Exh. DCG-6
Docket UE-190882
Witness: David C. Gomez

BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **PUGET SOUND ENERGY,** **Respondent.**	**DOCKET UE-190882**

EXHIBIT TO
TESTIMONY OF

David C. Gomez

STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION

Avista's Response to Staff DR No. 4

January 10, 2020

AVISTA CORP.
RESPONSE TO REQUEST FOR INFORMATION

JURISDICTION:	WASHINGTON	DATE PREPARED:	05/14/2019
CASE NO:	UE-190222	WITNESS:	Thomas Dempsey
REQUESTER:	Staff	RESPONDER:	Thomas Dempsey
TYPE:	Data Request	DEPT:	Thermal Generation
REQUEST NO.:	Staff - 004	TELEPHONE:	(509) 495-4960
		EMAIL:	tom.dempsey@avistacorp.com

REQUEST:

SUBPART A: Please describe the procedure contained in the ARCSA and CTA and/or in any other contract by which Westmoreland, PPL/Talen and/or Northwest Colstrip Owners conduct proximate and ultimate analysis of the coal fuel used by the plant to generate electricity. Please also include the frequency of these procedures (i.e., how often they are done). For example, describe the referenced standard (ASTM, ISO, etc.) and sampling plan which includes methods, frequency and representative sample size.

SUBPART B: Provide the coal specification referenced in the ARCSA and CTA, and/or any other contract with the owners of the Rosebud Mine and by which PPL/Talen and/or Northwest Colstrip Owners accept or reject coal shipments to the CGS. Also describe the ARCSA and CTA and/or any other contract's procedure for the disposition of nonconforming coal and price adjustments based on coal quality.

SUBPART C: Provide the proximate and ultimate analysis (values) of Rosebud Mine's coal referred to in Mr. Dempsey's testimony. Explain, and show via results, why they are within contractual specification.

SUBPART D: Provide the proximate and ultimate analysis (values) of Rosebud Mine's coal for the last four years (2014-2018).

SUBPART E: For the years 2014 to 2018 list each occurrence of Rosebud Mine coal delivered to the CGS which did not meet the contractual specification contained in the ARCSA and CTA and/or any other contract with the owners of the Rosebud Mine (as provided in response to SUBPART B above).

SUBPART F: For each event listed in response to SUBPART E above, describe the actions of the parties to resolve Rosebud Mine coal quality non-conformance. If in resolving a Rosebud Mine coal quality non-conformance event, parties employed a procedure and/or specification not described in Avista's response to SUBPARTS A and B above, explain why.

SUBPART G: List and quantify the duration of any outages and/or derates from the last four years (2014-2018) which were the result of coal quality nonconformance from the Rosebud Mine.

SUBPART H: Describe the current status of the ARCSA and CTA. Are Colstrip Units 3 and 4 currently operating without a fuel contract? What is the current status of the renewal, given that we are less than six months away from contract expiration?

SUBPART I: Please provide all of the documents submitted under seal by Avista to the United States Bankruptcy Court, Southern District of Texas, Houston Division in objection to the Joint Chapter 11 Plan of Westmoreland Coal Company and Certain of its Debtor Affiliates (Case #: 18-35672, Docket Number 1157).

The background provided below relates to Subparts J through M:

Contained within the Western Energy Company's (Westmoreland), Area F Final Environmental Impact Statement (expanding the Rosebud Mine), Section 1.2.2 Coal Combustion, Subsection 1.2.2.1 Colstrip Power Plant, Page 9, dated November of 2018, is the following statement:

> "The Rosebud Mine delivers between 7.7 and 9.95 million tons of coal annually to the Colstrip Power Plant primarily by covered conveyors (shown on Figure 2). Coal from Permit Areas A and B of the Rosebud Mine currently is used in Units 1 and 2 of the Colstrip Power Plant. Units 3 and 4 were originally limited to burning coal from Permit Areas C, D, and E, but in 2015 DEQ approved an amendment to the Certificate also allowing the use of coal from Permit Areas A, B, F, and G (DEQ 2015a). Currently, only coal from Area C is being burned in Units 3 and 4."

On February 15, 2019, the Montana Legislature's Senate Natural Resources Committee heard testimony regarding Senate Bill 252 proposing amendments to Sections 75-20-213 and 75-20-219 of the state's Major Facility Siting Act (SB 252) (*The bill currently awaits the Governor's signature*). SB 252 greatly simplifies the process by which Colstrip can switch its coal fuel source, both within the Rosebud Mine Areas of an altogether new mine.

Testifying on behalf of SB 252, was a representative for Talen Energy, Mr. Mark Taylor. Provided as an attachment below, is a fact sheet submitted to the Committee by Mr. Taylor in support of the bill. It appears Talen's statements are indicative of their plans to expand its sources of coal for Units 3 & 4.

SENATE NATURAL RESOURCES
Exhibit No. 1
Date 2-18-2019
Bill No. SB252

FACT SHEET: SB 252

- Talen Montana operates the Colstrip Steam Electric Station in Colstrip, MT.
- Units 3 and 4 at the station operate under a Montana Major Facility Siting Act ("MFSA") Certificate that requires use of coal exclusively from the Rosebud seam at the Colstrip mine ("Rosebud Mine").
- When the original MFSA Certificate was issued, both the Rosebud Mine and the Colstrip Steam Electric Station were owned by the same company, ensuring alignment of their interests. Since that time, both the Rosebud Mine and the Colstrip Steam Electric Station have changed owners and are now under different ownership.
- Recent events have demonstrated that access to economically viable coal is vital to ensuring the long-term viability of Colstrip Units 3 and 4. Hence, the Units cannot continue to be constrained to coal from only one mine.
- As a result, Talen requested a Montana Air Quality Permit (MAQP) which would allow the use of coal sourced from other mines. This would provide greater operational flexibility by allowing use of coal from other sources. Montana Department of Environmental Quality ("MDEQ") issued a preliminary permit on February 1. To date, no public comments have been received regarding Talen MAQP application or MDEQ's preliminary permit.
- The new permit will not affect the current coal quality requirements established in the existing air permits and the facility's MFSA certificate. The only emissions impact will be from coal delivery methods, which is being addressed. Talen Montana has evaluated 14 mines' coal quality and compared them to the Rosebud Mine's characteristics. It was determined that the use of coal from these other sources would have no negative impact on Colstrip's Units 3 and 4 boiler emissions. The coal from alternate mines being considered is the same quality or better for emissions related purposes to what is currently used to fuel Units 3 and 4. Findings were submitted as part of the related MAQP application.
- Despite already receiving a preliminary permit from MDEQ, under current regulations, Talen Montana must now file an amendment to the existing MFSA certificate, as a second step to obtain permissions to utilize non-Rosebud seam coal. This additional step requires additional time and is a duplicate effort at a point where it is critical to move quickly to maintain supply of coal to the Colstrip plant.
- As a result, Talen Montana is asking for the process to be changed so that it can move forward without having to amend the MFSA. Given the fact that MDEQ has already reviewed our proposal for a new air quality permit, and issued a preliminary permit, and the fact that the quality coal being proposed is of same or better quality as Rosebud seam coal, we believe that the necessary safeguards have been taken to protect public health and the environment.
- While Montana recognizes the impact that using other sources of coal may have on the Rosebud Mine, it must also consider the approximately 350 employees of the Colstrip Steam Electric Station. Talen's focus by requesting the MAQP is to ensure the economic operation of Colstrip for many years to come.

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SUBPART J: Since 2015, has Colstrip Units 3 and 4 burned any coal that was not mined from Area C of the Rosebud Mine?

SUBPART K: If the answer to SUBPART J is yes, please provide (by year starting in 2015):

- The source(s) and amounts of the coal burned at Units 3 & 4 (i.e. Rosebud Mine Area F or Cloud Peak Energy's Spring Creek Mine);
- Cost-per-ton, by source, including any costs associated with transport;
- The dollar amount of these costs that were included in ERM actual costs; and
- Coal Fuel Specification, including the values and ranges for proximate and ultimate analysis of the coal fuel. If these values are different than the specifications in the ARCSA and CTA, explain why.

SUBPART L: Please provide all email, correspondence, analysis, and reports associated with the quality of coal fuel for Units 3 & 4.

SUBPART M: Please provide all notes, presentations, reports and documents provided to Avista's Management and/or Board of Directors since 2015 regarding coal fuel for Colstrip Units 3 & 4.

RESPONSE:

Subpart A: Per Talen, the procedure defined in the ARCSA section 11 is: "At least One Representative sample from each twenty-four (24) hours of coal deliveries hereunder shall be taken by the operator using the buyers sampling equipment". A representative sample is taken every 12 hours for the proximate analysis. Proximate analysis of coal examines the chemical composition of the coal sample. The proximity analysis parameters are moisture, volatile compounds, ash content and fixed carbon. See Subpart B for coal specification requirements. The Title V OP requires daily fuel monitoring to meet Sulfur, MMBtu and tonnage requirements using EPA Method 19 (ASTM, proximate).

Ultimate analysis is a much more comprehensive analysis, and is dependent upon quantitative analysis of various elements present in the coal sample such as carbon, hydrogen, sulfur, oxygen and nitrogen. This type of analyses is done upon request using 1 of the four 1000g retained samples (discussed below). Samples are to be taken consistent with American Society for Testing Materials ("ASTM") Standards. An independent third-party testing laboratory ensures the samples are divided into four parts in airtight containers and held for 90 days after the end of the calendar month these samples are 1000g each they are cut from the representative sample, which varies in size depending on delivery but should be about 1.5lbs/ton of sample. All sampling and analysis is to be done in accordance with ASTM standards and the ARCSA unless otherwise agreed upon. Section 11 of the ARCSA has been modified by the signing of the "Memorandum of Understanding" allowing the seller to sample the coal.

Subpart B: Please see below for the contract requirements:

10.2 Coal Specifications.

The coal sold and delivered hereunder shall be 3 x 0 inch size and no pieces shall be larger than three (3) inches in any dimension. The coal shall be unwashed, undried and untreated by oil or other chemical agents, unless such additional preparation is mutually agreed upon. The coal shall be from the Rosebud seam or shall be coal of equivalent quality. Buyers recognize that coal sold and delivered hereunder has inherent qualities which cannot be changed, but Seller shall make all reasonable efforts to produce coal which has the average quality represented in subsection 10.3 and shall be generally free of overburden, underclay and other nonintrinsic material which can be kept out or removed by exercising reasonable care during mining, processing and loading of the coal.

ROSEBUD SEAM

COAL ANALYSIS

On As-Received Basis

Proximate Analysis		Ultimate Analysis	
Component	**% By Weight**	**Component**	**% By Weight**
Moisture	25.41	Carbon, C	48.57
Volatile Matter	29.67	Hydrogen, H2	3.43
Fixed Carbon	34.55	Sulfur, S	0.81
Ash	10.30	Oxygen, 02	10.63
		Nitrogen, N2	0.73
		Moisture, H20	25.76
		Ash	10.08
Total	100.00	Total	100.00

Btu/lb. 8,382

Grindability Index (Hardgrove) 52.37

Ash Fusion Temperature, °F

Oxidizing		Reducing	
Initial Deformation	2,297.08	Initial Deformation	2,240.33
Softening (H+W)	2,334.28	Softening (H+W)	2,283.34
Softening (H=1/2W)	2,385.73	Softening (H=1/2W)	2,318.75
Fluid	2,464.88	Fluid	2,393.04

10.4 Minimum and Maximum Characteristics.

Buyers and Seller agree that the coal to be delivered from Area C under this Agreement shall be mine-run coal and will fluctuate as to quality and characteristics; however, Seller guarantees that the coal shall not be less than the minimum nor more than the maximum specifications following:

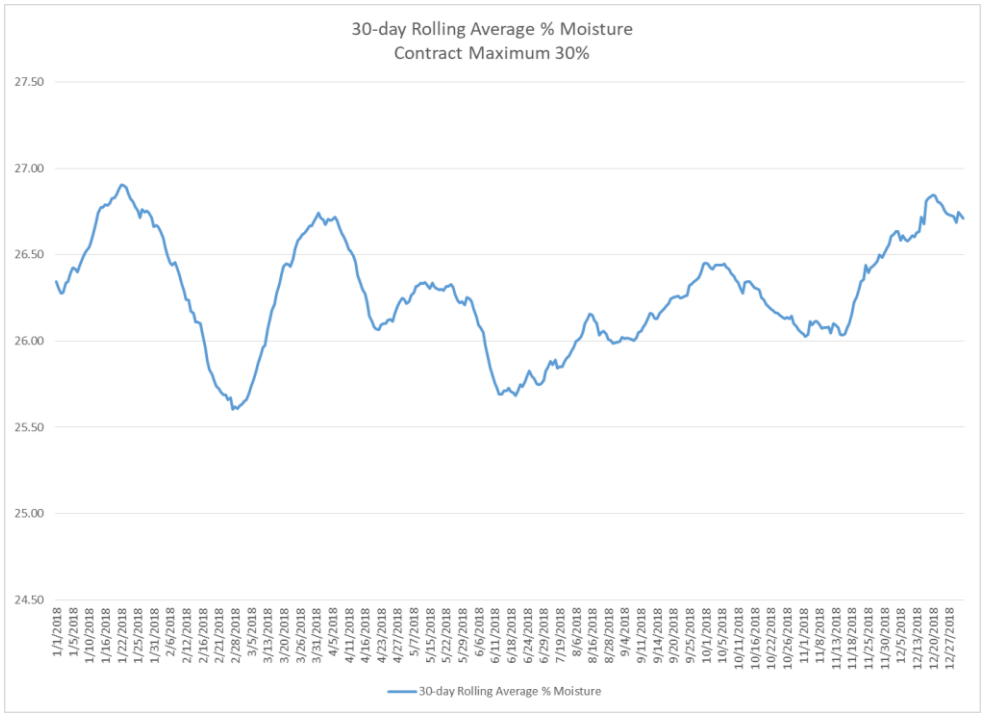
Characteristic	Specification
Maximum moisture content (as received)	30.0%
Maximum ash content (as received)	12.5%
Maximum sulfur content (as received)	1.5%
Minimum ash fusion temperatures, °F in reducing atmosphere:	
Initial Deformation	2010
Softening	2060
Fluid	2100
Minimum Grindability (Hardgrove)	48
Minimum Btu/lb. (as received)	8300

10.5 Nonconforming Coal.

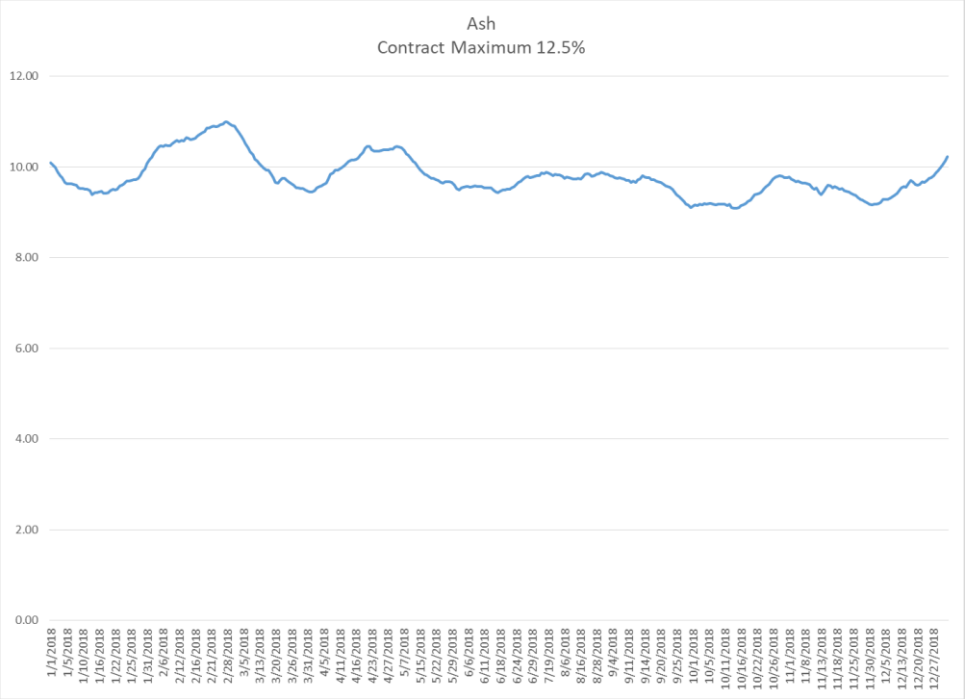
Except as may be specified otherwise in the Approved Annual Operating Plan, should the coal as received fail to conform to the minimum or maximum specifications set forth in subsection 10.4 when calculated as a weighted average over a thirty (30) day period, Buyers may suspend acceptance of any further shipments of such coal hereunder until they receive reasonable assurance from Seller that future deliveries will conform to the specifications. During such suspension period, Seller shall supply Buyers with the quality and quantity of coal agreed upon herein from other sources at no increased cost to Buyers.

Subpart C: Proximate analyses are performed to verify that the coal quality meets contract requirements; those analyses, as well as, the 30-day rolling average is attached as Staff_DR_004 Attachment A. Avista evaluated the daily data provided by Talen and has generated the following graph which illustrate the mine met the 30-day rolling average requirements for 2018:

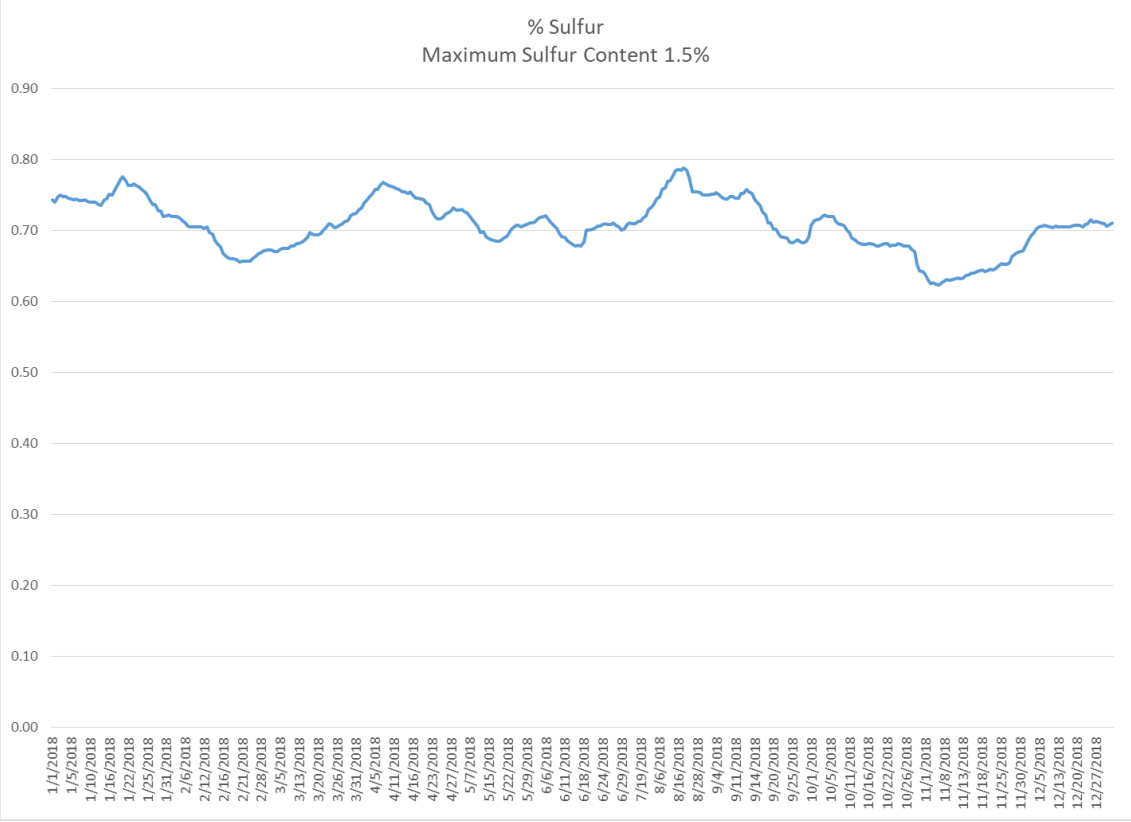
Moisture:



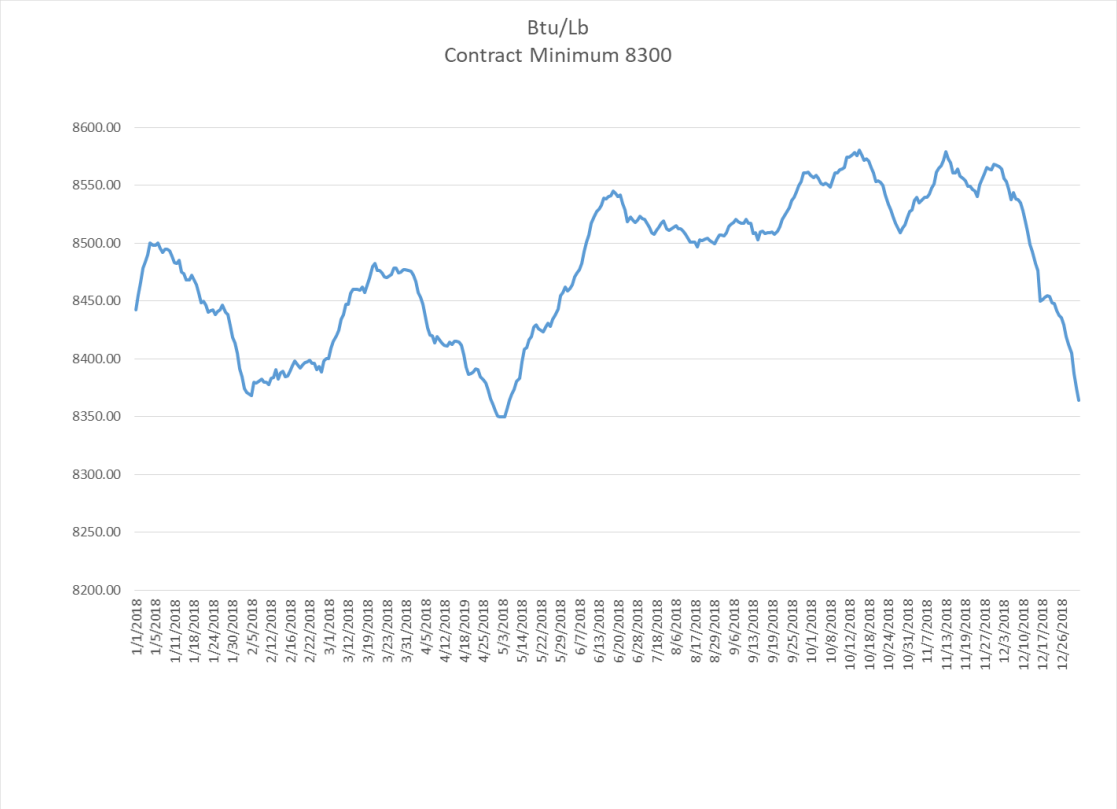
Ash



Sulfur



Btu Content



Ultimate Analyses are not used to determine if the mine is meeting its contractual requirements. Westmorland Rosebud Mining LLC performs an ultimate analysis on a quarterly basis. During the MATS issues encountered in 2018, additional ultimate analyses were performed as part of their troubleshooting efforts trying to pinpoint a cause of the particulate emissions. Avista has produced ultimate analyses for 2017 and 2018. Avista has requested additional quarterly ultimate analyses reports from Talen and will supplement this response when those documents are received.

Subpart D: Please see the Company's response to Subpart C (Staff_DR_004 Attachment A) for copies of the ultimate analysis performed by Talen. Talen did not start compiling these reports via excel until 2015. The attachment includes the daily values provided by Talen, and for illustrative purposes also includes a portion added by Avista to show the 30-day averages as requested.

For all recent Ultimate Analysis reports see attachments Staff_DR_004 Attachment B. Ultimate analyses tests are less frequent. They are conducted by the Plant in response to a specific issue where coal quality requires further analysis such as the MATS issue last June 2018. The Mine performs a composite quarterly Ultimate analysis in accordance with requirements set forth by MTDEQ. Talen receives a copy of these quarterly Ultimate analysis. Talen is in the process of compiling these reports back to 2014. We anticipate this information to be received within the next week. Avista will supplement this reponse once this information in received

Subpart E: Please see Part C for the proximinate analyses (Staff_DR_004 Attachment A) since 2015. Cells O2, P2, Q2, and R2 were added by Avista and list the 30-day average values which were out of the contract specification during the time period in question. In particular, the analysis shows that there were zero instances of moisture being out of spec, zero instances of ash being out of spec, zero instances of sulfur being out of spec, and 114 instances where the BTU content fell below the contractual specification. The maximum deviation from spec for the BTU content was 0.9%.

Subpart F: As indicated in the response to Subpart E, the only instances where the coal supplied by WECO fell out of specification was with respect to BTU content being lower than 8300. The very worst deviation from the contract specification was 0.9%. The average magnitude of the deviation from specification for those instances where BTU content fell below 8300 was 0.3851%. On the other hand, the average 30 day BTU content for coal supplied during the period in question exceeded the minimum contract specification by 1.72%.

As indicated in the response to Subart B, above, the plant operator "may suspend acceptance of any further shipments of such coal…" as a remedy. Talen as operator determined such actions were neither necessary nor practical.

Subpart G: There were no outages or derates associated with the mine being out of compliance with its 30-day rolling average contract requirements.

Subpart H: The ARCSA and CTA are in full effect until December 31, 2019. Negotiations for a new contract are ongoing.

Subpart I: See attachment labelled Staff_DR_004 Attachment C for the Coal Transportation Agreement and Staff_DR_004 Attachment D for the Amended and Restated Coal Supply Agreement.

Subpart J: Yes. Please see the subpart (K) for additional information.

Subpart K: Please see Staff_DR_004 Attachment F for the following information.

1. Rosebud Mine Area A June 2018
2. $23.06/ton
3. Avista's share of the Area A coal costs totalled $588,455.47 and are included in ERM calculations.
4. As it happens, Area A coal meets the specification for Area C coal that is part of the ARCSA even though the ARCSA does not have a coal specification related specifically to Area A coal. Nevertheless Talen did obtain the same proximate values as is done for Area C coal. Area A coal proximate analysis is provided in the attachment titled Subpart D U34 2015-2019 with averages (rows 1531-1538). Additionally Staff_DR_004 Attachment E includes ultimate analyses of Area A coal that was used during this period. The ultimate analyses were used as part of a troubleshooting effort-not for determining whether or not the coal met contractual requirements (although if it had been it would have).

Subpart L: Please see Staff_DR_004 Attachments G

Subpart M: Please see Staff_DR_004C Confidential Attachments A for confidential emails and Staff_DR_004 Attachment H for non-confidential emails.