

QUARTERLY SEDIMENTATION POND INSPECTION REPORT

CDMR Rule 4.05.9(17)

Mine: Lorencito
NPDES ID. No.: Pond #5
Inspection Period: First Quarter 2018
Inspection Date: 3/27/18

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

Pond: 5

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: may require surveying

OTHER OBSERVATIONS

A fairly large sediment delta continues to form at the inlet to the pond, possibly impacting water storage. Mine disturbed area reporting to this pond is minimal. Operator should consider applying for an SAE exemption for this drainage.

Ronald G. Young
MSHA Qualified Impoundment Inspector

3/27/2018
Date

QUARTERLY SEDIMENTATION POND INSPECTION REPORT

CDMR Rule 4.05.9(17)

Mine: Lorencito
NPDES ID. No.: Pond #6
Inspection Period: First Quarter 2018
Inspection Date: 3/27/18

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

Pond: 6

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: Visual observation

OTHER OBSERVATIONS

Minimal water - surface iced over

Ronald L. Thompson
MSHA Qualified Impoundment Inspector

3/27/2018
Date

QUARTERLY SEDIMENTATION POND INSPECTION REPORT

CDMR Rule 4.05.9(17)

Mine: Lorencito
NPDES ID. No.: Pond #7
Inspection Period: First Quarter 2018
Inspection Date: 3/27/18

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

Pond: 7

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: observation

OTHER OBSERVATIONS

Pond held minimal water with surface
iced over.

Ronald A. Thompson
MSHA Qualified Impoundment Inspector

3/27/2018
Date

QUARTERLY SEDIMENTATION POND INSPECTION REPORT

CDMR Rule 4.05.9(17)

Mine: Lorencito
NPDES ID. No.: Pond #8
Inspection Period: First Quarter 2018
Inspection Date: 3/27/18

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

Pond: 8

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: visual observation

OTHER OBSERVATIONS

Water level about 2 feet lower than base
of primary discharge riser. No significant
erosion on embankment slopes

Ronald A. Thayer
MSHA Qualified Impoundment Inspector

3/27/2018
Date

QUARTERLY SEDIMENTATION POND INSPECTION REPORT

CDMR Rule 4.05.9(17)

Mine: Lorencito
NPDES ID. No.: Pond #9 (North)
Inspection Period: First Quarter 2018
Inspection Date: 3/27/2018

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 <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

Pond: 9

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: Visual Observation

OTHER OBSERVATIONS

Water level several feet below base of Primary
discharge riser.

Ronald L. Thompson
MSHA Qualified Impoundment Inspector

3/27/2018
Date

QUARTERLY SEDIMENTATION POND INSPECTION REPORT

CDMR Rule 4.05.9(17)

Mine: Lorencito
NPDES ID. No.: Pond #9A (South)
Inspection Period: First Quarter 2018
Inspection Date: 3/27/18

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 <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

Pond: 9A

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: Visual Observation

OTHER OBSERVATIONS

Pond held minimal water at lowest levels
of the pond bottom.

Ronell H. Taylor

MSHA Qualified Impoundment Inspector

3/27/2018

Date



Pond 6 –Lorencito Canyon Mine – March 27, 2018



Pond 9A (South) – Lorencito Canyon Mine – March 27, 2018



Pond 9B (North) Lorencito Canyon Mine – March 27, 2018