

Steve Gili

From: Andy Thomson
Sent: Monday, March 03, 2014 2:00 PM
To: Tony Hoyt (tony.hoyt@wyo.gov); Jeff Wendt (jeff.wendt@wyo.gov); Kirk Billings (kirk.billings@wyo.gov); fred.dilella@wyo.gov
Cc: Steve Gili
Subject: Black Butte Mine Leucite TEOM High Concentration
Attachments: Leucite Hills Dust Summary Feb21_2014.docx

All,

On February 21st, 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. IML has validated the data and it shows an average concentration of 204.6 micrograms per cubic meter. This email will constitute the required notification from Black Butte to the WYDEQ of an exceedance.

We will be submitting an exceptional events package for this event. This event was due to events that were beyond our control and unrelated to our operations. Access to the Leucite TEOM is only suitable for maintenance purposes, not water-trucks or any other equipment. Attached please find a brief summary illustrating conditions surrounding Leucite TEOM on that day.

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

Andy Thomson
Environmental Engineer

Black Butte Coal

T: (307)352-6212

C: (307)350-5214

a.thomson@aecoal.com

P.O. Box 98

Point of Rocks, WY 82942



Black Butte Coal Mine Exceptional Events Documentation for the Event on February 21, 2014 Leucite TEOM Location

Produced by:

Black Butte Coal Company

May 30, 2014



EXECUTIVE SUMMARY

On February 21, 2014 the Leucite TEOM located at Black Butte mine in Sweetwater County, Wyoming recorded 24-hour average concentrations of $204.6 \mu\text{g}/\text{m}^3$. 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 February 21, 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 February 21, 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.

Section III of this report details the model of the high wind event that occurred on February 21, 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 to high wind event and the measurements taken on the 21st that resulted in the exceedance of the 24-hour PM10 standard.

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 February 21, 2014 was not reasonably controllable or preventable.

Section V of this report provides the graphical data evidence that the event on February 21, 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 February 21, 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.

Table of Contents

EXCEPTIONAL EVENT RULE (EER) REQUIREMENTS.....	1
I. BACKGROUND INFORMATION FOR THE EVENT.....	2
Mine Description, History and Location.....	
Operational Activities Taking Place during the Event.....	3
II. NARRATIVE OF ACTIONS LEADING UP TO AND DURING THE EVENT.....	4
February 21, 2014 Events.....	4
III. WEATHER CONDITIONS AND ITS EFFECT ON AIR QUALITY.....	20
Wind speed on February 21, 2014	20
PM10 Hourly and 24-Hour concentrations on February 21, 2014	21
IV. NOT REASONABLY CONTROLLABLE OR PREVENTABLE.....	22
Control Measures taken.....	22
Prevention Actions taken.....	23
V. NORMAL HISTORICAL FLUCTUATIONS.....	25
Hourly Historical Fluctuations.....	25
24-Hour Historical Fluctuations.....	26
VI. "BUT FOR" ANALYSIS.....	27
VII. CONCLUSIONS.....	28

List of Figures

Figure I.1 Map of Leucite Mine permit boundary, pit limits and Monitoring Site Locations.....	2
Figure I.2 Aerial Photo of Pit 24 and Leucite TEOM....	3
Figure II.1 Aerial Photo of TEOM and grazing location	4
Figure II.2 Photo of over grazed land on February 21, 2014....	5
Figure II.3-16 Photo of over grazed land and windblown dust on February 21, 2014....	6-19
Figure III.1 Graph of wind speed, direction and PM10 at Leucite TEOM....	20
Figure IV.1 Photo of Leucite Mine on February 21, 2014....	23
Figure V.1 Graph of Leucite TEOM hourly PM10 History....	25
Figure V.2 Graph of Leucite TEOM daily PM10 History....	26

List of Tables

Table III.1 Wind speed, direction and Hourly PM10 at Leucite TEOM....

21

List of Appendices

Appendix A – Wind and PM10 data compiled by Intermountain Labs for the Leucite TEOM location on February 21, 2014

Appendix B – License Agreement with Union Pacific Land Resources

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.

Section III of this report details the wind event that occurred on February 21, 2014, the land conditions that existed off the mine permit area but in the location of the TEOM 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 February 21, 2014 was not reasonably controllable or preventable. Additionally, it will clearly demonstrate that the fugitive dust measured at the Leucite TEOM on February 21, 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 February 21, 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 February 21, 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. 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.

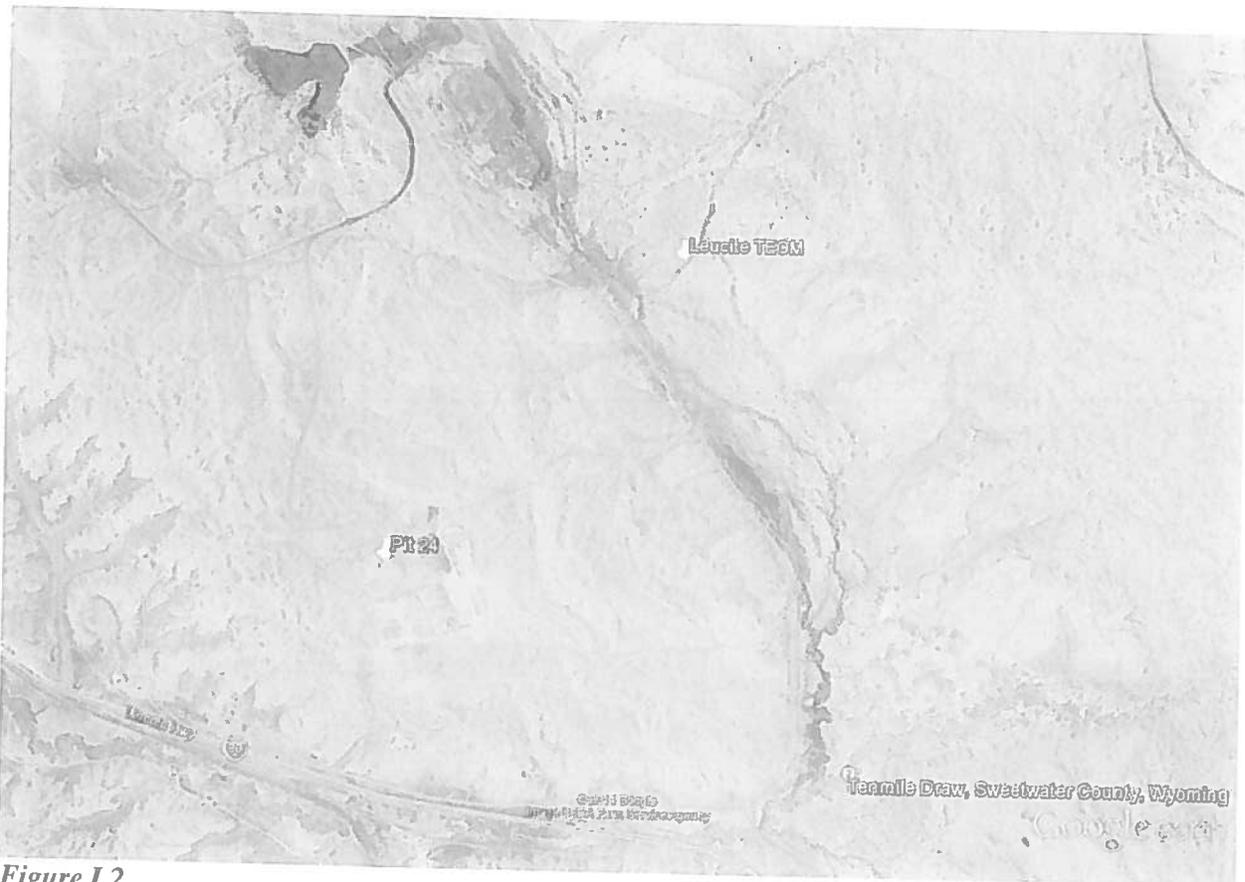


Figure I.2

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 February 21, 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.

