although alluvial valley floor has a technical meaning, particularly to a geologist, in the context of the Surface Mining Control and Reclamation Act

(SMCRA), the term has a regulatory meaning." OSM Guidelines p. 164. Casey Voigt only wants to apply a technical meaning, not the regulatory one.

40. In the initial reconnaissance phase of an alluvial valley floor determination, the OSM Guidelines indicate that color infrared air photo interpretation can be used to identify potentially subirrigated areas. *Id.* at pp. 177-178. However, the OSM Guidelines caution that "color infrared air photo interpretation will sometimes result in identification of areas whose water source to vegetation is not groundwater." *Id.* at p. 180. That is, infrared photos are not definitive in determining the presence of an alluvial valley floor. The OSM Guidelines go on to provide that color infrared photography is a useful method for reconnaissance identification, but that other methods are used to verify the existence of subirrigation. *Id.* at p. 316.

41. Also of relevance in making an alluvial valley floor determination in this area of North Dakota is the OSM's study entitled "Draft Reconnaissance Maps to Assist in the Identifying Alluvial Valley Floors, West-Central North Dakota," dated June 1985 (hereinafter, "OSM Reconnaissance Maps") (Voigt Appendix, pp. 334-365). The introduction to the OSM Reconnaissance Maps states in part that "These maps represent only a reconnaissance-level effort in identification of areas which are <u>likely</u> to meet this definition, and these areas, therefore, are called <u>potential</u> alluvial valley floors. . . .Because reconnaissance-level data have been used in this study, it is recognized that detailed data collected for any specific area may more conclusively prove or disprove the alluvial valley floor findings made in this report." *Id.* at p. 339.

42. The OSM Reconnaissance Maps indicate there are major regional differences when it states that "environmental characteristics, agriculture uses, and irrigation practices within stream

valleys vary in the different coal regions of the West. Therefore, the specific rationale for identifying the role and character of alluvial valley floors may vary from one area to another." *Id.* at p. 339. However, the OSM Reconnaissance Maps stress that site specific studies would indicate whether certain valleys or portions of valleys may not be considered alluvial valley floors due to unsuitable soils, topography, or water supply. *Id.* at p. 349.

43. The OSM Reconnaissance Maps further state that "uplands in west-central North Dakota have good soils. Rainfall averages about 16 inches annually, falls mainly during the growing season, and is adequate for dryland crops. Thus, the uplands are chosen for additional cropland over the small valley bottoms." *Id.* at p. 363. There are several reasons why small irrigation systems commonly known as spreader dike systems are not considered a regional practice in Dunn and Mercer Counties, North Dakota. One reason is that the small drainages where spreader dikes could be built "are not as crucial to operations as perhaps similar drainages would be in more arid coal regions." *Id.* at p. 363.

44. Thus, while Mr. Voigt places heavy reliance upon the OSM Reconnaissance Maps to assert that an alluvial valley floor exists in Coyote Creek, the report itself is very clear that it makes no such determination and at most indicates there are areas of potential alluvial valley floors. Mr. Charles Norris, Mr. Voigt's expert, acknowledged that the OSM Reconnaissance Maps are not an alluvial valley floor determination. (Transcript p. 191) Mr. Norris has not visited Coyote Creek and has not conducted any studies in order to make an alluvial valley floor assessment. (Transcript p. 195) He acknowledged that "boots on the ground" is his first choice in making an alluvial valley floor determination. (Transcript p. 217)

45. Also relevant to the Coyote Creek valley is the Alluvial Valley Floor Study prepared for Dakota Westmoreland Corporation in October 2009 (Voigt Appendix, pp. 41-74); and the corresponding memorandum and determination of the Reclamation Division with respect to the Dakota Westmoreland Corporation study (Voigt Appendix, pp. 75-81, and 82). Dakota Westmoreland Corporation operates a coal mine located just east of Coyote Creek.

