Steve Gili

From: Steve Gili
Sent: Wednesday, January 15, 2014 7:44 AM
To: Jeff Wendt; Tony Hoyt; 'Kirk Billings'
Cc: Andy Thomson
Subject: January 13, 2014 Pit 10 TEOM 24-hr PM10 Exceedance

All,

On January 13, 2014 Black Butte Coal experienced an exceedance of the 24-hr PM10 standard at the Pit 10 TEOM. The Pit 10 TEOM 24-hr reading on the 13th was 166.3 ug/m3. This email is meant to provide the required notification to the WY DEQ – AQD. Please let me know if we need to send notification to additional individuals.

Regards,

Steve Gili

General Manager Black Butte Mine

ambreenergy

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

Steve Gili

From: Steve Gili
Sent: Thursday, January 16, 2014 9:23 AM
To: 'Kirk Billings'
Cc: Jeff Wendt; Tony Hoyt; Andy Thomson; Cara Keslar
Subject: RE: January 13, 2014 Pit 10 TEOM 24-hr PM10 Exceedance

Kirk,

I don't want our immediate reaction to an exceedance to be that it must have been an exceptional event. I want the data to point us in that direction. All indications at this time are that it was an exceptional event but we are still gathering and analyzing data. The data is indicating that we were in complete compliance with our Air Quality Permit, we were in complete compliance with our Action Plan and we shutdown operations and deployed mitigation efforts prior to reaching any action levels in anticipation of the high winds that day. The one area we are still gathering and analyzing the data is in regards to wind speeds and how they relate to historical wind speeds. The past few days have been some intense winds and we have been concentrating on staying compliant. Now that winds have calmed down considerably we can look at the data more thoroughly. We will let you know shortly.

Steve

From: Kirk Billings [mailto:kirk.billings@wyo.gov]
Sent: Thursday, January 16, 2014 8:06 AM
To: Steve Gili
Cc: Jeff Wendt; Tony Hoyt; Andy Thomson; Cara Keslar
Subject: Re: January 13, 2014 Pit 10 TEOM 24-hr PM10 Exceedance

Thanks for keeping me informed Steve.
Will Black Butte be submitting an exceptional event package for this exceedance?

--
Kirk Billings
Wyoming Department of Environmental Quality
Air Quality Division, Monitoring Group
http://deq.state.wy.us/aqd/
(307) 335-6963 (desk)
(307) 438-2470 (cell)
kirk.billings@wyo.gov

On Wed, Jan 15, 2014 at 7:43 AM, Steve Gili <s.gili@aecoal.com> wrote:

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Steve Gili

General Manager Black Butte Mine

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Black Butte Coal Co.

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t 307-352-6206
f 307-352-6218

Steve Gili

From: Steve Gili
Sent: Friday, January 24, 2014 12:32 PM
To: 'Kirk Billings'
Cc: Jeff Wendt; Tony Hoyt; Andy Thomson; Cara Keslar
Subject: RE: January 13, 2014 Pit 10 TEOM 24-hr PM10 Exceedance

Kirk,

Given the severity and duration of the winds encountered on the 13th, the fact that all conditions of permit MD-7424 were being met and the mine air quality action plan was being utilized and in full compliance before, during and after the event, Black Butte Mine will be submitting an Exceptional Events package for the Pit 10 TEOM exceedence on January 13, 2014.

Steve

From: Kirk Billings [mailto:kirk.billings@wyo.gov]
Sent: Thursday, January 16, 2014 8:06 AM
To: Steve Gili
Cc: Jeff Wendt; Tony Hoyt; Andy Thomson; Cara Keslar
Subject: Re: January 13, 2014 Pit 10 TEOM 24-hr PM10 Exceedance

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Steve Gili

General Manager Black Butte Mine

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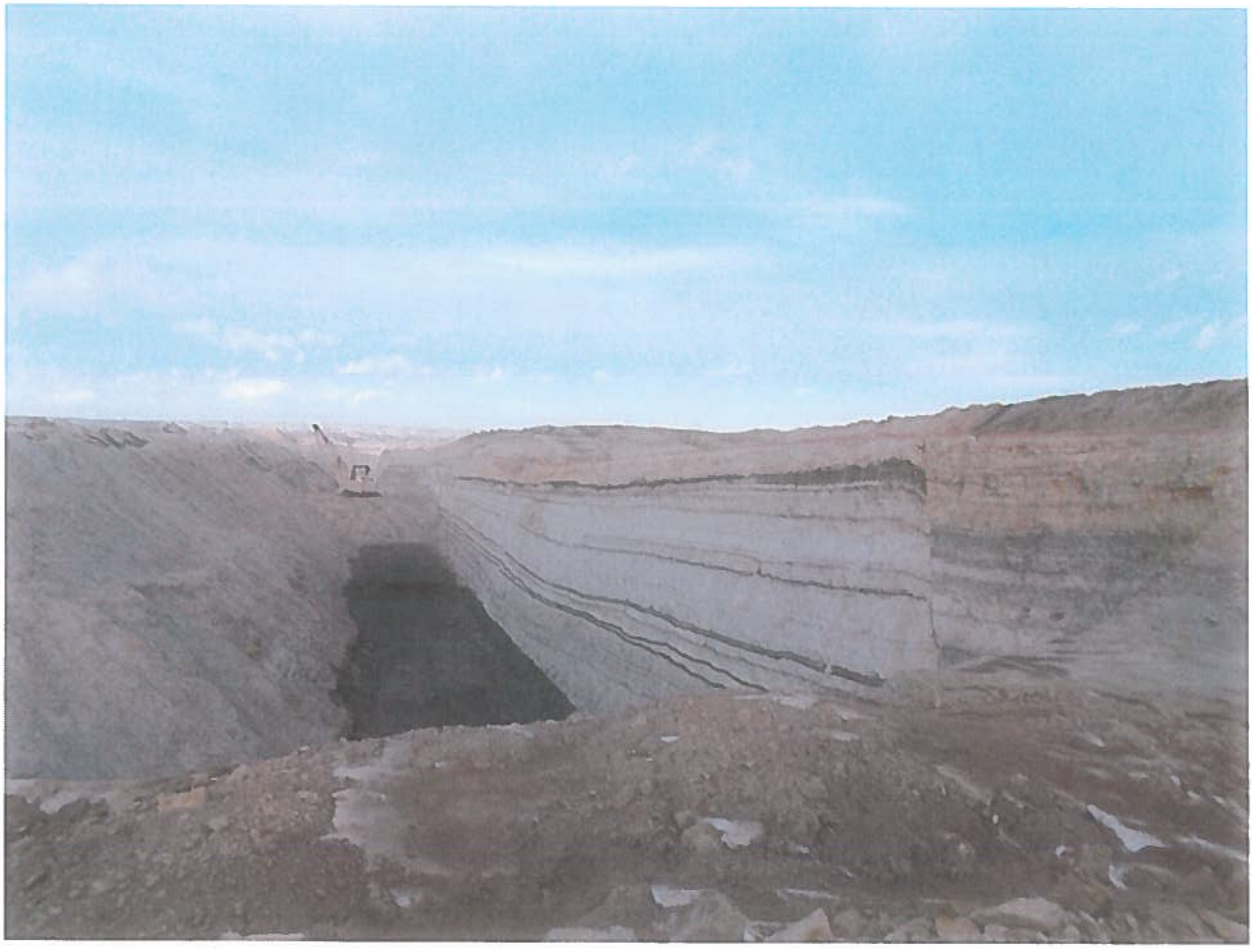
Black Butte Coal Mine Exceptional Events Documentation for the Event on January 13, 2014 Pit 10 TEOM Location

Produced by:

Black Butte Coal Company

April 29, 2014



EXECUTIVE SUMMARY

On January 13, 2014 the Pit 10 TEOM located at Black Butte mine in Sweetwater County, Wyoming recorded 24-hour average concentrations of 166.3 $\mu g/m^3$. 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 $\mu g/m^3$ 24 hr PM10 standard that occurred at the Black Butte Mine on January 13, 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 January 13, 2014 was a result of natural events that were not reasonably controllable or preventable.

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 in Pit 10 and Pit 1.

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 January 13, 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 13th 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 January 13, 2014 was not reasonably controllable or preventable.

Section V of this report provides the graphical data evidence that the event on January 13, 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 January 13, 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 in Pit 10.

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 January 13, 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 13th that resulted in the exceedance of the 24-hour PM10 standard.

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Section VI of this report builds upon the data provided in Sections II through V to provide clear evidence that no exceedance on January 13, 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

Black Butte Coal mine, located in Sweetwater County, Wyoming is a surface coal mining operation with annual production between 2 and 6 million tons per year. Mining operations consist of multiple open cut pits of varying depth, seam quality and thickness. Overburden removal is primarily done by two BE 1570 draglines, one 17 yard Komatsu PC2000 Hydraulic excavator, one Cat 992 Front-end loader, one Komatsu WA900 Front-end loader and a fleet of Cat 777 haul trucks. Production and maintenance operations run 24 hours a day, 7 days and week on 12 hour shifts. Shift start and stop times are from 6 to 6. Due to multiple pits and the large permit area of Black Butte the mines air quality is monitored by 4 TEOM's at various locations of the mine's boundary. Active mining operations are being done in Pit's 10, 11 and 14. Reclamation activities are taking place in Pit's 3, 5, 8 and 9. No production operations are currently taking place in those pits. The mine is bi-sected by the Union Pacific (UP) main line. Dragline #1 operates on the Northeast side of the UP line in Pits 10 and 11, and Dragline #2 operates on the southwest side of the UP line in Pit 14. Figure I.1 shows the current pit boundaries and TEOM locations.

