



Peabody Sage Creek Mine
29515 Routt County Road 27
Oak Creek, CO 80467

Peabody Sage Creek Mining, LLC

November 22, 2021

Tabetha Lynch
Colorado Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215
Denver, CO 80203

RE: Peabody Sage Creek Mine, Permit C-2009-087, Fourth Quarter 2021 IIR

CDRMS:

In accordance with Rule 4.05.9(17), please find enclosed the Peabody Sage Creek Mine (PSCM) Impoundment Inspection Report (IIR) and Impoundment Inspection Log (IIL). Please contact me with any comments and/or questions.

Sincerely,

Miranda Kawcak

Miranda Kawcak
Environmental Manager
Peabody, Colorado Operations

Enclosure: PSCM IIR

PERIODIC INSPECTION FORM: Water, Sediment, or Slurry Impoundments				
INSPECTOR'S NAME: Jason Herden		DATE: 10/27/21		
NPDES I.D. NO.: CO-0048275 D.P. 002				
FACILITY CONFIGURATION: Incised Pond		DATE LAST INSPECTION: 9/23/21		
SITE NAME: Wadge Impoundment #002		LOCATION: NW¼ NE¼, Sec. 2, T5N, R87W		
MINE NAME: Peabody Sage Creek Mine		LOCATION: 7.1 mi. SE of Hayden, CO		
MINE I.D. NO.: CMLRD Permit No. C-2009-087		OWNER'S REP.: Miranda Kawcak		
CIRCLE OR WRITE IN APPROPRIATE RESPONSE:		YES	NO	N/A
1	Foundation preparation (removal of vegetation, stumps, topsoil:			x
2	Lift thickness:			x
3	Compaction according to approved plan:			x
4	Burning (specify extent and location):			x
5	Angle of slope: _____upstream, _____downstream	Total = N/A		
6	*Seepage (specify location, color, and approximate volume)			
	From underdrain pipes			x
	At isolated points on embankment slopes			x
	At natural hillside:			x
	Over widespread areas:			x
	From downstream foundation area:			x
	"Boils" beneath stream or ponded water:		x	
7	Cracks or scarps on crest:			x
8	Cracks or scarps on slope:			x
9	Sloughing or bulging on slope:			x
10	*Major erosion problems:		x	
11	Surface movements in valley bottom or on hillside:		x	
12	*Erosion of toe:			x
13	*Water impounded against toe:			x
14	Existing embankment freeboard (ft) = 0.0			
15	_____ Increase _____ Decrease in water level (ft): NO CHANGE			
16	Cracks, bulging, or erosion on upstream face:			x
17	Visible sumps or sinkholes in slurry surface:			x
18	*Clogging			
	Spillway channels and pipes:		x	
	Decant system:			x
	Diversion ditches:		x	
19	*Cracking or crushing of pipes			
	Spillway pipes:			x
	Decant system:			x
20	Trash racks clear and in place:			x
21	Discharge rate (gpm) = 28.7			
<p>*Major adverse changes in these items could cause instability and should be reported to the Engineering Manager and Mine Superintendent for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) here: DISCHARGE WATER FLOWING UNDER FLUME.</p>				

