OGMCOAL DNR <ogmcoal@utah.gov>

Skyline Mine - Refuse Pile and Pond Inspections

Taylon Earl <TEarl@wolverinefuels.com> Mon, Feb 4, 2019 at 3:08 PM
To: "ogmcoal@utah.gov" <ogmcoal@utah.gov>, Steve Demczak <stevedemczak@utah.gov>, Priscilla Burton <priscillaburton@utah.gov>, Keenan Storrar <kstorrar@utah.gov>
Cc: Gregg Galecki <ggalecki@bowieresources.com>

Here are Skylines 4th quarter 2018 Refuse pile and Pond Inspections. Please let me know if you need anything else.

Thanks

Taylon Earl

Environmental Tech, Skyline Mine

Canyon Fuel Company, LLC

A Subsidiary of Wolverine Fuels, LLC
Skyline Mine

HC35, Box 380

Helper, UT 84526
O: (435) 448-2667

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2 attachments

4th Qtr Pond Inspections.pdf
1038K

4th Qtr 2018Refuse_signed.pdf
221K

State of Utah
DEPARTMENT OF NATURAL RESOURCES
Division of Oil, Gas & Mining

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
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UTAH DNR OIL, GAS & MINING

Quarterly Inspection Form - Refuse Disposal Areas

(please provide to DOGM promptly after inspection is complete)

Permit Number :	C/007/005	Inspection Date :	December 21, 2018
Mine Name :	Skyline Mine	Quarter / Year :	Q04/Y2018
Mine Operator (Permittee) :	Canyon Fuel Company, LLC	Inspector Name :	Jason D. Layton
MSHA ID # :	42-01566; Pile 1211-UT-09-01566	Inspector Signature :	

Facility Name / Location / Address : 7 miles SW of Scofield, Utah. HC35 Box 380, Helper, Utah 84526

1. Describe any changes in the geometry of the structure (as well as instrumentation, if any, used to monitor changes):
No obvious instability or structural weakness was observed during the 4th Quarter 2018 inspection.
No signs of slumping or heating were observed. No instrumentation is used at the site.

2. Lift Height / Thickness Avg 2-ft Maximum _____ # _____ Elevation of Active Benches : _____ , _____ , _____

3. Vertical Angle of Outslope(s) / Location(s) where measured 1 1/2h:1v / _____ / _____ / _____

4. Total storage capacity: 334,125 tons (cu Remaining storage capacity ~76,500 tons. H Volume placed during year : 12,476 tons

5. Describe foundation preparation (including removal of vegetation, stumps, topsoil, and all other organic material) :
The Refuse Pile is currently disturbed, and material placement is occuring in previously disturbed areas.
Subsoil that was collected from a DOGM reclamation project is stored in the lower topsoil/subsoil storage area.

6. Describe placement and compaction of fill materials (including an explanation of how compaction is confirmed) :
Approximately 12,296 tons of material was placed at the site during the quarter. Piles were leveled and compacted during place
Once a sufficient amount of waste rock has accumulated, the material is placed in lifts of 24-inches or less and compacted in pl

7. Is there any evidence of fires or burning on the structure ? (If YES, specify extent, location, and abatement/extinguishment of such fires) :
There is no evidence of fires or burning on the refuse pile.

8. Describe placement of under drains, protective filter systems, and final surface drainage systems (report any seepage, including location, color, flow) :
No under-drains are present or required at the site. Areas that are to final grade are capped with the prescribed amount of topso

9. Describe any appearances of instability, structural weakness, or other hazardous conditions :
No obvious instability or structural weakness, or other hazardous conditions were noted during the 3rd Quarter 2018 inspection

10. Please provide any other information pertaining to the stability of the structure (attach any photos taken during the inspection)

Are there cracks or scarps in crest ?	YES ☐	NO ☑	
Is there any detectable sloughing or bulging ?	YES ☐	NO ☑	
Do slope erosion problems exist ?	YES ☐	NO ☑	
Cracks or scarps in slope ?	YES ☐	NO ☑	
Surface movements? (valley bottom, hillsides)	YES ☐	NO ☑	
Erosion of Toe ?	YES ☐	NO ☑	
Water impounded by structure ?	YES ☐	NO ☑	
Are diversion ditches stable?	YES ☑	NO ☐	appear to be functioning as designed.
Is drainage positive ?	YES ☑	NO ☐	

Could failure of structure create an impoundment (provide description) ? Yes. Failure of the south slope could dam a small ephemeral stream.

Are design standards established within the mining and reclamation plan for the disposal facility being met ?
Yes

Proctor Determination : N/A

(place P.E. certification below)

PROFESSIONAL ENGINEER
Jason Layton
2-4-19
STATE OF UTAH

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 structure; that the fill structure has been maintained in accordance with the approved design and meets or exceeds 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.