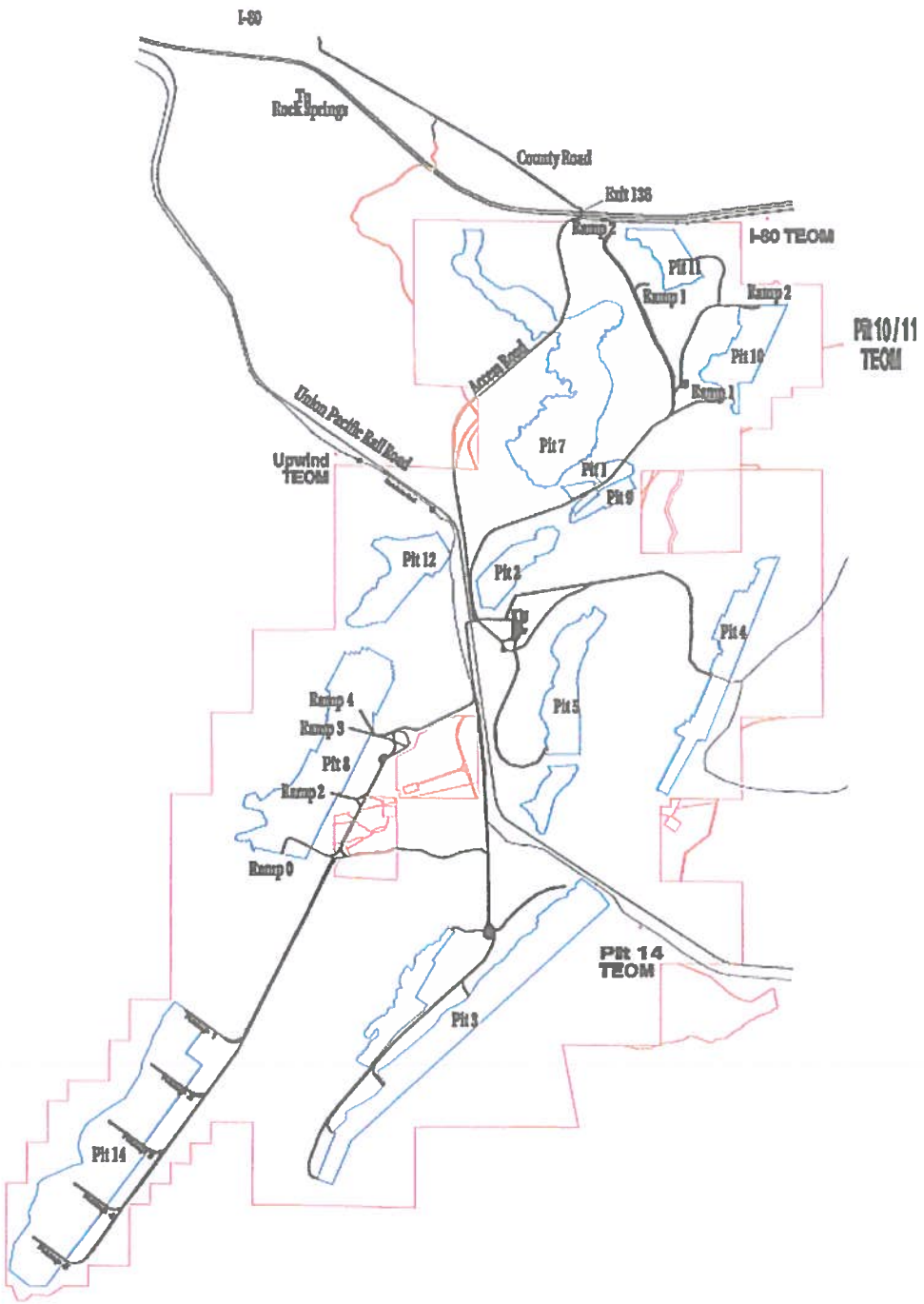


Figure I.1

On the day of the event, January 13, 2014, Dragline #1 was located in the South end of Pit 10. It had been idled since 10:00 pm on January 12th due to high winds and the anticipation of high PM10 readings. Three D11 dozers had been working in Pit 1 on final reclamation of this Pit on the 12th, but those machines were idled at 10:00 pm on the 12th also due to high winds and the expectation of worse. No other operations had been taking place in the Pit 10 area for several days prior to the 12th. No operations

took place in Pit 10, Pit 11, Pit 1 or Pit 9 at anytime on January 13, 2014. The only equipment activity that happened in these areas on the 13th were Water Trucks applying water in an attempt to control the fugitive dust and pickup trucks being driven to complete Federally required safety inspections and to monitor dust suppression activities. Figure I.2 shows the location of equipment prior to and during the date of January 13, 2014.

Figure I.2

The mine had been experiencing relatively high winds and resultant high PM10 concentrations for several days prior and had idled or moved operations to other areas that were less affected by the high winds. On January 12th Dragline #1 had been removing overburden on the south end of Pit10. D11 dozers had been regrading spoils in Pit 1.

Dragline #2 was working in Pit 14 and all truck operations had been moved to Pit 14 on the south end of the mine.

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

Starting on January 12, 2014 southwest Wyoming started experiencing relatively high wind speeds throughout the day. In response to our approved Air Quality Action Plan equipment that may have been contributing to fugitive dust was idled until wind speeds decreased. Dragline operation had been taking place in Pit 10 and dozer reclamation had been taking place in Pit 1. Both of these operations were idled during day shift on the 12th due to relatively high 1-hr PM10 concentrations at the Pit 10 TEOM. By the end of day shift on the 12th, wind speeds had decreased and the resulting PM10 concentrations had dropped to below action levels that required idling equipment. By 10:00 pm on the 12th wind speeds had begun to increase again and dragline operations in Pit 10 and dozer operations in Pit 1 were again idled. Water truck 19-1007 spent all of day shift and night shift on the 12th watering areas that it is capable of reaching in an attempt to control fugitive dust. There are areas where it is neither safe nor possible from an engineering standpoint for a water truck to reach. These areas would include recently shot overburden, active dragline spoils, regraded spoils, topsoiled and seeded reclamation, topsoil stockpiles and native undisturbed areas. Areas of these types exist in both Pit 10 and Pit 1. Operations continued in the Pit 14 area of the mine on the 12th as dust levels never reached an action level in this area. Water trucks were not needed at any of the active operation on the 12th or the 13th as fugitive dust was neither a health or safety concern in the areas where these operations were taking place.

During all 24 hours of January 13, 2014 all operations had been idled with only water truck and pickups being operated in Pit 10, Pit 11 and Pit 1 for the entire day. From 6:00 pm on January 12th to 6:00 am January 13th a total of 85,000 gallons of water had been applied to the Pit 10 area of the mine. From 6:00 am to 6:00 pm January 13 a total of 68,000 gallons of water had been applied to the Pit 10 area. From 6:00 pm on January 13 to 6:00 am January 14 a total of 136,000 gallons of water had been applied to the Pit 10 area. Areas that water was applied in the Pit 10 mine area included haul roads, Pit 10 floor, Pit 10 overburden removal benches, Pit 10 highwall, Pit 10 highwall berms, Pit 10 topsoil prestrip, Dragline 1 access and bench and the inactive spoils in Pit 10. There were no areas that we are either required to or allowed to apply water that were not treated.

Figure II.1 Water Application on temp haulroad.

Figure II.2 Water application on topsoil prestrip.

Figure II.3 Water application on Pit 10 highwall and berms.

Figure II.4 Water application on Pit 10 highwall and prestrip.

Figure II.5 Water application on prestrip and native.

Figure II.6 Water application on highwall and berms.

Date/Time	Wind Speed / Direction	Hourly PM10 Pit 10 ($\mu g/m^3$)	24-Hour PM10 Pit 10 ($\mu g/m^3$)	Actions
1/12/14 06:00 pm	17.5/267	90.4	79.9	Dragline 1 assigned to work in Pit 10. D11's assigned to work in Pit 1 reclamation. Water truck assigned to apply water to Pit 10 and Pit 1 work areas, as applicable.
1/12/14 10:00 pm	11.6/262	49	95.1	Dragline 1 in Pit 10 and D11 operations in Pit 1 idled due to expectation of high winds. Water truck continued to work in Pit 10 area.
1/13/14 12:00 am	19.3/259	59.2	99	Operations remained idle. Water truck continued to apply water to affected areas.
1/13/14 04:00 am	28.1/267	69.6	106.1	Max wind speed reached 49.5 mph. Operations remained idle. Water truck continued to apply water to affected areas.
1/13/14 08:00 am	20/261	16.8	105.7	Operations remained idle. Water truck continued to apply water to affected areas.
1/13/14 12:00 pm	27.2/261	710.7	134.8	Max wind speed reached 52.2 mph. Operations remained idle. Water truck continued to apply water to affected areas
1/13/14 01:00 pm	30.4/269	1124.6	160	Highest sustained wind speed of the day. Operations remained idle. Water truck continued to apply water to affected areas.
1/13/14 11:00 pm	18.3/270	14.6	168	Wind speeds finally dropped below 20 mph, max wind speeds still in the 30's. Operations remained idle. Water truck continued to apply water to affected areas.
1/14/12:00 am	17.9/276	17	166.3	Operations remained idle. Water truck continued to apply water to affected areas.

Table II.1

Operations in Pit 10 and Pit1 remained idled until the start of Day shift, 6:00 am, on January 14th.

III. METEROLOGICAL CONDITIONS ON MARCH 17, 2013 AND ITS EFFECT ON AIR QUALITY

As collected average hourly data on January 13, 2014 resulted in an average wind speed of 24.7 mph, maximum wind speed of 30.4 mph and minimum wind speed of 17.9 mph. The predominant wind direction was from the West sector with 92% of the possible winds coming from the West. Maximum recorded wind speed on this day was 52.2 mph, recorded at 12:00 pm. Appendix A includes charts and graphs of wind speed and direction for January 13, 2014. The mine started seeing sustained 1-hour wind speeds in excess of 25 mph at 4:00 am. Hourly wind speed readings remained above the 20 mph mark until 11:00 pm. The maximum 1-hour wind speed recorded on January 13 was 30.4 mph. During this exact same time period the mine recorded wind gusts in excess of 50 mph with the maximum wind speed of 52.2 mph. The three highest hourly PM10 recordings on January 13, 2014 for the Pit 10 TEOM correspond with the increase in hourly wind speed and with the spikes in the maximum wind speeds. As has been seen in prior exceedances when wind speeds reach in excess of 50 mph we see spikes in the hourly PM 10 readings at the Pit 10 TEOM. These spikes have shown to occur even when all operations contributing to fugitive dust have been shut down, all required actions of the approved Air Quality Action Plan are being taken and all conditions of our Air Quality permit are being met. This was the case on January 13, 2014.

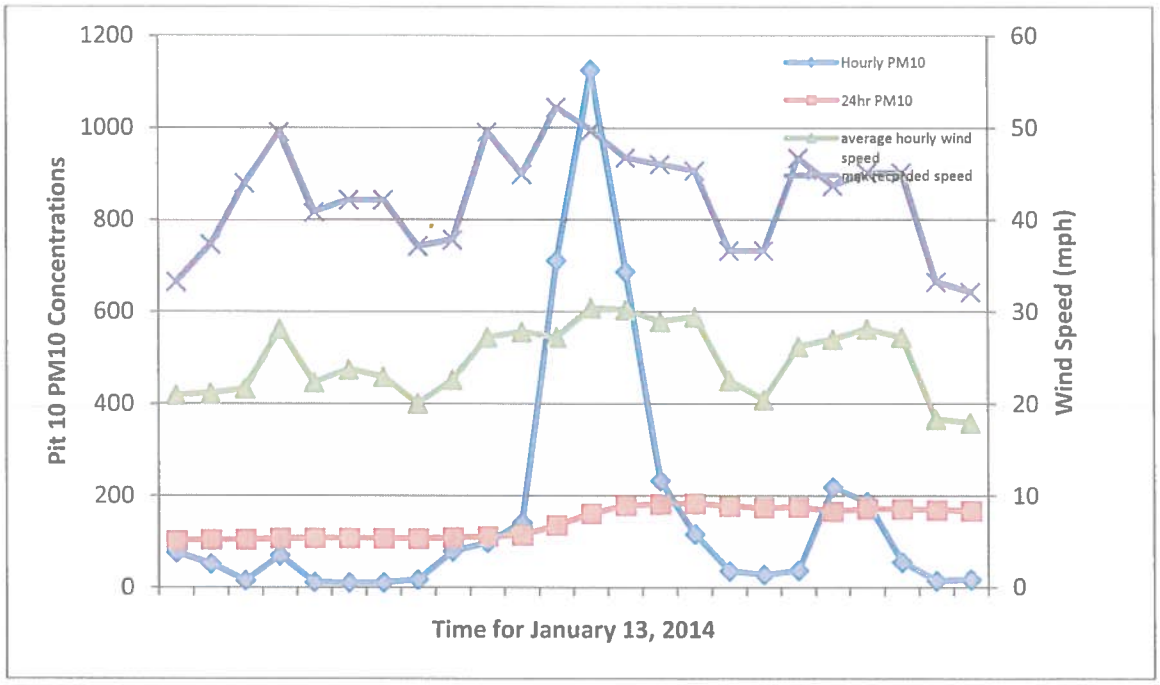


Figure III.1

Figure III.1 shows the correlation of wind speed and PM10 concentrations recorded on January 13, 2014 for the Pit 10 TEOM. As has been seen in the past once sustained wind speeds go above the 30 mph mark the approved controls utilized by Black Butte Coal begin to have diminished effectiveness.

