

## Steve Gili

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**From:** Andy Thomson  
**Sent:** Tuesday, March 18, 2014 10:53 AM  
**To:** Jeff Wendt (jeff.wendt@wyo.gov); Kirk Billings (kirk.billings@wyo.gov); Tony Hoyt (tony.hoyt@wyo.gov); fred.dilella@wyo.gov  
**Cc:** Steve Gili  
**Subject:** Black Butte Mine Exceedence

All,

On March, 2014, Black Butte Mine recorded a high concentration of the ambient air standard for particulate matter of 150 micrograms per cubic meter for a 24 hour average concentration at the Leucite TEOM and at Pit 10 TEOM. IML has validated the data and it shows an average concentration of 202.6 micrograms per cubic meter at Pit 10 TEOM and 242.4 micrograms per cubic meter at Leucite TEOM. This email will constitute the required notification from Black Butte to the WYDEQ of an exceedence.

We will be submitting exceptional events packages for each of these events.

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 March 17, 2014 Leucite TEOM Location**

Produced by:

Black Butte Coal Company

June 13, 2014



## EXECUTIVE SUMMARY

On March 17, 2014 the Leucite TEOM located at Black Butte mine in Sweetwater County, Wyoming recorded 24-hour average concentrations of  $242.4 \mu\text{g}/\text{m}^3$ . This reading is in exceedance of the federal 24-hour PM<sub>10</sub> 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 PM<sub>10</sub> standard that occurred at the Black Butte Mine on March 17, 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 March 17, 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 March 17, 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 March 17, 2014 was not reasonably controllable or preventable.

Section V of this report provides the graphical data evidence that the event on March 17, 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 March 17, 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 March 17, 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 March 17, 2014 was not reasonably controllable or preventable. Additionally, it will clearly demonstrate that the fugitive dust measured at the Leucite TEOM on March 17, 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 March 17, 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 March 17, 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.



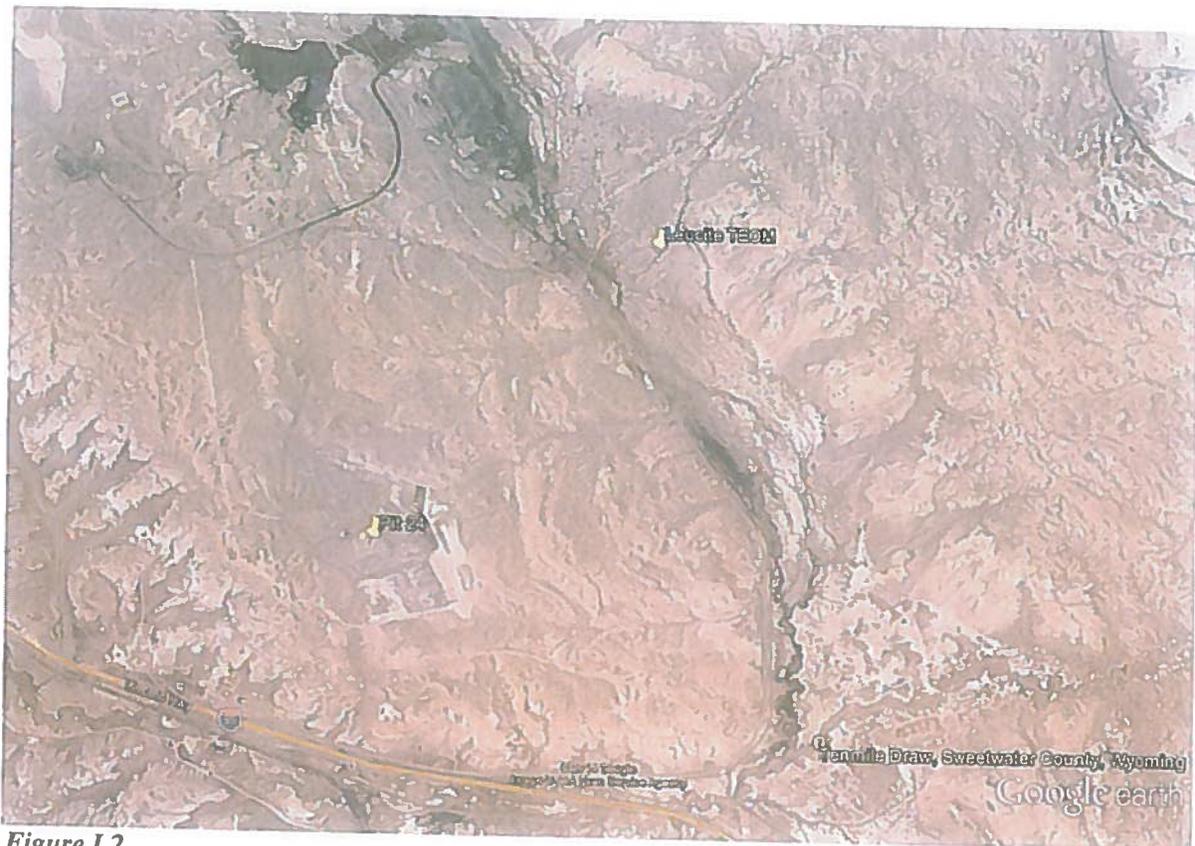
Figure I.1

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 March 17, 2014.

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 members of the RSGA and are grazed 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. 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 1 month prior to March 17, 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 Sweetwater county experienced high winds throughout the day. This 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 21<sup>st</sup> was found to be from over grazed areas off the mine permit area on ground that Black Butte has no control over.

On March 17, 2014 there were no activities taking place at the Leucite Mine. There had been no activity at the Leucite Mine since January 17, 2014, when regrading operations in Pit 24 stopped. At noon on the 17<sup>th</sup> wind speeds began to increase into the high 20 mph range. As had been seen since earlier in the year when wind speed increased above 20 mph we started to get unusually high hourly PM10 readings. The one hour reading at 12:00 pm on the 17<sup>th</sup> was 361  $\mu\text{g}/\text{m}^3$ . This was enough to initiate our action plan.

Since we had no activities taking place at Leucite on the day in question when PM10 readings reached action levels the only response we could take was to begin monitoring the situation. Mr. Thomson traveled to the Leucite Mine on the 17<sup>th</sup> to verify what we knew to be happening. That the source of the fugitive dust being measured by the Leucite TEOM was from land not under our permit and not under our control. This was confirmed by Mr. Thomson. Since mid January 2014, we had been experiencing unusually high readings at the Leucite TEOM. All investigations into the source of the fugitive dust had resulting in the source coming from the overgrazed land surrounding the Leucite TEOM and not from the Leucite Mine directly. Figures II.3 – II.8 show the source of the windblown dust being recorded at the Leucite TEOM.



*Figure II.3*



*Figure II.4*



*Figure 11.5*



*Figure II.6*



*Figure 11.7*



*Figure II.8*

It is important to note that **all the previous photos shown in this Section are from areas that are off the mine permit area. Black Butte has no ability or authority to treat these areas with any form of dust suppression.** 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.

Monitoring of the dust conditions continued throughout the day. By 1:00 pm the hourly wind speeds had increased to over 30 mph with gusts reaching 52 mph. Wind speeds over 50 mph are in the top 0.5% highest wind speeds ever recorded at the Leucite Mine. In direct relation to the extreme wind speeds, hourly PM10 readings increased as well. The 1:00 pm reading at the Leucite TEOM was 1,021.9  $\mu\text{g}/\text{m}^3$ . Hourly wind speeds remained above 25 mph until 10:00 pm on the 17<sup>th</sup>. Wind gusts remained above 40 mph until 11:00 pm. The highest wind speed recorded on the 17<sup>th</sup> was 53.6 mph at 2:00 pm. During this time hourly PM10 readings remained unusually high as well. They did not drop below 150  $\mu\text{g}/\text{m}^3$  until

10:00 pm. This prolonged time of extreme wind speeds are the driving factor that eventually lead to the exceedance recorded at the Leucite TEOM on March 17<sup>th</sup>, 2014.

