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I. INTRODUCTION

[¶1] This matter arises out of the Order by the North Dakota Public Service Commission (“PSC” or “Commission”) affirming the approval of grade approval requests designated as COY-034, COY-035, COY-036, COY-037, COY-038, and COY-039, and dismissing Appellants Casey and Julie Voigt’s (“Voigts”) Complaint filed November 22, 2023 before the PSC. *See* Exhibit A to Notice of Appeal – Order, Index #2.

[¶2] The first notice the Voigts generally had of these grade approvals was the issuance of the letter with the Commission’s approval. *See* Grade Approval Requests, Index ## 33, 39, 43, 47, 51, and 57. Pursuant to N.D.C.C. § 28-32-22, these approvals constitute “informal dispositions” and are therefore subject to the provisions governing appeals set out in the Administrative Agencies Practice Act, N.D.C.C. chapter 28-32.

[¶3] On June 8, 2023, the Voigts filed a Notice of Appeal and Specification of Errors regarding COY-035, COY-036, and COY-037 and served the PSC, CCMC, and the North Dakota Attorney General (“AG”) on that date. *See* Case No. 08-2023-CV-01338, Index ##1-4.

[¶4] On August 18, 2023, the Voigts served the PSC (through the Attorney General) and CCMC with a Notice of Appeal and Specification of Errors regarding COY-034 and filed the appeal on August 23, 2023. *See* Case No. 08-2023-CV-01964, Index ##1-5.

[¶5] On September 6, 2023, the parties filed a Stipulated Motion to Consolidate and to Extend Deadlines. *See* Case Nos. 08-2023-CV-01338, Index #115 and 08-2023-CV-01964, Index #9.

[¶6] On September 7, 2023 and September 8, 2023, the Court entered its Order to Consolidate and to Extend Deadlines. *See* Case Nos. 08-2023-CV-01964, Index #12 and 08-2023-CV-01338, Index #118.

[¶7] On September 26, 2023, the parties entered into a Stipulation and Request for Stay and the Court entered its Order for Stay. The Voigts proposed and the parties agreed that the Voigts would

file a complaint with the PSC asking to hold a formal hearing and address the matters raised in the appeals of the grade approvals through an adjudicative proceeding under the Administrative Agencies Practice Act, N.D.C.C. ch. 28-32 and if the PSC accepts the complaint for adjudication and holds a formal hearing, and issues a final decision adjudicating the claims, the Voigts would file a motion to voluntarily dismiss the appeal with prejudice. *See* Case No. 08-2023-CV-01338, Index ## 119, 122.

[¶8] On October 24, 2023, the Voigts served the PSC (through the Attorney General) and CCMC with a Notice of Appeal and Specification of Errors regarding COY-038 and COY-039 and filed the appeal on October 26, 2023. *See* Case No. 08-2023-CV-02561, Index ##1-5.

[¶9] The parties entered into a Stipulation and Request for Stay and the Stipulation was filed on November 8, 2023. *See* Case No. 08-2023-CV-01338, Index #123 and 08-2023-CV-02561, Index #8. The Court entered its Order Consolidating 08-2023-CV-02561 to 08-2023-CV-01338 and granted the stay. *See* 08-2023-CV-01338, Index #126 and 08-2023-CV-02561, Index #11. As with the prior stipulation, the parties agreed that the Voigts would file a formal complaint with the PSC and attempt to resolve the dispute before the agency through a formal hearing on the additional grade approvals.

[¶10] The Voigts' entire intent with this proposal was to give the PSC an opportunity to make a complete record of a formal decision and to make adjudication of this dispute more transparent, efficient and orderly for all involved. The PSC and the Mine agreed to this process, presumably for these same reasons.

[¶11] On November 22, 2023, the Voigts filed their formal complaint with the PSC, seeking redress under ch. 28-32 for failures to follow provisions of N.D.A.C. Art. 69-02. Index #12, ¶ 4. The PSC accepted the Voigts' complaint on November 29, 2023. Index #15. A notice of formal

hearing was issued on November 30, 2023 scheduling the formal hearing for December 22, 2023. Index #17. CCMC filed its answer to the complaint on December 12, 2023. Index #20. A formal hearing was held on December 22, 2023. The Commission issued its Findings of Fact, Conclusions of Law and Order on February 14, 2024 dismissing the Voigts' complaint. Index #116.