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			
Permit Number	C/007/005	**Report Date**	January 30, 2019
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	December 21, 2018	
Inspected By	Jason Layton / Gregg Galecki	
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)		Quarterly

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

No signs of instability were observed. No hazardous conditions were observed during the inspection of the pond. The pond was essential pumped dry for cleaning. The pond is incised, with all the banks appearing stable, with vegetation typically along a many of the banks. Particular attention was paid to the pond banks looking for signs of instability or structural weakness, drainage from the road located just west of the scales will continue to be monitored.

Required for an impoundment which functions as a SEDIMENTATION POND.

2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.

Remaining Sediment Storage Capacity: 130,482 ft^3
60% Elevation: 8571.75feet ASL
100% Elevation: 8573.75 feet ASL
Removal of sediment was conducted during the 3rd Quarter 2018. The sediment storage capacity was surveyed and calculated during the 4th Quarter. Original sediment-loading calculations estimated a 3-year sediment load from the site at 74,490 cu-ft. The elevation of the bottom of the pond is 8565.8 with a 100% sediment capacity elevation of 8573.75.

3. Principle and emergency spillway elevations.

Principal and Emergency Spillway Elevations: 8579.6 feet ASL (The outlet structure for Pond 001 serves as both the Principal and Emergency Spillways) Storage volumes listed below are based on the 4th quarter 2018 survey.
Total volume of pond at Spillway: 293,492 ft^3 (original dimension 358,110 $ft^3$from Plate 3.2.1-2)
Required runoff storage: 163,010 ft^3
100% Sediment storage: 147,190 ft^3
60% Sediment storage: 88,314 ft^3
Current Sediment storage: 16,708 ft^3 (~11.3%)
Current sediment storage remaining: 130,482 ft^3

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 outslopes of embankments, etc.

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT		

The water level in the pond was level with the discharge. The sediment pond did not discharge during the quarter. The pond was ice and snow covered. 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.

A series of turbidity curtains are installed in the pond to help contain the suspended load within the west section of the pond. The curtains adequately contain sediment in the upper reaches of the pond; as evident with the sizeable delta contained within the westernmost turbidity curtain. The spillway was clear of debris and was functioning as designed. The curtains were not functioning during the inspection due to cleaning of the pond

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. Spill kits were labeled and full of supplies. No signs of instability are apparent in the functionality of the pond.

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:** January 30, 2019

CERTIFIED REPORT

IMPOUNDMENT EVALUATION (If NO, explain under Comments)	YES	NO
1. Is impoundment designed and constructed in accordance with the approved plan?	Yes	
2. Is impoundment free of instability, structural weakness, or any other hazardous condition?	Yes	
3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?	Yes	

COMMENTS AND OTHER INFORMATION

The pond was cleaned during the 3rd quarter of 2018.

Certification Statement:

PROFESSIONAL ENGINEER
No. 181313-2202
JASON D. LAYTON
2/4/19
[PE Cert. Stamp]
STATE OF UTAH

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify 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 or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

By:
Jason D. Layton, Professional Engineer

Signature: _____ **Date:** January 30, 2019

P.E. Number & State:

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			
Permit Number	C/007/005	**Report Date**	January 25, 2019
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	December 21, 2018
Inspected By	Jason Layton / Gregg Galecki
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Quarterly

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

No instability of the embankment or hazardous conditions was noted during the inspection.

Required for an impoundment which functions as a SEDIMENTATION POND.

2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.

Remaining Sediment Storage Capacity: 17,982 ft^3
60% Elevation: 7915.37 feet ASL (above sea level)
100% Elevation: 7916.08 ASL

The sediment level in the pond was measured using a Total Station survey of the entire pond during the 3rd Quarter 2017 following removal of sediment. Approximately 17,982 cu-ft of sediment storage capacity are available. The original sediment-loading calculations estimate a 3-year sediment load from the site at 9,148 cu-ft. This 3-year estimate was done prior to the construction of the sediment trap installed in 2015 which considerably reduces the amount of sediment reporting to the pond. In the 2017 survey, the bottom of the pond was measured with the total capacity to be approximately 57,186 cu-ft.

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3. Principle and emergency spillway elevations.

Principle Spillway Elevation: 7919.7 feet ASL
Emergency Spillway Elevation: 7922 feet ASL
Total volume of pond at Spillway (based on 2017 survey): 57,186 ft^3
Required runoff storage: 39,204 ft^3
100% Sediment Storage: 17,982 ft^3
60% Sediment Storage: 10,789 ft^3

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 outslopes of embankments, etc.