By midnight the wind speed had dropped to 19.6 mph with gust of 35 mph. The final average PM10 reading for the 17<sup>th</sup> was 242.4.

### III. METEOROLOGICAL CONDITIONS ON MARCH 17, 2014 AND ITS EFFECT ON AIR QUALITY

Sustained hourly wind speeds on March 17, 2014 were above the 20 mph mark for 13 out of 24 hours. The lowest recorded hourly wind speed on March 17, 2014 was 15 mph at 8:00 pm. Maximum hourly wind speeds never dropped below 26 mph from 8:00 am through the rest of the day. The highest recorded wind speed on the 17<sup>th</sup> was 53.6 mph. This wind speed is in the highest 0.5% ever recorded by the Met station. The extended period of high wind speeds driving through the area of overgrazing resulted in unusually high hourly PM10 readings for such an extended period of time that by 2:00 pm there was no practical way the daily PM10 reading would be below 150  $\mu\text{g}/\text{m}^3$ .

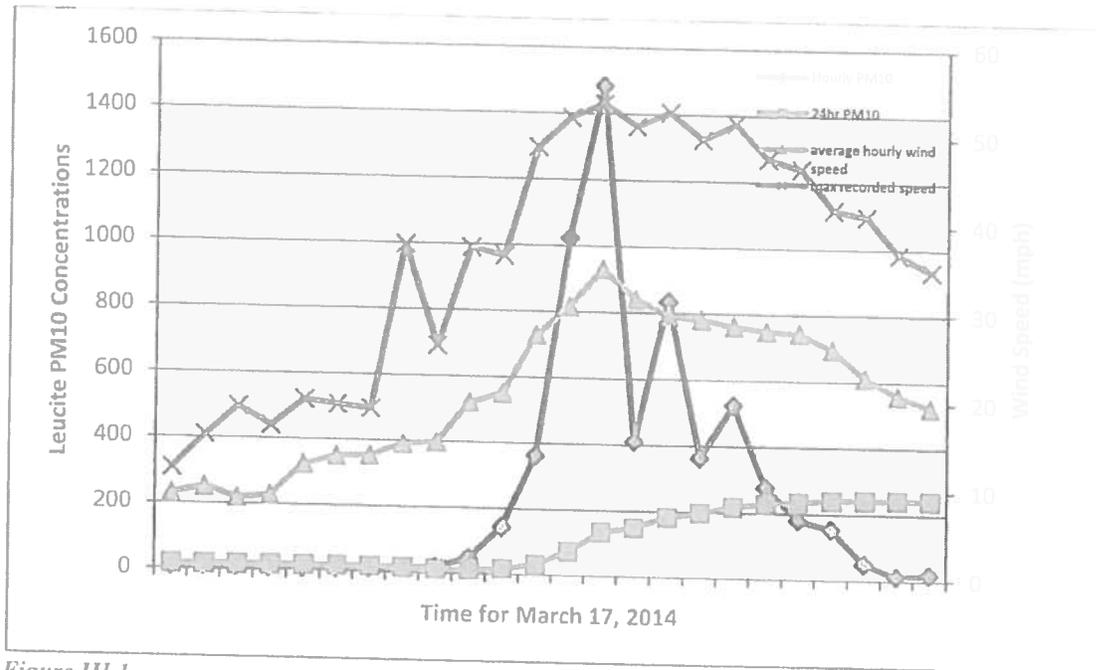


Figure III.1

Figure III.1 shows the correlation of wind speed and PM10 concentrations recorded on March 17, 2014 for the Leucite TEOM. Note the direct correlation between the spikes in wind gusts and the spikes in the hourly PM10 readings.

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)	Leucite Hourly PM10 Conc. ( $\mu\text{g}/\text{m}^3$ )
03/17/2014 01:00 AM	8.6	11.5	8.8
03/17/2014 02:00 AM	9.4	15.3	11.2
03/17/2014 03:00 AM	8.2	18.6	10
03/17/2014 04:00 AM	8.5	16.5	8.2
03/17/2014 05:00 AM	12.1	19.5	7.5
03/17/2014 06:00 AM	13.1	19	8.8
03/17/2014 07:00 AM	13.2	18.6	10.8
03/17/2014 08:00 AM	14.6	37.3	13
03/17/2014 09:00 AM	14.9	25.9	17.5
03/17/2014 10:00 AM	19.5	37.1	46.8
03/17/2014 11:00 AM	20.6	36.2	142.8
03/17/2014 12:00 PM	27.3	48.6	361.6
03/17/2014 01:00 PM	30.6	52	1021.9
03/17/2014 02:00 PM	34.9	53.6	1483
03/17/2014 03:00 PM	31.5	51.1	409.6
03/17/2014 04:00 PM	29.7	52.7	833.5
03/17/2014 05:00 PM	29.3	49.7	363.4
03/17/2014 06:00 PM	28.6	51.5	523.9
03/17/2014 07:00 PM	28.1	47.6	277.6
03/17/2014 08:00 PM	27.9	46.5	179.4
03/17/2014 09:00 PM	26.1	41.9	154.5
03/17/2014 10:00 PM	22.9	41.2	51.1
03/17/2014 11:00 PM	20.9	36.9	12.3
03/18/2014 12:00 AM	19.6	35	18.7

Table III.1

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

No operations had taken place at the Leucite mine on March 17, 2014. Additionally, no operations had taken place at the Leucite mine since January 17, 2014. That was the day that Schmid Construction complete spoil regrade work in Pit 24. On March 17, 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 Andy 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. It was not until April of 2014 that Mr. Gili's phone calls and messages were returned. The representative from Rocky Mountain Power he spoke to was not aware that an grazing had taken place on their land. He stated that he did not understand how someone else could graze his land without his approval. Mr. Gili requested permission to perform mitigation activities to their 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.

Without even the possibility of performing dust mitigation activities on the land in question, Black Butte was ultimately left with no options to mitigate the fugitive dust. Therefore leaving Black Butte with no reasonable way of preventing the exceedance. 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.

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 there were no operations taking place that day.

All actions taken by Black Butte were in exact accordance with the mines approved Air Monitoring Action Plan. 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
03/17/2014 01:00 AM	8.6	8.8	16.1	No ops taking place. No action level reached.
03/17/2014 02:00 AM	9.4	11.2	16.3	No ops taking place. No action level reached.
03/17/2014 03:00 AM	8.2	10	16.5	No ops taking place. No action level reached.
03/17/2014 04:00 AM	8.5	8.2	16.5	No ops taking place. No action level reached.
03/17/2014 05:00 AM	12.1	7.5	16.5	No ops taking place. No action level reached.
03/17/2014 06:00 AM	13.1	8.8	16.6	No ops taking place. No action level reached.
03/17/2014 07:00 AM	13.2	10.8	16.8	No ops taking place. No action level reached.
03/17/2014 08:00 AM	14.6	13	14.9	No ops taking place. No action level reached.
03/17/2014 09:00 AM	14.9	17.5	12.5	No ops taking place. No action level reached.
03/17/2014 10:00 AM	19.5	46.8	11.8	No ops taking place. No action level reached.
03/17/2014 11:00 AM	20.6	142.8	17	No ops taking place. No action level reached.
03/17/2014 12:00 PM	27.3	361.6	31.6	Hourly action level reached. No ops taking place. Monitoring began.
03/17/2014 01:00 PM	30.6	1021.9	73.3	Hourly and 24 hour action level reached. No ops taking place. Monitoring.
03/17/2014 02:00 PM	34.9	1483	133.3	Hourly and 24 hour action level reached. No ops taking place. Monitoring.
03/17/2014 03:00 PM	31.5	409.6	148.9	Hourly and 24 hour action level reached. No ops taking place. Monitoring.
03/17/2014 04:00 PM	29.7	833.5	182.2	Hourly and 24 hour action level reached. No ops taking place. Monitoring.
03/17/2014 05:00 PM	29.3	363.4	197.1	Hourly and 24 hour action level reached. No ops taking place. Monitoring.
03/17/2014 06:00 PM	28.6	523.9	217.2	Hourly and 24 hour action level reached. No ops taking place. Monitoring.
03/17/2014 07:00 PM	28.1	277.6	227.3	24 hour action level reached. No ops taking place. Monitoring.
03/17/2014 08:00 PM	27.9	179.4	234.3	24 hour action level reached. No ops taking place. Monitoring.
03/17/2014 09:00 PM	26.1	154.5	240.2	24 hour action level reached. No ops taking place. Monitoring.
03/17/2014 10:00 PM	22.9	51.1	242.2	24 hour action level reached. No ops taking place. Monitoring.
03/17/2014 11:00 PM	20.9	12.3	242.6	24 hour action level reached. No ops taking

				place. Monitoring.
03/18/2014 12:00 AM	19.6	18.7	242.4	24 hour action level reached. No ops taking place. Monitoring.

*Table IV.1*

The information presented in this Section and in Section III clearly demonstrate that the source of the fugitive dust was not from the Leucite mine. Furthermore, there were no operations taking place at Leucite on the day in question. 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 March 17, 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 March 21, 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. Clearly the high 1-hr readings that began in February are far outside of the prior recorded history

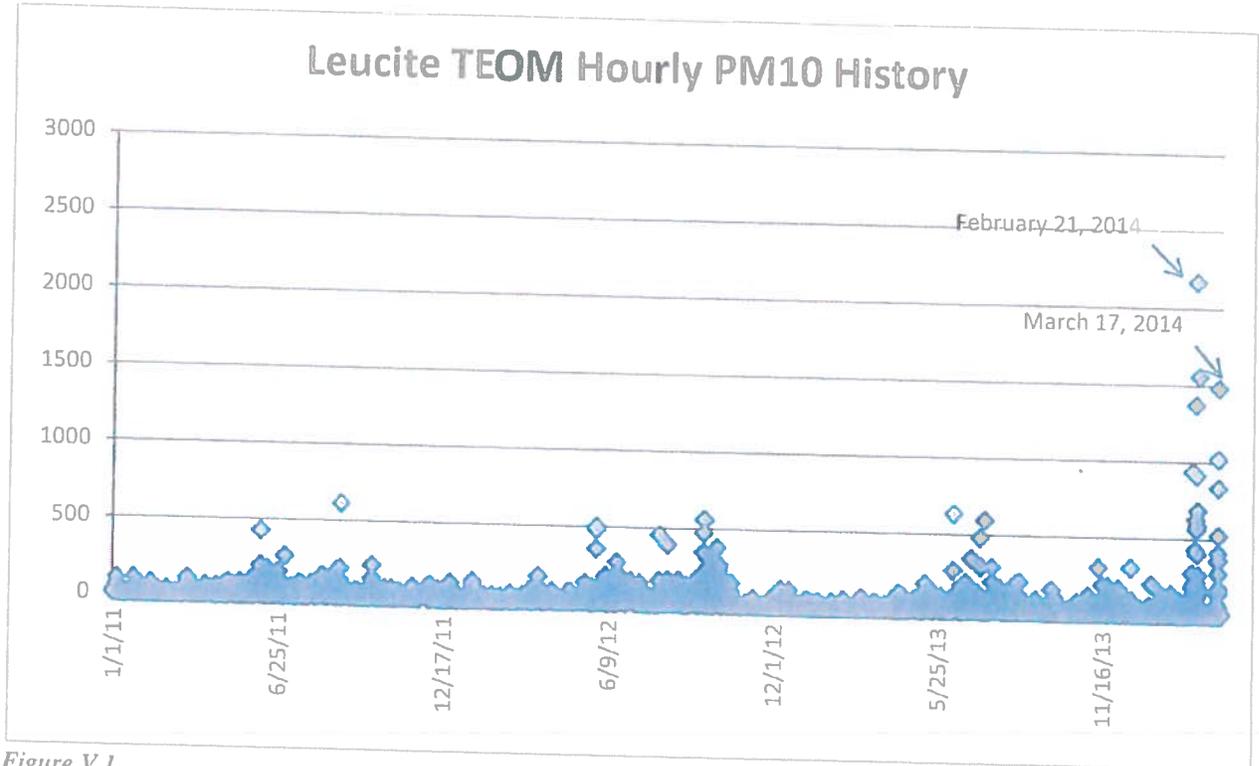


Figure V.1

Time series graphs were also produced for the PM10 daily averages over a five year span from May 5, 2009 through April 29, 2014. Out of a total of 1,823 valid data points no readings were higher than the  $2442 \mu\text{g}/\text{m}^3$  mark seen on the 17<sup>th</sup>. Prior to the 17<sup>th</sup> the highest 24 hr reading ever recorded at the Leucite TEOM was  $204 \mu\text{g}/\text{m}^3$ . This was taken on February 21, 2014. Prior to that the highest reading was 124. 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.

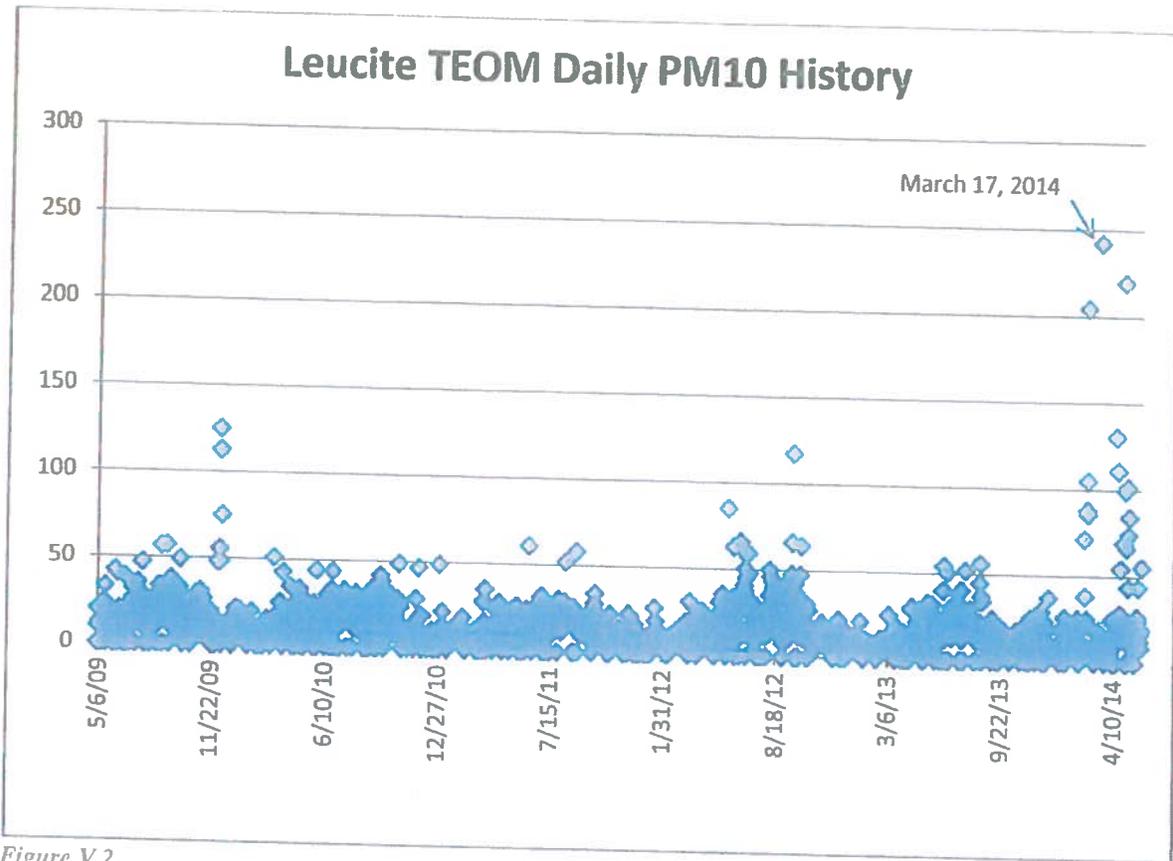


Figure V.2

Section V clearly demonstrates that the event that occurred on March 17, 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 winter. 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.