46. The authors of the Dakota Westmoreland Corporation study and Coyote Creek Mine study both used the OSM Guidelines in their determinations. (Voigt Appendix, p. 44, CCMC Appendix, p. 28)

47. The Dakota Westmoreland Corporation study indicates that part of the area examined included Sections 19, 30 and 31, Township 143 North, Range 88 West, Mercer County, North Dakota. Mr. Voigt owns lands within Section 31. (Voigt Appendix, p. 72) The study further indicates that data from two wells in the area of the farmstead of Mr. Voigt in the S½ of Section 31 were reviewed, and that Mr. Voigt stated water well levels were at 15 to 20 feet. The study also notes that root systems of annual crops and forage grasses in Section 31 typically would not tap water resources at such depths to significantly increase yields, nor would rangeland plants subjected to grazing. It goes on to indicate that no phreatophyte communities were noted during surveys, suggesting that the depth to water table was too great for these plants to profit. This lack of phreatophytes in low lying land forms strongly suggest that subirrigation is not contributing to any increased yields for agricultural crops, most of which are grown on slightly higher elevations in the flood plain. *Id.* at p. 72.

48. With respect to irrigation systems in the area, the Dakota Westmoreland Corporation study references county Soil Conservationist reports that state "they were not aware of any

systems on Coyote Creek . . ." *Id.* at pp. 68-72. "Flood irrigation on the Coyote Creek Stream Valley floodplain has many impediments." Further, the lowland areas along Coyote Creek are "generally small fields." *Id.* at p. 71. "Stream valleys like Coyote Creek typically are not developed for flood irrigation purposes, especially in areas within Mercer County south of the Knife River." *Id.* at p. 71.

49. The Dakota Westmoreland Corporation study also indicates that pursuant to the OSM Guidelines, one of the plant groups that received attention was the agricultural field crop group. The survey for the Dakota Westmoreland Corporation study revealed that those plants nearest to the creek which should have the best access to subirrigation were, if anything, in poorer condition than the average plant in the fields. The most productive plants were the beneficiaries of additional surface water, not ground water, by virtue of the location near the footslope position. The study notes that "The landowner of lands where the fields reside indicates that yields exceed those on the uplands, but do not appear to be benefiting from subirrigation." Thus, it appears that Mr. Voigt himself has previously acknowledged that subirrigation is not occurring on his fields. *Id.* at p. 72.

50. The Dakota Westmoreland Corporation study concludes that subirrigation is not playing a role in enhancement of crop production in the study area, and that the Coyote Creek stream valley does not contain an alluvial valley floor within the study area. In addition, it indicates that the absence of phreatophytes, poor groundwater quality, water table depth exceeding 15 feet, and a lack of evidence of plant growth benefiting from additional water provided by subirrigation also supported the conclusion that deep rooted crops such as alfalfa are not being subirrigated. *Id.* at p. 73.

51. The Reclamation Division conducted its own independent review of the Dakota Westmoreland Corporation study, and issued its report on June 15, 2009 (Voigt Appendix, pp. 75-81). The consensus after the field review was that those areas adjacent to Coyote Creek within the study area do not fit the definition of an alluvial valley floor. No evidence of subirrigation was observed. The report concludes that "corn is historically the predominant crop raised by the landowner within the study area and Mr. Voigt reported to Mr. Smestad that he felt crop production was generally better within the flood plain along Coyote Creek because of increased soil quality and landform run-on characteristics associated with the terrace topography as opposed to upland areas and not because of groundwater availability through subirrigation." *Id.* at p. 81.

52. The primary purpose of the study prepared for Coyote Creek Mine by Dr. Bickel was to study adjacent areas of the Coyote Creek drainage in order to make an alluvial valley floor determination. This included lands in Sections 32-35 in Township 143 North, Range 88 West, Mercer County, North Dakota. (CCMC Appendix, pp. 26-51) As previously noted, Mr. Voigt owns lands in Section 31.

