



Seneca Coal Company

July 23, 2019

Robin Reilly
Colorado Division of Reclamation, Mining and Safety
1313 Sherman Street
Denver, CO 80203

RE: Seneca II W Mine, Permit C-82-057, 2Q19 IIR

Dear Robin:

In accordance with Rule 4.05.9(17), please find enclosed the Seneca II West Mine Impoundment Inspection Reports (IIR) and Impoundment Inspection Log (IIL) for Ponds:

- Pond #005, Pond #006, Pond #008, Pond #009, Pond #015, Pond #016, Pond #017

and Stock Tanks:

- Stock Tank T-1, Stock Tank T-2, Stock Tank T-3, Stock Tank T-5, Stock Tank T-18, Stock Tank T-20, Stock Tank T-22, Stock Tank T-24, Stock Tank T-25, Stock Tank T-26 and Stock Tank T-27.

Maintenance is required at Pond #016 and Pond #017. Please contact me with any comments and/or questions.

Sincerely,

Miranda Kawcak
Environmental Engineer

Enclosure: Seneca II W IIR

| | | | | |
|---|---------------------------|---|-----------------------------|---|
| Mining Area Date Inspected Impoundment NPDES ID No Owner's Rep | Seneca II West Mine | Facility Configuration Date Last Inspected Pond Location Site Location Inspector | Cross-Vally Pond | Quarterly Impoundment Inspection Form |
| | 6/10/2019 | | 3/11/2019 | |
| | Pond #005 | | NW¼ SW¼, Sec. 10, T5N, R88W | |
| | CMLRD Permit No. C-82-057 | | 8 mi. S of Hayden, CO | |
| | Miranda Kawcak | | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | | PROBLEM | | COMMENTS |
| | | YES (Above) | NO (Below) | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | | X | | Water level 0.05 feet above spillway |
| Existing Embankment Freeboard (7.4 ft) | | 10.4 | | |
| 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 | | | | |
| Maintenance Required | | | X | Spring below dam, no impact on pond, will continue to monitor |
| Maintenance Performed | | | X | |
| Additional Comments | | X | | |

| | | | | |
|---|---------------------|-------------------------------|---|--|
| Mining Area | Seneca II West Mine | Facility Configuration | Cross-Vally Pond | Quarterly Impoundment Inspection Form |
| Date Inspected | 6/10/2019 | Date Last Inspected | 3/11/2019 | |
| Impoundment | Pond #006 | Pond Location | NW¼ NW¼, Sec. 22, T5N, R88W | |
| NPDES ID No | CO-0000221 D.P. 006 | Site Location | 8 mi. S of Hayden, CO | |
| Owner's Rep | Miranda Kawcak | Inspector | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | PROBLEM | | COMMENTS | |
| | YES (Above) | NO (Below) | | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | X | | water level 0.1 feet above spillway | |
| Existing Embankment Freeboard (7.5 ft) | 7.5 | | | |
| Outflow (gpm) | X | | 190.5 | |
| 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 | | | | |
| Maintenance Required | | X | Sluff on south side above pond on hill, currently not affecting pond. Will continue to monitor. | |
| Maintenance Performed | | X | | |
| Additional Comments | X | | | |

| | | | | |
|---|--------------------|---|---------------------------|--|
| Mining Area Date Inspected Impoundment NPDES ID No Owner's Rep | Seneca II Mine | Facility Configuration Date Last Inspected Pond Location Site Location Inspector | Cross-Vally Pond | Quarterly Impoundment Inspection Form |
| | 6/12/2019 | | 3/11/2019 | |
| | Pond #008 | | SE½SW¼, Sec. 7, T5N, R86W | |
| | CO-0000221 D.P.008 | | 7.1 mi SE of Hayden, CO | |
| | Miranda Kawcak | | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | | PROBLEM | | COMMENTS |
| | | YES (Above) | NO (Below) | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | | X | | Water Level 0.1 above spillway |
| Existing Embankment Freeboard (4.7 ft) | | 4.7 | | |
| Outflow (gpm) | | X | | |
| 117 | | | | |
| 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 | |
| MAINTENANCE | | | | |
| Maintenance Required | | | X | |
| Maintenance Performed | | | X | |
| Additional Comments | | | X | |

