TRI-STATE

June 23, 2023

Mr. Clayton Wein
Environmental Protection Specialist
Colorado Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215
Denver, CO 80203

RE: New Horizon Mine (Permit No. C-1981-008)
Technical Revision No. 107 (TR-107)
Johnson Access Road

Dear Mr. Wein:

Tri-State Generation and Transmission Association Inc. (Tri-State), is the parent company to Elk Ridge Mining and Reclamation, LCC (ERMR), which owns and operates the New Horizon Mine. The New Horizon Mine operates under the Division of Reclamation, Mining and Safety (DRMS) Permit No. C-1981-008. Therefore, Tri-State on behalf of ERMR is submitted TR-106 to Permit No. C-1981-008.

TR-107 proposes the Johnson Access Road which will provide long-term access from the north side of BB Road down to the Pond 013 area.

Also included with this technical revision are a public notice for your review, and a change sheet to ease incorporation of these materials in the permit application. If you have any questions in regard to this technical revision, please contact Tony Tennyson at (970) 824-1232 or ttennyson@tristategt.org.

Sincerely,

DocuSigned by:
Chris Gilbreath
D250C711D0BF450...

Chris Gilbreath
Senior Manager,
Remediation and Reclamation

CG:TT:der

Enclosures

cc: Tony Tennyson (via email)
File: G474-11.3(21)b-4

P.O. BOX 33695
DENVER, CO 80233-0695
303-452-6111
WWW.TRISTATE.COOP

CHANGE SHEET FOR PERMIT REVISIONS, TECHNICAL REVISION, AND MINOR REVISIONS

Mine Company Name: **New Horizon Mine**

Permit Number: **C-1981-008**

Date: **June 22, 2023**

Revision Description: **TR-107 Johnson Access Road**

Volume Number	Page, Map or other Permit Entry to be REMOVED		Page, Map or other Permit Entry to be ADDED		Description of Change
1					No Change
2					No Change
3					No Change
4	Attachment 2.05.3(3)-1 pages 2 through 13 (11 pages)		Attachment 2.05.3(3)-1 pages 2 through 10 (10 pages)		Attachment 2.05.3(3)-1 has been updated.
4	Map 2.05.3(3)-1		Map 2.05.3(3)-1		Map 2.05.3(3)-1 has been updated.
5	Section 2.05.3(3) Page 1 and Pages 14 through 17 (5 pages)		Section 2.05.3(3) Page 1 and Pages 14 through 17 (5 pages)		Section 2.05.3(3) Table of Contents and Access Roads has been updated.
6			Attachment 2.05.3(3)-17 Page 5 (1 page)		Landowner letter has been added to Attachment 2.05.3(3)-17
7	Attachment 2.05.3(3)-36 Page 1 (1 page)		Attachment 2.05.3(3)-36 Page 1 (1 page)		Attachment 2.05.3(3)-36 has been updated with a citation.
8	Map 2.05.4-5		Map 2.05.4-5		Map 2.05.4-5 has been updated.
9					No Change
10					No Change

Table of Contents

List of Tables

1. Introduction

All surface water control structures including sediment ponds, collection ditches, and culverts, within the permit area are shown on Map 2.05.3(3)-1 The drainage basins that were used to design these structures are also shown on Map 2.05.3(3)-1.

2. Parameters for Designs

Temporary structures have been designed for the 10 year 24 hour event, using a Type II storm. Permanent structures have been designed using a 100 year 24 hour event, Type II storm.

Historical SCS Curve Numbers for the New Horizon Mine, as shown on Table 2.05.3(3)-1 were used for designs conducted prior to October 1, 2015. After October 1, 2015, the SCS Curve Numbers shown in Table 2.05.3(3)-1A have been used for designs. All times of concentration and peak flows were determined from the SCS method using Carlson Software.

