2806 ROSEBUD MINING COMPANY

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INDEPENDENT REGULATORY REVIEW COMMISSION

Environmental Quality Board
P.O. Box 8477
Harrisburg, PA 17105-8477

RE: DEP's Chapter 95 proposed revisions

Dear Board Members:

Please find enclosed Rosebud Mining Company comments regarding the proposed Chapter 95 revisions. The enclosed comments are provided in addition to our previous letter dated February 3, 2010 as well as an email correspondence that included comments. Due to our concern on this very serious matter and the impact it would have on our business, we have decided to submit the enclosed Supplemental Comments. Thank you for the opportunity to present our information.

Truly Yours,

Dennis K. Foster
Manager - Permitting

ROSEBUD MINING COMPANY'S COMMENTS TO THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S PROPOSED REVISIONS TO CHAPTER 95

The Pennsylvania Department of Environmental Protection (the "Department") published proposed revisions to its water effluent standards for Total Dissolved Solids ("TDS"), sulfates, and chlorides in 25 PA. CODE § 95 in the November 7, 2009 Pennsylvania Bulletin. 39 Pa. Bull. 6467. According to the Department, the proposed changes to 25 PA. CODE § 95 were initiated by complaints of "unusually high levels" of TDS in the Monongahela River in October 2008, which continued through the end of December 2008. Over this same time period, the Monongahela River experienced a period of very low flow.

These proposed revisions would require treatment of "new discharges" of "High-TDS wastewater" prior to release into Pennsylvania waters. "High-TDS wastewater" is defined as any discharge with a TDS concentration that exceeds 2,000 mg/L or a TDS loading that exceeds 100,000 pounds per day that did not exist prior to April 1, 2009. A "new discharge" is defined to include an additional discharge, an expanded discharge, or an increased discharge from a facility in existence prior to April 1, 2009. If these proposed revisions are adopted, new discharges of High-TDS wastewater would be required to meet new average monthly effluent limits of 500 mg/L for TDS, 250 mg/L for total chlorides, and 250 mg/L for total sulfates. These effluent limits originate from Pennsylvania's secondary drinking water standards, adopted from the National Secondary Drinking Water Regulations, which are designed to protect public water supplies from color, taste, and odor problems rather than guard against adverse human health risks.[1]

A. ROSEBUD MINING COMPANY'S BACKGROUND

Rosebud Mining Company is a Pennsylvania corporation with a business address of 301 Market Street, Kittanning, PA 16201. Rosebud has been in business since 1979 and currently employs over 700 people in Pennsylvania. The company operates 14 underground bituminous coal mines and 5 surface coal preparation plants in Pennsylvania. It is actively mining metallurgical and steam coal from the Upper and Lower Freeport coal seams, and the Upper, Middle and Lower Kittanning coal seams. Rosebud also has a considerable base of reserve coal acreage that will support increasing production for many years to come.

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[1] Effluent limits guidelines are customarily based on an express "technology-based" evaluation, which the Department has not employed in this case.

B. LEGAL REQUIREMENTS THAT MUST BE FULFILLED BY THE DEPARTMENT

Section 5 (a) of The Clean Streams Law (P.L 1987, Act 394 of 1937, as amended), requires the Department to *exercise of sound judgment and discretion* and consider the following factors when promulgating regulations:

> (a) Water quality management and pollution control in the watershed as a whole;
> (b) The present and possible future uses of particular waters;
> (c) The feasibility of combined or joint facilities;
> (d) The state of scientific and technological knowledge;
> (e) The immediate and long-range economic impact upon the Commonwealth and its citizens.

35 PA. STAT. ANN § 691.5(a). The Regulatory Review Act, 71 PA. STAT. ANN § 745.5, also requires the Department to consider and provide the Independent Regulatory Review Commission with a complete and in-depth regulatory analysis of the following factors, among others:

> (a)(4) Estimates of the direct and indirect costs to the Commonwealth, to its political subdivisions and to the private sector...
> (a)(12) A description of any alternative regulatory provisions which have been considered and rejected and a statement that the least burdensome acceptable alternative has been selected.

