

## Steve Gili

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**From:** Andy Thomson  
**Sent:** Friday, July 18, 2014 10:46 AM  
**To:** Jeff Wendt (jeff.wendt@wyo.gov); Kirk Billings (kirk.billings@wyo.gov); Tony Hoyt (tony.hoyt@wyo.gov)  
**Cc:** Steve Gili  
**Subject:** Black Butte Air Quality

All,

On July 14th, Black Butte Mine recorded a high concentration of ambient air particulate matter of 294 micrograms per cubic meter for a 24 hour average concentration at the Leucite TEOM. IML has validated the data.

This event came out of the Northeast, making it impossible to have come from our operations. The extremely dry conditions along with the poor condition of the range in the vicinity of the TEOM contributed to the problem.

This email will constitute the required notification from Black Butte to the WYDEQ of an exceedance. We will be submitting an exceptional event package for this event.

Please let me know if you have any questions or need additional information.

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# **Black Butte Coal Mine Exceptional Events Documentation for the Event on July 14, 2014 Leucite TEOM Location**

Produced by:

Black Butte Coal Company

December 18, 2014



## EXECUTIVE SUMMARY

On July 14, 2014 the Leucite TEOM located at Black Butte mine in Sweetwater County, Wyoming recorded 24-hour average concentration of  $294 \mu\text{g}/\text{m}^3$ . This reading is in exceedance of the federal 24-hour PM10 standard. Black Butte believes that this exceedance is the result of an Exceptional Event as determined by the Environmental Protection Agency.

On March 22, 2007 the EPA promulgated the Exceptional Events Rule (EER) to address exceptional events in 40 CFR Parts 50 and 51. The EER allows for states and tribes to “flag” air quality monitoring data as an exceptional event and exclude that data from use in the determination of exceedances or violations of the National Ambient Air Quality Standards (NAAQS), provided the EPA concurs with the demonstration submitted.

This report is intended to provide documentation and support that the exceedance of the  $150 \mu\text{g}/\text{m}^3$  24 hr PM10 standard that occurred at the Black Butte Mine on July 14, 2014 qualifies as an exceptional event under the EER by meeting all requirements set forth in 40 CFR Part 50.14(c)(3)(iii). Black Butte Coal Company contends that the exceedance that was measured on July 14, 2014 was a result of natural events that were not reasonably controllable or preventable. Furthermore, the fugitive dust measured was from ground that is not under the control of Black Butte Coal Co.

Section I of this report provides a history and basic information of the Black Butte mine. As well as providing some background as to when operations were taking place at the Leucite Mine.

Section II of this report is a narrative of events that lead up to and during the event in question. It includes information from notes, reports and eye-witness accounts taken before and during the event. It will provide factual information regarding the overgrazing that occurred on the land surrounding the Leucite TEOM. Details regarding the land conditions that existed off the mine permit area but in the location of the Leucite TEOM are reported in this Section.

Section III of this report details the wind event that occurred on July 14, 2014 and provides the explanation that “the event affected air quality”. This section provides evidence that it was a “natural event”. It also clearly demonstrates the clear causal relationship with the overgrazing conditions that existed off the mine permit area and the wind event.

Section IV of this report provides the factual evidence that despite taking all possible and required actions to prevent and control the event, the event on July 14, 2014 was not reasonably controllable or preventable.

Section V of this report provides the graphical data evidence that the event on July 14, 2014 caused measurement concentrations beyond normal historical fluctuations.

Section VI of this report builds upon the data provided in Sections II through V to provide clear evidence that no exceedance on July 14, 2014 would have occurred “but for” the presence of the natural event.

Section VII of this report provides conclusions and summarizes the exceptional event and how they relate to the rules and requirements in the EER.

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## DOCUMENTATION REQUIREMENTS OF THE EXCEPTIONAL EVENTS RULE (EER)

Section 50.14(c)(3)(iii) of the EER states that in order to justify excluding air quality monitoring data, evidence must be provided to satisfy the following elements:

1. The event satisfies the criteria set forth in 40 CFR 501(j) that:
  - a. The event affected air quality,
  - b. The event was not reasonably controllable or preventable, and
  - c. The event was caused by human activity unlikely to recur in a particular location or was a natural event;
2. There is a clear causal relationship between the measurement under consideration and the event;
3. The event is associated with a measurement concentration in excess of normal historical fluctuations;
4. There would have been no exceedance or violation but for the event.

Section I of this report provides a history and basic information of the Black Butte mine. As well as providing a background as to what, why and when operations were taking place at the Leucite Mine.

Section II of this report is a narrative of events that lead up to and during the event in question. It includes information from notes, reports and eye-witness accounts taken before and during the event. It will provide factual information regarding the overgrazing that occurred on the land surrounding the Leucite TEOM. Details regarding the land conditions that existed off the mine permit area but in the location of the Leucite TEOM are reported in this Section.

Section III of this report details the wind event that occurred on July 14, 2014 and provides the explanation that "the event affected air quality". This section provides evidence that it was a "natural event". It also clearly demonstrates the clear causal relationship with the overgrazing conditions that existed off the mine permit area and the wind event.

Section IV of this report provides the factual evidence that despite taking all possible and required actions to prevent and control the event, the event on July 14, 2014 was not reasonably controllable or preventable. Additionally, it will clearly demonstrate that the fugitive dust measured at the Leucite TEOM on July 14, 2014 was from land outside of the mine permit and not under the control of Black Butte.

Section V of this report provides the graphical data evidence that the event on July 14, 2014 caused measurement concentrations beyond normal historical fluctuations. It also will demonstrate that the overgrazing by sheep herds, not managed by Black Butte, that occurred in the weeks prior, on land that is not managed by Black Butte, was the source of the fugitive dust and not the mine permit land at all.

Section VI of this report builds upon the data provided in Sections II through V to provide clear evidence that no exceedance on July 14, 2014 would have occurred but for the presence of the natural event.

Section VII of this report provides conclusions and summarizes the exceptional event and how they relate to the rules and requirements in the EER.

## I. BACKGROUND INFORMATION FOR THE EVENT

Leucite Hills mine permit area, located in Sweetwater County, Wyoming is a former surface coal mining operation. The mine has not produced coal since 2008. Since that time the former producing pits have been in various stages of reclamation. At the end of January 2014 all prior producing pits had been completely regraded except for Pit 21 and Pit 24. The majority of Pit 24 had been regraded with only 46 acres remaining that would require both dozer regrading and truck regrading. 46 acres of Pit 24 had been topsoiled by the end of January 2014. In February 2014 no operations had taken place at the Leucite mine. In March 2014 no operations had taken place at the Leucite mine. The Leucite Permit area fugitive dust emissions are monitored by 1 TEOM. This TEOM, is located 1.5 miles to the East of the mine permit boundary on a Section of land that is owned by Rocky Mountain Power. Since the TEOM is not located within the mine permit boundary, access to its location is granted through a License Agreement between Union Pacific Resources and Black Butte Coal Company that allows for a 40 foot wide light vehicle access to the TEOM. Figure I.1 shows the pit boundaries, permit boundary, and TEOM locations.

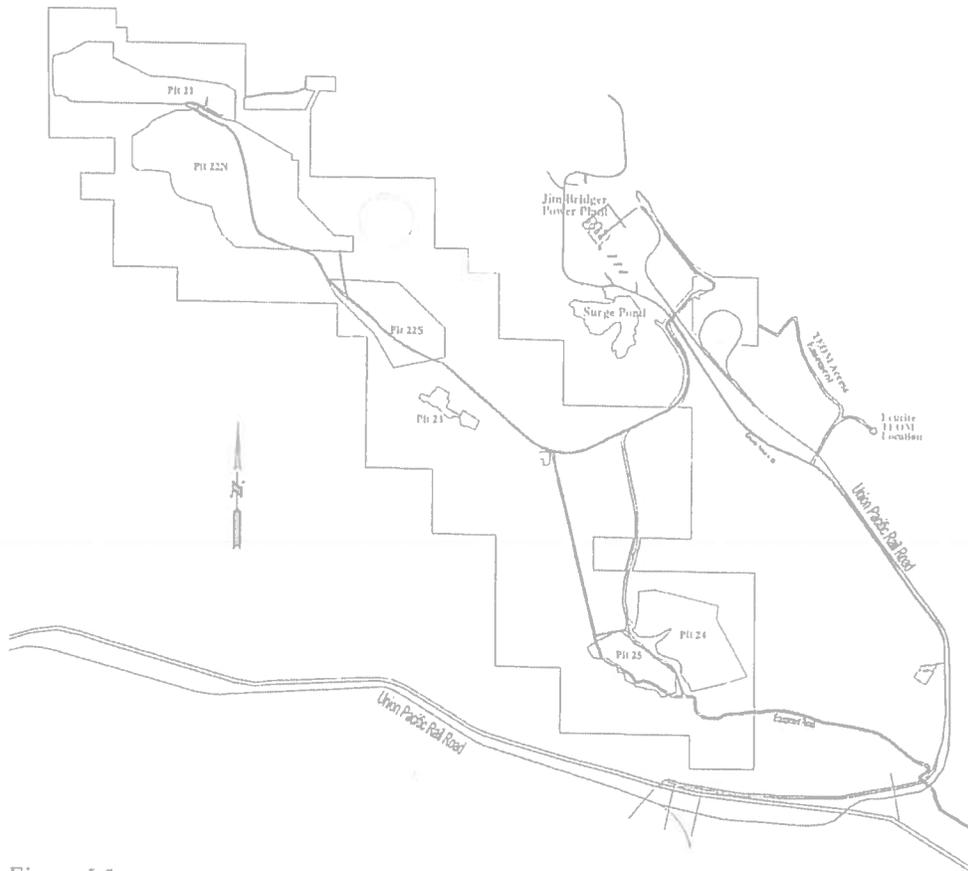


Figure I.1

The land within and around the Leucite Hills permit boundary is referred to as the checkerboard. This refers to fact that every other section of land is owned or controlled by BLM or Anadarko. The Anadarko land was formerly Union Pacific Resources. The Leucite Hills mine leases the rights to mine from both the BLM and Anadarko. Some of the sections have been sold to other entities as well as some have been

given to the State of Wyoming. The section that the TEOM is located in is currently owned by Rocky Mountain Power. This section was sold by Anadarko to RMP several years ago. Much of the livestock grazing rights in this area are controlled by the Rock Springs Grazing Association (RSGA). The RSGA then allots areas to its members for them to graze their cattle and sheep.

Grazing by members of the RSGA occurs on and around both the Leucite Hills mine and the Black Butte mine. However, when they are grazing within the mine permit boundary Black Butte Coal Co has some say into where and when they can graze their herds. Outside of the permit boundary, we have no control over grazing activities. Black Butte Coal Co. has worked very closely with the RSGA over the past 3 years to organize grazing activities at the Leucite Hills mine so that reseeded areas can establish and take hold.

In the winter of 2013-14 sheep herds were grazed extensively on the large flats located between County Road 15 and the foothills to the East, around the location of the Leucite TEOM and in the Ten Mile Draw area of Sweetwater County. The flat is bounded by a county road and wetland type habitat on the west side and foothills and cliff sets on the Eastern side. The TEOM is located in the flat. The flat appears to be used by the sheep herders as a corridor moving sheep between Ten Mile Draw and the Leucite Hills area.