[¶12] On March 13, 2024, the Voigts served the Appellees with a Notice of Appeal. Index ##3-5. On March 14, 2024, a Notice of Appeal and Specifications of Error was filed. Index ##1-2. A Notice regarding Briefing Schedule was filed on April 10, 2024. Index #122. The parties entered into a stipulation for extension of time and the order was entered on April 24, 2024. Index ## 128, 131.

II. LAW AND ARGUMENT

A. The regulation at N.D.A.C. § 69-05.2-15-04 requires all graded spoil to be tested in order to assess and determine the final respread depth based on the graded spoil.

[¶13] The challenged grade approvals require less than 48 inches of Suitable Plant Growth Material (“SPGM”) (i.e. topsoil and subsoil) to be respread on the Voigt ranch. *See* Index #33, Voigt Exh. 2; Index #39, Voigt Exh. 8; Index #43, Voigt Exh. 12; Index #47, Voigt Exh. 16; Index #51, Voigt Exh. 20; Index #57, Voigt Exh. 26. Pursuant to N.D.A.C. § 69-05.2-21-03 (emphasis added):

All exposed coal seams and toxic-forming and combustible materials exposed, used, or produced during mining must be **adequately covered** with nontoxic and noncombustible materials, or treated, to control the impact on surface and ground water in accordance with chapter 69-05.2-16, to prevent sustained combustion, and to minimize adverse effects on plant growth and the approved postmining land use.

[¶14] As used in this title of the Administrative Code, “Toxic-forming materials means earth materials or wastes which, if acted upon by air, water, weathering, or microbiological processes, are likely to produce chemical or physical conditions in soils or water that are detrimental to biota

or uses of water.” N.D.A.C. § 69-05.2-01-02(115). These toxic-forming materials are also often referred to as “spoil.”

[¶15] The thickness of the SPGM respread following grade approval is significant and important for reclamation success because the toxic spoil can contaminate the respread soils if there is not a sufficient buffer between highly toxic and sodic spoils and the SPGM that is respread over top of it. The applicable standards at N.D.A.C. § 69-05.2-15-04 contain a table that refers to the characteristics of the graded spoil material, which is the material onto which the SPGM is respread.

Suitable Plant Growth Material Redistribution Thickness

Spoil Properties		Total Redistribution Thickness	
Texture	Sodium Adsorption Ratio (SAR)	(Top Soil Plus Subsoil)	
		Average in Inches	(Centimeters)
Medium*	12	24	(61)
Course**	12	36	(91)
***	12-20	36	(91)
***	20	48	(122)
*	Loam or finer		
**	Sandy loam or coarser		
***	Not applicable		

[¶16] It is important to recognize that this table bases the depth of SPGM on the properties of the spoil onto which it will be respread. Important here is the Sodium Adsorption Rate, or “SAR”. If the spoil has a higher SAR, it can negatively alter the properties of the SPGM being respread on top of it. “[S]odicity primarily affects plant growth through its effect on physical properties of soils and minespoils.” *See* Index #75, Voigt Exh. 43. The PSC staff testified that soils with an SAR above a 12 are considered “sodic” soils. *See* Index #24, Tr. of Electronic Recording, p.35, lns. 8-9.

[¶17] The Voigts submitted a study from North Dakota researchers which gave “[s]pecial attention ... to a dynamic aspect of sodicity-the migration of sodium from mine spoil into overspread topsoil at certain sites.” *Id.* at p.2.¹ PSC Staff agreed at the hearing that this study is an authoritative source. *See* Index #24, Tr. of Electronic Recording, p. 50, Ins. 1-4; Index #88, Voigt Exh. 53. That same study found that at “the site of several reclamation experiments in western North Dakota, upward migration of sodium **increased the exchangeable sodium of topsoil spread over minespoil.** Evidence is presented which indicates that chemical diffusion played an important role in this process.” *Id.* In other words, if there is not a sufficient amount of SPGM spread over top of the spoil, salts in the spoil can migrate upwards through the soil and contaminate the topsoil, have a significant detrimental effect on the ability to successfully reclaim the soil. Nothing is more critical to the Voigts as cattle ranchers.

[¶18] The table below indicates the SAR of the spoil over which topsoil was spread in a reclamation study, and it illustrates in real numbers the impact that a high-SAR spoil will have on the SPGM laid down on top of it.

¹ Page number references for Voigt exhibits will be to the page numbers as labeled by the Voigts (e.g. “Voigt-002” is p.2 here).