PERIODIC INSPECTION FORM: Water, Sediment, or Slurry Impoundments				
INSPECTOR'S NAME: Jason Herden		DATE: 10/27/21		
NPDES I.D. NO.: CO-0048275 D.P. 003				
FACILITY CONFIGURATION: Diked Pond		DATE LAST INSPECTION: 9/23/21		
SITE NAME: Shop Pond #003		LOCATION: SE¼ SW¼, Sec. 27, T6N, R87W		
MINE NAME: Peabody Sage Creek Mine		LOCATION: 7.1 mi. SE of Hayden, CO		
MINE I.D. NO.: CMLRD Permit No. C-2009-087		OWNER'S REP.: Miranda Kawcak		
CIRCLE OR WRITE IN APPROPRIATE RESPONSE:		YES	NO	N/A
1	Foundation preparation (removal of vegetation, stumps, topsoil:	x		
2	Lift thickness = 12 inches			
3	Compaction according to approved plan:	x		
4	Burning (specify extent and location):		x	
5	Angle of slope: <u>2:1</u> upstream, <u>3:1</u> downstream	Total = 5:1		
6	*Seepage (specify location, color, and approximate volume)			
	From underdrain pipes			x
	At isolated points on embankment slopes		x	
	At natural hillside:		x	
	Over widespread areas:		x	
	From downstream foundation area:		x	
	"Boils" beneath stream or ponded water:		x	
7	Cracks or scarps on crest:		x	
8	Cracks or scarps on slope:		x	
9	Sloughing or bulging on slope:		x	
10	*Major erosion problems:		x	
11	Surface movements in valley bottom or on hillside:		x	
12	*Erosion of toe:		x	
13	*Water impounded against toe:		x	
14	Existing embankment freeboard (ft) (4.9 is normal) = 5.05			
15	<u> X </u> Increase <u> </u> Decrease in water level (ft): 0.35			
16	Cracks, bulging, or erosion on upstream face:		x	
17	Visible sumps or sinkholes in slurry surface:			x
18	*Clogging			
	Spillway channels and pipes:		x	
	Decant system:			x
	Diversion ditches:		x	
19	*Cracking or crushing of pipes			
	Spillway pipes:			x
	Decant system:			x
20	Trash racks clear and in place:	x		
21	Discharge rate (gpm) = 0.0			
<p>*Major adverse changes in these items could cause instability and should be reported to the Engineering Manager and Mine Superintendent for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) here: 15" THEL-MAR WEIR BROKEN BUT OPERABLE BY HAND FLOW MEASUREMENT. ANIMAL BURROWS.</p>				

PERIODIC INSPECTION FORM: Water, Sediment, or Slurry Impoundments				
INSPECTOR'S NAME: Jason Herden		DATE: 10/28/21		
NPDES I.D. NO.: N/A				
FACILITY CONFIGURATION: Incised Pond		DATE LAST INSPECTION: 9/23/21		
SITE NAME: Spill Control Pond #2		LOCATION: NW¼ NE¼, Sec. 34, T6N, R87W		
MINE NAME: Peabody Sage Creek Mine		LOCATION: 7.1 mi. SE of Hayden, CO		
MINE I.D. NO.: CMLRD Permit No. C-2009-087		OWNER'S REP.: Miranda Kawcak		
CIRCLE OR WRITE IN APPROPRIATE RESPONSE:		YES	NO	N/A
1	Foundation preparation (removal of vegetation, stumps, topsoil:	x		
2	Lift thickness =			
3	Compaction according to approved plan:			x
4	Burning (specify extent and location):			x
5	Angle of slope: ___upstream, ___downstream	N/A		
6	*Seepage (specify location, color, and approximate volume)			
	From underdrain pipes			x
	At isolated points on embankment slopes		x	
	At natural hillside:		x	
	Over widespread areas:		x	
	From downstream foundation area:		x	
	"Boils" beneath stream or ponded water:		x	
7	Cracks or scarps on crest:		x	
8	Cracks or scarps on slope:		x	
9	Sloughing or bulging on slope:		x	
10	*Major erosion problems:		x	
11	Surface movements in valley bottom or on hillside:		x	
12	*Erosion of toe:		x	
13	*Water impounded against toe:		x	
14	Existing embankment freeboard (ft) (7.0 is normal when dry) = 7.0			
15	___ Increase ___ Decrease in water level (ft): NO CHANGE			
16	Cracks, bulging, or erosion on upstream face:		x	
17	Visible sumps or sinkholes in slurry surface:			x
18	*Clogging			
	Spillway channels and pipes:		x	
	Decant system:			x
	Diversion ditches:			x
19	*Cracking or crushing of pipes			
	Spillway pipes:			x
	Decant system:			x
20	Trash racks clear and in place:			x
21	Discharge rate (gpm) = 0.0			
<p>*Major adverse changes in these items could cause instability and should be reported to the Engineering Manager and Mine Superintendent for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) here:</p>				