The basic design for all ditches assumes trapezoidal cross-section with 2H:1V sideslopes, constructed of earth with some vegetation, resulting in a manning's n of 0.0275. If portions of ditches along hillsides encounter durable rock, the widths may be reduced since no erosion will occur on the bottom. See applicable ditch designs for dimensions of individual ditches. The table below shows the rainfall for important frequency events at the mine site.

Design 24-Hour Event	Rainfall (inches)
10 year	2.0
25 year	2.4
100 year	3.0

A number of ditches and culverts in the permit area will be permanent. These structures are primarily along the re-established portions of 2700 Road and BB Road. Since the County requires that the culverts be designed for the 25 year 24 hour event and the Division requires that permanent structures be designed for the 100 year 24 hour event, the 100 year event will take precedence and all permanent structures will be designed for this event.

All watershed areas are determined from the postmining topography and all watershed land slopes are determined from a grid made from either the original or final land surface, whichever is appropriate in the design. A maximum flow length was also determined for each watershed, which was then used to determine the Time of Concentration, using the SCS method. This was then used to determine the peak flow using the graphical method in Carlson Software.

The ditch slope was then determined using Carlson Software and the channel was designed using Manning's equation. All ditches will have 0.3 feet of freeboard above the design depth.

3. Ditch Designs

The summary table below lists the design information for all ditches in the entire permit area and includes the applicable location in the permit to find additional design information.

Table 2.05.3(3)-1 Collection Ditch and Diversion Ditch Designs

Structure	Watershed Basin(s)	Watershed Area (acres)	Watershed % Avg. Slope	Runoff Curve No.	Design Storm (yrs)	Time of Conc. (hrs)	Peak Flow (cfs)	Avg. Ditch Slope %	Ditch Bottom Width (ft)	Ditch Depth (ft)	Velocity at Design Flow (ft/sec)	Design Information Location
C4A	Pond 018	-	-	-	100	-	23.2	2.9	8	1.40	3.52	Attachment 2.05.3(3)-28
018 East Ditch	Pond 018	-	-	-	100	-	8.91	5.0	8	1.00	2.60	Attachment 2.05.3(3)-28
C5	Pond 016	-	-	-	100	-	7.10	5.0	4	1.12	2.89	Attachment 2.05.3(3)-36
Tailwater 0 to 11	Pond 016	-	-	-	100	-	5.73	0.3	2	2.49	1.05	Attachment 2.05.3(3)-36
Tailwater 11 to 20	Pond 016	-	-	-	100	-	4.85	4.6	2	1.33	3.29	Attachment 2.05.3(3)-36
Tailwater 20 to 34	Pond 016	-	-	-	100	-	1.25	0.7	1	1.45	0.64	Attachment 2.05.3(3)-36
C7	Pond 012	-	-	-	25	-	1.17	2.1	4	0.93	0.91	Attachment 2.05.3(3)-31
C8	Pond 012	-	-	-	25	-	1.74	6.0	4	0.81	1.60	Attachment 2.05.3(3)-31
C9	Pond 013	-	-	-	25	-	6.43	3.2	3	1.32	2.70	Attachment 2.05.3(3)-32
C15	SP2	-	-	-	25	-	0.04	8.9	4	0.44	0.21	
C23	SP2	-	-	-	25	-	0.15	9.3	4	0.51	0.47	
C29	Pond 015	-	-	-	100	-	2.85	2.0	4	0.58	2.39	Attachment 2.05.3(3)-33

4. Culvert Designs

Culverts C138 through C179 have been designed using a variety of methods including SEDCAD and HydroCAD and the results of these designs have been provided either on the following pages or in other sections of the PAP. Their summary information has been provided on Table 2.05.3(3)-2

