

QUARTERLY SEDIMENTATION POND INSPECTION REPORT

CDMR Rule 4.05.9(17)

Mine: Lorencito
NPDES ID. No.: Pond #5
Inspection Period: First Quarter 2017
Inspection Date: 3/15/17

General Description or Reference to Site Plan:

This pond is located West of the area of mining scheduled for 2001-02. The pond is partially incised into bedrock and the embankment keyed into bedrock. Side slopes are less than 2H:1V. The primary discharges south into Cow Canyon drainage.

EMBANKMENT

- 1). Adequacy of the vegetative cover: Excellent Moderate Few Poor
- 2). Erosion forming Gullies: Extensive Some Few None
- 3). Is wave action causing erosion:
- | | | |
|----------------------------------|-----------|-------------|
| On the Upstream embankment? | Yes _____ | No <u>✓</u> |
| At the principal spillway inlet? | Yes _____ | No <u>✓</u> |
- 4). Erosion of the downstream toe of the embankment? Yes _____ No ✓
Cause of erosion can be attributed to: _____

- 5). Is seepage occurring through the dam? Yes _____ No ✓
Could this seepage cause potential instability? _____

PRINCIPAL SPILLWAY

- 1). Is the principal spillway system in working order? Yes ✓ No _____
- 2). Is the inlet free of debris and restrictive material? Yes ✓ No _____
- 3). Is the discharge outlet free of restrictive material? Yes ✓ No _____
- 4). Is erosion occurring at the discharge outlet? Yes _____ No ✓
Evaluate the severity: Extensive Moderate Just starting None

EMERGENCY SPILLWAY

1). Does it appear that the emergency spillway has discharged water since the last inspection?

Yes _____ No ✓

2). Is erosion occurring at any section of the emergency spillway?

Yes _____ No ✓

Describe extent: _____

SEDIMENT STORAGE CAPACITY

1). Has the design storage capacity of the reservoir been surpassed?

Yes _____ No ✓

Explain: By observation and revised pond design
criteria based on ground conditions from Final Reclamation
and termination of mining.

OTHER OBSERVATIONS

A significant sediment delta is building at
pond inlet. Operator should consider doing a
survey to determine amount of sediment accumulation.

Ronald G. Horgan
MSHA Qualified Impoundment Inspector

3/15/2017

Date

QUARTERLY SEDIMENTATION POND INSPECTION REPORT

CDMR Rule 4.05.9(17)

Mine: Lorencito
NPDES ID. No.: Pond #6
Inspection Period: First Quarter 2017
Inspection Date: 3/15/17

General Description or Reference to Site Plan:

This pond is located South of the area of mining scheduled for 2001-02. The pond is partially incised into bedrock and the embankment keyed into bedrock. Side slopes are less than 2H:1V. The primary discharges south into Jeff Canyon drainage.

EMBANKMENT

- 1). Adequacy of the vegetative cover: Excellent Moderate Few Poor
- 2). Erosion forming Gullies: Extensive Some Few None
- 3). Is wave action causing erosion:
- | | | |
|----------------------------------|-----------|-------------|
| On the Upstream embankment? | Yes _____ | No <u>✓</u> |
| At the principal spillway inlet? | Yes _____ | No <u>✓</u> |
- 4). Erosion of the downstream toe of the embankment? Yes _____ No ✓
- Cause of erosion can be attributed to: _____
- 5). Is seepage occurring through the dam? Yes _____ No ✓
- Could this seepage cause potential instability? _____

PRINCIPAL SPILLWAY

- 1). Is the principal spillway system in working order? Yes ✓ No _____
- 2). Is the inlet free of debris and restrictive material? Yes ✓ No _____
- 3). Is the discharge outlet free of restrictive material? Yes ✓ No _____
- 4). Is erosion occurring at the discharge outlet? Yes _____ No ✓
- Evaluate the severity: Extensive Moderate Just starting None

EMERGENCY SPILLWAY

1). Does it appear that the emergency spillway has discharged water since the last inspection?

Yes _____ No X

2). Is erosion occurring at any section of the emergency spillway?

Yes _____ No X

Describe extent: _____

SEDIMENT STORAGE CAPACITY

1). Has the design storage capacity of the reservoir been surpassed?

Yes _____ No X

Explain: By observation and based on revised pond
designs approved by DKMS as a result of vegetation and
termination of mining

OTHER OBSERVATIONS

Late winter conditions prevail; Pond holds a
limited amount of water well below point of
discharge.