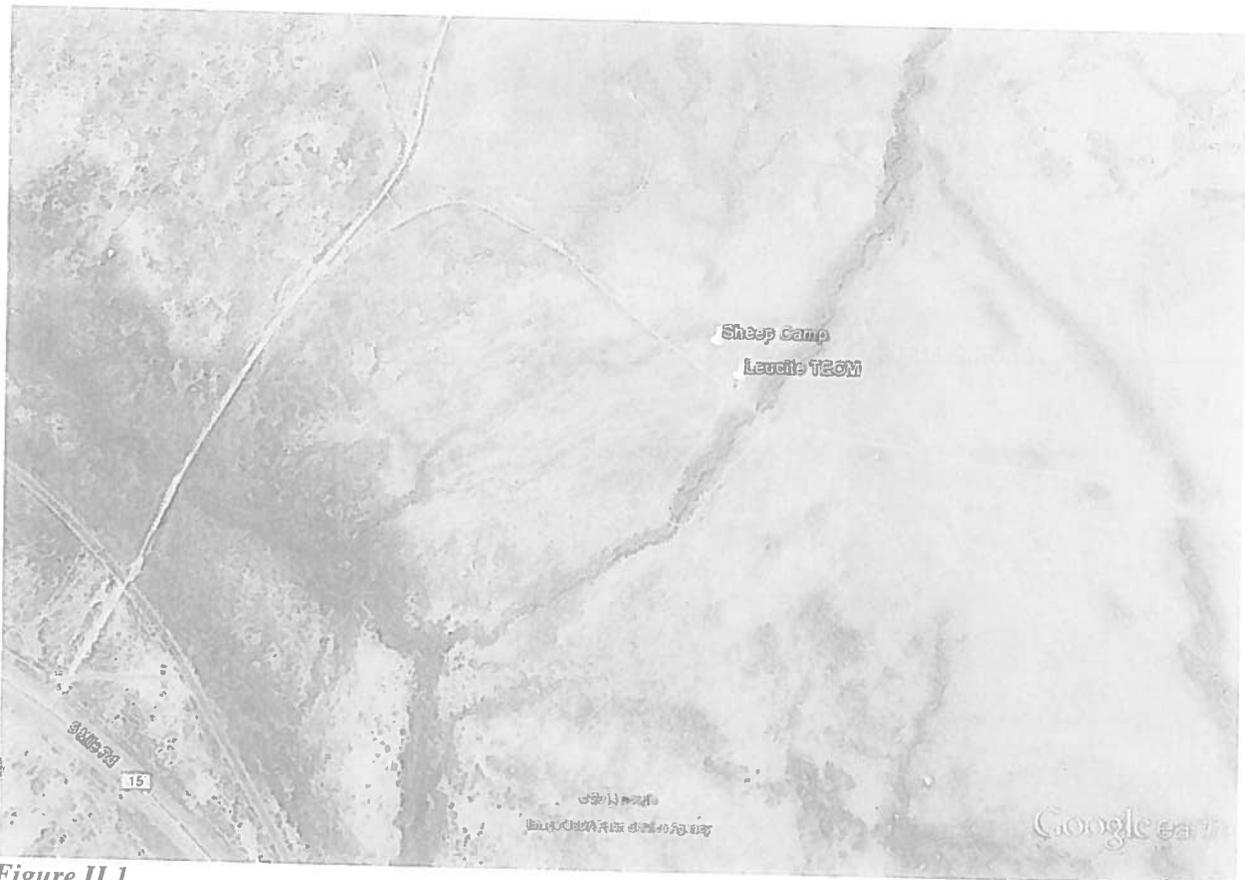


Figure II.1

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 week prior to February 21, 2014.

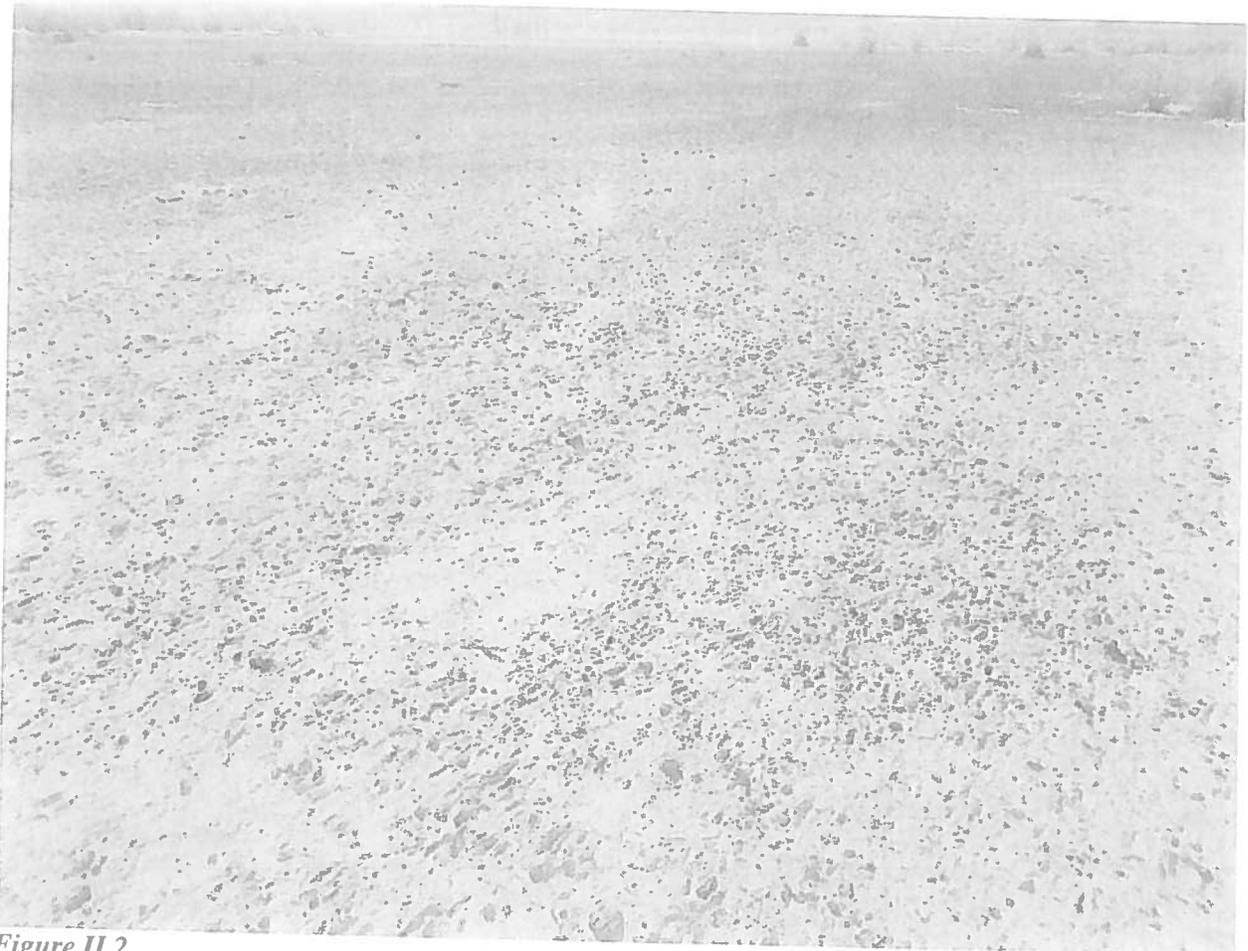


Figure II.2

The grazing activities had been noted by Andy Thomson, Black Butte environmental engineer in January while he performed in 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.