71 PA. STAT. ANN § 745.5.

For the reasons discussed below, Rosebud does not believe that the Department has provided enough support and analysis to fulfill these legal requirements to the Commonwealth.

C. THE DEPARTMENT HAS FAILED TO DEMONSTRATE WITH LEGALLY SUFFICIENT GROUNDS THAT THE PROPOSED CHAPTER 95 REVISIONS ARE REQUIRED OR NECESSARY

1. The Department has Provided Insufficient and Poorly Managed Data in Support of the Proposed Chapter 95 Revisions

The Department has not presented a rational connection between its sampling data collected to date and any water quality problems in Pennsylvania's surface

waters. Rosebud does not believe the Department's data establishes that there is, in fact, a TDS issue.

The following TDS, sulfate, and chloride concentration data is the only publicly available sample data published by the Department regarding the proposed revisions to Chapter 95: (1) the Monongahela River surface water quality sampling data posted on the Department's Southwest Regional Office's ("SWRO's) website for "Community Involvement"[2] and (2) the River Alert Information Network ("RAIN") new water monitoring system sponsored by the Department that frequently updates the public on the water quality in the Monongahela River via the RAIN website.[3] The Department has not affirmatively provided the public with any additional data outside of these two data sets, and has not provided any indication that it reviewed or researched historic sampling data prior to proposing the revisions to Chapter 95. Rosebud believes that the Department's information available for public review is poorly managed and does not support the proposed revisions to Chapter 95. Further, nearly all of the Department's data comes from the Monongahela River, which does not support the proposed imposition of Chapter 95 across Pennsylvania.

Rosebud believes the SWRO's surface water quality sampling data for the Monongahela River is minimal.[4] This data spans from October 14, 2008 to December 30, 2008 and September 8, 2009 to January 5, 2010 (while omitting a nine month period from December 31, 2008 to September 7, 2009).[5] In total, this is less than seven months of Monongahela River sampling data that the Department reviewed and relied on to support the proposed revisions to Chapter 95. Also, this data is not supported by adequate documentation or records of sampling events, laboratory reports, or field notes. The public is left to review data that has been stripped of the majority of the information regarding how the samples were collected.

As such, since the Department relies on this data as support for the proposed revisions to Chapter 95, the public should have the ability to review records regarding the quality of this data. For example, there are irregularities between the Department's most recent January 14, 2010 version of the surface water quality sampling data for the Monongahela River and the previous December 7,

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[2] *Available at* http://files.dep.state.pa.us/RegionalResources/SWRO/SWROPortalFiles/monongahelarivertdschlorideandsulfatesamplingresults.pdf.

[3] *Available at* www.3rain.org.

[4] Note that this information is current as of Department's most recent January 14, 2010 revision.

[5] Note that the Department does not provide any public notice regarding update or revisions to the limited surface water quality sampling data for the Monongahela River posted on the "Community Involvement" section of the SWRO's website.

2009 version posted on the SWRO's website.[6] The Department modified 15 sample results it previously published, some dating as far back as October 22, 2008. The following table summarizes the Department's modifications:

RMI	SAMPLE LOCATION	SAMPLE ID #	DATE COLLECTED	PA DEP'S VERSION	SPECIFIC CONDUCTANCE (µs/cm)	TDS @ 105°c (mg/L)	CHLORIDE (mg/L)	SULFATE (mg/L)
85.5	Mon River RMI 85.5 upstream of Georgia's Creek	0593-030	10/22/2008	1/14/10	NA	147	32	230
				12/7/09	942	666	18.4	374
84.0	Mon River RMI 84.0 upstream of Jacob's Creek	0593-031	10/22/2008	1/14/10	NA	82	16	80
				12/7/09	812	580	16.3	316
69.0	Mon River RMI 69.0 upstream of Pumpkin Run	0552-873	10/22/2008	1/14/10	NA	850	49.9	428
				12/7/09	906	786	38	429
66.0	Mon River RMI 66.0 upstream of Tenmile Creek	0552-872	10/22/2008	1/14/10	991	756	37.4	395
				12/7/09	895	794	39.5	416
50.5	Mon River RMI 50.5 near Newell, PA	1523-157	12/30/2008	1/14/10	115	194	11	77.5
				12/7/09	298	194	11	77.5
34.2	Mon River RMI 32.2 upstream of Sunfish Run	0594-126	10/22/2008	1/14/10	580	NA	NA	NA
				12/7/09	1066	732	58.7	362
32.5	Mon River RMI 32.5 upstream of Pigeon Creek	0594-127	10/22/2008	1/14/10	240	NA	NA	NA
				12/7/09	1090	738	62.6	367
30.0	Mon River RMI 30.0 upstream of Mingo Creek	0594-128	10/22/2008	1/14/10	195	142	9.97	47.8
				12/7/09	1160	804	64.5	399
26.0	Mon River RMI 26.0 upstream of Kelly Run	0594-129	10/22/2008	1/14/10	870	580	28.4	282
				12/7/09	1120	800	46	391
24.0	Mon River RMI 24.0 USGS Gage Sta Elizabeth	NA	12/30/2008	1/14/10	241	546	37.5	254
				12/7/09	241	NA	NA	NA
24.0	Mon River RMI 24.0 USGS Gage Sta Elizabeth	NA	10/7/2009	1/14/10	826	576	36.3	285
				12/7/09	826	NA	NA	NA
24.0	Mon River RMI 24.0 USGS Gage Sta Elizabeth	NA	10/13/2009	1/14/10	901	568	44.2	279
				12/7/09	NA	NA	NA	NA
12.0	Mon River RMI 12.0	0594-135	10/22/2008	1/14/10	855	808	30.9	207

[6] While the Department may be in possession of additional revisions, the January 14, 2010 and December 7, 2009 revisions are the last made publicly available by the Department. Please note that the Department's December 7, 2009 revision is no longer publicly available on its website.

	upstream of Turtle Creek			12/7/09	746	480	48.1	225
11.0	Mon River RMI 11.0 downstream of Turtle Creek	0552-868	10/17/2008	1/14/10	801	400	31.2	100
				12/7/09	666	524	52.3	279.2
4.5	Mon River RMI 4.5 near Glenwood, PA	CMU	11/24/2009	1/14/10	Deleted	Deleted	Deleted	Deleted
				12/7/09	NA	BLANK	45.1	154.3

The Department has not explained the changes. As such, Rosebud has specific and serious questions for the Department regarding if and how it conducts its quality assurance/quality control of the data prior to relying on the data.

The RAIN data is even more minimal than the data published on the SWRO's website. On December 11, 2009, RAIN and the Department started to publish Monongahela River water data. Note that this was over a month after this proposed rulemaking was published in the Pennsylvania Bulletin on November 7, 2009. The RAIN database provides useful, up-to-date water quality data, but it does not maintain historic table or log of the data collected.[7] As such, the RAIN data cannot be accessed and reviewed by the public at this time.

2. The Department Used an Unapproved Methodology

On the same data tables from the SWRO's website discussed above, the Department designates TDS samples as "TDS @ 105°C." We understand that the Department used USGS Method I-1749-85 for its analyses, which requires a sample to be dehydrated at a temperature of 105°C.

This analytical technique is not an EPA-approved method for determining TDS concentrations. The EPA-approved methods are Standard Method 2540 C and USGS Method I-1750-85, both of which require collected samples to be dried at 180°C before determining the TDS concentration. *See* 40 C.F.R. § 136.3(a), "Guidelines Establishing Test Procedures for the Analysis of Pollutants", and 40 C.F.R. § 143.4(b), "Monitoring for the National Secondary Drinking Water Regulations.

As such, there is a risk that moisture which would have evaporated at 180°C would remain if dried only to 105°C. Incomplete drying of a sample would bias the sample results toward a higher TDS concentration than is actually present, thereby possibly invalidating the TDS concentrations that the Department relies upon for the proposed revisions to Chapter 95. Note that all TDS concentrations posted on the SWRO's website are designated by a column titled "TDS @ 105°C."

[7] The RAIN data, like the SWRO's data, does not provide any information regarding the quality assurance and quality control practices.

The Department has not publicly provided any explanation regarding why the Department chose the non-EPA-approved USGS-I-1749-85 methodology to determine TDS concentration.

3. TDS, Chlorides, and Sulfates are Secondary Contaminants

TDS, chlorides, and sulfates are secondary contaminants that "primarily affect the *aesthetic qualities* relating to the public acceptance of drinking water." 40 C.F.R. § 143.1 (as adopted by 25 PA. CODE § 109.202(b)(2))((emphasis added). These National Secondary Drinking Water Regulations are not federally enforceable but are intended as guidelines for the states, with the secondary maximum contaminant levels for TDS, chloride, and sulfate concentrations to represent "represent *reasonable goals* for drinking water quality." 40 C.F.R. § 143.3 (emphasis added).

The Department's water quality criteria for TDS, sulfate, and chloride protect potable water supply as the only critical use. *See* 25 PA. CODE § 93.7 [8] These surface water quality criteria apply **at the point of an existing or planned surface potable water supply withdrawal**. The Department's sampling data discussed in Section C(1) of these comments does not indicate that the samples were properly collected at the point of an existing or planned surface potable water supply withdrawal. Therefore, it is improper to establish end-of-pipe discharge limits for constituents for which compliance is to be measured at the point of withdrawal.

TDS, sulfates, and chlorides effect the aesthetic qualities of drinking water; they are not classified has having a potential human health risk. The Department does not provide any information demonstrating that infrequent concentrations of TDS, sulfates or chlorides above the proposed limits present any human health risk. The Department's citation, in Section "D. Background and Purpose" of the Preamble to the proposed Chapter 95 regulations, that Disinfection By-Products ("DBPs"), such as brominated and chlorinated DBPs, have been identified as posing a health risk, is unclear and potentially misleading. DBPs originate from the disinfection of sanitary wastewater, which is unlikely to be a "High-TDS discharge" under the proposed regulations. In any event, Rosebud's activities, as well as other coal mining activities, do not DBPs because it does not disinfect its mining effluent with chlorine or bromine. **[Rosebud to confirm.]**

4. The Department's Economic Analysis is Incomplete and Inadequate to Proceed with the Rulemaking.

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[8] The water quality criteria are 250 mg/L (maximum) for chloride, 250 mg/L (maximum) for sulfate, and 500 mg/L (monthly average) and 750 mg/L(maximum) for TDS.

Section 5(a) of The Clean Streams Law, 35 P.S. § 691.5(a), and Section (a)(12) of the Regulatory Review Act, 71 PA. STAT. ANN § 745.5, both require the Department to consider the immediate and long-range economic impact of the proposed regulation, including estimates of the direct and indirect costs, to both the Commonwealth and to the private sector. We believe that the Department's economic analysis of its proposed revisions to Chapter 95 is incomplete because it does not consider the full impact to coal mining and therefore is inadequate for the Department to be able to proceed with the proposed revisions.

Section D of the Preamble to the proposed rulemaking states that "currently no treatment exists for TDS, sulfates and chlorides other than dilution...[but] dilution can no longer be considered adequate treatment for high TDS wastewaters." 39 Pa. Bull. 6467. However, the Department then states, in Section F of the same Preamble and in contrast to its previous statement, that:

> New or increased discharges will be required to install advanced treatment to meet the requirements of this proposed rulemaking. It is anticipated that treatment costs could be on the order of $0.25/gallon."

The Department has not clarified the treatment technology, if any exists, it expects industries to use to meet the proposed effluent TDS, sulfate, and chloride limits. The Department's Regulatory Analysis #7-446, which it provided to the Independent Regulatory Review Commission, has no background or supporting information regarding of $0.25 per gallon treatment cost. The Regulatory Analysis does not state whether this treatment cost is specific to a particular industry, watershed, or location in Pennsylvania, or whether the Department's "treatment technology" (which has yet to be identified) has any volumetric limits. Discharges from different industries have unique volumes, concentrations, and other limitations. It is unreasonable for the Department to assume a flat treatment cost would apply across all industries affected by the proposed revisions to Chapter 95.

Rosebud has not determined what it would actually cost to treat any of its discharges that may be subject to the proposed rule, but we note that a September 21, 2009 study prepared by CME Engineering for the Pennsylvania Coal Association concluded that the bituminous coal industry would have to incur $1.35 billion in capital costs, $133 million in annual O&M costs, and $134 million to adjust current bonds and trust funds to comply with the proposed regulation. The study also concludes that an evaporation and crystallization treatment system (the only technology even capable of treating effluent to the levels proposed by the Department) would cost $46,000 in capital cost and $3,600 in O&M cost per gallon-per-minute treated. The coal industry simply cannot afford these costs. But more to the point, there is no evidence that the

Department considered these costs, as legally required. If it had, it would had to have concluded that the cost is wholly disproportionate with any environmental benefit.

5. Economic and Environmental Impacts not Considered by the Department

The Department has not adequately considered the many additional costs and potential environmental impacts of the proposed rulemaking. For example:

- The power needed to treat extremely large volumes of wastewater will be substantial and expensive. This cost has not been addressed by the Department. The CME Engineering report estimates an energy usage of approximately 429,000 megawatts per year at a conservative cost estimate of $42.9 million.
- The residual waste that will be generated in either solid or slurry form (depending on the treatment technology) from the wastewater treatment will be extremely large and require either landfill disposal or additional treatment prior to disposal. Significant additional landfill space and accompanying leachate control systems will be required for the highly soluble residual waste that results from this treatment, assuming landfills will even agree to accept the waste.
- Additional infrastructure will be required to transport the residual waste brine from mine sites to disposal facilities.

Lastly, in light of the increasing regulation of greenhouse gases on the federal level, emissions from these technologies will likely result in a significant cost to industry. The Department failed to analyze the costs associated with these impacts before proceeding with the proposed rulemaking.

6. The Timeframe set by the Department for Compliance is Untenable

The compliance date for the proposed rule is January 1, 2011. This would provide Rosebud less than 11 months to comply with the proposed effluent limits for TDS, sulfates, and chlorides for any new or expanded discharges of High-TDS wastewater. Simply put, the Department's timeframe is draconian and untenable for Rosebud and other industries to attain. It would require years for Rosebud to ultimately install and operate the required treatment technology.[9] Moreover, the Department has not accounted at all in its economic analysis the

[9] Treatment technology that, according to the Department, does not exist to treat TDS, chlorides, and sulfates.

costs for the public to comply with the proposed TDS, sulfate, and chloride limits in such an unreasonable and impossible timeframe.

D. STATEMENTS OF SUPPORT

Rosebud supports the comments provided by Allegheny Conference on Community Development, Greater Pittsburgh Chamber of Commerce, Monongahela Valley Progress Council, the Pennsylvania Coal Association and the Pennsylvania Mining Professionals.

E. CONCLUSION

Rosebud believes the Department has not provided the public with one example of a properly collected[10] or documented sample demonstrating an exceedance of current TDS limits using an EPA-approved analytical methodology. The Department has not provided the public with the scientific support required for the implementation of the proposed Chapter 95 revisions. The Department has rushed the proposed rulemaking, and in the process has not prepared a complete economic analysis. In addition, the Department has not provided the public with any examples of available treatment technology, let alone cost-effective treatment technology. As such, Rosebud respectfully requests the Department to withdraw the proposed Chapter 95 revisions.

[10] A sample collected at the point of an existing or planned surface potable water supply withdrawal.

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From: Dennis Foster [Dennis.Foster@rosebudmining.com]
Sent: Thursday, February 11, 2010 8:08 AM
To: EP, RegComments
Subject: Chapter 95 proposed revisions on TDS, Sulfates and Chlorides
Attachments: 02.10.10 Letter to Environmental Quality Board Signed by DKF.RMC Proposed Revisions.pdf

Attached is a copy of a letter and written comments that were forwarded yesterday via US Mail. This email is included to make sure the comments are received in time, to avoid any deadline problems.

Thank you.

Dennis K. Foster
Rosebud Mining Company

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