The water level was 0.33-feet below the discharge point during the inspection. The pond was covered with snow and ice during the inspection. The pond embankment appears stable with the banks snow-covered and without noticeable erosion. Both the inlet and outlet are functioning as designed. The footprint of the pond remains unchanged.

A sediment trap located upstream of the main entrance to the pond significantly reduce the amount of sediment reporting to the pond.

Three (3) turbidity curtains contain the majority of material in the upper, southeast side and south sides (inlets) of the pond where sediment can be periodically removed. All three (3) turbidity curtains appeared to be functioning as designed. The discharge pipe or outlet is in good condition and functioning as designed.

The water appeared fine with no floating debris or oil sheen. The pond discharged once during the 4th Quarter 2018, on October 11th. Flow was measured at 50 gpm with no exceedances on any of the monitored parameters.

The pond had sediment removed during was 3rd the quarter 2016 to increase storage volume. The amount of sediment storage capacity was reported in 4th quarter 2017 is based on a licensed survey conducted the same year.

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 remains consistent. The average depth of the water 0.33 feet below the discharge point with only one discharge during the quarter. The amount of sediment storage in the pond was based on a total-station survey conducted after the pond was cleaned. Assuming a 3-year sediment accumulation of approximately 9,000 cu-ft, the pond should be scheduled for cleaning in 2019, but the sediment accumulation has been significantly reduced with the sediment trap installed upstream of the pond that is cleaned regularly.

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: _____ **Date:** January 30, 2019

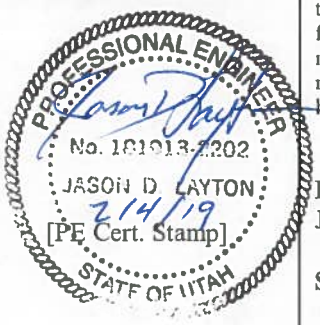
CERTIFIED REPORT

IMPOUNDMENT EVALUATION (If NO, explain under Comments)	YES	NO
1. Is impoundment designed and constructed in accordance with the approved plan?	Yes	
2. Is impoundment free of instability, structural weakness, or any other hazardous condition?	Yes	
3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?	Yes	

COMMENTS AND OTHER INFORMATION

The pond sediment level was surveyed using a Total Station in 3rd quarter 2017. The pond is typically surveyed annually to monitor the sediment level. Spot checks of the sediment depth indicate there is adequate capacity for sediment in the pond.

Certification Statement:



[PE Cert. Stamp]

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By:
Jason D. Layton, Professional Engineer

Signature: _____ **Date:** January 30, 2019

P.E. Number & State:

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			
Permit Number	C/007/005	**Report Date**	February 4, 2019
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	December 21, 2018
Inspected By	Jason Layton / Gregg Galecki
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Quarterly

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

No instability, structural weakness or other hazardous condition was noted at the site during the quarterly pond site inspection.

Required for an impoundment which functions as a SEDIMENTATION POND.

2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.

Sediment Storage Capacity: 873 ft^3
60% Elevation: 8072.15 feet ASL (above sea level) per as-built survey
100% Elevation: 8072.6 ASL per as-built survey
Current Sediment Level Elevation: Only minimal delta of sediment was apparently forming at the inlet. The pond was surveyed during 4th quarter 2018 with a Total Station to calculate sediment storage capacity. The survey indicates approximately 873 cu-ft of sediment are available.

3. Principle and emergency spillway elevations.

Principal Spillways Elevation: 8076.32 feet ASL (per C. Ware survey)
Emergency Spillway Elevation: 8076.73 feet ASL (per C. Ware survey)
Total Volume of pond at Spillway: 5055 cu-ft (per 2018 survey)
Required runoff storage: 4,182 cu-ft
100% Sediment Storage: 873 cu-ft
60% Sediment Storage: 524 cu-ft

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 outslopes of embankments, etc.

This pond did not discharge during the 4th quarter of 2018, therefore no water samples were obtained. The pond was dry during the inspection and snow-covered. The pond received runoff from storms during the quarter, with the ditches functioning as designed. The out slopes of the pond embankment do not appear to present any type of hazardous conditions and are typically well-vegetated but currently snow-covered. 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 2018 survey determined the sediment storage for the pond is approximately 873 cu-ft.

The pond is routinely inspected during weekly water monitoring (often inspected using a camera posted at the site).

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.