For several days prior to the 21st it was noted that as wind speeds were picking up, hourly PM10 concentrations were rising 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 there were no activities taking place at the Leucite Mine. By 9:00 am sustained wind speeds had reached 25 mph with gusts up to 44 mph. Hourly concentrations started to rise correspondingly. The hourly PM10 reading at 9:00 am was 83.1. The 10:00 am reading rose to 431 due to an increase in wind speeds of 30 mph. Sustained wind speed reached its maximum point of 31 mph at 12:00 pm. This was also the time we saw the maximum hourly PM10 reading of 2,171.

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. At 10:00 am Black Butte Environmental Engineer , Andy Thomson, travelled to Leucite to see if there was anything that could be done to control the dust. Since he had seen the same situation happen for several days prior he was fairly certain that the dust was not coming from the mine but rather from the over grazed areas off the permit area. However, he inspected the mine area to see if water trucks should be deployed to help control the dust. As he had expected the mine area was contributing little if anything to the high readings seen at the TEOM. What he did view was large clouds of windblown dust being generated from the over grazed areas. Mr. Thomson took photographs of the area and the source of the dust as early as 11:00 am. Figures II.3 – II.16 show the source of the windblown dust being recorded at the Leucite TEOM.



Figure II.3

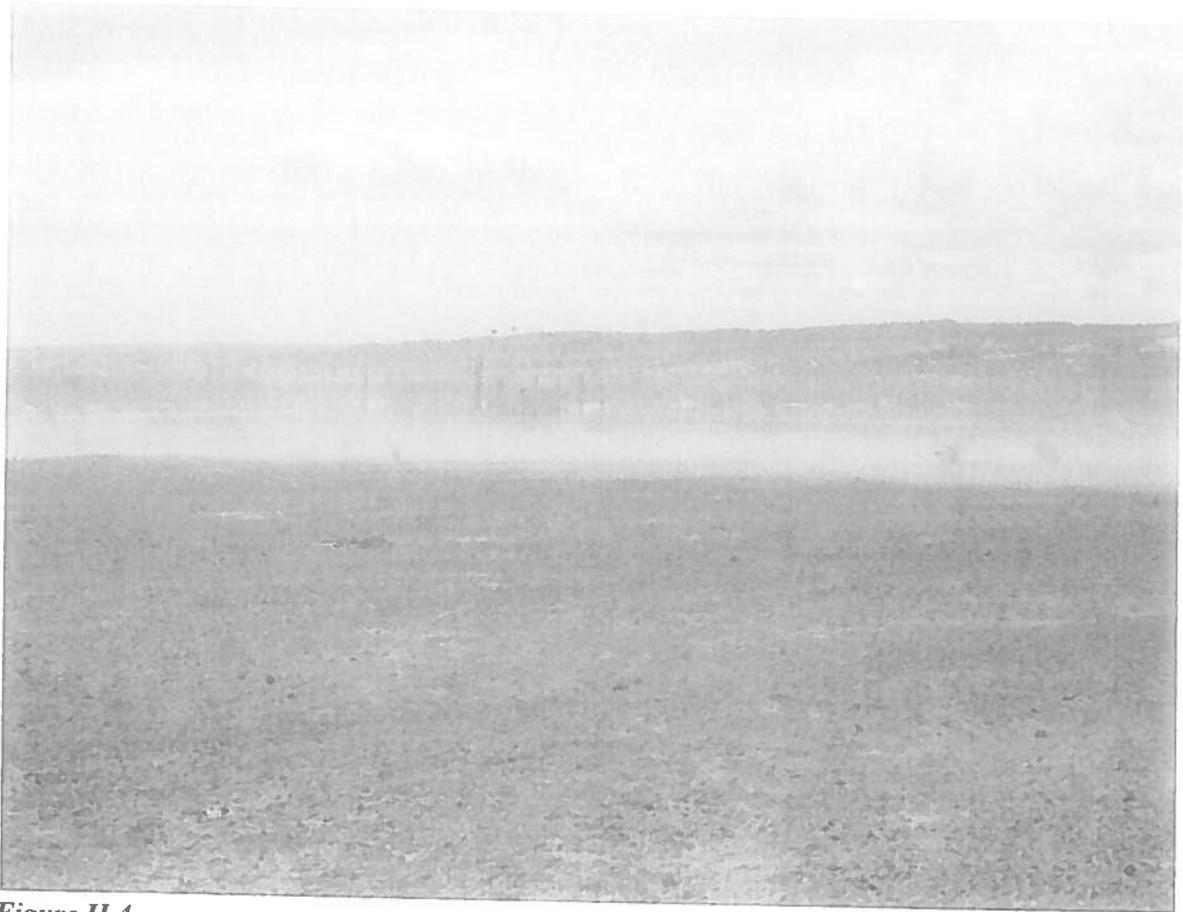