Table III.1 provides the maximum wind speed recorded during each hour and the corresponding Hourly PM10 concentration recorded at the Pit 10 TEOM.

Time	Hourly Wind Speed (mph)	Max Wind Speed (mph)	Pit 10 Hourly PM10 Conc. ($\mu g/m^3$)
01/13/2014 01:00 AM	20.9	33.2	75.4
01/13/2014 02:00 AM	21.1	37.3	50.9
01/13/2014 03:00 AM	21.6	44	14.7
01/13/2014 04:00 AM	28.1	49.5	69.6
01/13/2014 05:00 AM	22.3	40.8	11.3
01/13/2014 05:00 AM	23.7	42.1	10
01/13/2014 07:00 AM	22.9	42.1	10.4
01/13/2014 08:00 AM	20	37.1	16.8
01/13/2014 09:00 AM	22.6	37.8	78.6
01/13/2014 10:00 AM	27.2	49.5	97.2
01/13/2014 11:00 AM	27.8	44.9	140.9
01/13/2014 12:00 PM	27.2	52.2	710.7
01/13/2014 01:00 PM	30.4	49.7	1124.6
01/13/2014 02:00 PM	30.2	46.7	686.5
01/13/2014 03:00 PM	28.9	46	232.3
01/13/2014 04:00 PM	29.4	45.3	115.8
01/13/2014 05:00 PM	22.5	36.6	35.4
01/13/2014 06:00 PM	20.4	36.6	27.5
01/13/2014 07:00 PM	26.2	46.7	36.7
01/13/2014 08:00 PM	27	43.7	217.7
01/13/2014 09:00 PM	28.1	45.1	186.1
01/13/2014 10:00 PM	27.2	45.1	54.9
01/13/2014 11:00 PM	18.3	33.2	14.6
01/14/2014 12:00 AM	17.9	32.1	17

Table III.1

Data collected on January 13, 2014 from the Upwind TEOM shows minimal readings for the entire day.

Time	Hourly Wind Speed (mph)	Max Wind Speed (mph)	Hourly PM10 Concentrations ($\mu g/m^3$)	24 Hour PM10 Concentrations ($\mu g/m^3$)
01/13/2014 01:00 AM	20.9	33.2	6.3	11.7
01/13/2014 02:00 AM	21.1	37.3	6.8	12.1
01/13/2014 03:00 AM	21.6	44	15.1	12.6
01/13/2014 04:00 AM	28.1	49.5	9	12.7
01/13/2014 05:00 AM	22.3	40.8	9.7	12.9
01/13/2014 05:00 AM	23.7	42.1	12.6	13.4
01/13/2014 07:00 AM	22.9	42.1	9.4	13.5
01/13/2014 08:00 AM	20	37.1	8.2	13.6
01/13/2014 09:00 AM	22.6	37.8	7	13.4
01/13/2014 10:00 AM	27.2	49.5	13.4	13
01/13/2014 11:00 AM	27.8	44.9	13.9	13.2
01/13/2014 12:00 PM	27.2	52.2	16.1	13.4
01/13/2014 01:00 PM	30.4	49.7	16.8	13.6
01/13/2014 02:00 PM	30.2	46.7	10.7	13.6
01/13/2014 03:00 PM	28.9	46	6.9	13.4
01/13/2014 04:00 PM	29.4	45.3	6.5	13
01/13/2014 05:00 PM	22.5	36.6	7.8	12.9
01/13/2014 06:00 PM	20.4	36.6	10.7	13
01/13/2014 07:00 PM	26.2	46.7	12.7	10.1
01/13/2014 08:00 PM	27	43.7	7.1	9.9
01/13/2014 09:00 PM	28.1	45.1	7.1	9.8
01/13/2014 10:00 PM	27.2	45.1	8.8	9.9
01/13/2014 11:00 PM	18.3	33.2	7.2	9.9
01/14/2014 12:00 AM	17.9	32.1	6.3	11.7

Table III.2 Upwind TEOM PM10 data

IV. EVENT WAS NOT REASONABLY CONTROLLABLE OR PREVENTABLE

Mining operations had not taken place in Pit 10 since 10:00 pm on January 12, 2014. At that time Dragline 1 was uncovering coal in Pit 10 and D11 dozers were completing final spoil regrade in Pit 1. No other operations were taking place on the North end of the mine. At 10:00 pm Dragline #1 and the D11's were idled in anticipation of high winds. The only work that was done from 10:00 pm January 12 to 12:00 am January 14, 2014, on the North end of the mine was water truck placement of water to control fugitive dust, pickup truck traffic to complete Federally required work area safety inspections and monitoring of dust control efforts and effectiveness.

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 $\mu g/m^3$ 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 Pit 10 operations were idled for the entire day. No operations were taking place in Pit 11. Dozer operations in Pit 1 had been idled for the entire day. Appendix C includes the Action Plan Event Logs for the shifts that covered the 13th. The Action Plan Event Log (Appendix B) shows that records were taken.

Date/Time	Wind Speed	Hourly PM10	24-Hour PM10	Actions	Action Plan Response
01/13/2014 01:00 AM	20.9	75.4	100.9	Dragline #1 in Pit 10 and Dozers in Pit 1 had been idled since the 12th. Water truck continued applying water in the Pit 10, Pit11 and Pit 1 areas.	90 $\mu g/m^3$ 24hr level reached. Documentation had already begun. Operations had already been shutdown earlier in the shift. All available water trucks were already dedicated to combating dust in the Pit 10 area. Notifications took place.
01/13/2014 02:00 AM	21.1	50.9	103	Operations idle water truck dedicated to this area.	Same as above.
01/13/2014 03:00 AM	21.6	14.7	103.5	Same as above.	Same as above.
01/13/2014 04:00 AM	28.1	69.6	106.1	Same as above.	Same as above.
01/13/2014 05:00 AM	22.3	11.3	106.5	Same as above.	Same as above.
01/13/2014 05:00 AM	23.7	10	106.5	Same as above.	Same as above.
01/13/2014 07:00 AM	22.9	10.4	106.4	Same as above.	Same as above.
01/13/2014 08:00 AM	20	16.8	105.7	Same as above.	Same as above.
01/13/2014 09:00 AM	22.6	78.6	108.4	Same as above.	Same as above.
01/13/2014 10:00 AM	27.2	97.2	110.5	Same as above.	110 $\mu g/m^3$ 24hr level reached. Same as above.
01/13/2014 11:00 AM	27.8	140.9	113.3	Same as above.	Same as above.
01/13/2014 12:00 PM	27.2	710.7	134.8	Same as above.	130 $\mu g/m^3$ 24hr level reached. Same as above.
01/13/2014 01:00 PM	30.4	1124.6	160	Same as above.	Same as above.
01/13/2014 02:00 PM	30.2	686.5	177.8	Same as above.	Same as above.
01/13/2014 03:00 PM	28.9	232.3	180.8	Same as above.	Same as above.
01/13/2014 04:00 PM	29.4	115.8	182.3	Same as above.	Same as above.
01/13/2014 05:00 PM	22.5	35.4	176.1	Same as above.	Same as above.
01/13/2014 06:00 PM	20.4	27.5	173.1	Same as above.	Same as above.
01/13/2014 07:00 PM	26.2	36.7	174.1	Same as above.	Same as above.
01/13/2014 08:00 PM	27	217.7	165.1	Same as above.	Same as above.
01/13/2014 09:00 PM	28.1	186.1	170.2	Same as above.	Same as above.
01/13/2014 10:00 PM	27.2	54.9	170	Same as above.	Same as above.
01/13/2014 11:00 PM	18.3	14.6	168	Same as above.	Same as above.
01/14/2014 12:00 AM	17.9	17	166.3	Same as above.	Same as above.

Table IV.1 Hourly weather, Pit 10 PM10 concentrations, mine actions taken

The information presented in this Section clearly demonstrates that all actions taken on the 13th were in accordance with the mine's Air Monitoring Action Plan and that despite these efforts the strength and speed of the storm created conditions that those efforts could not overcome.

BEST AVAILABLE CONTROL MEASURES

Best Available Control Measures (BACM) in place and in use at the Pit 10 and Pit 11 area of Black Butte on the 13th of January and prior to this day include the following measures; treatment of inactive spoil piles in Pit 10 and 11 with water and chemicals to control fugitive dust, treatment of disturbed pre-strip areas in Pit 10 and 11 with water and chemicals to control fugitive dust, chemical treatments at least twice a year and water treatments as needed throughout the year on permanent haul roads, treatment of temporary haul roads with water or chemicals, temporary vegetative cover applied to topsoiled areas that

will not receive permanent seeding within 60 days of topsoil laydown and mitigation of coal fires from spontaneous combustion.

Condition 14 of Black Buttes air quality permit states that we must treat inactive spoils in Pit 10 and 11 with water **or** chemical dust suppression on a schedule such that treatments remains a viable control measure. Inactive spoil piles in the Pit 10 and 11 areas' are located within the dragline pit. These areas had received treatments of water at various times throughout the year. Additionally, these areas received treatments with chemical dust suppression. Out of pit stockpiles had received treatment in the form of chemical dust suppression in late 2013. These areas also receive additional treatments with water when the need arises. This took place on the 13th.

Condition 15 of Black Buttes air quality permit states that the mine shall treat disturbed prestrip areas in Pit 10 and 11 with water or chemical suppressants to control fugitive dust. Newly stripped areas in Pit 10 and Pit 11 shall be treated within 7 days of completion of stripping. Prestrip areas in Pit 10 and Pit 11 received chemical dust suppression treatments on multiple dates in 2013. These areas also receive water treatments as the need and ability arises. These areas were treated on the 13th with water. These areas were inspected for compliance by AQD representative Mr. Jeff Wendt on November 19th, 2013.

Chemical treatments of the permanent haulroads in Pit 10 and Pit 11 occurred in summer 2013. Water treatments of these areas occurred as needed prior to and during the event of January 13, 2014.

Action Plan Event Logs which list the number of water truck loads and the areas it is applied are included in Appendix B.

The final BACM in place at Black Butte is the approved Air Monitoring Action Plan for Black Butte mine. As demonstrated in Section IV of this report the Air Monitoring Action Plan was followed exactly as required on the day in question.

The information contained in this section clearly demonstrates that all required and reasonable control measures were in place and being utilized prior to and during the January 13, 2014 event.

BEST AVAILABLE CONTROL TECHNOLOGY

Best Available Control Technology required at Black Butte consists of the TEOM network in place at the mine and Meteorological station. The TEOM network consists of 5 TEOM's located throughout the mine. The TEOM network sends wireless information on an hourly basis to a central database located in the mine office area. Automatic notification is sent via email to Managers, engineers, supervisors and leadmen at the mine when action levels are reached. The met station in located at the office area and transmits data over a radio network to the mines central database. Data for both the TEOM's and Met station is managed and compiled by IML and downloaded to a website managed by them.

The TEOM's are calibrated on no more than a monthly basis and a quarterly report of the data quality and recordings is prepared and distributed to the WYDEQ-AQD. Calibrations of the TEOM's are primarily done by mine personnel but occasions do arise where the mine contracts that work out if needed.

Distribution, construction and maintenance of the TEOM's and Met Station are all in accordance with Black Buttes Air Quality permit MD-7424

All controls required by the mine's Action Plan were in effect on the 13th. All controls required by the mine's Action plan had been in effect and utilized since day one of 2014. All conditions of the mines Air Quality Permit, MD-7424 were being met. Specifically, Conditions 14, 15, 16 and 17 had been adhered to. Chemical dust suppression had been utilized in all required and needed areas of the mine since the middle of 2013. This was verified by In addition to the controls of the action plan the mine had treated prestrip areas in Pit's 10 and 11 with water to control dust. Inactive spoil piles that were accessible to a water truck had been treated as well. These areas of the mine had been treated at various times, as needed throughout the winter and spring. Beginning on the 12th of January and going through the 13th of January the Pit 10 roads, prestrip areas, spoil areas, out-of-pit spoil areas and highwall areas had been treated with a total of xx gallons of water.

The mine utilized all required controls according to our Wyoming Department of Environmental Quality – Air Quality Division approved action plan. The required control methods under the action plan are reasonable and have proven effective in the past. However, as with any control method, there exists a limit to the effectiveness. The high wind conditions that existed on the 12th and 13th overwhelmed the controls in place at the mine. Given that the mine did not operate any equipment in the affected area of the mine for more than the day in question and the all required control methods were in place and utilized including the application of chemical dust suppression, the question must be asked, "What more could or should have been done to prevent the exceedance? It is rational to determine that no reasonable controls would have been available to overcome the conditions present on the 13th of January, 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 April 27, 2014. Time series plots of the hourly readings from October, 2010 through April, 2014 were created for the Pit 10 monitor. Additionally data was compiled for the time period of May 5, 2009 through April, 2014. A shorter time period was used in this graph to make the graphical depiction clearer.

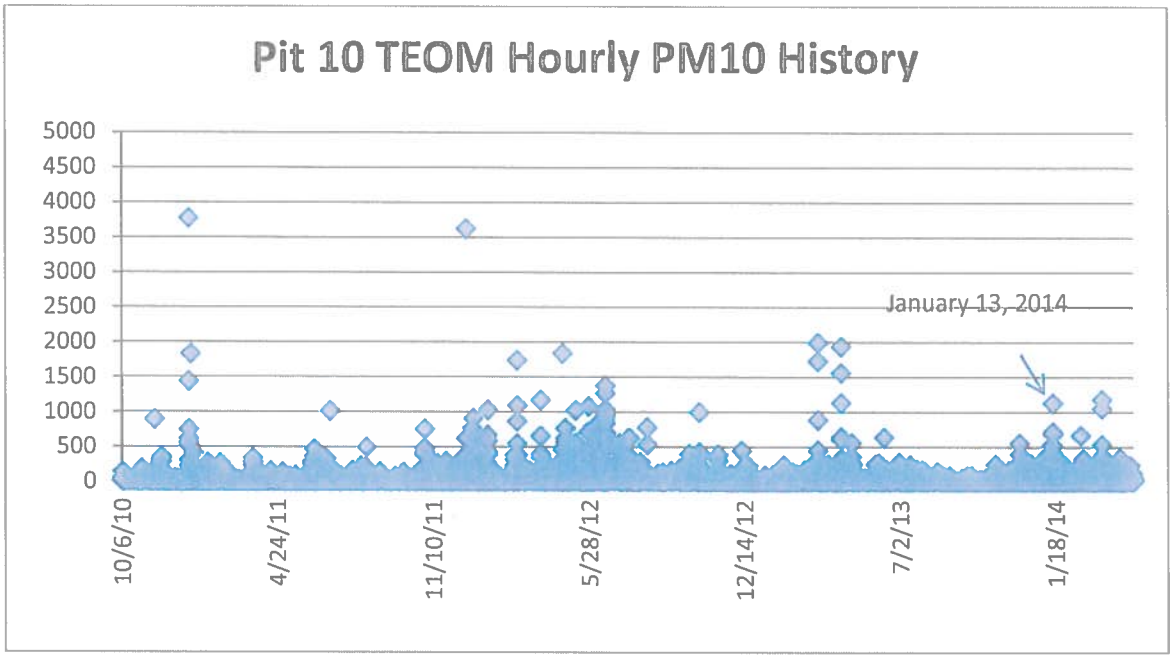


Figure V.1

Time series graphs were also produced for the PM10 daily averages over a five year span from May 5, 2009 through February 28, 2014. Out of a total of 1,776 valid data points only 5 readings were above the 166 $\mu g/m^3$ mark. This places the January 13, 2014 daily reading of 166.3 $\mu g/m^3$ in the 99.9 percentile of all daily readings in the last 5 years.

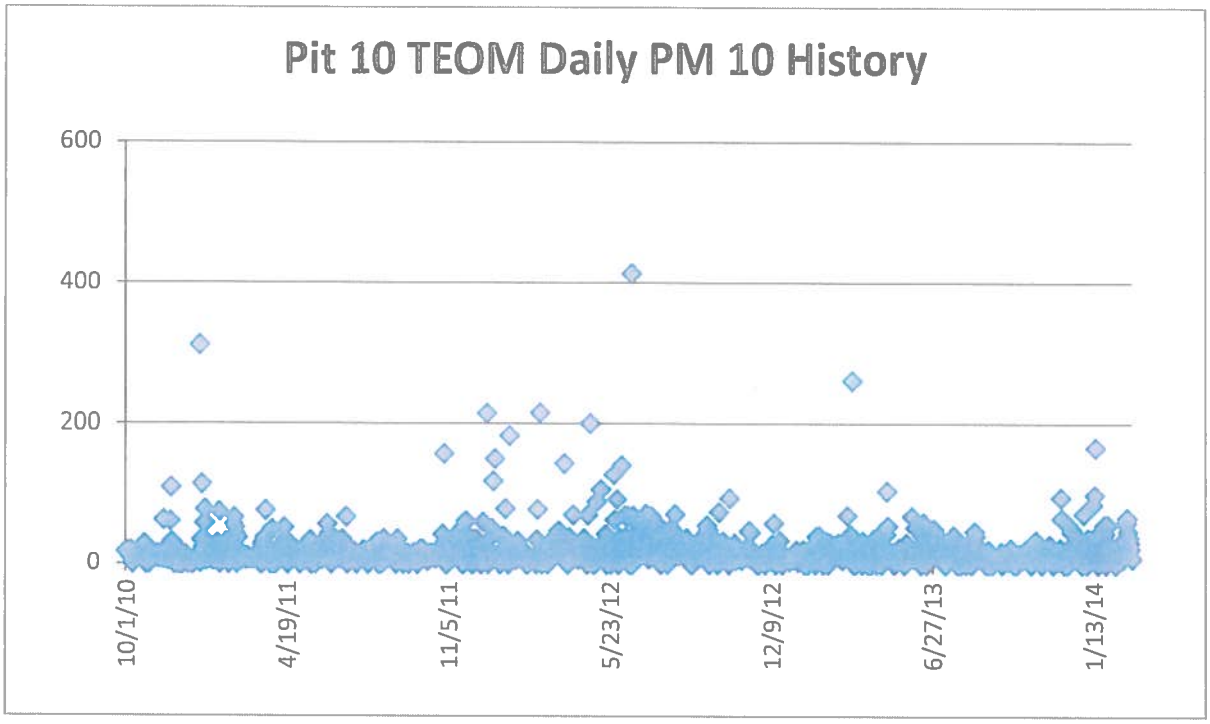


Figure V.2

This same methodology and data interpretation was used by the Arizona Department of Environmental Quality (ADEQ) to support their conclusion that PM10 data recorded in the Phoenix area on July 2-8, 2011 should be excluded. The historical fluctuations shown by the ADEQ showed that daily maximum hourly average and 24-hour averages of PM10 concentrations seen during the time period of July 2-8 were some of the highest readings seen in the last 5 years, but not necessarily the highest seen. The ADEQ also showed that the PM10 readings during the July 2-8 period were amongst the top ten events in the last 5 years and these same readings were in the 99.5th percentile when compared to 5 year historical data. This conclusion was supported and documented by the EPA as meeting the criteria set by 40 CFR Section 50.14(c)(3)(iii) for historical fluctuations.

In the case of the event on January 13, 2014 at the Pit 10 TEOM, the 24-hour reading was in the 99.9th percentile.

Section V clearly demonstrates that the event that occurred on January 13, 2014 as a result of the high winds experienced that day was far outside of normal historical fluctuations. Historical data was determined going back to May 5, 2009 for the Pit 10 TEOM.

VI. NO EXCEEDANCE OR VIOLATION BUT FOR THE EVENT

Section IV of this report details the compelling evidence that the exceedance which occurred on January 13, 2014 was not reasonably controllable or preventable. Section III of this report provided the detail to determine that the there exists a clear causal relationship between the high wind events that carried PM10 particulates and the exceedance as measured by the Pit 10 TEOM. Section V of this report provides overwhelming evidence that the event was far outside normal historical fluctuations seen at the Pit 10 TEOM location for Black Butte mine. 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.

Given that no equipment was in operation on the North end of the mine for the entire day. Given that a water truck was dedicated to applying water to all accessible areas of Pit 10, Pit 11 and Pit 1 for the entire day. Given that all conditions of permit MD-7424 were in compliance. Given that the Inactive spoils, Out of Pit Stockpiles, Prestrip and haulroads had been treated with a chemical dust suppression. Given that the application of this dust suppression had been inspected as recently as November 19, 2013 by Mr. Jeff Wendt and had received very positive feedback on its application and effectiveness from the AQD inspector. Given all of these items it is clear that Black Butte Mine applied all reasonable and required control measures. Furthermore it is clear that despite all reasonable controls being in place and utilized the sustained high winds overwhelmed these controls and that this is the direct cause of the exceedance. Had the sustained high wind event not occurred on January 12 and 13th then it is reasonable to assume that the exceedance would not have happened.

VII. CONCLUSIONS

The exceedance's that occurred on January 13, 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 January 13, 2014.

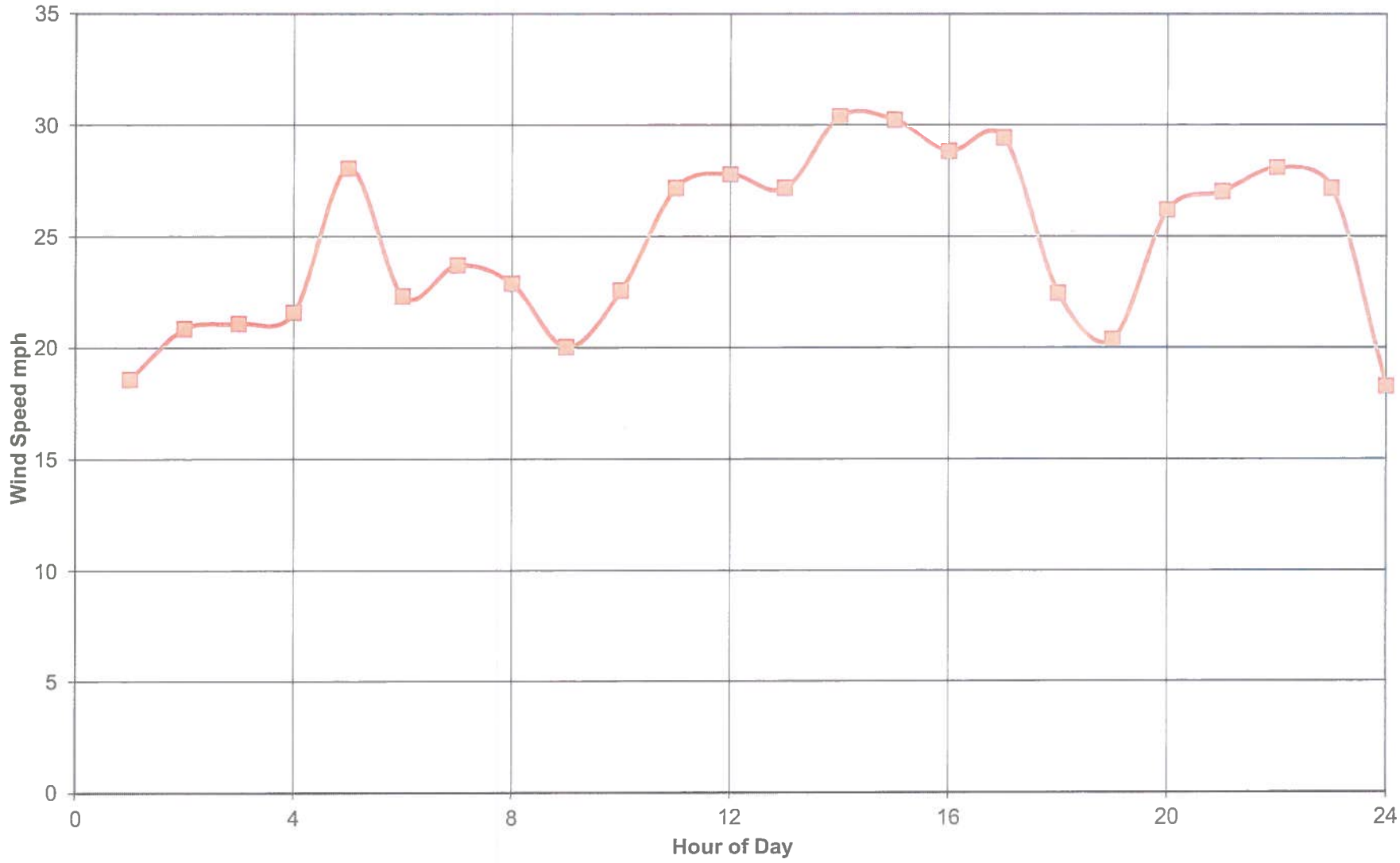
The exceedance's on January 13, 2014 of the federal 24-hour PM10 standard would not have occurred but for the high western winds driving windblown dust, based on the following evidence:

- Graphs showing the relationship of high winds, and the associated elevated PM10 readings at the Pit 10 TEOM.
- Photographic evidence and written notes detailing the actions taken before and during the event.
- 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

January 13, 2014 Wind Speed and Direction

Diurnal Average Wind Speed



Black Butte Mine

Meteorological Data Summary

1/13/2014 - 1/13/2014

Hourly Data

	Average/Total	Max	Min
Wind Speed (mph)	24.6	30.4	17.9
Sigma-Theta (°)	8.6	10.5	7.3
Temperature (C)	-2.0	0.6	-5.4
Precipitation (in)	0.00	0.00	

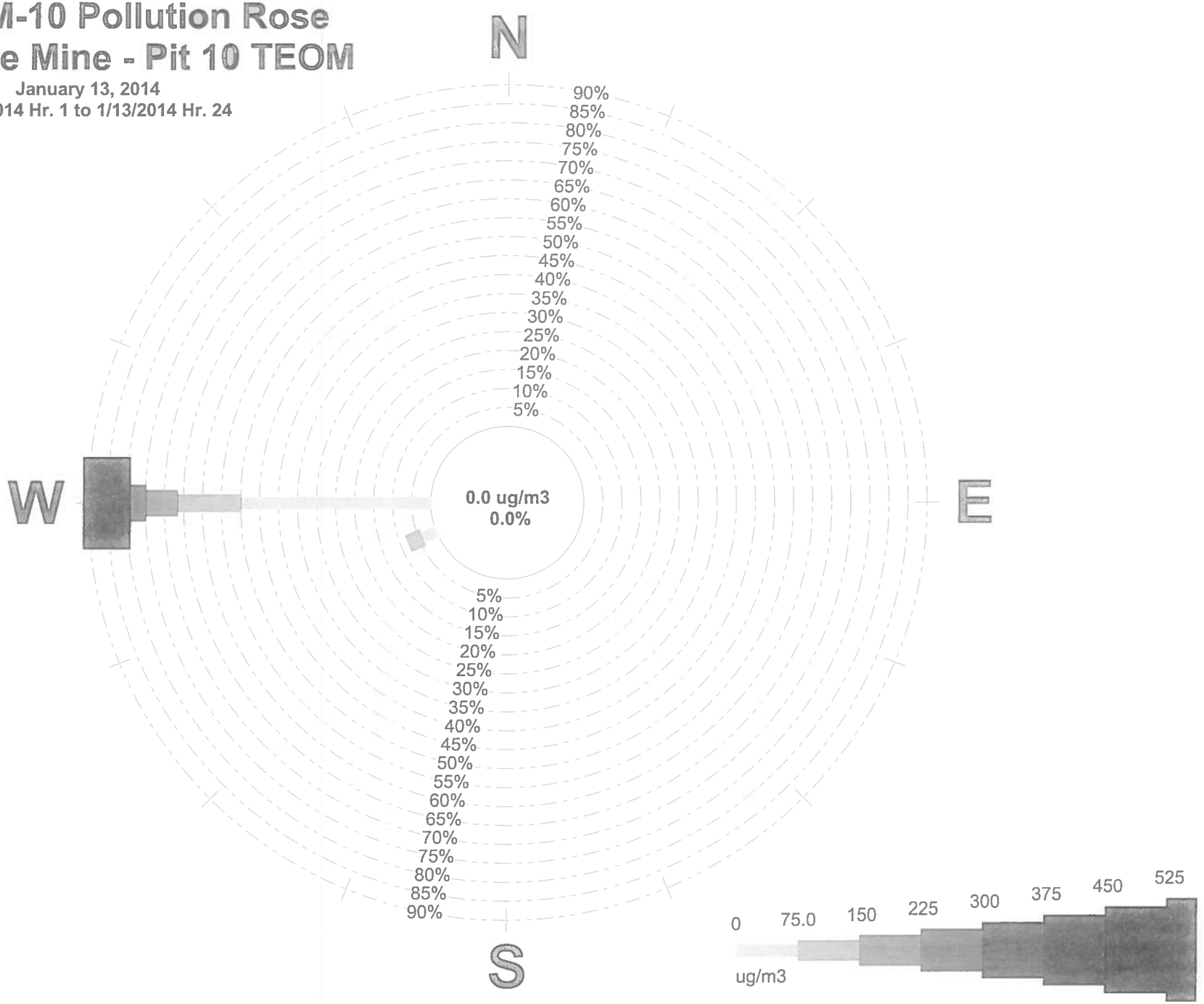
Predominant wind direction was from the W sector, accounting for 91.7% of the possible winds

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%

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

January 13, 2014
1/13/2014 Hr. 1 to 1/13/2014 Hr. 24



TEOM PM-10 Pollution Rose
Black Butte Mine - Pit 10 TEOM
January 13, 2014
1/13/2014 Hr. 1 to 1/13/2014 Hr. 24