Ronald G. Hoyer

MSHA Qualified Impoundment Inspector

3/15/2017

Date

EMERGENCY SPILLWAY

- 1). Does it appear that the emergency spillway has discharged water since the last inspection?
 Yes _____ No ✓
- 2). Is erosion occurring at any section of the emergency spillway?
 Yes _____ No ✓
- Describe extent: _____

SEDIMENT STORAGE CAPACITY

- 1). Has the design storage capacity of the reservoir been surpassed?
 Yes _____ No ✓
- Explain: By observation and revised pond designs
approved by DRMS recognizing affects of final
reclamation

OTHER OBSERVATIONS

late winter conditions prevail - Pond is
dry.

Ronald L. Thoms
 MSHA Qualified Impoundment Inspector

3/15/2017
 Date

QUARTERLY SEDIMENTATION POND INSPECTION REPORT

CDMR Rule 4.05.9(17)

Mine: Lorencito
NPDES ID. No.: Pond #8
Inspection Period: First Quarter 2017
Inspection Date: 3/15/17

General Description or Reference to Site Plan:

This pond is located north of the area of mining scheduled for 2001-02. The pond is partially incised into bedrock and the embankment keyed into bedrock. Side slopes are less than 2H:1V. The primary discharges north into a small drainage.

EMBANKMENT

- 1). Adequacy of the vegetative cover: Excellent Moderate Few Poor
- 2). Erosion forming Gullies: Extensive Some Few None
- 3). Is wave action causing erosion:
- | | | |
|----------------------------------|-----------|-------------|
| On the Upstream embankment? | Yes _____ | No <u>✓</u> |
| At the principal spillway inlet? | Yes _____ | No <u>✓</u> |
- 4). Erosion of the downstream toe of the embankment? Yes _____ No ✓
- Cause of erosion can be attributed to: _____
- 5). Is seepage occurring through the dam? Yes _____ No ✓
- Could this seepage cause potential instability? _____

PRINCIPAL SPILLWAY

- 1). Is the principal spillway system in working order? Yes ✓ No _____
- 2). Is the inlet free of debris and restrictive material? Yes ✓ No _____
- 3). Is the discharge outlet free of restrictive material? Yes ✓ No _____
- 4). Is erosion occurring at the discharge outlet? Yes _____ No ✓
- Evaluate the severity: Extensive Moderate Just starting None

EMERGENCY SPILLWAY

1). Does it appear that the emergency spillway has discharged water since the last inspection?

Yes _____ No ☒

2). Is erosion occurring at any section of the emergency spillway?

Yes _____ No ☒

Describe extent: _____

SEDIMENT STORAGE CAPACITY

1). Has the design storage capacity of the reservoir been surpassed?

Yes _____ No ☒

Explain: By observation and recent pond design revision,
approved by DRMS to recognize reclamation activities

OTHER OBSERVATIONS

Pond held a moderate amount of water mostly
as ice. Late winter conditions prevail.

Amahl Y. Thompson

MSHA Qualified Impoundment Inspector

3/15/2017

Date

QUARTERLY SEDIMENTATION POND INSPECTION REPORT

CDMR Rule 4.05.9(17)

Mine: Lorencito
NPDES ID. No.: Pond #7
Inspection Period: First Quarter 2017
Inspection Date: 3/15/17

General Description or Reference to Site Plan:

This pond is located south of the area of mining scheduled for 2001-02. The pond is partially incised into bedrock and the embankment keyed into bedrock. Side slopes are less than 2H:1V. The primary discharges south into Jeff Canyon drainage.

EMBANKMENT

- 1). Adequacy of the vegetative cover: Excellent Moderate Few Poor
- 2). Erosion forming Gullies: Extensive Some Few None
- 3). Is wave action causing erosion:
 On the Upstream embankment? Yes _____ No ✓
 At the principal spillway inlet? Yes _____ No ✓
- 4). Erosion of the downstream toe of the embankment? Yes _____ No ✓
 Cause of erosion can be attributed to: _____

- 5). Is seepage occurring through the dam? Yes _____ No ✓
 Could this seepage cause potential instability? _____

PRINCIPAL SPILLWAY

- 1). Is the principal spillway system in working order? Yes ✓ No _____
- 2). Is the inlet free of debris and restrictive material? Yes ✓ No _____
- 3). Is the discharge outlet free of restrictive material? Yes ✓ No _____
- 4). Is erosion occurring at the discharge outlet? Yes _____ No ✓
 Evaluate the severity: Extensive Moderate Just starting None

QUARTERLY SEDIMENTATION POND INSPECTION REPORT

CDMR Rule 4.05.9(17)

Mine: Lorencito
NPDES ID. No.: Pond #9 (North)
Inspection Period: First Quarter 2017
Inspection Date: 3/15/2017

General Description or Reference to Site Plan:

This pond is located north-east of the area of mining scheduled for 2001-02. The pond is partially incised into bedrock and the embankment keyed into bedrock. Side slopes are less than 2H:1V. The primary spillway discharges north into a small unnamed drainage.

EMBANKMENT

- 1). Adequacy of the vegetative cover: Excellent Moderate Few Poor
- 2). Erosion forming Gullies: Extensive Some Few None
- 3). Is wave action causing erosion:
 On the Upstream embankment? Yes _____ No ✓
 At the principal spillway inlet? Yes _____ No ✓
- 4). Erosion of the downstream toe of the embankment? Yes _____ No ✓
 Cause of erosion can be attributed to: _____

- 5). Is seepage occurring through the dam? Yes _____ No ✓
 Could this seepage cause potential instability? _____

PRINCIPAL SPILLWAY

- 1). Is the principal spillway system in working order? Yes ✓ No _____
- 2). Is the inlet free of debris and restrictive material? Yes ✓ No _____
- 3). Is the discharge outlet free of restrictive material? Yes ✓ No _____
- 4). Is erosion occurring at the discharge outlet? Yes _____ No ✓
 Evaluate the severity: Extensive Moderate Just starting None

EMERGENCY SPILLWAY

1). Does it appear that the emergency spillway has discharged water since the last inspection?

Yes _____ No X

2). Is erosion occurring at any section of the emergency spillway?

Yes _____ No X

Describe extent: _____

SEDIMENT STORAGE CAPACITY

1). Has the design storage capacity of the reservoir been surpassed?

Yes _____ No X

Explain: By observation and recent changes in
pond design criteria due to phase I release and vegetation.

OTHER OBSERVATIONS

Late winter conditions prevail with water
level about 2' below lowest weep holes.

Ronald E. Thompson
MSHA Qualified Impoundment Inspector

3/15/2017

Date

QUARTERLY SEDIMENTATION POND INSPECTION REPORT

CDMR Rule 4.05.9(17)

Mine: Lorencito
NPDES ID. No.: Pond #9A (South)
Inspection Period: First Quarter 2017
Inspection Date: 3/15/17

General Description or Reference to Site Plan:

This pond is located south-east of the area of mining scheduled for 2001-02. The pond is partially incised into bedrock and the embankment keyed into bedrock. Side slopes are less than 2H:1V. The primary spillway discharges south into Jeff Canyon.

EMBANKMENT

- 1). Adequacy of the vegetative cover: Excellent Moderate Few Poor
- 2). Erosion forming Gullies: Extensive Some Few None
- 3). Is wave action causing erosion:
 On the Upstream embankment? Yes _____ No ✓
 At the principal spillway inlet? Yes _____ No ✓
- 4). Erosion of the downstream toe of the embankment? Yes _____ No ✓
 Cause of erosion can be attributed to: _____
- 5). Is seepage occurring through the dam? Yes _____ No ✓
 Could this seepage cause potential instability? _____

PRINCIPAL SPILLWAY

- 1). Is the principal spillway system in working order? Yes ✓ No _____
- 2). Is the inlet free of debris and restrictive material? Yes ✓ No _____
- 3). Is the discharge outlet free of restrictive material? Yes ✓ No _____
- 4). Is erosion occurring at the discharge outlet? Yes _____ No ✓
 Evaluate the severity: Extensive Moderate Just starting None

EMERGENCY SPILLWAY

- 1). Does it appear that the emergency spillway has discharged water since the last inspection?

Yes _____ No ✓

- 2). Is erosion occurring at any section of the emergency spillway?

Yes _____ No ✓

Describe extent: _____

SEDIMENT STORAGE CAPACITY

- 1). Has the design storage capacity of the reservoir been surpassed?

Yes _____ No ✓

Explain: By observation and approval of new design
criteria due to site criteria changes from final reclamation

OTHER OBSERVATIONS

Late winter conditions prevail with only a
modest amount of water/ice held in the pond.

Ronald L. Thompson

MSHA Qualified Impoundment Inspector

3/15/2017

Date