Table 2.05.3(3)-2 Permit Area Culvert Designs								
Structure	Watershed Area (acres)	Runoff Curve No.	Design Event	Peak Flow (cfs)	Pipe Diameter (inches)	Design Flow (cfs)	Culvert Length (feet)	Design Information Location
C138*	34.8	63	100 yr-24 hr	8.5	18	8.5**	60	Below
C175*	8.9	73	10 yr-24 hr	2.8	24	18.1	60	Below
C176	Pond 018	-	-	-	18	-	90	Attachment 2.05.3(3)-28 for design.
C177	Pond 013	-	-	-	18	-	20	Carries peak flow from Ditch C9 into Pond 013. See Attachment 2.05.3(3)-32 for design.
C179*	16.3	62	10 yr-24 hr	0.6	16	8.4	140	Below
C180	Pond 016	-	100 yr-24 hr	-	18	11.2**	40	Attachment 2.05.3(3)-36
C181*	Pond 016	-	100 yr-24 hr	-	18	11.2**	40	Attachment 2.05.3(3)-36 (Refer to Culvert C180 Design Flow)
C182*	Pond 016	-	100 yr-24 hr	-		7.10	30	Attachment 2.05.3(3)-36 (Refer to C5 Ditch for Design Flow) and Below

*The landowner has requested structure be retained as permanent. The landowners request can be found in Attachment 2.05.3(3)-17.

**Culvert C181 is in the same segment of tailwater ditch as culvert C180; therefore, the same design flow and culvert size was utilized for culvert C181.

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Culvert 138

Culvert 138 was installed by the landowner and conveys surface water runoff off down San Miguel Draw and provides a crossing location for the landowner.

Time of Concentration (SCS) Fri Dec 15 10:01:38 2017
Project: New Horizon Mine By: JSS Date: 12/15/17
Location: C138 Checked: Date:
Curve Number: 63
Length of Flow: 1436.61 ft
Average Land Slope: 5.11 %
Time of Concentration: 0.502 hrs, 30.1 mins

Graphical Peak Discharge Fri Dec 15 10:02:12 2017
Project: New Horizon Mine By: JSS Date: 12/15/17
Location: C138 Checked: Date:
Present
1. Data:
Drainage area:.....A = 34.8029Acres
Runoff Curve Number:.....CN = 63
Time of Concentration:.....Tc = 0.50
Storm Type:..... = II
Pond and swamp areas spread
throughout watershed..... = 0.00 percent of A
0.0000 Acres
2. Frequency.....yr = 100
3. Rainfall,P(24-hour).....in = 3.00
4. Initial abstraction, Ia..... = 1.1746
5. Compute Ia/P..... = 0.3915
6. Unit peak discharge, qu.....csm/in = 358.94
7. Runoff,Q.....in = 0.4328
8. Pond & swap adjustment factor,...Fp = 1.00
9. Peak Discharge,qp.....cfs = 8.4482

This 18” HDPE pipe has been installed to cross San Miguel Draw flowing into Pond 007 for use by the landowner and is not designed to be part of the mining and reclamation plan. The landowner has requested this culvert be retained as a permanent structure.

Culvert 175

Culvert 175 carries tail water from the irrigated pasture reference area (outside of the permit boundary) under the Lincoln Haul Road to Calamity Draw.

Time of Concentration (SCS)
Curve Number: 73
Length of Flow: 560.70 ft
Average Land Slope: 4.13 %
Time of Concentration: 0.202 hrs, 12.1 mins

Graphical Peak Discharge Tue Mar 15 16:41:27 2016
Project: New Horizon Mine By: JSS Date: 03/15/16
Location: C175 Checked: Date:
1. Data:
Drainage area:.....A = 8.9069Acres
Runoff Curve Number:.....CN = 73
Time of Concentration:.....Tc = 0.20
Storm Type:..... = II
Pond and swamp areas spread
throughout watershed..... = 0.00 percent of A
0.0000 Acres
2. Frequency.....yr = 10
3. Rainfall,P(24-hour).....in = 2.00
4. Initial abstraction, Ia..... = 0.7397
5. Compute Ia/P..... = 0.3699
6. Unit peak discharge, qu.....csm/in = 622.19
7. Runoff,Q.....in = 0.3203
8. Pond & swap adjustment factor,...Fp = 1.00
9. Peak Discharge,qp.....cfs = 2.7734

Culvert 177

This 18" HDPE pipe conveys the flow from Ditch C9 into Pond 013 and will provide a crossing over Ditch C9. The design for this culvert is provided in the Pond 013 design located in Attachment 2.05.3(3)-32.