No changes or modifications have been noted in the geometry or perimeter footprint of the pond since construction in 2011. The pond was functioning, and received minor runoff periodically during the 4th quarter 2018. 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:** Jason D. Taylor **Date:** February 4, 2019

CERTIFIED REPORT

IMPOUNDMENT EVALUATION (If NO, explain under Comments)	YES	NO
1. Is impoundment designed and constructed in accordance with the approved plan?	Yes	
2. Is impoundment free of instability, structural weakness, or any other hazardous condition?	Yes	
3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?	Yes	

COMMENTS AND OTHER INFORMATION

The pond has not discharge in 2018. No sediment removal from the pond occurred during the quarter. The available capacity will be reported in 1st quarter 2019. The available sediment storage capacity is surveyed on an annual basis.

Certification Statement:

PROFESSIONAL ENGINEER
No. 1[illegible]-7202
JASON D. LAYTON
STATE OF UTAH
[PE Cert. Stamp]
2-4-19

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify 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 or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

By:
Jason D. Layton, Professional Engineer

Signature: _____ **Date:** February 4, 2019

P.E. Number & State:

IMPOUNDMENT INSPECTION AND CERTIFIED REPORT			
Permit Number	C/007/005	**Report Date**	January 25, 2019
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	December 21, 2018
Inspected By	Jason Layton / Gregg Galecki
Reason for Inspection (Annual, Quarterly or Other Periodic Inspection, Critical Installation, or Completion of Construction)	Quarterly

1. Describe any appearance of any instability, structural weakness, or any other hazardous condition.

No instability, structural weakness or other hazardous condition was noted at the site during the quarterly pond site inspection. The banks of the pond are normally well-vegetated – both on the inside and outside of the bank. The pond was dry during the inspection with snow and small patches of ice present.

Required for an impoundment which functions as a SEDIMENTATION POND.

2. Sediment storage capacity, including elevation of 60% and 100% sediment storage volumes, and, estimated average elevation of existing sediment.

Sediment Storage Capacity: 10,330 ft^3 (calculated 1-yr sediment storage volume)
60% Elevation: 7857.2 feet ASL (above sea level)
100% Elevation: 7858.1 ASL
Current Sediment Level Elevation: The pond was cleaned in 3rd quarter 2016. 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. The volume remaining based on a 2018 survey is 53,474 cu-ft. The available sediment storage was calculated using a total-station survey.

3. Principle and emergency spillway elevations.

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 7858.1 feet.
Total volume of pond at Spillway: 53,474 ft^3
Required runoff storage: 35,036 ft^3
100% Sediment storage: 18,438 ft^3
60% Sediment storage: 11,063 ft^3

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 outslopes of embankments, etc.

This pond did not discharge during the 4th quarter 2018, therefore no water samples were obtained. The bottom of the pond was approximately 2.9 feet below the decant pipe. The out slopes of the pond embankment do not appear to present any type of hazardous conditions. The pond was dry with the exception of a few ice patches. No instability was noted in the pond embankment that was covered with snow.

The current sediment storage capacity is based on a survey conducted during the 2018 survey and visual inspections. 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.

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.

No changes or modifications have been noted in the geometry of the pond since the last inspection. The pond was dry with no signs of appreciable deposition. The pond may have retained water periodically during the 4th quarter 2018. The bottom of the pond was approximately 2.9 feet below the discharge pipe based on the survey. Based on the current sediment level measured during the 2018 total-station survey, the accumulated sediment is approximately 53 percent of the 18,438 cu-ft sediment 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 typically tends to accumulate at the inlet. Minor run off was encountered during the quarter, with the pond functioning as designed. The sediment accumulation is surveyed annually.

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: Jason D Naylor **Date:** January 30, 2019

CERTIFIED REPORT

IMPOUNDMENT EVALUATION (If NO, explain under Comments)	YES	NO
1. Is impoundment designed and constructed in accordance with the approved plan?	Yes	
2. Is impoundment free of instability, structural weakness, or any other hazardous condition?	Yes	
3. Has the impoundment met all applicable performance standards and effluent limitations from the previous date of inspection?	Yes	

COMMENTS AND OTHER INFORMATION

The pond did not discharge in 2018. The pond was cleaned in 2016 and is surveyed annually to monitor sediment accumulation.

Certification Statement:

I hereby certify that; I am experienced in the construction of impoundments; I am qualified and authorized in the State of Utah to inspect and certify 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 or under my direction and include any appearances of instability, structural weakness or other hazardous conditions of the structure affecting stability in accordance with the Utah R645 Coal Mining Rules.

PROFESSIONAL ENGINEER
No. 181215-2202
JASON D. LAYTON
[P.E Cert. Stamp]
2-4-19
STATE OF UTAH

By: Jason D. Layton, Professional Engineer

Signature: _____ **Date:** January 30, 2019

P.E. Number & State: