

Musick - DNR, Jason < jason.musick@state.co.us>

#### **Yoast Pond Reports**

1 message

Watterson, Brian < BWatterson@peabodyenergy.com>

Wed, Jan 25, 2017 at 12:34 PM

To: "Musick - DNR, Jason <jason.musick@state.co.us> (jason.musick@state.co.us)" <jason.musick@state.co.us>

----Original Message----

From: twentymile@peabodyenergy.com [mailto:twentymile@peabodyenergy.com]

Sent: Wednesday, January 25, 2017 12:50 PM

To: Watterson, Brian

Subject: Scanned from Engineering Trailer

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Seneca Coal Company

Peabody Energy PO Box 670 36600 Routt County Road 27 Hayden, CO 81639

January 23, 2017

Janet Binns Colorado Division of Reclamation, Mining and Safety 1313 Sherman Street Denver, CO 80203

RE: Yoast Mine, Permit C-94-082, 4Q16 IIR

Dear Janet:

In accordance with Rule 4.05.9(17), please find enclosed the Yoast Mine Impoundment Inspection Report (IIR) and Impoundment Inspection Log (IIL) for Ponds: 010, 011, 011A, 012, 012A, 013, 014 and Stock Tank ST-1.

No maintenance is required at this time. Please contact me with any comments and/or questions.

Sincerely,

Brian Watterson

Geologist

TNS/tns

Enclosure: Yoast IIR

Mining AreaYoast Mine(Seneca Coal Co)Facility ConfigurationCross-Valley PondDate Inspected10/4/2016Date Last Inspected8/1/2016ImpoundmentPond# 010Pond LocationNW% NEX, Sec. 8, T5N, R87WNPDES ID NoCO-0000221 D.P. 010Site Location8.5 mi SE of Hayden, COOwner's RepBrian WattersonInspectorJason Herden

0 1 5		_	0.5 1111 50 01 1		
Owner's Rep	Brian Watterson	Inspector	Jason H		
		Mark	or Write in A	ppropriate Respons	
	FEATURE		PROBL	EM	COMMENTS
		YES (A	bove)	NO (Below)	
GENERAL					
	below principal spillway)	X			water level 0.06 feet above spillway
Existing Embankment	Freeboard (10.1 ft)	10	.1		
Outflow (gpm)		X			71.43
EROSION					
Rills & Gullies on Em	bankment			X	
Wave Erosion				X	
Spillway Erosion				X	
Burrows				X	
Other				X	
STRUCTURAL					
Differential Settling				X	
Cracks or Slides				X	
Seepage				X	
Other				Х	
STRUCTURES					
Principal Spillway					
Clogged Orifice				X	
Clogged or Damage		x			Intake starting to rust out but still functionable
Damaged Headgate	<u> </u>			NA	
Emergency Spillway					
Erosion				Х	
Riprap				Х	
Clogged or Damage	ed Culvert			X	
Other				X	
MAINTENACE		THAT WE THE	History - In A		
Maintenance Required		>	(		See comment above
Maintenance Performe				X	
Additional Comments				X	

Mining Area	Yoast Mine(Seneca Coal Co)	<b>Facility Configuration</b>	Cross	-Vally Pond					
Date Inspected	10/5/2016	Date Last Inspected							
Impoundment	Pond #011	Pond Location			Quarterly Impoundment Inspection Form				
NPDES ID No	CO-0000221 D.P.011	Site Location	8.5 mi SE of Hayden, CO		Constitution of the consti				
Owner's Rep	Brian Watterson	Inspector	Jaso	n Herden					
		Mark	or Write in	n Appropriate F	Response:				
	FEATURE PROBLEM COMMENTS								
		YES (At	oove)	NO (Belo	ow)				
GENERAL									
	below principal spillway)			Х	Water level 1.9 feet below spillway				
Existing Embankment	Freeboard (5.1 ft)	5.2							
Outflow (gpm)				Х					
EROSION									
Rills & Gullies on Em	bankment			Х					
Wave Erosion				X					
Spillway Erosion				X					
Burrows				X					
Other	·			X					
STRUCTURAL			10000						
Differential Settling				X					
Cracks or Slides				Х					
Seepage				Х					
Other STRUCTURES				X					
Principal Spillway Clogged Orifice									
Clogged or Damag	ad Culvert			X					
Damaged Headgate			X						
Emergency Spillway	<u> </u>			NA_					
Erosion	<del></del>			х					
Riprap				<u>x</u>	——				
Clogged or Damage	ed Culvert			x					
Other				- x					
MAINTENACE			NICA INST	^					
Maintenance Required	1			x					
Maintenance Perform				x					
Additional Comments				×					
	·								