Culvert 179

Culvert 179 conveys surface water runoff from an area north of the permit boundary, north of 5th Street, to the C4A Ditch down to Pond 018.

Time of Concentration (SCS)
Curve Number: 62
Length of Flow: 1095.97 ft
Average Land Slope: 5.85 %
Time of Concentration: 0.388 hrs, 23.3 mins

Graphical Peak Discharge Thu Jun 09 09:05:10 2016
Project: New Horizon Mine By: JSS Date: 06/09/16
Location: C179 Checked: Date:
Present
1. Data:
Drainage area:.....A = 16.3349Acres
Runoff Curve Number:.....CN = 62
Time of Concentration:.....Tc = 0.39
Storm Type:..... = II
Pond and swamp areas spread
throughout watershed..... = 0.00 percent of A
0.0000 Acres
2. Frequency.....yr = 10
3. Rainfall,P(24-hour).....in = 2.00
4. Initial abstraction, Ia..... = 1.2258
5. Compute Ia/P..... = 0.6129
6. Unit peak discharge, qu.....csm/in = 264.38
7. Runoff,Q.....in = 0.0868
8. Pond & swap adjustment factor,...Fp = 1.00
9. Peak Discharge,qp.....cfs = 0.5859

Culvert 182

SEDCAD 4.0

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
30.00	2.00	0.0150	2.00	0.00	0.90

Culvert Results:

Minimum pipe diameter: 1 - 18 inch pipe(s) required

Detailed Performance Curves

Design Discharge = 7.10 cfs

Maximum Headwater = 2.00 ft

(BOLD indicates design pipe size)

Headwater (ft)	Discharge (cfs) (15 in)	**Discharge (cfs) (18 in)**	Discharge (cfs) (21 in)
0.20	0.24	**0.28**	0.33
0.40	0.68	**0.81**	0.93
0.60	1.22	**1.46**	1.71
0.80	1.88	**2.25**	2.62
1.00	2.62	**3.14**	3.67
1.20	3.44	**4.13**	4.82
1.40	4.34	**5.20**	6.07
1.60	5.10	**6.36**	7.42
1.80	5.79	**7.46**	8.85
2.00	6.40	**8.43**	10.36
2.20	6.96	**9.30**	11.60
2.40	7.48	**10.10**	12.78
2.60	7.96	**10.84**	13.85
2.80	8.41	**11.53**	14.85
3.00	8.85	**12.18**	15.78

TABLE OF CONTENTS

LIST OF ATTACHMENTS

Drainage

The Lincoln Street Haul Road will utilize existing ditches and culverts to provide adequate drainage. The water control system has been designed to safely pass peak runoff from a 10-year, 24-hour precipitation event. Refer to Attachment 2.05.3(3)-1 for culvert and ditch designs.

Surfacing

The Lincoln Street Haul Road is an existing road that is currently surfaced with sufficiently durable material (rock, gravel) for the volume of traffic and weight and speed of vehicles used. Acid- or toxic-forming substances will not be used for surfacing.

Maintenance

The Lincoln Street Haul Road will be maintained such that required standards are met throughout the life of the facility. Maintenance will include blading, replacement of surfacing material, brush removal, and watering for dust control. Other commercial products may be utilized for fugitive dust control and will be applied according to manufacturer recommendation.

Reclamation

Unless the Division approves retention of the Lincoln Street Haul Road as part of the postmining land use, the road will be reclaimed in accordance with 4.03.1(7) after it is no longer needed.