Figure II.4



Figure II.5



Figure II.6



Figure II.7



Figure 11.8

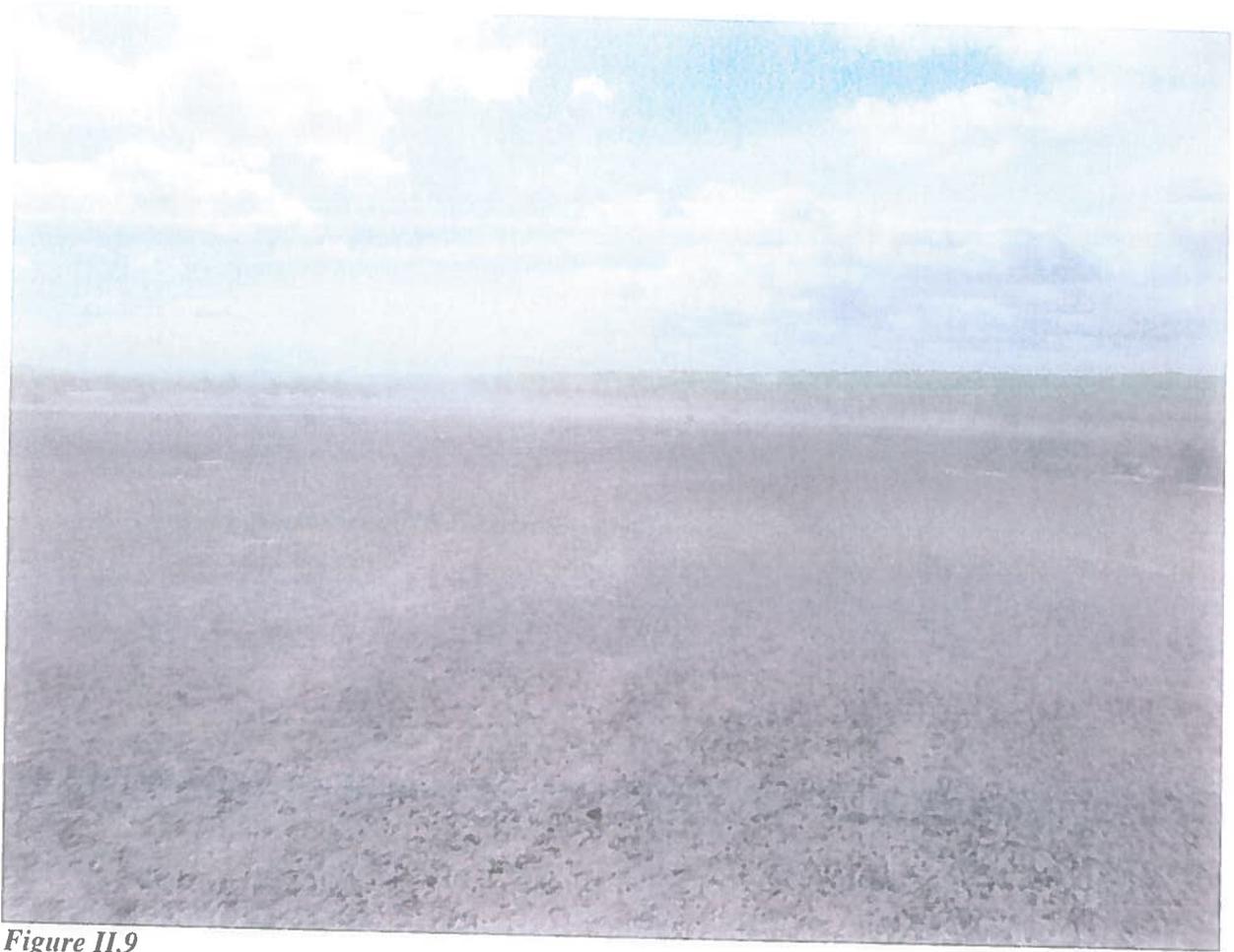


Figure II.9

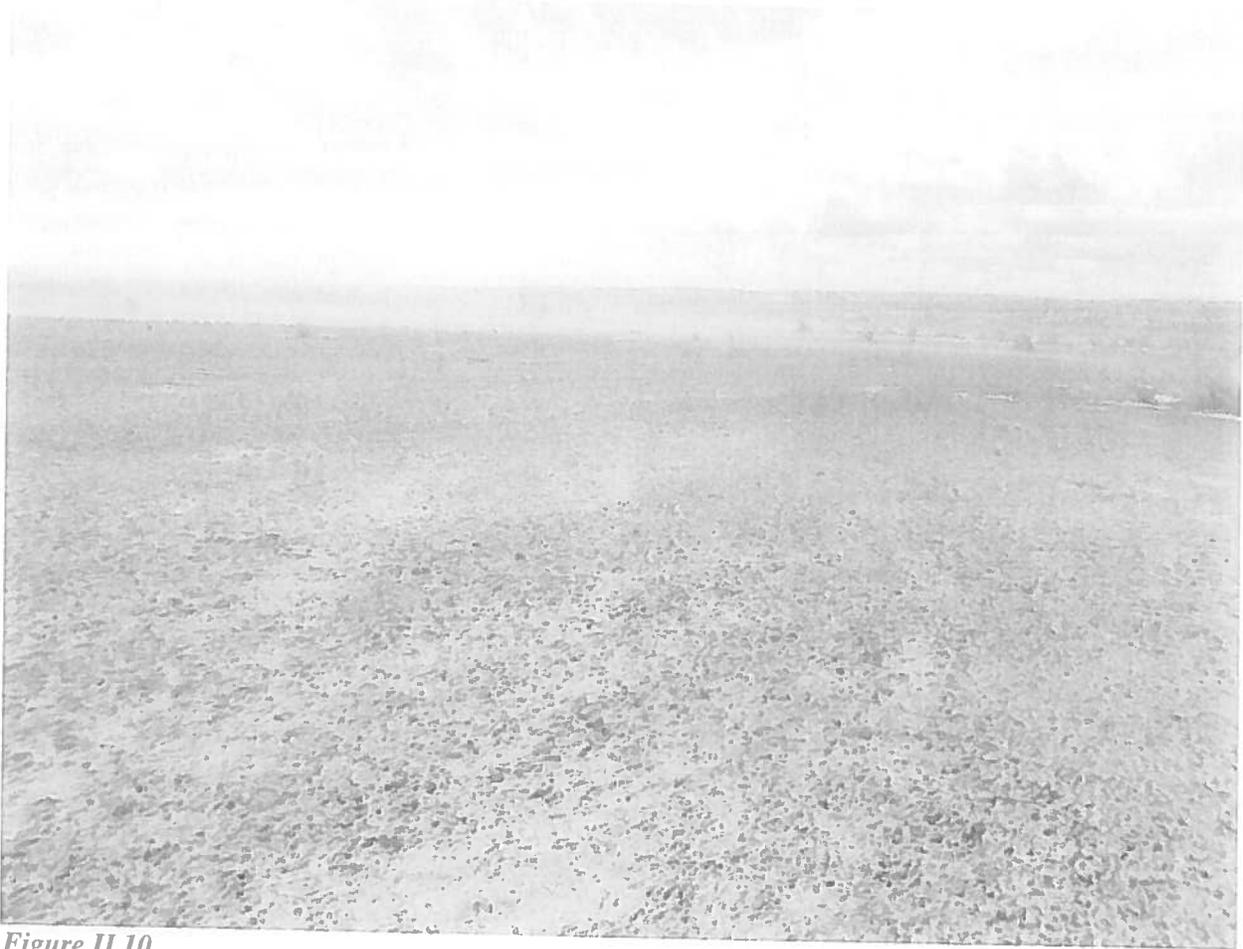


Figure II.10



Figure II.11



Figure II.12



Figure II.13



Figure II.14



Figure II.15



Figure II.16

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 until around 3:00 pm. However, by this point due to the two extremely high hourly readings that occurred at 11:00 am and 12:00 pm there was no statistical chance of the 24 hr concentration ending below the exceedance level. By 5:00 pm the wind speeds had dropped to below 25 mph and the hourly PM10 readings dropped to more normally seen levels.

III. METEOROLOGICAL CONDITIONS ON FEBRUARY 21, 2014 AND ITS EFFECT ON AIR QUALITY

Sustained hourly wind speeds on February 21, 2014 were above the 20 mph mark for 14 out of 24 hours. The lowest recorded hourly wind speed on February 21, 2014 was 15 mph at 8:00 pm. The maximum wind speeds recorded each hour never dropped below 26 mph for the entire day. Wind gust started the day out at over 40 mph. They dropped to 27 mph by 5:00 am and then again began to increase. By 9:00 am wind gusts were up to 44.4 mph. They remained above the 40 mph mark until 3:00 pm, reaching the highest level of 47.6 mph at 11:00 am. The increase in maximum wind speed corresponds exactly with the increase in hourly PM10 concentrations recorded at the Leucite TEOM. It was not until wind gusts reached below the 30 mph mark before hourly PM10 readings dropped to levels more typically seen at the Leucite TEOM.

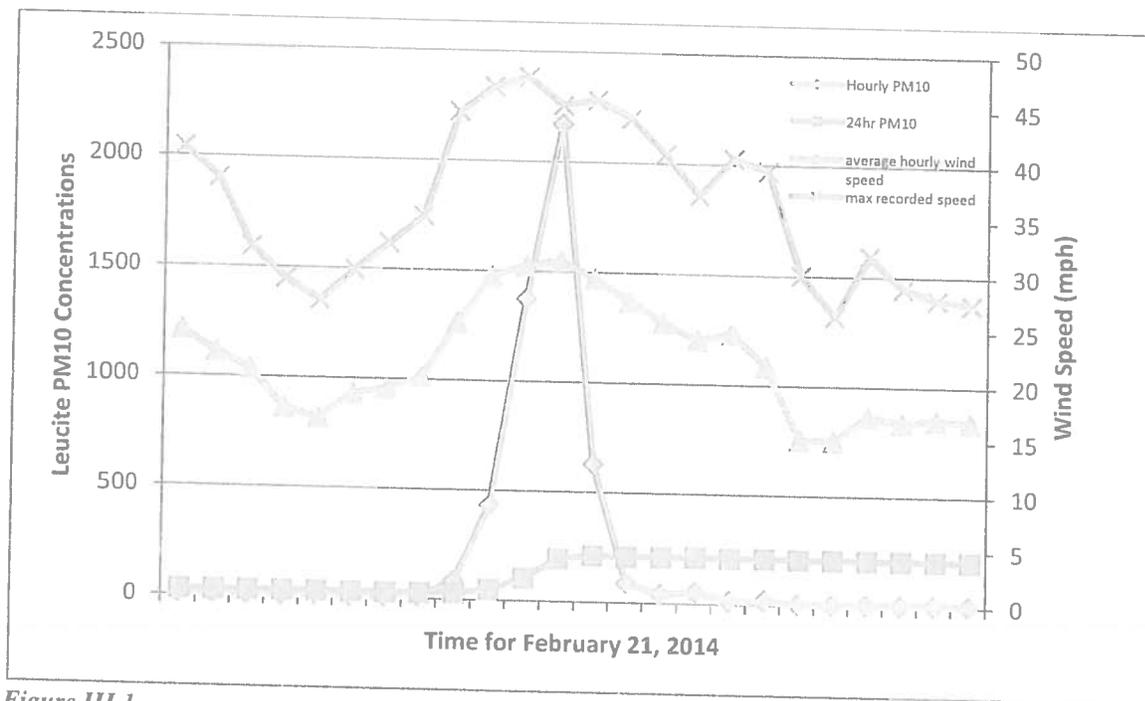


Figure III.1

Figure III.1 shows the correlation of wind speed and PM10 concentrations recorded on February 21, 2014 for the Leucite TEOM

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. ($\mu\text{g}/\text{m}^3$)
02/21/2014 01:00 AM	24.2	40.8	7.9
02/21/2014 02:00 AM	22.2	38	7.5
02/21/2014 03:00 AM	20.7	31.8	5.5
02/21/2014 04:00 AM	17.2	28.9	4.1
02/21/2014 05:00 AM	16.3	27	7.6
02/21/2014 06:00 AM	18.6	29.8	5.3
02/21/2014 07:00 AM	19.1	32.3	5.6
02/21/2014 08:00 AM	20.2	34.8	9.4
02/21/2014 09:00 AM	25.2	44.4	83.1
02/21/2014 10:00 AM	29.5	46.7	431.1
02/21/2014 11:00 AM	30.5	47.6	1373.1
02/21/2014 12:00 PM	31	45.1	2171.1
02/21/2014 01:00 PM	29.4	45.6	627
02/21/2014 02:00 PM	27.4	44	86.4
02/21/2014 03:00 PM	25.5	40.8	39.4
02/21/2014 04:00 PM	24	37.1	51.8
02/21/2014 05:00 PM	24.6	40.5	11.8
02/21/2014 06:00 PM	21.7	39.4	18.3
02/21/2014 07:00 PM	15.1	30	5.5
02/21/2014 08:00 PM	15	26.3	3
02/21/2014 09:00 PM	17.3	31.8	6.5
02/21/2014 10:00 PM	16.7	28.9	5.7
02/21/2014 11:00 PM	17	27.9	8
02/22/2014 12:00 AM	16.8	27.5	5.7

Table III.1

IV. EVENT WAS NOT REASONABLY CONTROLLABLE OR PREVENTABLE

No operations had taken place at the Leucite mine on February 21, 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 February 21, 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. The photographs shown in Section III were taken at approximately 12:00 pm on the 21st and show the overgrazed land in question. At that same time Andy took photographs of the Leucite mine area to show the lack of fugitive dust coming from the areas that are under our control. Photo IV.1 shows a picture taken from the Leucite TEOM looking to the West and is of the Leucite mine area directly west of the TEOM. The eastern edge of the mine permit boundary is the top of the ridge in the photo. Note the distinct lack of fugitive dust in the air. Then note the high concentrations of fugitive dust in the photos shown in Section III. These pictures were taken at the same time.



Figure IV.1

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.

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 Pit 10 area.

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.

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 little if any 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 February 21, 2014.

V. NORMAL HISTORICAL FLUCTUATIONS

Pit 10 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 five year time period from May 5, 2009 through February 21, 2014. The 24 hour reading for February 21, 2014 was the highest validated reading, up-to that date, ever recorded at the Leucite TEOM. Prior to February 21, 2014 the Leucite TEOM had never recorded an air quality exceedance. The 12:00 pm reading on the 21st of 2,171 $\mu\text{g}/\text{m}^3$ was the highest one hour reading ever recorded at the Leucite TEOM. Prior to the 21st the highest one-hour reading ever recorded at the Leucite TEOM was 1,327 $\mu\text{g}/\text{m}^3$. Time series plots of the hourly readings from October, 2010 through February, 2014 were created for the Leucite monitor. Additionally data was compiled for the time period of May 5, 2009 through February, 2014. A shorter time period was used in this graph to make the graphical depiction clearer.

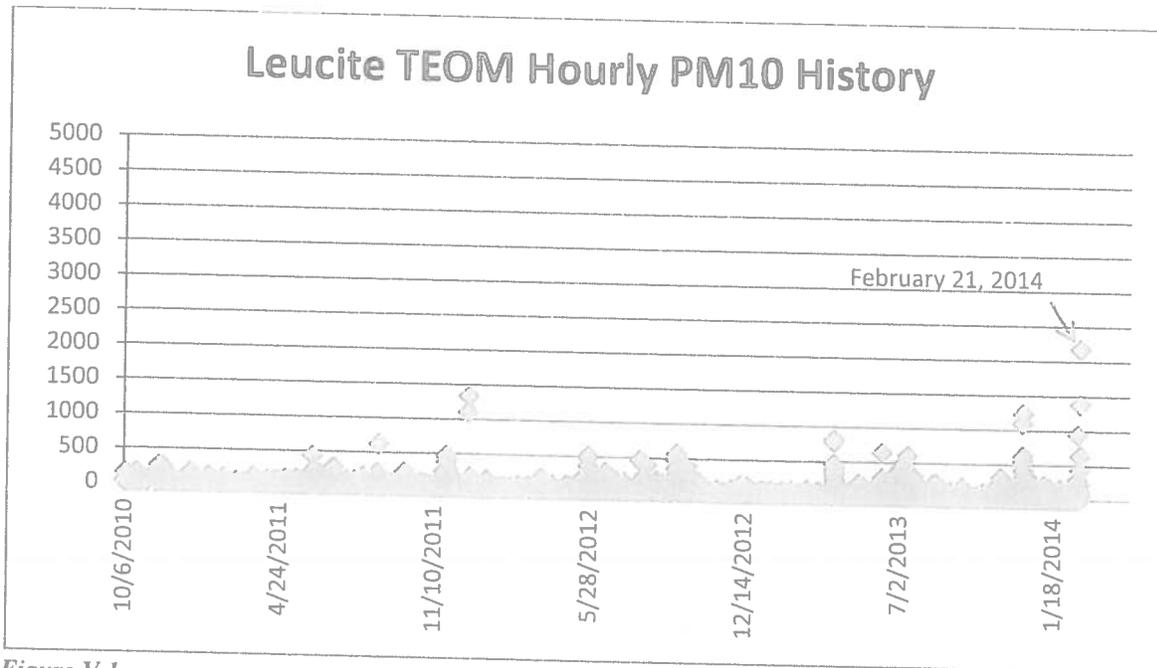


Figure V.1

Time series graphs were also produced for the PM10 daily averages over a five year span from May 5, 2009 through February 21, 2014. Out of a total of 1,730 valid data points no readings were higher than the 204 $\mu\text{g}/\text{m}^3$ mark seen on the 21st. Prior to the 21st the highest 24 hr reading ever recorded at the Leucite TEOM was 130.2 $\mu\text{g}/\text{m}^3$.

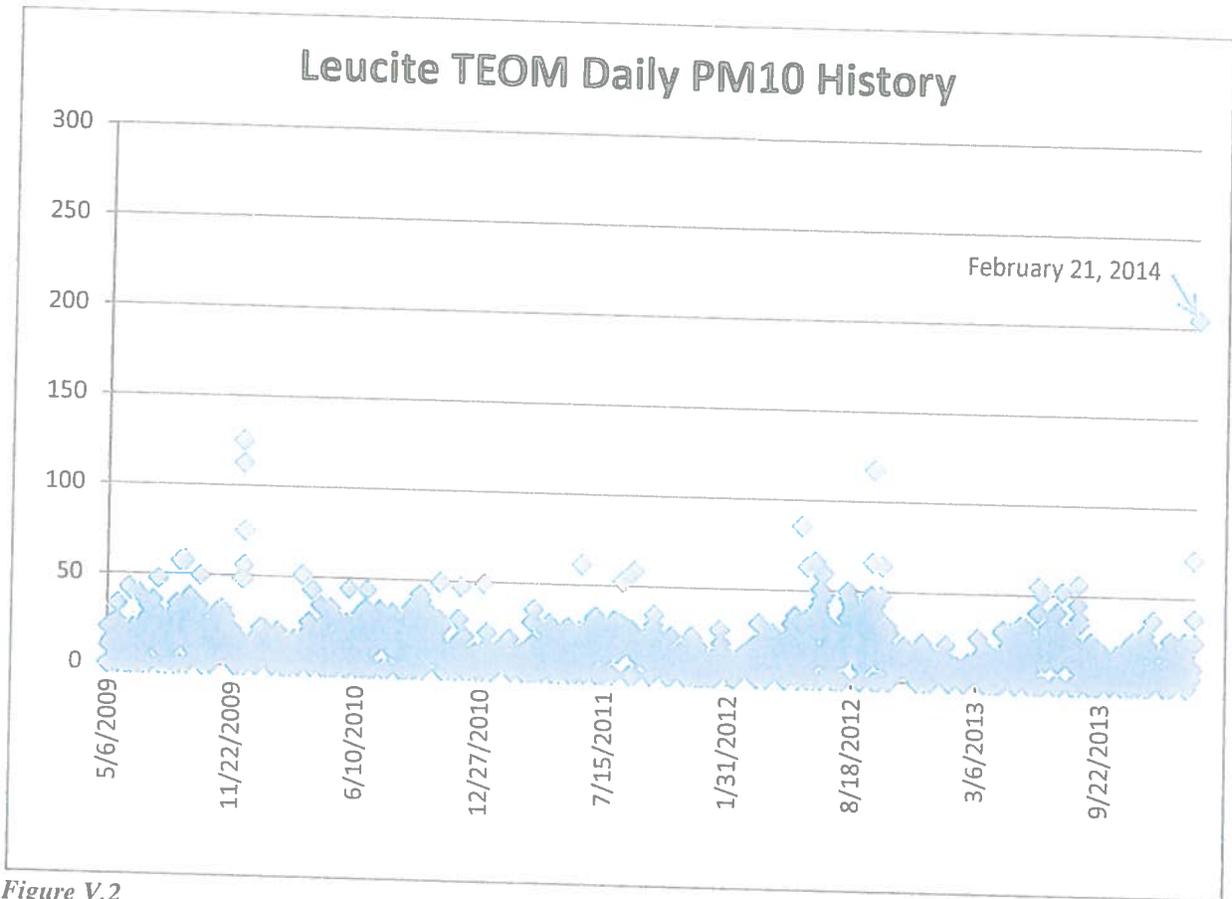


Figure V.2

Section V clearly demonstrates that the event that occurred on February 21, 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 February 21, 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 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 February 21, 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 high PM10 particulate matter driven by high winds during the period of February 21, 2014.

The exceedance's on February 21, 2014 of the federal 24-hour PM10 standard would not have occurred but for the high western winds driving windblown dust that was created on land that the Mine has no control over, based on the following evidence:

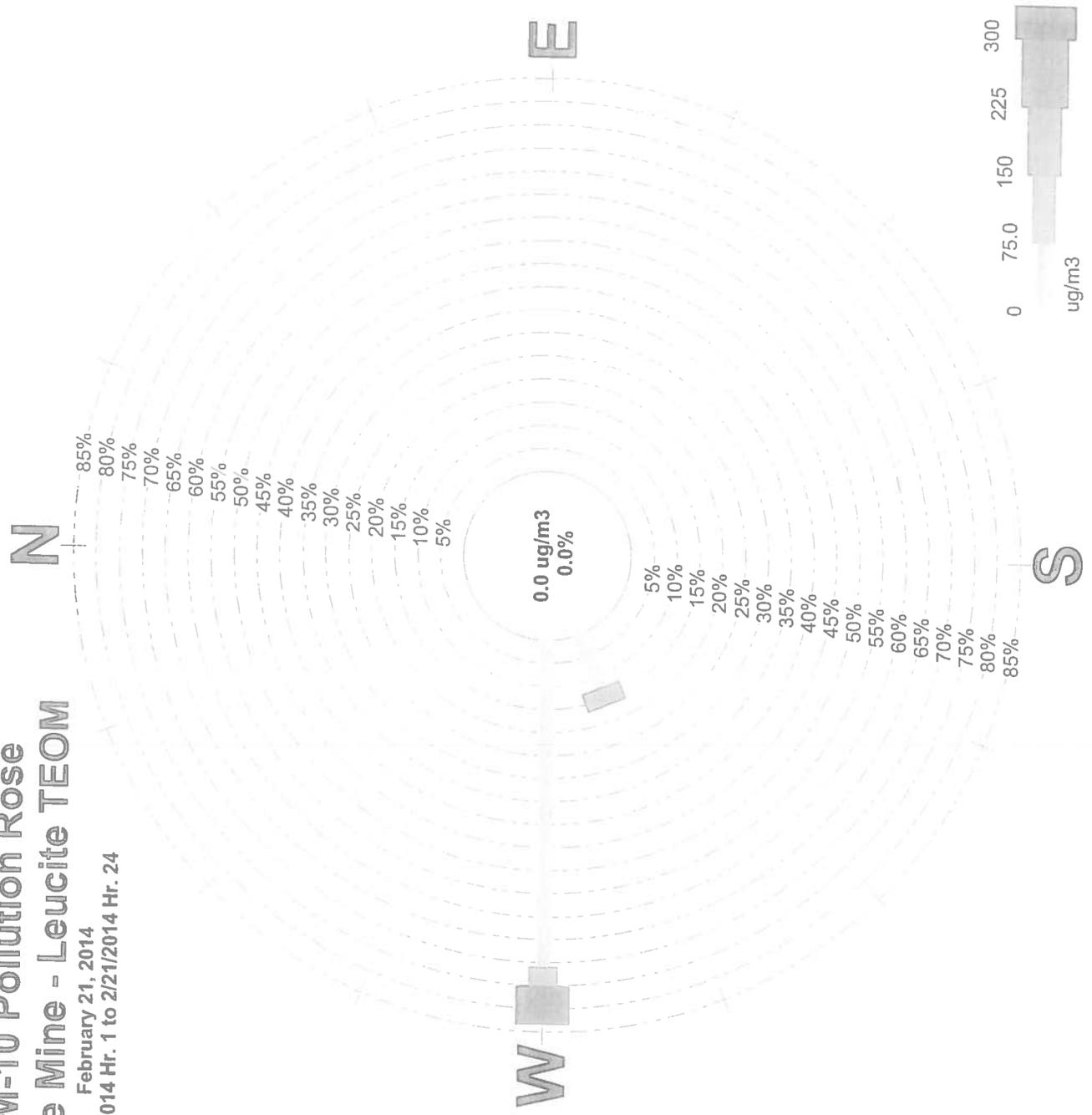
- Graphs showing the relationship of high winds, and the associated elevated PM10 readings at the Pit 10 TEOM.
- Photographic evidence showing the source of the fugitive dust.
- Historical fluctuation analysis and graphs showing the atypically high PM10 concentrations associated with the high wind events.
- Wind direction and speed monitoring data from the onsite weather station.

APPENDIX A

February 21, 2014 Wind Speed and Direction

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

February 21, 2014
2/21/2014 Hr. 1 to 2/21/2014 Hr. 24



TEOM PM-10 Pollution Rose
Black Butte Mine - Leucite TEOM
 February 21, 2014
 2/21/2014 Hr. 1 to 2/21/2014 Hr. 24

RELATIVE FREQUENCY (% of Recorded Winds) TABLE

Wind Direction	0.0-75.0	75.0-150	150-225	225-300	300-375	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.						0.0
180.0 deg.						0.0
202.5 deg.						0.0
225.0 deg.						0.0
247.5 deg.	12.5			4.2		16.7
270.0 deg.	70.8	4.2			8.3	83.3
292.5 deg.						0.0
315.0 deg.						0.0
337.5 deg.						0.0
	83.3	0.0	4.2	4.2	8.3	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

2/21/2014 - 2/21/2014

Hourly Data

	Average/Total	Max	Min
Wind Speed (mph)	21.9	31.0	15.0
Sigma-Theta (°)	8.8	10.2	8.0
Temperature (C)	-1.4	2.3	-4.6
Precipitation (in)	0.00	0.00	

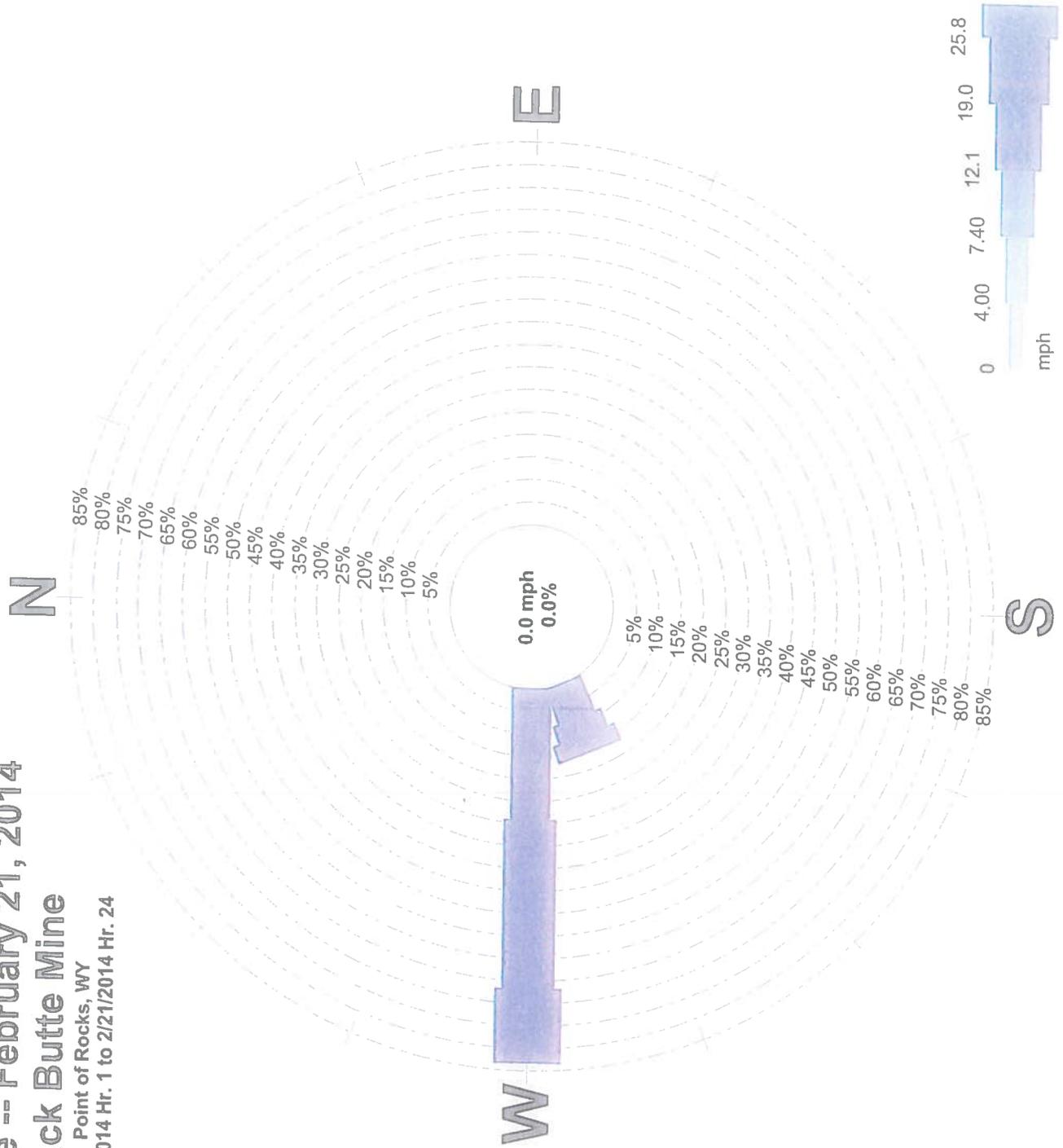
Predominant wind direction was from the W sector,
accounting for 83.3% of the possible winds

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 -- February 21, 2014 Black Butte Mine

Point of Rocks, WY
2/21/2014 Hr. 1 to 2/21/2014 Hr. 24



Wind Rose -- February 21, 2014
Black Butte Mine
 Point of Rocks, WY
 2/21/2014 Hr. 1 to 2/21/2014 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.							0.0
180.0 deg.							0.0
202.5 deg.							0.0
225.0 deg.							0.0
247.5 deg.				8.3	4.2	4.2	16.7
270.0 deg.				29.2	37.5	16.7	83.3
292.5 deg.							0.0
315.0 deg.							0.0
337.5 deg.							0.0
0 mph (0.0%)	0.0	0.0	0.0	37.5	41.7	20.8	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

1

LICENSE AGREEMENT

THIS AGREEMENT, made and entered into this 13th 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

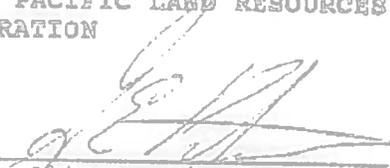
Subject to the provisions of Section 14 hereof, this agreement shall be binding upon and inure to the benefit of the parties hereto, their respective heirs, executors, administrators, successors and assigns.

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.

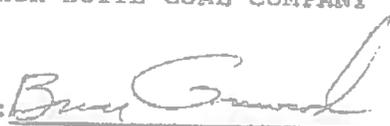
UNION PACIFIC LAND RESOURCES
CORPORATION

By: 
Its: Attorney-in-Fact

Witness:

Paul E. White

BLACK BUTTE COAL COMPANY

By: 
Its: Member - Management
Committee

Attest:

Secretary (SEAL)

EXHIBIT "A"

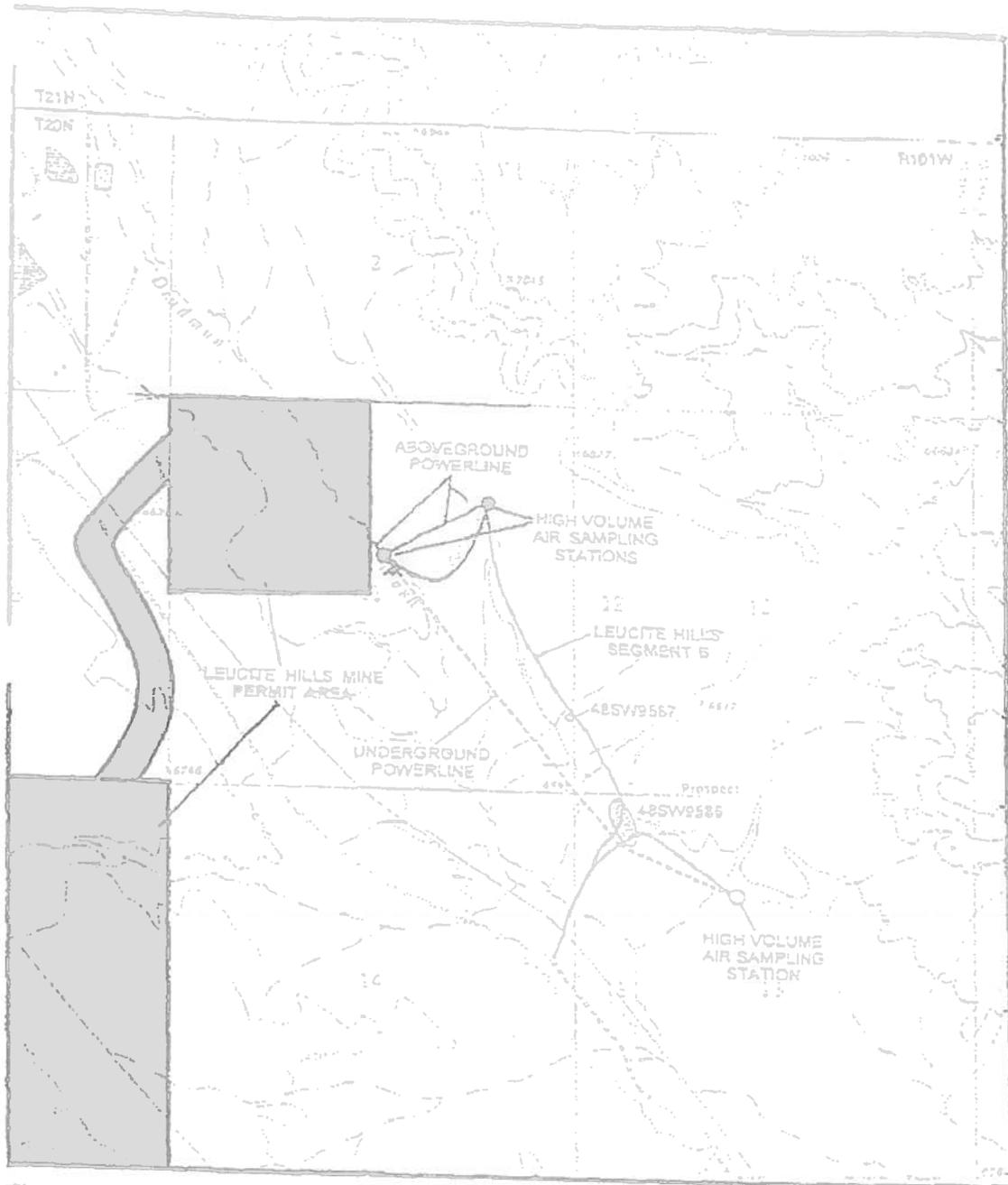


Figure S.8 Topographic Map Showing Leucite Hills Inventory Segment B. Taken from the Point of Rocks (1968; photorevised 1978) and Bitter Creek NW (1968; photorevised 1978), Wyoming, USGS 7.5' Quadrangles.



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 PM₁₀ February 21, 2014 Exceedance

Dear Mr. Gili,

The Air Quality Division (AQD) has reviewed the request to flag the February 21, 2014 PM₁₀ ambient monitored data at the Black Butte Mine (BBKK) 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 PM₁₀ 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 May 30, 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, duration of stay and where the information was obtained.
- ✓ • 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.

Sincerely,



Kirk Billings
Monitoring Project Advisor

Cc: Black Butte Mine Monitoring File

Steve Gili

From: Steve Gili
Sent: Tuesday, October 28, 2014 3:35 PM
To: Cara Keslar
Subject: Additional Information Request for EE on February 21, 2014
Attachments: Additional Information Submittal Feb212014EE.pdf

Cara,

Attached is a pdf version of the additional information requested by AQD for the Leucite PM10 Exceedance Exceptional Event submission. 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

IMPORTANT NOTICE: This email and any attachment(s) is/are intended for use only by the addressee(s) and may contain information which is confidential, copyright and/or the subject of legal privilege. If you are not the intended recipient of this communication, any disclosure, distribution or use of the information is prohibited and may be unlawful. Please delete the email, destroy all copies and contact the sender immediately. We do not represent, warrant, and/or guarantee, except as required by law, that the integrity of this communication has been maintained nor that the communication is free of errors, viruses, interception or interference.

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 25th Street
Cheyenne, WY 82002

**RE: February 21, 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 February 21, 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 fluid and cursive.

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. ($\mu\text{g}/\text{m}^3$)
02/21/2014 01:00 AM	24.2	259	40.8	7.9
02/21/2014 02:00 AM	22.2	261	38	7.5
02/21/2014 03:00 AM	20.7	269	31.8	5.5
02/21/2014 04:00 AM	17.2	266	28.9	4.1
02/21/2014 05:00 AM	16.3	262	27	7.6
02/21/2014 06:00 AM	18.6	263	29.8	5.3
02/21/2014 07:00 AM	19.1	263	32.3	5.6
02/21/2014 08:00 AM	20.2	260	34.8	9.4
02/21/2014 09:00 AM	25.2	258	44.4	83.1
02/21/2014 10:00 AM	29.5	258	46.7	431.1
02/21/2014 11:00 AM	30.5	265	47.6	1373.1
02/21/2014 12:00 PM	31	264	45.1	2171.1
02/21/2014 01:00 PM	29.4	271	45.6	627
02/21/2014 02:00 PM	27.4	273	44	86.4
02/21/2014 03:00 PM	25.5	279	40.8	39.4
02/21/2014 04:00 PM	24	281	37.1	51.8
02/21/2014 05:00 PM	24.6	277	40.5	11.8
02/21/2014 06:00 PM	21.7	273	39.4	18.3
02/21/2014 07:00 PM	15.1	268	30	5.5
02/21/2014 08:00 PM	15	257	26.3	3
02/21/2014 09:00 PM	17.3	258	31.8	6.5
02/21/2014 10:00 PM	16.7	260	28.9	5.7
02/21/2014 11:00 PM	17	261	27.9	8
02/22/2014 12:00 AM	16.8	273	27.5	5.7

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.



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: May 30, 2014 Request for Flag under the Exceptional Event Rule for PM₁₀, February 21, 2014 Exceedance at Leucite TEOM Location

Dear Mr. Gili,

On February 21, 2014, the Black Butte Coal Company's (BBCC) Leucite TEOM sampler recorded an exceedance of the 24-hour PM₁₀ standard, with a final concentration of 204.6 µg/m³.

On May 30, 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 PM₁₀ data collected at the Leucite TEOM monitor on February 21, 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.

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

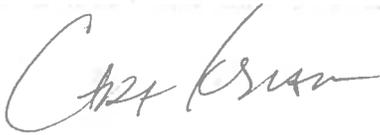
SOLID & HAZARDOUS WASTE
(307) 332-6924
FAX 332-7726

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



Please 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