Mining Area	Yoast Mine(Seneca Coal Co)	Facility Configuration	Cross-Vally Pond
Date Inspected	10/4/2016	Date Last Inspected	8/3/2016
Impoundment	Pond #011A	Pond Location	SW¼ NW¼, Sec. 16, T5N, R87W
NPDES ID No	N/A	Site Location	8.5 mi SE of Hayden, CO
Owner's Rep	Brian Watterson	Inspector	Jason Herden

Owner's Rep	Brian Watterson	Inspector	Jason	Herden	
		Mark o	or Write in A	Appropriate Response	
	FEATURE		PROBI	EM	COMMENTS
		YES (Ab	ove)	NO (Below)	
GENERAL					
Water Level (above or	below principal spillway)			X	Water level 2.1 feet below spillway
Existing Embankment l	Freeboard (4.6 ft)	5.3			
Outflow (gpm)				X	
EROSION			Versupvell		
Rills & Gullies on Emb	ankment			X	
Vave Erosion				X	
Spillway Erosion				X	
Burrows				X	
Other				X	
TRUCTURAL					
Differential Settling				X	
Cracks or Slides				X	
Seepage				X	
Other				X	
TRUCTURES					
Principal Spillway					
Clogged Orifice				X	
Clogged or Damage				Х	
Damaged Headgate				NA	
Emergency Spillway					
Erosion				X	
Riprap				X	
Clogged or Damageo	d Culvert			Х	
Other				Х	
MAINTENACE					
Maintenance Required				X	
Maintenance Performe	d			X	
Additional Comments				Х	

Top of Sediment Storage = 2.1 feet below top of pipe

Mining Area	Yoast Mine(Seneca Coal Co)	Facility C	onfiguration	Cross-	Vally Pond		
Date Inspected	10/3/2016	-	st Inspected         8/1/2016           Location         NE% NW%, Sec. 19, T5N, R87W				
Impoundment	Pond #012				Onai	terly Impoundment Inspection Form	
NPDES ID No	CO-0000221 D.P. 012	Site I	Location		of Hayden, CO	\Quu.	torry impoundment inspection i orm
Owner's Rep	Brian Watterson	Ins	pector	Jason Herden			
			Mark	or Write in	Appropriate l	Response:	
	FEATURE		PROBLEM			COMMENTS	
			YES (Above) NO (Be		NO (Belo	ow)	
GENERAL						William o	
Water Level (above or	r below principal spillway)		Х				Water level 0.1 feet above spillway
Existing Embankment	Freeboard (9.0 ft)		9				, ,
Outflow (gpm)	Outflow (gpm)		X				67.57
EROSION				The state of	Well seems to the		
Rills & Gullies on Em	bankment				X		
Wave Erosion					Х		
Spillway Erosion					X		
Burrows					X		

Х

Х

Х

Х

Х

Χ

Х

Х

NA

Χ

Χ

Χ

Х

Х

Erosion behind and underneath flume

Other

Seepage

Other

STRUCTURAL Differential Settling

Cracks or Slides

STRUCTURES
Principal Spillway
Clogged Orifice

Emergency Spillway

MAINTENACE
Maintenance Required

Maintenance Performed

Additional Comments

Erosion Riprap

Other

Clogged or Damaged Culvert

Clogged or Damaged Culvert

Damaged Headgate

 Mining Area
 Yoast Mine(Seneca Coal Co)
 acility Configuratio
 Cross-Vally Pond

 Date Inspected
 10/3/2016
 Date Last Inspected
 8/1/2016

 Impoundment
 Pond #012A
 Pond Location
 NEX NWX,Sec. 19, T5N, R87W

 NPDES ID No
 N/A
 Site Location
 8.5 mi SE of Hayden, CO

 Owner's Rep
 Brian Watterson
 Inspector
 Jason Herden

Owner's Rep Brian	Watterson In	spector Ja	ason Herden	
		Mark or Wri	ite in Appropriate Response:	
FEATU	RE		PROBLEM	COMMENTS
		YES (Above)	NO (Below)	
GENERAL				
Water Level (above or below prin			Х	Water level 1.3 feet below spillway
Existing Embankment Freeboard	(4.6 ft)	6.2		
Outflow (gpm)			X	
EROSION				
Rills & Gullies on Embankment			X	
Wave Erosion			X	
Spillway Erosion			X	
Burrows			X	
Other			X	
STRUCTURAL				
Differential Settling			X	
Cracks or Slides			X	
Seepage			X	
Other			X	
STRUCTURES				
Principal Spillway				
Clogged Orifice			X	
Clogged or Damaged Culvert			X	
Damaged Headgate			NA	
Emergency Spillway				
Erosion			X	
Riprap			X	
Clogged or Damaged Culvert			X	
Other			X	
MAINTENACE		Market Williams		
Maintenance Required			X	
Maintenance Performed			X	
Additional Comments			X	