Table 3. Initial and subsequent saturation extract sodium and sodium-adsorption-ratio (SAR) values found in fall (September to November) soil samples from four field sites where 12 inches of soil had been spread over minespoil.

Site	Depth	Sodium					SAR				
		Years					Years				
		0	1	2	3	4	0	1	2	3	4
	inches	meq/liter									
SI	0-6	1	2	2	2	1	1	1	1	1	1
	6-12	1	6	7	9	10	1	3	3	4	5
	12-24	22	28	27	25	26	12	9	9	9	10
	24-36	22	20	20	21	21	12	14	13	12	13
B	0-6	1	1	2	1	1	1	1	1	1	1
	6-12	1	8	19	9	12	1	3	6	4	4
	12-24	35	38	39	34	44	11	11	10	10	10
	24-36	35	36	37	37	39	11	11	10	11	11
S2	0-6	3	6	4	3	3	2	4	3	2	3
	6-12	3	18	17	23	16	2	9	10	17	18
	12-24	30	27	29	26	33	25	24	23	21	26
	24-36	30	35	29	33	33	25	29	26	26	25
Z	0-6	9	11	17	12	12	3	3	5	4	4
	6-12	9	25	42	40	41	3	7	15	14	12
	12-24	39	41	40	39	31	27	28	29	27	27
	24-36	39	35	33	37	39	27	32	30	27	28

See Voigt-004 of Index #75.

[¶19] As indicated, topsoil with an SAR of 2 has its SAR increased to **17 within four years**, well over the PSC’s agreed definition of sodic soils (SAR of 12 or higher). Given the PSC staff’s agreement with these principles, it is therefore a proven fact that respraying SPGM on sodic spoil will cause an increase in the sodicity of overlying SPGM. This fact is also reflected in the regulation, which requires additional SPGM to be respread as SAR values increase in the spoil. As such, the specific SAR and other characteristics of the spoil onto which the SPGM is respread is critical to ensure reclamation success, and if the Mine is allowed to short the Voigts on the amounts of SPGM being respread it could reduce the productivity of the soils being respread for decades

on the Voigt Ranch. Thus, while the issue is a technical one, what is at stake is literally the soil that the Voigt family has been building for their entire life on the ranch.

[¶20] The Voigts' concern arises from the lack of sample data used by the Commission staff to determine the *actual* respread depth. Prior to mining, the Commission calculates *projected* respread depths using voluminous testing data taken from soil bores every 40 acres and to depths beyond one hundred feet in five-foot increments. Samples are tested for SAR and other overburden properties. *See* Section 2.1.7 OB Sample Analyses of the permit; Index #71, Voigt Exh. 39, pp. 5-7. This comprehensive testing is utilized to calculate the projected respread depths.

[¶21] For whatever reason, the Commission requires this extensive testing for the projected respread depths, but only requires a *12-inch* depth for the samples of graded spoil analyzed to determine *actual* respread depths. This reduced requirement for testing is in direct conflict with the applicable regulation as N.D.A.C. § 69-05.2-15-04(4) which requires that the SPGM respread depths be based on the “graded spoil characteristics” and not merely “the top 12 inches of graded spoil.” This practice results in insufficient data for making these critical determinations, particularly in the matter at hand and given the evidence in the record of how far salts from sodic spoils can migrate into SPGM. *See* Voigt-005 of Index #75.

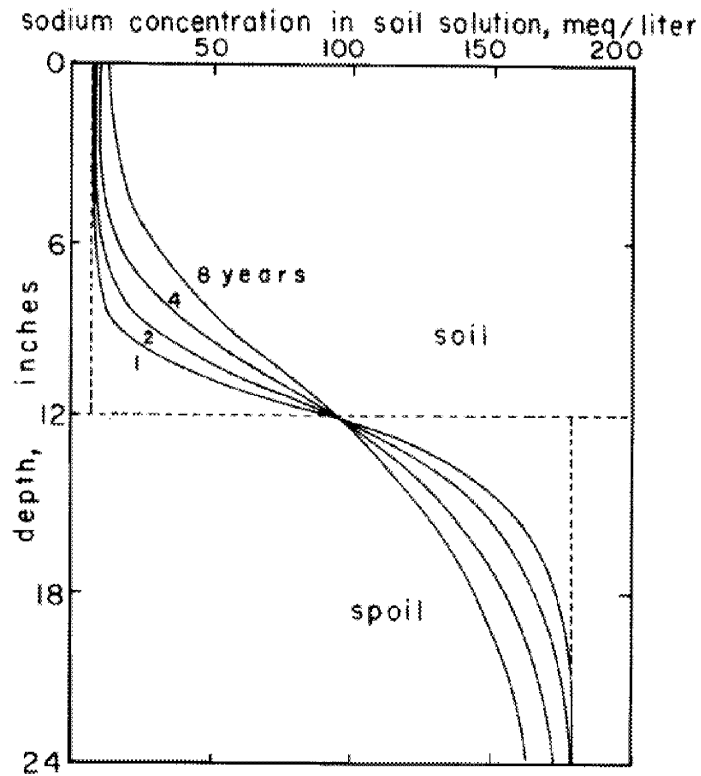


Figure 1. Calculated changes in soil solution sodium concentrations occurring in 12 inches of cover soil spread over minespoil as the result of the processes of chemical diffusion and ion exchange.

[¶22] Fortunately, it is merely a practice the Commission has to require testing to a depth of 12 inches, and a practice that can be changed at any time, such as is being requested here by the Voigts.

[¶23] As the Voigts have pointed out, “upward migration of sodium increased the exchangeable sodium of topsoil spread over minespoil” in numerous study sites in North Dakota, and this migration can move further than 12 inches. While it may not be necessary to conduct testing to the same depths post-mining for purposes of calculating respread depths for SPGM, it is elementary that this data should be collected at least to the rooting depth of the plants intended to be planted post-reclamation. Alfalfa has a rooting depth of at least 6-8 feet. *See* Index #73, Voigt Exh. 41, p.4. PSC Staff agreed at the hearing that prairie grasses, the plants to which the Voigt lands will

be planted post-mining, can root deeper than four feet deep. Index #24, Tr. of Electronic Recording, p.102, Ins. 14-18. Mr. Voigt asked at the hearing for testing to be conducted to at least four feet or 48 inches from the surface of the graded spoil rather than the arbitrary top 12 inches. *See* Index #24, Tr. of Electronic Recording, p. 107, Ins. 3-12.

[¶24] The testimony from Casey Voigt at the hearing also supports the need to conduct sampling of all the graded spoil. He submitted pictures into evidence showing the “pre-bench” or “glacial till” that the Mine claims to place on top of the sodic spoil. *See* Index #82, Voigt Exh. 50, p.3. In one picture, Mr. Voigt explained he witnessed the Mine placing about 12 inches of the glacial till over top of gray spoil material. Index #24, Tr. of Electronic Recording, p. 106, Ins. 15-18. Mr. Voigt also testified that staff from the Mine *told him* they were spreading twelve inches of pre-bench material over top of the spoil (Donn Steffen with the Mine disputed this when he testified, but also admitted he was not there for the conversations or photographs taken by Mr. Voigt). Index #25, Tr. of Electronic Recording, p. 27, Ins. 14-16.

[¶25] There are numerous examples of spoil with SARs well above the “sodic” threshold of 12 to which the PSC Staff testified, and sometimes above 30, which is extremely toxic. *See* Index #64. Given the Mine’s practice of spreading the higher quality “pre-bench” material over what can be toxic spoil, and Mr. Voigt’s testimony that it was spreading approximately twelve inches on top of spoil, the PSC’s general practice of only requiring graded spoil to be tested to twelve inches is insufficient here and specifically problematic because it stops short of testing critical graded spoil.

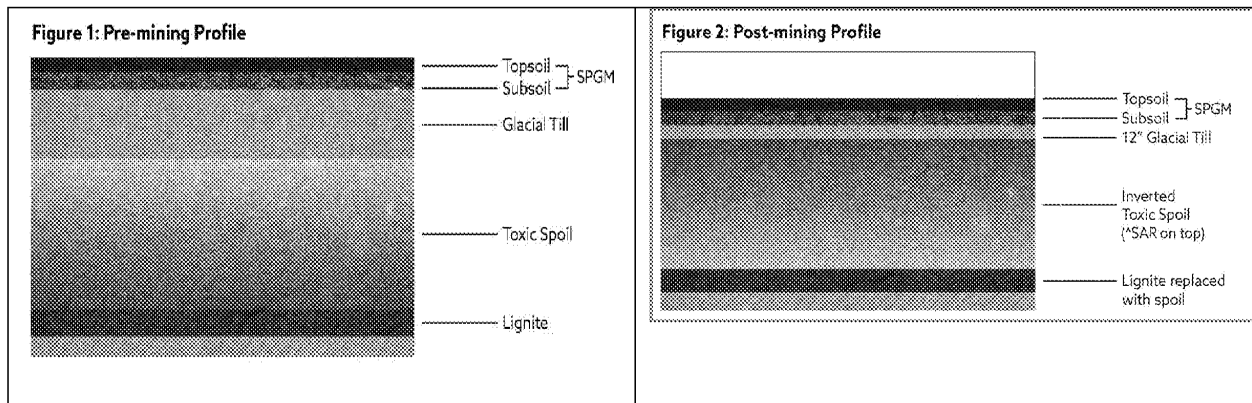
[¶26] More importantly, this practice conflicts with the regulation which requires the SPGM respread depth to be calculated “based on the graded spoil characteristics.” N.D.A.C. § 69-05.2-15-04(4) (emphasis added). The “graded spoil” as used in the regulation refers to all of the spoil,

and is nowhere limited to the top *twelve inches* of graded spoil. *See, e.g.*, N.D.C.C. § 38-14.1-24(3)(b) (“The permittee, at a minimum, shall backfill, grade, and compact (where advisable) using all available overburden and other spoil...”). All available spoil is considered to be “graded” as it is used to reshape the land to its approximate original contour.

[¶27] Fortunately, there is no reason the PSC needs to require testing on only the top twelve inches of spoil in this case. The practice of testing the top twelve inches is just that – a practice – and an arbitrary one that can be changed at any time. And it *must be* changed when the practice conflicts with the regulation, which is the case here. The 12-inch testing limit is not contained in the regulation and indeed, given the studies which form the basis for the regulation and their findings related to sodium migration, it is likely not a practice well-grounded in the research. Given the testimony here that the Mine is spreading twelve inches of lower-SAR pre-bench material on top of spoil, there is an even more specific reason to require deeper testing beyond only the top twelve inches of graded spoil. The regulation’s plain language requires it and that is all that is necessary for reversal. But the facts of this matter also indicate that the parties and the PSC can only benefit from additional data and knowledge regarding the SAR values of the spoil for the challenged grade approvals given the testimony that testing may have only been conducted on a cap and not on the actual graded spoil. To the extent the SAR values are above 20 within the rooting zone of the plants that will be used for revegetation on the Voigt ranch, the SPGM should be respread at a minimum thickness of 48 inches per the regulation. Given the failure to test and base the respread depths on the “graded spoil” as the regulation requires, reversal is necessary.

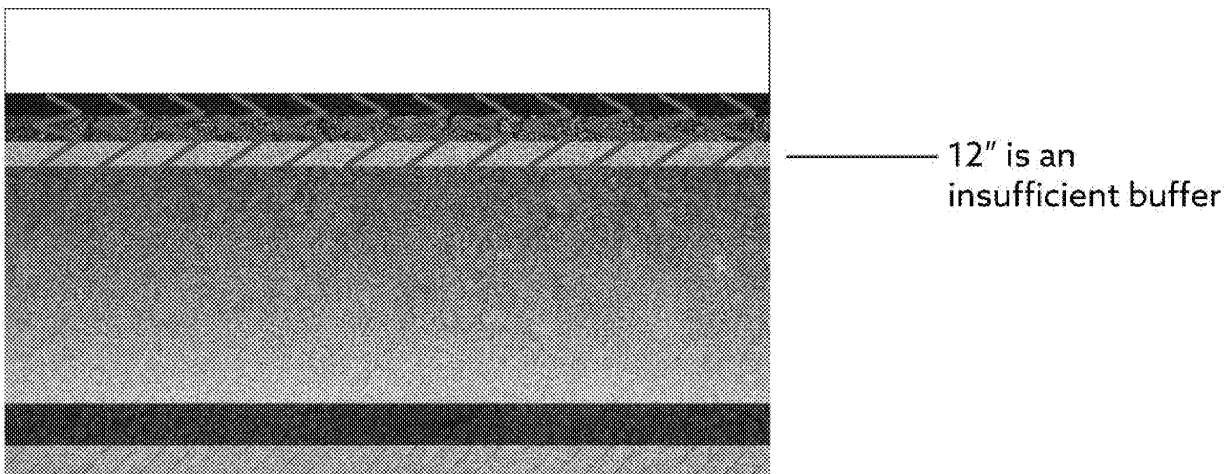
[¶28] To further illustrate, the concern the Voigts have is that there is no data with respect to the SAR lurking just beneath the top twelve inches, and based on what Mr. Voigt saw in the field, it is possible that there is toxic spoil with an SAR well above 20 just below what was tested. Prior to

mining, the most toxic spoil is near the lignite, but at the hearing the testimony indicated that the dragline will invert that spoil, such that the most toxic spoil is on top in backfilled areas.



[¶29] The figures above roughly illustrate the Voigts’ concern with soil and spoil strata prior to mining, and again after mining. As indicated, the larger buffer of glacial till is reduced to a 12” buffer after mining, and it sits immediately on top of the most toxic spoil. Based on the sodium migration evidenced in the study submitted by the Voigts, this 12” buffer of glacial till would be insufficient to prevent contamination of the SPGM if the “pre-bench” or glacial till materials were placed immediately on top of highly sodic spoil. The regulation requires a full 48 inches of SPGM if that is the case, but the data here is insufficient to make the determination.

Figure 3: Toxic Spoil Contamination



[¶30] The illustration above depicts the Voigts’ concern more directly, and there is only one way to ensure that the Mine is abiding by N.D.A.C. § 69-05.2-15-04(4) and its requirement to base the respread depth on the “graded spoil.”

[¶31] The current regulation at N.D.A.C. § 69-05.2-15-04(4) resulted from pressure from North Dakota mines, with North American Coal Corporation leading the charge. *See* Index #76, Voigt Exh. 44, p.2 (article by Michael Poole, Manager of Environment Affairs, North American Coal Corporation, explaining history of current regulation). In order to get away from the prior standard of five feet of SPGM respread, industry and the Commission worked together with researchers to develop the current regulation. *Id.* According to North American Coal, in 1988 “[r]eclamation cost savings for each acre-foot of soil which does not have to be salvaged are more than \$1,000.” *Id.* That figure would obviously be far higher today. North American Coal described the regulation stating: “The gist of these regulations is shown in table 1. In most cases, reclamation costs will be reduced because less soil will have to be salvaged.” *Id.*

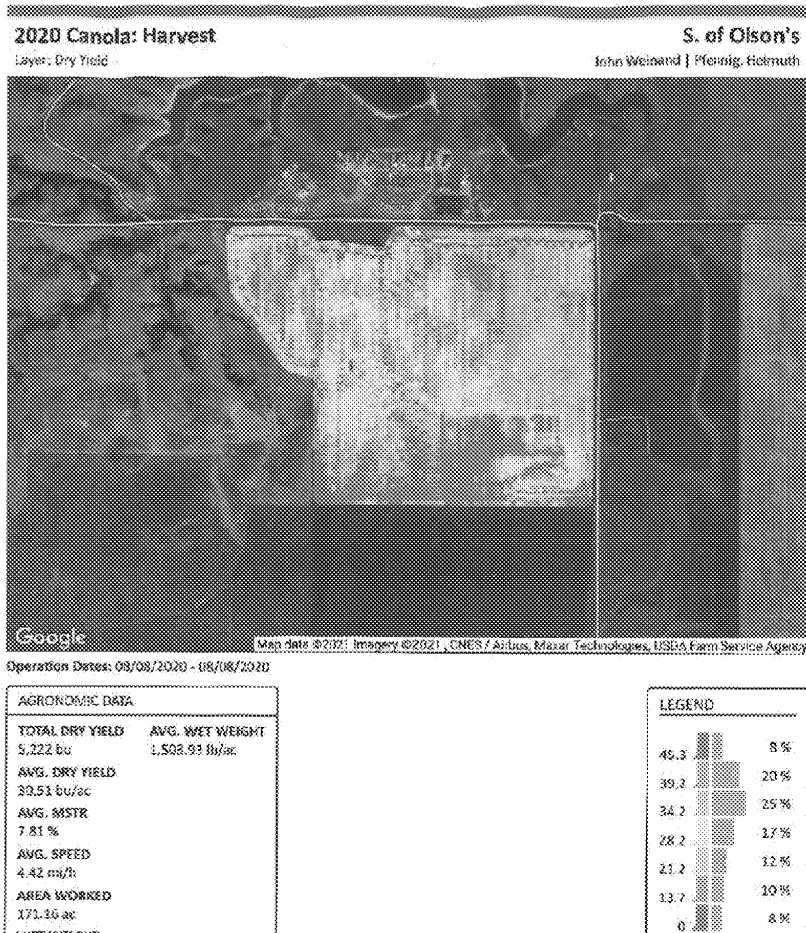
[¶32] In its summary of the research, North American Coal also lauded the researchers for adhering to a strict evidence-based approach:

The researchers themselves refused to make recommendations based on insufficient data, but once they felt confident in their research conclusions, they were willing to publicize and, if necessary, defend their research in the political arena, the media, and the scientific community. They conditioned their conclusions and recommendations, but not to the extent that the results of their work could not be applied to reclamation in the field.

Id. at p.6.

[¶33] And the lack of data is significant because there is a general concern from farmers about the actual success of reclamation at some mines. For example, another farmer in the area named John Weinand testified at the hearing that he and others have concerns about the success of reclamation because they have seen firsthand that production on mined and reclaimed lands is

substandard. Mr. Weinand referred to the “elephant in the room” and submitted yield maps showing significantly decreased yields on land used by another mine.



Voigt Exh. 54, Index #89, p.1.²

[¶34] The technology used to generate Mr. Weinand’s yield maps is commonplace for North Dakota farmers and can provide critical data on production and reclamation success for mined lands. It also illustrates the Voigts’ concerns with having their highly productive land disturbed with the possibility of a detrimental long-term impact to the productivity of the soil. If sodium migration is allowed to move sodium into the SPGM being respread because the 12” buffer of glacial till is insignificant, there will be little recourse.

² See colored version at Index #89.

B. The Congressional intent of SMCRA encourages landowners to be involved to catch precisely the types of issues raised in this appeal.

[¶35] The Voigts have been involved in proceedings with the Mine related to reclamation under North Dakota’s version of “SMCRA,” the federal surface mining reclamation law. *See, e.g.*, N.D.C.C. § 38-14.1-02(5) (stating Commission is state regulatory authority for Surface Mining Control and Reclamation Act of 1977 [Pub. L. 95-87; 91 Stat. 445; 30 U.S.C. 1201 et seq.]). While this proceeding is not one arising out of SMCRA’s public participation process, it is important to recognize that the participation by the Voigts is precisely the kind of landowner involvement and participation that is specifically encouraged by coal mine reclamation laws in order to ensure better reclamation of mined soils.

[¶36] In 1977, the Nation’s legislators well understood the fundamental economic principle that, “[f]or any market to operate, enforceable property rights are necessary,” and the nature of coal surface mining requires a balancing of those rights against the country’s need for coal as an energy resource. 30 U.S.C. §§ 1201, 1202(b) and (i); Joseph P. Tomain and Richard D. Cudahy, *Energy Law in a Nutshell*, 18 (2016). Congress expressed this intent in pertinent part with the passage and enactment of § 1202 “Statement of Purpose [of SMCRA]” which expressly provides that:

It is the *purpose* of this Act to –

...

(b) assure that the *rights* of *surface landowners* and other persons with a legal interest in the land or appurtenances thereto are *fully protected* from such operations; [and to]

...

(i) *assure that appropriate procedures are provided for the public participation* in the development, revision, and enforcement of regulations, standards, reclamation plans, or programs established by the Secretary *or any State* under this Act;

...

(Emphasis added).

[¶37] Congress furthermore expressed support for public and landowner participation in State proceedings with debate on the House and Senate floor. 128 Cong. Rec. 12617-15862 (1977). As

just one example among many, Rep. Philip Ruppe (R-MI), stated before his elected colleagues that “[l]andowners, the public, and residents adjacent to mine areas should be protected. They deserve and have the right to the environmental standards we have in this legislation.” *Id.*, at 12638.

III. CONCLUSION

[¶38] In this matter, the Commission has been provided insufficient data to determine the required SPGM respread depth. The Voigts’ request is simple: They ask for the Commission’s order to be reversed so that the Commission can test all of the “graded spoil” as required by N.D.A.C. § 69-05.2-15-04(4). The Commission’s *practice* of testing only the top 12 inches is arbitrary and contradicts this regulation and is particularly problematic here where there is evidence that the top 12 inches may differ significantly in sodicity from the spoil below 12 inches.

DATED this 21st day of May, 2024.

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