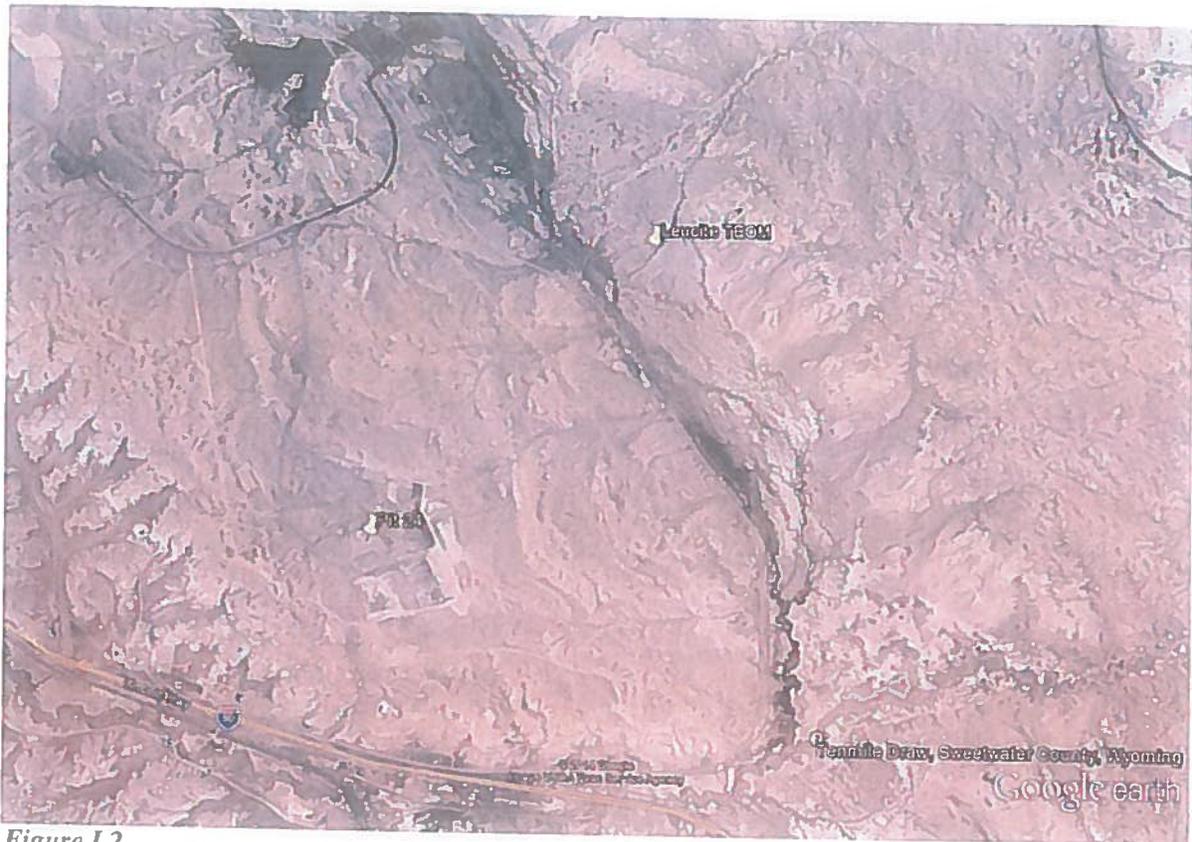
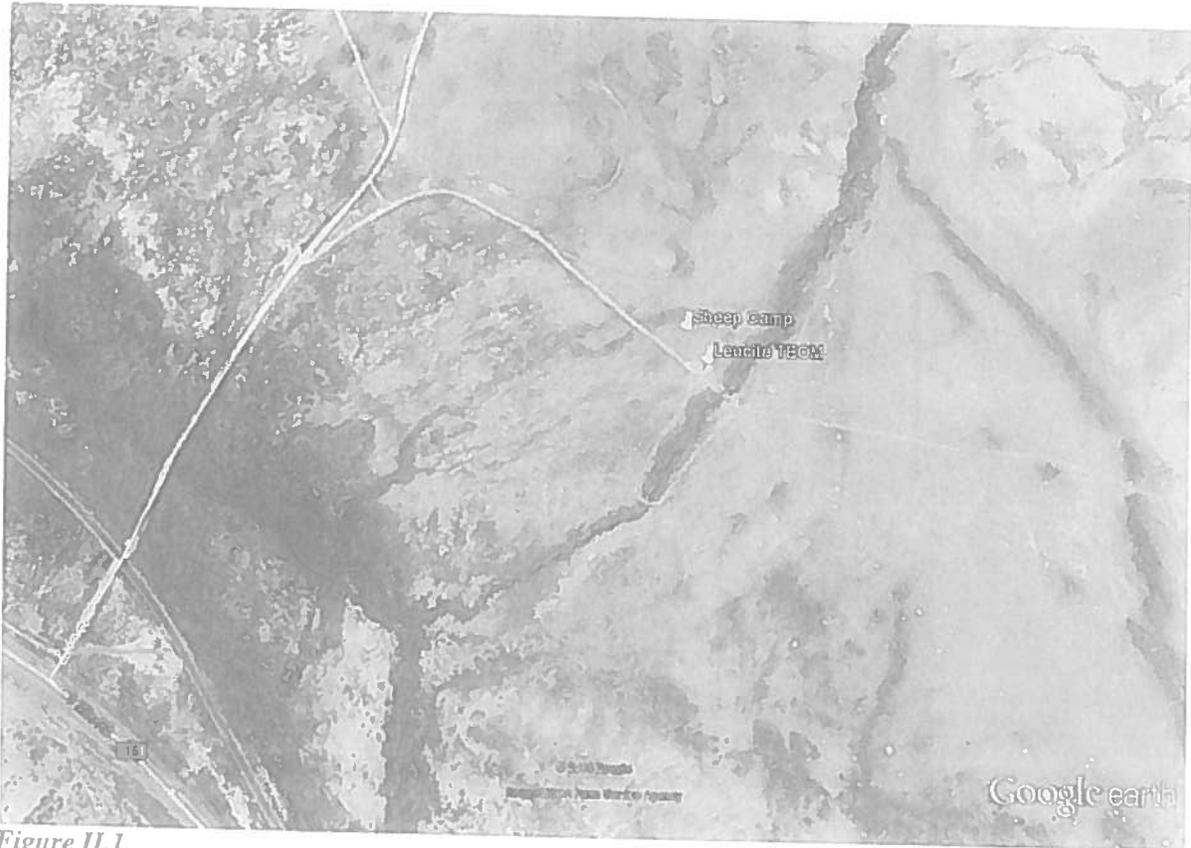


Figure I.2

## II. NARRATIVE OF ACTIONS LEADING UP TO AND DURING THE EVENT

In 2013 dozer and truck regrade operations took place at the Leucite Hills mine. Dozers worked in Pit 21 and 24 and trucks worked in Pit 24. Some topsoil laydown activities also occurred in Pit 22. This activity consisted of using scrapers to lay down 18 inches of topsoil on regraded areas followed by using a farm tractor to crimp straw into the topsoil to stabilize the soil. The farming activities were concluded in October 2013. The truck regrade work in Pit 24 extended into January 2014. This project consisted of using contractor haul trucks to haul spoil off a pile and place it into the final pit. Only 137,000 yards was done in 2014. This project was completed by Schmid Construction and finished on January 17, 2014. No other activities had taken place in Leucite between January 17 and April 30, 2014. On May 1, 2014, 1 D11 dozer was moved to Pit 21 to begin spoil regrade activities for the year. Between May 1, 2014 and July 14, 2014 between 1 and 3 D11 dozers were working at the Leucite Mine on final pit regrade activities in Pit 21. The only work that took place at Leucite through July 14, 2014 is what is mentioned above.

During the winter of 2013-14 sheep were grazed in the Ten Mile draw and Leucite TEOM locations. This has taken place for several years. The sheep are from herds owned by Mr. Fred Roberts. Mr. Roberts is a member of the Rock Springs Grazing Association (RSGA). The overgrazing that occurred took place on land that is neither owned, leased nor controlled by Black Butte Coal. Occasionally the RSGA will graze sheep on land within the Leucite Hills permit but this is limited while the reseeded areas try to establish. This is done in the best interest of Black Butte Coal as well as the RSGA. The herds were grazed from the Ten mile draw area, northwest along the flats that parallel CR 15. These herds will spend several days at a time in this area. This year the herder made his camp just feet from the Leucite TEOM. In information obtained from Mr. John Hay, President of the RSGA, the sheep herd that grazed in this location during the 2013-14 winter was comprised of 1,800 animals. These 1,800 sheep spent a total of 10 days that winter just on the Section of land that the Leucite TEOM is located on. Figure II.1 shows the location of the TEOM and the location of the sheep herder camp.



*Figure II.1*

The grazing activities that took place in this location during the winter of 2013-14 is best described as extreme over-grazing. The vast majority of the edible vegetation had been completely removed leaving only some sage brush and salt brush. Figure II.2 shows the state of the land around the TEOM following the over-grazing that occurred during the winter of 2013-14. The sheep herd left this area approximately 5 months prior to July 14, 2014.



*Figure II.2*

The grazing activities had been noted by Andy Thomson, Black Butte environmental engineer in January while he performed his monthly TEOM verification at the Leucite TEOM. However, since this is on land that Black Butte has no control over there was nothing we could do to force the grazing to stop.

Since mid-February it had been noted that as wind speeds picked up, hourly PM10 concentrations rose as well. It was also noted that the source of the dust was from over-grazed areas off of the mine permit area and under the control of others.

On February 21, 2014, March 17, 2014, April 28, 2014, May 3, 2014 and July 14, 2014 the mine experienced high winds throughout the day. All five of these days resulted in high PM10 readings and eventually an exceedance of the 24-hr PM10 standard at the Leucite TEOM. The source of the fugitive dust on the February, March, April, May and July events were found to be from over grazed areas off the mine permit area on ground that Black Butte has no control over. It is important to note that prior to the February 21, 2014 exceedance the Leucite TEOM had never shown an exceedance of the 24-hour PM10 standard.

On March 28, 2014 representatives from the Wyoming Department of Environmental Quality – Air Quality Division, Mr. Kirk Billings and Mr. Jeff Wendt, travelled to the Leucite TEOM location at the invitation of Black Butte Coal to view firsthand the uncontrollable dust situation that had been created by

the overgrazing on the surrounding property. On May 1, 2014 Mr. Steve Gili, General Manager of Black Butte Coal, was able to speak with a land management representative for Rocky Mountain Power, the current owner of the land the Leucite TEOM is located on. During that conversation Mr. Gili asked the representative if he was aware of the overgrazing and condition of the land. Not only was he not aware of the condition he was unaware of the fact that any animals had been grazed on his land at all. Mr. Gili informed him that overgrazing had occurred and the problems that the mine was experiencing because of the overgrazing. Mr. Gili asked if Black Butte could secure permission to apply dust control to the land surrounding the TEOM. Mr. Gili was told no but that RMP would look into it. On May 2, 2014 Mr. Steve Gili, General Manager of Black Butte Coal called Mr. Kirk Billings to once again seek guidance or input as to possible remedies for another exceedance. The forecast for the weekend was for high winds and it was the expectation of Black Butte Coal that the Leucite TEOM would again experience an exceedance. He informed Mr. Billings of the lack of knowledge of land condition by the land owner, Rocky Mountain Power. He also mentioned that Black Butte was willing to apply dust control measures at its expense but that we had not been given permission as of yet. To date Black Butte Coal has not received permission from RMP to perform dust control measures on their land. However, on the afternoon of May 2, 2014 Mr. Gili instructed environmental engineers at Black Butte coal to have our contract farmer take his tractor and straw crimper to the land surrounding the Leucite TEOM on the morning of May 3<sup>rd</sup> when the expectation was for the mildest daytime winds to be seen. On the morning of May 3<sup>rd</sup>, the contractor under the supervision of Black Butte personnel crimped straw into the parts of the barren land surrounding the Leucite TEOM that could be done without harming any of the remaining vegetation. Figure's II.3 and II.4 show the area of application and the technique used.



