

OGMCOAL - Skyline 1st Qtr Refuse / Pond Reports

From: "Galecki, Gregg" <GGalecki@archcoal.com>
To: Karl Houskeeper <karlhouskeeper@utah.gov>, "OGMCOAL@utah.gov" <OGMCOAL@u...>
Date: 4/15/2011 12:22 PM
Subject: Skyline 1st Qtr Refuse / Pond Reports
CC: "Galecki, Gregg" <GGalecki@archcoal.com>
Attachments: 1stQtr2011_Refuse Report.pdf; 1st Qtr.2011 Pond Inspections.pdf

Karl,

Attached are the Skyline Mine 1st Qtr 2011 Refuse Pile and Pond Inspection Reports.

Let me know if you have any questions,

Gregg

Gregg A. Galecki
Environmental Engineer
Canyon Fuel Company, LLC
Skyline Mine
(435)448-2636

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INSPECTION AND CERTIFIED REPORT ON EXCESS SPOIL PILE OR REFUSE PILE			
Permit Number	C/007/005	Report Date	April 14, 2011
Mine Name	Skyline Mines		
Company Name	Canyon Fuel Company, LLC		
Excess Spoil Pile or Refuse Pile Identification	Pile Name	Skyline Waste Rock Site	
	Pile Number	1211-UT-09-01566-01	
	MSHA Mine ID Number	42-01566	
Inspection Date	March 30, 2011		
Inspected By	Gregg Galecki / Carl Winters		
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)		Quarterly	
		Attachments to Report? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	
Field Evaluation			
<u>No significant problems with the waste site were observed during the 1st quarter 2011.</u>			
1. Foundation preparation, including the removal of all organic material and topsoil. No contemporaneous reclamation was performed at the site during the quarter.			
2. Placement of underdrains and protective filter systems. No underdrains are present or required at this site. Areas that are to final grade are capped with the prescribed amount of topsoil, seeded, top-dressed with straw, then held in place with a matting material.			
3. Installation of final surface drainage systems. Existing surface is not at final contour. Therefore, final surface drainages have not yet been constructed. All surface runoff from the refuse pile is treated by the sediment pond. No water is allowed to impound on the pile. Runoff from the main access road below the sediment pond is treated by straw bale and silt fence dikes.			
4. Placement and compaction of fill materials. No waste material was hauled into the pile during the quarter. Waste rock deposited at the site is placed in lifts of 24-inches or less and compacted in place using a tracked dozer and sheeps-foot roller or another method to insure stabilization at final placement.			
5. Final grading and revegetation of fill. When the waste rock is placed permanently, contemporaneous reclamation of the waste rock pile will take place as the site is backfilled. The backfill slopes are built to 1 1/2h:1v or less and seeded as described in the final reclamation plan. The seed mix specified in the Reclamation Plan is planted after the placement of topsoil.			
6. Appearances of instability, structural weakness, and other hazardous conditions. No obvious instability or structural weakness was noted during the 1 st quarter 2011 inspection. No signs of slumping or heating			

INSPECTION AND CERTIFIED REPORT ON EXCESS SPOIL PILE OR REFUSE PILE

were observed. The highwall that is reappearing due to the removal of material continues to be monitored to ensure no loose coal or rock is retained on the highwall. No hazardous conditions were noted on the highwall during the inspection.

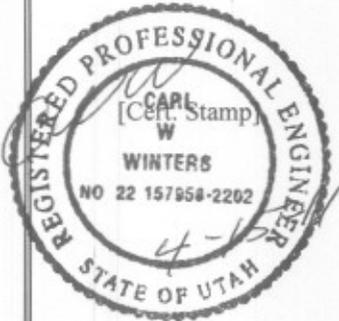
The sedimentation pond was snow-covered, and no water appeared to be in the pond. Drainage ditches reporting from the pile to the Sedimentation pond were snow-covered but appeared to be functioning as designed.

No hazardous conditions were observed at the time of the inspection, however the berm around the top needs to be increased in height. The surface crew will work on this in the Spring when snow is removed.

7. **Other Comments.** Describe any changes in the geometry of the Excess Spoil/Refuse Pile structure, instrumentation, average and maximum lifts of materials placed in the pile, elevations of active benches, total and remaining storage capacity of the structure, evidence of fires in the pile and abatement of such fires, volumes of materials placed in the structure during the year, and any other aspect of the structure affecting its stability or function which has occurred during the reporting period.

Historic records indicated the total storage capacity was approximately 334,125 tons. An application to expand the size of the refuse pile was approved February 29, 2008. A portion of the expansion area has been used for topsoil storage. No material has been placed in the pile in 2011.