I. Access Roads

The Johnson Access Road provides long term access to the Pond 013 area from BB Road within the disturbed areas as defined by Rule 4.05.2(4). The location of the road is provided on Map 2.05.4-5. The Johnson Access Road will meet the requirements of Rule 4.03.2(4)(a)(iii) and 4.03.2(4)(b), as the access road is within the disturbed area, and will included proper drainage including a culvert (please refer to Map 2.05.3(3)-1 for the location of culvert 181) and will be surfaced with crushed rock and gravel to minimize erosion and allow for a stable travel surface. The Johnson Access Road will remain permanently post-mine and the surface landowner has provided documentation retaining the road permanent structure as shown in Attachment 2.05.3(3)-17.

J. Light-Use Roads

Under the definition of Light-Use Road provided in Section 1.04 of the Rules, there are no light-use roads within the permit area.

K. Support Facilities

Buildings

Map 2.05.3(3)-1 shows the locations of the existing buildings. Details of sizes and types of construction for all buildings are shown on Table 2.05.3(3)-4. See Attachment 2.05.3(3)-17 for landowner letters retaining buildings as permanent structures.

Table 2.05.3(3)-3 Building Inventory

Building Function	Building Construction	Building Foundation	Concrete Floor Thickness	Length (feet)	Width (feet)	Height (feet)	Post Mine Plans
Shop	Steel	Concrete	8-12 in.	77 ft.	52 ft.	40 ft.	Remain for farm support
Washbay	Open	Concrete	8-12 in.	31 ft.	52 ft.	N/A	Remain for farm support
Shop addition	Steel	Concrete	8-12 in.	37 ft.	10 ft.	12 ft.	Remain for farm support
Foreman's Office	Trailer	N/A	N/A	37 ft.	10 ft.	12 ft.	Storage or tow away
Mine Office	Trailer	N/A	N/A	39 ft.	25 ft.	12 ft.	Will revert to residence
Engineer's Office	Residential	Concrete	N/A	82 ft.	35 ft.	12 ft.	Will revert to residence
Change Room	Trailer	N/A	N/A	60 ft.	14 ft.	12 ft.	Remain for farm support
Training Building	Cinder Block	Concrete	4-6 in.	32 ft.	21ft.	12 ft.	Remain for farm support
Warehouse (Open)	Cinder Block	Concrete	4-6 in.	90 ft.	24 ft.	12 ft.	Remain for farm support
Warehouse (Enclosed)	Cinder Block	Concrete	4-6 in.	47 ft.	32 ft.	12 ft.	Remain for farm support
Engineer's Garage	Wood Frame	Concrete	4-6 in.	24 ft.	22 ft.	8 ft.	Will support residence
Container A	Steel	N/A	N/A	40 ft.	8 ft.	8 ft.	Storage or tow away
Container B	Steel	N/A	N/A	40 ft.	8 ft.	8 ft.	Storage or tow away
Container C	Steel	N/A	N/A	20 ft.	8 ft.	8 ft.	Storage or tow away
Container D	Steel	N/A	N/A	20 ft.	8 ft.	8 ft.	Storage or tow away
Cargo Trailer	Steel	N/A	N/A	40 ft.	8 ft.	8 ft.	Storage or tow away

Waste Water

Sewage from the existing buildings will be disposed of through an existing sanitary sewer lines discharging into a sewer main on Lincoln Street which is owned by the Nucla Sanitary District. Waste water from the equipment wash will be run through a sediment trap and an oil water separator and discharged to Pond 018 via a natural drainage.

Domestic Water

Potable water will be provided through a water line tied into the Town of Nucla water system.