*Figure II.3*



*Figure II.4*

On July 14, 2014 the only activity taking place at the Leucite Mine was 2 D11 dozer's performing spoil regrade work in Pit 21. This project had begun in early May. The Pit 21 project is 6 miles to the Northwest of the Leucite TEOM. Prior to that there had been no activity at the Leucite Mine since January 17, 2014, when regrading operations in Pit 24 stopped. The day started out with wind speeds in the single digits. Wind speeds remained in the single digits until 5:00 pm when the sustained wind speed reached 12.6 mph. However, at 5:00 pm the mine experienced a significant gust of 50.4 mph. This spike in wind speed resulted in a PM10 reading of 4,522.1  $\mu\text{g}/\text{m}^3$ . Once that happened it began impossible for the mine to have a 24 hour PM10 reading that would be below 150  $\mu\text{g}/\text{m}^3$ . Even if every other reading that day had been zero. The PM10 reading at 4:00 pm was 10.7  $\mu\text{g}/\text{m}^3$ . There were no readings prior to the 5:00 pm reading that would have resulted in any required action by the mine even if we could have done something to control the fugitive dust. The highest hourly PM10 reading prior to 5:00 pm was 38.7  $\mu\text{g}/\text{m}^3$ . By 6:00 pm wind speeds peaked at 29.9 mph and gusts remained near 50 mph. By 7:00 pm wind speeds had decreased slightly to the mid twenties but maximum wind speeds were still in the 40 mph range. PM10 readings at the Leucite TEOM for 6:00 pm and 7:00 pm were 705.2  $\mu\text{g}/\text{m}^3$  and 1,384.6  $\mu\text{g}/\text{m}^3$ , respectively. By 8:00 pm wind speeds had dropped to 12.6 mph with maximum wind speeds of 25.4 mph. This resulted in a corresponding decrease in PM10 reading of 108.6  $\mu\text{g}/\text{m}^3$ . Sustained and maximum wind speeds continued to drop throughout the remainder of the day as did PM10 readings. By midnight the hourly PM10 reading was 4  $\mu\text{g}/\text{m}^3$ . The resultant 24 hr Pm10 reading ended the day at 294  $\mu\text{g}/\text{m}^3$ . During the entire day there were only 3 hourly readings that even reached action levels. The first of which was so severe it rendered any possible control measures useless.

The following photos were taken on July 14, 2014 between 6:50 pm and 7:18 pm. The 7:00 pm PM10 reading was 1,384.6  $\mu\text{g}/\text{m}^3$ .



*Figure II.5*



*Figure II.6*



*Figure II.7*

It is important to note that **all the previous photos shown in Figures II.3 – II.7 are from areas that are off the mine permit area and directly surround the Leucite TEOM.** Furthermore, all of the land in question is either private land owned by Rocky Mountain Power or Anadarko Petroleum or BLM land not leased by Black Butte Coal. In either case we have no legal rights to trespass on the private land or take equipment onto the public BLM land. The only portion of this land we have any legal right to access is the 40' wide right-of-way we have with Union Pacific Resources. However, this right-of-way only allows for light vehicle traffic and nothing else. A copy of the License Agreement we have in place with Union Pacific Land Resources for access to the TEOM is included in the Appendix. If we were to attempt to treat these areas with water to control the dust we would be discharging water off the mine permit area which is a violation of our Wyoming DEQ water discharge permit.



*Figure II.8*



*Figure II.9*

Figure II.8 shows the active dozer regrade operation in Pit 21 on July 14, 2014. The photo was taken at 7:00 pm. At that time the wind was coming from the West and hourly PM10 readings were in the thousands. Note the distinct lack of fugitive dust emissions from the Leucite Mine. The photo in Figure II.9 also shows the active regrade operation at Pit 21. This photo was taken at 7:00 pm. Note the lack of visible dust emissions. The 7:00 pm hourly PM10 concentration reading at the Leucite TEOM was 1,384.6  $\mu\text{g}/\text{m}^3$ . The only way to generate hourly readings this high is to have significant and sustained visible airborne dust concentrations. As can be seen in the above photos there is no visible fugitive dust coming from the Leucite Mine. There is however, significant visible dust coming from the areas off the mine permit that surround the Leucite TEOM as shown in Figures II.3-10.

Monitoring of the dust conditions continued throughout the day. Control measures for the source of the dust are essentially nonexistent as we have no control over those areas. Use of water to control dust on the areas was contributing to the fugitive dust was not an option since these areas are off the mine permit. Any un-permitted discharge of water off the mine permit area is a violation. Chemical application was not an option as we do not have authority or approval to apply chemicals to the land we do not own or lease. As with the prior dust events recorded in 2014 at the Leucite TEOM we were left with no viable or legal mitigation means. We were left to monitor and hope that the wind would die down.

### III. METEOROLOGICAL CONDITIONS ON JULY 14, 2014 AND ITS EFFECT ON AIR QUALITY

Maximum wind speeds on July 14, 2014 were above the 40 mph mark for only 3 out of 24 hours. The highest recorded wind speed on the 14<sup>th</sup> was 50.4 mph. Sustained hourly wind speeds never reached above 30 mph for the day. The highest hourly wind speed was 29.9 mph at 6:00 pm. The spike in hourly PM10 readings is in direct correlation with the spike in maximum wind speed.

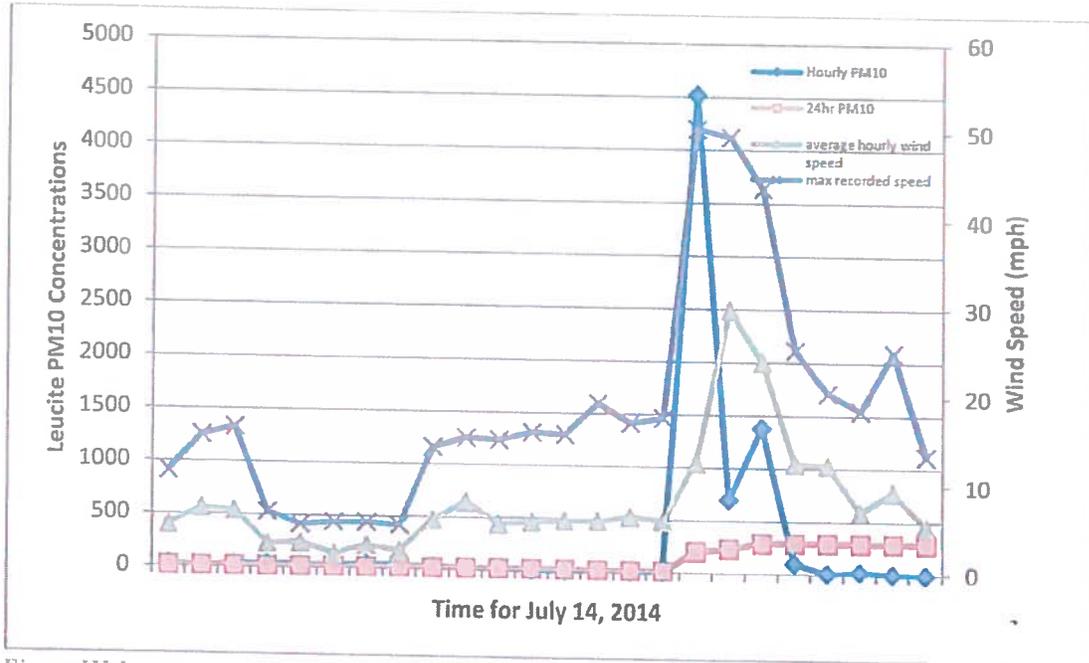


Figure III.1

Figure III.1 shows the correlation of wind speed and PM10 concentrations recorded on July 14, 2014 for the Leucite TEOM. Note the direct correlation between the spikes in wind gusts and the spikes in the hourly PM10 readings. The hourly PM10 reading at 4:00 pm was 10.7  $\mu\text{g}/\text{m}^3$ . At 5:00 pm this reading was 4,522.1  $\mu\text{g}/\text{m}^3$ .

Table III.1 provides the maximum wind speed recorded during each hour and the corresponding Hourly PM10 concentration recorded at the Leucite TEOM.

Time	Hourly Wind Speed (mph)	Max Wind Speed (mph)	Wind Direction (deg)	Leucite Hourly PM10 Conc. ( $\mu\text{g}/\text{m}^3$ )
07/14/2014 01:00 AM	4.8	11	48	26.1
07/14/2014 02:00 AM	6.8	15.1	71	8.8
07/14/2014 03:00 AM	6.5	16	43	27.2
07/14/2014 04:00 AM	2.8	6.4	172	30.9
07/14/2014 05:00 AM	2.9	5	347	27.1
07/14/2014 06:00 AM	1.7	5.3	188	23.1
07/14/2014 07:00 AM	2.7	5.3	202	38.7
07/14/2014 08:00 AM	2.1	5	230	28.8
07/14/2014 09:00 AM	5.7	14	54	29.9
07/14/2014 10:00 AM	7.8	15.1	61	20
07/14/2014 11:00 AM	5.3	14.9	83	17.2
07/14/2014 12:00 PM	5.6	15.8	75	11.9
07/14/2014 01:00 PM	5.8	15.6	301	13.2
07/14/2014 02:00 PM	5.8	19.2	6	15.7
07/14/2014 03:00 PM	6.3	17	0	9.2
07/14/2014 04:00 PM	5.9	17.6	3	10.7
07/14/2014 05:00 PM	12.6	50.4	24	4522.1
07/14/2014 06:00 PM	29.9	49.5	30	705.2
07/14/2014 07:00 PM	24.1	43.7	21	1384.6
07/14/2014 08:00 PM	12.6	25.4	15	108.6
07/14/2014 09:00 PM	12.4	20.6	111	13.6
07/14/2014 10:00 PM	7.1	18.6	211	28.3
07/14/2014 11:00 PM	9.4	25.2	336	8.5
07/15/2014 12:00 AM	5.5	13.5	152	4

Table III.1

#### IV. EVENT WAS NOT REASONABLY CONTROLLABLE OR PREVENTABLE

The only operation taking place at the Leucite Mine on July 14, 2014 was two D11 dozer's working on final pit reclamation in Pit 21. No other operations had taken place at the Leucite mine since January 17, 2014. That was the day that Schmid Construction completed spoil regrade work in Pit 24. On July 14, 2014 mine representative Andy Thomson traveled to the Leucite Mine to observe the source of the excessive fugitive dust. He noted that no noticeable fugitive dust was being produced from the Leucite mine area but rather the source of the excessive dust was from private and Federal land surrounding the Leucite TEOM. **Land that Black Butte Coal has no control over.** It is important to note that Andy Thomson is trained and certified to perform Opacity readings for Black Butte. There is no better source at Black Butte than Mr. Thomson to determine, visually, the amount of fugitive dust being emitted at the mine.

Given that the source of the dust was from overgrazed land that was off the Leucite Mine permit area and neither under the jurisdiction of the mine or under our control we could do nothing more than note this condition and take photographs. We lacked both the authority and ability to apply dust suppression to the areas that were generating the dust. No new or different operations had taken place in 2014 at the Leucite Mine than what had taken place since its inception. As a matter of fact fewer operations had taken place in 2014 than had ever taken place at the Leucite Mine. The mine has not been in production since 2008. The problem with high PM10 readings at Leucite did not start until February 2014. Prior to this there had been no recorded exceedances of the 24hr PM10 standard at the Leucite Mine. The overgrazing of the land surrounding the Leucite TEOM occurred in the winter of 2013-14. This is in direct correspondence to the sudden increase in PM10 readings at the Leucite TEOM. Between February and April 2014 attempts to contact the owners of the land that were responsible for the high fugitive dust being recorded were made by Mr. Steve Gili, General Manager of Black Butte Coal company. On May 2, 2014 Mr. Gili spoke with Mr. Mike Wolf from Rocky Mountain Power. Rocky Mountain Power purchased the section of land that the TEOM is located on from Anadarko Petroleum in 2010. Mr. Wolf was not aware that any grazing had taken place on their land. He stated that he did not understand how someone else could graze RMP land without approval. Mr. Gili requested permission to perform mitigation activities to RMP land at the expense of Black Butte Coal Company. This mitigation would be in the form of crimping straw into the bare land in hopes of slowing the surface wind speeds that were driving the dust. Mr. Gili was told that they would need to investigate this option but ultimately his request was never responded to. Given the lack of proper stewardship by RMP, Mr. Gili authorized for the placement of straw mulch to easily accessible areas of overgrazed land around the TEOM. This was to take place on May 3, 2014. Black Butte coal had a contract farming operation taking place on its permitted area at the same time. The contractor was performing a similar job in recently topsoiled reclamation at the Black Butte mine. Mr. Gili felt this would be the least obtrusive form of dust mitigation possible as other forms would have resulted in the potential for illegal activities or the application of unwanted chemicals on RMP land. For all practical purposes this exceedance is a result of poor land management on the part of Rocky Mountain Power and the Bureau of Land Management and therefore should be their responsibility for correcting.

## ACTION PLAN RESPONSE

Black Buttes approved Air Monitoring Action Plan uses a combination of 1 hour and 24 hour readings to determine recommended and required actions at the mine in response to elevated readings. Compliance to the 24 hour levels is determined by the rolling 24 hour readings recorded each hour. However, mine personnel are instructed and trained to also utilize the calculated 24 hour readings as a guideline to determine recommended and required responses. If either of these numbers reaches an action level then a response to the Action Plan is required. This is done out of an abundance of caution as the calculated 24 hour readings will in most cases result in a higher 24 hour reading than the rolling 24 hour readings. This is particularly true for a sudden and extreme wind event that is preceded by a relatively mild wind event. Compliance to the Air Monitoring Action Plan is determined by responses in comparison to the rolling 24 hour readings. This methodology is listed in the approved Action Plan.

The first hour that an Action Level was reached was 5:00 pm. The hourly reading of 4,522.1 would have triggered the 300  $\mu\text{g}/\text{m}^3$  hourly action level and the 130  $\mu\text{g}/\text{m}^3$  24-hour action level. Action requirements of the 24 hour greater than 130  $\mu\text{g}/\text{m}^3$  action level are that complete records are taken, mine manager is notified and photographs will be taken if possible. Shutdown requirements are that all operations be shutdown in the affected areas. In Leucite the only operation taking place on July 14, 2014 was two D11 dozer's in operation at Pit 21. These dozers were performing final pit backfill operations. Mr. Thomson traveled to Pit 21 on July 14, 2014 during the period of high winds and did not observe fugitive dust emissions of any significance coming from the activity in Pit 21. The decision was made to not shutdown these dozers. This was based on two factors. First, there would be no benefit to shutting down this operation and would merely be symbolic due to the fact that the dozers were not generating fugitive dust. Since this operation was a reclamation activity rather than a production activity it was determined that no benefit would be gained from stopping activity in Pit 21 and the dozer was told to continue operation until further notice. Second, the 5:00 pm reading of 4,522.1  $\mu\text{g}/\text{m}^3$  was so high that even had every other reading that day been zero the Leucite TEOM would have still registered a exceedance of the 24-hour standard.

All actions taken by Black Butte were in exact accordance with the mines approved Air Monitoring Action Plan. Mr. Thomson made visual observations of the haulroads and other reclaimed pits in Leucite during the high wind event. This was done to determine if bringing a water truck over to Leucite would be of benefit. Since there was no activity anywhere other than Pit 21, no visible fugitive dust was observed. It was determined that bringing a water truck to the Leucite Permit area would be of no benefit. Table IV.1 lists the hourly wind speed, hourly and 24 hour PM10 concentrations, operations in place and actions taken by the mine in accordance to the Action Plan for each hour of the day for the Leucite Mine area.

Date and Time	Hourly Wind speed (mph)	Hourly PM10 ( $\mu\text{g}/\text{m}^3$ )	24-hour PM10 ( $\mu\text{g}/\text{m}^3$ )	Actions Taken
07/14/2014 01:00 AM	4.8	26.1	17.3	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 02:00 AM	6.8	8.8	17.2	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 03:00 AM	6.5	27.2	17.7	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 04:00 AM	2.8	30.9	18.4	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 05:00 AM	2.9	27.1	19.2	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 06:00 AM	1.7	23.1	19.9	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 07:00 AM	2.7	38.7	21.2	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 08:00 AM	2.1	28.8	22.1	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 09:00 AM	5.7	29.9	22.8	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 10:00 AM	7.8	20	23.5	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 11:00 AM	5.3	17.2	23.8	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 12:00 PM	5.6	11.9	24	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 01:00 PM	5.8	13.2	23.7	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 02:00 PM	5.8	15.7	19.3	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 03:00 PM	6.3	9.2	19.2	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 04:00 PM	5.9	10.7	19.1	2 D11 dozers performing reclamation in Pit 21. No action level reached.
07/14/2014 05:00 PM	12.6	4522.1	205.9	Hourly and 24 hour action level reached. Notifications made. Pictures taken. Conditions monitored.
07/14/2014 06:00 PM	29.9	705.2	236.5	Hourly and 24 hour action level reached. Notifications made. Pictures taken. Conditions monitored.
07/14/2014 07:00 PM	24.1	1384.6	292.5	Hourly and 24 hour action level reached. Notifications made. Pictures taken. Conditions monitored.
07/14/2014 08:00 PM	12.6	108.6	295.3	24 hour action level reached. Notifications made. Pictures taken. Conditions monitored.
07/14/2014 09:00 PM	12.4	13.6	295.2	24 hour action level reached. Notifications made. Pictures taken. Conditions monitored.
07/14/2014 10:00 PM	7.1	28.3	294.8	24 hour action level reached. Notifications made. Pictures taken. Conditions monitored.
07/14/2014 11:00 PM	9.4	8.5	295	24 hour action level reached. Notifications made. Pictures taken. Conditions monitored.
07/15/2014 12:00 AM	5.5	4	294	24 hour action level reached. Notifications made. Pictures taken. Conditions monitored.

Table IV.1

When operations taking place at Leucite are resulting in fugitive dust, mitigation efforts are through water application, surface scarification and mulch applications. Water is applied through the use of water trucks. This is necessary when truck operations are in place at Leucite. In January 2014, contract reclamation was taking place in Pit 24. The contractor had in place and utilized its own water truck for dust suppression. Water is sourced from Pit 21 through a series of pumps and pipes. At times it has been necessary for more than one water truck to be utilized at Leucite in the case of both spoil reclamation and topsoil activities taking place at the same time. Both operations are required to have a separate water truck and for it to be utilized at all times. Neither of these activities had occurred at Leucite since early January 2014.

Following spoil regrade at Leucite the surface is roughened to help prevent wind erosion. Typically the surface left by the dozers that performed the regrade is sufficient to serve this purpose. The grousers on the tracks of a D11 dozer can be up to 3 inches in length and leave depressions in the final surface. These depressions are similar in size, depth and spacing to what a chisel plow would leave. The D11 dozer blade also leaves small windrows of material that push out of the corners of the blade. These help to provide the required disturbance to the wind over the surface of the spoil.

Areas that have recently received topsoil are typically treated with straw mulch to accomplish two goals; 1) Help control fugitive dust that is generated from newly topsoiled and seeded reclamation prior to germination and growth of the planted grasses and shrubs and 2) Help retain snow on the newly seeded reclamation areas. The project involves using either a crimper or a disk to cut weed free and seed free straw into the newly applied topsoil and then drilling seed into the topsoil. The straw helps to disrupt the wind flow over the relatively smooth topsoil. This helps to reduce the amount of fugitive dust and provides vegetation for the snow to catch behind rather than blow away during the high wind winter months. Topsoil is typically spread during the spring and summer months at Black Butte and seeding is typically done in the summer and fall months. The application of the straw mulch is done following the spreading of topsoil and verification of depths.

In 2013 a total of 92 acres had been regraded at the Leucite Mine. 178 acres of regrade was topsoiled in 2013 and 330 acres was treated with straw mulch and seeded. In 2014 prior to July 14, 2014 a total of 6.5 additional acres was regraded in Leucite and no acres had been topsoiled or mulched yet.

The information presented in this Section, Section II and in Section III clearly demonstrates that the source of the fugitive dust was not from the Leucite mine. The mine had no actions that we could take to control the dust being emitted from other land owners. Given that the all reasonable and required actions were taken by the mine on July 14, 2014 it stands to reason that the event was not reasonably controllable by Black Butte Coal and therefore Black Butte Coal should not be held responsible for the exceedance.

## V. NORMAL HISTORICAL FLUCTUATIONS

### Leucite TEOM Location

The Environmental Protection Agency, EPA, generally considers a 3-5 year time period when looking at Normal Historical Fluctuations. Data for this document looked at a time period from January 1, 2011 through July 31, 2014. Figure V.1 shows all hourly readings taken during this timeframe. The spike seen in the far right side of the graph shows the unusually high readings that began in February 2014 following the grazing activities that occurred on the land surrounding the Leucite TEOM. The 5:00 pm reading on July 14, 2014 of 4,522.1  $\mu\text{g}/\text{m}^3$ , is the highest hourly reading ever recorded at the Leucite TEOM. Clearly the high 1-hr readings that began in February are far outside of the prior recorded history. The graph also clearly illustrates that the high PM10 readings that started in February 2014 are far outside of historical fluctuations even though reclamation practices and dust mitigation efforts have not changed or decreased during that time.

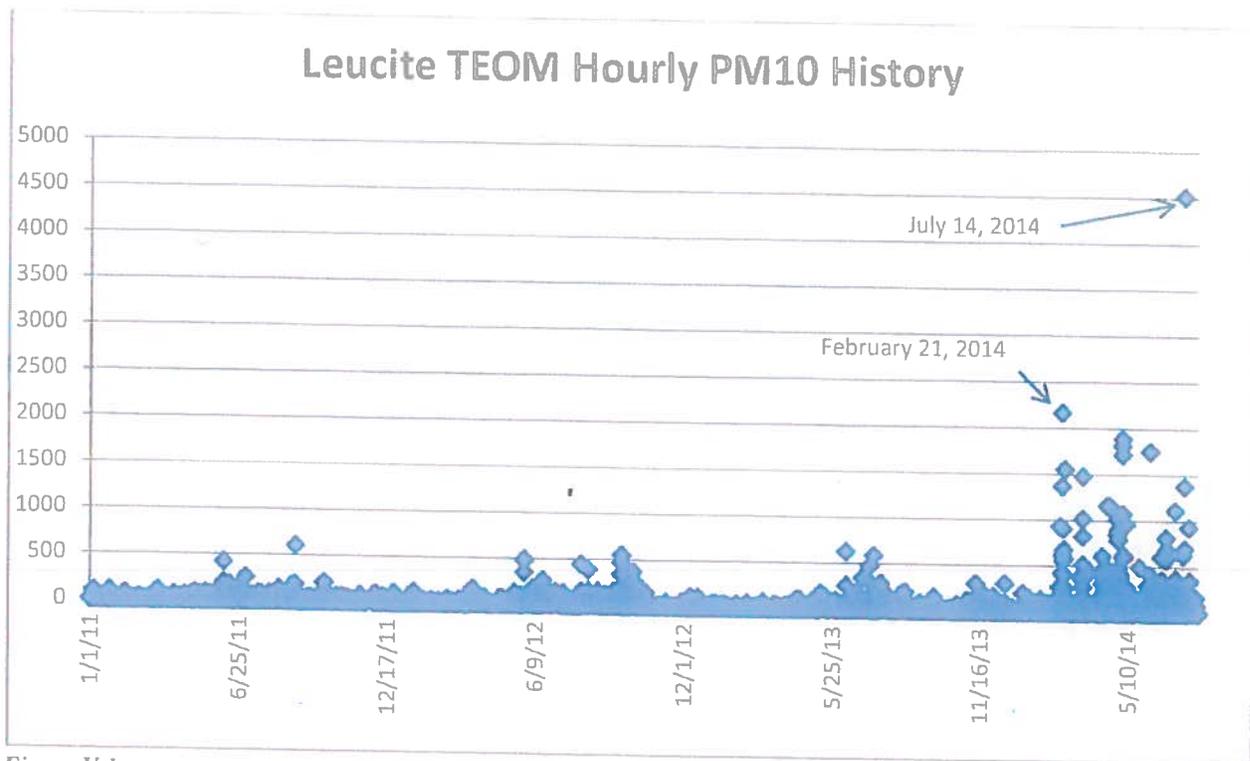


Figure V.1

Time series graphs were also produced for the PM10 daily averages over a five year span from May 5, 2009 through July 31, 2014. Out of a total of 1,895 valid data points only one reading was higher than the 294  $\mu\text{g}/\text{m}^3$  mark seen on the 3<sup>rd</sup> and that was the 24-hour reading from May 3, 2014. The five highest PM10 readings at the Leucite TEOM have all occurred since February 21, 2014. Prior to that the highest reading was 124  $\mu\text{g}/\text{m}^3$  on December 7, 2009. Figure V.2 clearly shows the spike in 24 hour readings that began in February 2014 following the grazing activities on land surrounding the Leucite TEOM. It further demonstrates that the readings that occurred on the 14<sup>th</sup> of July as well as the readings that began in February 2014 are far outside the historical norms for this TEOM.

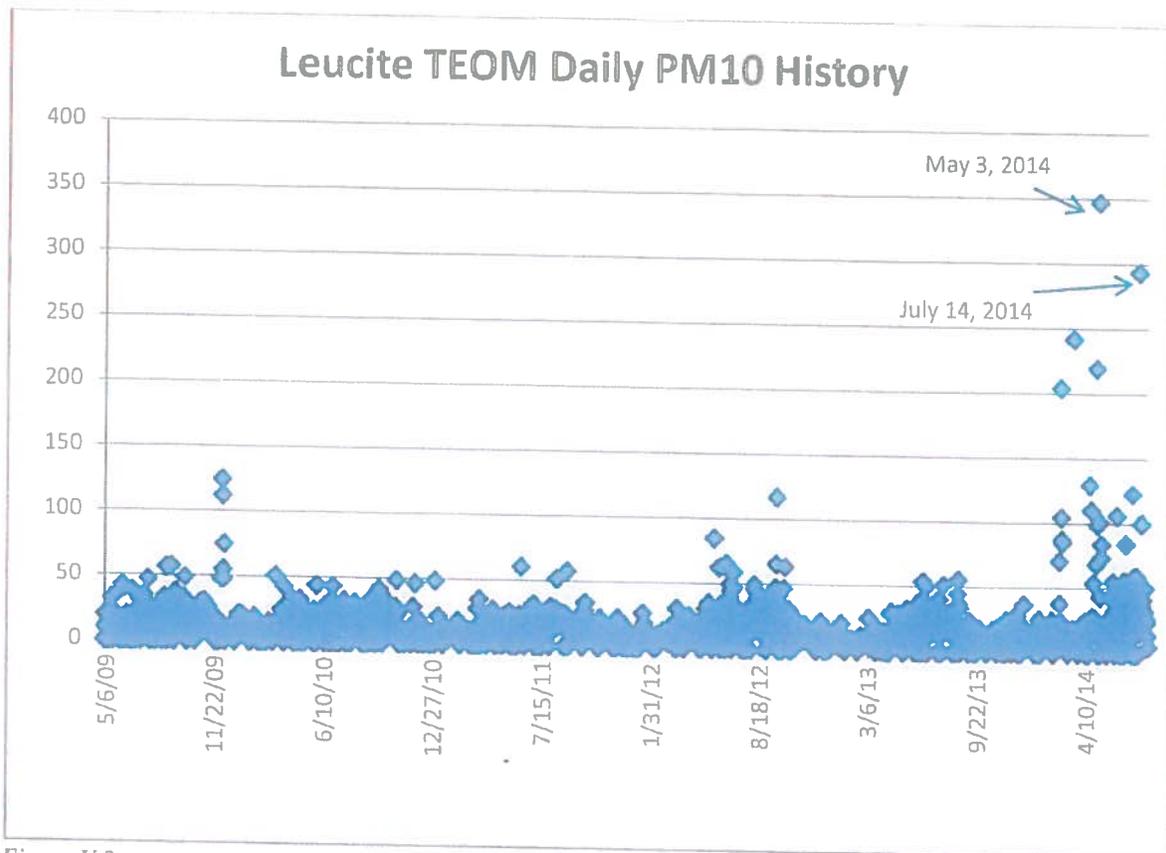


Figure V.2

Section V clearly demonstrates that the event that occurred on July 14, 2014 was far outside of normal historical fluctuations. Historical data was determined going back to May 5, 2009 for the Leucite TEOM.

Given the history, over the last 5 years, of low dust readings and solid dust mitigation performance at the Leucite TEOM, you must ask yourself what changed this summer. No additional mining has taken place in the last 5 years. Each year reclamation work has taken place at the Leucite Mine. Topsoil laydown has taken place each year along with farming activities. The only factor that changed was the extreme overgrazing that took place in the Ten Mile draw area the prior winter.

## **VI. NO EXCEEDANCE OR VIOLATION BUT FOR THE EVENT**

Section IV of this report details the compelling evidence that the exceedance which occurred on July 14, 2014 was not reasonably controllable or preventable. Section III of this report provided the detail to determine that there exists a clear causal relationship between the high wind events that carried PM10 particulates and the overgrazed land not under Mine control and the exceedance as measured by the Leucite TEOM. Section V of this report provides overwhelming evidence that the event was far outside normal historical fluctuations seen at the Leucite TEOM location. The overwhelming weight of the evidence provided in these sections clearly illustrates that but for the extreme overgrazing that occurred in the winter of 2013-14 on land outside of the control of Black Butte coal which has resulted in uncontrollable PM10 particulate matter carried by the high winds there would have been no exceedance of the 24-hour PM10 standard.

All reasonable controls were in place and followed before and during the event in question.

## VII. CONCLUSIONS

The exceedance's that occurred on July 14, 2014 satisfies the criteria of 40 CFR 50.1(j) and meet the definition of an exceptional event.

- The event affects air quality- the information in Sections II and III provide the conclusion that the event affected air quality.
- The event is not reasonably controllable or preventable – Section IV provides the documentation that all reasonable controls and prevention measures were in place and utilized during the event.
- The event is unlikely to reoccur at a particular location or is a natural event - as shown in Section II the cause of the exceedance was overgrazing on land surrounding the Leucite TEOM resulting in high PM10 particulate matter driven by high winds during the period of July 14, 2014.

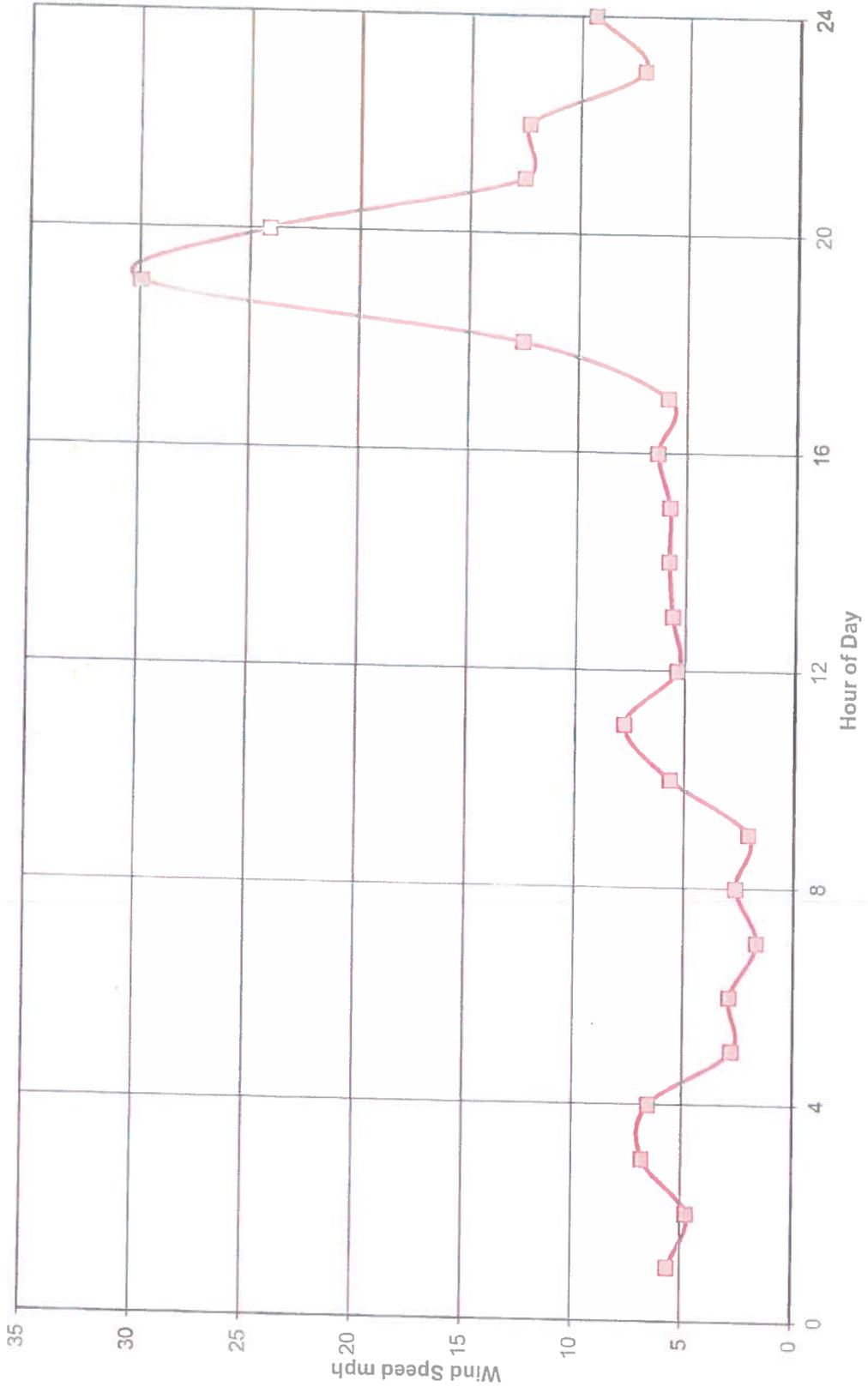
The exceedance's on July 14, 2014 of the federal 24-hour PM10 standard would not have occurred but for the over grazing and the high western winds driving windblown dust that was created on land that the Mine has no control over, based on the following evidence:

- Graphs showing the relationship of high winds, and the associated elevated PM10 readings at the Leucite TEOM.
- Photographic evidence showing the source of the fugitive dust.
- Historical fluctuation analysis and graphs showing the atypically high PM10 concentrations associated with the high wind events.
- Wind direction and speed monitoring data from the onsite weather station.

# APPENDIX A

## July 14, 2014 Wind Speed and Direction

### Diurnal Average Wind Speed



# Black Butte Mine

## Meteorological Data Summary

7/14/2014 - 7/14/2014

### Hourly Data

	<b>Average/Total</b>	<b>Max</b>	<b>Min</b>
Wind Speed (mph)	8.0	29.9	1.7
Sigma-Theta (°)	32.2	56.8	9.7
Temperature (C)	21.2	30.5	12.5
Precipitation (in)	0.00	0.00	

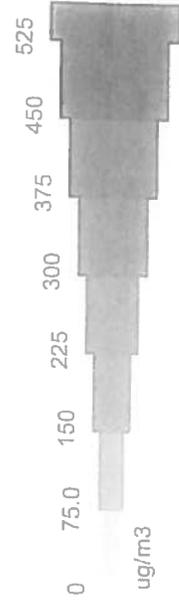
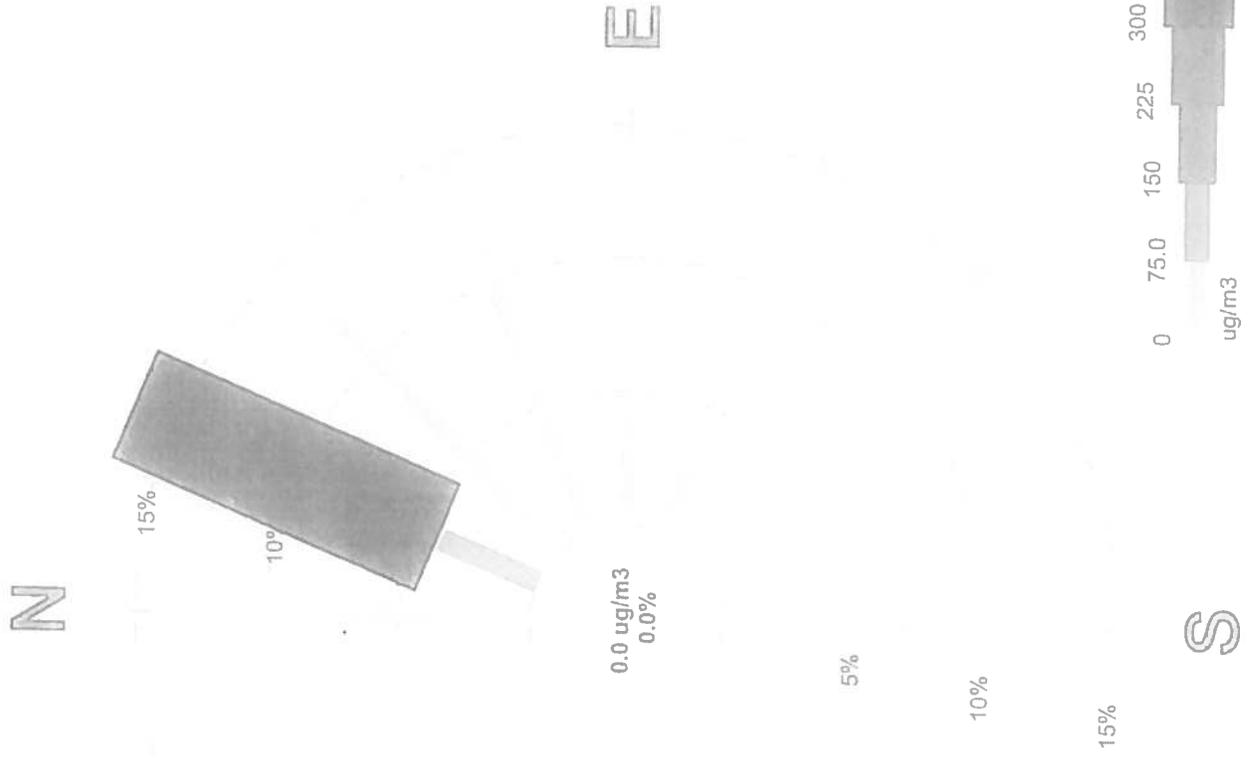
Predominant wind direction was from the NNE sector,  
accounting for 16.7% of the possible winds

### Data Recovery

<b>Parameter</b>	<b>Possible (hours)</b>	<b>Reported (hours)</b>	<b>Recovery</b>
Wind Speed	24	24	100.00%
Wind Direction	24	24	100.00%
Sigma-Theta	24	24	100.00%
Temperature	24	24	100.00%
Precipitation	24	24	100.00%

# TEOM PM-10 Pollution Rose Black Butte Mine - Leucite TEOM

July 14, 2014  
7/14/2014 Hr. 1 to 7/14/2014 Hr. 24



**TEOM PM-10 Pollution Rose**  
**Black Butte Mine - Leucite TEOM**  
 July 14, 2014  
 7/14/2014 Hr. 1 to 7/14/2014 Hr. 24

**RELATIVE FREQUENCY (% of Recorded Winds) TABLE**

Wind Direction	0.0-75.0	75.0- 150	150- 225	225- 300	300- 375	375- 450	450- 525	525-above	Row Total
0.0 deg.(North)	12.5								12.5
22.5 deg.		4.2						12.5	16.7
45.0 deg.	12.5								12.5
67.5 deg.	12.5								12.5
90.0 deg.	4.2								4.2
112.5 deg.	4.2								4.2
135.0 deg.									0.0
157.5 deg.	4.2								4.2
180.0 deg.	8.3								8.3
202.5 deg.	8.3								8.3
225.0 deg.	4.2								4.2
247.5 deg.									0.0
270.0 deg.									0.0
292.5 deg.	4.2								4.2
315.0 deg.									0.0
337.5 deg.	8.3								8.3
<b>0 ug/m3 ( 0.0%)</b>	<b>83.3</b>	<b>4.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>12.5</b>	<b>100.0</b>

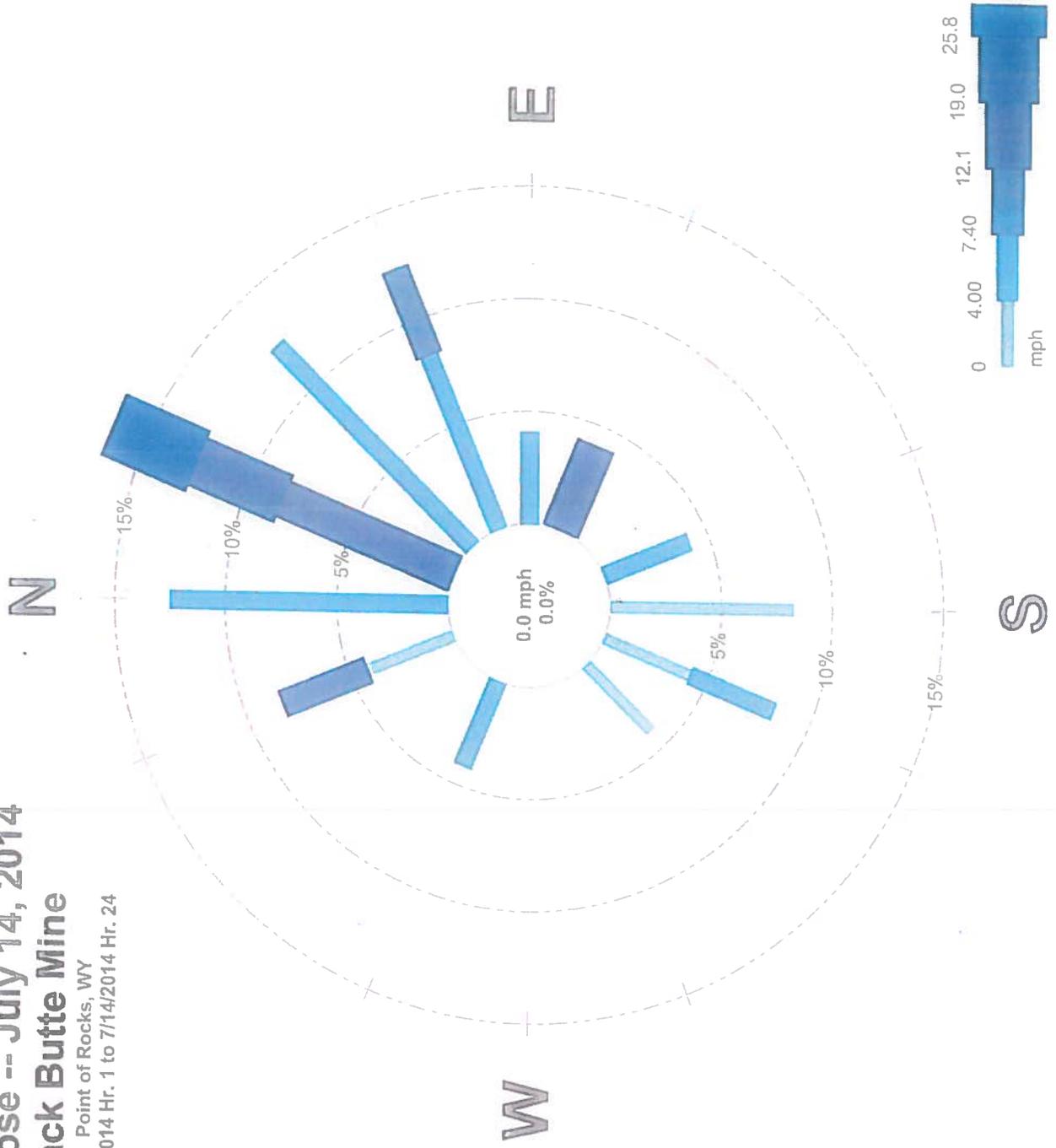
INVALID READINGS 0

NUMBER OF POSSIBLE READINGS 24      VALID READINGS 24      DATA CAPTURE 100.00%

# Wind Rose -- July 14, 2014

## Black Butte Mine

Point of Rocks, WY  
7/14/2014 Hr. 1 to 7/14/2014 Hr. 24



# Wind Rose -- July 14, 2014

## Black Butte Mine

Point of Rocks, WY

7/14/2014 Hr. 1 to 7/14/2014 Hr. 24

### RELATIVE FREQUENCY (% of Recorded Winds) TABLE

Wind Direction	mph								Row Total
	0.0- 4.0	4.0- 7.4	7.4-12.1	12.1-19.0	19.0-25.8	25.8-100.0			
0.0 deg.(North)		12.5							12.5
22.5 deg.				8.3	4.2	4.2			16.7
45.0 deg.		12.5							12.5
67.5 deg.		8.3	4.2						12.5
90.0 deg.		4.2							4.2
112.5 deg.				4.2					4.2
135.0 deg.									0.0
157.5 deg.		4.2							4.2
180.0 deg.	8.3								8.3
202.5 deg.	4.2	4.2							8.3
225.0 deg.	4.2								4.2
247.5 deg.									0.0
270.0 deg.									0.0
292.5 deg.		4.2							4.2
315.0 deg.									0.0
337.5 deg.	4.2		4.2						8.3
	20.8	50.0	8.3	12.5	4.2	4.2			100.0

0 mph ( 0.0%)      INVALID READINGS 0

NUMBER OF POSSIBLE READINGS 24      VALID READINGS 24      DATA CAPTURE 100.00%

# APPENDIX B

## License Agreement with Union Pacific Land Resources

LICENSEE'S DUP. ORIG.

LICENSE AGREEMENT

THIS AGREEMENT, made and entered into this 13<sup>th</sup> day of April, 1994, by and between UNION PACIFIC LAND RESOURCES CORPORATION, a corporation of the State of Nebraska (hereinafter called "Licensor") whose address is P.O. Box 7, Fort Worth, Texas 76101-0007, and BLACK BUTTE COAL COMPANY, a Joint Venture (hereinafter called "Licensee"), whose address is P.O. Box 98, Point of Rocks, Wyoming 82942.

RECITALS:

Licensee desires to construct, maintain and operate air quality monitoring stations and to use existing non-exclusive roadways (hereafter called "Facility") upon Licensor's premises situate in Sections 11 and 13, Township 20 North, Range 101 West of the Sixth Principal Meridian, Sweetwater County, Wyoming, (hereafter called "Licensed Premises") in the locations shown on the print hereto attached marked Exhibit "A" and made a part hereof.

AGREEMENT:

NOW, THEREFORE, it is mutually agreed by and between the parties hereto as follows:

Section 1: LICENSOR GRANTS RIGHT

In consideration of the sum of Ten and No/100 Dollars (\$10.00) to be paid by Licensee to Licensor upon execution and delivery of this agreement, and in further consideration of the covenants and agreements herein contained to be by Licensee kept, observed and performed, Licensor hereby grants to Licensee, subject to the terms and conditions herein stated, the right to maintain and operate, during the term hereof, said Facility upon said Licensed Premises in the locations described in said Exhibit "A".

The foregoing grant is subject to the right and power of Licensor, its successors and assigns, to the use of the Licensed Premises for any purpose not inconsistent with the use by Licensee for the purposes herein defined.

The foregoing grant is also subject to all outstanding superior rights (including those in favor of telegraph and telephone companies, lessees of said right of way, and others) whether recorded or unrecorded and the right of Licensor to renew and extend the same.

Section 2. MAINTENANCE AND USE

Licensee shall maintain said Facility in the locations described on Exhibit "A". All work performed by Licensee on said

Licensed Premises in connection with the maintenance and use of said Facility shall be done at the sole expense of Licensee and to the satisfaction of Licensor.

Section 3. MODIFICATION OR RELOCATION OF FACILITY

The rights herein granted are subject to the needs and requirements of Licensor in the operation and improvement and use of its property, and Licensee shall, at Licensee's own expense, make any and all modifications or changes in the Facility or move the same to such new location as Licensor may designate, whenever the Facility shall unreasonably interfere with Licensor's contemplated use of the Licensed Premises. All the terms, conditions and stipulations herein expressed with reference to the maintenance and use of the Facility in the location described in Exhibit "A" shall apply to the Facility when modified or moved to a new location under the terms of this Section.

Section 4. LIABILITY

Licensee shall indemnify and hold harmless Licensor and its affiliates, and their officers, employees and agents, and all other persons, firms and corporations who have or may have the right to use said Licensed Premises, its and their officers, agents and employees, against and from any and all liability, loss, damage, claims, demands, costs and expenses of whatsoever nature, including court costs and counsel fees, growing out of personal injury to or death of persons whomsoever, or loss or destruction of or damage to property whatsoever, where such personal injury, death, loss, destruction or damage arises in any way in connection with or incident to the occupation or use of said Licensed Premises by, or the presence thereon of, Licensee, its officers, agents, employees, servants and/or licensees, unless caused by the sole and direct negligence of the Licensor, its affiliates, or its and their officers, employees or agents.

The term "affiliate" (or "affiliates" as the case may be) as used herein means any corporation which directly or indirectly controls, or is controlled by, or is under common control with Licensor.

Section 5. MECHANIC'S LIENS

Licensee shall not suffer or permit any mechanic's lien, or other lien, to be filed against said Licensed Premises or any part thereof, by reason of work, labor, services, or materials supplied, or claimed to have been supplied, to Licensee, or anyone claiming under Licensee. If any such mechanic's lien, or other lien, shall at any time be filed against said Licensed Premises, Licensee shall cause the same to be discharged of record within thirty (30) days of the date of filing the same, and if Licensee shall fail to discharge such lien within such period, then Licensor may, at its option, discharge the same by paying the amount claimed to be due without inquiry into the validity of the same and Licensee shall

thereupon reimburse Licensor within thirty (30) days for any payment so made.

Section 6. COMPLIANCE WITH LAWS

Licensee agrees to comply with all laws, rules and regulations of all regulatory bodies having jurisdiction with regard to the construction, maintenance and use of said Facility. All operations hereunder shall be conducted in compliance with all Federal, State and County laws, rules, ordinances and regulations which are applicable to the area of operations, including but not limited to those pertaining to environment, fire, sanitation, conservation, water pollution, and fish and game. All operations hereunder shall be conducted in a prudent manner. If, as a result of Licensee's operations or use of said Licensed Premises hereunder, any statute, law, ordinance, rule, regulation or requirement is violated, Licensee shall protect, save harmless, defend and indemnify Licensor, its officers, employees and/or agents, against and from any and all penalties, fines, costs and expenses, including court costs and counsel fees, imposed upon or incurred by Licensor, its officers, employees and/or agents, resulting from, or connected with, such violation and/or violations.

Section 7. SUBSIDENCE

It is expressly understood that the subjacent support of the premises described in Exhibit "A" may have been impaired by mining operations heretofore carried on beneath the surface thereof, and the right herein granted is upon the condition that Licensor, its successors and assigns, shall not be liable for damages resulting therefrom.

Section 8. TERMINATION ON NON-USE OR BREACH

It is agreed that non-use of the right herein granted or the Facility for one (1) year or the breach of any covenant, stipulation or condition herein contained to be kept and performed by Licensee shall, at the option of Licensor, forthwith work a termination of this agreement and all rights of Licensee hereunder. A waiver by Licensor of a breach by Licensee of any covenant or condition of this agreement shall not impair the right of Licensor to avail itself of any subsequent breach thereof.

Section 9. TERMINATION ON NOTICE

This agreement may be terminated by written notice given by either Licensor to Licensee or Licensee to Licensor on any date in such notice stated, no less, however, than thirty (30) days subsequent to the date on which such notice shall be given.

In the event such notice is given by either party by mail, the notice shall be deemed to have been given on the date said postal notice is deposited with the Postal Service. The address of Licensee for all purposes of notification required by this

agreement, unless written notice to the contrary is given by Licensee, shall be: 1000 Kiewit Plaza, Omaha, Nebraska 68131. The address of Licensor for all purposes of this agreement shall be P.O. Box 7, Mail Station 3005, Fort Worth, Texas 76101-0007, unless written notice to the contrary is given by Licensor to Licensee.

Section 10. RESEEDING PROVISION

Licensee hereby agrees that the surface of any of the right-of-way disturbed in the exercise of the rights granted hereunder to Licensee shall be reseeded by Licensee, at the sole expense of Licensee, in a manner consistent with applicable Governmental requirements on comparable adjacent areas of public lands. Additionally, Licensee shall eradicate all noxious weeds from the right-of-way and shall not allow the same to go to seed.

Section 11. REMOVAL OF FACILITY

Within 30 days after the termination of this agreement howsoever, Licensee shall at Licensor's option and at Licensee's own expense, remove the Facility pursuant to the terms of this agreement and restore the Licensed Premises to as good condition as it was in at the time of the construction of said Facility, to the reasonable satisfaction of Licensor; and if Licensee fails so to do, Licensor may do such work of removal and restoration at the expense of Licensee.

In the event of the removal of said Facility as in this Section provided, Licensor shall not be liable to Licensee for any damage sustained by Licensee for or on account of such removal, and such removal shall not prejudice or impair any right of action for damage, or otherwise, which Licensor may have against Licensee.

Section 12. EFFECTIVE DATE - TERM

This agreement shall take effect as of the 1st day of March, 1994, and will run concurrently with the term of the Black Butte and Leucite Hills Mine Permits unless terminated as hereinbefore provided.

Section 13. AGREEMENT NOT TO BE ASSIGNED

Licensee shall not assign this agreement, or any interest therein, without the written consent of Licensor, except to a parent, subsidiary or affiliate of Licensee, provided written notice of such assignment is given to Licensor.

Section 14. SUCCESSORS AND ASSIGNS

Subject to the provisions of Section 14 hereof, this agreement shall be binding upon and inure to the benefit of the parties hereto, their respective heirs, executors, administrators, successors and assigns.

Section 15. NON-FOREIGN CORPORATION

In accordance with Section 1445(b) (2) of the Internal Revenue Code, Licensor, Federal ID No. 13-2678588, certifies that it is not a foreign corporation and withholding of Federal Income Tax from the amount realized will not be made by Licensee. Licensor understands that this certification may be disclosed to the Internal Revenue Service by the Licensee and that any false statement made here could be punished by fine, imprisonment, or both.

IN WITNESS WHEREOF, the parties hereto have executed this agreement in duplicate as of the date first herein written.

UNION PACIFIC LAND RESOURCES CORPORATION

By: [Signature]  
Its: Attorney-in-Fact

Witness:

Paul E. White

BLACK BUTTE COAL COMPANY

By: [Signature]  
Its: Member - Management Committee

Attest:

\_\_\_\_\_  
Secretary (SEAL)



# APPENDIX C

Action Plan Event Log – Action Reports for Night shift on  
July 14, 2014

Action Plan Event Log  
Action Report

7/14/14  
Night Shift

THIS REPORT WILL BE COMPLETED IN ITS ENTIRETY BY THE ON SHIFT SUPERINTENDENT PRIOR TO LEAVING AT THE END OF THE SHIFT.