Mining Area	Yoast Mine(Seneca Coal Co)	Facility Configuration	Cross-Vally Pond	
Date Inspected	10/3/2016	Date Last Inspected	8/1/2016	
Impoundment	Pond #013	Pond Location	SE¼ NW¼, Sec. 19, T5N, R87W	
NPDES ID No	CO-0000221 D.P. 013	Site Location	8.5 mi SE of Hayden, CO	
Owner's Rep	Brian Watterson	Inspector	Jason Herden	
		Mark o	r Write in Appropriate	
	FEATURE		PROBLEM	

Owner's Rep	Brian Watterson	Inspector	Jason H		
		Mark o	or Write in A	ppropriate Response	
	FEATURE		PROBL	EM	COMMENTS
		YES (At	pove)	NO (Below)	T
GENERAL			NIL V. HUGENA		
Water Level (above or	below principal spillway)			Х	water level 1.3 feet below spillway
Existing Embankment	Freeboard (4.0 ft)	4			]
Outflow (gpm)				Х	1
EROSION			W-2-2-		
Rills & Gullies on Emb	ankment			Х	
Wave Erosion				Χ	
Spillway Erosion				X	
Burrows				Χ	
Other				X	
STRUCTURAL					
Differential Settling				Χ	
Cracks or Slides				X	
Seepage				X	
Other_				X	
STRUCTURES			Roll Harris		
Principal Spillway					
Clogged Orifice				X	
Clogged or Damage				Х	
Damaged Headgate				NA	
Emergency Spillway					<u> </u>
Erosion				X	
Riprap				X	
Clogged or Damage	d Culvert			X	
Other				X	
MAINTENACE					
Maintenance Required				X	
Maintenance Performe	d			Χ	
Additional Comments				X	

 Mining Area
 Yoast Mine(Seneca Coal Co)
 Facility Configuration
 Cro

 Date Inspected
 10/3/2016
 Date Last Inspected

 Impoundment
 Pond #014
 Pond Location
 NEX SWX

 NPDES ID No
 CO-0000221 D.P. 014
 Site Location
 8.5 mil

 Owner's Rep
 Brian Watterson
 Inspector
 Ja

Cross-Vally Pond
8/1/2016
NE% SW%, Sec. 19, T5N, R87W
8.5 mi SE of Hayden, CO
Jason Herden

Owner's Rep	Brian Watterson	Inspector	Jaso	n Herden	
				Appropriate Response:	
	FEATURE		PRO	BLEM	COMMENTS
		YES (A	bove)	NO (Below)	
GENERAL					
Water Level (above or	below principal spillway)			X	water level 1.7 feet below spillway
Existing Embankment l	Freeboard (6.8 ft)	6.	8		
Outflow (gpm)				X	
EROSION					
Rills & Gullies on Emb	pankment			X	
Wave Erosion				X	
Spillway Erosion				Х	
Burrows				Х	
Other				X	
STRUCTURAL					
Differential Settling				X	
Cracks or Slides				X	
Seepage				X	
Other				X	
STRUCTURES					
Principal Spillway					
Clogged Orifice				X	
Clogged or Damage				X	
Damaged Headgate				NA NA	
Emergency Spillway					
Erosion				X	
Riprap				Х	
Clogged or Damage	d Culvert			Х	
Other				X	
MAINTENACE					
Maintenance Required				X	
Maintenance Performe	d			Х	
Additional Comments				X	

Mining Area	Yoast Mine(Seneca Coal Co)	<b>Facility Configuration</b>	Stockpond		
Date Inspected	10/3/2016	Date Last Inspected	8/3/2016 SW½ Sec. 20, T5N, R87W		
Impoundment	ST-1	Pond Location			Quarterly Impoundment Inspection Form
NPDES ID No	N/A	Site Location	8.5 mi SE of Hayden, CO		
Owner's Rep	Brian Watterson	Inspector	Jason Herden		
		Mark or	Write in Appropr	iate Res	sponse:
	FEATURE		PROBLEM		COMMENTS
		YES (Ab	ove) NO	(Below)	
GENERAL					
	r below principal spillway)			Χ	Water level 2.4 feet below spillway
EROSION				LUIE A	
Rills & Gullies on Em	bankment			Х	
Wave Erosion				Χ	
Spillway Erosion				Х	
Burrows				X	
Other				Х	
STRUCTURAL					
Differential Settling				Х	
Cracks or Slides				Х	
Seepage				Х	
Other				Х	
STRUCTURES					
Principal Spillway	<u> </u>				
Clogged Orifice				NA	
Clogged or Damag				NA	
Damaged Headgate	е			NA	
Emergency Spillway					
Erosion				_ X	
Riprap	-1 C. I			X	
Clogged or Damage	ea Cuivert			NA	
Other MAINTENACE				Х	
Maintenance Required	A			V	
Maintenance Require				X	
Additional Comments				X	
raditional Comments				^	

## **IMPOUNDMENT INSPECTION LOG**

### **JOB DATA**

JOB NAME: PEC Hydrologic Support Services	CLIENT: Peabody	ŁOCATION: Routt County, CO
JOB(s): 2016-037 T1-SCC, T2-PSCM		

#### FLOW DATA

FLOW DAT	ГА		4-	,				
SITE ID	COMPANY	MINE	DATE	TIME	WATER LEVEL (FT)	OUTFLOW (GPM)	OBSERVATIONS	MAINTENANCE (Y/N)
002	Sage Creek	Sage Creek	10-3-14	13:00	0.28	92.9		N
003	Sage Creek	Sage Creek	10-3-16	12:30	0.12	8,3	Some burrows	N
004	Sage Creek	Sage Creek	10-4-16	07:30	0.13	36.1		N
Lower Sump	Sage Creek	Sage Creek	10-3-14	13:15	0.05	238.09		N
PECOCO	Sage Creek	Sage Creek	10-3-16	14:20	0.05	142		N
Portal Sump 1	Sage Creek	Sage Creek	10-3-16	13:40	0.02	4		N
Portal Sump 2	Sage Creek	Sage Creek	10-3-16	13:50				N
Spill Control 2	Sage Creek	Sage Creek	10-3-16	13:25	~	_	Dry	$\sim$
Truck Wash	Sage Creek	Sage Creek	10-2-16	12:45	_	_	Pra	N
Upper Sump	Sage Creek	Sage Creek	10-3-14	14:10	0.05	134		N
001	Seneca	Hayden Gulch	10-3-16	15:00	- 2.3	_	NO Flow	N
002	Seneca	Hayden Gulch	16-3-16	15:15			Dia	N
005	Seneca	Seneca II West	10-3-16	15:30	-1.6	_	No Flow	N
006	Seneca	Seneca II West	10-3-16	16:55	0.05	99.01	Big Slaffon S. Sides not affecting	У
009	Seneca	Seneca II West	10-3-16	14:60	-2.5		No Flow, possible seepinous	W
015	Seneca	Seneca II West	10-4-16	14:40	0.06	6		N
016	Seneca	Seneca II West	10-4-16	11:15	0.03	28.4	placed bentonite under Flume	N
017	Seneca	Seneca II West	10-4-16	11:45	0.05	14,6	placed bentonite under Flume Slufton N. Sidearmouris w	King A
T-1	Seneca	Seneca II West	10-3-16		-1.2	_	No Flow, Damremoved	N
T-18	Seneca	Seneca II West	10-3-16	16:20			Pro	$\sim$
T-2	Seneca	Seneca II West	10-4-16	13:10	-2.4	_	NO Flow	N
T-20	Seneca	Seneca II West	10-3-16	16:05	_	_	Dia	$\sim$
T-22	Seneca	Seneca II West	10-3-14	15:45	-0.8	_	NOFIOW	N
T-24	Seneca	Seneca II West				_	015	N
T-25	Seneca	Seneca II West	10-4-16	10:45		_	runoff control structure	N
T-26	Seneca	Seneca II West	10-4-16	12:20	-2.5	_	NO Flow	N

800

10-4-16 08:30 0.09 34.43



IMPOUNDMENT INSPECTION LOG

SITE ID	COMPANY	MINE	DATE	TIME	WATER LEVEL (FT)	OUTFLOW (GPM)	OBSERVATIONS	MAINTENANCE (Y/N)
T-27	Seneca	Seneca II West	10-4-16	12:46	-2.6	*aprillings	NoFlow	N
T-3	Seneca	Seneca II West	10-4-16	13:55	-2,3	~	NO FIOW	N
T-5	Seneca	Seneca II West	10-4-16	12:05	-1.9	~	No Flow	N
010	Seneca	Yoast	10-4-16	09:15	0.06	71.43	outlet is justed through	У
011	Seneca	1	10-5-16	E .	-1.9	_	No Flow	N
011A	Seneca	Yoast	10-4-16	09:40	-2.1		NO Flow	N
012	Seneca	Yoast	10-3-16	14:15	0.1	67.57	erosion behind tunderneth the	У
012A	Seneca	Yoast	10-3-16	14:00	-1.3	_	No Flow	N
013	Seneca	Yoast	10-3-16	14:38	-1.3	_	NO Flow	N
014	Seneca	Yoast	10-3-16	14:45	-1.7	_	NO Flow	N
ST-1	Seneca	Yoast	10-3-16	17:10	-2.4	_	No Flow	N

CLIMATIC CONDITIONS:

FIELD PERSONNEL: JH	FIELD PERSONNEL SIGNATURE:
NOTES	
1	