53. Dr. Bickel previously worked for the Public Service Commission Reclamation Division, with concentration in surface and groundwater hydrology. Part of his duties at the Public Service Commission was to review coal mine alluvial valley floor studies, of which he examined dozens. He worked for the Commission for 17 years from 1989 to 2006. During this time Dr. Bickel made presentations at OSM training workshops on how to prepare alluvial valley floor determinations. Subsequently, he has been consulting which includes preparing alluvial valley floor studies for potential coal mining. (Transcript pp. 406-408)

54. Mr. Charles Norris, Casey Voigt's expert, had challenged Dr. Bickel's lack of independent investigation in preparation of his alluvial valley floor study. However, the details set forth at the hearing and in his study indicate that Dr. Bickel used significant independent data, including: (1) US Geological Survey data on hydrology; (2) NRCS data on soils; (3) NOAA data on weather; (4) State Water Commission data dealing with hydraulic information; (5) vegetation, land use, wetland spring and seep data collected by field surveys by KDH Consulting; (6) soils surveys completed by Prairie Soils Consulting; (7) data from existing groundwater monitoring wells installed in the 1980's and in 2012; (8) preliminary geologic mapping by Coyote Creek Mine as relates to geologic strata of coal beds to possible springs and seeps and their contribution to streams; and (9) Reclamation Division staff. (Transcript pp. 413-415)

55. The extensive data reviewed and field investigation completed by Dr. Bickel demonstrate that Coyote Creek Mine complied with the alluvial valley floor review requirements of North Dakota Administrative Code § 69-05.2-08-13(1).

56. Dr. Bickel testified that no significant areas of potential subirrigation were identified through these studies. He further stressed that no areas of soils indicative of subirrigation were observed. (Transcript p. 420) He found no evidence of subirrigated soils on the lands within the study area for the Coyote Creek drainage. (Transcript p. 422) This lack of subirrigated soils was confirmed by Reclamation Division Assistant Director Dean Moos, indicating he reviewed NRCS soil survey data for Mercer County. The primary soils along the Coyote Creek drainage are straw soils. The NRCS data indicates that the depth to water table for straw soil at greater than 80 inches. This is indicative that there is no alluvial valley floor, as there is no subirrigation due to such depth. He noted that straw soils are

typically not a subirrigated soil. (Transcript pp. 639, 644) This point was further confirmed by the testimony of Coyote Creek Mine's rangeland expert Sarah Flath, with respect to production received by Mr. Voigt in both his upland fields and lowland fields. She explained that soils, not subirrigation, explain the difference in productivity between the upland hay fields and the lowland hay fields owned by Mr. Voigt. Based upon data submitted by Mr. Voigt, (Voigt Appendix, p. 367) she noted the increasing yields from the uplands to the lowlands is only 47% compared to 76% which would be expected based on the more productive lowland soils. She further indicated that if the lowlands were subirrigated, that in the dry year of 2012 she would expect to see more similar year to year production and less of a drop between the first and second cuttings. She indicated a subirrigated area should only drop approximately 25%, but in 2012 the drop was much more significant. In addition, she noted that in 2013 and 2014 the uplands actually out-produced the lowlands on the first cutting. Ms. Flath concluded that production on the lowland hay fields was considerably less than what would be expected if those fields were subirrigated. (Transcript pp. 535, 536)

57. Dr. Bickel also noted in his testimony that the regional climate in west-central North Dakota is different from that in arid areas further to the west. He stated that West-Central North Dakota is considered semi-arid, "but long-term climatic records show that the region has had significantly more years dominated by wet conditions than have states to the west and south." North Dakota's climate allows areas, other than stream flood plains, to produce crops such as alfalfa. Thus, regional livestock production is not dependent on stream valleys for hay production. (Transcript p. 423)

58. Dr. Bickel further noted that Coyote Creek has "static water levels below the rooting depths of common range vegetation and cultivated crops in the area. The saturated zone is characterized by low hydraulic head that has very limited potential as a groundwater supply for significant irrigation." (CCMC Appendix, pp. 49-51) He indicated there is no soil evidence of subirrigation of consequence occurring along Coyote Creek, the Knife River, or other rivers and tributaries in the study area. He then quoted from the OSM Guidelines that "If certain stream valleys do not serve a special role in agricultural land use in a particular coal region, or if their special role is not a function of water availability, then these streams are not alluvial valley floors in that region." *Id.* at p. 42. He further noted that the main channel of Coyote Creek within the study area showed no evidence of surface water spreading, flood irrigation, catchments for irrigation, or other mechanisms to enhance hay or crop production on the floodplains. The crop and hay production occurring on the Coyote Creek floodplain is controlled by slope rather than water availability. *Id.* at p. 46. Dr. Bickel found that:

> [t]here is no evidence that the Knife River and Coyote Creek or other drainages within or adjacent to the AVF [alluvial valley floor] study area meet any of the criteria essential for determining them to be AVF. Their agricultural usage is not different from adjacent upland areas, nor are they critical to crop or livestock feed production as are the true AVF areas in the arid West. They have no history of surface water irrigation or economically feasible irrigation potential for enhancing current or foreseeable agriculture in the area. They are not subirrigated. *Id.* at p. 51.

59. An example of a classic alluvial valley floor area, according to Dr. Bickel, is along the Powder River in eastern Montana and Wyoming, which satisfy the OSM Guidelines by virtue of the significance of those stream valleys to agricultural production. He noted this was the original concept of SMCRA, to protect those areas where stream valleys are the backbone of the agricultural economy. He stated it is important pursuant to the OSM

Guidelines to review the relevance of the stream valley economy to the ranchers in the region. Because North Dakota's climate is wetter than that of areas further west, alluvial valley floors are very rare in North Dakota. As North Dakota has abundant moisture this allows for hay and cropping to occur on uplands. Thus, the Coyote Creek valley does not qualify as an alluvial valley floor under the OSM Guidelines. (Transcript pp. 450-454, 468-469) Dr. Bickel concluded that there was no alluvial valley floor within the Coyote Creek drainage areas he studied. (Transcript p. 420)

60. As previously noted, the Reclamation Division conducted its own independent investigation and site visit to confirm whether there was an alluvial valley floor in the area of the study prepared by Dr. Bickel. By letter dated August 26, 2013, the Director of the Reclamation Division agreed that after its independent investigation that no alluvial valley floor existed within the study area. (Voigt Appendix, p. 118) This was confirmed in the testimony of Mr. Bruce Beechie of the Reclamation Division. Mr. Beechie stated he agreed there was no alluvial valley floor in the study area of the 2009 Dakota Westmoreland Corporation study. Mr. Beechie further indicated that the Reclamation Division's specific examination of vegetation and soils for the 2009 Dakota Westmoreland Corporation study indicated that subirrigation was not occurring. He stated that the two infrared photos submitted as exhibits by Mr. Voigt do not specifically depict areas of subirrigation. Rather, the photos depict moisture content of vegetative growth both along Coyote Creek and in adjacent upland areas. (CCMC Appendix, pp. 12-15) He confirmed that there was no alluvial valley floor within the area reviewed by Dr. Bickel in his 2013 study. (Transcript, p. 599)

61. Both Dr. Bickel and Mr. Beechie indicated that one of the data sources they relied upon were the water levels at two wells located on Mr. Voigt's property in Section 31. The depth to the water was from 8.68 feet to 10.84 feet, and thus not subirrigated. (Transcript pp. 430 and 609, 610). (CCMC Appendix, p. 3)

62. Both further stated that based upon voluminous data, no subirrigation is occurring. (Transcript at pp. 423 and 631).

63. In both the Dakota Westmoreland and Coyote Creek Mine AVF determinations, the Reclamation Division staff conducted its own field investigations within the study areas for each study. Mr. Beechie concluded "That the detailed data collected and reviewed by environmental consultants and the Reclamation Division staff produced no discernible or defensible evidence that the valley of Coyote Creek is an alluvial valley floor." (CCMC Appendix, p. 15). Mr. Beechie also confirmed that in this region of North Dakota, the Reclamation Division staff has not found alluvial valley floors to the extent which are much more common in northeast Wyoming and southeast Montana and other western states. He said that one could envision scrubland and sagebrush uplands dropping down into a valley floor where ranchers are actually able to get hay production for cattle, would give a good picture of what a true alluvial valley floor is in the statutory and regulatory definition of SMCRA. (Transcript pp. 627, 628)

64. The purpose of SMCRA to protect such areas in western states was acknowledged in the decision of the United States District Court for the District of Columbia in *National Wildlife Federation v. Lujan*, Nos. 89–0504, 89–1221 and 89–1614, 1990 W.L. 134826 at *1 (D.D.C. Sept. 5, 1990). Congress intended for SMCRA to protect alluvial valley floors

which form the backbone of the agricultural and cattle ranching industry in those areas such as the Powder River Basin in eastern Montana and Wyoming. *Id.* at *4.