1. Concentrations which trigger the action plan

Use the table below to record the date, time, and concentration at which action plan levels were reached

Date	Time	70 ug/m <sup>3</sup> (24-hour)			90 ug/m <sup>3</sup> (24-hour)			130 ug/m <sup>3</sup> (24-hour)			150 ug/m <sup>3</sup> (24-hour)		
		Date	Time	24-hour reading	Date	Time	24-hour reading	Date	Time	24-hour reading	Date	Time	24-hour reading
7-17													
7-14	6:15												

2. Identify problem areas, ensure problem areas are addressed, ensure adequate water trucks are operating in the areas, and record when and where watering activities were going done. Please give priority to the areas listed in the table below

Place an X by each area that is visibly contributing to airborne dust, and describe the severity of dust emission in Section VI of this report. Also, fill out the supplemental information for each applicable area. Take photographs if possible.	Was the water truck requested to address this specific area?	At what time was the initial request made?	How many loads of water were applied in this area.	At what times was the water truck in this area
South tail of Pit 10 (highest)	Yes/No	am/pm	loads	
Pit 10 assist bench	Yes/No	am/pm	loads	
Road in yards on North side of Pit 10	Yes/No	am/pm	loads	
<input checked="" type="checkbox"/> Pit 10 Ignition	<input checked="" type="checkbox"/> Yes/No	6:15 am/pm	loads	
Pit 10 tanks	Yes/No	am/pm	loads	
<input checked="" type="checkbox"/> Drag #1's road and access road	<input checked="" type="checkbox"/> Yes/No	6:15 am/pm	loads	
Pit 10 massive cone	Yes/No	am/pm	loads	
Pit 10 operation	Yes/No	am/pm	loads	
Pit 10 conveyor system	Yes/No	am/pm	loads	
Pit 10 area of pit stockpiles (N300)	Yes/No	am/pm	loads	
Pit 10 200's	Yes/No	am/pm	loads	
Pit 10 100's	Yes/No	am/pm	loads	
<input checked="" type="checkbox"/> Pit 10 conveyor system	<input checked="" type="checkbox"/> Yes/No	6:15 am/pm	loads	
Pit 10 road	Yes/No	am/pm	loads	
Pit 10 200's conveyor system	Yes/No	am/pm	loads	
Drag #1's road and access road	Yes/No	am/pm	loads	
	Yes/No	am/pm	loads	
	Yes/No	am/pm	loads	
	Yes/No	am/pm	loads	
	Yes/No	am/pm	loads	

When the water trucks below available on the day of the event?	If the truck was available, please specify the time during the shift that the water truck was put into service	If unavailable, please specify the reason. Include any WO's associated with maintenance and repairs
19-0983	<input checked="" type="checkbox"/> Yes/No 6:15 PM	
19-1007	<input checked="" type="checkbox"/> Yes/No 6:15 PM	
	Yes/No	
	Yes/No	

ng meeting\Environmental R Drive\FMIV\_01\_Air\_Emissions\Air Quality Concerns - Responses\2013\Forms\Action Plan Event Log and Shutdown Information.xlsx Shut Down

Total 14 loads of H<sub>2</sub>O: 11 to Pits 10 & 11, Coal Stockpile  
3 to Pit 14

Action Plan Event Log  
Action Report

III. Record weather conditions and possible external influences.

*In the space below, describe wind, precipitation, and other weather events as they occur throughout the day. Take photographs if possible.*

A Thunderstorm move in from the North West causing winds of 12 to 30 MPH. Gusts of wind probably higher. Winds were NNE for over a hour, 6:00 to 7:30 or so. We experieced light rain and some lightning with the storm.

*In the space below, describe any possible external influences. Take photographs if possible. (ex. Oil equipment traffic, livestock in the area, etc.)*

IV. Consider modifying operations contributing to dust.

*In the space below, describe any modifications to operations which you've made as part of the Action Plan. How can you change dust emissions in advance of events which contribute to dust? (ex. coveralls resulting from plants, etc.)*

The mine power went off during the storm and DL #1 was down from 6:00 to 7:30 PM. DL #2 was down from 6:00 to 11:00 PM. The winds had diminished about as quickly as they came, when the storm passed. Ran both water trucks until 11:00 PM.

V. Notify the Production Superintendent.

*Please record when and how the Production Superintendent was notified.*

Called Andy Thompson

Action Plan Event Log  
Action Report

VI Record actions taken

In the space below, summarize all actions performed in response to the Action Plan.  
In addition, include descriptions of the sources of dust listed in section II of this report.

When the storm came in it caused dust to blow NNE. As soon as we were out of the line out meeting we sent both H2O trucks out. 1 truck worked around P10 stockpile area for vendors at plant and I went to P10 & P11 Highwalls and access roads. I stayed in P10 all throughout and the other joined him after the plant and readyline area was wet down. Matt Vessels checked TEOM's and called about Leucite. I went to Leucite to take pictures and check to dozers. Matt called Andy and notified him. I took several pictures and returned to BBC around 8:30 pm. The wind had calmed down and it was raining at Leucite and on the way back to Black Butte side. DL #1 was down from 6:00 to 7:30 and DL #2 was down until 11:00. Power was off twice during the storm.





# Action Plan Event Log Shut Down Report

What operations were occurring at the time PM10 concentrations reached action plan levels during the shift of the event. Please include any contractor operations.	When were operations modified or shut down?
DL#1 operation PID	DL#1 ↓ 6:00 to 7:30 PM
PID Haul operation	Truck did not start until 6:50
P21 Dozers at Keweenaw Hills	Ran all shift
Vendors at PID Hopper	Needed H2O truck to Continue
DL#2 operation P14	Down DK#2 until 11:00 PM
P14 M3 Drill R4	Down 1hr. lightning
P14 M50 Drill R5	Continue to Run
P14 R4 Haul Truck operation	Ran all shift.
Ran Both H2Os at BBC.	Shut / H2O at 11:00. Had a rain
	in PID.

6 PM

Leucite

1 hr ~~4522.1~~ 4522.1

24 hr 285.9

P-10

1 hr ~~463.1~~ 463.1

24 hr ~~463.1~~

I 80

1 hr 182.9

24 hr 262

Upwind

1 hr 144.6

24 hr 27.6

P-14

1 hr 17.8

24 hr 16.9

Weather

Wind: WNE 12.6 mph

Temp: 85.3° F

7 PM

7/14/14 TEGM READINGS

Leucite

1 hr 705.2

24 hr 309.2

P-10

1 hr 0.0 (Power Outage)

24 hr 419

I 80

1 hr 284.3

24 hr 405

Upwind

1 hr 30

24 hr 26.1

P-14

1 hr 401.1

24 hr 38.3

Weather

Wind: NNE 29.9 MPH

Temp: 72.4

# APPENDIX D

## Correspondence with Anadarko and Rocky Mountain Power





## Steve Gili

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**From:** Steve Gili  
**Sent:** Thursday, December 18, 2014 3:57 PM  
**To:** Cara Keslar; 'Daniel Sharon'; Jeff Wendt  
**Cc:** Andy Thomson  
**Subject:** July 14, 2014 Leucite EE submission packet  
**Attachments:** July 14 2014 Leucite EE submission.pdf

All,

Attached is a .pdf version of the Exceptional Event packet for the July 14, 2014 exceedance of the 24-hr PM10 standard seen at the Leucite TEOM. I will be mailing a paper copy to Cara as well as a thumb drive with all photos included in this packet. Please let me know if you require any additional copies or information.

Regards,

**Steve Gili**

### General Manager Black Butte Mine

Black Butte Coal Co.  
P.O. Box 98  
Point of Rocks, WY 82942

**c** 801-819-2400

**t** 307-352-6206

**f** 307-352-6218

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# APPENDIX E

Corrected Page 13 of December 18, 2014 Submission



*Figure II.9*

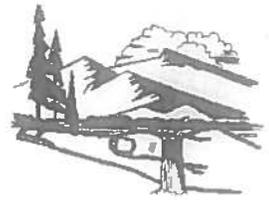
Figure II.8 shows the active dozer regrade operation in Pit 21 on July 14, 2014. The photo was taken at 7:00 pm. At that time the wind was coming from the Northeast and hourly PM10 readings were in the thousands. Note the distinct lack of fugitive dust emissions from the Leucite Mine. The photo in Figure II.9 also shows the active regrade operation at Pit 21. This photo was taken at 7:00 pm. Note the lack of visible dust emissions. The 7:00 pm hourly PM10 concentration reading at the Leucite TEOM was  $1,384.6 \mu\text{g}/\text{m}^3$ . The only way to generate hourly readings this high is to have significant and sustained visible airborne dust concentrations. As can be seen in the above photos there is no visible fugitive dust coming from the Leucite Mine. There is however, significant visible dust coming from the areas off the mine permit that surround the Leucite TEOM as shown in Figures II.3-10.

Monitoring of the dust conditions continued throughout the day. Control measures for the source of the dust are essentially nonexistent as we have no control over those areas. Use of water to control dust on the areas was contributing to the fugitive dust was not an option since these areas are off the mine permit. Any un-permitted discharge of water off the mine permit area is a violation. Chemical application was not an option as we do not have authority or approval to apply chemicals to the land we do not own or lease. As with the prior dust events recorded in 2014 at the Leucite TEOM we were left with no viable or legal mitigation means. We were left to monitor and hope that the wind would die down.



# Department of Environmental Quality

*To protect, conserve and enhance the quality of Wyoming's environment for the benefit of current and future generations.*



Matthew H. Mead, Governor

Todd Parfitt, Director

May 12, 2015

Mr. Steve Gili  
Black Butte Coal Company  
PO Box 98  
Point of Rocks, WY 82942

**RE: December 18, 2014 Request for Flag under the Exceptional Event Rule for PM<sub>10</sub>, July 14, 2014 Exceedance**

Dear Mr. Gili,

On July 14, 2014, the Black Butte Coal Company's (BBCC) Leucite TEOM recorded an exceedance of the 24-hour PM<sub>10</sub> standard, with a final average concentration of 294.0 µg/m<sup>3</sup>.

On December 18, 2014 the Air Quality Division (AQD) received a request that data for the Leucite TEOM on this day be flagged under 40 CFR Part 50.14 "Treatment of Data Influenced by Exceptional Events" due to high winds.

After review of the submitted materials, the AQD has decided to pursue BBCC's request to flag the PM<sub>10</sub> data collected at the Leucite TEOM on July 14, 2014 under 40 CFR 50.14.

The next step in the process is a 30 day public comment period. In order to move forward, the AQD needs an electronic copy of all the documentation and correspondence submitted during the review process. All correspondence, starting with the original notification to the AQD, the original Exceptional Event packet, any requests for additional information, responses to those requests and other information submitted to the AQD during the review process should be combined into a single, chronologically ordered .pdf document and submitted to the AQD.

Once received, the chronological packet will be posted to the AQD's website and the public comment period will be advertised.

BBCC's final packet is requested on or before May 26, 2015. Please email it to [daniel.sharon@wyo.gov](mailto:daniel.sharon@wyo.gov).



Please contact Daniel Sharon at (307) 777-7104 or [daniel.sharon@wyo.gov](mailto:daniel.sharon@wyo.gov) if you have any questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Cara Keslar". The signature is fluid and cursive, with the first name "Cara" being larger and more prominent than the last name "Keslar".

Cara Keslar  
Monitoring Section Supervisor

Cc: Daniel Sharon, Monitoring Project manager  
Black Butte Coal Company Monitoring File  
Tony Hoyt, District 5 Engineer