Solid Wastes

Solid waste will be picked up by the local waste disposal contractor for disposal in the Montrose County Landfill. The land fill is privately owned and operates under the regulations mandated by the State of Colorado and Montrose County. Solid wastes not suitable for disposal at the landfill will be transported to and disposed of in suitable, licensed facilities under the applicable Federal and State regulations. When practicable, solid wastes will be separated for recycling.

Fuel Storage

One above ground fuel tank will be utilized. One tank of approximately 1,000 gallons capacity will be used for gasoline storage. The gasoline tank is located at the fuel and lubricant storage and dispensing facility proximal to the truck shop. The tank is enclosed by berms and has spill prevention and safety protection devices as mandated by the appropriate regulatory authorities. Spill prevention and containment measures will be implemented under the New Horizon Mine Spill Prevention Control and Counter-measure (SPCC) Plan.

Support Facilities and Utility Installations

All support facilities used in connection with the operation of the mine, including but not limited to, mine buildings, equipment storage facilities, sheds, shops and other buildings will be designed, constructed or reconstructed and located to minimize or control erosion and siltation, water pollution and damage to public or private property. Services which run through pass over, or under the permit area, consisting of power, sewage, water, telephone lines and wells will be protected against damage or relocated to prevent or minimize the disruption of service.

At various times, other support facilities such as power poles and irrigation pumps may be located on bond released areas to provide permanent support to landowners for postmining land use

activities. These facilities are not associated with New Horizon's mining activities and should not be required to be permitted or bonded in accordance with Rule 3.02.1(2). *Irrigation System*

An irrigation pump station has been established along the north permit boundary to furnish additional water to the irrigation system, see Map 2.05.3(3)-1 for location. This irrigation system will enhance the revegetation on the irrigated pastureland portion of the final reclamation. All information on topsoil and overburden stockpiles is given in Section 2.05.4.

Relocation of the CCC West Lateral Ditch

An agreement between the Colorado Cooperative Company (CCC) and New Horizon was reached to install a primary 26" HDPE pipeline and a secondary 12" HDPE pipeline to temporary divert and distribute approximate 38cfs of water to the lawful water share owners while mining through the original West Lateral Ditch located within the permit boundary. After the land was reclaimed, the same pipelines were reinstalled into the approximate original right of way of the original open ditch. Gate valves and mechanical flow meters were installed at agreed upon locations along the pipeline so each land owner could meter their shares of water out of one or the other or both of the two main pipelines. It was decided and agreed upon that a big benefit of keeping the pipelines as a permanent structure across the final graded reclamation was that leakage of water from an open ditch through disturbed ground would be eliminated, plus it would give the downstream water users some pressure to better irrigate their land with.

A 12" HDPE pipeline, with three takeouts, will be installed along BB Road west of 2700 Road to provide irrigation water for the Morgan and ERMR properties on that side of the mine. The location of the pipeline structure on Map 2.05.4-5 is the permanent location. The design details and historical information regarding the ditch relocation can be seen below.

TRI-STATE

June 21, 2023

Mr. Clayton Wein
Environmental Protection Specialist
Colorado Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215
Denver, CO 80203

RE: New Horizon Mine (Permit No. C-1981-008)
Permanent Features Retention Request

Dear Mr. Wein:

Tri-State Generation and Transmission Association (Tri-State), is the parent company to Elk Ridge Mining and Reclamation, LLC (ERMR), which owns and operates the New Horizon Mine. The New Horizon Mine operates under the Division of Reclamation, Mining, and Safety (DRMS) Permit No. C-1981-008.

Rules 4.05.3(6) requires each temporary diversion to be removed and the affect land regraded, topsoiled, and revegetated. Tri-State on behalf of ERMR is requesting that the 4A (including culvert C179), C5, Tailwater (including culvert C180), C15, and C23 ditches not be reclaimed and be retained as permanent structures to support the post mine land use. Several of these ditches route tailwater from irrigation activities, and others are routing surface runoff along county roads and adjacent properties; therefore, it is a benefit to the landowner and post mine land use to retain all these ditches and culverts permanently.