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

Section IV of this report details the compelling evidence that the exceedance which occurred on March 17, 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, the over grazed 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 March 17, 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 March 17, 2014.

The exceedance's on March 17, 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

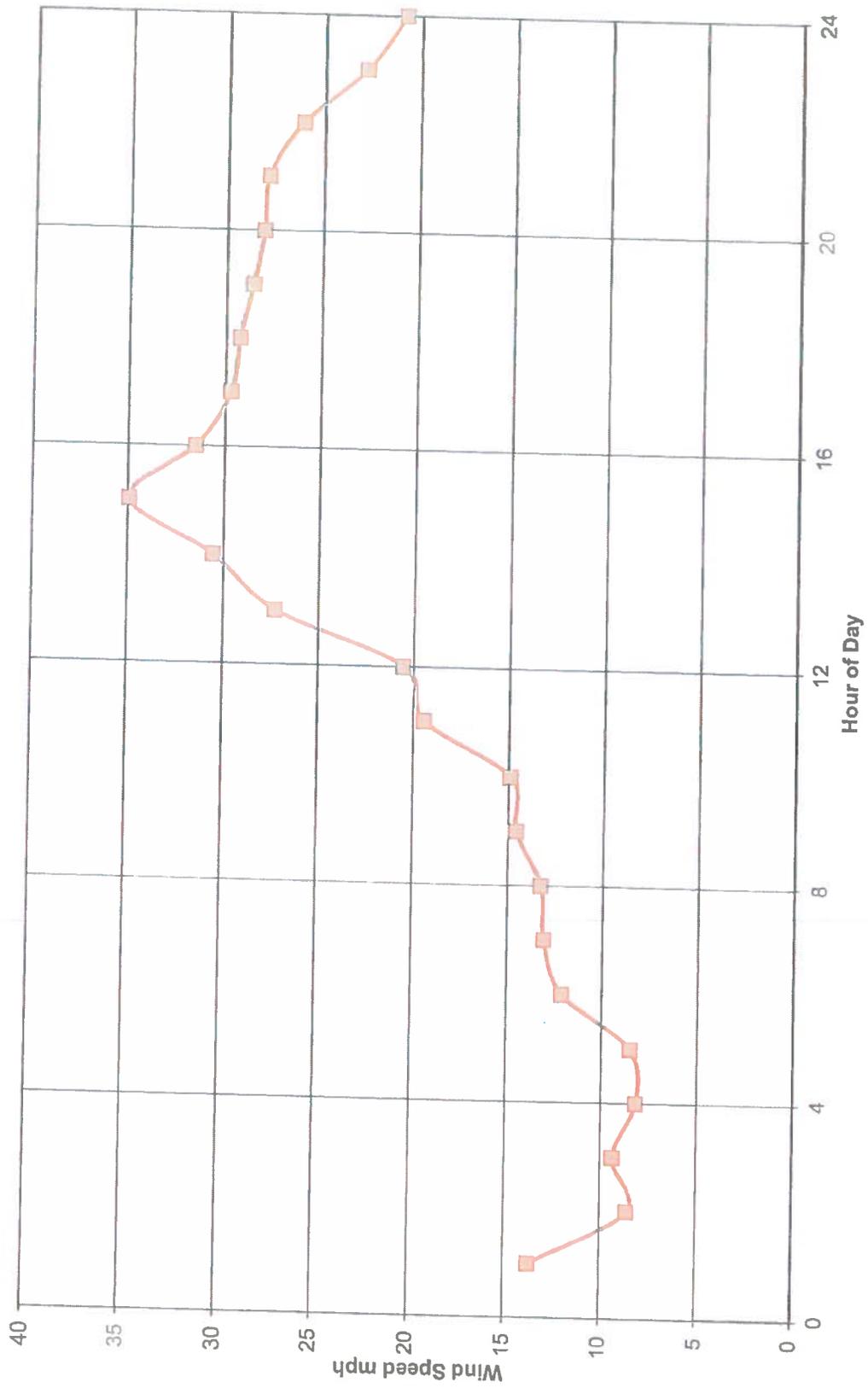
March 17, 2014 Wind Speed and Direction

Black Butte Mine

Hourly Averages

March 17, 2014

### Diurnal Average Wind Speed

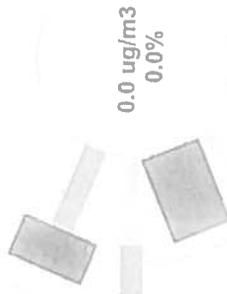


# TEOM PM-10 Pollution Rose Black Butte Mine - Leucite TEOM

March 17, 2014  
3/17/2014 Hr. 1 to 3/17/2014 Hr. 24

N

40%  
35%  
30%  
25%  
20%  
15%  
10%  
5%



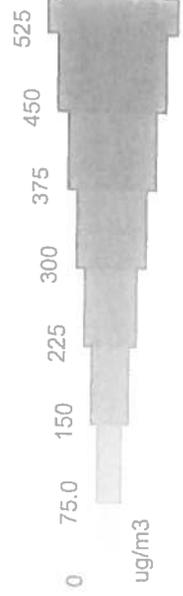
W

0.0 ug/m3  
0.0%

5%  
10%  
15%  
20%  
25%  
30%  
35%  
40%

E

S



**TEOM PM-10 Pollution Rose**  
**Black Butte Mine - Leucite TEOM**  
 March 17, 2014  
 3/17/2014 Hr. 1 to 3/17/2014 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)									0.0
22.5 deg.									0.0
45.0 deg.									0.0
67.5 deg.									0.0
90.0 deg.									0.0
112.5 deg.									0.0
135.0 deg.									0.0
157.5 deg.	8.3								0.0
180.0 deg.	8.3								8.3
202.5 deg.	16.7								8.3
225.0 deg.	4.2								16.7
247.5 deg.					8.3				4.2
270.0 deg.	8.3	12.5	4.2	4.2				12.5	8.3
292.5 deg.		8.3				4.2			41.7
315.0 deg.									12.5
337.5 deg.									0.0
	45.8	20.8	4.2	4.2	8.3	4.2	0.0	12.5	100.0

0 ug/m3 ( 0.0%)      INVALID READINGS 0

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

# Black Butte Mine

## Meteorological Data Summary

3/17/2014 - 3/17/2014

### Hourly Data

	Average/Total	Max	Min
Wind Speed (mph)	20.8	34.9	8.2
Sigma-Theta (°)	9.4	15.7	5.3
Temperature (C)	2.0	8.6	-3.4
Precipitation (in)	0.00	0.00	

Predominant wind direction was from the W sector,  
accounting for 41.7% of the possible winds

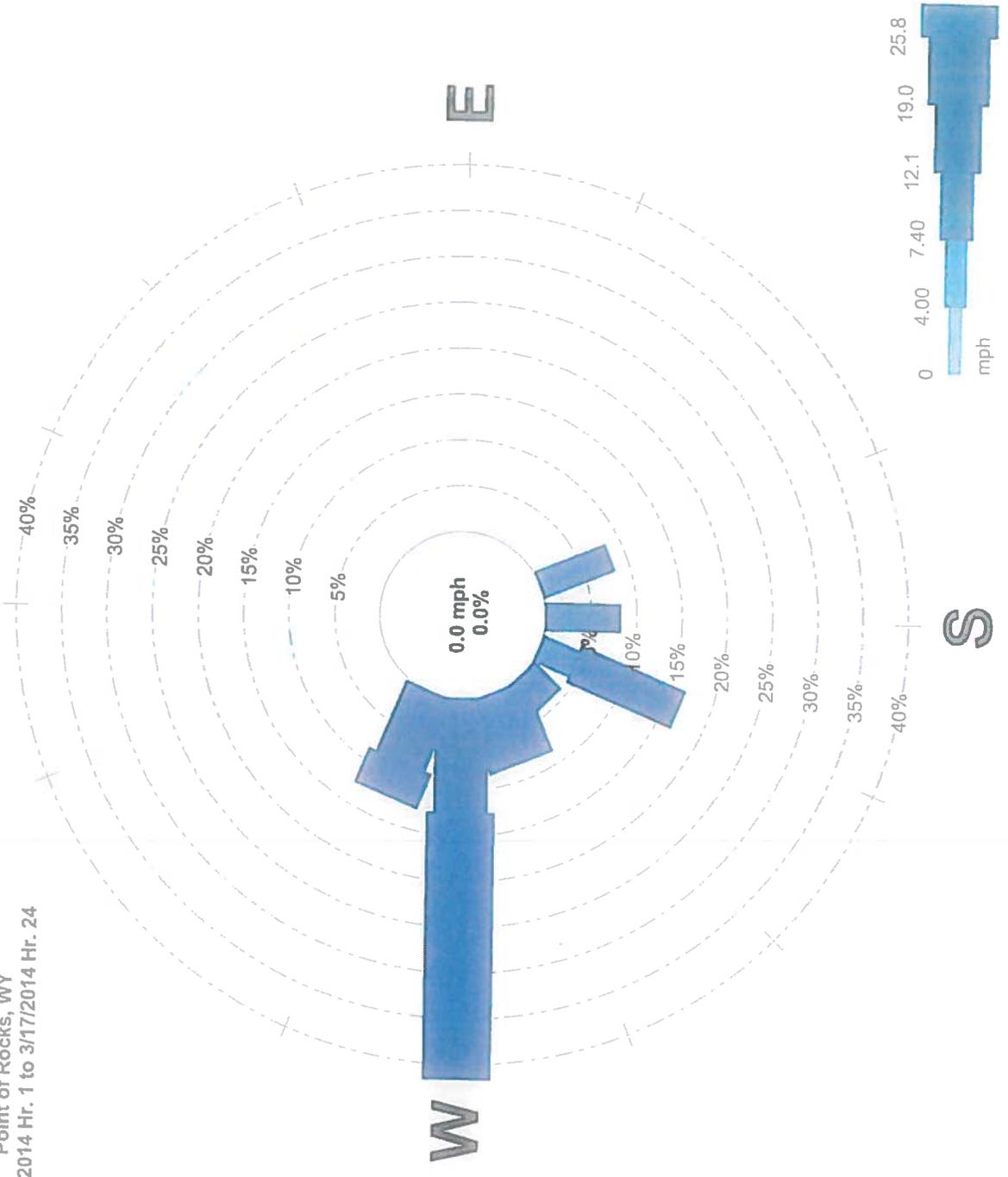
### Data Recovery

Parameter	Possible (hours)	Reported (hours)	Recovery
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%

# Wind Rose -- March 17, 2014

## Black Butte Mine

Point of Rocks, WY  
3/17/2014 Hr. 1 to 3/17/2014 Hr. 24



**Wind Rose -- March 17, 2014**  
**Black Butte Mine**  
 Point of Rocks, WY  
 3/17/2014 Hr. 1 to 3/17/2014 Hr. 24

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

Wind Direction	0.0- 4.0	4.0- 7.4	7.4-12.1	12.1-19.0	19.0-25.8	25.8-100.0	Row Total
0.0 deg.(North)							0.0
22.5 deg.							0.0
45.0 deg.							0.0
67.5 deg.							0.0
90.0 deg.							0.0
112.5 deg.							0.0
135.0 deg.							0.0
157.5 deg.							8.3
180.0 deg.			8.3				8.3
202.5 deg.			8.3				16.7
225.0 deg.			4.2	12.5			16.7
247.5 deg.				4.2			4.2
270.0 deg.					12.5	8.3	20.8
292.5 deg.					8.3	4.2	12.5
315.0 deg.							0.0
337.5 deg.							0.0
0 mph ( 0.0%)	0.0	0.0	20.8	16.7	20.8	41.7	100.0

INVALID READINGS 0

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

# APPENDIX B

## License Agreement with Union Pacific Land Resources

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

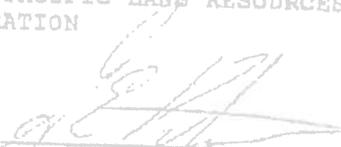
Subject to the provisions of Section 14 hereof, this agreement shall be binding upon and inure to the benefit of the parties hereto, their respective heirs, executors, administrators, successors and assigns.

Section 15. NON-FOREIGN CORPORATION

In accordance with Section 1445(b) (2) of the Internal Revenue Code, Licensor, Federal ID No. 13-2678598, 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 LAMB RESOURCES  
CORPORATION

By:   
Its: Attorney-in-Fact

Witness:

Paul E. White

BLACK BUTTE COAL COMPANY

By:   
Its: Member - Management  
Committee

Attest:

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



# APPENDIX C

**Action Plan Event Log – Action Reports for Day shift and  
night shift on March 17, 2014**

## Action Plan Event Log Action Report

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

I. Concentrations which trigger the action plan.

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

	300 ug/m <sup>3</sup> (1-hour)			70 ug/m <sup>3</sup> (24-hour)			50 ug/m <sup>3</sup> (24-hour)			110 ug/m <sup>3</sup> (24-hour)			300 ug/m <sup>3</sup> (24-hour)		
	Date	Time	1-hour reading	Date	Time	24-hour reading	Date	Time	24-hour reading	Date	Time	24-hour reading	Date	Time	24-hour reading
Pit 10 I-80	3-17	1 PM	533	3-17	1 PM	71.28									
Pit 14															
Leachate															
UPWIND															

II. 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 being 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 half of Pit 10 highwall	Yes / No	____ am/pm	____ loads	
<input checked="" type="checkbox"/> Pit 10 assist bench	<input checked="" type="checkbox"/> Yes / No	7 am/pm	____ loads	7am to 6pm
<input checked="" type="checkbox"/> Road to spoils on North side of Pit 10	<input checked="" type="checkbox"/> Yes / No	7 am/pm	____ loads	7am to 6pm
____ Pit 11 highwall	Yes / No	____ am/pm	____ loads	
____ Pit 11 spoils	Yes / No	____ am/pm	____ loads	
____ Dragline #1's pad and access road	Yes / No	____ am/pm	____ loads	
____ Pit 10 inactive spoils	Yes / No	____ am/pm	____ loads	
____ Pit 10 pre-strip	Yes / No	____ am/pm	____ loads	
____ Pit 10 topsoil stockpiles	Yes / No	____ am/pm	____ loads	
____ Pit 10 out of pit stockpiles (OOPS)	Yes / No	____ am/pm	____ loads	
____ Pit 11 OOPS	Yes / No	____ am/pm	____ loads	
<input checked="" type="checkbox"/> Pit 11 topsoil pile	Yes / No	____ am/pm	____ loads	6-1 (Continues)
____ Pit 10 hopper/stockpile	Yes / No	____ am/pm	____ loads	
____ Pit 8 stilling shed/ stockpile	Yes / No	____ am/pm	____ loads	
<input checked="" type="checkbox"/> Pit 14 haul roads	<input checked="" type="checkbox"/> Yes / No	2 am/pm	____ loads	8-6pm
____ Pit 14 OOPS or topsoil stockpiles	Yes / No	____ am/pm	____ loads	
<input checked="" type="checkbox"/> Drag #2's pad and access road	<input checked="" type="checkbox"/> Yes / No	8 pm am/pm	____ loads	8-6pm
____	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	

Were 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.
19-0981	<input checked="" type="checkbox"/> Yes / No	
19-1007	<input checked="" type="checkbox"/> Yes / No	No other for other water trucks.
	Yes / No	
	Yes / No	

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

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.

High winds throughout the day. With wind gusts up to 40 mph.  
Short lived SMC storms through out the day.

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

The well in pit 10 was being cleaned. Creating alot of extra dust. This operation was shut down twice before the high team reading at 1 pm. Shut down all operations at P14 at 3 pm. High wind was causing the dust. Kept both water trucks running in both pits.

IV. Consider modifying operations contributing to dust.

In the space below, describe any modifications to operations which occurred as part of the Action Plan. Include any changes put into place in advance of events which contributed to PM10 concentrations reaching action plan levels.

Dray ches and the 2 D-11s working in pit 10 were shut down and a second H2O truck was started. Shut down all operations at P14 at 3 pm. Leavette had high TSEM readings. There was no BOC operation there. 07 H2O truck put 10 loads of water in the pit 10 area and 81 H2O truck put 2 loads of water in pit 10 and 4 loads in P14.

V. Notify the Production Superintendent

Please record when and how the Production Superintendent was notified.

by the radio at 1 pm

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.

Dry one was shut down. 2 D-115 in pit 10 were shut down. The dryer dropping the high wall was the main cause of this dust. It was shut down and another water truck was put into service. Shut down P14 at 3pm. 30+ mph winds. Kept both water trucks running in P 10 and P14.

Action Plan Event Log  
Action Report

VI. Photographic documentation.

*Please attached any photographs taken during the event to this section. Otherwise, submit photographs and videos of the event to the Engineering Department*

Action Plan Event Log  
Action Report

VII. Supporting documentation

Please list any supporting documentation attached to this report. Examples include written field notes, witness accounts, and operational logs.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

VII. Shut Down documentation

Please attach a completed copy of a Shut Down Report to this Action Report in order to complete the Action Plan Event Log

Mark Campbell  
Print Name

[Signature]  
Signature

3-17-14  
Date

Please return completed copy to the Black Butte Coal Company Air Permit Coordinator (Andy Thomson)

If you have any questions on completing this form, do not hesitate to contact Andy Thomson day or night

Office: 307-352-6212  
Work Cell: (970)629-2104  
E-mail: a.thomson@aecoal.com

# Action Plan Event Log Shut Down Report

What operations were occurring at the time the concentration was reached or low plant levels during the shift of the plant? Please include any safety operations.	When were operations modified or shut down?
dryer shutdown	1/13 powder was ready to
shower dryer feed was about 2.5000	no
P1 changing the hydraulic was shut down	th JH work scheduled at post 10
1.1 coal burner stop 3	at 3P operation shutdown
Dryer were shutdown	

## Action Plan Event Log Action Report

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

**I. Concentrations which trigger the action plan.**

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

	300 ug/m <sup>3</sup> (1-hour)			70 ug/m <sup>3</sup> (24-hour)			90 ug/m <sup>3</sup> (24-hour)			130 ug/m <sup>3</sup> (24-hour)			210 ug/m <sup>3</sup> (24-hour)		
	Date	Time	1-hour reading	Date	Time	24-hour reading	Date	Time	24-hour reading	Date	Time	24-hour reading	Date	Time	24-hour reading
Pit 10 I-80	3-17	6 PM	165.9	3-17	6 PM	52.0									
Pit 14 Leucite	3-17	6 PM	69.9												
UPWIND															

**II. 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 being 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 half of Pit 10 highwall	Yes / No	____ am/pm	____ loads	
<input checked="" type="checkbox"/> Pit 10 assist bench	<input checked="" type="radio"/> Yes / No	6 am/pm	1 loads	6-12
____ Road in spoils on North side of Pit 10	Yes / No	____ am/pm	____ loads	
____ Pit 11 highwall	Yes / No	____ am/pm	____ loads	
____ Pit 11 spoils	Yes / No	____ am/pm	____ loads	
____ Dragline #1's pad and access road	Yes / No	____ am/pm	____ loads	
____ Pit 10 inactive spoils	Yes / No	____ am/pm	____ loads	
<input checked="" type="checkbox"/> Pit 10 pre-strip	<input checked="" type="radio"/> Yes / No	6 am/pm	3 loads	6-12
____ Pit 10 topsoil stockpiles	Yes / No	____ am/pm	____ loads	
____ Pit 10 out of pit stockpiles (OOPS)	Yes / No	____ am/pm	____ loads	
____ Pit 11 OOPS	Yes / No	____ am/pm	____ loads	
____ Pit 11 topsoil pile	Yes / No	____ am/pm	____ loads	
____ Pit 10 hopper/stockpile	Yes / No	____ am/pm	____ loads	
<input checked="" type="checkbox"/> Pit 8 stilling shed/ stockpile	<input checked="" type="radio"/> Yes / No	10 am/pm	1 loads	10-12
____ Pit 14 haul roads	Yes / No	____ am/pm	____ loads	
____ Pit 14 OOPS or topsoil stockpiles	Yes / No	____ am/pm	____ loads	
____ Drag #2's pad 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	
____	Yes / No	____ am/pm	____ loads	

Were 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.
19-0981	<input checked="" type="radio"/> Yes / No 6 PM	
19-1007	<input checked="" type="radio"/> Yes / No 6 PM	
	Yes / No	
	Yes / No	

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.*

High winds all shift 20-30 mph  
Snow after 12am

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

N/A

IV. Consider modifying operations contributing to dust.

*In the space below, describe any modifications to operations which occurred as part of the Action Plan. Include any changes put into place in advance of events which contributed to PM10 concentrations reaching action plan levels.*

V. Notify the Production Superintendent.

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

Were already notified prior  
to this shift.

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.*

All mine operations were downed during the prior shift. We kept P-14 Idle until midnite then began operations. P-10 was idle the entire shift. We ran both water trucks until snow made this no longer feasible at midnite.

Action Plan Event Log  
Action Report

VI. Photographic documentation.

*Please attached any photographs taken during the event to this section. Otherwise, submit photographs and videos of the event to the Engineering Department.*

None taken (night shift)

Action Plan Event Log  
Action Report

VII. Supporting documentation

Please list any supporting documentation attached to this report. Examples include written field notes, witness accounts, and operational logs

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

VII. Shut Down documentation

Please attach a completed copy of a Shut Down Report to this Action Report in order to complete the Action Plan Event Log

Luke Haworth  
Print name

Luke Haworth  
Signature

3-17-14  
Date

Please return completed copy to the Black Butte Coal Company Air Permit Coordinator (Andy Thomson)

If you have any questions on completing this form, do not hesitate to contact Andy Thomson day or night

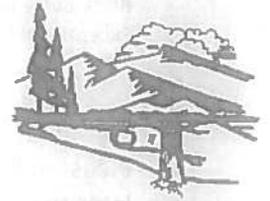
Office: 307-352-6212  
Work Cell: (970)629-2104  
E-mail: a.thomson@aecoal.com

# 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?
<p>No operations were running all but one (diesel shut down) during the process, we went this through out our shift.</p>	<p>3-17-14 Day Shift</p>
<p>1 person operator after maintenance as dusts &amp; fumes</p>	
<p>1 operations shut down the entire shift</p>	



# Department of Environmental Quality



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

Matt Mead, Governor

Todd Parfitt, Director

October 10, 2014

Certified Mail Receipt Number: 7014 0510 0001 9791 8786

Mr. Steve Gili  
General Manager  
Black Butte Coal Company  
P.O. Box 98  
Point of Rocks, WY 82942

Re: Request for Flag under the Exceptional Event Rule for Leucite Hills PM<sub>10</sub> March 17, 2014 Exceedance

Dear Mr. Gili,

The Air Quality Division (AQD) has reviewed the request to flag the March 17, 2014 Leucite Hills PM<sub>10</sub> ambient monitored data at the Black Butte Mine (BBCC) as an Exceptional Event in accordance with the 40 CFR Part 50.14. Although the AQD has placed a temporary flag in AQS on the February 21, 2014 PM<sub>10</sub> data, with the description "Possible Exceptional Event – under evaluation by AQD", the team of AQD staff found deficiencies in the "weight of evidence" approach presented in the June 13, 2014 submittal. Supplemental information is needed before AQD can determine if all elements were addressed to exclude event-related concentrations from regulatory determinations.

The review team requests the following information to clarify the packet:

- ✓ Please submit wind direction data for the day of the exceedance in tabular form, so that it may be compared to hourly concentration and wind speed data.
- ✓ Please provide the original digital images provided in the Exceptional Event packet by email or CD-ROM.
- ✓ Please provide citations for all claims regarding livestock in the area. Include the number and type of animals, the location and duration of stay and where the information was obtained.
- ✓ Please provide documentation of any correspondence with Rocky Mountain Power regarding this matter.
- ✓ Please provide a discussion of fugitive dust controls, if any were in place. If no controls were in place, please note that in your response.

The AQD level of review for Exceptional Event packages is greatly dependent on the level of detail and information provided by the facility in the request to flag exceedances. EPA has also provided examples of exceptional events demonstrations that meet the requirements of the draft guidance. The following link <http://www.epa.gov/ttn/analysis/exevents.htm> is the best place to find examples of information that are needed to have EPA concur with an exceptional event demonstration.

Please keep in mind that while AQD had an extensive staff of monitoring, compliance and permitting personnel available to evaluate the documentation packet, this packet will also be reviewed by the public and EPA.

Lander Field Office • 510 Meadowview Drive • Lander, WY 82520 • <http://deq.state.wy.us>

ABANDONED MINES  
(307) 332-5085  
FAX 332-7726

AIR QUALITY  
(307) 332-6755  
FAX 332-7726

LAND QUALITY  
(307) 332-3047  
FAX 332-7726

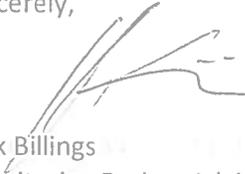
SOLID & HAZARDOUS WASTE  
(307) 332-6924  
FAX 332-7726

WATER QUALITY  
(307) 332-3144  
FAX 332-7726



Please submit the requested supplemental information to Cara Keslar, Monitoring Section Supervisor no later than two (2) weeks from receipt of this letter. The AQD evaluation team will reconvene to determine if all requirements were met under the Exceptional Event Rule. If all requirements of the rule were met, AQD will keep the flag in the AQS database and the documentation package will be made available for public review and submitted to EPA Region 8 for concurrence. If you have questions please contact me at (307) 335-6963 or [kirk.billings@wyo.gov](mailto:kirk.billings@wyo.gov).

Sincerely,



Kirk Billings  
Monitoring Project Advisor

Cc: Black Butte Mine Monitoring File

## Steve Gili

---

**From:** Steve Gili  
**Sent:** Tuesday, October 28, 2014 3:48 PM  
**To:** Cara Keslar  
**Subject:** Additional Information Request for EE March 17, 2014  
**Attachments:** Additional Information Submittal Mar172014EE.pdf

Cara,

Attached is a pdf version of the additional information requested by AQD for the Leucite PM10 Exceedance Exceptional Event submission for March 17th. I will mail a hard copy to you as well. I will mail the requested photos to you on a thumb drive as they are rather large files.

Regards,

**Steve Gili**

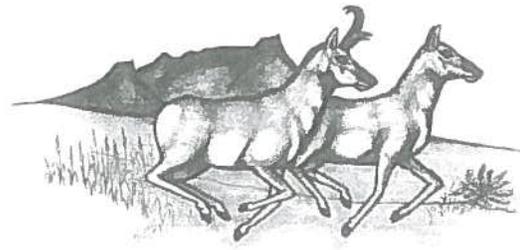
### General Manager Black Butte Mine

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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# Black Butte Coal Company

P.O. Box 98  
Point Of Rocks, Wyoming 82942  
(307)382-6200  
Fax: (307)352-6234



**October 27, 2014**

Cara Keslar, Monitoring Section Supervisor  
Air Quality Division, Wyoming Department of Environmental Quality  
Herschler Building  
122 West 25<sup>th</sup> Street  
Cheyenne, WY 82002

**RE: March 17, 2014 Leucite TEOM PM10 Exceedance Exceptional Event -  
Additional Information Submittal**

Cara,

Enclosed is Black Buttes response to the request by the Air Quality Division for additional information regarding the March 17, 2014 Exceptional Event Submittal. The information is formatted to be included in the original submission packet. If a final complete packet is required please let me know and I will prepare copies for you.

Sincerely,

A handwritten signature in blue ink, appearing to read 'S. Gili'. The signature is stylized and fluid.

Steve Gili  
General Manager, Black Butte Coal Company

Enclosure:

## VIII. Wind Direction Data

Time	Hourly Wind Speed (mph)	Wind Direction (deg)	Max Wind Speed (mph)	Leucite Hourly PM10 Conc. ( $\mu\text{g}/\text{m}^3$ )
03/17/2014 01:00 AM	8.6	161	11.5	8.8
03/17/2014 02:00 AM	9.4	169	15.3	11.2
03/17/2014 03:00 AM	8.2	170	18.6	10
03/17/2014 04:00 AM	8.5	172	16.5	8.2
03/17/2014 05:00 AM	12.1	204	19.5	7.5
03/17/2014 06:00 AM	13.1	208	19	8.8
03/17/2014 07:00 AM	13.2	200	18.6	10.8
03/17/2014 08:00 AM	14.6	211	37.3	13
03/17/2014 09:00 AM	14.9	217	25.9	17.5
03/17/2014 10:00 AM	19.5	265	37.1	46.8
03/17/2014 11:00 AM	20.6	284	36.2	142.8
03/17/2014 12:00 PM	27.3	275	48.6	361.6
03/17/2014 01:00 PM	30.6	276	52	1021.9
03/17/2014 02:00 PM	34.9	277	53.6	1483
03/17/2014 03:00 PM	31.5	284	51.1	409.6
03/17/2014 04:00 PM	29.7	272	52.7	833.5
03/17/2014 05:00 PM	29.3	257	49.7	363.4
03/17/2014 06:00 PM	28.6	258	51.5	523.9
03/17/2014 07:00 PM	28.1	262	47.6	277.6
03/17/2014 08:00 PM	27.9	267	46.5	179.4
03/17/2014 09:00 PM	26.1	270	41.9	154.5
03/17/2014 10:00 PM	22.9	273	41.2	51.1
03/17/2014 11:00 PM	20.9	277	36.9	12.3
03/18/2014 12:00 AM	19.6	285	35	18.7

## IX. Grazing Activities around the Leucite TEOM

The grazing that took place in the area around the Leucite TEOM was from sheep. The sheep belong to Mr. Fred Roberts. He is a member of the Rock Springs Grazing Association (RSGA). The RSGA controls the grazing rights to much of the land in southwestern Wyoming. During the winter of 2013-14 Mr. Roberts grazed 1,800 sheep for a period of 10 days on the section that the Leucite TEOM is located on. This information was provided to Mr. Steve Gili, General Manager of Black Butte Coal, by Mr. John Hay, President of the Rock Springs Grazing Association.

## X. Fugitive Dust Controls at Leucite

Fugitive dust controls were not performed on the section of land that the Leucite TEOM is on as it is not owned or controlled by Black Butte Coal. Fugitive dust controls were being performed at the Leucite property at the time of this exceedance. The main dust control measure in place at Leucite is the application of straw that is crimped into the re-topsoiled, reclaimed land. This is done as both a dust control measure and an erosion control measure. As no mining or reclamation activities were taking place at Leucite during the time of the exceedance no water trucks were present that day. However, when

reclamation activities using trucks are being done at Leucite dust control is done using water applied by water trucks.

#### **XI. Correspondence with Rocky Mountain Power and Anadarko**

Black Butte was initially under the impression that the section of land the Leucite TEOM is on was owned by Anadarko. In May 2014 Mr. Steve Gili contacted Mr. Harry Nagel with Anadarko about the possibility of Black Butte performing dust mitigation on the land owned by Anadarko. Mr. Nagel put Mr. Gili in contact with Don Ballard, Land Manager for Anadarko. Don informed Mr. Gili that the section in question had been sold to Rocky Mountain Power (RMP) in 2010. He also provided Mr. Gili with two names and one phone number of individuals from Rocky Mountain Power. This correspondence is in the form of emails and is included in Appendix D. On May 2, 2014 Mr. Gili contacted Mike Wolf with Rocky Mountain Power by phone. During this phone call Mr. Gili informed Mr. Wolf of the over-grazing that had occurred on RMP land. Mr. Wolf was unaware and surprised that grazing had taken place without RMP approval. Mr. Gili asked if RMP would allow Black Butte to perform dust mitigation work in the form of straw crimped into the land on bare areas of Section 13. Mr. Wolf stated that he would need to confirm with others and that he would get back with Mr. Gili. As of this writing he has not.