65. The OSM Guidelines recognized these regional differences by stating that "(t)he natural environment of the West is highly diverse, and the characteristics of alluvial valley floors differ widely from North Dakota to New Mexico." (Voigt Appendix, p. 150)

66. In the Reclamation Division's Memorandum identifying whether it determined an alluvial valley floor existed within the Coyote Creek valley, it was stated "The OSM Guidelines also note that the water availability criteria excludes areas that could be developed for subirrigation; e.g., by establishing deep rooting alfalfa to trap groundwater not presently used by native vegetation." (Voigt Appendix, p. 110) Thus, the fact that Mr. Voigt had established an alfalfa crop in his lowland hayfields is specifically excluded under OSM Guidelines as illustrative of subirrigation. The Memorandum goes on to state that it is the general consensus of the PSC inspectors that the six valley sites studied do not meet the criteria for an alluvial valley floor for flood irrigation or subirrigation. The presence of several small tracts of possible subirrigation pursuant to the OSM Guidelines "would not represent productive lands that form the backbone of the agricultural and cattle ranching economy of the area." *Id.* at p. 110. In addition, Casey Voigt's upland fields are productive, and he is not reliant on the Coyote Creek valley for all of his hay or crop production. (Transcript pp. 421, 468-469).

67. North Dakota Administrative Code § 69-05.2-08-13(2) has a two part test to determine if an alluvial valley floor exists. The first is whether "unconsolidated streamlaid deposits holding streams are present." While it was agreed Coyote Creek occupies a valley that holds deposits of shallow alluvium, it has been clearly demonstrated by the four alluvial

valley floor studies which have been completed by industry experts and the PSC that there is no evidence of flood irrigation in the area or its historical use, nor does Coyote Creek have the capability to be flood irrigated. The evidence further demonstrated that subirrigation from the groundwater system is not occurring. As a result, the PSC correctly determined that there is no alluvial valley floor within the Coyote Creek valley.

68. Further, the PSC's definition of "agricultural activities" with respect to alluvial valley floors indicates that the uses of grazing or harvesting of plants "do not include agricultural practices which do not benefit from the availability of water from subirrigation or flood irrigation." N.D.A.C. § 69-05.2-01-02(3). The record indicates that there is no grazing or cropping as enhanced or facilitated by subirrigation. The PSC correctly found, based upon the voluminous evidence submitted by CCMC, and the Reclamation Division staff field investigations that no alluvial valley floor exists within the creek.

69. In *Grams v. Environmental Quality Counsel*, 730 P.2d. 784 (Wyo. 1986), the Wyoming Supreme Court considered a challenge by landowners that proposed mining operations would have an adverse effect upon a potential alluvial valley floor. The State of Wyoming's Reclamation Division had found that the concerns of the landowners were addressed and protected in the mining permit application. The Court noted the record of the case consisted of seven volumes consisting of thousands of pages of highly technical material. The Court found that the mining application adequately contained information regarding the evaluation of alluvial valley floor restrictions. As a result, the Court concluded that the decision of the State of Wyoming's Reclamation Division to approve the permit was not arbitrary, capricious or an abuse of discretion, and was in accordance with the law. The permit was affirmed. *Id.* at 791.

70. The same can be said for the alluvial valley floor determinations made by the PSC for Dakota Westmoreland Corporation and Coyote Creek Mine. The determinations were supported by studies of alluvial valley floor experts, who reviewed voluminous data. Both studies were confirmed after independent investigations by the Reclamation Division. As a result, four separate studies have determined there is no alluvial valley floor within the Coyote Creek valley. Mr. Voigt's expert witness conducted no field investigations and did not prepare an alluvial valley floor study. His testimony is pure speculation.

CONCLUSION

71. By a vast preponderance of the evidence the PSC found there was no alluvial valley floor within the Coyote Creek valley. This is a matter of great technical expertise and the finding of the PSC is entitled to appreciable deference. Coyote Creek Mine respectfully requests that the determination of the PSC that no alluvial valley floor exists within the Coyote Creek valley be affirmed.

Dated this 6th day of June, 2016.

/s/ Brian R. Bjella

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