Rule 4.03.2(1)(g)(i) allows for retention of a road as an approved part of the post mine land use, and Rule 4.03.2(1)(g)(ii) allows a landowner to request in wiring to retain a road or certain parts thereof. In accordance with Rule 4.03.2(1)(g)(ii), Tri-State on behalf of ERMR is requesting to retain permanently in its entirety the Johnson Access Road including culverts C181 and C182.

Finally, culvert C175 routes water from an irrigated pasture area under the Lincoln Haul Road. The Lincoln Haul Road has already been approved to be retained permanently post mine, and Tri-State is also requesting the C175 culvert be retained permanently under the Lincoln Haul Road.

If you should have any additional questions pertaining to this request, please feel free to contact me at (303) 254-3313. I appreciate your attention to this matter.

Sincerely,

Barry W. Ingold
Chief Operating Officer

P.O. BOX 33695
DENVER, CO 80233-0695
303-452-6111
WWW.TRISTATE.COOP

A Touchstone Energy® Cooperative

POND 016 AS-BUILT

Pond Construction and Compliance Demonstrations

The as-built drawing for NH2 Pond 016 is provided on Map 2.05.3(3)-36 and includes a plan view, cross-sections, stage-storage curve, and spillway details. Map 2.05.3(3)-36-1 provides the watersheds and tailwater ditch parameters. Pond 016 was approved and constructed under the requirements of DRMS Rule 4.05.9 (2)(e)(ii) and will be operated as a zero discharge facility for stormwater runoff up through the 100-YR, 24-HR storm. The emergency spillway consists of a vegetated channel with a minimum depth of 2.0 feet, minimum bottom width of 17.0 feet, left side slope of 3.4H:1V and right side slope of 2.9H:1V.

SEDCAD was used to analyze sedimentology and hydrology for Pond 016. First, a sediment volume estimate was conducted using the 10-YR, 24-HR storm. This demonstration indicates the capacity of Pond 016 below the emergency spillway is adequate to store the total runoff volume into the pond (2.03 ac-ft) as well as seven years of sediment (0.23 ac-ft). Next, a containment analysis was performed using the 100-YR, 24-HR storm. This demonstration shows the capacity of Pond 016 below the emergency spillway is adequate to store the total runoff volume into the pond (5.79 ac-ft), assuming a permanent pool elevation no higher than 5,614.0'. Finally, the emergency spillway was evaluated using the 100-YR, 24-HR storm event, assuming the pond is full to the emergency spillway at the time of the storm event. The evaluation shows the peak discharge of 22.83 cfs is carried by the emergency spillway at a depth of 0.6 feet, providing 1.4 feet of freeboard. Design information for collection ditches represents minimum size requirements for each structure. As field conditions dictate, New Horizon may construct these structures with dimension larger than minimum design (i.e. wider, deeper, flatter slopes). These larger dimensions would still provide adequate capacity without affecting structure performance.

Embankment Construction and Stability Analysis

Foundation preparation for Pond 016 embankment included removal of vegetation, a key cut and scarification of the ground. The embankment fill material is free of sod, roots, vegetative matter and frozen soil. Lambert and Associates on-site compaction testing services were utilized as-needed and their testing methods were in accordance with ASTM Test Method, D2922 and D3017, for Nuclear Moisture Content and Dry Density for accepted material testing practices in the area. All final field density tests indicated 95% standard or greater relative compaction. Information provided from Lambert and Associates has been provided on the following pages.

Lambert also performed a stability analysis of the embankment using "XSTABL" software. The slope stability analysis was conducted on Section A-A' from the Pond 016 As-Built drawing. The analysis provides a theoretical factor of safety for various conditions as indicated below.

Theoretical Condition	Factor of Safety
Rapid Draw Down: Interior	3.380
Reservoir Full: Exterior	3.504
Reservoir Full: Interior	4.907