RELATIVE FREQUENCY (% of Recorded Winds) TABLE

ug/m3

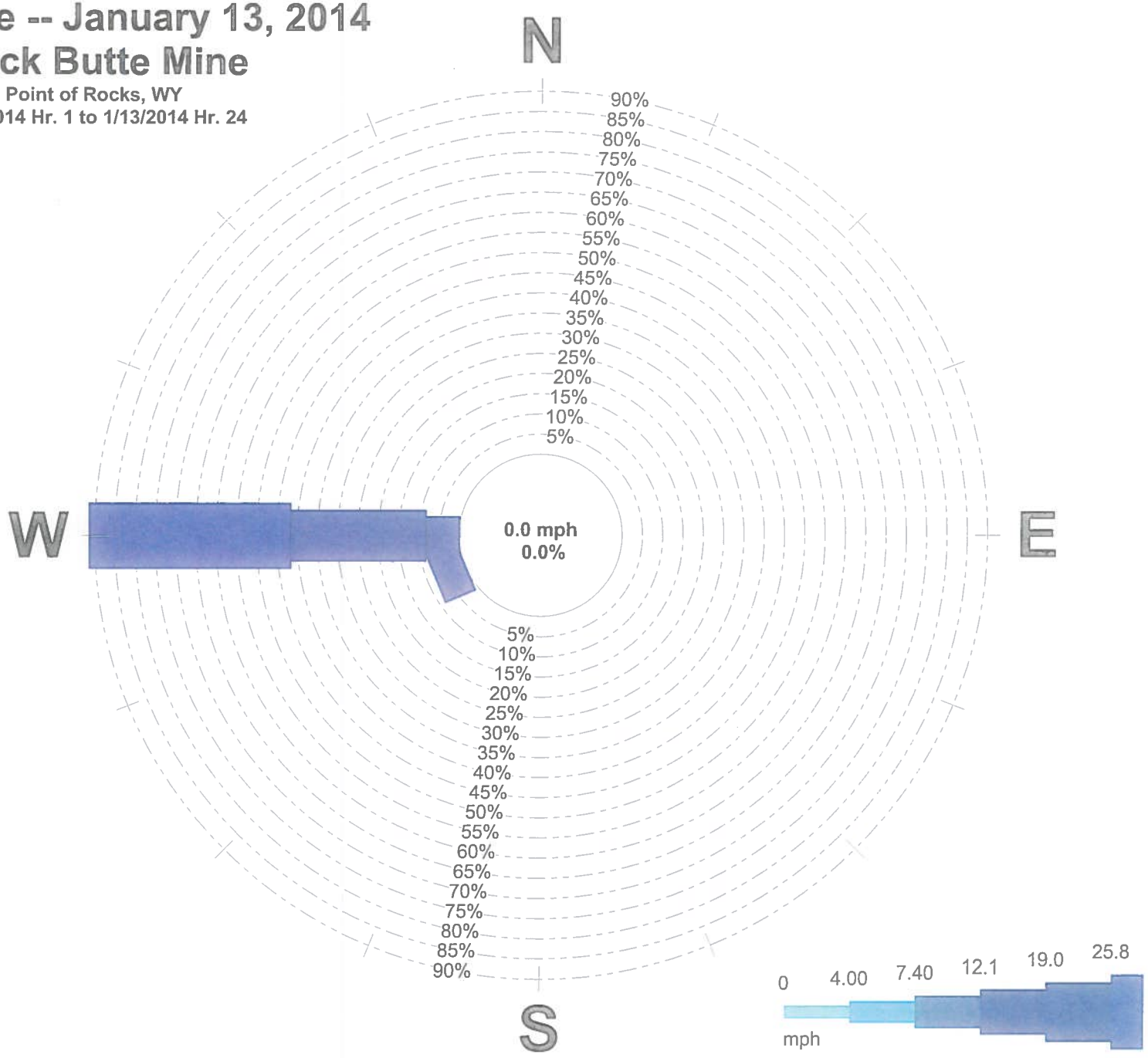
Wind Direction	0.0-75.0	75.0- 150	150- 225	225- 300	300- 375	375- 450	450- 525	525-above	Row Total
0.0 deg.(North)									0.0
22.5 deg.									0.0
45.0 deg.									0.0
67.5 deg.									0.0
90.0 deg.									0.0
112.5 deg.									0.0
135.0 deg.									0.0
157.5 deg.									0.0
180.0 deg.									0.0
202.5 deg.									0.0
225.0 deg.									0.0
247.5 deg.	4.2	4.2							8.3
270.0 deg.	50.0	16.7	8.3	4.2				12.5	91.7
292.5 deg.									0.0
315.0 deg.									0.0
337.5 deg.									0.0
	54.2	20.8	8.3	4.2	0.0	0.0	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%

Wind Rose -- January 13, 2014
Black Butte Mine

Point of Rocks, WY
1/13/2014 Hr. 1 to 1/13/2014 Hr. 24



APPENDIX B

Action Plan Event Log Action Report for January 13, 2014

Action Plan Event Log
Action Report

1-13-14
Day Shift

THIS REPORT WILL BE COMPLETED IN 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/m³ (1-hour)			70 ug/m³ (24-hour)			90 ug/m³ (24-hour)			110 ug/m³ (24-hour)			130 ug/m³ (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	1/12/14	8:00 Pm	423												
I-80															
Pit 14															
Leucite															
UPWIND															

P.t10 1/13/14 12:00pm 710

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 emmission in Section VI of this report. Also, fill out the supplemental information for each applicable area. Take photograph's 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	
X Pit 10 assist bench	(Yes) / No	6 am/pm	____loads	
____ 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	
X Pit 10 pre-strip	(Yes) / No	6 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	
____ Pit 11 topsoil pile	Yes / No	____am/pm	____loads	
____ Pit 10 hopper/stockpile	Yes / No	____am/pm	____loads	
____ Pit 8 stilling shed/ stockpile	Yes / No	____am/pm	____loads	
____ 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	
X Pit 10 spoils	(Yes) / No	6 am/pm	4 loads	6AM-6PM
____	Yes / No	____am/pm	____loads	
____	Yes / No	____am/pm	____loads	
____	Yes / No	____am/pm	____loads	
____	Yes / No	____am/pm	____loads	

4 loads Total to Pit 10

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	Yes / (No)		Down 12 hrs W/O 302640 Needs liner #6
19-1007	(Yes) / No	6AM-6PM	
	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 Repo

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 lisetd in section II of this report.

High Wind Speeds 30 - 50 mph Gust
All operations have been shut Down
for the entire Shift in Pit 10
and in Pit 1

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.

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.

Tony McCain
Print Name

Tony McCain
Signature

1/13/14
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

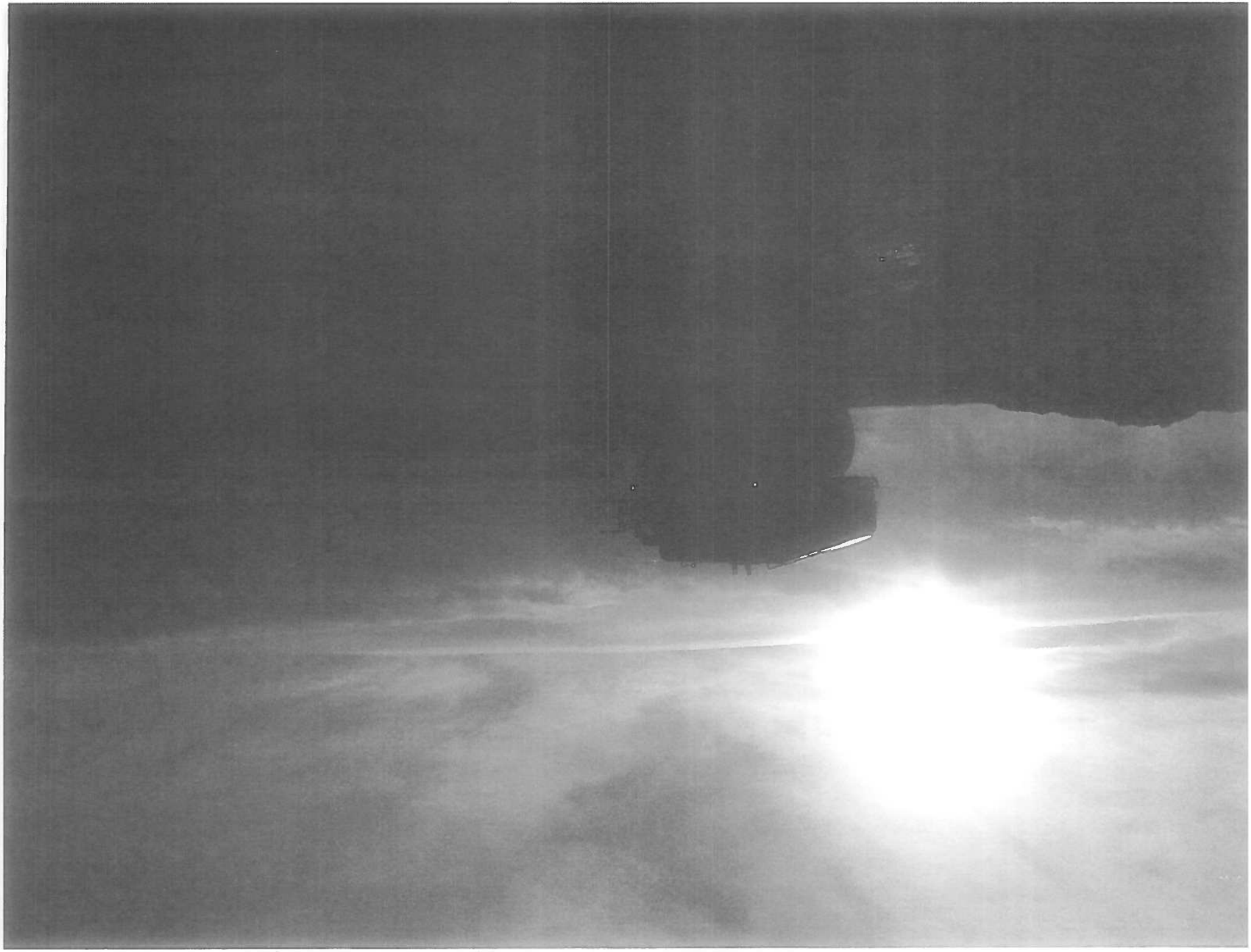
Office: 307-352-6212
Work Cell: (970)629-2104
E-mail: a.thomson@aecoal.com

Action Plan Event Log
Shut Down Report

What operations were occuring 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?
No equipment running except water-truck	1-12-14 Night Shift


1/13/14 @ 4:00 PM
Pit 10 - Looking Southwest
Assist Access


1/13/14 @ 4:00 PM
Pit 10 - Looking Southwest
Assist Bench




1/13/14 @ 4:00 PM
P.t 10 Assist Bench

1/13/14 @ 4:00 PM

Lower Assist Bench

Pit 10


1/13/14 @ 4:00 PM
Pit 10
South Spoil Peak

1/13/14
Pit 10 (After Wind Had Subsided)

Action Plan Event Log
Action Report

1/13/14
Night Shift

THIS REPORT WILL BE COMPLETED IN 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/m³ (1-hour)			70 ug/m³ (24-hour)			90 ug/m³ (24-hour)			110 ug/m³ (24-hour)			130 ug/m³ (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	1-13-14	9:00pm	186										1-13	9pm	147
I-80															
Pit 14															
Leucite															
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 emmission in Section VI of this report. Also, fill out the supplemental information for each applicable area. Take photograph's 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.
X South half of Pit 10 highwall	(Yes) / No	6:00 am/(pm)	_____ loads	
X Pit 10 assist bench BERMS ON ASSIST BENCH	(Yes) / No	6:00 am/(pm)	_____ loads	
_____ 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	
X Dragline #1's pad and access road SHOT BEHIND DRAG #1	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	
_____ Pit 11 topsoil pile	Yes / No	_____ am/pm	_____ loads	
_____ Pit 10 hopper/stockpile	Yes / No	_____ am/pm	_____ loads	
_____ Pit 8 stilling shed/ stockpile	Yes / No	_____ am/pm	_____ loads	
_____ 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	
X P-10 ACTIVE Spoil	Yes / (No)	_____ am/pm	_____ loads	
X P-10 Ramp & Pit Floor	(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	Yes / (No)		Down W/O 302640
19-1007	(Yes) / No	AT START of Shift	
	Yes / No		
	Yes / No		

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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 photograph's if possible.

WIND levels are 28 mpH to 30+ gusts

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

IV. Consider modifying operations contributing to dust.

In the space below, describe any modifications to operations which 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.