Certification Statement



I hereby certify that; I am experienced in the construction of earth and rock fills; I am qualified and authorized in the State of Utah to inspect and certify the condition and appearance of earth and rock fills in accordance with the certified and approved designs for this structure; that the fill structure has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself, or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

By: Carl W. Winters, Engineering Manager

(Full Name and Title)

Signature: *Carl W. Winters* Date: April 14, 2011

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			
Permit Number	C/007/005	Report Date	April 14, 2011
Mine Name	Skyline Mine		
Company Name	Canyon Fuel Company		
Impoundment Identification	Impoundment Name	Mine Site Sediment Pond	
	Impoundment Number	001	
	UPDES Permit Number	UT0023540	
	MSHA ID Number	NA	
IMPOUNDMENT INSPECTION			
Inspection Date	March 29, 2011		
Inspected By	Gregg Galecki		
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Quarterly		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No signs of instability were observed. No hazardous conditions were observed during the inspection of the pond. The pond was discharging at 23 gpm at the time of the inspection. The pond is incised, with all the banks appearing stable. Particular attention was paid to the pond banks looking for signs of instability or structural weakness. The pond was cleaned during the 3rd Quarter 2010. The pond and surrounding area were covered by approximately five (5) feet of snow.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity: 86,721 ft³ (based on 2010 survey) 60% Elevation: 8571.26 feet ASL (above sea level) 100% Elevation: 8573.03 feet ASL The elevation of the sediment within the pond was not measured at the discharge point due to ice. In the 3rd Quarter, the sediment was 10.90 feet below the surface or an elevation of 8568.70 feet. No delta was present at the inlet of the sediment pond.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principal and Emergency Spillway Elevations: 8579.6 feet ASL (The outlet structure for Pond 001 serves as both the Principal and Emergency Spillways) Total volume of pond at Spillway: 249,731 ft³ Required runoff storage: 163,010 ft³ 100% Sediment storage: 86,721 ft³ 60% Sediment storage: 52,032 ft³</p>		

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT

4. Field Information. Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on out slopes of embankments, etc.

Water level at discharge point (8579.5 ft ASL) was essentially level with the spill point; discharging at 23 gpm. The sediment pond discharged periodically during the quarter. A sample of the mine discharge water, (normally) including this pond's discharge, is taken on weekly basis throughout the quarter as required by the Mine's UPDES permit. On a biweekly basis the water sample is analyzed for total iron. Weekly samples include oil and grease, total dissolved solids, total suspended solids, pH and conductivity. Flow is recorded by in-line flow meters.

Surface water is collected from the upper mine pad and discharged to the pond through a culvert located on the west end of the pond. The culvert is functioning as designed. The outlet structure was working as designed and appears to be in good working condition. The pond is an incised structure. The banks and pond were covered by approximately five (5) feet of snow.

A series of turbidity curtains are installed in the pond to help reduce the suspended load within the pond. The spillway was clear of debris and was functioning as designed.

5. Field Evaluation. Describe any changes in the geometry of the impounding structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The overall geometry or footprint of the pond has not changed. However during cleaning in 2010, the south and southwest portions of the pond are deeper than previously surveyed. The minimum water elevation was approximately one (1) foot below the spillway structure. Based on the 2010 survey and depth measurements, approximately 86,721 ft³ of sediment storage is available in the pond. Based on a sediment elevation of 8568.70 feet, the sediment level is at approximately 18 percent of the sediment capacity. An estimated 72,000 ft³ of material was removed from the pond during the cleaning in 2010. Turbidity curtains were functioning as designed. Spill Kits were labeled and full of supplies.

Qualification Statement

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: *Brygg A. Jalala* Date: 4-14-11

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			
Permit Number	C/007/005	Report Date	April 14, 2011
Mine Name	Skyline Mines		
Company Name	Canyon Fuel Company		
Impoundment Identification	Impoundment Name	Rail Loadout Sediment Pond	
	Impoundment Number	002	
	UPDES Permit Number	UT0023540	
	MSHA ID Number	NA	
IMPOUNDMENT INSPECTION			
Inspection Date	March 29, 2011		
Inspected By	Gregg Galecki		
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Quarterly		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability of the embankment or hazardous conditions was noted during the inspection. The inlet is slightly eroding; armoring rock / rip rap will need to be added in the future.</p>			
<p>Required for an impoundment which functions as a SEDIMENTATION POND.</p>	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity: 22,963 ft³ 60% Elevation: 7914.46 feet ASL (above sea level) 100% Elevation: 7915.40 ASL The current elevation of the sediment within the pond was not measured due to thick ice. In the 3rd quarter the sediment was measured at 6.15 feet below the discharge point at an approximate elevation of 7913.55 feet. This depth more closely illustrates the volume of the pond than during previous quarterly inspections because a boat was used to check the average depth in the center of the pond. No significant amount of material appears to have been added to the pond since the last inspection. The turbidity curtains were in place and functioning as designed during the inspection.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principle Spillway Elevation: 7919.7 feet ASL Emergency Spillway Elevation: 7922 feet ASL Total volume of pond at Spillway: 68,701 ft³ Required runoff storage: 45,738 ft³ 100% Sediment Storage: 22,963 ft³ 60% Sediment Storage: 13,778 ft³</p>		

