

U.S. Department of Labor

Office of Inspector General—Office of Audit

**MINE SAFETY AND HEALTH
ADMINISTRATION**



PATTERN OF SIGNIFICANT AND SUBSTANTIAL VIOLATION RATE EXTENDED ANALYSIS

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U.S. Department of Labor

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Assistant Inspector General's Report

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On September 29, 2010, the U.S. Department of Labor's (DOL) Office of Inspector General (OIG) published an audit report titled *In 32 Years MSHA Has Never Successfully Exercised Its Pattern of Violations Authority* (05-10-005-06-001). A portion of that audit examined whether mines notified by MSHA of a potential Pattern of Violations (POV) from 2007 – 2009 achieved and sustained required improvement levels beyond the one subsequent inspection period monitored by MSHA. That analysis showed that 94 percent of the potential POV mines monitored by MSHA satisfied established improvement metrics after the first inspection period. However, the success rate decreased to 89 percent after a second inspection period and further decreased to 85 percent after a third inspection period.

In response to a request from the U.S House Committee on Education and Labor, we expanded our analyses in this area to determine the extent to which safety improvements were maintained over a longer period of time. Specifically, for mines that received a potential POV notification from MSHA during 2007 – 2009, we performed analyses of MSHA's enforcement data as of October 12, 2010, to determine the:

1. rate at which mines met MSHA's improvement metrics for Significant and Substantial (S&S) violations for up to 8 periods beyond the 90-day inspection period evaluated by MSHA,
2. impact on success rates of increasing the improvement metrics, and
3. trend in the rate of reduction of S&S violations at potential POV mines over subsequent inspection periods.

Results

1. The Percentage of Mines Meeting MSHA’s Improvement Metrics Declined When Evaluated Beyond One Inspection Period

Our analysis showed that 94 percent of mines successfully met MSHA’s improvement metrics after one complete inspection period, but the success rate gradually declined in subsequent periods. After eight inspection periods, the percentage of mines meeting MSHA’s improvement metrics had decreased to 79 percent.

During 2007 – 2009, MSHA used a computer application to produce a list of potential POV mines on five separate occasions for the 24-month periods ending:

- March 31, 2007 (Cycle 1)
- September 30, 2007 (Cycle 2)
- March 31, 2008 (Cycle 3)
- December 31, 2008 (Cycle 4)
- August 31, 2009 (Cycle 5)

In total MSHA sent potential POV notification letters to a total of 68 mines. Two of these mines subsequently ceased operations. Another had its notification withdrawn because MSHA determined that it had been issued in error. Under the POV procedures in place during 2007 – 2009, MSHA monitored and evaluated the rate of S&S violations at the remaining 65 mines for the period covering one complete inspection following the notification. To avoid a POV designation, mine operators had to meet either of the following two improvement metrics: (1) reduce the rate of S&S citations and orders at the mine by at least 30 percent, or (2) reduce the rate of S&S citations and orders at the mine to at least the national average for similar mines. Ninety four percent (61 out of 65) successfully met one of the improvement metrics.

To evaluate whether these mines maintained improved rates of S&S violations beyond the one inspection period evaluated by MSHA, we used MSHA’s methodology to calculate for each mine the cumulative rate of S&S violations as of the end of each subsequent Regular Health and Safety Inspection performed by MSHA on or before September 30, 2010 (to a maximum of 8 inspection periods). We compared the results against the two improvement metrics used by MSHA during the 2007 – 2009 timeframe.

In reviewing the results of our analysis, it is important to note that the Federal Mine Safety and Health Act of 1977 mandates a different inspection frequency based on the type of mine. MSHA performs a complete inspection of each underground mine four times per year (approximately every three months) and each surface mine or facility twice per year (approximately every six months). Therefore, 8 complete inspections for an underground mine would typically cover a 2-year period, while the same number of complete inspections for a surface mine or facility would typically cover a 4-year period. Depending on several factors — the cycle in which the mine was identified as having a potential POV, the mine’s operating status, and changes in the owner or operator — an individual mine may have had fewer than eight complete inspections during our analysis

period. Some mines had fewer than 8 completed inspections in our analysis because they were abandoned, became idle, or had changed ownership. See Exhibit 1 for additional information.

It is also important to note that the average S&S rate for similar mines used by MSHA as the second improvement metric was based on the 24-month period analyzed by MSHA in identifying potential POV mines. In monitoring mine performance over eight subsequent inspection periods, we did not compute an updated national average for these future time periods. As a result, in assessing a mine's performance against the second improvement metric, we compared the actual rate of S&S violations against the historic national average from the original evaluation period.

The ability of all mine operators' to meet MSHA's POV improvement metrics up to 8 inspection periods after receiving the potential POV notification letter from MSHA fell from 94 percent to 79 percent. Surface mine and facilities operators met MSHA's POV improvement metrics 100 percent of the time for 6 of the 8 inspection periods (periods 2 and 3 were 83 percent). However, the ability of underground mine operators to meet MSHA's POV improvement metrics declined from 92 percent to 79 percent over the 8 inspection periods. Exhibit 2 contains all the rate information for mines for each inspection period. Exhibit 5 contains graphs showing each individual mine's performance over the inspection periods analyzed.

2. Changing the Improvement Standard by Increasing the Required S&S Reduction Rate Would Reduce the Number of Mines Meeting the Standard

Under the POV procedures in place during 2007 – 2009¹, mine operators had to meet one of two improvement metrics: (1) reduce the rate of S&S citations and orders at the mine by at least 30 percent, or (2) reduce the rate of S&S citations and orders at the mine to at least the national average for similar mines.

In most cases, MSHA's first improvement standard (30 percent reduction in S&S rate) was the lower standard for potential POV mines to meet. So meeting MSHA's two-pronged improvement metric was generally dependent on meeting the 30 percent reduction in S&S rate. Strengthening this first standard (i.e., requiring a reduction of more than 30 percent in the rate of S&S violations), results in a gradual decrease in the percent of mines that successfully meet the overall improvement metrics. At the 30 percent S&S reduction rate required by MSHA during 2007-2009, 79 percent of potential POV mines meet the standard after eight inspection periods. If the standard required a 40 percent S&S reduction rate, the percentage of potential POV mines meeting the standard after eight inspection periods declines to 76. At a 50 percent

¹ On September 30, 2010, MSHA announced more stringent POV improvement provisions. Under the new provisions, mines that implement appropriate corrective action programs must achieve a 50 percent reduction in the rate of S&S violations or a rate within the top 50 percent for all mines of similar type and classification. Mines that do not choose to implement corrective action programs need to achieve a 70 percent or more reduction in their S&S issuance rates or a rate within the top 35 percent for all mines of similar type and classification.

required S&S reduction rate, 69 percent of potential POV mines would meet the standards after eight inspection periods. Increasing the rate above 50 percent appears to have little additional impact, as the percentage of mines meeting the standard after eight inspection periods remains at 69. Furthermore, requiring a reduction level greater than 70 percent would have no further impact on success rates. Beyond the 70 percent level, the second metric (reduction of S&S rate to the national average for similar mines) becomes the deciding standard.

The tables in Exhibit 3 summarize the percent of mines that would have met improvement metrics if the required reduction in S&S rate had been increased in increments of 10 percentage points.

3. Overall, Mines Lost Some of the Gains They Initially Achieved in Reducing Their Rates of S&S Violations

The average improvement (reduction) in the rate of S&S violations declined when evaluated over eight subsequent inspection periods. Mines receiving a potential POV notification from MSHA reduced their rate of S&S violations by an average of 63 percent after one subsequent inspection period. After the eighth inspection period, the average reduction rate was 51 percent.

Underground mines reduced their rate of S&S violations by an average of 62 percent after one subsequent inspection period; the average reduction rate was 51 percent after the eighth inspection period. Surface mines and facilities reduced their rate of S&S violations by an average of 67 percent after one subsequent inspection period; the average reduction rate after the eighth inspection period was 58 percent. See Exhibit 4 for the rates for each inspection period.

We appreciate the cooperation and courtesies that MSHA personnel extended to the Office of Inspector General during this additional work.



Elliot P. Lewis
Assistant Inspector General
for Audit

Exhibits

Exhibit 1

Reasons Why Mines Not Inspected

Inspection Period	# of Mines						Total
	Inspected	Abandoned	Idled	Ownership Change	Inspection Started/Ended After 09/30/10	Other	
1	65		2			1	68
2	62	1	3	1		1	68
3	61	2	3	1		1	68
4	56	4	3	1	3	1	68
5	47	5	3	1	11	1	68
6	40	6	4	3	14	1	68
7	31	6	4	3	23	1	68
8	29	6	4	3	25	1	68

Exhibit 2**Reduced S&S Rates by MSHA 30% or National Average Metrics**

Reduce Rate of S&S Violations by 30% OR to National Average for Similar Mines						
Inspection Period	Underground Mines		Surface Mines / Facilities		All Mines	
	# Inspected	% Meeting Either Metric	# Inspected	% Meeting Either Metric	# Inspected	% Meeting Either Metric
1	52	92%	13	100%	65	94%
2	50	90%	12	83%	62	89%
3	49	86%	12	83%	61	85%
4	48	85%	8	100%	56	88%
5	39	85%	8	100%	47	87%
6	35	80%	5	100%	40	83%
7	28	79%	3	100%	31	81%
8	28	79%	1	100%	29	79%

Exhibit 3**Reduced S&S Rates by Various Percentages or National Average Metrics**

Reduce Rate of S&S Violations by 40% OR to National Average for Similar Mines						
Inspection Period	Underground Mines		Surface Mines / Facilities		All Mines	
	# Inspected	% Meeting Either Metric	# Inspected	% Meeting Either Metric	# Inspected	% Meeting Either Metric
1	52	85%	13	85%	65	85%
2	50	76%	12	83%	62	77%
3	49	86%	12	75%	61	84%
4	48	75%	8	100%	56	79%
5	39	69%	8	100%	47	74%
6	35	71%	5	100%	40	75%
7	28	79%	3	100%	31	81%
8	28	75%	1	100%	29	76%

Reduce Rate of S&S Violations by 50% OR to National Average for Similar Mines						
Inspection Period	Underground Mines		Surface Mines / Facilities		All Mines	
	# Inspected	% Meeting Either Metric	# Inspected	% Meeting Either Metric	# Inspected	% Meeting Either Metric
1	52	79%	13	69%	65	77%
2	50	74%	12	83%	62	76%
3	49	82%	12	75%	61	80%
4	48	73%	8	88%	56	75%
5	39	67%	8	100%	47	72%
6	35	66%	5	80%	40	68%
7	28	71%	3	67%	31	71%
8	28	68%	1	100%	29	69%

Reduce Rate of S&S Violations by 60% OR to National Average for Similar Mines						
Inspection Period	Underground Mines		Surface Mines / Facilities		All Mines	
	# Inspected	% Meeting Either Metric	# Inspected	% Meeting Either Metric	# Inspected	% Meeting Either Metric
1	52	73%	13	69%	65	72%
2	50	72%	12	75%	62	73%
3	49	73%	12	75%	61	74%
4	48	69%	8	88%	56	71%
5	39	67%	8	100%	47	72%
6	35	66%	5	80%	40	68%
7	28	71%	3	67%	31	71%
8	28	68%	1	100%	29	69%

Exhibit 3, continued**Reduced S&S Rates by Various Percentages or National Average Metrics**

Reduce Rate of S&S Violations by 70% OR to National Average for Similar Mines						
Inspection Period	Underground Mines		Surface Mines / Facilities		All Mines	
	# Inspected	% Meeting Either Metric	# Inspected	% Meeting Either Metric	# Inspected	% Meeting Either Metric
1	52	71%	13	62%	65	69%
2	50	70%	12	67%	62	69%
3	49	73%	12	50%	61	69%
4	48	67%	8	75%	56	68%
5	39	67%	8	88%	47	70%
6	35	66%	5	60%	40	65%
7	28	71%	3	67%	31	71%
8	28	68%	1	100%	29	69%

Reduce Rate of S&S Violations by 80% OR to National Average for Similar Mines						
Inspection Period	Underground Mines		Surface Mines / Facilities		All Mines	
	# Inspected	% Meeting Either Metric	# Inspected	% Meeting Either Metric	# Inspected	% Meeting Either Metric
1	52	71%	13	54%	65	68%
2	50	70%	12	67%	62	69%
3	49	73%	12	50%	61	69%
4	48	67%	8	75%	56	68%
5	39	67%	8	88%	47	70%
6	35	66%	5	60%	40	65%
7	28	71%	3	67%	31	71%
8	28	68%	1	100%	29	69%

Reduce Rate of S&S Violations by 90% OR to National Average for Similar Mines						
Inspection Period	Underground Mines		Surface Mines / Facilities		All Mines	
	# Inspected	% Meeting Either Metric	# Inspected	% Meeting Either Metric	# Inspected	% Meeting Either Metric
1	52	71%	13	54%	65	68%
2	50	70%	12	67%	62	69%
3	49	73%	12	50%	61	69%
4	48	67%	8	75%	56	68%
5	39	67%	8	88%	47	70%
6	35	66%	5	60%	40	65%
7	28	71%	3	67%	31	71%
8	28	68%	1	100%	29	69%

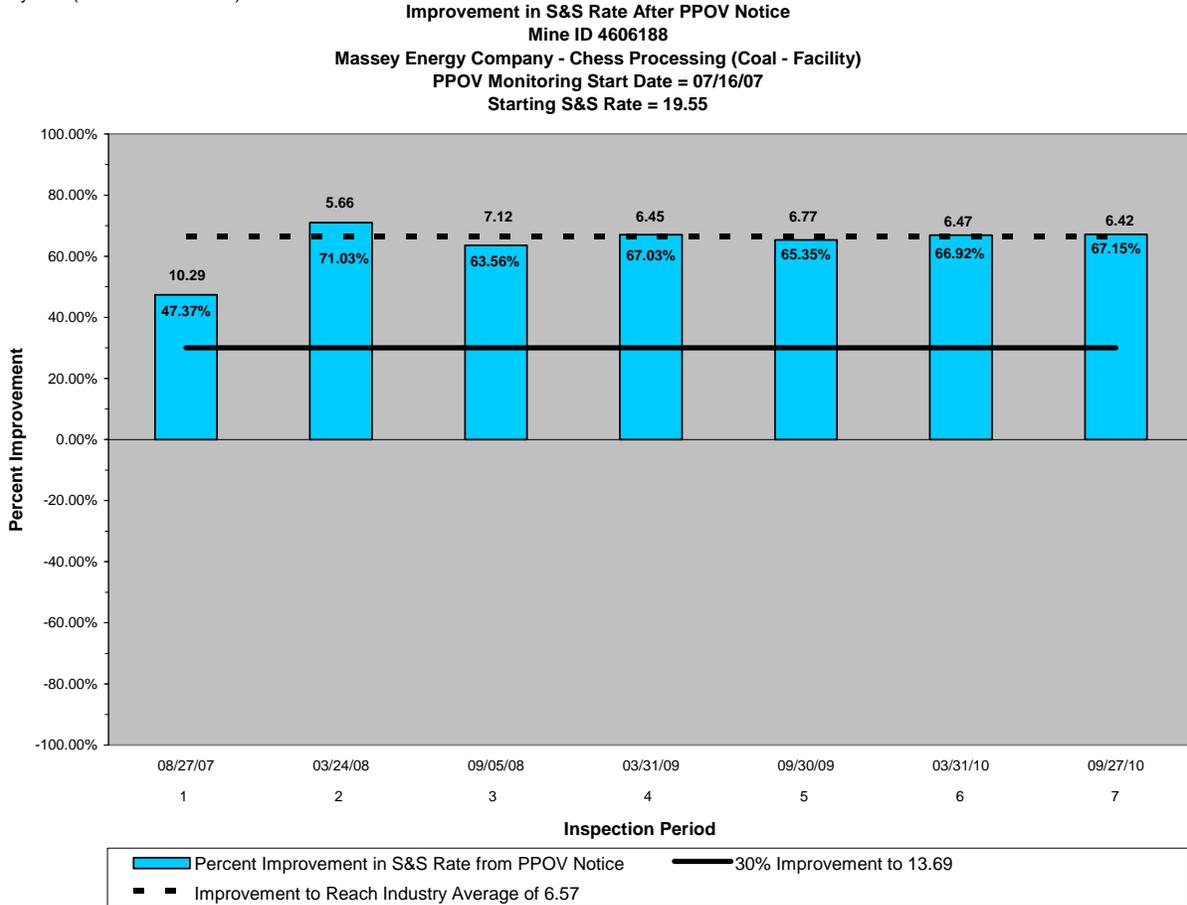
Exhibit 4**Average Reduction Rates**

Average Percentage Reduction in Rate of S&S Violations						
Inspection Period	Underground Mines		Surface Mines / Facilities		All Mines	
	# Inspected	Average % Reduction in Rate of S&S Violations	# Inspected	Average % Reduction in Rate of S&S Violations	# Inspected	Average % Reduction in Rate of S&S Violations
1	52	62%	13	67%	65	63%
2	50	58%	12	66%	62	60%
3	49	54%	12	62%	61	56%
4	48	52%	8	69%	56	54%
5	39	51%	8	70%	47	54%
6	35	50%	5	65%	40	52%
7	28	53%	3	57%	31	53%
8	28	51%	1	58%	29	51%

Exhibit 5

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 1 (04/01/05 - 03/31/07)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

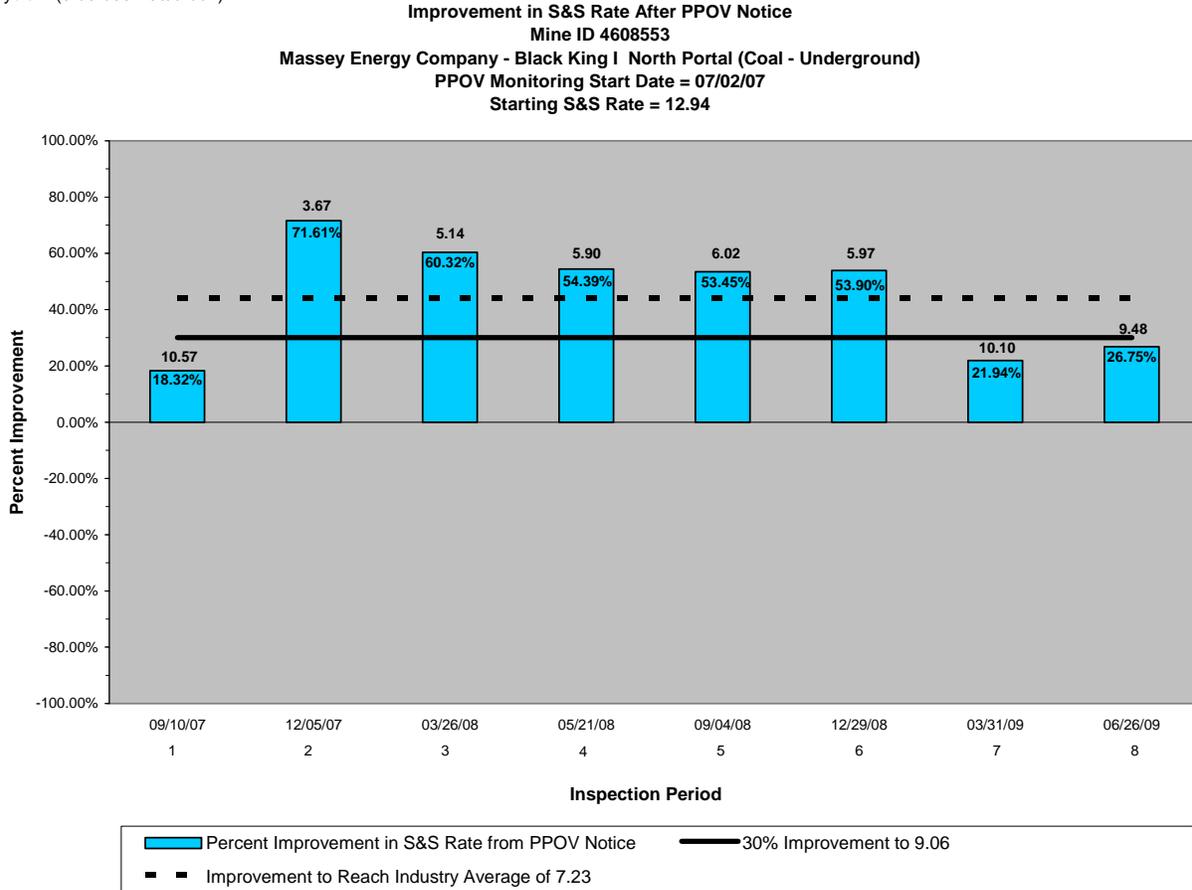
The number presented inside each bar of the graph represents the percent reduction in the mine's rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 1 (04/01/05 - 03/31/07)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

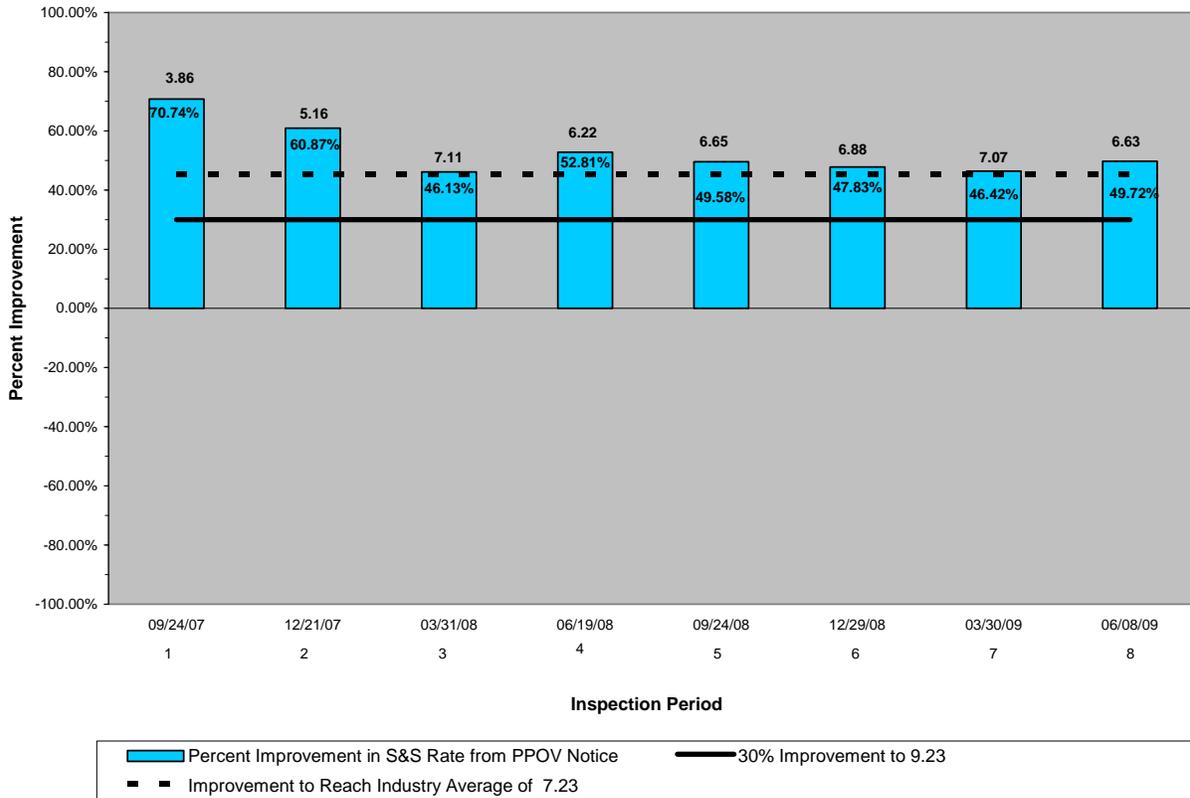
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 1 (04/01/05 - 03/31/07)

Improvement in S&S Rate After PPOV Notice
 Mine ID 1509636
 James River Coal Company - #77 (Coal - Underground)
 PPOV Monitoring Start Date = 07/11/07
 Starting S&S Rate = 13.19



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine's rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

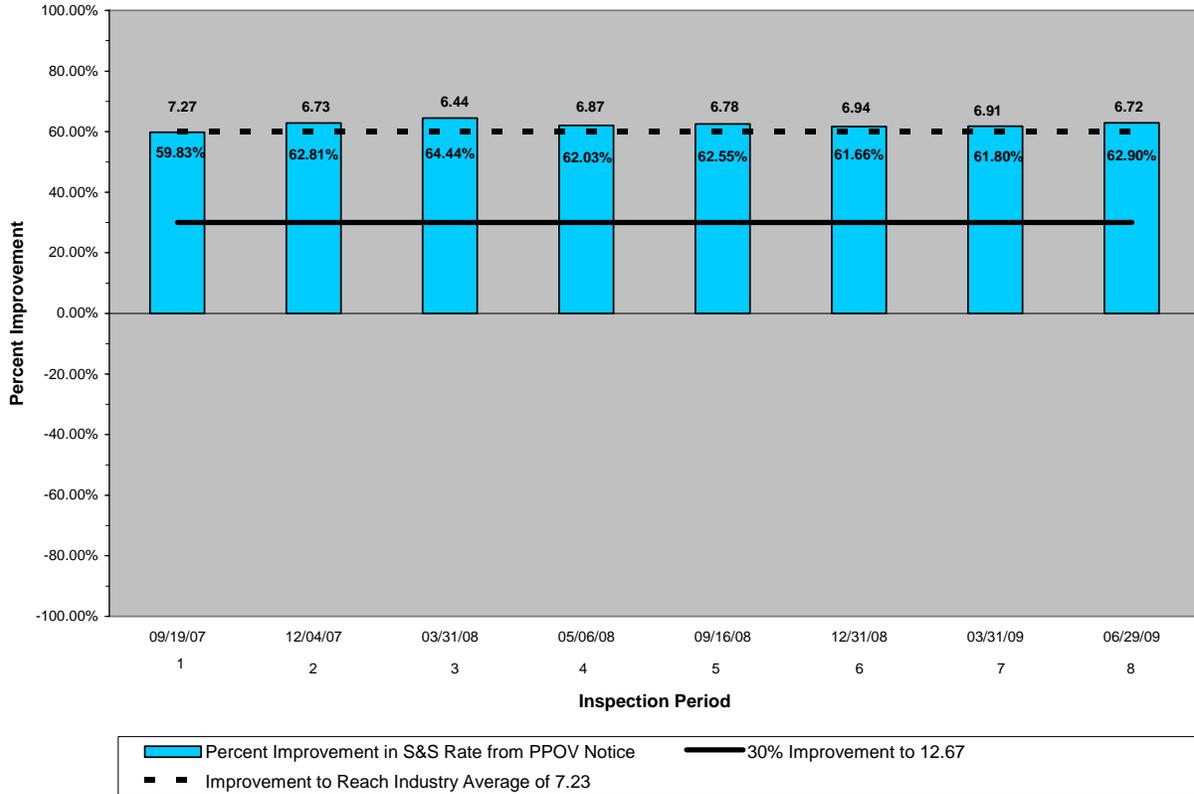
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 1 (04/01/05 - 03/31/07)

Improvement in S&S Rate After PPOV Notice
 Mine ID 1512564
 Ben Bennett - Straight Creek #1 Mine (Coal - Underground)
 PPOV Monitoring Start Date =07/10/07
 Starting S&S Rate =18.10