PERIODIC INSPECTION FORM: Water, Sediment, or Slurry Impoundments				
INSPECTOR'S NAME: Jason Herden		DATE: 10/28/21		
NPDES I.D. NO.: N/A				
FACILITY CONFIGURATION: Final Pit Impoundment		DATE LAST INSPECTION: 9/23/21		
SITE NAME: Pecoco Reservoir		LOCATION: SW¼ NW¼, Sec. 2, T5N, R87W		
MINE NAME: Peabody Sage Creek Mine		LOCATION: 7.1 mi. SE of Hayden, CO		
MINE I.D. NO.: CMLRD Permit No. C-2009-087		OWNER'S REP.: Miranda Kawcak		
CIRCLE OR WRITE IN APPROPRIATE RESPONSE:		YES	NO	N/A
1	Foundation preparation (removal of vegetation, stumps, topsoil:	x		
2	Lift thickness =			
3	Compaction according to approved plan:	x		
4	Burning (specify extent and location):		x	
5	Angle of slope: <u>5:1</u> upstream, <u>2:1</u> downstream	Total = 7:1		
6	*Seepage (specify location, color, and approximate volume)			
	From underdrain pipes			x
	At isolated points on embankment slopes		x	
	At natural hillside:		x	
	Over widespread areas:		x	
	From downstream foundation area:		x	
	"Boils" beneath stream or ponded water:		x	
7	Cracks or scarps on crest:		x	
8	Cracks or scarps on slope:		x	
9	Sloughing or bulging on slope:		x	
10	*Major erosion problems:		x	
11	Surface movements in valley bottom or on hillside:		x	
12	*Erosion of toe:		x	
13	*Water impounded against toe:		x	
14	Existing embankment freeboard (ft) (6.1 is normal) = 6.1			
15	<u> </u> Increase <u> </u> Decrease in water level (ft): NO CHANGE			
16	Cracks, bulging, or erosion on upstream face:		x	
17	Visible sumps or sinkholes in slurry surface:			x
18	*Clogging			
	Spillway channels and pipes:		x	
	Decant system:			x
	Diversion ditches:			x
19	*Cracking or crushing of pipes			
	Spillway pipes:		x	
	Decant system:			x
20	Trash racks clear and in place:			x
21	Discharge rate (gpm) = 49.0			
<p>*Major adverse changes in these items could cause instability and should be reported to the Engineering Manager and Mine Superintendent for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) here:</p>				

PERIODIC INSPECTION FORM: Water, Sediment, or Slurry Impoundments					
INSPECTOR'S NAME: Jason Herden			DATE: 10/28/21		
NPDES I.D. NO.: N/A					
FACILITY CONFIGURATION: Diked Pond			DATE LAST INSPECTION: 9/23/21		
SITE NAME: Lower Sump			LOCATION: SE¼, Sec. 34, T6N, R87W		
MINE NAME: Peabody Sage Creek Mine			LOCATION: 7.1 mi. SE of Hayden, CO		
MINE I.D. NO.: CMLRD Permit No. C-2009-087			OWNER'S REP.: Miranda Kawcak		
CIRCLE OR WRITE IN APPROPRIATE RESPONSE:			YES	NO	N/A
1	Foundation preparation (removal of vegetation, stumps, topsoil:		x		
2	Lift thickness =				
3	Compaction according to approved plan:		x		
4	Burning (specify extent and location):			x	
5	Angle of slope: ___upstream, ___downstream		N/A		
6	*Seepage (specify location, color, and approximate volume)				
	From underdrain pipes				x
	At isolated points on embankment slopes			x	
	At natural hillside:			x	
	Over widespread areas:			x	
	From downstream foundation area:			x	
	"Boils" beneath stream or ponded water:			x	
7	Cracks or scarps on crest:			x	
8	Cracks or scarps on slope:			x	
9	Sloughing or bulging on slope:			x	
10	*Major erosion problems:			x	
11	Surface movements in valley bottom or on hillside:			x	
12	*Erosion of toe:			x	
13	*Water impounded against toe:			x	
14	Existing embankment freeboard (ft) =				
15	___ Increase ___ Decrease in water level (ft): NO CHANGE				
16	Cracks, bulging, or erosion on upstream face:			x	
17	Visible sumps or sinkholes in slurry surface:				x
18	*Clogging				
	Spillway channels and pipes:			x	
	Decant system:				x
	Diversion ditches:			x	
19	*Cracking or crushing of pipes				
	Spillway pipes:				x
	Decant system:				x
20	Trash racks clear and in place:		x		
21	Discharge rate (gpm) = 47.0				
<p>*Major adverse changes in these items could cause instability and should be reported to the Engineering Manager and Mine Superintendent for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) here:</p>					