From start of shift Drag #1 down and D-11's @ P-1 Down.
All operation in P-1, P-9, P-10 & P-11 have been Cancelled until further Notice

V. Notify the Production Superintendent.

Please record when and how the Production Superintendent was notified

Passed on from Prior shift
Days 1-13-14

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 lisetd in section II of this report

DUST AREAS

#1 DUST OFF ACTIVE SPOIL (CURRENTLY FROM THIS CUT) CANT WATER

#2 DUST OFF THE END OF THE SHOT BEHIND THE DRAGLINE (ENDWALL AREA) CANT WATER

#3 BERMS ALONG THE ASSIST BENCH ALONG THE TRACK HOE CUTS (TRIED TO WATER.. WIND JUST BLOWS WATER AWAY FROM BERMS)

* WE WILL CONTINUE TO WATER AREA THAT IS ACCESSIBLE WITH THE WATER TRUCKS.
* WE WILL END UP TCING UP OUR ACCESS'S
* SO WE will use Precaution while wateering
* TAKE ALL THE PIC WE CAN.
* No operations will be Allowed untill wind and dust Drops.

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.

No Pictures - Night Shift

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.

Print Name	Signature	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 occuring 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?
No operations running except water-truck	1-12-14 Night shift

APPENDIX C

Equipment Timecards for Night shift and Day shift on January 13, 2014

DAILY CREW TIME CARD

CREW 3 E

Date: 1-13-14 | Foreman: Christ Frost 134906 | SHIFT: DAY / NIGHT | Approved by: Superintendent: Rick Williams 162018

CRAFT CODES:
22 DL OPERATOR; 27 DL DOZER; 31 DL OILER; 31 DL OILER; 60 HAUL TRUCK; 63 PROD/REC DOZER; 65 BLADE OPERATOR; 67 DL DOZER; 69 WATER TRUCK; 68 HOE BURDEN/COAL DZR; 64 RUBBER TIRE DOZER

LOADS & LOCATION

ID #	Employee Name	Craft Code	Total Hours	PIT 8	PIT 10	PIT11	PIT 14	PIT 21	SEAM	LC	COST CODE: 7010.02	3010.02	4172L.06	1013.01	1028.01	1128.01	WORK ORDERS: 7016.01	7010.04	PAID TIME OFF: VACATION	HOLIDAY	SICK	OPERATIONAL DELAYS: PRE SHIFT WALKAROUND 164	DEADHEAD 02	SUBSTATION / CABLE MOVE 04	WAITING FOR BOSS 165	WEATHER 07	EQUIPMENT OFF / VAN RIDE	DOWN TIME: MECH. REPAIR NON-SCHEDULED 14	MECH. REPAIR SCHEDULED 09	ELECTRICAL REPAIR NON-SCHEDULED 140	ELECTRICAL REPAIR SCHEDULED 090	EMPLOYEE SIGNATURE	INJURY TODAY Y	INJURY TODAY N
176876	Matt Campbell	7											10.5				1																		
Equipment #	05-2937												6									.5					5								
Equipment #																																		
Equipment #																																		
122607	Cameron Ekker	31	12										11.2				1																		
Equipment #	05-2027																																	
Equipment #																																		
Equipment #																																		
168799	Sam Hannah	31	11.5														1																		
Equipment #																																		
Equipment #																																		
Equipment #																																		
157308	Kris Kroese	68	11.5									10.5					1											1							
Equipment #	05-2661		11.5									7										.5					4							
Equipment #																																		
Equipment #																																		
203777	Terry Pearson	61	11.5											7	3.5		1																		
Equipment #	VP 1007		11.5											6	2							.5					3							
Equipment #																																		
Equipment #																																		
4024	Bob Puckett	2	12										12																						
Equipment #	10-7122		11.5				625		G	78	→		9.5				2.5						.1				5				.4			
Equipment #																																		
Equipment #																																		
1920	John Beeman	2	5														1	10.5																		
Equipment #																																		
Equipment #																																		
Equipment #																																		

DAILY CREW TIME CARD

Date	Foreman	Shift
1/13	Kyle Allred 159751	DAY / NIGHT
Approved By:	Superintendent	
	Bill Haeck 16151	

CREW 2 B

CRAFT CODES:
17 LOWBOY OP. · 22 DL OPERATOR · 23 992 OPERATOR · 25 DRILL OPERATOR · 26 TRACKHOE OPERATOR · 31 DL OILER · 60 777 DRIVER · 65 BLADE OPERATOR · 67 DL DOZER OPERATOR · 68 HOE BURDEN/COAL DOZER · 69 WATER TRUCK · 71 RUBBER TIRE DOZER

LOADS & LOCATION

ID #	Employee Name	Craft Code	Total Hours	PIT 8 ST 90	PIT 8 PL 91	PIT 10 ST 90	PIT 10 PL 91	PIT 11 ST 90	PIT 11 PL 91	PIT 14 ST 90	PIT 14 PL 91	PIT 21 ST 90	PIT 21 PL 91	PIT 24 ST 90	PIT 24 PL 91	BURDEN 61		SEAM	COST CODE 1423.02	1411.01	1427.02	3010.02	3015.02	1428.01	1018.01				WORK ORDERS				PAID TIME OFF VACATION	HOLIDAY	SICK	OPERATIONAL DELAYS PRE SHIFT WALKAROUND 164	DEADHEAD 02	WAIT ON TRUCKS 166	WAIT ON LOADER / HOE 167	FUELING NOT DURING LUNCH 161	WEATHER 07	EQUIPMENT OFF / VAN RIDE	DOWN TIME MECH REPAIR NON-SCHEDULED 14	MECH REPAIR SCHEDULED 09	EMPLOYEE SIGNATURE	INJURY TODAY Y	INJURY TODAY N
234661	Luin Frazier	68	11.5																11.5																									
Equipment #	DS2717		11.5																9																.5					2					
Equipment #																																														
Equipment #																																														
243457	Donald Jides	60	12																	1.5	10.5																									
Equipment #	191187		11.5					R	1	02											9.5														.5					1.5					
Equipment #								R	2	03																																				
Equipment #	052827		11.5																	1														.5					10					
237014	Jose Maranzatto	60	11.5								1										11.5																									
Equipment #	191251		11.5					R	1		1										3														.5					8					
Equipment #								R	2		2																																			
Equipment #																																														
189833	Clint Nations	60	11.5																		11.5																									
Equipment #	19-1140							R	1	1	1										3														.5					8					
Equipment #																																														
Equipment #																																														
157515	Bill Purviance	64	11.5																			6	5.5																							
Equipment #	060678		11.5																			5	6													.5			.5		.5					
Equipment #																																														
Equipment #																																														
3935	Jerry Ray	65	11.5																					11.5																							
Equipment #	081217		11.5																					10												.5			.5		.5					
Equipment #																																														
Equipment #																																														
161141	Jimmie Smith	69	11.5	Arrived late																					11.5																						
Equipment #	191067		11.5	4	4																				10												.5					1					
Equipment #																																														
Equipment #																																														

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 Pit 10 PM_{10} January 13, 2014 Exceedance

Dear Mr. Gili,

The Air Quality Division (AQD) has reviewed the request to flag the January 13, 2014 PM_{10} 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 "High Wind" flag in AQS on the January 13, 2014 PM_{10} 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 April 29, 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 data in the table on page 14.
- Please include information on why one of the facility's two water trucks was not operational and how long it had been out of service. piston rings #6. Installed new cyl kit and injector. 1/9 6:00pm 1/15 6:00pm
- Please correct the sentence on page 19 to include how many gallons of water were used in that time period (currently "xx" is listed in place of an amount).
- Please include information indicating how often BBCC is applying water or chemical treatment to satisfy conditions 14 and 15 of air quality permit MD-7424. Please include locations, dates, type of chemical used and quantities.
- Please correct the "Best Available Control Technology" section of the packet to remove references to items which are not BACT, such as the TEOM network. Please contact Andrew Keyfauver with New Source Review should you require guidance in this matter.

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 high wind 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.

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

November 4, 2014

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

RE: January 13, 2014 Pit 10 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 January 13, 2014 Pit 10 TEOM Exceptional Event Submittal. The information is formatted to be included in the original submission packet.

Sincerely,

Steve Gili
General Manager, Black Butte Coal Company

Enclosure:

will not receive permanent seeding within 60 days of topsoil laydown and mitigation of coal fires from spontaneous combustion.

Condition 14 of Black Buttes air quality permit states that we must treat inactive spoils in Pit 10 and 11 with water **or** chemical dust suppression on a schedule such that treatments remains a viable control measure. Inactive spoil piles in the Pit 10 and 11 areas' are located within the dragline pit. These areas had received treatments of water at various times throughout the year. Additionally, these areas received treatments with chemical dust suppression. Out of pit stockpiles had received treatment in the form of chemical dust suppression in late 2013. These areas also receive additional treatments with water when the need arises. This took place on the 13th.

Condition 15 of Black Buttes air quality permit states that the mine shall treat disturbed prestrip areas in Pit 10 and 11 with water or chemical suppressants to control fugitive dust. Newly stripped areas in Pit 10 and Pit 11 shall be treated within 7 days of completion of stripping. Prestrip areas in Pit 10 and Pit 11 received chemical dust suppression treatments on multiple dates in 2013. These areas also receive water treatments as the need and ability arises. These areas were treated on the 13th with water. These areas were inspected for compliance by AQD representative Mr. Jeff Wendt on November 19th, 2013.

Chemical treatments of the permanent haulroads in Pit 10 and Pit 11 occurred in summer 2013. Water treatments of these areas occurred as needed prior to and during the event of January 13, 2014.

Action Plan Event Logs which list the number of water truck loads and the areas it is applied are included in Appendix B.

The final BACM in place at Black Butte is the approved Air Monitoring Action Plan for Black Butte mine. As demonstrated in Section IV of this report the Air Monitoring Action Plan was followed exactly as required on the day in question.

The information contained in this section clearly demonstrates that all required and reasonable control measures were in place and being utilized prior to and during the January 13, 2014 event.

BEST AVAILABLE CONTROL TECHNOLOGY

Best Available Control Technology required at Black Butte consists mainly of applications of water to high dust, active mining areas, chemical dust suppression to all haul roads, chemical dust suppression to inactive and prestripped areas of Pit 10 and Pit 11, straw crimped into newly topsoiled reclamation and timely planting of vegetation following reclamation activities.

All controls required by the mine's Action Plan were in effect on the 13th. All controls required by the mine's Action plan had been in effect and utilized since day one of 2014. All conditions of the mines Air Quality Permit, MD-7424 were being met. Specifically, Conditions 14, 15, 16 and 17 had been adhered to. Chemical dust suppression had been utilized in all required and needed areas of the mine since the middle of 2013. This was verified by In addition to the controls of the action plan the mine had treated prestrip areas in Pit's 10 and 11 with water to control dust. Inactive spoil piles that were accessible to a water truck had been treated as well. These areas of the mine had been treated at various times, as needed throughout the winter and spring. Beginning on the 12th of January and going through the 13th of January

the Pit 10 roads, prestrip areas, spoil areas, out-of-pit spoil areas and highwall areas had been treated with a total of 204,000 gallons of water.

The mine utilized all required controls according to our Wyoming Department of Environmental Quality – Air Quality Division approved action plan. The required control methods under the action plan are reasonable and have proven effective in the past. However, as with any control method, there exists a limit to the effectiveness. The high wind conditions that existed on the 12th and 13th overwhelmed the controls in place at the mine. Given that the mine did not operate any equipment in the affected area of the mine for more than the day in question and the all required control methods were in place and utilized including the application of chemical dust suppression, the question must be asked, "What more could or should have been done to prevent the exceedance? It is rational to determine that no reasonable controls would have been available to overcome the conditions present on the 13th of January, 2014.

VIII. Wind Direction Data

Time	Wind Direction (deg)	Hourly Wind Speed (mph)	Max Wind Speed (mph)	Pit 10 Hourly PM10 Conc. ($\mu g/m^3$)
01/13/2014 01:00 AM	258	20.9	33.2	75.4
01/13/2014 02:00 AM	255	21.1	37.3	50.9
01/13/2014 03:00 AM	265	21.6	44	14.7
01/13/2014 04:00 AM	267	28.1	49.5	69.6
01/13/2014 05:00 AM	262	22.3	40.8	11.3
01/13/2014 05:00 AM	263	23.7	42.1	10
01/13/2014 07:00 AM	265	22.9	42.1	10.4
01/13/2014 08:00 AM	261	20	37.1	16.8
01/13/2014 09:00 AM	261	22.6	37.8	78.6
01/13/2014 10:00 AM	265	27.2	49.5	97.2
01/13/2014 11:00 AM	264	27.8	44.9	140.9
01/13/2014 12:00 PM	261	27.2	52.2	710.7
01/13/2014 01:00 PM	269	30.4	49.7	1124.6
01/13/2014 02:00 PM	271	30.2	46.7	686.5
01/13/2014 03:00 PM	267	28.9	46	232.3
01/13/2014 04:00 PM	267	29.4	45.3	115.8
01/13/2014 05:00 PM	263	22.5	36.6	35.4
01/13/2014 06:00 PM	261	20.4	36.6	27.5
01/13/2014 07:00 PM	262	26.2	46.7	36.7
01/13/2014 08:00 PM	273	27	43.7	217.7
01/13/2014 09:00 PM	270	28.1	45.1	186.1
01/13/2014 10:00 PM	271	27.2	45.1	54.9
01/13/2014 11:00 PM	270	18.3	33.2	14.6
01/14/2014 12:00 AM	276	17.9	32.1	17

Table VIII.1

IX. Water Truck Availability

On January 13, 2014 one of the two 17,000 gallon water trucks that Black Butte keeps in its fleet was down for maintenance. Water truck 19-0981 was out of service as it underwent a repair to the engine. It had gone down on January 9, 2014 and came up from the repair on January 15, 2014. The unit had damaged cylinder rings on the #6 cylinder. It required a new cylinder kit and injector. The work was unplanned and was completed by contract mechanics from Wyoming Machinery.

X. Condition 14 and 15 Compliance

As required by Conditions 14 of permit MD-7424, Black Butte Coal applies water or chemical dust suppression to inactive spoils in Pit 10 and Pit 11 on a schedule sufficient to control fugitive dust from the inactive spoil piles. The initial treatment of inactive spoil piles is done as soon as the last of the coal below the spoil pile is removed. In that case of dragline spoils, a road needs to be built on the top of the pile to allow for the operation of the spray truck. The act of building this road can cause rocks to roll to the pit floor. In order to keep coal removal operations taking place in the pit out of danger from falling rocks we construct this road after the final coal is removed. If coal removal is to be delayed by any more than a week in either Pit 10 or Pit 11 due to low coal demands or other operational issues, we will construct the spoil top access road prior to removal of final coal, while the pit floor is coned off. Any rocks or spoil that rolls to the pit floor or on top of the exposed coal below is then cleaned off after road construction. When this is completed coal removal operations can continue. The inactive spoils are treated at a minimum yearly or as needed to control fugitive dust. The frequency of applications are dependent on how often the inactive spoil piles are disturbed and how well the crust that is developed by the chemical is working. Determination of this is from visual observations completed by Black Butte's environmental staff. Table X.1 shows the areas of chemical application, the dates and the quantity of chemicals used in regards to compliance with Condition 14.

Application Location	Date of Application	Area Treated (acres)	Quantity of Chemical (tons)	Type of Chemical Applied
Pit 11 Dragline Spoils	4/25/13	141	169.42	Magnesium Chloride
Pit 10 Truck Spoils	5/1/13	121	146.65	Magnesium Chloride
Pit 10 Dragline Spoils	5/16/13	49.6	75	Magnesium Chloride
Pit 11 Dragline Spoils	11/1/13	20.6	35	Magnesium Chloride
Pit 10 Dragline Spoils	8/20/14	16.1	45.02	Magnesium Chloride
Pit 11 Dragline Spoils	8/20/14	20.6	25	Magnesium Chloride

Table X.1

Condition 15 of permit MD-7424 requires that Black Butte treat all prestriped areas of Pit 10 and 11 with water or chemicals to control fugitive dust and that this is completed no more than 7 days after completion of stripping. The standard process is that water is applied to the stripped areas continuously while stripping activities are taking place. Immediately following completion of stripping a final application of water is applied to the entire stripped area. This area is then bermed off and signage is placed indicating that travel in these areas is prohibited. Chemical dust suppression is then ordered and delivery typically takes place within the next two weeks. Contractors are used to apply the chemical due to the specialized nature of the application. Due to the fact that the treatment areas are bermed off and

travel is prohibited the crust formed by the chemical has not shown itself to deteriorate. Additionally, we typically strip areas shortly before active mining operations will take place so prestripped areas do not remain inactive for very long. As a result additional applications of chemical have not been required. Table X.2 shows the areas of chemical application, that dates and quantity of chemical used in regards to compliance with Condition 15.

Application Location	Date of Application	Area Treated (acres)	Quantity of Chemical (tons)	Type of Chemical Applied
Pit 10 Prestrip	5/4/13	20.4	80	Magnesium Chloride
Pit 10 Prestrip	3/14/14	26.8	112	Magnesium Chloride
Pit 11 Prestrip	3/28/14	10.4	75	Magnesium Chloride
Pit 11 Prestrip	4/11/14	29	113	Magnesium Chloride

Table X.2

On November 19, 2013 a representative of the Wyoming Department of Environmental Quality – Air Quality Division, Mr. Jeff Wendt, completed an inspection of Black Butte mine. Mr. Wendt travelled to both Pit 10 and Pit 11. While touring the Pit 11 Inactive Spoils, it is noted on page 2 of his inspection report that Mr. Wendt found "an excellent hard shell crust as a result of the treatments that have been applied." Mr. Wendt also noted that winds were around 10-20 mph but no fugitive dust was noted. This agrees with the same facts that Black Butte has noted for years. All required and reasonable control measures work well when winds are below the 30 mph mark. When wind speeds exceed 30 mph control of fugitive dust at Black Butte can become problematic. A copy of page 2 of Mr. Wendt's inspection notes is included in Appendix D.

XI. Condition 19 Compliance

Condition 19 of permit MD-7424 requires that BBC rip or chisel the surface or plant a temporary vegetative cover to recently regraded or topsoiled areas that will sit idle for an extended period of time in order to stabilize against wind erosion. Prior to 2013, all regraded and topsoiled areas in Pit 10 had permanent vegetative cover already planted and growing. In 2014, an area 50 acres in size was regraded and topsoiled. This area received an application of straw mulch and was seeded with native grasses and shrubs.

Beginning in 2013 Black Butte Coal began a process of applying straw mulch to newly topsoiled reclamation areas. The project was implemented to accomplish two goals; 1) Help control fugitive dust that is generated from newly topsoiled and seeded reclamation prior to germination and growth of the planted grasses and shrubs and 2) Help retain snow on the newly seeded reclamation areas. The project involves using either a crimper or a disk to cut weed free and seed free straw into the newly applied topsoil and then drilling seed into the topsoil. The straw helps to disrupt the wind flow over the relatively smooth topsoil. This helps to reduce the amount of fugitive dust and provides vegetation for the snow to catch behind rather than blow away during the high wind winter months. Topsoil is typically spread during the spring and summer months at Black Butte and seeding is typically done in the summer and fall months. The application of the straw mulch is done following the spreading of topsoil and verification of depths. Within 1 to 2 weeks following the application of the straw, seeding of native grass and shrubs is done in these areas.

Black Butte has been and is in complete compliance with Condition 19 of our air quality permit.

APPENDIX D

Page 2 of the November 19, 2013 WYDEQ – AQD inspection report.

GENERAL INSPECTION OBSERVATIONS AND COMMENTARY:

GENERAL

On 11/19/2013, I traveled to Black Butte Coal Company's (BBCC) Black Butte Mine to perform the FY-2014 Air Quality Inspection. This was an announced inspection. I arrived at around 9:30 am and met with Andy Thomson, the Environmental Engineer assigned to handle most of the air quality related tasks at the facility. We sat in a large conference room and went over the information he provided in response to the records request I had made some two weeks prior to the inspection, then we went through each condition of permit MD-7424, the only active permit for the facility. The records requested were all found to be in order and complete. The permit conditions were all found being met, as required. See Permit Status section later in this document, and the addendum included at the end of this report titled "2013 Dust Control Summary" for more information.

After reviewing the records and permit, we loaded into a truck and traveled around the facility to look at items of interest. The previous inspection had flagged several concerns which eventually begot an NOV, so I asked to see several things in order to ascertain compliance. The first item we reviewed during the site inspection was a water truck parked close to the office building (see Photo #01). The water trucks at this facility have recently been equipped with much-needed side sprayers. The side sprayer can be seen at roughly the center of the photo in the front of the truck, and toward the left of the photo at the rear of the truck.

The next stop was the Pit 10/11 loading hopper, as shown in Photo #02. The coal stockpile around this hopper has been seen to be a major contributor of dust in past years. The coal pile at the time of this inspection was quite minimal due to high demand for the coal, primarily by the Jim Bridger Power Plant nearby. In fact, the coal stockpile was greatly reduced compared to the size of the pile during the previous (2012) inspection. No fugitive emissions were noted.

From the Pit 10/11 loading hopper, we traveled the service road to Pit 11, where we ascended to the rim of the pit, as seen in Photo #03. The roads to this area were made as a direct result of BBCC's desire to come into compliance with Condition (14) and (15) of their permit. I checked the dirt in this area and found it had an excellent hard shell crust as a result of the treatments that have been applied. This road can also be seen in Photo #04. When we traveled back down to the lower level from this vantage, we stopped and I took Photo #05 and Photo #06. This shows a flattened pile; the top was leveled and treatments applied to it. During the inspection, winds were noted at around 10-20 mph, but no fugitive dust was noted. The ground, where not wet from snow, was crusted.

At this point, we descended into Pit 10 and I observed up close action as the dragline operated. Photos #07 through #10 show the dragline operating. Of particular interest is #10, showing a dump from the bucket producing little fugitive dust.

After observing the dragline, we traveled toward the Pit 8 stilling shed. On the way, Mr.