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

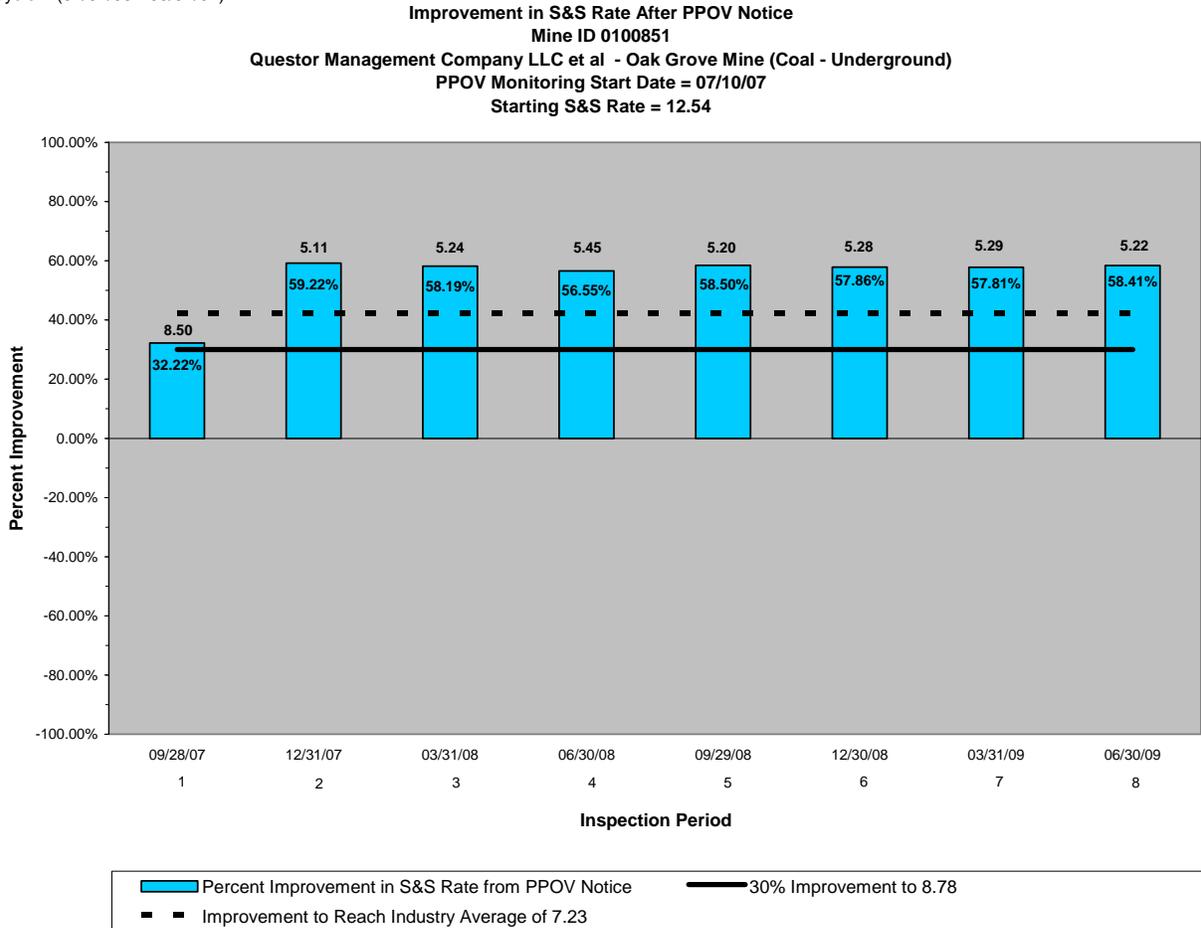
The number presented inside each bar of the graph represents the percent reduction in the mine's rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 1 (04/01/05 - 03/31/07)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

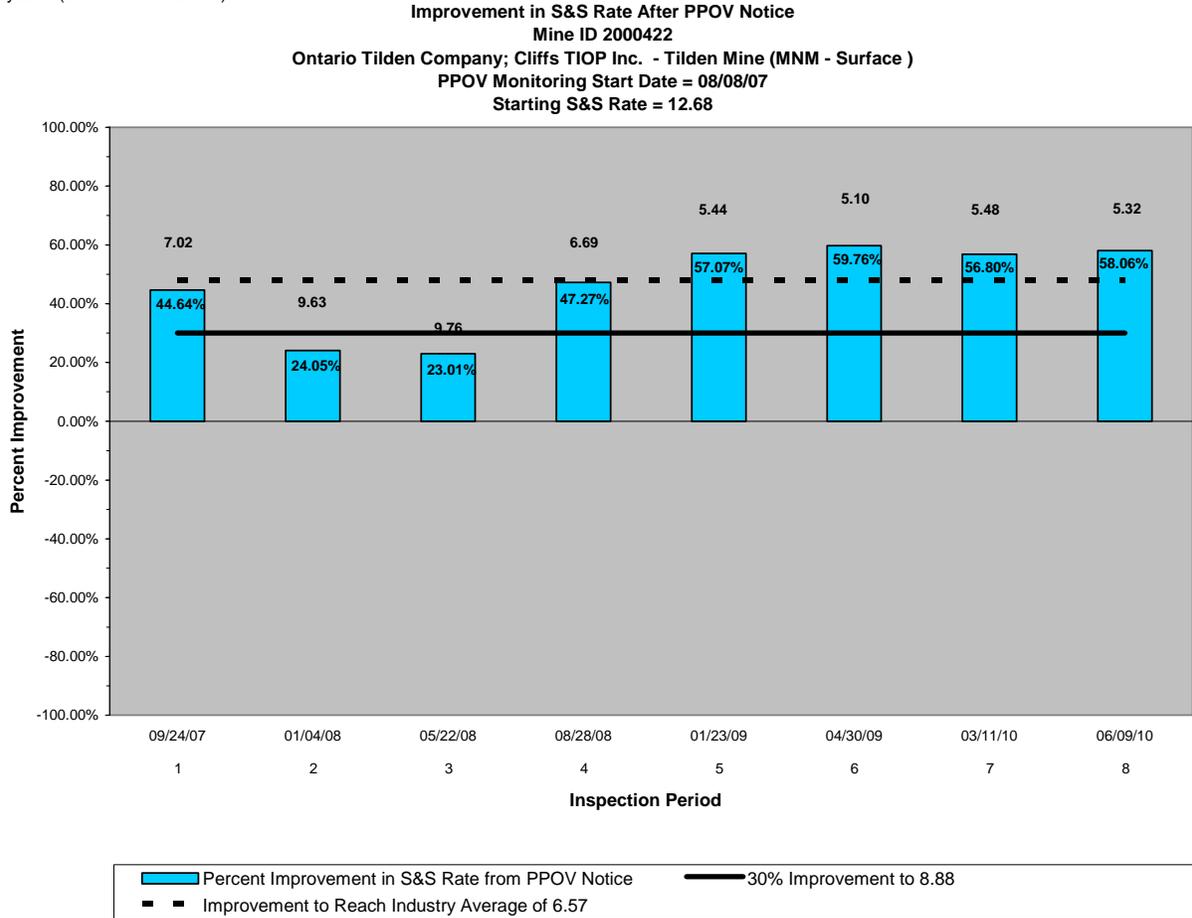
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Cliffs Natural Resources became the Controller of this mine on 07/31/2007.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 1 (04/01/05 - 03/31/07)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

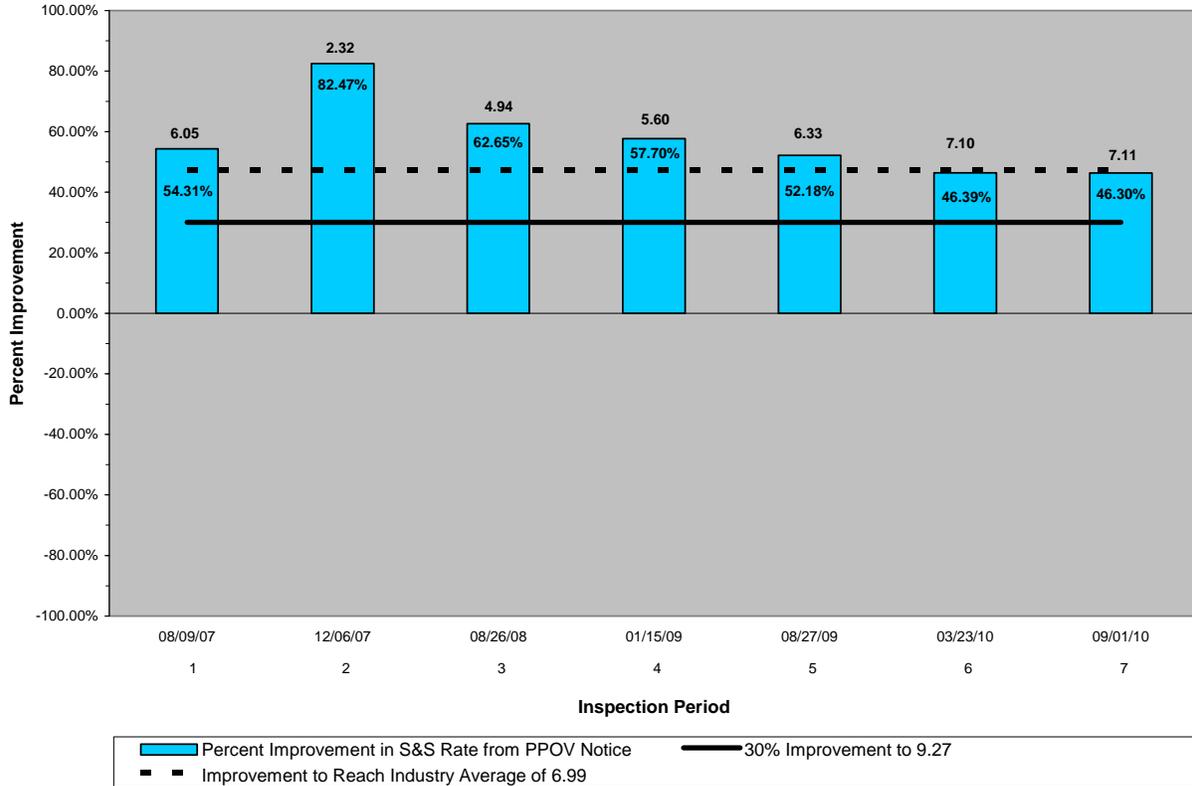
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 1 (04/01/05 - 03/31/07)

Improvement in S&S Rate After PPOV Notice
Mine ID 0400011
Texas Industries Inc. - Oro Grande Quarry (MNM - Facility)
PPOV Monitoring Start Date = 7/23/07
Starting S&S Rate = 13.24



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

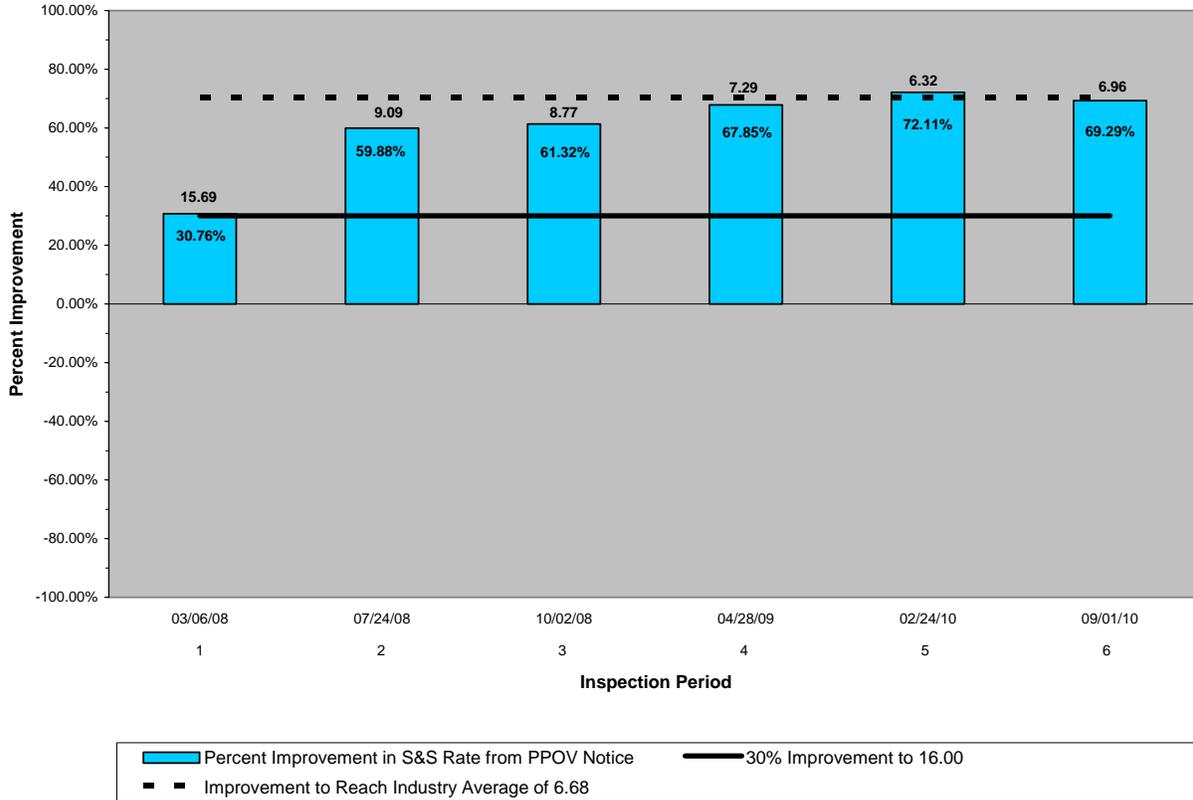
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)

Improvement in S&S Rate After PPOV Notice
Mine ID 1504469
Cemex S A - KOSMOS CEMENT CO. (MNM - Facility)
PPOV Monitoring Start Date =03/03/08
Starting S&S Rate = 22.66



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

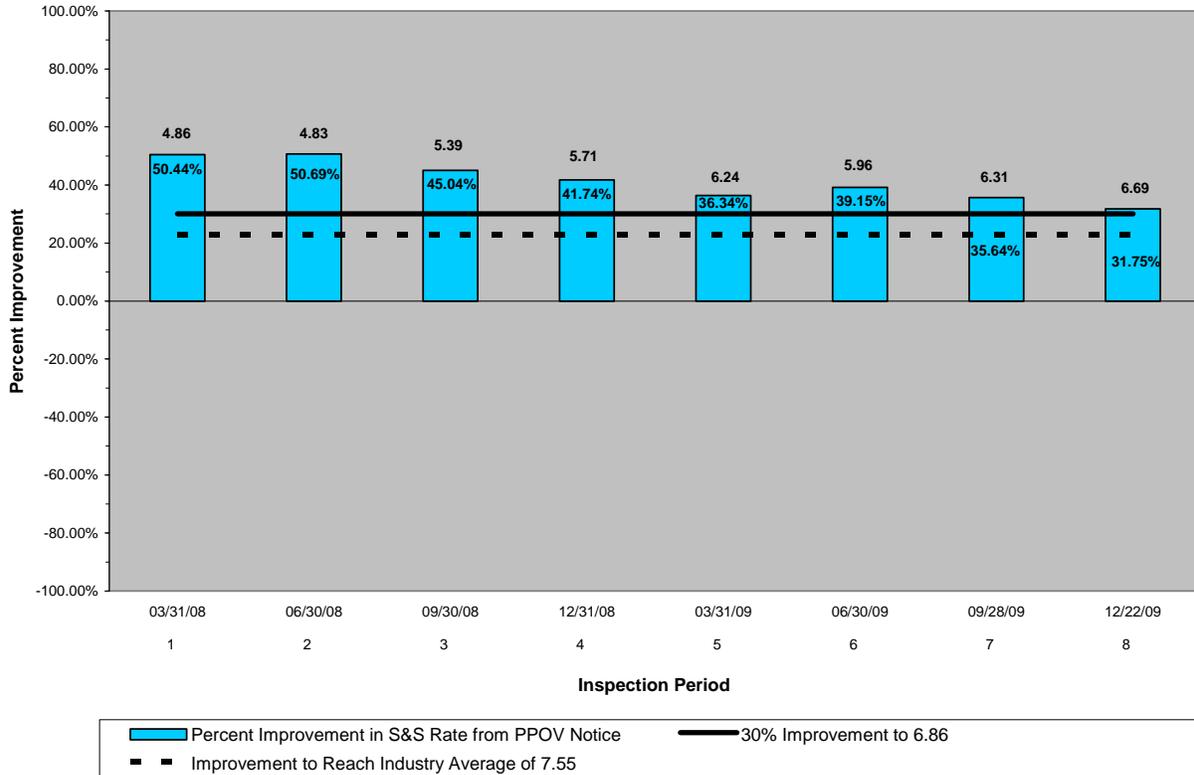
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)

Improvement in S&S Rate After PPOV Notice
Mine ID 4601437
CONSOL Energy Inc. - McElroy Mine (Coal - Underground)
PPOV Monitoring Start Date =01/08/08
Starting S&S Rate = 9.80



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

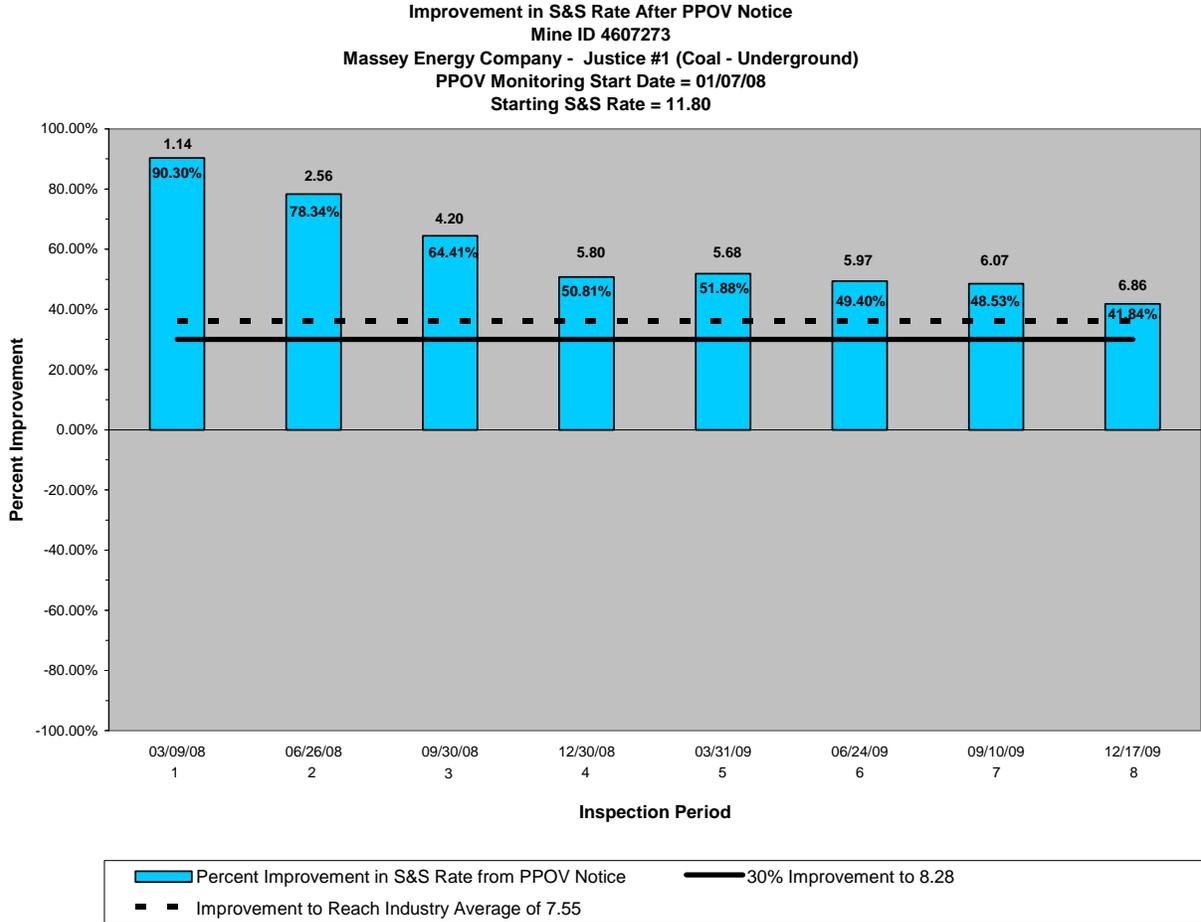
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

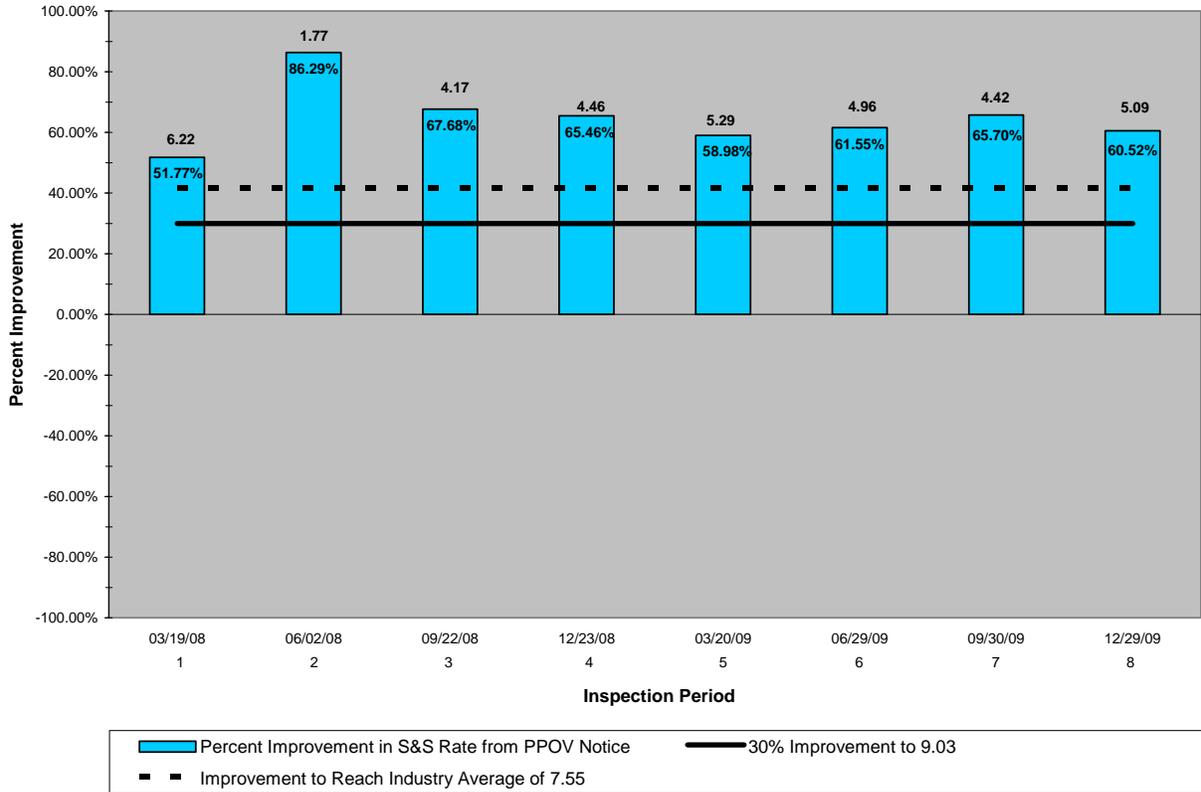
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)

Improvement in S&S Rate After PPOV Notice
 Mine ID 4608315
 Massey Energy Company - Brushy Eagle (Coal - Underground)
 PPOV Monitoring Start Date = 01/07/08
 Starting S&S Rate = 12.90



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine's rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

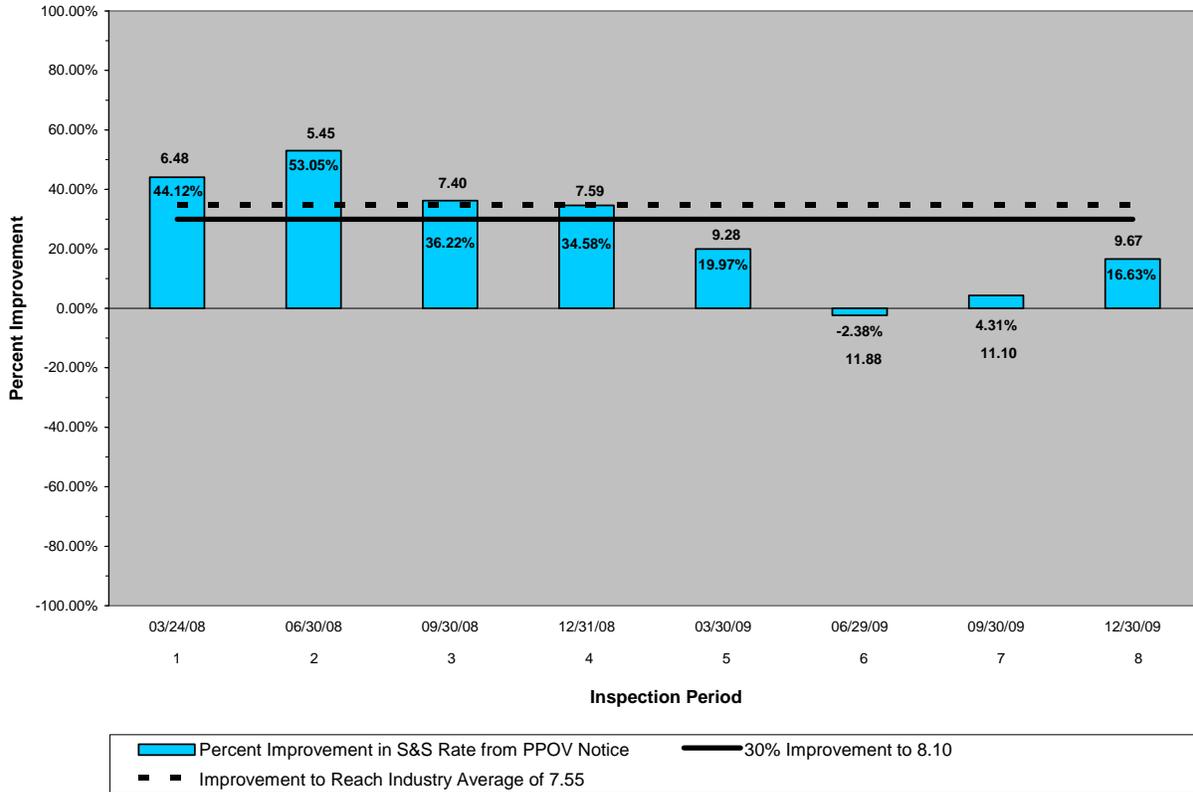
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)

Improvement in S&S Rate After PPOV Notice
Mine ID 4608436
Massey Energy Company - Upper Big Branch Mine-South (Coal - Underground)
PPOV Monitoring Start Date = 01/07/08
Starting S&S Rate = 11.60



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside or below each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

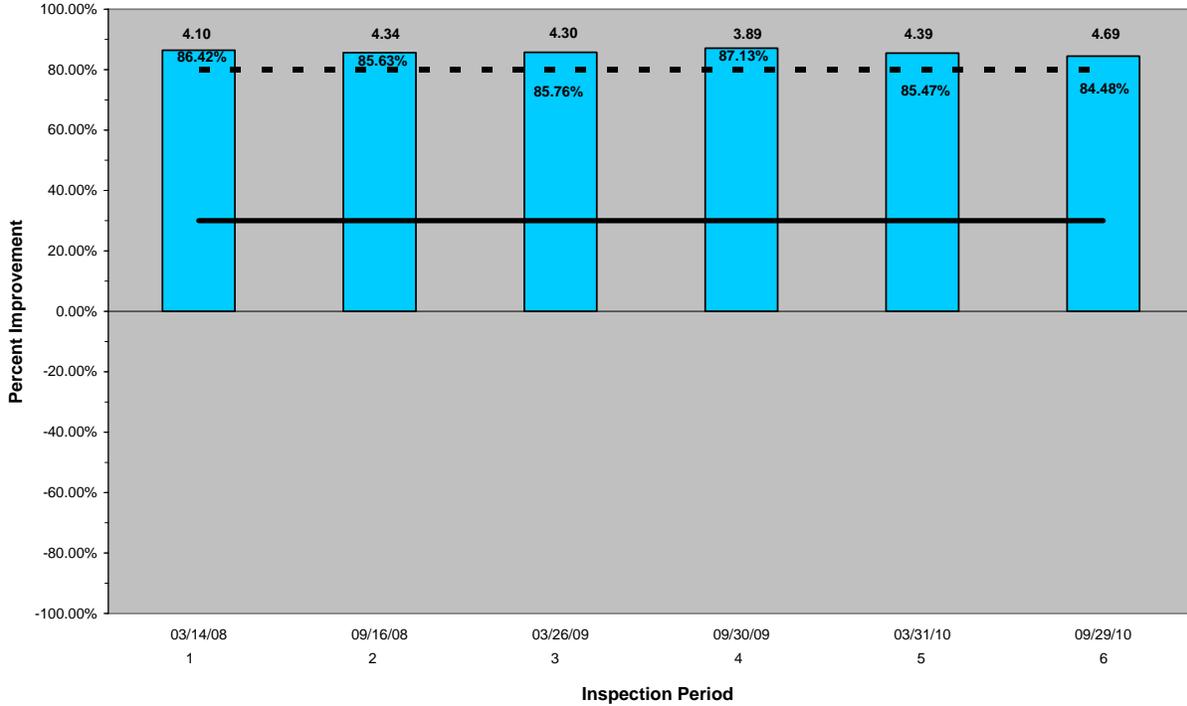
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)

Improvement in S&S Rate After PPOV Notice
 Mine ID 4608645
 Massey Energy Company - Twilight Mtr Surface Mine (Coal - Surface)
 PPOV Monitoring Start Date = 01/07/08
 Starting S&S Rate = 30.20



■ Percent Improvement in S&S Rate from PPOV Notice — 30% Improvement to 21.11
 - - - Improvement to Reach Industry Average of 6.09

Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

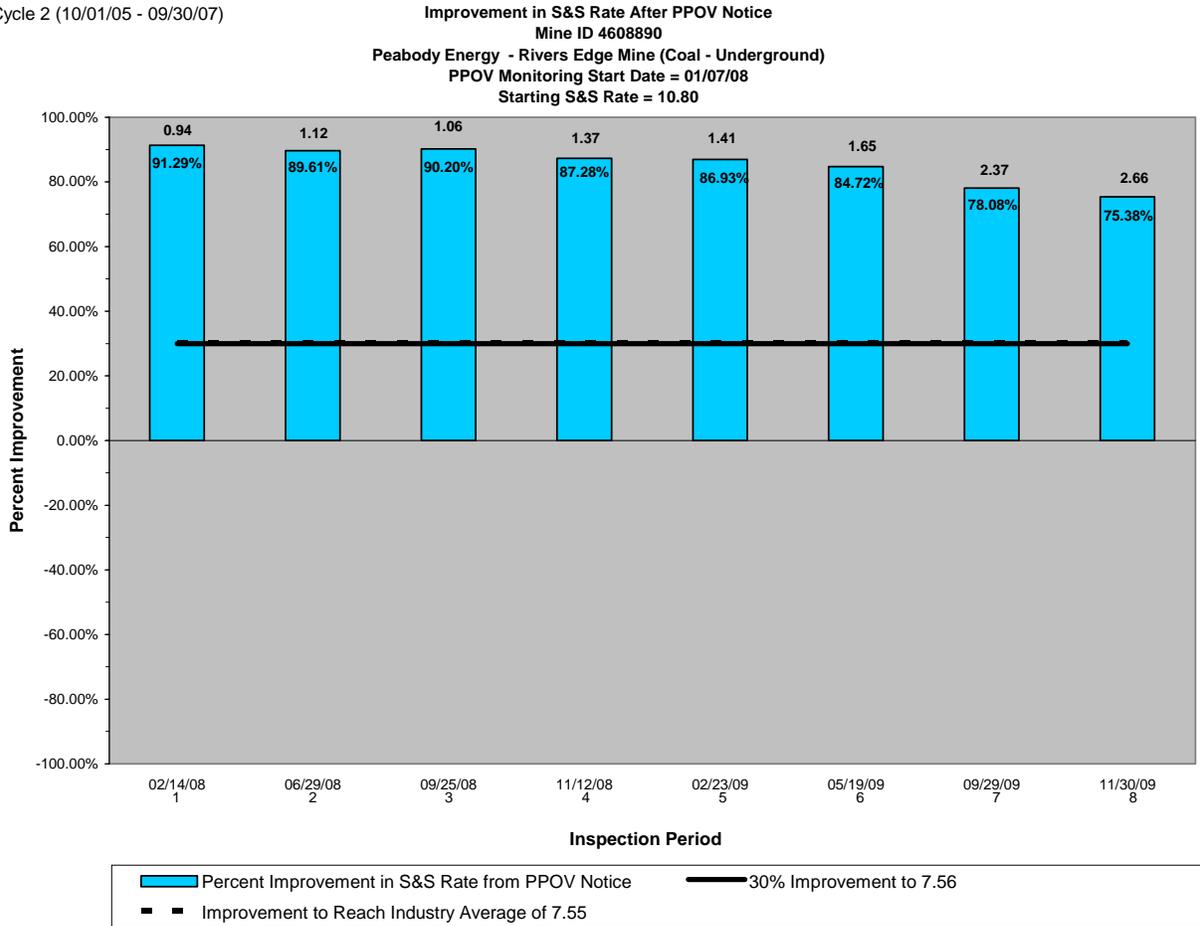
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

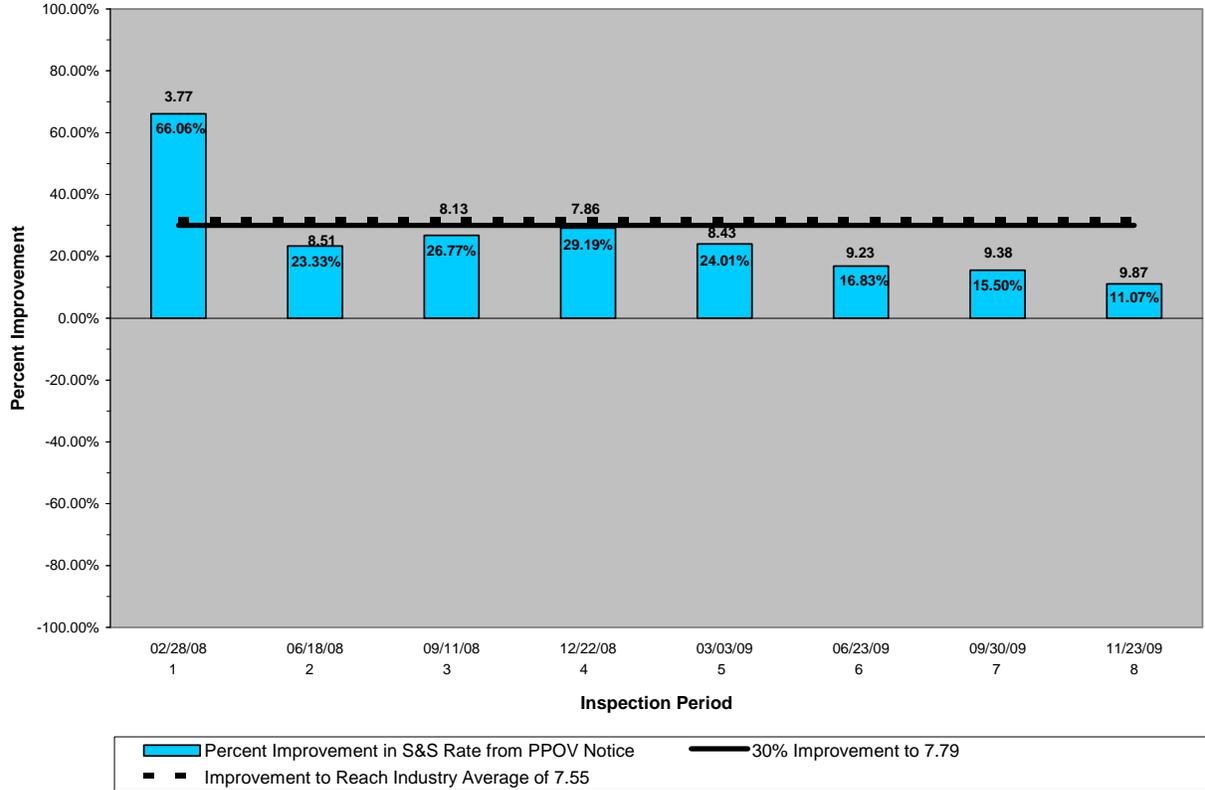
Patriot Coal Corporation became the Controller of this mine on 10/31/2007.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)

Improvement in S&S Rate After PPOV Notice
Mine ID 4608994
James H Booth - Deep Mine No. 8 (Coal - Underground)
PPOV Monitoring Start Date = 01/07/08
Starting S&S Rate = 11.10



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine's rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

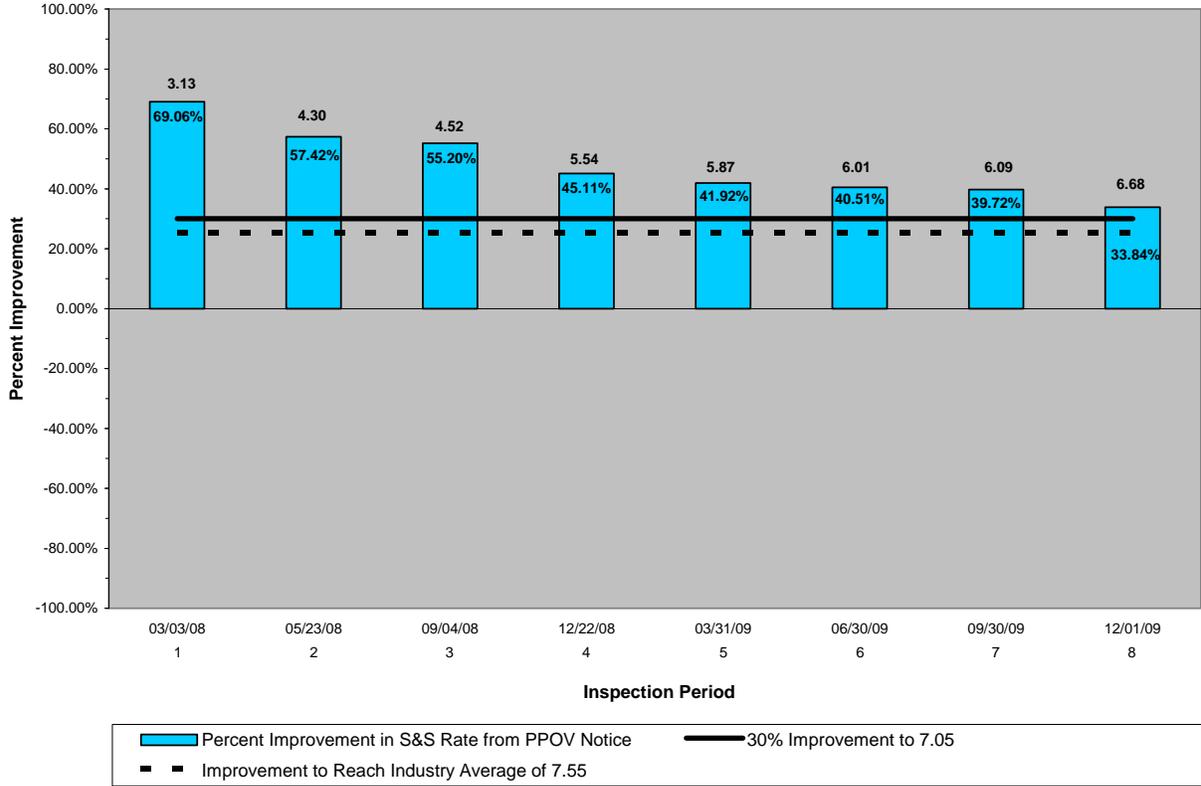
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)

Improvement in S&S Rate After PPOV Notice
Mine ID 4609020
James C Justice II et al - No 65 (Coal - Underground)
PPOV Monitoring Start Date = 01/07/08
Starting S&S Rate = 10.10



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

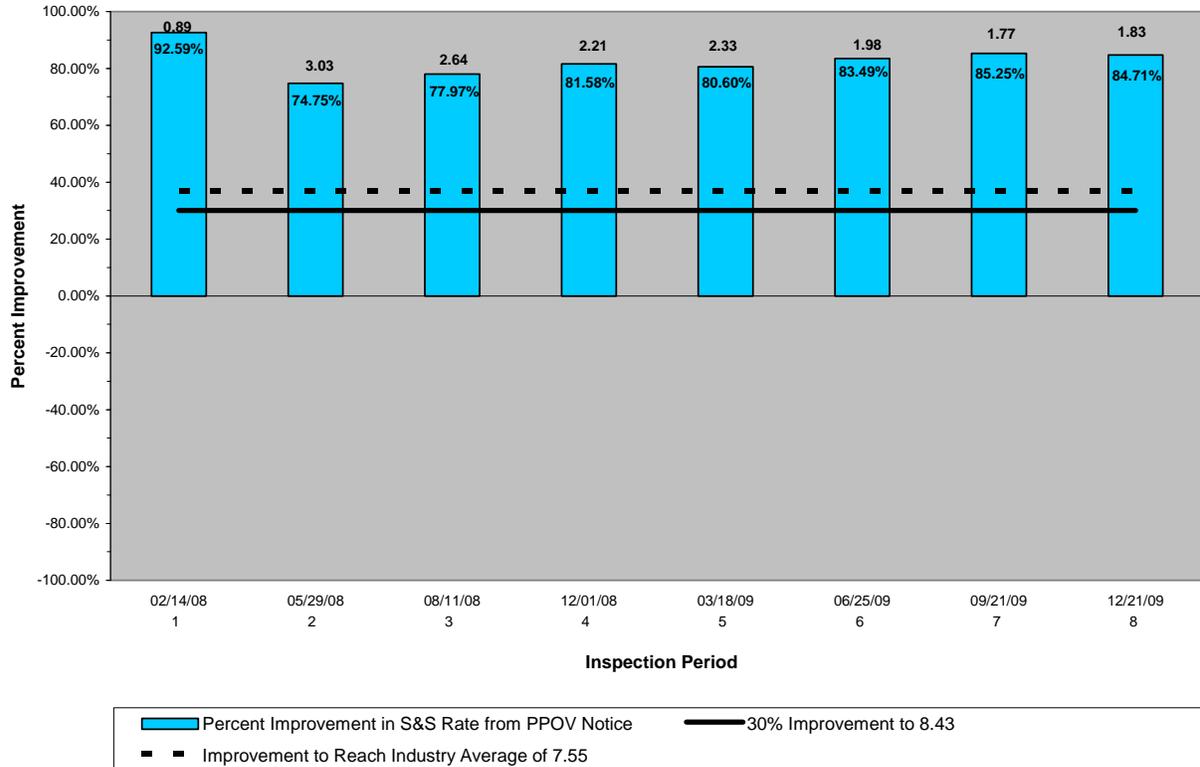
Mechel Oao became the Controller of this mine on 05/07/2009.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)

Improvement in S&S Rate After PPOV Notice
Mine ID 4404946
Alpha Natural Resources LLC - No 2 (Coal - Underground)
PPOV Monitoring Start Date = 01/02/08
Starting S&S Rate = 12.00



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

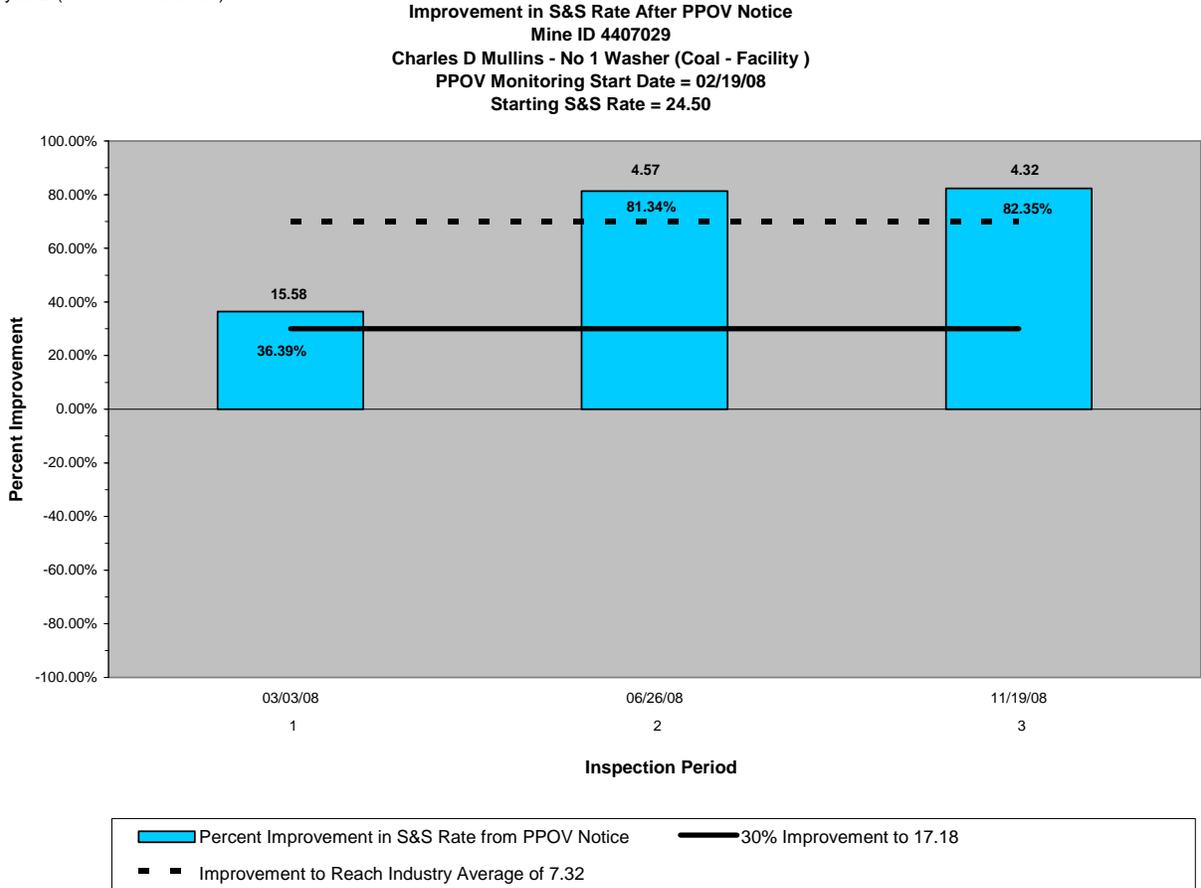
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

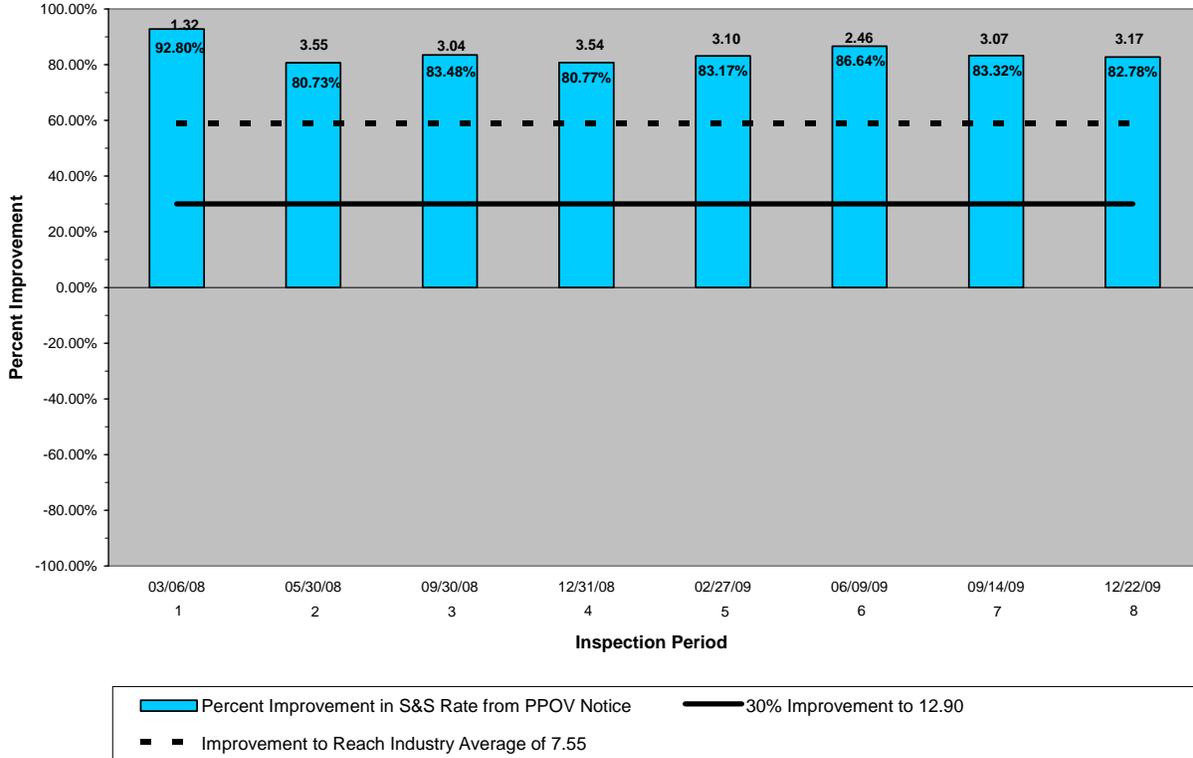
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)

Improvement in S&S Rate After PPOV Notice
Mine ID 4407081
Ervin Stiltner - No. 2 (Coal - Underground)
PPOV Monitoring Start Date = 02/01/08
Starting S&S Rate = 18.40



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

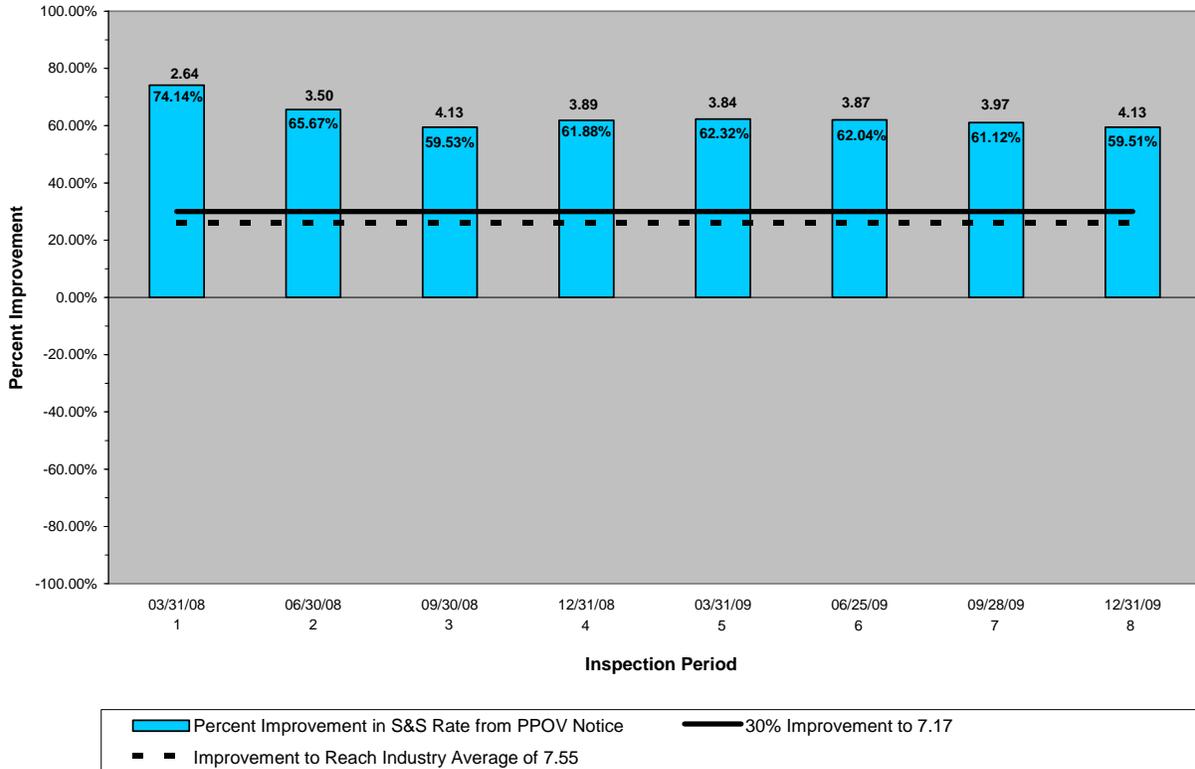
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)

Improvement in S&S Rate After PPOV Notice
Mine ID 1508079
Alliance Resource Partners LP - Mine No 3 (Coal - Underground)
PPOV Monitoring Start Date = 01/07/08
Starting S&S Rate = 10.20



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

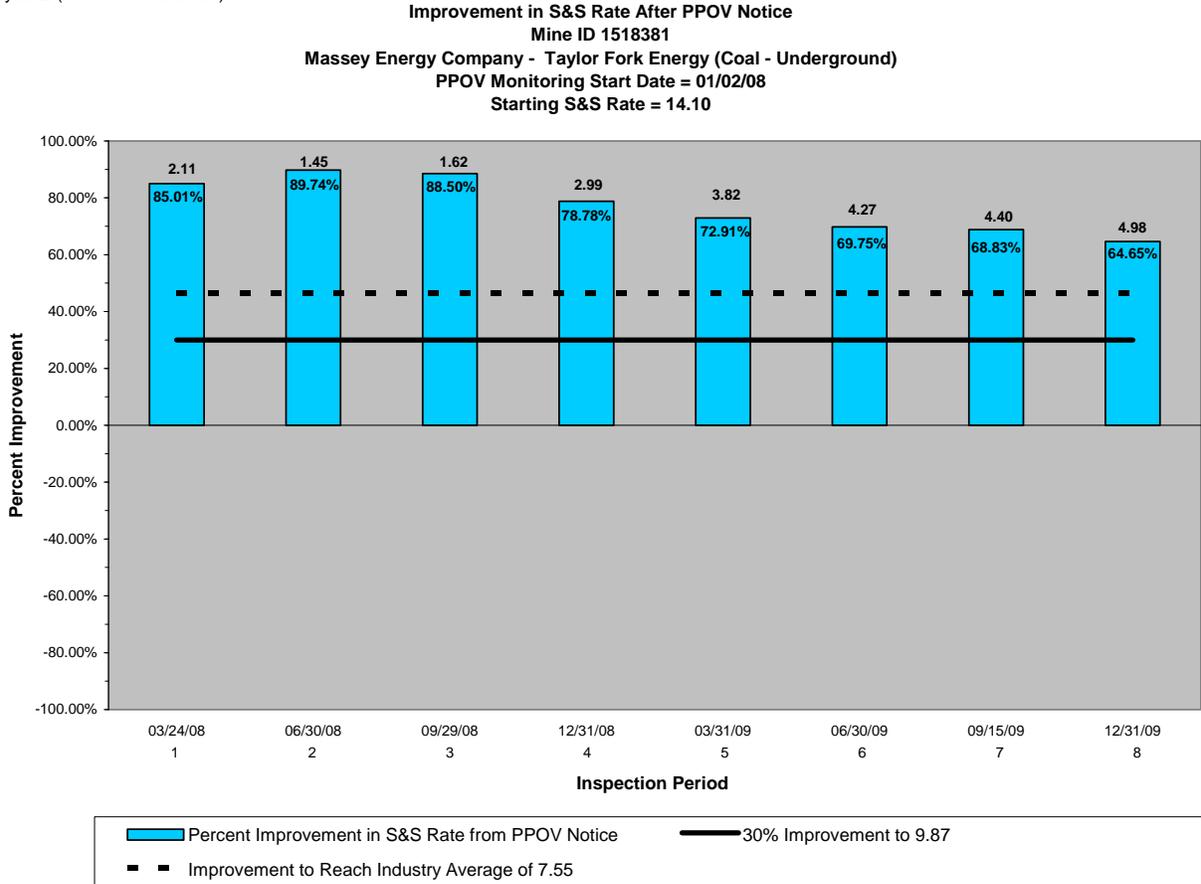
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

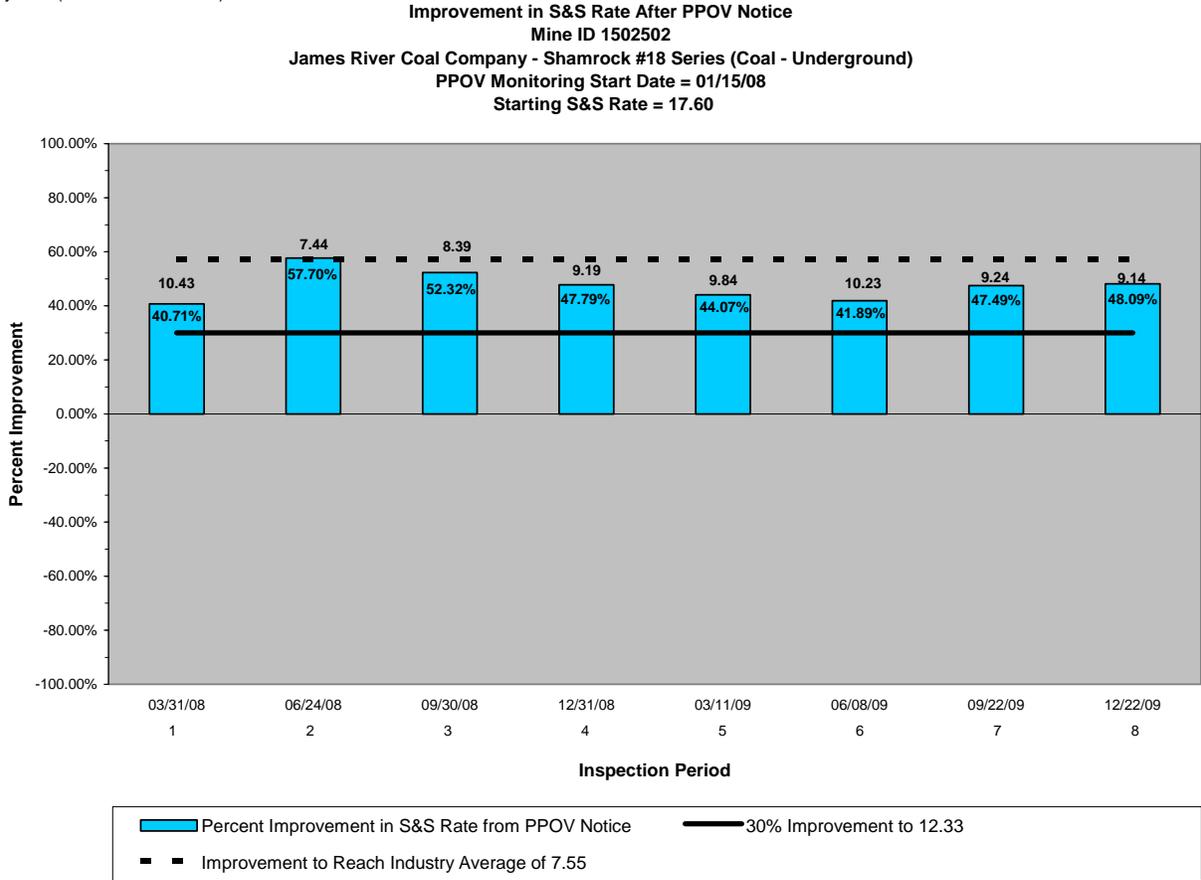
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

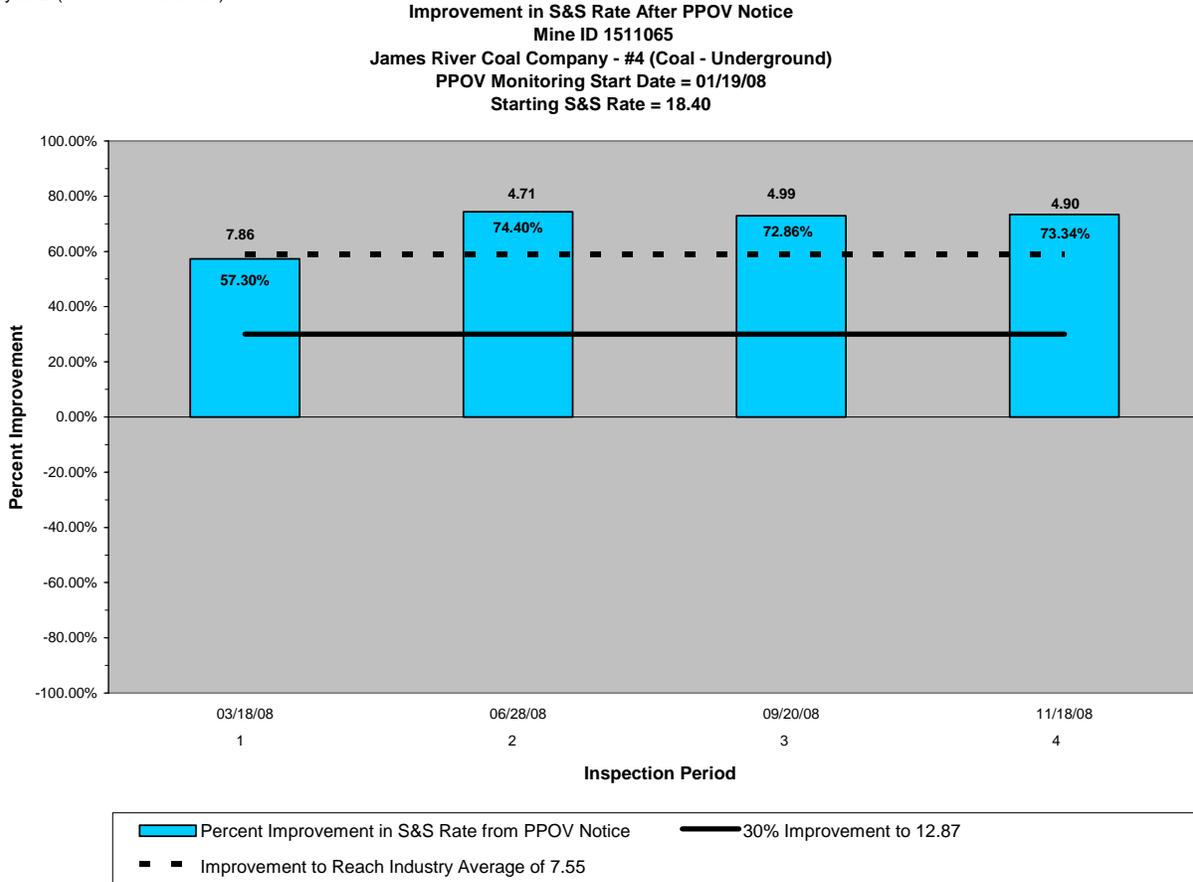
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

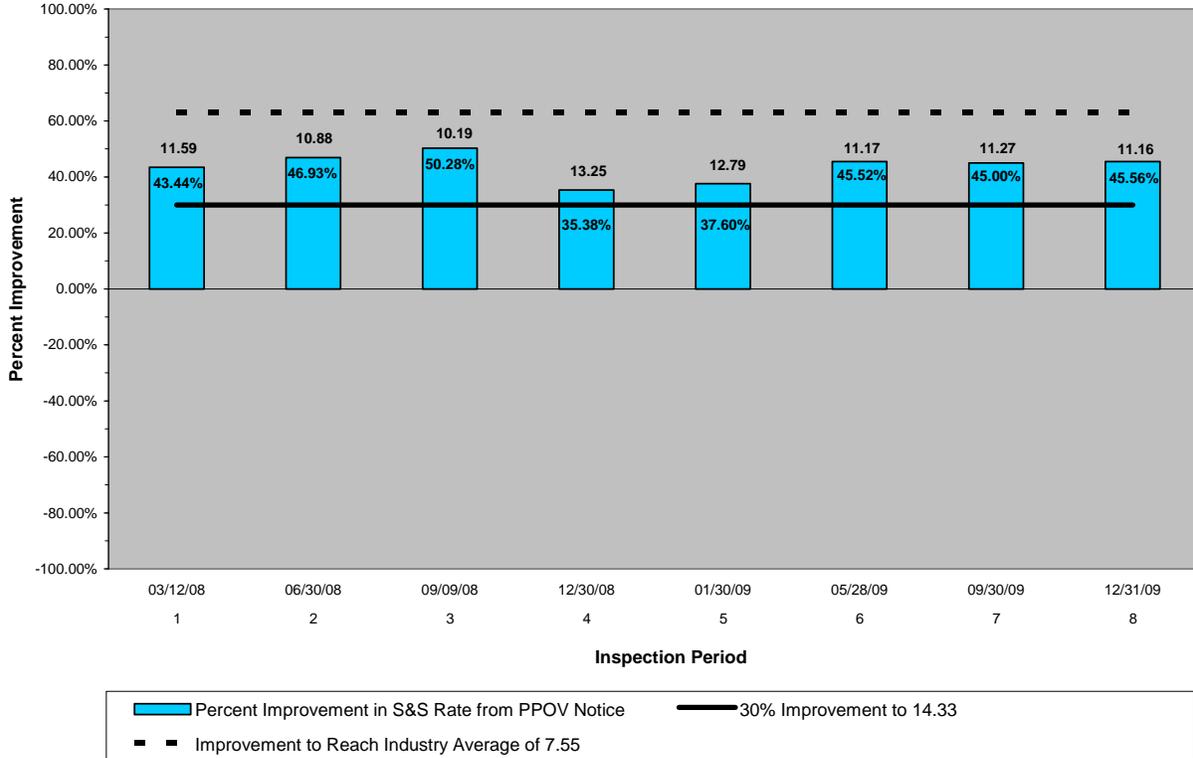
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)

Improvement in S&S Rate After PPOV Notice
Mine ID 1518182
Horace Garrison Hill - D & C Mining Corp. (Coal - Underground)
PPOV Monitoring Start Date = 01/22/08
Starting S&S Rate = 20.50



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

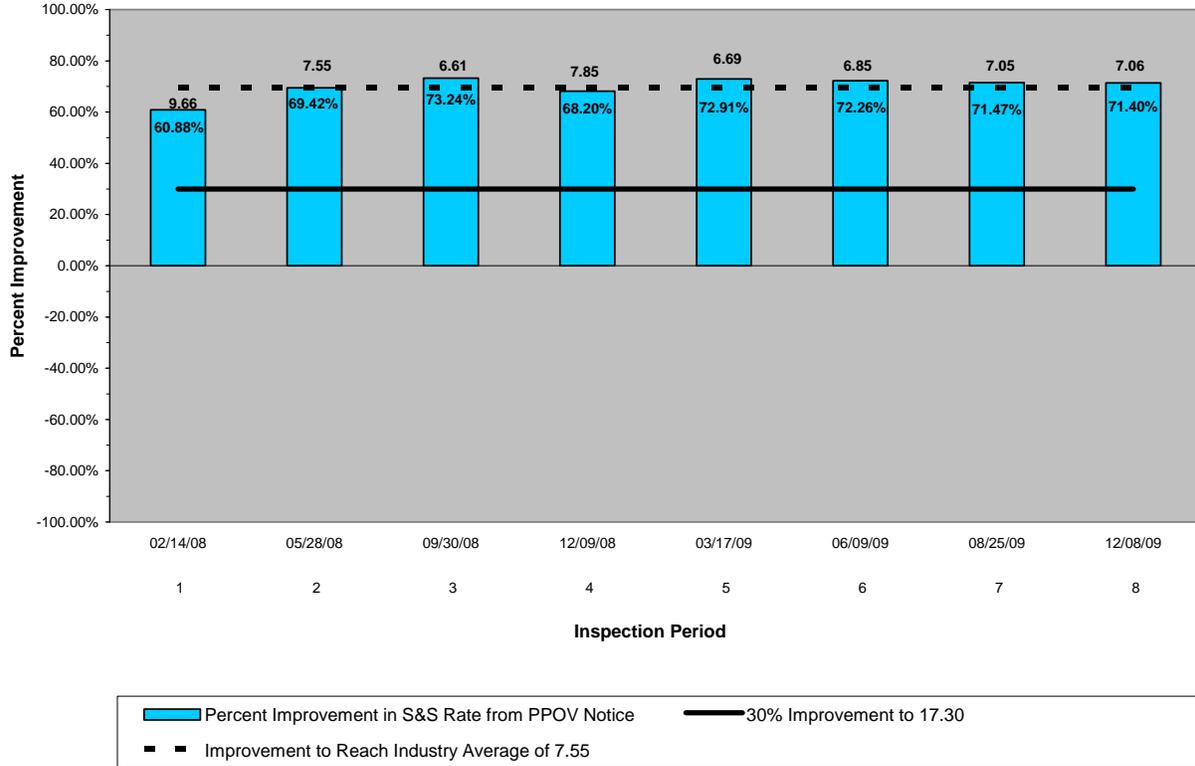
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)

Improvement in S&S Rate After PPOV Notice
Mine ID 1518267
Ben Bennett - RB #10 (Coal - Underground)
PPOV Monitoring Start Date = 01/22/08
Starting S&S Rate = 24.70



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

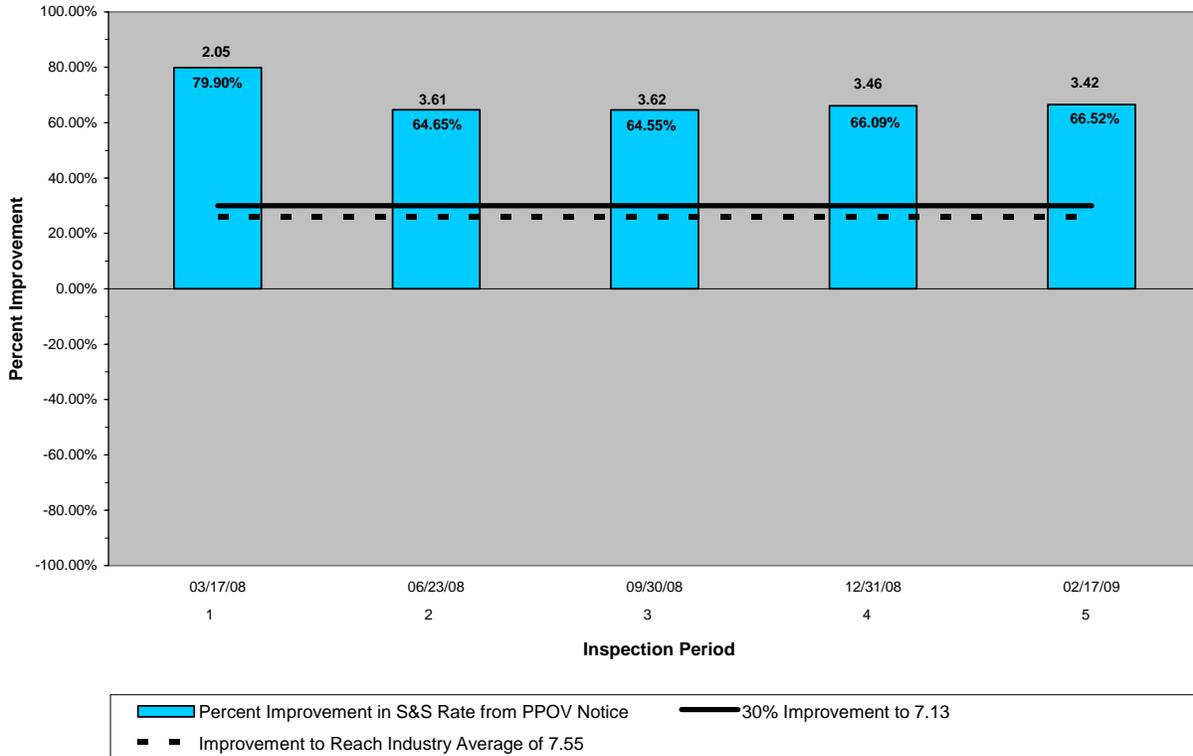
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 2 (10/01/05 - 09/30/07)

Improvement in S&S Rate After PPOV Notice
Mine ID 4003237
National Coal Corporation - Mine No. 11 (Coal - Underground)
PPOV Monitoring Start Date = 01/11/08
Starting S&S Rate = 10.20



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

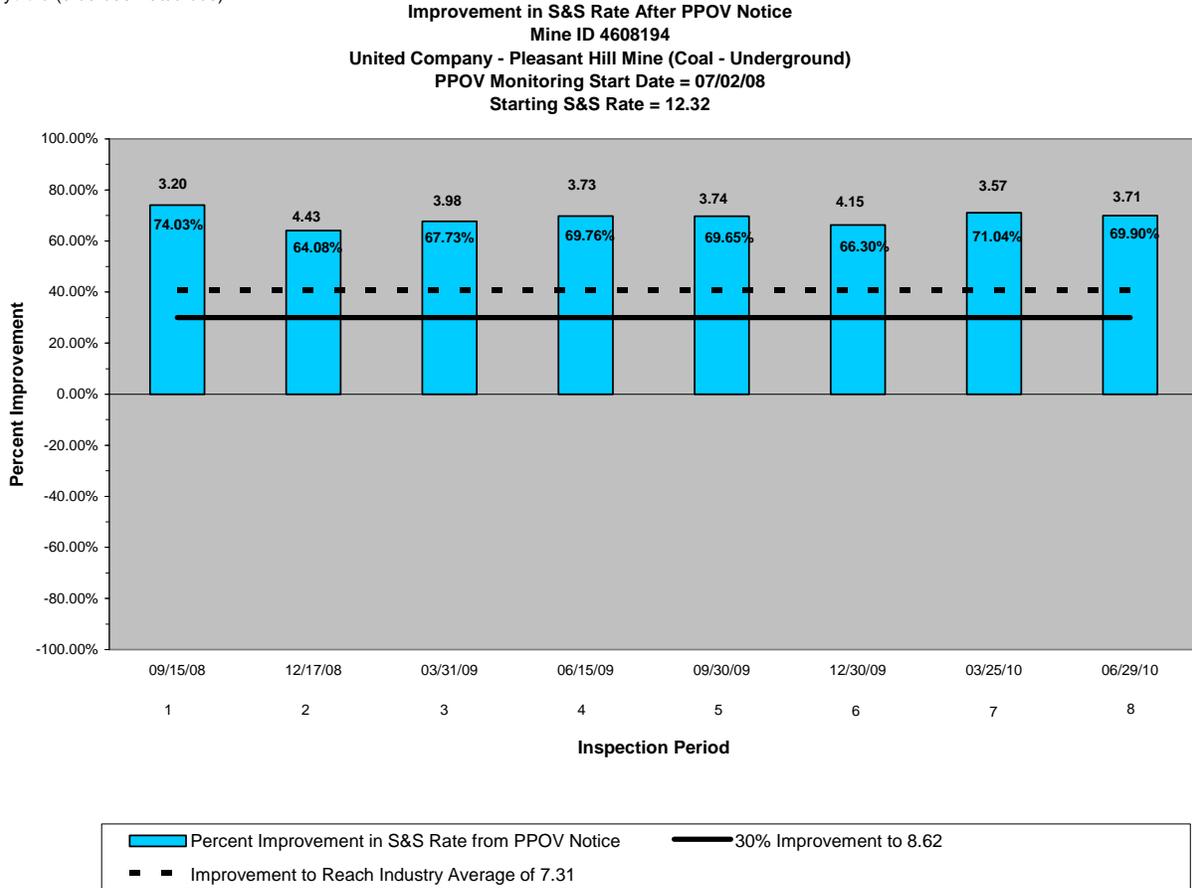
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 3 (04/01/06 - 03/31/08)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

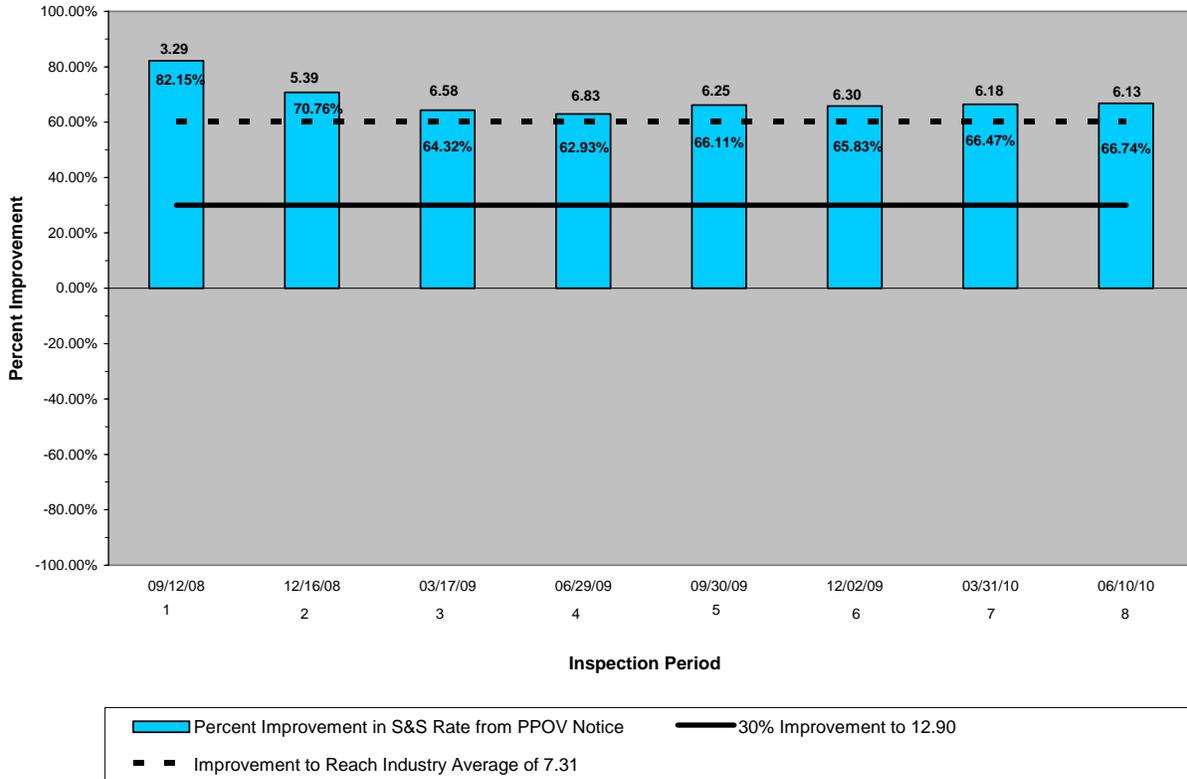
Metinvest B V became the Controller of this mine on 04/30/2009.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 3 (04/01/06 - 03/31/08)

Improvement in S&S Rate After PPOV Notice
Mine ID 4608759
Franklin D Robertson & James O Bunn et al - Eagle Mine (Coal - Underground)
PPOV Monitoring Start Date = 07/02/08
Starting S&S Rate = 18.43



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

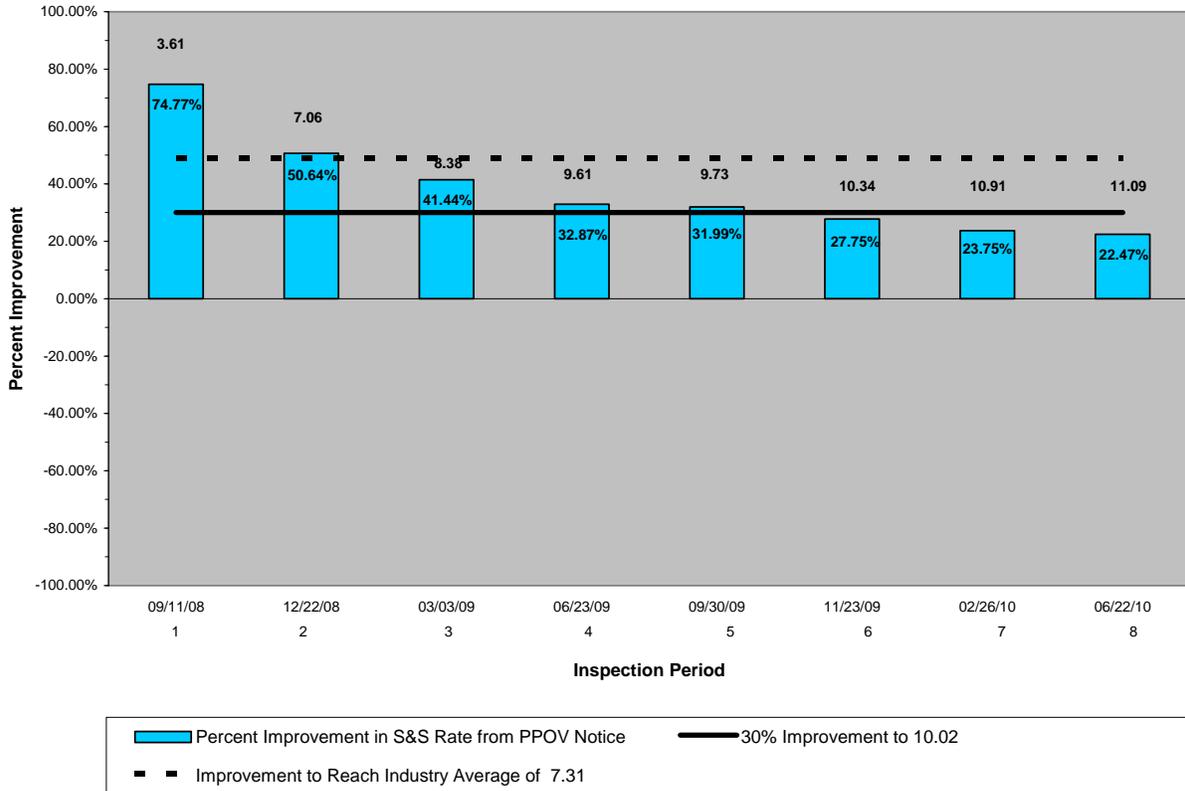
Robert E Ellis became the Controller of this mine on 04/01/2008.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 3 (04/01/06 - 03/31/08)

Improvement in S&S Rate After PPOV Notice
Mine ID 4608994
James H Booth - Deep Mine No. 8 (Coal - Underground)
PPOV Monitoring Start Date = 07/17/08
Starting S&S Rate = 14.31



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

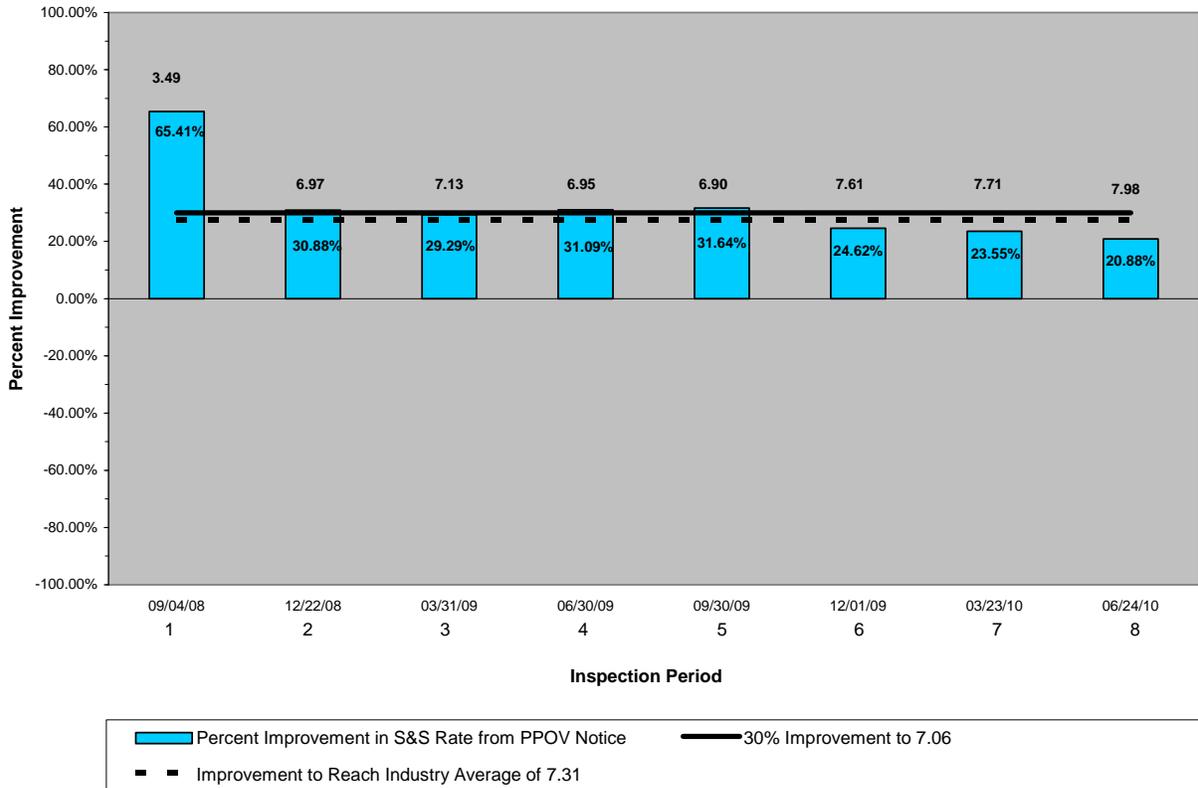
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 3 (04/01/06 - 03/31/08)

Improvement in S&S Rate After PPOV Notice
Mine ID 4609020
James C Justice II et al - No. 65 (Coal - Underground)
PPOV Monitoring Start Date = 07/21/08
Starting S&S Rate = 10.09



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

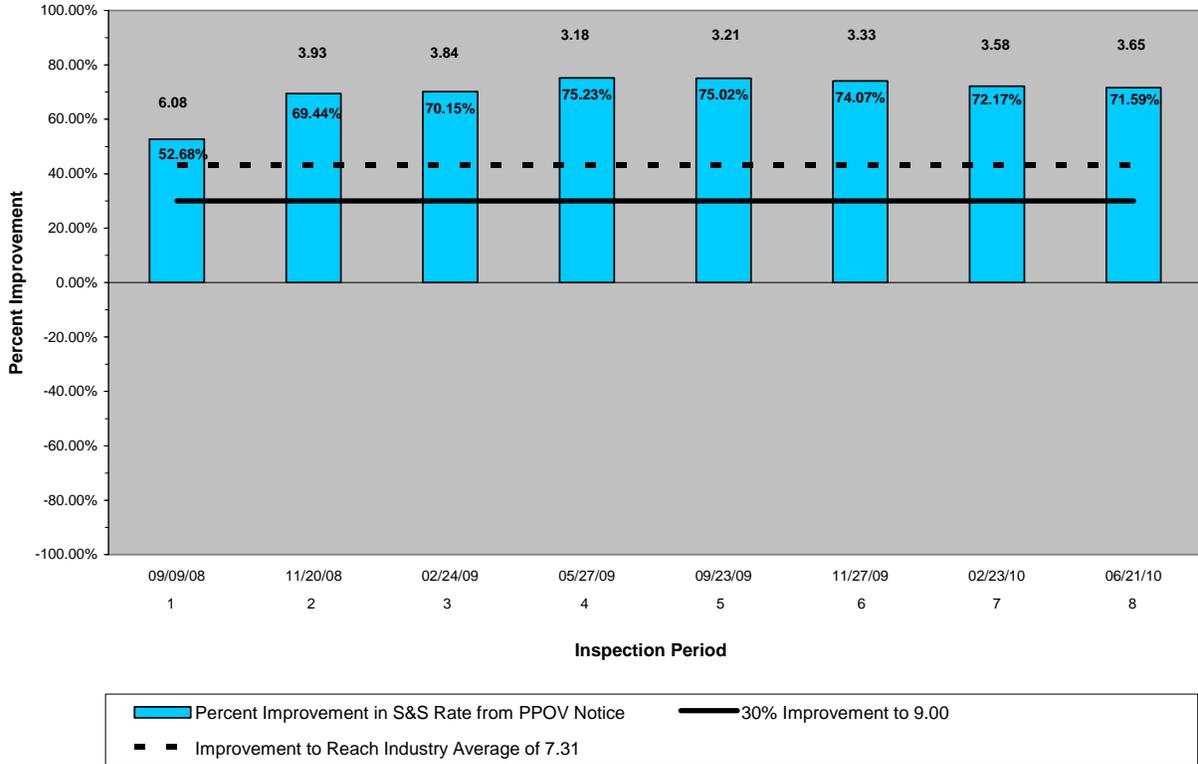
Mechel Oao became the Controller of this mine on 05/07/2009.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 3 (04/01/06 - 03/31/08)

Improvement in S&S Rate After PPOV Notice
 Mine ID 4407137
 Ervin Stiltner; Keith Stiltner - No. 2 (Coal - Underground)
 PPOV Monitoring Start Date = 08/25/08
 Starting S&S Rate = 12.85



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

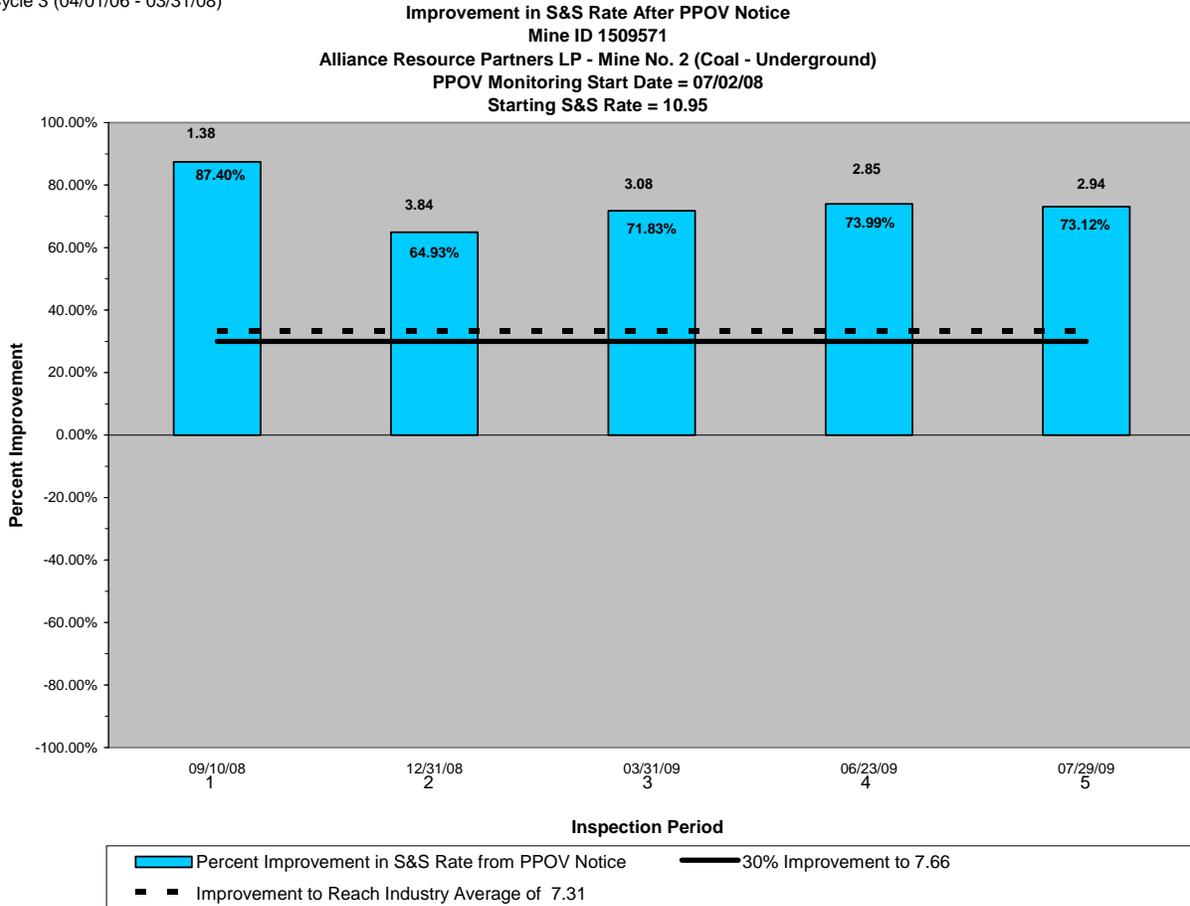
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 3 (04/01/06 - 03/31/08)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

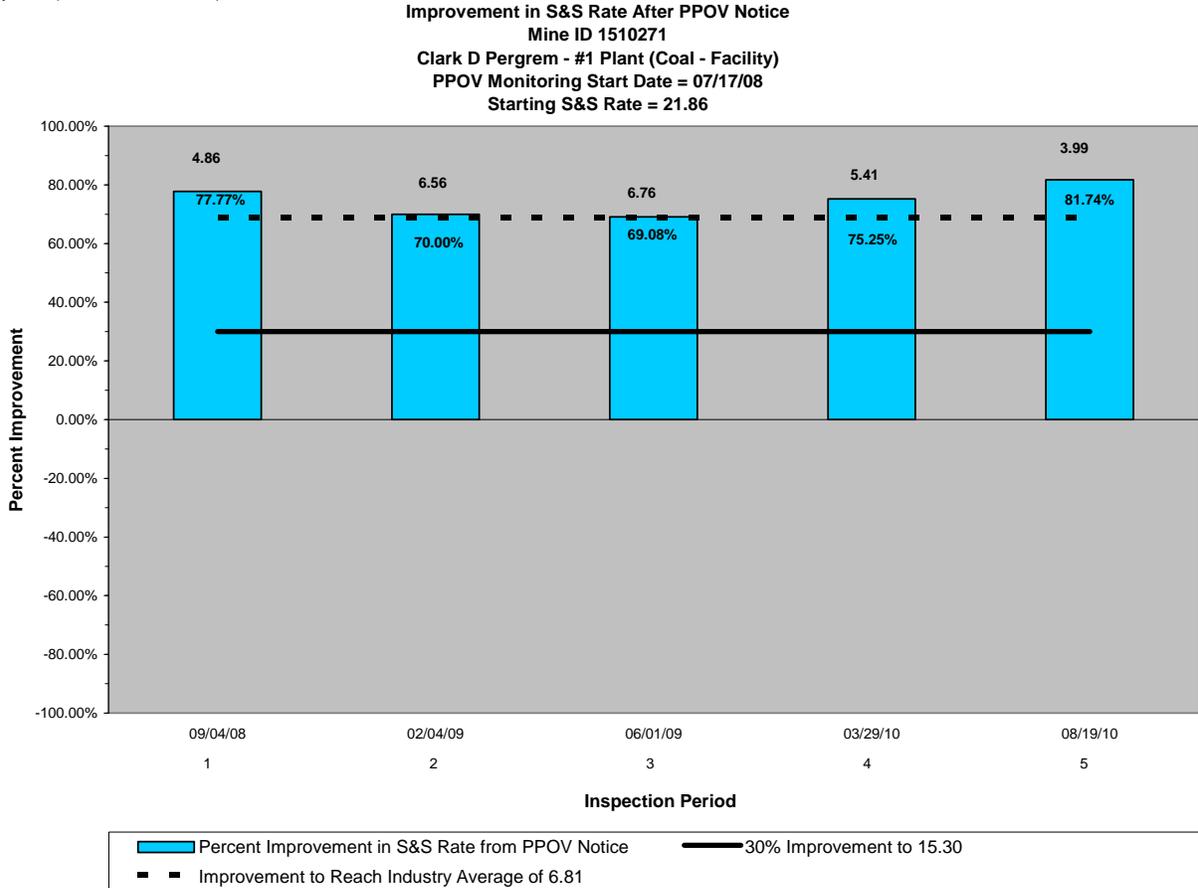
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 3 (04/01/06 - 03/31/08)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

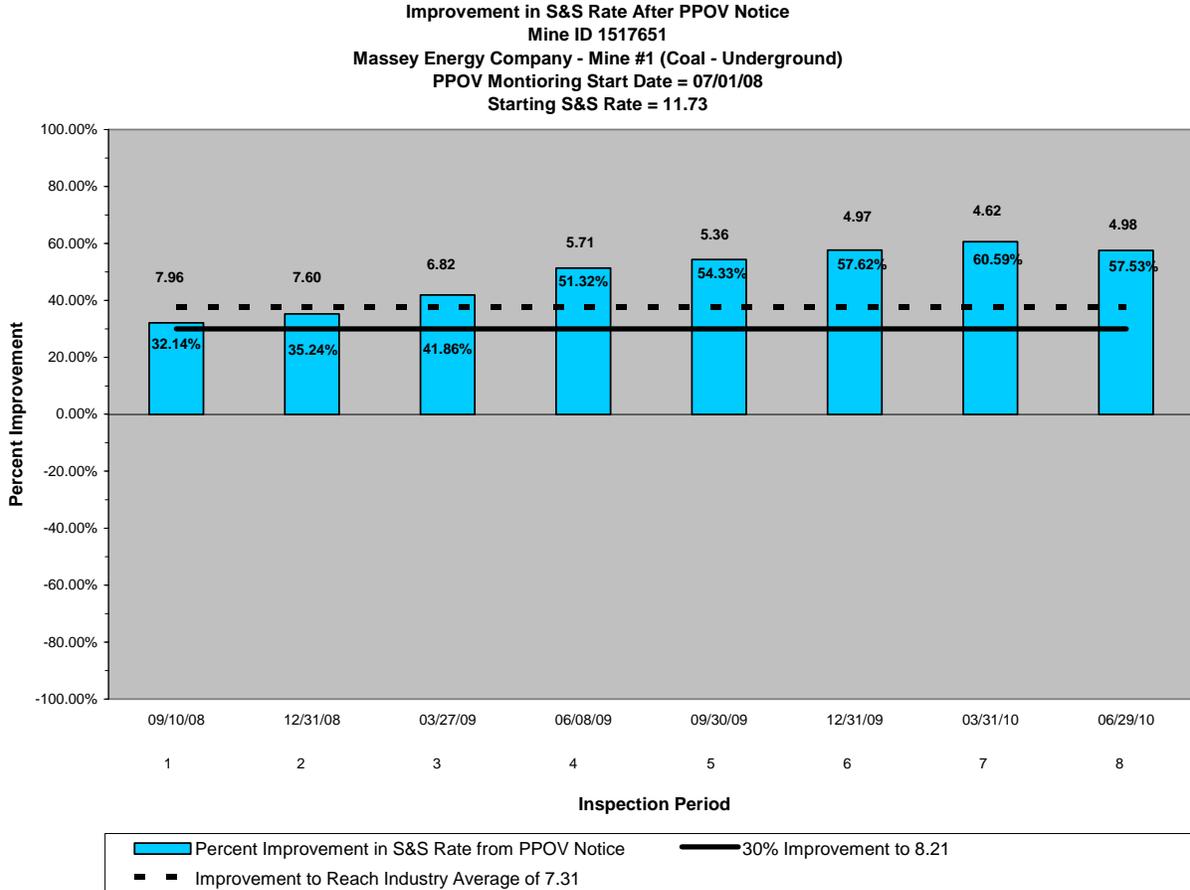
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 3 (04/01/06 - 03/31/08)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

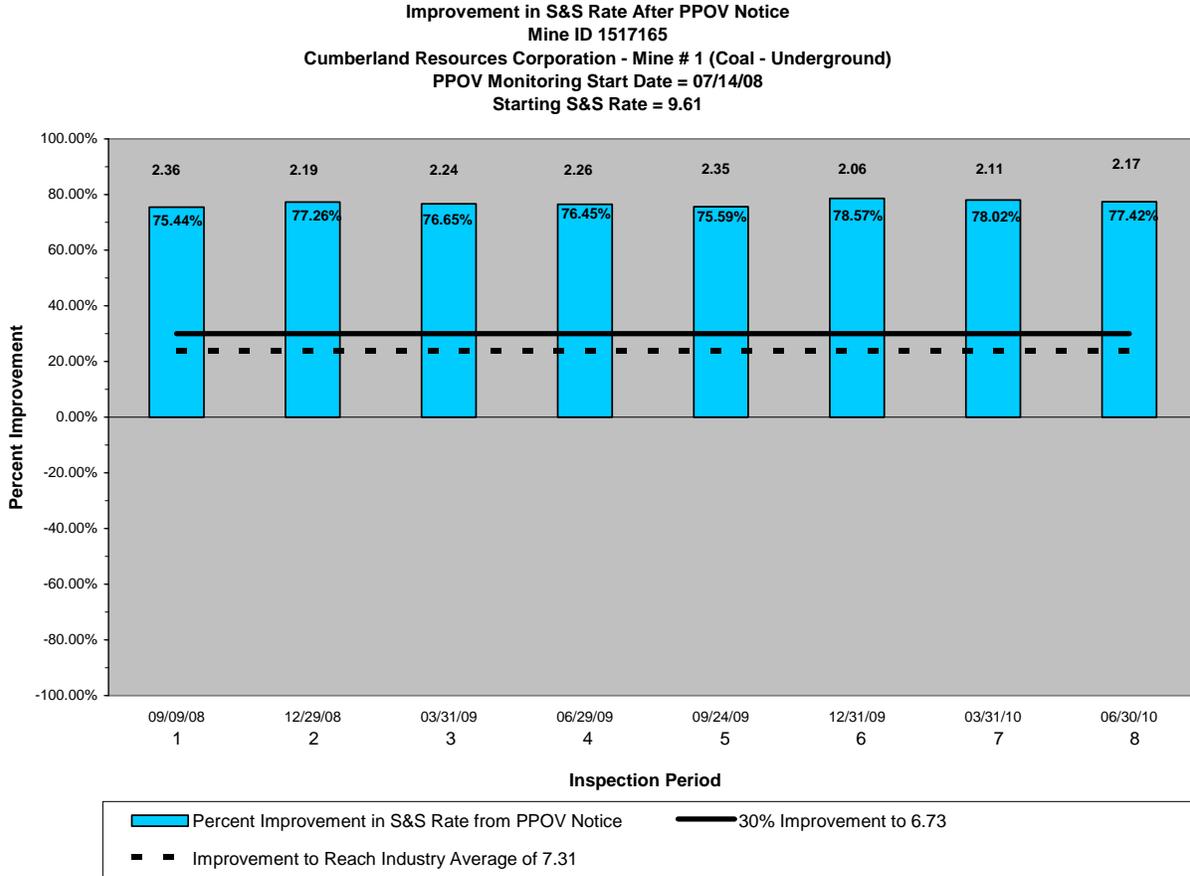
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 3 (04/01/06 - 03/31/08)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

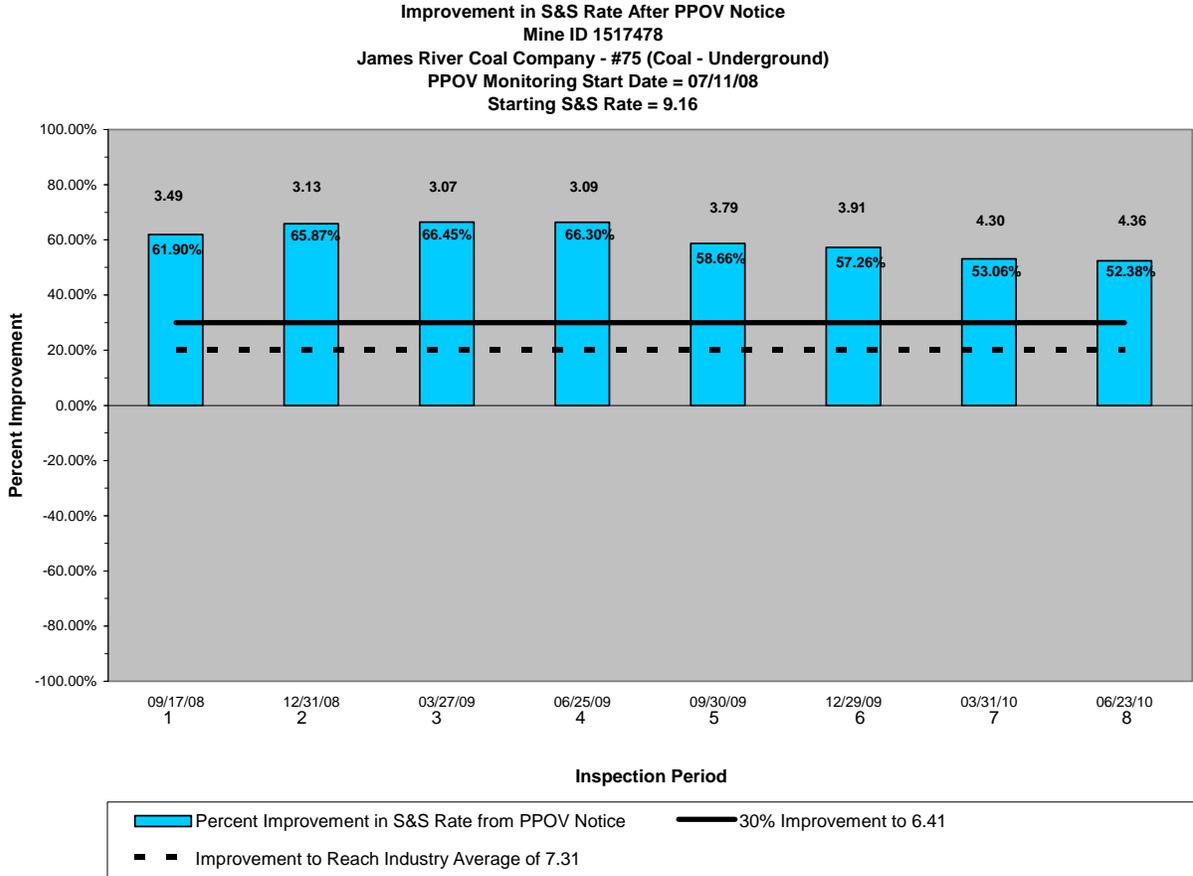
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Massey Energy Company became the Controller of this mine on 04/19/2010.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 3 (04/01/06 - 03/31/08)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

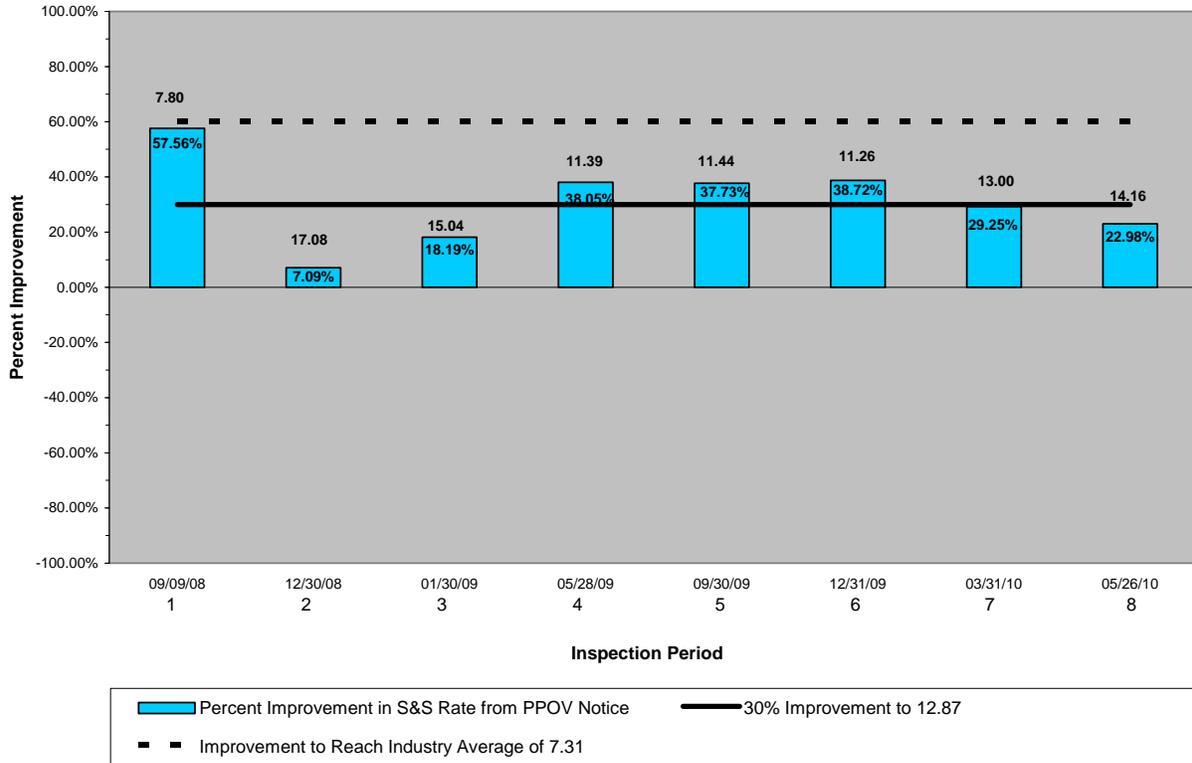
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 3 (04/01/06 - 03/31/08)

Improvement in S&S Rate After PPOV Notice
 Mine ID 1518182
 Horace Garrison Hill - D & C Mining Corp. (Coal - Underground)
 PPOV Monitoring Start Date = 07/09/08
 Starting S&S Rate = 18.38



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

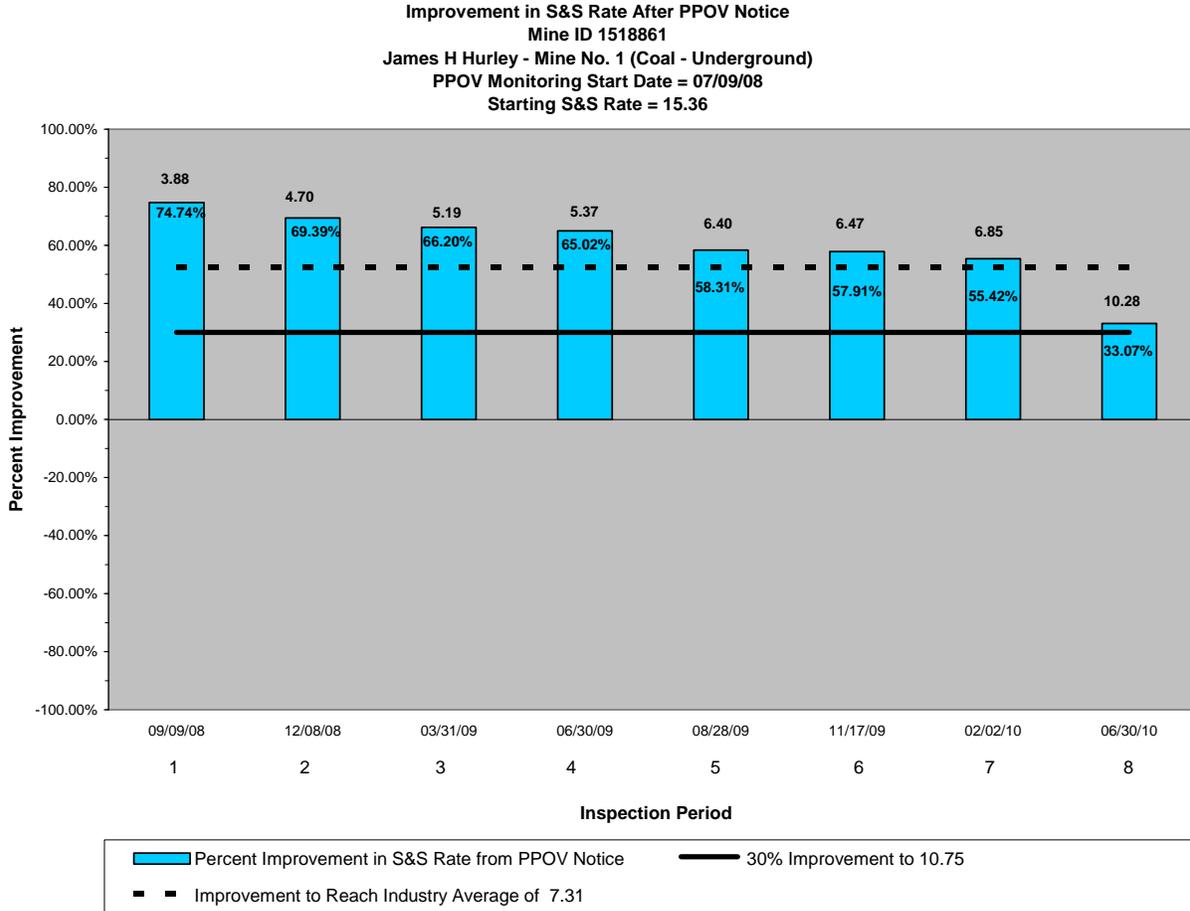
The number presented inside each bar of the graph represents the percent reduction in the mine's rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 3 (04/01/06 - 03/31/08)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

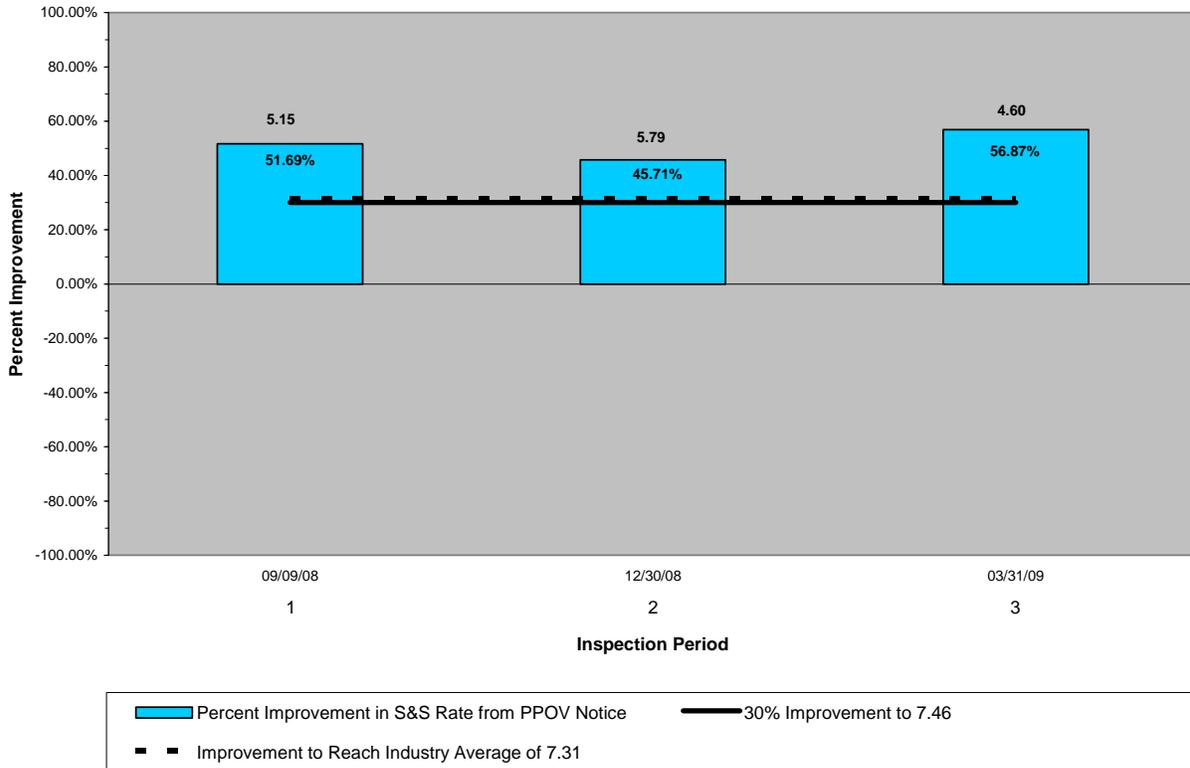
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 3 (04/01/06 - 03/31/08)

Improvement in S&S Rate After PPOV Notice
Mine ID 0500266
GCC of America - King I (Coal - Underground)
PPOV Monitoring Start Date = 07/10/08
Starting S&S Rate = 10.66



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

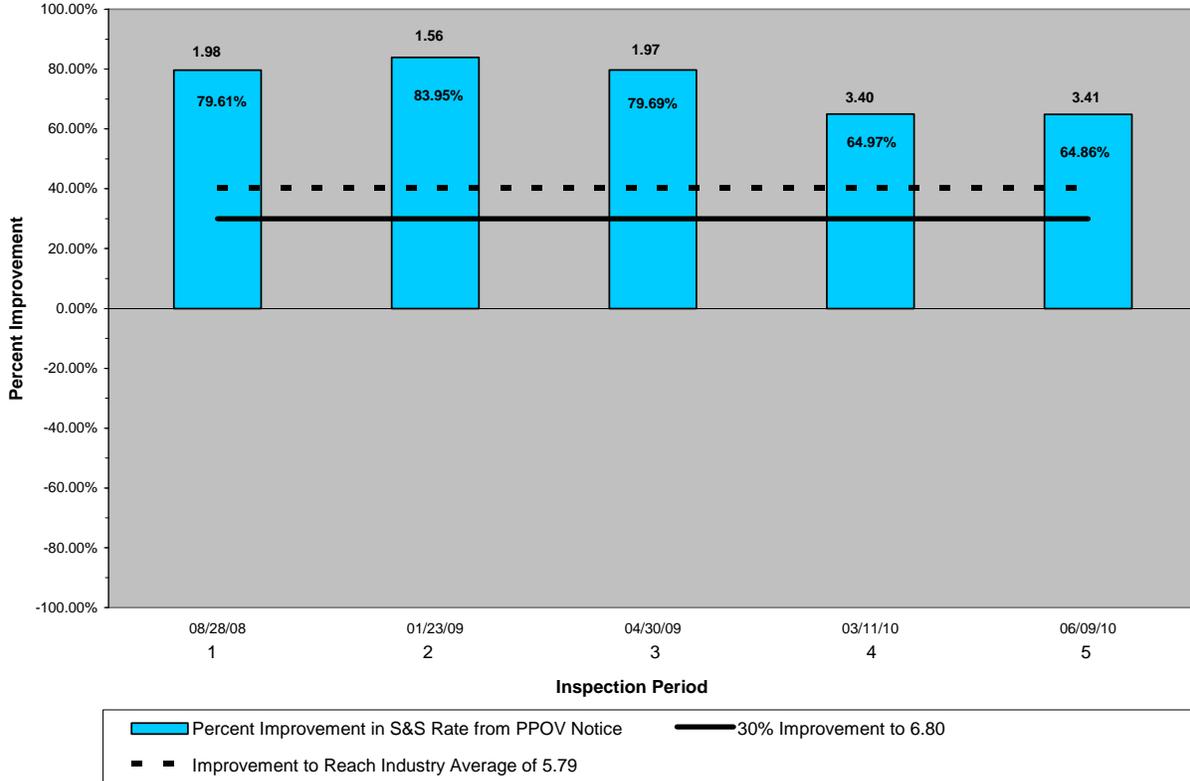
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 3 (04/01/06 - 03/31/08)

Improvement in S&S Rate After PPOV Notice
Mine ID 2000422
Ontario Tilden Company; Cliffs TIOP Inc - Tilden Mine (MNM - Surface)
PPOV Monitoring Start Date = 08/04/08
Starting S&S Rate = 9.71



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

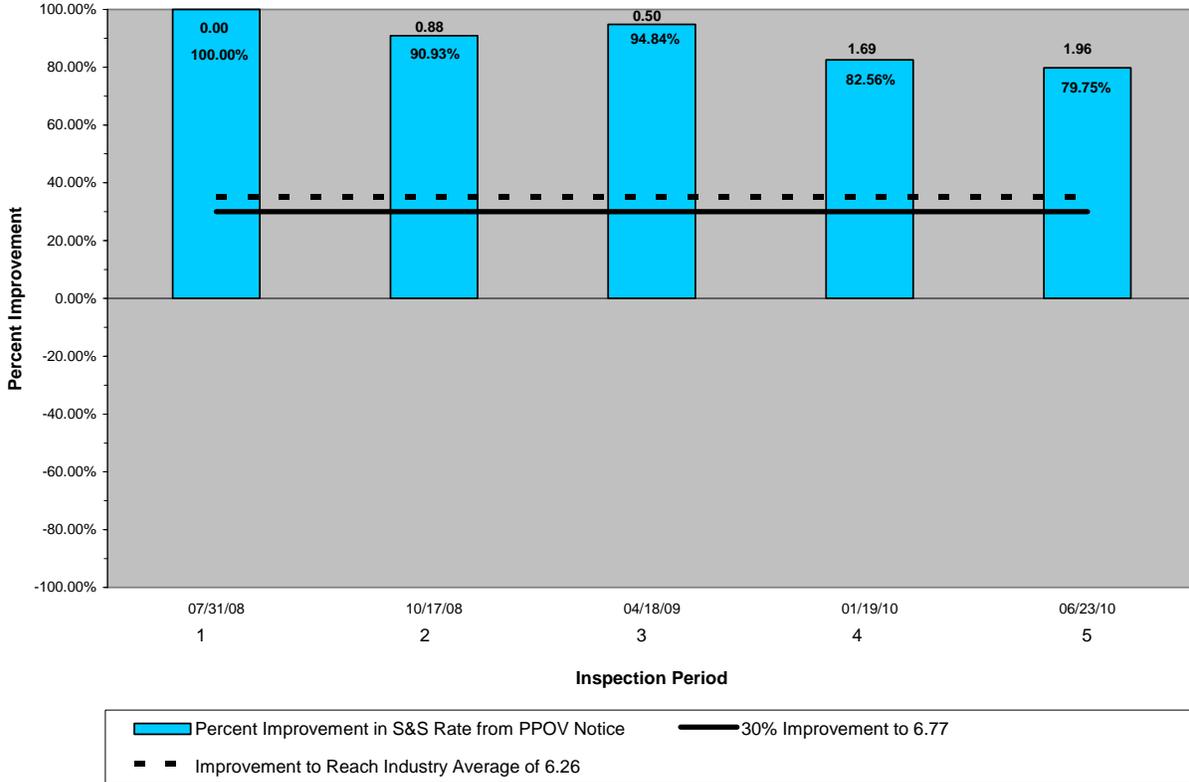
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 3 (04/01/06 - 03/31/08)

Improvement in S&S Rate After PPOV Notice
Mine ID 1505484
Carmeuse Holding SA; Lafarge SA - Plant Black River Operations (MNM - Facility)
PPOV Monitoring Start Date = 07/28/08
Starting S&S Rate = 9.67



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

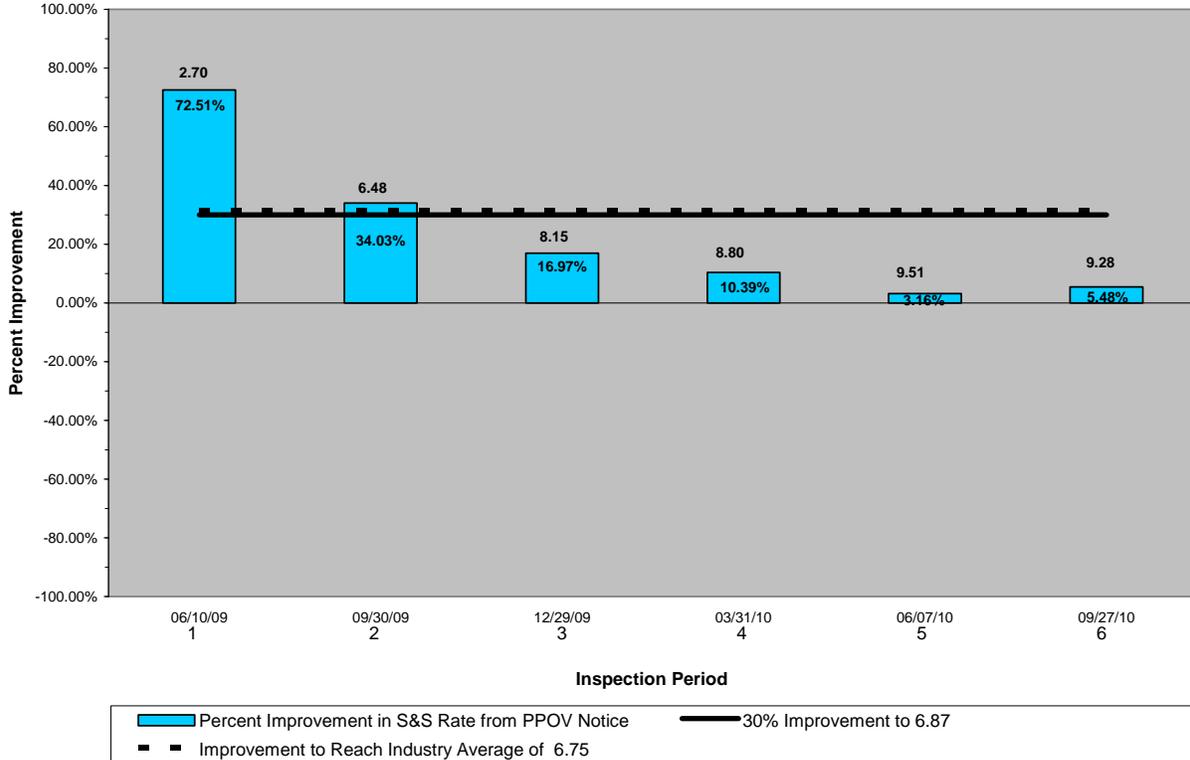
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 4 (01/01/07- 12/31/08)

Improvement in S&S Rate After PPOV Notice
Mine ID 4609136
Coalfield Transport Inc - Broad Run Mine (Coal - Underground)
PPOV Monitoring Start Date = 04/01/09
Starting S&S Rate = 9.82



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

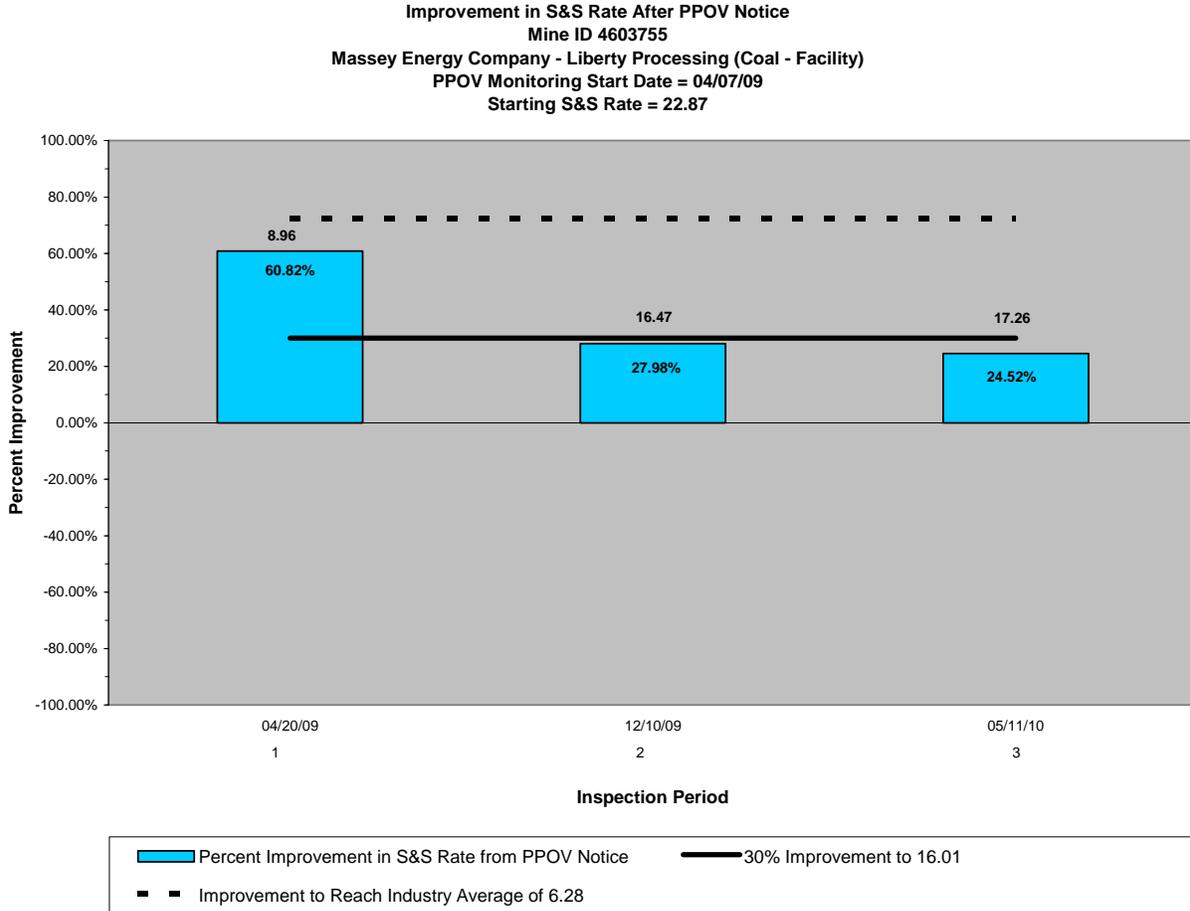
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 4 (01/01/07- 12/31/08)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

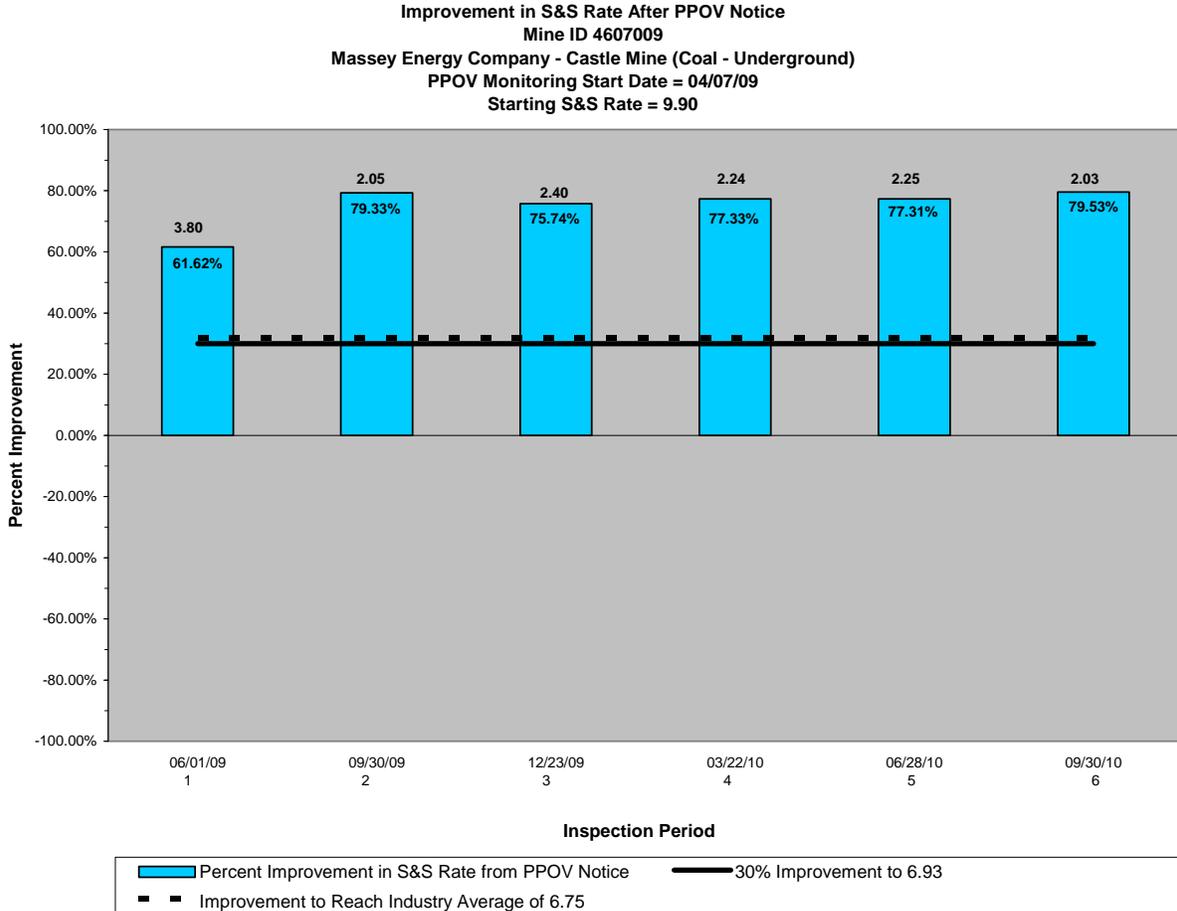
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 4 (01/01/07- 12/31/08)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

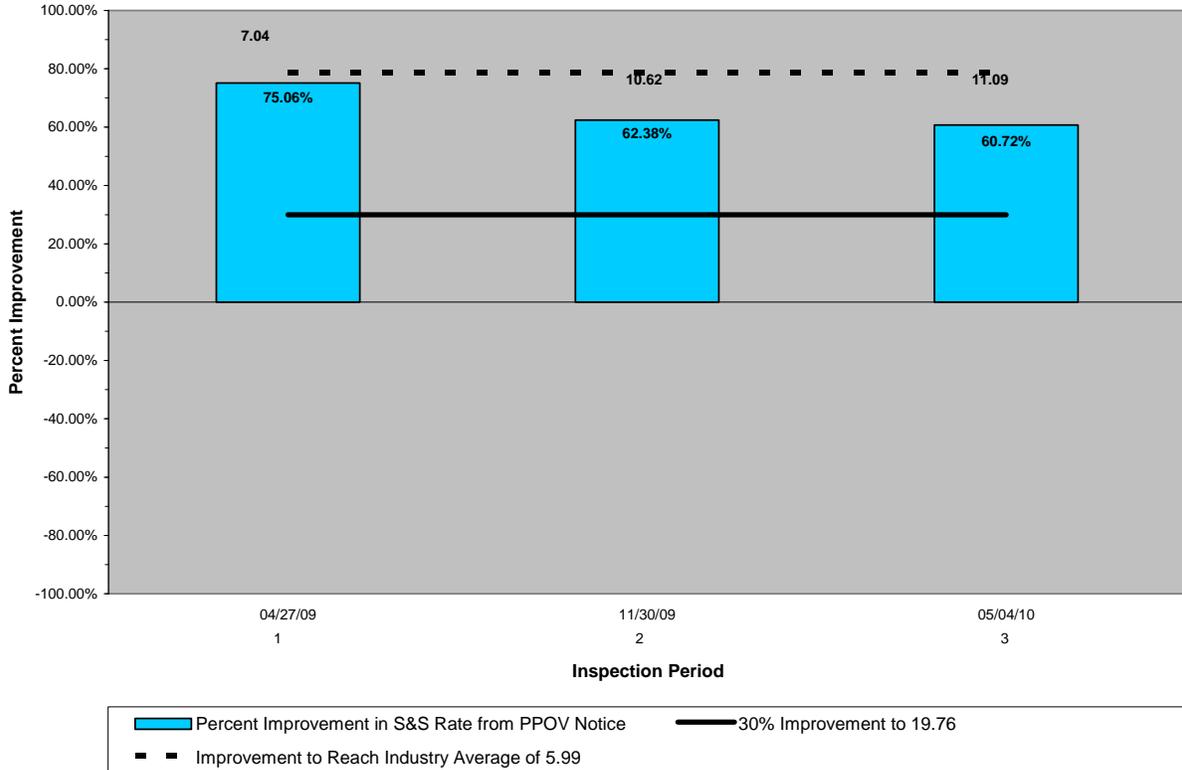
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 4 (01/01/07- 12/31/08)

Improvement in S&S Rate After PPOV Notice
Mine ID 4608249
Rhonda Marcum - Surface No. 1 (Coal - Surface)
PPOV Monitoring Start Date = 04/06/09
Starting S&S Rate = 28.23



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

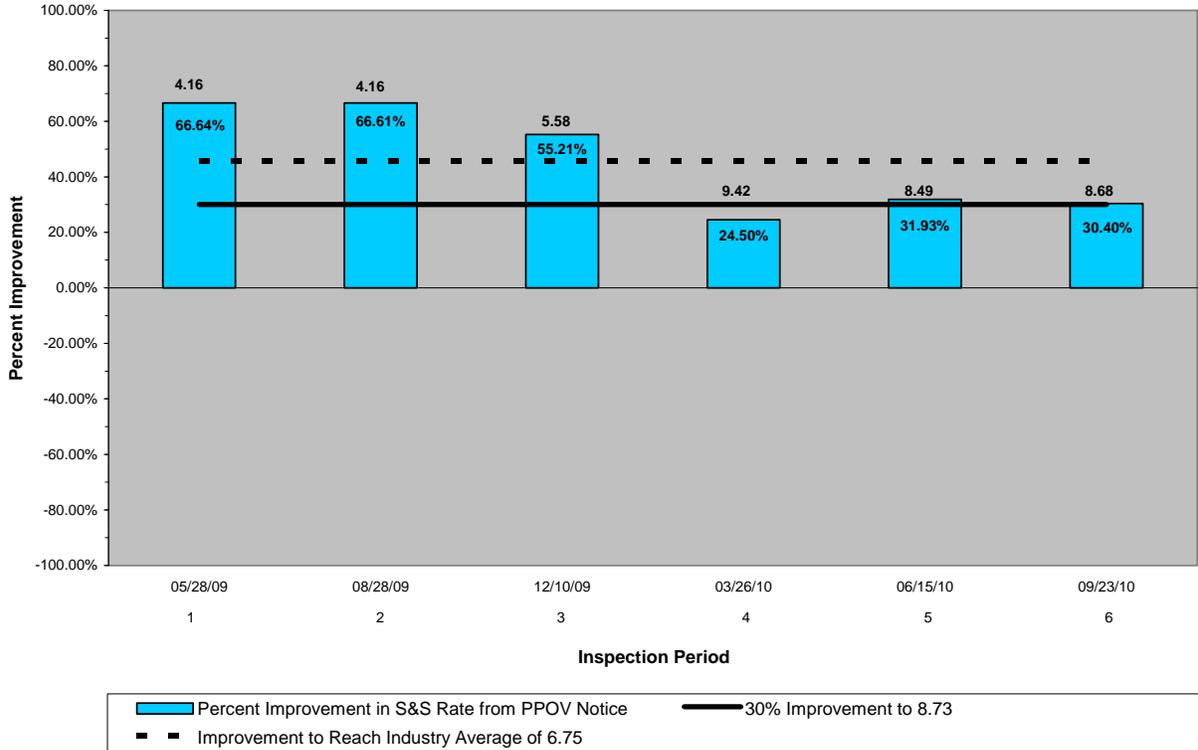
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 4 (01/01/07- 12/31/08)

Improvement in S&S Rate After PPOV Notice
Mine ID 4406685
United Company - Paw Paw Mine (Coal - Underground)
PPOV Monitoring Start Date = 04/13/09
Starting S&S Rate = 12.47



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

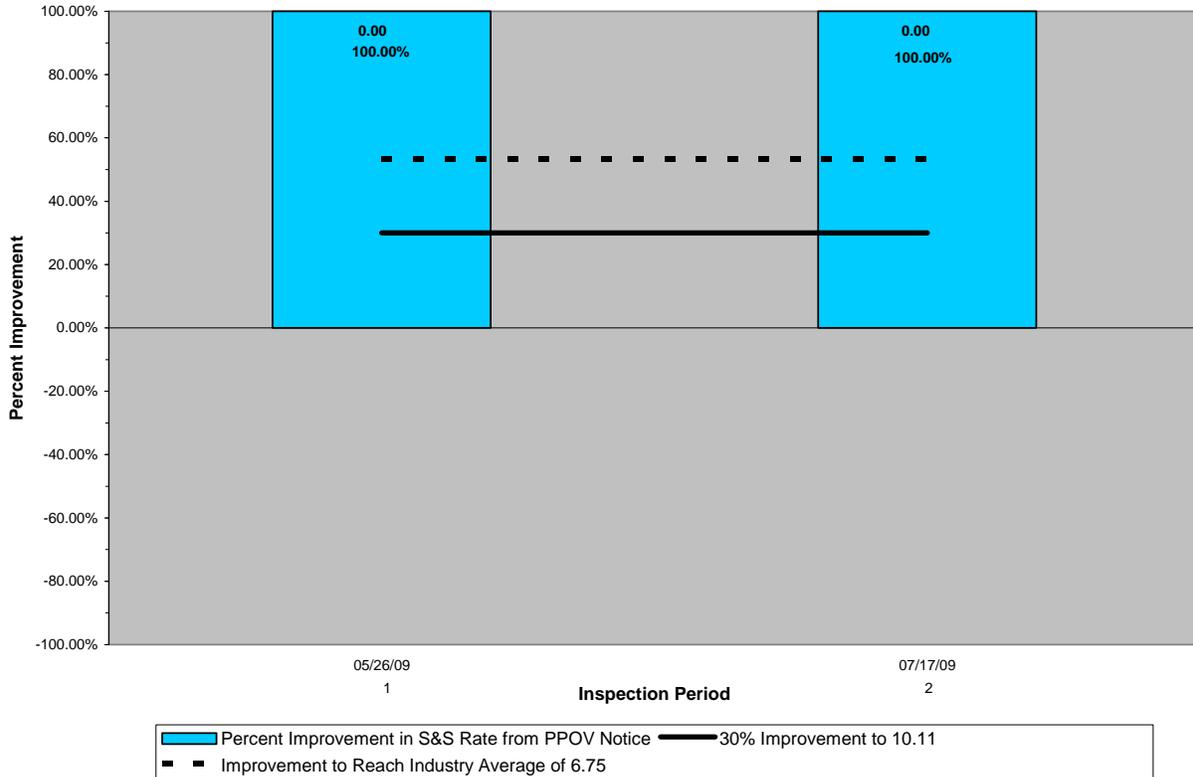
Metinvest B V became the Controller of this mine on 04/30/2009.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 4 (01/01/07- 12/31/08)

Improvement in S&S Rate After PPOV Notice
Mine ID 4406866
Robin M Lambert; Philip T Lambert - Mine No. 2 (Coal - Underground)
PPOV Monitoring Start Date = 04/13/09
Starting S&S Rate = 14.44



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

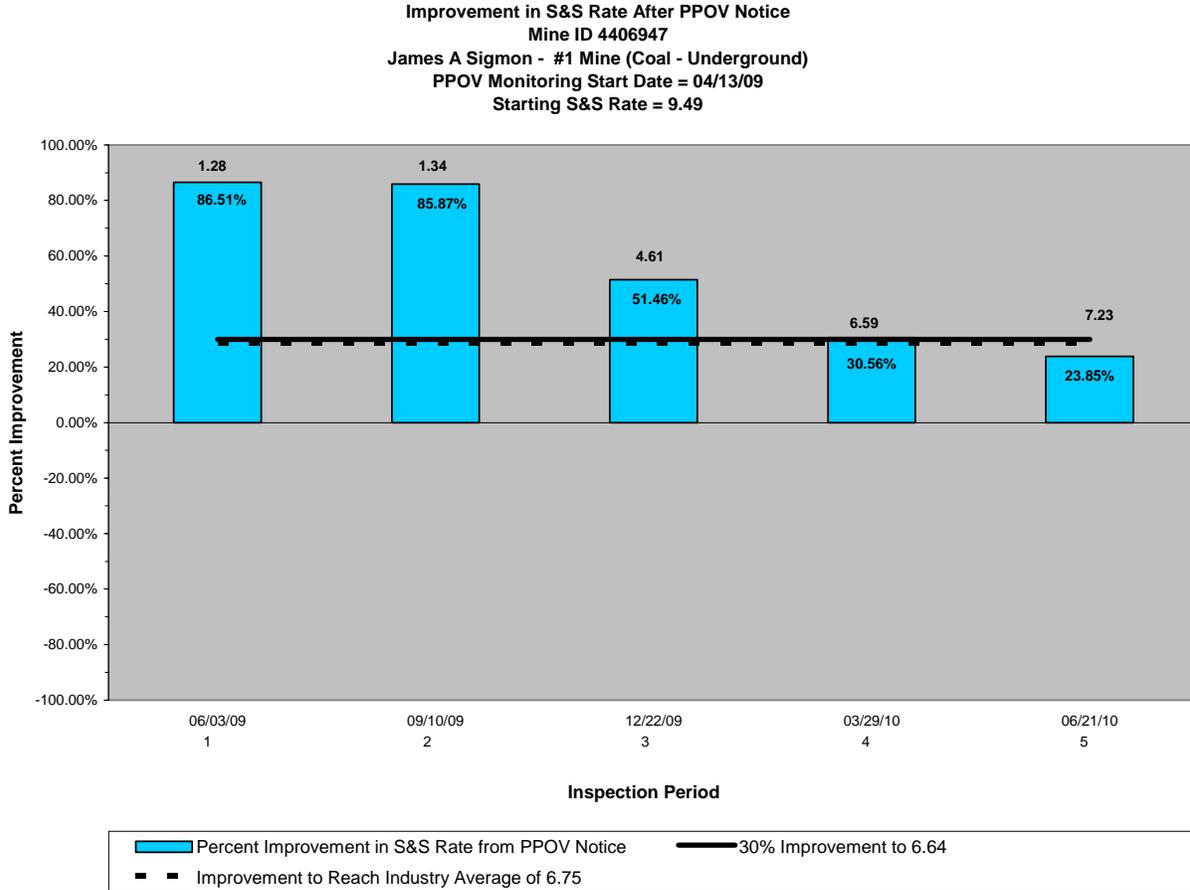
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 4 (01/01/07- 12/31/08)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

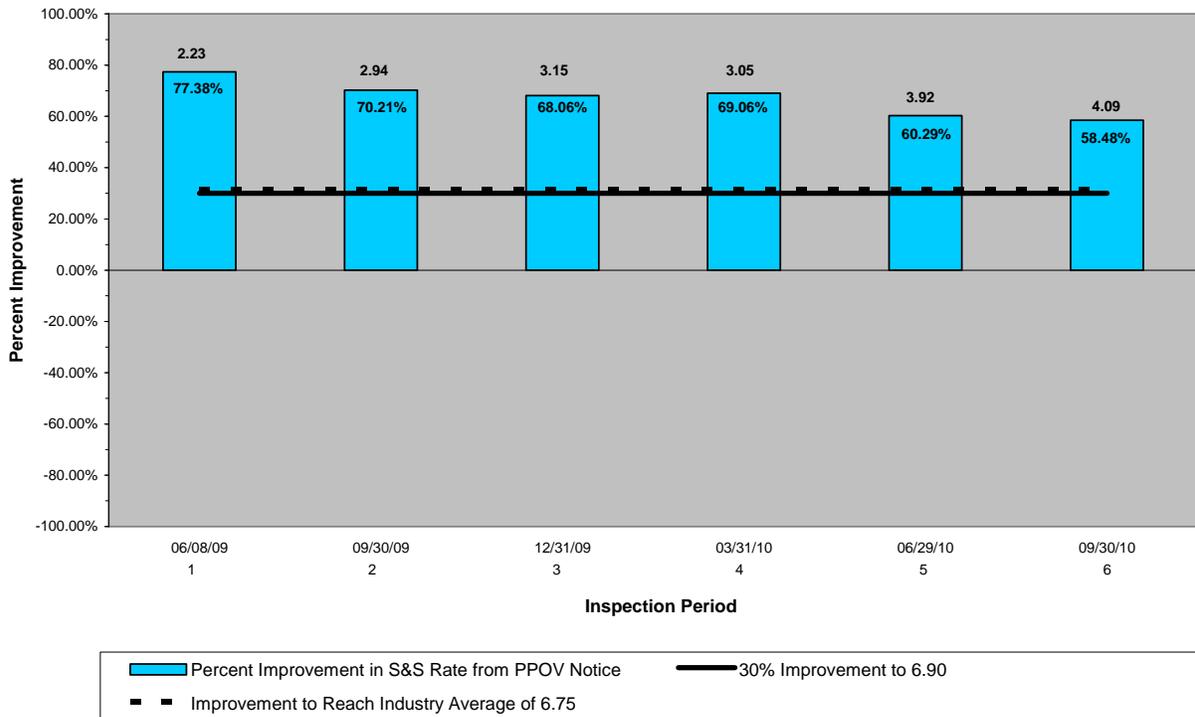
James C Justice II became the Controller of this mine on 07/28/2010.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 4 (01/01/07- 12/31/08)

Improvement in S&S Rate After PPOV Notice
 Mine ID 1517651
 Massey Energy Company - Mine #1 (Coal - Underground)
 PPOV Monitoring Start Date = 03/30/09
 Starting S&S Rate = 9.86



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

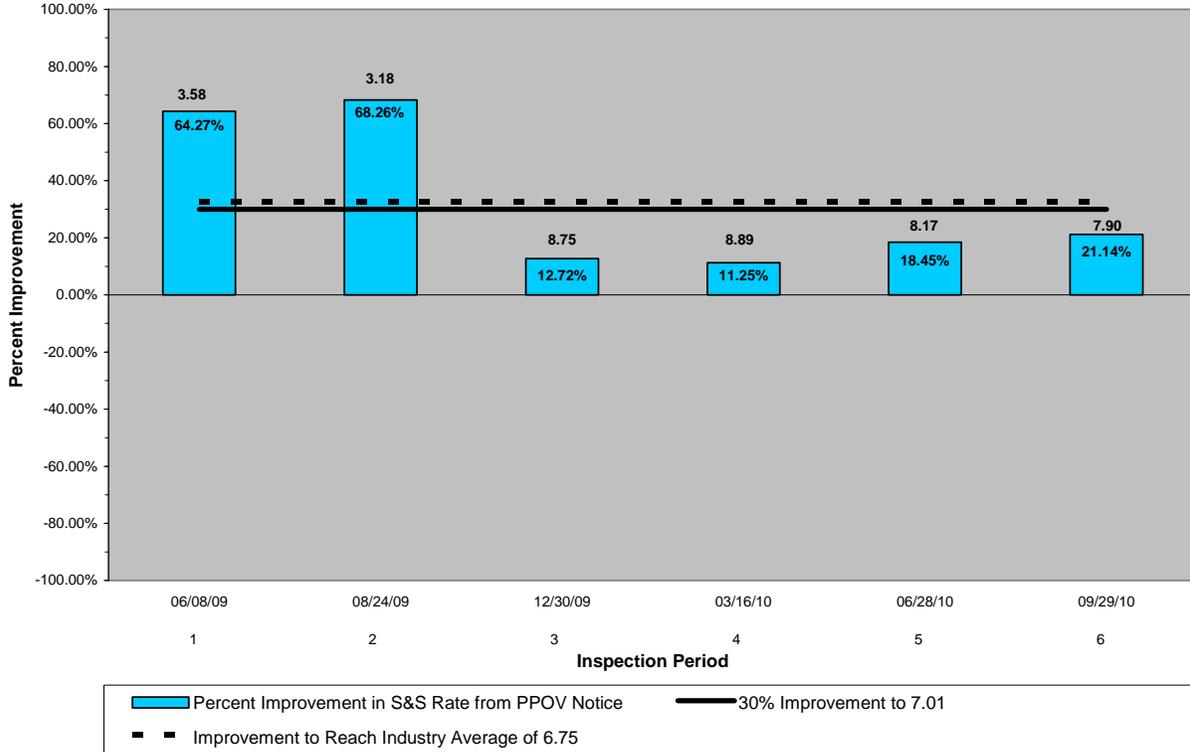
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 4 (01/01/07- 12/31/08)

Improvement in S&S Rate After PPOV Notice
 Mine ID 1509636
 James River Coal Company - #77 (Coal - Underground)
 PPOV Monitoring Start Date = 04/01/09
 Starting S&S Rate = 10.02



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine's rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

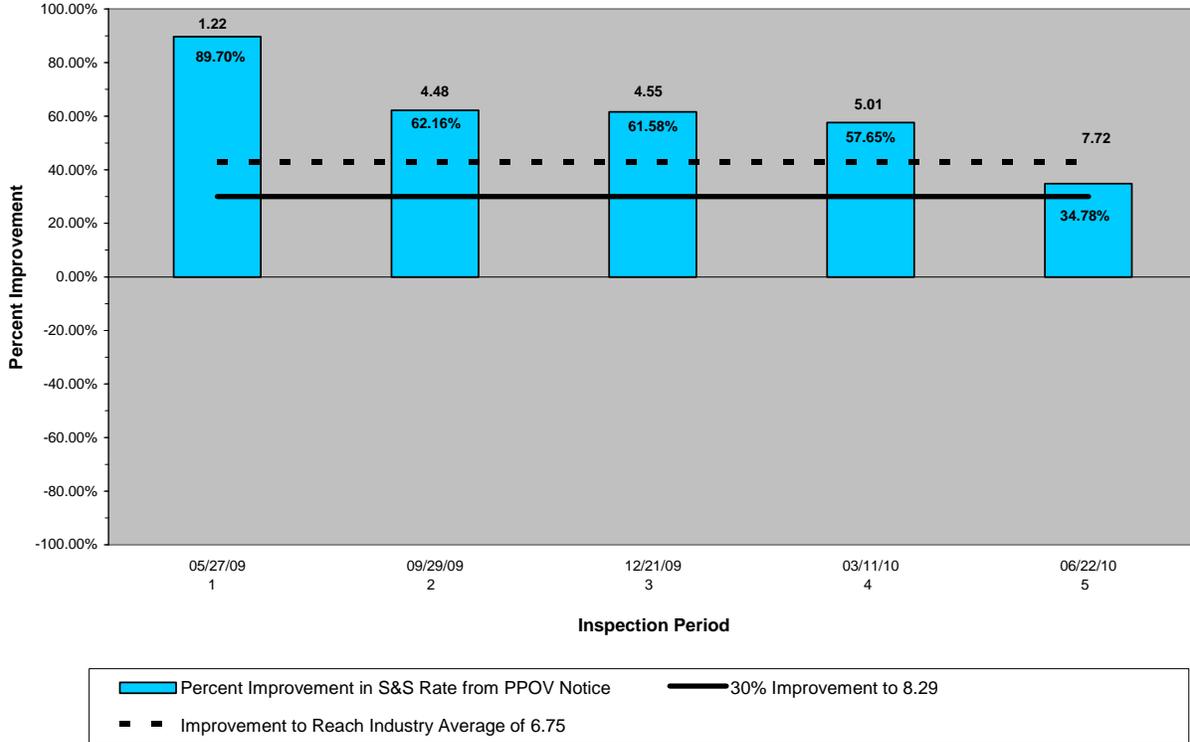
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 4 (01/01/07- 12/31/08)

Improvement in S&S Rate After PPOV Notice
 Mine ID 1518924
 Broe Companies Inc - Butcher Branch (Coal - Underground)
 PPOV Monitoring Start Date = 04/01/09
 Starting S&S Rate = 11.84



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

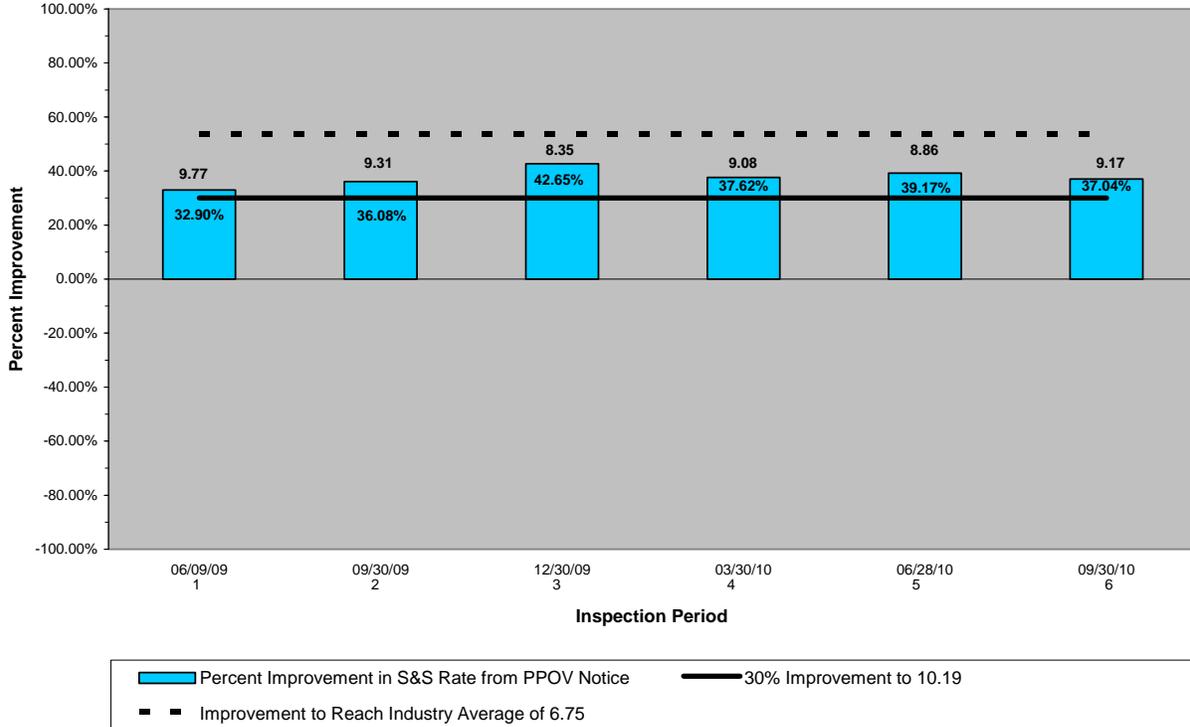
Douglas McClain and Jim Miceli became the Controller of this mine on 07/28/2010.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 4 (01/01/07- 12/31/08)

Improvement in S&S Rate After PPOV Notice
Mine ID 4202074
America West Resources, Inc. - Horizon Mine (Coal - Underground)
PPOV Monitoring Start Date = 04/22/09
Starting S&S Rate = 14.56



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

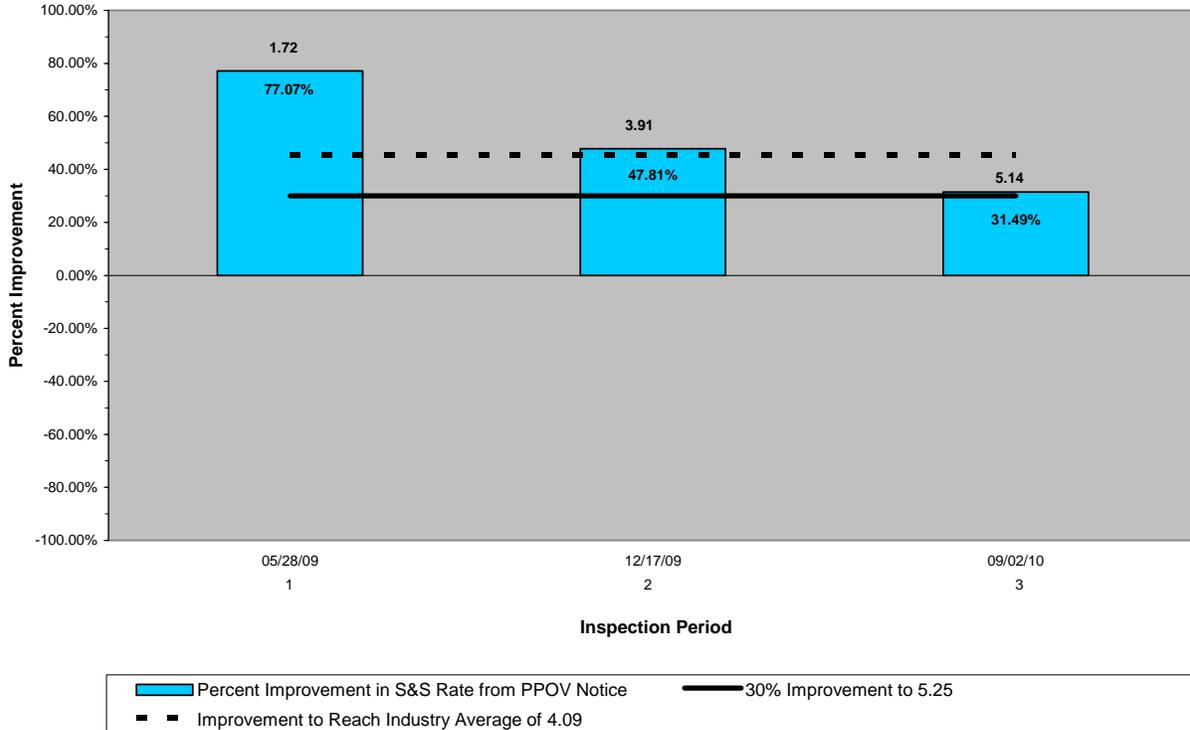
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 4 (01/01/07- 12/31/08)

Improvement in S&S Rate After PPOV Notice
Mine ID 0402848
Imerys S A - Lompoc Plant (MNM - Surface)
PPOV Monitoring Start Date = 05/19/09
Starting S&S Rate = 7.50



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

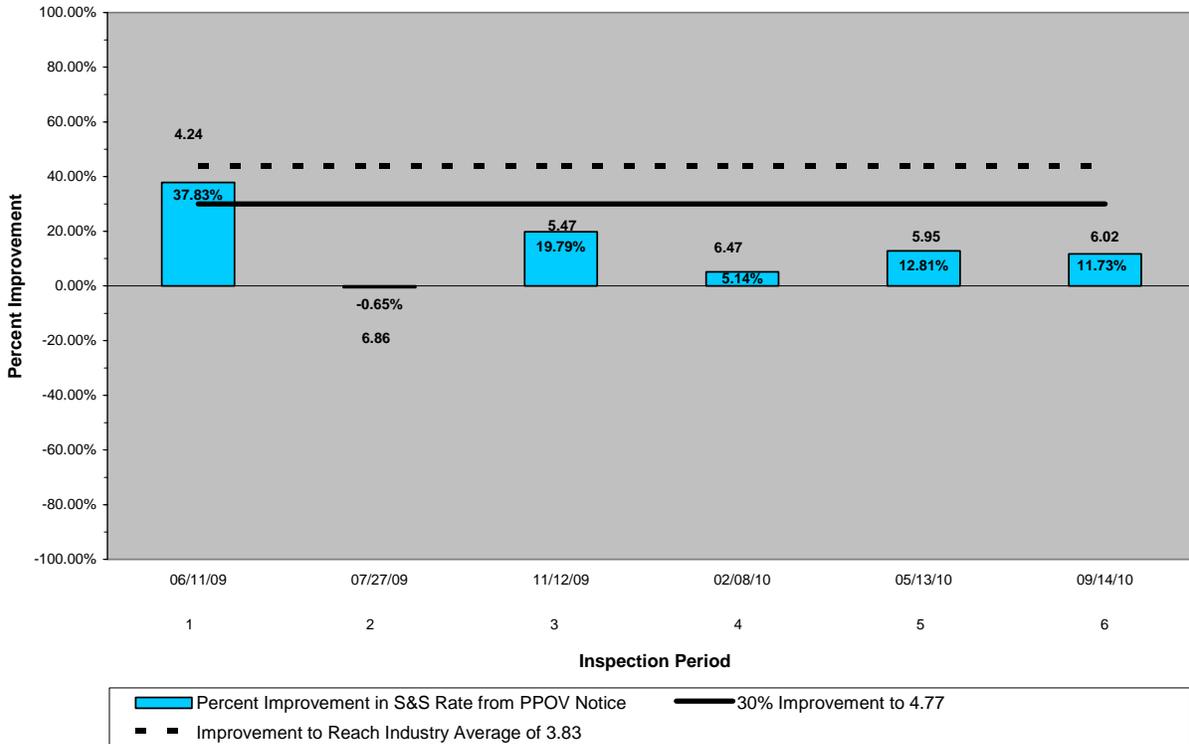
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 4 (01/01/07- 12/31/08)

Improvement in S&S Rate After PPOV Notice
Mine ID 2602512
Newmont Mining Corp. - Leeville (MNM - Underground)
PPOV Monitoring Start Date = 05/27/09
Starting S&S Rate = 6.82



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside or below each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

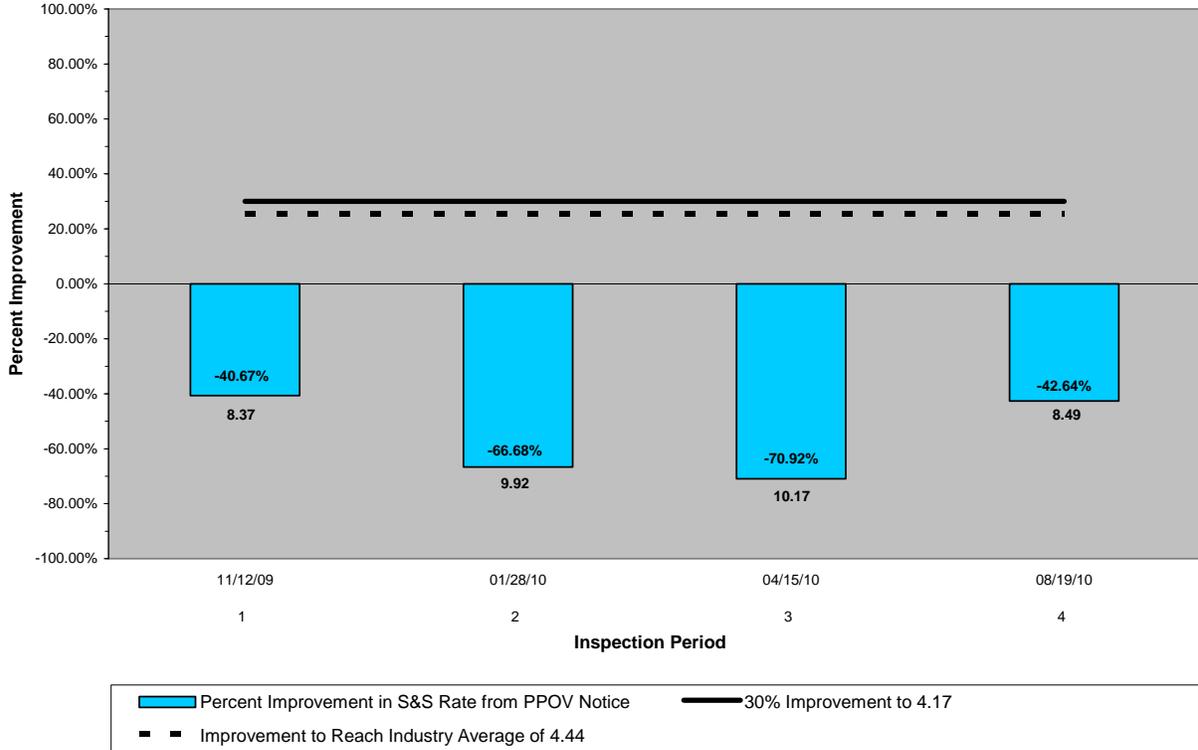
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 5 (09/01/07 - 08/31/09)

Improvement in S&S Rate After PPOV Notice
Mine ID 2300457
Renco Group - Buick Mine/Mill (MNM - Underground)
PPOV Monitoring Start Date = 11/02/09
Starting S&S Rate = 5.95



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

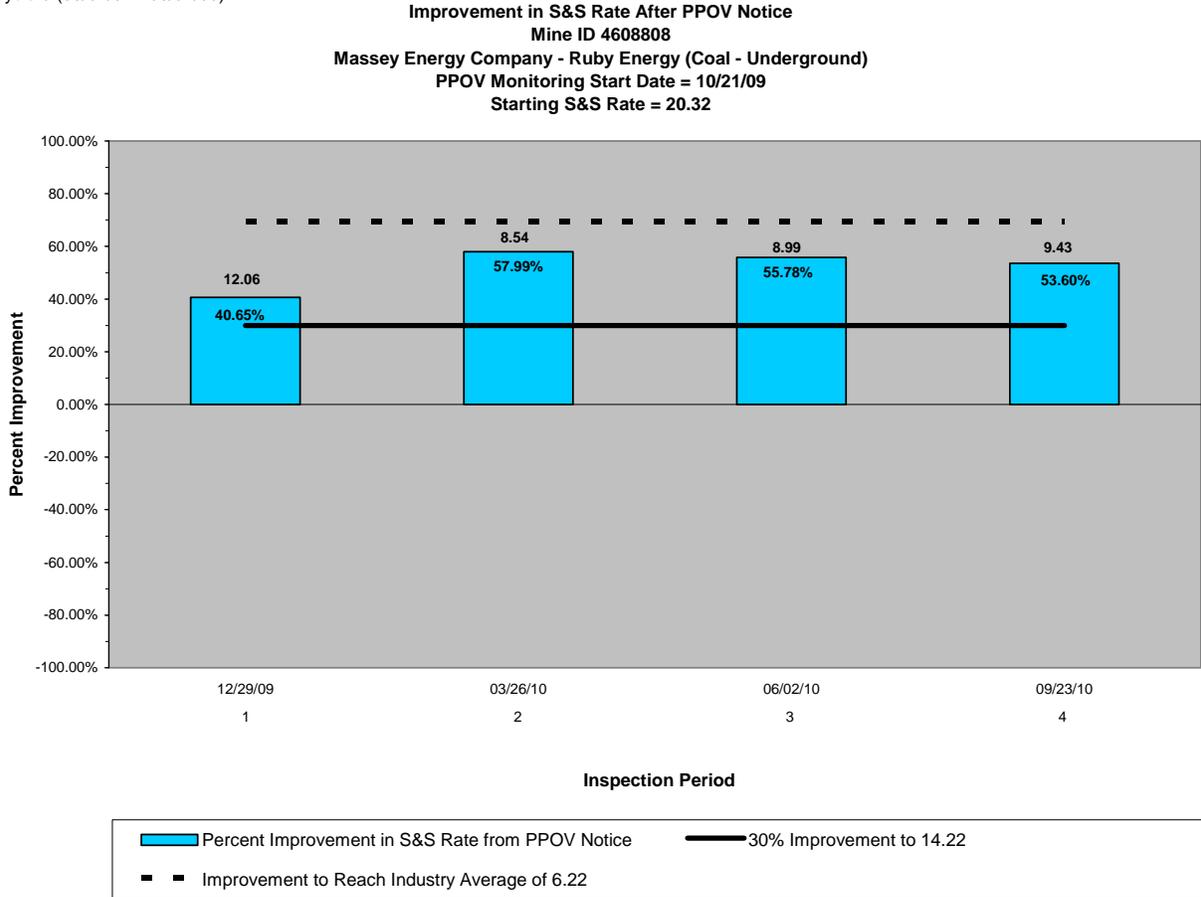
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 5 (09/01/07 - 08/31/09)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

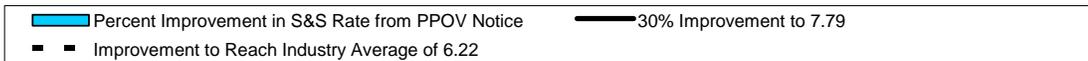
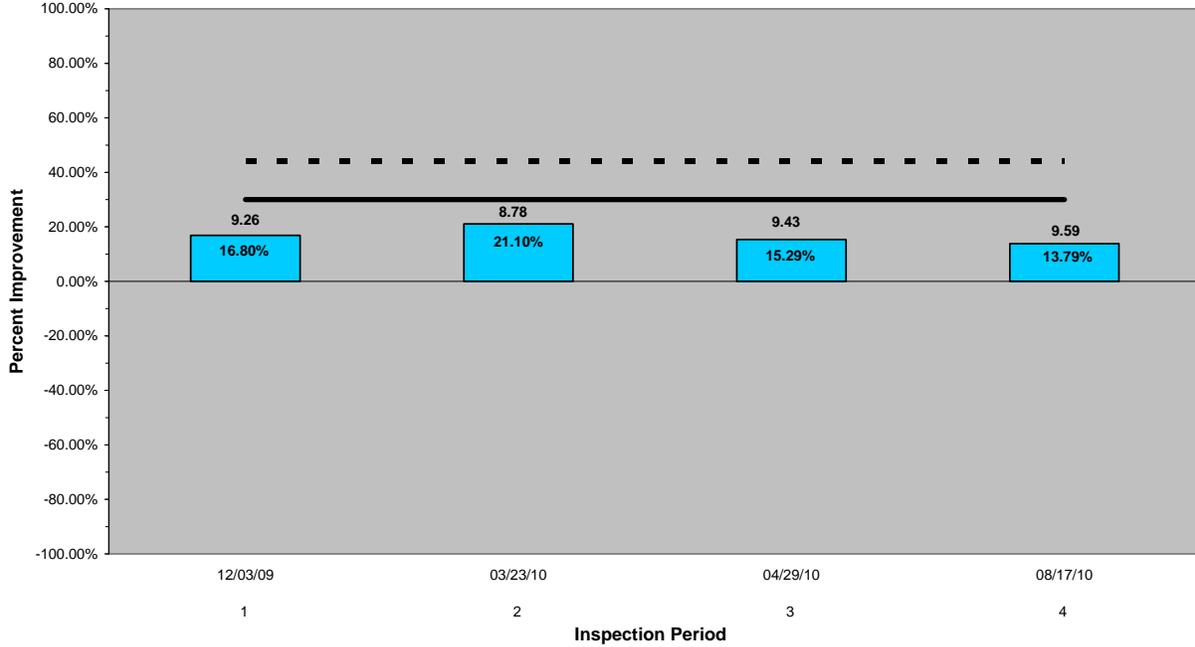
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 5 (09/01/07 - 08/31/09)

Improvement in S&S Rate After PPOV Notice
Mine ID 4608949
Clarence R Peters; Richard N Nester - Winifrede 12 Mine (Coal - Underground)
PPOV Monitoring Start Date = 10/21/09
Starting S&S Rate = 11.13



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

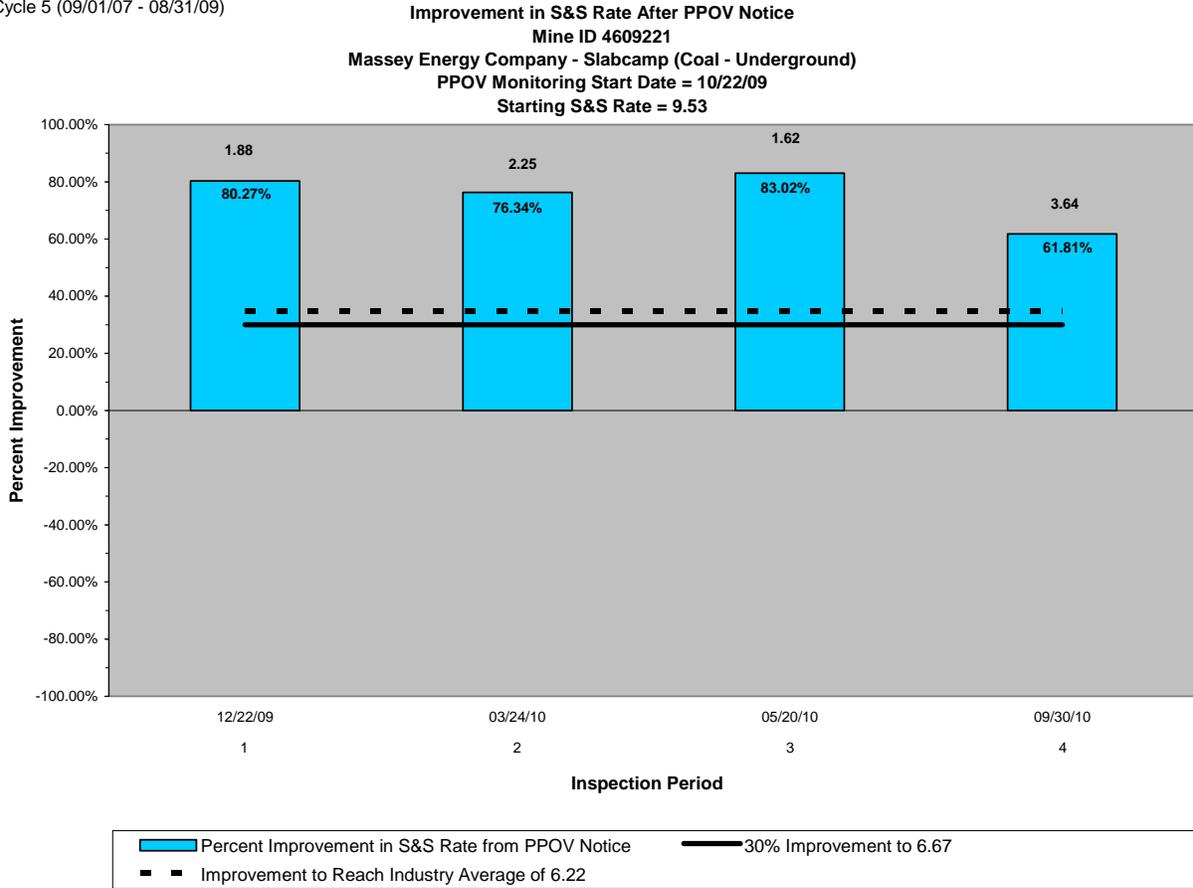
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 5 (09/01/07 - 08/31/09)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

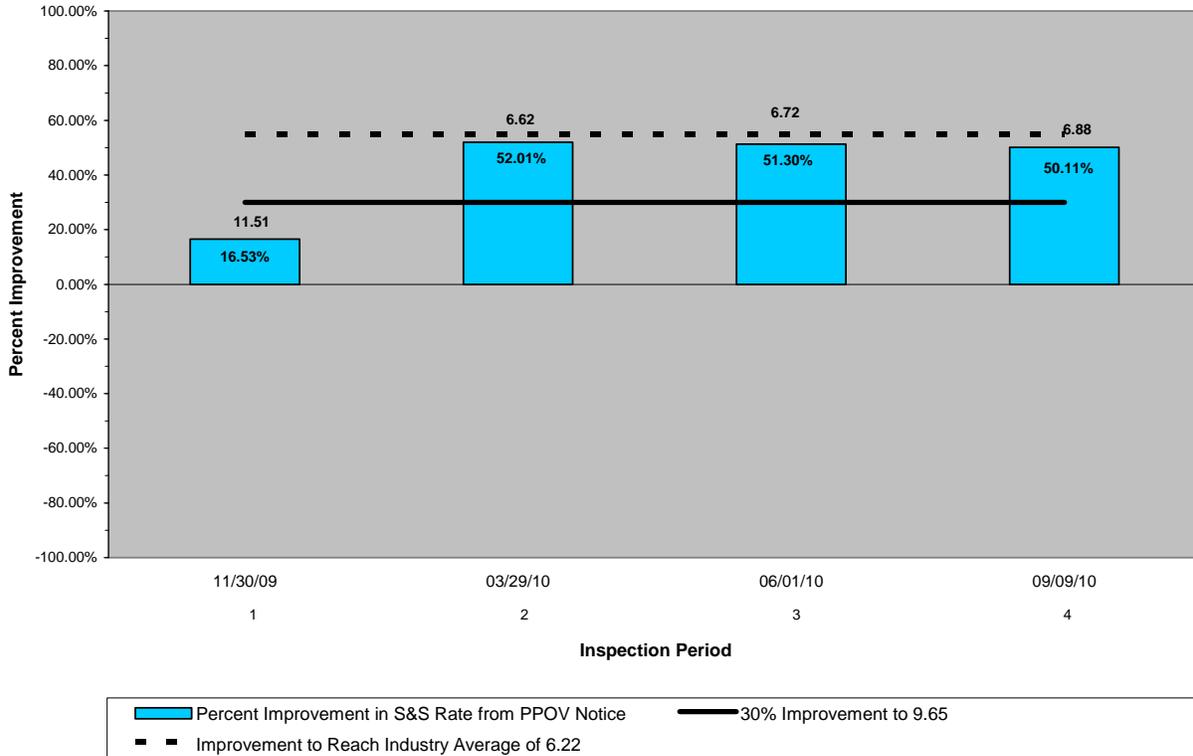
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 5 (09/01/07 - 08/31/09)

Improvement in S&S Rate After PPOV Notice
Mine ID 4406804
Massey Energy Company - Tiller No 1 (Coal - Underground)
PPOV Monitoring Start Date = 10/23/09
Starting S&S Rate = 13.79



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

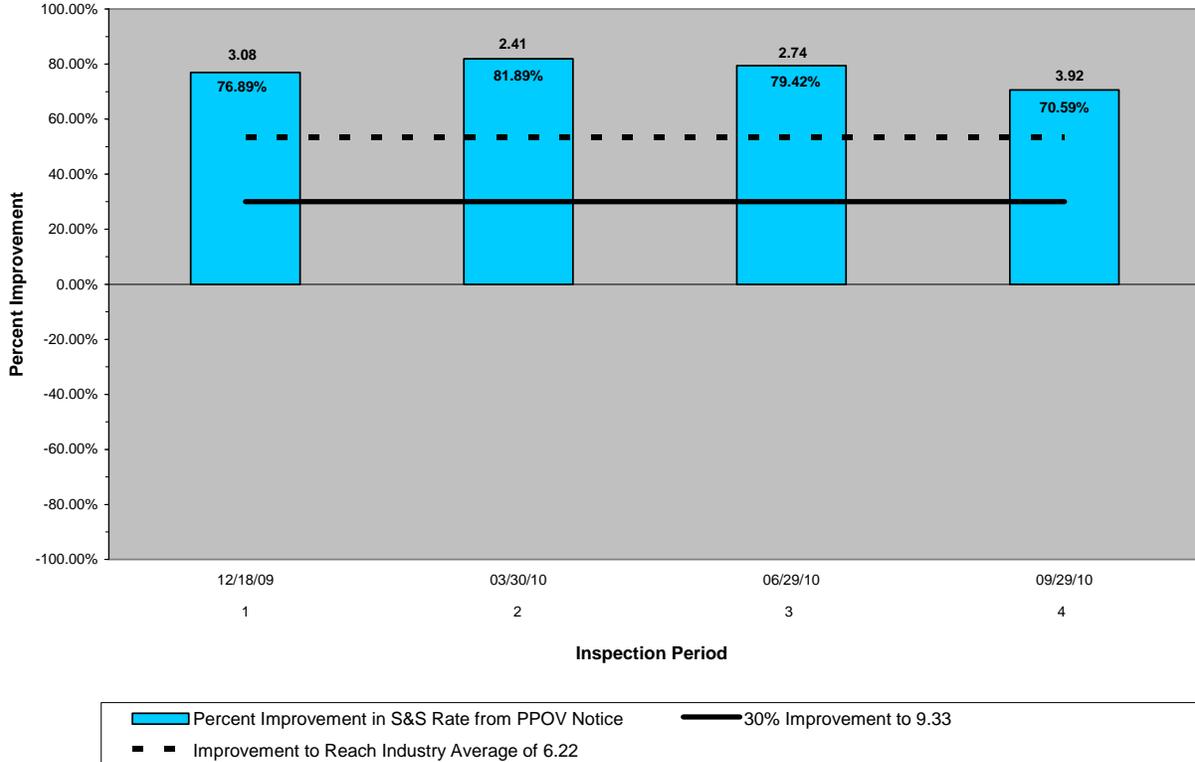
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 5 (09/01/07 - 08/31/09)

Improvement in S&S Rate After PPOV Notice
Mine ID 1518775
James River Coal Company - Mine #15 (Coal - Underground)
PPOV Monitoring Start Date = 10/21/09
Starting S&S Rate = 13.33



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

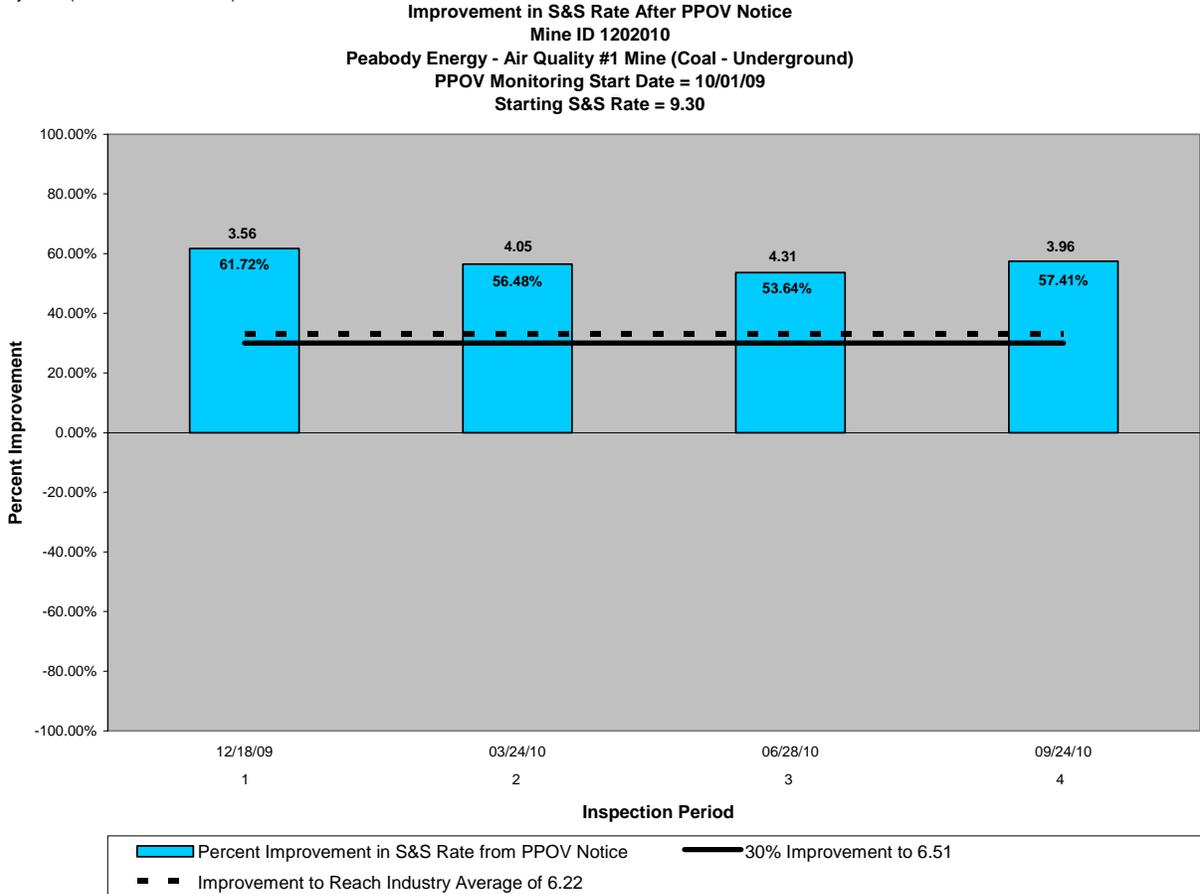
The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 5 (09/01/07 - 08/31/09)



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine’s rate of S&S violations from the “Monitoring Start Date” shown in the heading through the ending date of the inspection period.

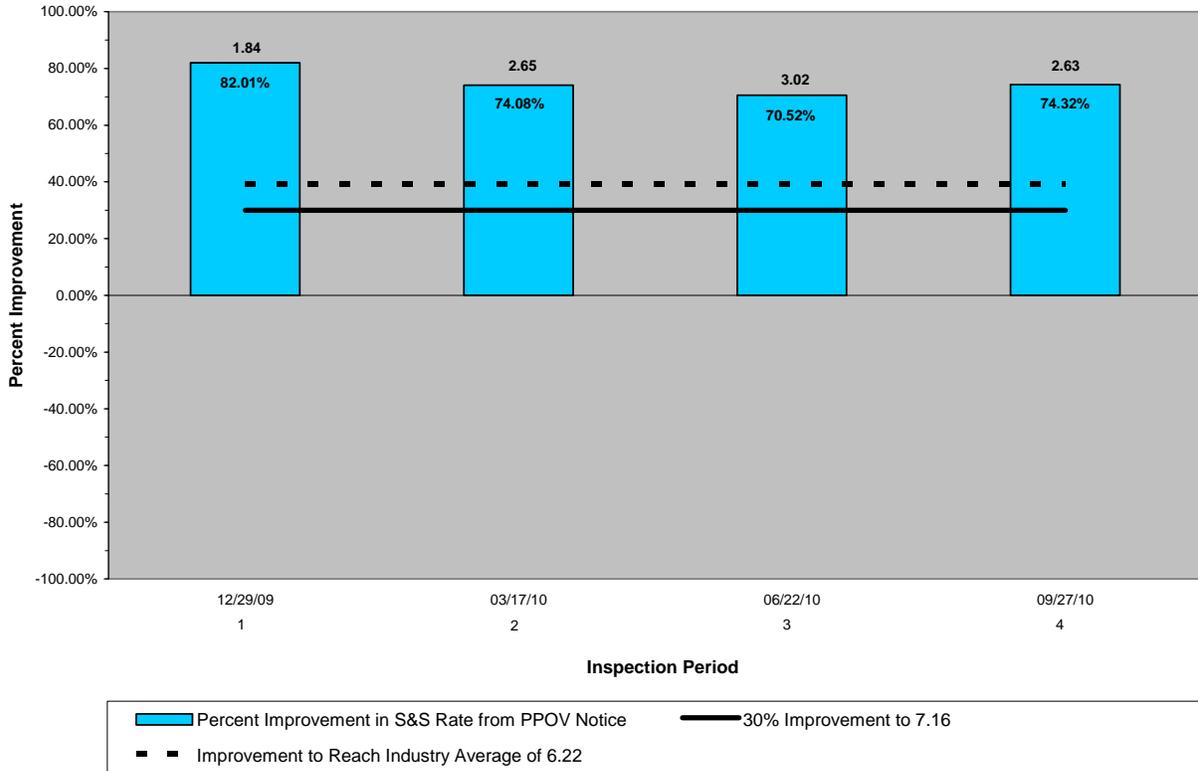
Dates shown along the bottom of the graph represent the ending date of each inspection period.

Exhibit 5, Continued

Graphs of S&S Rates Subsequent to Receipt of Potential POV Notification

Cycle 5 (09/01/07 - 08/31/09)

Improvement in S&S Rate After PPOV Notice
Mine ID 1517232
Gary E Peyton - Richland No 9 (Coal - Underground)
PPOV Monitoring Start Date = 11/02/09
Starting S&S Rate = 10.23



Notes: The number presented above each bar of the graph is the actual rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

The number presented inside each bar of the graph represents the percent reduction in the mine's rate of S&S violations from the "Monitoring Start Date" shown in the heading through the ending date of the inspection period.

Dates shown along the bottom of the graph represent the ending date of each inspection period.