PERIODIC INSPECTION FORM: Water, Sediment, or Slurry Impoundments					
INSPECTOR'S NAME: Jason Herden			DATE: 10/28/21		
NPDES I.D. NO.: N/A					
FACILITY CONFIGURATION: Incised Pond			DATE LAST INSPECTION: 9/23/21		
SITE NAME: Truck Wash Settling Pond			LOCATION: NW¼ NE¼, Sec. 34, T6N, R87W		
MINE NAME: Peabody Sage Creek Mine			LOCATION: 7.1 mi. SE of Hayden, CO		
MINE I.D. NO.: CMLRD Permit No. C-2009-087			OWNER'S REP.: Miranda Kawcak		
CIRCLE OR WRITE IN APPROPRIATE RESPONSE:			YES	NO	N/A
1	Foundation preparation (removal of vegetation, stumps, topsoil:		x		
2	Lift thickness =				
3	Compaction according to approved plan:				x
4	Burning (specify extent and location):				x
5	Angle of slope: ___upstream, ___downstream				N/A
6	*Seepage (specify location, color, and approximate volume)				
	From underdrain pipes				x
	At isolated points on embankment slopes				x
	At natural hillside:				x
	Over widespread areas:				x
	From downstream foundation area:				x
	"Boils" beneath stream or ponded water:			x	
7	Cracks or scarps on crest:				x
8	Cracks or scarps on slope:				x
9	Sloughing or bulging on slope:				x
10	*Major erosion problems:			x	
11	Surface movements in valley bottom or on hillside:				x
12	*Erosion of toe:				x
13	*Water impounded against toe:				x
14	Existing embankment freeboard (ft) (5.0 is normal when dry): 5.0				
15	___ Increase ___ Decrease in water level (ft): NO CHANGE				
16	Cracks, bulging, or erosion on upstream face:				x
17	Visible sumps or sinkholes in slurry surface:				x
18	*Clogging				
	Spillway channels and pipes:			x	
	Decant system:				x
	Diversion ditches:				x
19	*Cracking or crushing of pipes				
	Spillway pipes:			x	
	Decant system:				x
20	Trash racks clear and in place:		x		
21	Discharge rate (gpm) = 0.0				
<p>*Major adverse changes in these items could cause instability and should be reported to the Engineering Manager and Mine Superintendent for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) here:</p>					

PERIODIC INSPECTION FORM: Water, Sediment, or Slurry Impoundments				
INSPECTOR'S NAME: Jason Herden		DATE: 10/28/21		
NPDES I.D. NO.: N/A				
FACILITY CONFIGURATION: Diked Pond		DATE LAST INSPECTION: 9/23/21		
SITE NAME: Upper Sump		LOCATION: NW¼, Sec. 3, T5N, R87W7W		
MINE NAME: Peabody Sage Creek Mine		LOCATION: 7.1 mi. SE of Hayden, CO		
MINE I.D. NO.: CMLRD Permit No. C-2009-087		OWNER'S REP.: Miranda Kawcak		
CIRCLE OR WRITE IN APPROPRIATE RESPONSE:		YES	NO	N/A
1	Foundation preparation (removal of vegetation, stumps, topsoil:	x		
2	Lift thickness =			
3	Compaction according to approved plan:	x		
4	Burning (specify extent and location):		x	
5	Angle of slope: ___upstream, ___downstream	N/A		
6	*Seepage (specify location, color, and approximate volume)			
	From underdrain pipes			x
	At isolated points on embankment slopes		x	
	At natural hillside:		x	
	Over widespread areas:		x	
	From downstream foundation area:	x		
	"Boils" beneath stream or ponded water:		x	
7	Cracks or scarps on crest:		x	
8	Cracks or scarps on slope:		x	
9	Sloughing or bulging on slope:		x	
10	*Major erosion problems:		x	
11	Surface movements in valley bottom or on hillside:		x	
12	*Erosion of toe:		x	
13	*Water impounded against toe:		x	
14	Existing embankment freeboard (ft) =			
15	___ Increase ___ Decrease in water level (ft): NO CHANGE			
16	Cracks, bulging, or erosion on upstream face:		x	
17	Visible sumps or sinkholes in slurry surface:			x
18	*Clogging			
	Spillway channels and pipes:		x	
	Decant system:			x
	Diversion ditches:			x
19	*Cracking or crushing of pipes			
	Spillway pipes:		x	
	Decant system:			x
20	Trash racks clear and in place:	x		
21	Discharge rate (gpm) = 38.0			
<p>*Major adverse changes in these items could cause instability and should be reported to the Engineering Manager and Mine Superintendent for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) here:</p>				

PERIODIC INSPECTION FORM: Water, Sediment, or Slurry Impoundments				
INSPECTOR'S NAME: Jason Herden		DATE: 10/28/21		
NPDES I.D. NO.: N/A				
FACILITY CONFIGURATION: Diked Pond		DATE LAST INSPECTION: 9/23/21		
SITE NAME: Portal Sump #1 (Upper North)		LOCATION: NW¼, Sec. 3, T5N, R87W		
MINE NAME: Peabody Sage Creek Mine		LOCATION: 7.1 mi. SE of Hayden, CO		
MINE I.D. NO.: CMLRD Permit No. C-2009-087		OWNER'S REP.: Miranda Kawcak		
CIRCLE OR WRITE IN APPROPRIATE RESPONSE:		YES	NO	N/A
1	Foundation preparation (removal of vegetation, stumps, topsoil:	x		
2	Lift thickness = 12"			
3	Compaction according to approved plan:	x		
4	Burning (specify extent and location):		x	
5	Angle of slope: ___upstream, ___downstream	N/A		
6	*Seepage (specify location, color, and approximate volume)			
	From underdrain pipes			x
	At isolated points on embankment slopes			x
	At natural hillside:			x
	Over widespread areas:			x
	From downstream foundation area:			x
	"Boils" beneath stream or ponded water:		x	
7	Cracks or scarps on crest:			x
8	Cracks or scarps on slope:			x
9	Sloughing or bulging on slope:			x
10	*Major erosion problems:		x	
11	Surface movements in valley bottom or on hillside:		x	
12	*Erosion of toe:			x
13	*Water impounded against toe:			x
14	Existing embankment freeboard (ft) =			
15	___ Increase ___ Decrease in water level (ft): NO CHANGE			
16	Cracks, bulging, or erosion on upstream face:			x
17	Visible sumps or sinkholes in slurry surface:			x
18	*Clogging			
	Spillway channels and pipes:		x	
	Decant system:			x
	Diversion ditches:			x
19	*Cracking or crushing of pipes			
	Spillway pipes:		x	
	Decant system:			x
20	Trash racks clear and in place:			x
21	Discharge rate (gpm) = 0.0			
<p>*Major adverse changes in these items could cause instability and should be reported to the Engineering Manager and Mine Superintendent for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) here:</p>				

PERIODIC INSPECTION FORM: Water, Sediment, or Slurry Impoundments				
INSPECTOR'S NAME: Jason Herden		DATE: 10/28/21		
NPDES I.D. NO.: N/A				
FACILITY CONFIGURATION: Diked Pond		DATE LAST INSPECTION: 9/23/21		
SITE NAME: Portal Sump #2 (Lower South)		LOCATION: NW¼, Sec. 3, T5N, R87W		
MINE NAME: Peabody Sage Creek Mine		LOCATION: 7.1 mi. SE of Hayden, CO		
MINE I.D. NO.: CMLRD Permit No. C-2009-087		OWNER'S REP.: Miranda Kawcak		
CIRCLE OR WRITE IN APPROPRIATE RESPONSE:		YES	NO	N/A
1	Foundation preparation (removal of vegetation, stumps, topsoil:	x		
2	Lift thickness = 12"			
3	Compaction according to approved plan:	x		
4	Burning (specify extent and location):		x	
5	Angle of slope: ___upstream, ___downstream	N/A		
6	*Seepage (specify location, color, and approximate volume)			
	From underdrain pipes			x
	At isolated points on embankment slopes			x
	At natural hillside:			x
	Over widespread areas:			x
	From downstream foundation area:			x
	"Boils" beneath stream or ponded water:		x	
7	Cracks or scarps on crest:			x
8	Cracks or scarps on slope:			x
9	Sloughing or bulging on slope:			x
10	*Major erosion problems:		x	
11	Surface movements in valley bottom or on hillside:		x	
12	*Erosion of toe:			x
13	*Water impounded against toe:			x
14	Existing embankment freeboard (ft) =			
15	___ Increase ___ Decrease in water level (ft): NO CHANGE			
16	Cracks, bulging, or erosion on upstream face:			x
17	Visible sumps or sinkholes in slurry surface:			x
18	*Clogging			
	Spillway channels and pipes:		x	
	Decant system:			x
	Diversion ditches:			x
19	*Cracking or crushing of pipes			
	Spillway pipes:		x	
	Decant system:			x
20	Trash racks clear and in place:			x
21	Discharge rate (gpm) = 0.0			
<p>*Major adverse changes in these items could cause instability and should be reported to the Engineering Manager and Mine Superintendent for further evaluation. Adverse conditions noted in these items should normally be described (extent, location, volume, etc.) here: NOT PUMPING.</p>				

IMPOUNDMENT INSPECTION LOG

JOB DATA

JOB NAME: PEC Hydrologic Services	CLIENT: Peabody	JOB(s): 2021-095 (PSCM), 2021-096 (SCC)
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FLOW DATA

SITE ID	COMPANY	MINE	DATE	WATER LEVEL (FT)	OUTFLOW (GPM)	OBSERVATIONS	MAINTENANCE (Y/N)
002	Sage Creek	Sage Creek	10-27-21	0.04	28.7	Flume locking & flowing under	Y
003	Sage Creek	Sage Creek	10-27-21	-0.15	—	no flow, animal burrows	N
004	Sage Creek	Sage Creek	10-27-21	0.10	46.4		N
Lower Sump	Sage Creek	Sage Creek	10-28-21	0.05	47		N
PECOCO	Sage Creek	Sage Creek	10-28-21	0.06	49		N
Portal Sump 1	Sage Creek	Sage Creek	10-28-21	-1.0	—	no flow	N
Portal Sump 2	Sage Creek	Sage Creek	10-28-21	—	—	not pumping	N
Spill Control 2	Sage Creek	Sage Creek	10-28-21	—	—	Dry	N
Truck Wash	Sage Creek	Sage Creek	10-28-21	—	—	Dry	N
Upper Sump	Sage Creek	Sage Creek	10-28-21	0.1	38		N
001	Seneca	Hayden Gulch	10-28-21	—	—	no flow, dry	N
002	Seneca	Hayden Gulch	10-28-21	—	—	Dry	N
005	Seneca	Seneca II West	10-27-21	-3.0	—	no flow	N
006	Seneca	Seneca II West	10-27-21	0.1	23.7	sluff on S. side	N
009	Seneca	Seneca II West	10-27-21	-2.7	—	no flow	N
015	Seneca	Seneca II West	10-27-21	-0.4	—	no flow	N
016	Seneca	Seneca II West	10-27-21	0.1	21.3		N
017	Seneca	Seneca II West	10-27-21	-0.4	—	no flow	N
T-1	Seneca	Seneca II West	10-27-21	—	—	Dry	N
T-18	Seneca	Seneca II West	10-27-21	-4.0	—	no flow	
T-2	Seneca	Seneca II West	10-27-21	—	—	Dry	N
T-20	Seneca	Seneca II West	10-27-21	—	—	no flow	N
T-22	Seneca	Seneca II West	10-27-21	—	—	Dry	N
T-24	Seneca	Seneca II West	10-27-21	—	—	Dry	N
T-25	Seneca	Seneca II West	10-27-21	—	—	gone	N
T-26	Seneca	Seneca II West	10-27-21	-3.3	—	no flow	N