# **APPENDIX D**

## **Correspondence with Anadarko and Rocky Mountain Power**

## Steve Gili

---

**From:** Nagel, Harry [Harry.Nagel@anadarko.com]  
**Sent:** Friday, May 02, 2014 2:08 PM  
**To:** Steve Gili  
**Subject:** FW: Section Description

If you've got any more questions regarding the section, you should get in touch with Don Ballard, our landman. His contact info is below.

---

**From:** Ballard, Don  
**Sent:** Friday, May 02, 2014 2:40 PM  
**To:** Nagel, Harry  
**Subject:** RE: Section Description

Harry,  
The surface along with the HR minerals in Section 13 of T20N, R101W was sold to Rocky Mountain Power (Bridger) on 9/9/2010. They can talk to Mike Wolf at 801-220-2485 or Brad Knoles (I can't locate his number).

Don Ballard  
Sr. Staff Landman  
Anadarko Petroleum Corporation  
1201 Lake Robbins Dr.  
The Woodlands, Texas 77380  
832-636-2726

---

**From:** Nagel, Harry  
**Sent:** Friday, May 02, 2014 11:30 AM  
**To:** Ballard, Don  
**Subject:** Fwd: Section Description

Sent from my iPad

Begin forwarded message:

**From:** Steve Gili <[s.gili@aecoal.com](mailto:s.gili@aecoal.com)>  
**Date:** May 2, 2014 at 11:25:27 AM CDT  
**To:** "Nagel, Harry" <[Harry.Nagel@anadarko.com](mailto:Harry.Nagel@anadarko.com)>  
**Subject:** Section Description

Harry,

Here is the description, T20N R101W Section 13.

I also attached a few pics so you can see what we are talking about. We will not disturb the few sage bushes that remain but rather spread straw and crimp it into the soil. This is the same technique we use on our topsoil piles and topsoiled reclamation. The straw is certified weed and seed free.

**Steve Gili**

## General Manager Black Butte Mine



Black Butte Coal Co.

P.O. Box 98

Point of Rocks, WY 82942

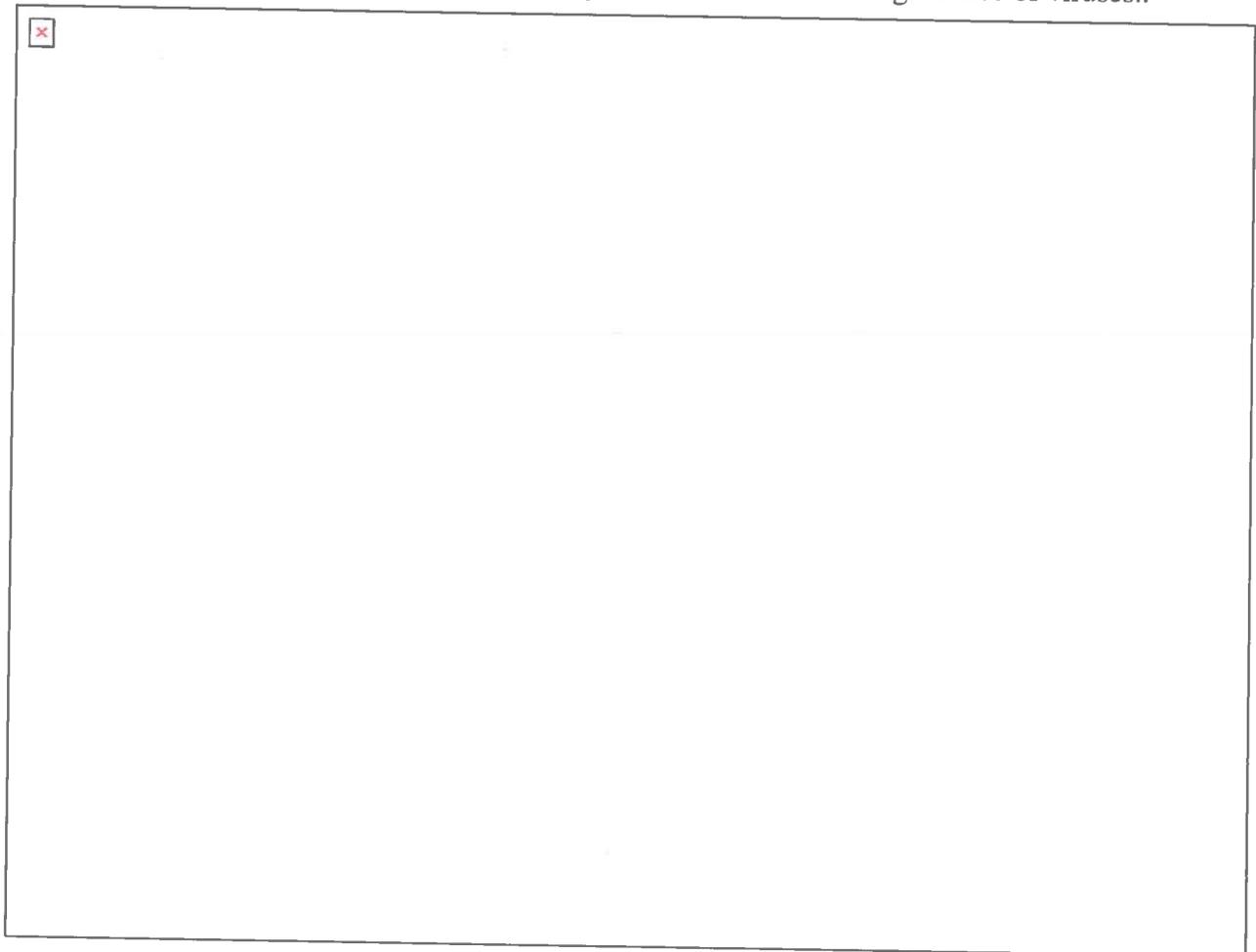
**c** 801-819-2400

**t** 307-352-6206

**f** 307-352-6218

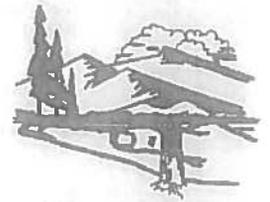
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# Department of Environmental Quality



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

Matt Mead, Governor

Todd Parfitt, Director

March 20, 2015

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

Re: June 13, 2014 Request for Flag under the Exceptional Event Rule for PM<sub>10</sub>, March 17, 2014 Exceedance at Leucite TEOM Location

Dear Mr. Gili,

On March 17, 2014, the Black Butte Coal Company's (BBCC) Leucite TEOM sampler recorded an exceedance of the 24-hour PM<sub>10</sub> standard, with a final concentration of 242.2 µg/m<sup>3</sup>.

On June 13, 2014 the Air Quality Division (AQD) received a request from BBCC that data for the Leucite TEOM monitor 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 monitor on March 17, 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 April 20, 2015. Please email it to [kirk.billings@wyo.gov](mailto:kirk.billings@wyo.gov).

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ABANDONED MINES  
(307) 332-5085  
FAX 332-7726

AIR QUALITY  
(307) 332-6755  
FAX 332-7726

LAND QUALITY  
(307) 332-3047  
FAX 332-7726

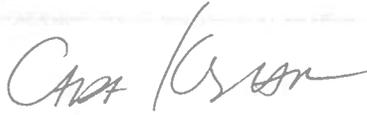
SOLID & HAZARDOUS WASTE  
(307) 332-6924  
FAX 332-7726

WATER QUALITY  
(307) 332-3144  
FAX 332-7726



Please contact Kirk Billings at (307) 335-6963 or kirk.billings@wyo.gov if you have any questions regarding this matter.

Sincerely,



Cara Keslar  
Monitoring Section Supervisor

Cc: Kirk Billings, Monitoring Section  
Black Butte Coal Company Monitoring File  
Tony Hoyt, District 5 Engineer