NO LONGER REQUIRED DUE TO FINAL BOND RELEASE

| | | | | |
|---|---------------------|---|-----------------------------|--|
| Mining Area Date Inspected Impoundment NPDES ID No Owner's Rep | Seneca II West Mine | Facility Configuration Date Last Inspected Pond Location Site Location Inspector | Cross-Vally Pond | Quarterly Impoundment Inspection Form |
| | 6/10/2019 | | 3/11/2019 | |
| | Pond #009 | | SE¼ SW¼, Sec. 11, T5N, R88W | |
| | CO-0000221 D.P. 009 | | 8 mi. S of Hayden, CO | |
| | Miranda Kawcak | | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | | PROBLEM | | COMMENTS |
| | | YES (Above) | NO (Below) | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | | | X | Water level 2.0 feet below top of pipe |
| Existing Embankment Freeboard (6.9 ft) | | 11.4 | | |
| 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 | | | | |
| Maintenance Required | | | X | |
| Maintenance Performed | | | X | |
| Additional Comments | | | X | |

| | | | | |
|---|---------------------|---|-----------------------------|--|
| Mining Area Date Inspected Impoundment NPDES ID No Owner's Rep | Seneca II West Mine | Facility Configuration Date Last Inspected Pond Location Site Location Inspector | Cross-Vally Pond | Quarterly Impoundment Inspection Form |
| | 6/10/2019 | | 3/11/2019 | |
| | Pond #015 | | NE¼ SE¼, Sec. 23, T5N, R88W | |
| | CO-0000221 D.P. 015 | | 8 mi. S of Hayden, CO | |
| | Miranda Kawcak | | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | | PROBLEM | | COMMENTS |
| | | YES (Above) | NO (Below) | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | | X | | water level 0.01 feet above spillway |
| Existing Embankment Freeboard (4.0 ft) | | 4.8 | | |
| Outflow (gpm) | | X | | 76.4 |
| 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 | |
| MAINTENANCE | | | | |
| Maintenance Required | | | X | |
| Maintenance Performed | | | X | |
| Additional Comments | | | X | |

| | | | | |
|---|---------------------|---|-----------------------------|--|
| Mining Area Date Inspected Impoundment NPDES ID No Owner's Rep | Seneca II West Mine | Facility Configuration Date Last Inspected Pond Location Site Location Inspector | Cross-Vally Pond | Quarterly Impoundment Inspection Form |
| | 6/10/2019 | | 3/11/2019 | |
| | Pond #016 | | NE¼ SE¼, Sec. 27, T5N, R88W | |
| | CO-0000221 D.P. 016 | | 8 mi. S of Hayden, CO | |
| | Miranda Kawcak | | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | | PROBLEM | | COMMENTS |
| | | YES (Above) | NO (Below) | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | | X | | water level 0.1 feet above spillway |
| Existing Embankment Freeboard (6.8 ft) | | 6.8 | | |
| Outflow (gpm) | | X | | |
| 154.3 | | | | |
| 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 | | | | |
| Maintenance Required | | X | | Small seep under flume |
| Maintenance Performed | | | X | |
| Additional Comments | | | X | |

| | | | | |
|---|---------------------|-------------------------------|--|--|
| Mining Area | Seneca II West Mine | Facility Configuration | Cross-Vally Pond | Quarterly Impoundment Inspection Form |
| Date Inspected | 6/10/2019 | Date Last Inspected | 3/11/2019 | |
| Impoundment | Pond #017 | Pond Location | SW¼ NE¼, Sec. 34, T5N, R88W | |
| NPDES ID No | CO-0000221 D.P. 017 | Site Location | 8 mi. S of Hayden, CO | |
| Owner's Rep | Miranda Kawcak | Inspector | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | PROBLEM | | COMMENTS | |
| | YES (Above) | NO (Below) | | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | X | | water level 0.1 feet above spillway | |
| Existing Embankment Freeboard (3.1 ft) | 3.1 | | | |
| Outflow (gpm) | X | | 151.1 | |
| 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 | | | | |
| Maintenance Required | X | | All water running around and under flume, need to place bentonite around flume | |
| Maintenance Performed | | X | | |
| Additional Comments | X | | | |

| | | | | |
|---|---------------------|---|---------------------------|---|
| Mining Area Date Inspected Impoundment NPDES ID No Owner's Rep | Seneca II West Mine | Facility Configuration Date Last Inspected Pond Location Site Location Inspector | Stockpond | Quarterly Impoundment Inspection Form |
| | 6/13/2019 | | 3/11/2019 | |
| | Stock Tank T-1 | | SE¼SW¼, Sec 16, T5N, R88W | |
| | N/A | | 8 mi S of Hayden, CO | |
| | Miranda Kawcak | | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | | PROBLEM | | COMMENTS |
| | | YES (Above) | NO (Below) | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | | | X | Dry |
| EROSION | | | | |
| Rills & Gullies on Embankment | | | X | |
| Wave Erosion | | | X | |
| Spillway Erosion | | | N/A | |
| Burrows | | | X | |
| Other | | | X | |
| STRUCTURAL | | | | |
| Differential Settling | | | X | |
| Cracks or Slides | | | X | |
| Seepage | | | X | |
| Other | | | X | |
| STRUCTURES | | | | |
| Principal Spillway | | | | |
| Clogged Orifice | | | N/A | |
| Clogged or Damaged Culvert | | | N/A | |
| Damaged Headgate | | | N/A | |
| Emergency Spillway | | | | |
| Erosion | | | X | |
| Riprap | | | X | |
| Clogged or Damaged Culvert | | | N/A | |
| Other | | | X | |
| MAINTENANCE | | | | |
| Maintenance Required | | | X | DAM REMOVED SPRING 2012, ROCK IN CHANNEL NOW. |
| Maintenance Performed | | | X | |
| Additional Comments | | X | | |

| | | | | |
|---|---------------------|---|---------------------------|--|
| Mining Area Date Inspected Impoundment NPDES ID No Owner's Rep | Seneca II West Mine | Facility Configuration Date Last Inspected Pond Location Site Location Inspector | Stockpond | Quarterly Impoundment Inspection Form |
| | 6/13/2019 | | 3/11/2019 | |
| | Stock Tank T-2 | | NW¼SW¼, Sec 22, T5N, R88W | |
| | N/A | | 8 mi S of Hayden, CO | |
| | Miranda Kawcak | | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | | PROBLEM | | COMMENTS |
| | | YES (Above) | NO (Below) | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | | | X | Water level 2.5 feet below spillway |
| 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 | | | NA | |
| Clogged or Damaged Culvert | | | NA | |
| Damaged Headgate | | | NA | |
| Emergency Spillway | | | | |
| Erosion | | | X | |
| Riprap | | | X | |
| Clogged or Damaged Culvert | | | NA | |
| Other | | | X | |
| MAINTENANCE | | | | |
| Maintenance Required | | | X | |
| Maintenance Performed | | | X | |
| Additional Comments | | | X | |

| | | | | |
|---|---------------------|---|---------------------------|--|
| Mining Area Date Inspected Impoundment NPDES ID No Owner's Rep | Seneca II West Mine | Facility Configuration Date Last Inspected Pond Location Site Location Inspector | Stockpond | Quarterly Impoundment Inspection Form |
| | 6/13/2019 | | 3/11/2019 | |
| | Stock Tank T-3 | | NW¼SE¼, Sec 22, T5N, R88W | |
| | N/A | | 8 mi S of Hayden, CO | |
| | Miranda Kawcak | | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | | PROBLEM | | COMMENTS |
| | | YES (Above) | NO (Below) | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | | | X | Water level 3.0 feet below spillway |
| 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 | | | NA | |
| Clogged or Damaged Culvert | | | NA | |
| Damaged Headgate | | | NA | |
| Emergency Spillway | | | | |
| Erosion | | | X | |
| Riprap | | | X | |
| Clogged or Damaged Culvert | | | NA | |
| Other | | | X | |
| MAINTENACE | | | | |
| Maintenance Required | | | X | |
| Maintenance Performed | | | X | |
| Additional Comments | | | X | |

| | | | | |
|---|---------------------|-------------------------------|-------------------------------------|--|
| Mining Area | Seneca II West Mine | Facility Configuration | Stockpond | Quarterly Impoundment Inspection Form |
| Date Inspected | 6/13/2019 | Date Last Inspected | 3/11/2019 | |
| Impoundment | Stock Tank T-5 | Pond Location | NE¼ Sec 22, T5N, R88W | |
| NPDES ID No | N/A | Site Location | 8 mi S of Hayden, CO | |
| Owner's Rep | Miranda Kawcak | Inspector | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | PROBLEM | | COMMENTS | |
| | YES (Above) | NO (Below) | | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | | X | Water level 2.5 feet below spillway | |
| 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 | | NA | | |
| Clogged or Damaged Culvert | | NA | | |
| Damaged Headgate | | NA | | |
| Emergency Spillway | | | | |
| Erosion | | X | | |
| Riprap | | X | | |
| Clogged or Damaged Culvert | | NA | | |
| Other | | X | | |
| MAINTENACE | | | | |
| Maintenance Required | | X | | |
| Maintenance Performed | | X | | |
| Additional Comments | | X | | |

| | | | | |
|---|---------------------|---|---------------------------|--|
| Mining Area Date Inspected Impoundment NPDES ID No Owner's Rep | Seneca II West Mine | Facility Configuration Date Last Inspected Pond Location Site Location Inspector | Stockpond | Quarterly Impoundment Inspection Form |
| | 6/13/2019 | | 3/11/2019 | |
| | Stock Tank T-18 | | NW¼NE¼, Sec 15, T5N, R88W | |
| | N/A | | 8 mi S of Hayden, CO | |
| | Miranda Kawcak | | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | | PROBLEM | | COMMENTS |
| | | YES (Above) | NO (Below) | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | | | X | Water level 1.0 feet below spillway |
| 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 | | | NA | |
| Clogged or Damaged Culvert | | | NA | |
| Damaged Headgate | | | NA | |
| Emergency Spillway | | | | |
| Erosion | | | X | |
| Riprap | | | X | |
| Clogged or Damaged Culvert | | | NA | |
| Other | | | X | |
| MAINTENANCE | | | | |
| Maintenance Required | | | X | |
| Maintenance Performed | | | X | |
| Additional Comments | | | X | |

| | | | | |
|---|---------------------|---|---------------------------|--|
| Mining Area Date Inspected Impoundment NPDES ID No Owner's Rep | Seneca II West Mine | Facility Configuration Date Last Inspected Pond Location Site Location Inspector | Stockpond | Quarterly Impoundment Inspection Form |
| | 6/13/2019 | | 3/11/2019 | |
| | Stock Tank T-20 | | NW¼NE¼, Sec 15, T5N, R88W | |
| | N/A | | 8 mi S of Hayden, CO | |
| | Miranda Kawcak | | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | | PROBLEM | | COMMENTS |
| | | YES (Above) | NO (Below) | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | | | X | Water level 3.0 feet below spillway |
| 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 | | | NA | |
| Clogged or Damaged Culvert | | | NA | |
| Damaged Headgate | | | NA | |
| Emergency Spillway | | | | |
| Erosion | | | X | |
| Riprap | | | X | |
| Clogged or Damaged Culvert | | | NA | |
| Other | | | X | |
| MAINTENANCE | | | | |
| Maintenance Required | | | X | |
| Maintenance Performed | | | X | |
| Additional Comments | | | X | |

| | | | | |
|---|---------------------|-------------------------------|---|--|
| Mining Area | Seneca II West Mine | Facility Configuration | Stockpond | Quarterly Impoundment Inspection Form |
| Date Inspected | 6/13/2019 | Date Last Inspected | 3/11/2019 | |
| Impoundment | Stock Tank T-22 | Pond Location | SE¼SW¼, Sec 10, T5N, R88W | |
| NPDES ID No | N/A | Site Location | 8 mi S of Hayden, CO | |
| Owner's Rep | Miranda Kawcak | Inspector | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | PROBLEM | | COMMENTS | |
| | YES (Above) | NO (Below) | | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | X | | Water level 0.2 feet above spillway 12.7gpm | |
| 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 | | NA | | |
| Clogged or Damaged Culvert | | NA | | |
| Damaged Headgate | | NA | | |
| Emergency Spillway | | | | |
| Erosion | | X | | |
| Riprap | | X | | |
| Clogged or Damaged Culvert | | NA | | |
| Other | | X | | |
| MAINTENANCE | | | | |
| Maintenance Required | | X | | |
| Maintenance Performed | | X | | |
| Additional Comments | | X | | |

| | | | | |
|---|---------------------|---|--------------------------|--|
| Mining Area Date Inspected Impoundment NPDES ID No Owner's Rep | Seneca II West Mine | Facility Configuration Date Last Inspected Pond Location Site Location Inspector | Stockpond | Quarterly Impoundment Inspection Form |
| | 6/13/2019 | | 3/11/2019 | |
| | Stock Tank T-24 | | SW¼NE¼, Sec 9, T5N, R88W | |
| | N/A | | 8 mi S of Hayden, CO | |
| | Miranda Kawcak | | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | | PROBLEM | | COMMENTS |
| | | YES (Above) | NO (Below) | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | | | X | Dry |
| 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 | | | NA | |
| Clogged or Damaged Culvert | | | NA | |
| Damaged Headgate | | | NA | |
| Emergency Spillway | | | | |
| Erosion | | | X | |
| Riprap | | | X | |
| Clogged or Damaged Culvert | | | NA | |
| Other | | | X | |
| MAINTENANCE | | | | |
| Maintenance Required | | | X | |
| Maintenance Performed | | | X | |
| Additional Comments | | | X | |

| | | | | |
|---|---------------------|-------------------------------|--|--|
| Mining Area | Seneca II West Mine | Facility Configuration | Stockpond | Quarterly Impoundment Inspection Form |
| Date Inspected | 6/10/2019 | Date Last Inspected | 3/11/2019 | |
| Impoundment | Stock Tank T-25 | Pond Location | SW¼NE¼, Sec 34, T5N, R88W | |
| NPDES ID No | N/A | Site Location | 8 mi S of Hayden, CO | |
| Owner's Rep | Miranda Kawcak | Inspector | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | PROBLEM | | COMMENTS | |
| | YES (Above) | NO (Below) | | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | | N/A | Dry | |
| EROSION | | | | |
| Rills & Gullies on Embankment | | N/A | | |
| Wave Erosion | | N/A | | |
| Spillway Erosion | | N/A | | |
| Burrows | | N/A | | |
| Other | | N/A | | |
| STRUCTURAL | | | | |
| Differential Settling | | N/A | | |
| Cracks or Slides | | N/A | | |
| Seepage | | N/A | | |
| Other | | N/A | | |
| STRUCTURES | | | | |
| Principal Spillway | | | | |
| Clogged Orifice | | N/A | | |
| Clogged or Damaged Culvert | | N/A | | |
| Damaged Headgate | | N/A | | |
| Emergency Spillway | | | | |
| Erosion | | N/A | | |
| Riprap | | N/A | | |
| Clogged or Damaged Culvert | | N/A | | |
| Other | | N/A | | |
| MAINTENANCE | | | | |
| Maintenance Required | | X | DAM REMOVED FALL 2011, REBUILT IN 2012 AS A RUNOFF CONTROL STRUCTURE (PM1-A3) | |
| Maintenance Performed | | X | | |
| Additional Comments | X | | | |

| | | | | |
|---|---------------------|---|---------------------------|--|
| Mining Area Date Inspected Impoundment NPDES ID No Owner's Rep | Seneca II West Mine | Facility Configuration Date Last Inspected Pond Location Site Location Inspector | Stockpond | Quarterly Impoundment Inspection Form |
| | 6/13/2019 | | 3/11/2019 | |
| | Stock Tank T-26 | | NE¼NW¼, Sec 35, T5N, R88W | |
| | N/A | | 8 mi S of Hayden, CO | |
| | Miranda Kawcak | | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | | PROBLEM | | COMMENTS |
| | | YES (Above) | NO (Below) | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | | | X | Water level 1.5 feet below spillway |
| 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 | | | NA | |
| Clogged or Damaged Culvert | | | NA | |
| Damaged Headgate | | | NA | |
| Emergency Spillway | | | | |
| Erosion | | | X | |
| Riprap | | | X | |
| Clogged or Damaged Culvert | | | NA | |
| Other | | | X | |
| MAINTENANCE | | | | |
| Maintenance Required | | | X | |
| Maintenance Performed | | | X | |
| Additional Comments | | | X | |

| | | | | |
|---|---------------------|-------------------------------|---|--|
| Mining Area | Seneca II West Mine | Facility Configuration | Stockpond | Quarterly Impoundment Inspection Form |
| Date Inspected | 6/13/2019 | Date Last Inspected | 3/11/2019 | |
| Impoundment | Stock Tank T-27 | Pond Location | NW¼NW¼, Sec 35, T5N, R88W | |
| NPDES ID No | N/A | Site Location | 8 mi S of Hayden, CO | |
| Owner's Rep | Miranda Kawcak | Inspector | Jason Herden | |
| Mark or Write in Appropriate Response: | | | | |
| FEATURE | PROBLEM | | COMMENTS | |
| | YES (Above) | NO (Below) | | |
| GENERAL | | | | |
| Water Level (above or below principal spillway) | | N/A | Water Level 1.5 feet below spillway | |
| EROSION | | | | |
| Rills & Gullies on Embankment | | N/A | | |
| Wave Erosion | | N/A | | |
| Spillway Erosion | | N/A | | |
| Burrows | | N/A | | |
| Other | | N/A | | |
| STRUCTURAL | | | | |
| Differential Settling | | N/A | | |
| Cracks or Slides | | N/A | | |
| Seepage | | N/A | | |
| Other | | N/A | | |
| STRUCTURES | | | | |
| Principal Spillway | | | | |
| Clogged Orifice | | N/A | | |
| Clogged or Damaged Culvert | | N/A | | |
| Damaged Headgate | | N/A | | |
| Emergency Spillway | | | | |
| Erosion | | N/A | | |
| Riprap | | N/A | | |
| Clogged or Damaged Culvert | | N/A | | |
| Other | | N/A | | |
| MAINTENANCE | | | | |
| Maintenance Required | | X | REBUILT IN 2012 AS A RUNOFF CONTROL STRUCTURE. No access due to winter conditions | |
| Maintenance Performed | | X | | |
| Additional Comments | X | | | |

IMPOUNDMENT INSPECTION LOG

JOB DATA

| | | |
|---|-----------------|----------------------------|
| JOB NAME: PEC Hydrologic Support Services | CLIENT: Peabody | LOCATION: Routt County, CO |
| JOB(s): 2018-005 T1-SCC, 2018-006 T1-PSCM | | |

FLOW DATA

| SITE ID | COMPANY | MINE | DATE | TIME | WATER LEVEL (FT) | OUTFLOW (GPM) | OBSERVATIONS | MAINTENANCE (Y/N) |
|-----------------|------------|----------------|---------|-------|------------------|---------------|--------------------------------|-------------------|
| 002 | Sage Creek | Sage Creek | 6-11-19 | 14:45 | 0.43 | 207.3 | | N |
| 003 | Sage Creek | Sage Creek | 6-11-19 | 14:15 | 0.10 | 24.8 | culvert flume broken | Y |
| 004 | Sage Creek | Sage Creek | 6-11-19 | 16:15 | 0.15 | 191.3 | | N |
| Lower Sump | Sage Creek | Sage Creek | 6-13-19 | 06:20 | 0.08 | 108.7 | | N |
| PECOCO | Sage Creek | Sage Creek | 6-12-19 | 11:20 | 0.1 | 139 | | N |
| Portal Sump 1 | Sage Creek | Sage Creek | 6-13-19 | 07:00 | 0.1 | 23 | | N |
| Portal Sump 2 | Sage Creek | Sage Creek | 6-13-19 | 07:15 | — | — | NOT Pumping | N |
| Spill Control 2 | Sage Creek | Sage Creek | 6-13-19 | 06:40 | — | — | Dry | N |
| Truck Wash | Sage Creek | Sage Creek | 6-13-19 | 06:05 | — | — | Dry | N |
| Upper Sump | Sage Creek | Sage Creek | 6-13-19 | 07:46 | 0.1 | 147 | | N |
| 001 | Seneca | Hayden Gulch | 6-13-19 | 09:40 | -2.0 | — | NO Flow | N |
| 002 | Seneca | Hayden Gulch | 6-13-19 | 09:50 | -2.5 | — | NO Flow | N |
| 005 | Seneca | Seneca II West | 6-10-19 | 11:00 | 0.05 | 78.8 | spring @ dam no impact | N |
| 006 | Seneca | Seneca II West | 6-10-19 | 08:50 | 0.1 | 190.5 | big sluff on S. side no impact | N |
| 009 | Seneca | Seneca II West | 6-10-19 | 11:30 | -2.0 | — | NO Flow | N |
| 015 | Seneca | Seneca II West | 6-10-19 | 11:50 | 0.10 | 76.4 | | N |
| 016 | Seneca | Seneca II West | 6-10-19 | 09:05 | 0.1 | 154.3 | small seep under flume | Y |
| 017 | Seneca | Seneca II West | 6-10-19 | 10:00 | 0.1 | 151.1 | all water running around flume | Y |
| T-1 | Seneca | Seneca II West | 6-13-19 | 09:40 | — | — | Dry | N |
| T-18 | Seneca | Seneca II West | 6-13-19 | 12:45 | -1.0 | — | NO Flow | |
| T-2 | Seneca | Seneca II West | 6-13-19 | 10:30 | -2.5 | — | NO Flow | N |
| T-20 | Seneca | Seneca II West | 6-13-19 | 13:10 | -3 | — | NO Flow | N |
| T-22 | Seneca | Seneca II West | 6-13-19 | 13:30 | 0.1 | 12.7 | | N |
| T-24 | Seneca | Seneca II West | 6-13-19 | 14:10 | — | — | Dry | N |
| T-25 | Seneca | Seneca II West | 6-10-19 | 10:10 | — | — | Dry | N |
| T-26 | Seneca | Seneca II West | 6-13-19 | 11:20 | -1.5 | — | NO Flow | N |

008

6-12-19 13:00

0.1

117

outlet pipe has risen

Y

cleaned gate & put weights on pipe

WWC ENGINEERING

IMPOUNDMENT INSPECTION LOG

| SITE ID | COMPANY | MINE | DATE | TIME | WATER LEVEL (FT) | OUTFLOW (GPM) | OBSERVATIONS | MAINTENANCE (Y/N) |
|---------|---------|----------------|---------|---------------------------|------------------|---------------|----------------------------|-------------------|
| T-27 | Seneca | Seneca II West | 6-13-19 | 11:30 12:45 | -1.5 | — | NO Flow | N |
| T-3 | Seneca | Seneca II West | 6-13-19 | 20:35 | -3.0 | — | NO Flow | N |
| T-5 | Seneca | Seneca II West | 6-13-19 | 10:50 | -2.5 | — | NO Flow | N |
| 010 | Seneca | Yoast | 6-11-19 | 12:45 | 0.1 | 126.3 | outlet pipe rusted through | Y |
| 011 | Seneca | Yoast | 6-11-19 | 07:10 | 0.1 | 45.4 | | N |
| 011A | Seneca | Yoast | 6-11-19 | 18:30 | -.4 | — | NO Flow | N |
| 012 | Seneca | Yoast | 6-10-19 | 12:20 | 0.08 | 206.3 | Cat tails in pond | N |
| 012A | Seneca | Yoast | 6-12-19 | 06:40 | -.1 | — | NO Flow | N |
| 013 | Seneca | Yoast | 6-14-19 | 06:50 | -.1 | — | NO Flow | N |
| 014 | Seneca | Yoast | 6-14-19 | 07:15 | -.1 | — | NO Flow | N |
| ST-1 | Seneca | Yoast | 6-13-19 | 15:15 | -1.0 | — | NO Flow | N |

NOTES