4. Field Information. Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on out slopes of embankments, etc.

The depth of the water level with the spill point of the principal spillway at the time of the inspection. Earlier in the day the pond was discharging at 2.99 gpm.

The pond discharged twice during the quarter on March 9 and 29, 2011 due to snow melt. The pond embankment appears stable and without noticeable erosion. The entire area is covered by approximately four (4) feet of snow. The footprint of the pond remains unchanged.

Two turbidity curtains contain a majority of material in the upper, west side and south sides (inlets) of the pond where sediment can be periodically removed. The pond currently has three (3) turbidity curtains. All three (3) turbidity curtains were functioning as designed during the inspection. The discharge pipe or outlet is in good condition and functioning as designed.

5. Field Evaluation. Describe any changes in the geometry of the impounding structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The geometry of the pond does not appear to have changed significantly with the removing of sediment in September 2007. Moderately sized deltas continuously form upstream of the turbidity curtains installed at the inlets. On average, the water depth was 0-4 feet below the depth of the discharge pipe during the quarter. Since sediment is not deposited uniformly in the pond, the sediment level is estimated at slightly more than 7913.55ft. This is significantly more space than previously reported since sediment elevations were averaged based on a method using a boat to check the depth of the center of the pond during the 3rd Quarter 2010. Based on the sediment elevation of approximately 7913.55 ft, approximately 8,762 ft³ of sediment storage remains to fill the pond to the 60% sediment storage level. The volume calculations are based on a combination of the survey conducted in the Fall 2007 following the cleaning of the pond and both sediment levels and a check of the center of the pond during the 3rd quarter 2011. The visual inspection indicated minimal additional sediment was accumulated during the quarter.

The pond is routinely inspected on a weekly basis during weekly water monitoring.

Qualification Statement

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature: Gregg A. Seelbach Date: 4-14-11

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			
Permit Number	C/007/005	Report Date	April 14, 2011
Mine Name	Skyline Mines		
Company Name	Canyon Fuel Company		
Impoundment Identification	Impoundment Name	Waste Rock Site Sediment Pond	
	Impoundment Number	003	
	UPDES Permit Number	UT0023540	
	MSHA ID Number	NA	
IMPOUNDMENT INSPECTION			
Inspection Date	March 30, 2011		
Inspected By	Gregg Galecki		
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Quarterly		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability, structural weakness or other hazardous condition was noted at the site during the quarterly pond site inspection.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity: 9,939 ft³ 60% Elevation: 7857.2 feet ASL (above sea level) 100% Elevation: 7858.1 ASL Current Sediment Level Elevation: The pond was cleaned of sediment in August 2007. The pond was resurveyed to estimate the available sediment capacity following the cleaning. A bedrock shelf exists in the bottom of the pond, enabling portions of the pond to be deeper in areas where the shelf does not exist. Last quarter (4th 2010), the sediment level is 2.4 feet below the decant pipe (elev. 7857.2)</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principal and Emergency Spillways Elevation: 7864.0 feet ASL (The outlet of Pond 003 serves as both the principal and emergency spillway). A manual decant pipe in the pond marks the sediment cleanout elevation of 7857.2 feet.</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on out slopes of embankments, etc.

This pond did not discharge during the 1st quarter of 2011, therefore no water samples were obtained. The pond was buried under approximately four (4) feet of snow. The out slopes of the pond embankment do not appear to present any type of hazardous conditions. No instability was noted in the pond embankment. The pond embankment is stabilized with native grasses – and portions of the out slope of the embankment were widened in 2010 to accommodate the existing road on top of the embankment. The entire area was blanketed in snow. The pond was thoroughly cleaned in August 2007, and the capacity land surveyed. Based on the survey, the pond has a sediment capacity of approximately 9,939 cu-ft.

The current sediment storage capacity is based on the 2007 survey. The perimeter footprint of the pond did not change during the cleaning project, only the depth of the pond was modified.

The pond is routinely inspected during weekly water monitoring, with the exception late 4th quarter and the 1st quarter when the site is inaccessible to vehicles due to snow.

5. **Field Evaluation.** Describe any changes in the geometry of the impounding structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The pond was cleaned in August 2007. No changes or modifications from the cleaning have been noted in the geometry or perimeter footprint of the pond since the last inspection. The pond was buried in snow the entire quarter. No water or ice was present during the inspection. Based on the The current sediment level measured at the decant indicates the accumulated sediment is approximately 8 percent of capacity. Since the pond collects water only periodically, and a rock outcrop exists in the middle of the pond, sediment does not fill the pond uniformly and tends to accumulate at the inlet. Field observations estimate the current sediment storage capacity is approximately 40 percent of the 9939 cu-ft capacity. Minimal run off was encountered during the quarter, with the pond functioning as designed.

Qualification Statement

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized under the direction of a Registered Professional Engineer to inspect the condition and appearance of impoundments in accordance with the certified and approved designs for this structure; that the impoundment has been maintained in accordance with approved design and meet or exceed the minimum design requirements under all applicable federal, state and local regulations; and, that inspections and inspection reports are made by myself and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability.

Signature:  Date: 4-14-11

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			
Permit Number	C/007/005	Report Date	April 14, 2011
Mine Name	Skyline Mines		
Company Name	Canyon Fuel Company		
Impoundment Identification	Impoundment Name	Winter Quarters Ventilation Facility Sediment Pond	
	Impoundment Number	004	
	UPDES Permit Number	UT0023540	
	MSHA ID Number	NA	
IMPOUNDMENT INSPECTION			
Inspection Date	March 29, 2011		
Inspected By	Gregg Galecki		
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Quarterly		
<p>1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.</p> <p>No instability, structural weakness or other hazardous condition was noted at the site during the quarterly pond site inspection. The pond was constructed during the quarter.</p>			
Required for an impoundment which functions as a SEDIMENTATION POND.	<p>2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.</p> <p>Sediment Storage Capacity: 1,108 ft³ 60% Elevation: 8071.55 feet ASL (above sea level) Designed elevation prior to as-built survey 100% Elevation: 8072.1 ASL Designed elevation prior to as-built survey Current Sediment Level Elevation: The pond was built in the 1st Qtr 2011. The pond will need to be surveyed once the snow melts to confirm elevations and capacities. During the inspection no appreciable amount of sediment has been deposited in the pond.</p>		
	<p>3. Principle and emergency spillway elevations.</p> <p>Principal Spillways Elevation: 8075.05 feet ASL Emergency Spillway Elevation: 8075.55 feet ASL Total Volume of pond at Spillway: 5,290 cu-ft Required runoff storage: 4,182 cu-ft 100% Sediment Storage: 1,108 cu-ft 60% Sediment Storage: 665 cu-ft</p> <p>An as-built survey will be conducted to confirm elevations and volumes.</p>		

4. **Field Information.** Provide current water elevation, whether pond is discharging, type and number of samples taken, monitoring/instrumentation information, inlet/outlet conditions, or other related activities associated with the pond including but not limited to sediment cleanout, pond decanting, embankment erosion/repairs, monitoring information, vegetation on out slopes of embankments, etc.

This pond did not discharge during the 1st quarter of 2011, therefore no water samples were obtained. The pond was activated March 20, 2011. The pond has been buried under snow the entire quarter. The out slopes of the pond embankment do not appear to present any type of hazardous conditions. Both the inlet and outlet are clear and appear to be ready to function as designed. No instability was noted in the pond embankment. The pond embankment will be stabilized with native grasses.

The designed sediment storage for the pond is 1,108 cu-ft which will be confirmed with an as-built survey.

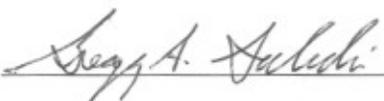
The pond is routinely inspected during weekly water monitoring.

5. **Field Evaluation.** Describe any changes in the geometry of the impounding structure, average and maximum depths and elevations of impounded water, estimated sediment or slurry volume and remaining storage capacity, estimated volume of water impounded, and any other aspect of the impounding structure affecting its stability or function which has occurred during the reporting period.

The pond was constructed during the 1st Qtr 2011. No changes or modifications have been noted in the geometry or perimeter footprint of the pond since construction. The pond was buried in snow the entire quarter. No water or ice was present during the inspection. Field observations estimate the current sediment storage capacity is approximately 100 percent of the 1,108 cu-ft capacity. Minimal run off was encountered during the quarter, with the pond functioning as designed.

Qualification Statement

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Signature:  Date: 4-14-11