

November 28, 2017



Western Farmers Electric Cooperative
P. O. Box 219
Fort Towson, Oklahoma 74735

Attn: Mr. Gene Grindle c/o Kent Fletcher

P: [405] 247 2498

F: [405] 247 4452

E: k_fletcher@wfec.com

Re: CCR Impoundment Safety Factor Assessment
WFEC Hugo Power Plant
Hugo, Oklahoma
Terracon Project Number: 03171071

Dear Mr. Grindle:

Terracon provided the subsurface and geotechnical exploration and analysis services for the referenced project at the request of Guernsey as part of Guernsey's performance of the Initial Hazard Potential Classification, Structural Stability, and Safety Factor assessment of the WFEC Hugo Power Plant CCR Impoundment. The Impoundment is divided into two cells. The north cell is labeled CCR Unit 2 and the south cell is labeled CCR Unit 3. The results of Terracon's investigation, analysis, and recommendations were provided to Guernsey in Terracon's Report 03165346 dated October 10, 2016 and were included in Guernsey's Combined Initial Hazard Potential Classification, Structural Stability, and Safety Factor Assessment Report (Guernsey Report). This Report provides an updated assessment of safety factors following construction of corrective modifications to the critical cross section (i.e., eastern embankment) of the Impoundment, which are discussed and described herein.

The following configuration data were used in the analyses of the Impoundment's eastern embankment. The configurations were based on the plans and cross sections, provided by Guernsey, of the Impoundment's eastern embankment.

ITEM	IMPOUNDMENT
	Existing
Embankment crest width (ft.)	25
Elevation of embankment crest (ft.)	446
Elevation of upstream toe (ft.)	428.5
Elevation of downstream toe (ft.)	422.5
Upstream slope	2H:1V

Terracon Consultants, Inc. 4701 North Stiles Avenue Oklahoma City, Oklahoma 73105

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Environmental

Facilities

Geotechnical

Materials

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ITEM	IMPOUNDMENT
	Existing
Downstream slope	2H:1V
Water depth below existing crest surface (ft.)	15

As described in more detail in the Guernsey Report, the Impoundment's eastern embankment did not meet the safety factors required by the CCR Rule and ODEQ's counterpart regulations. As requested by Guernsey, a slope repair recommendation for the Impoundment's eastern embankment was provided that would maintain the current 2H:1V slope for the embankment in order to avoid reducing the storage capacity of the process water pond at the downstream toe of the Impoundment's eastern embankment. The factor of safety (F.S.) for the repaired embankment dam was analyzed under the following conditions and safety factor as required in the CCR Rule and ODEQ's counterpart regulations:

- n a normal pool elevation of 443 feet, F.S. ≥ 1.5
- n a maximum pool elevation at the top of the embankment, F.S. ≥ 1.4
- n under seismic loads at a pool elevation of 445 feet, F.S. ≥ 1.0

An additional concern was the susceptibility to liquefaction for the soils used in the construction and corrective modifications of the Impoundment's eastern embankment. These soils are predominantly high plasticity clays. It is our opinion that these clays are not susceptible to liquefaction. Soils most susceptible to liquefaction are loose granular soils such as silty sands and sands that are moderately saturated and poorly drained. Clay soils that are susceptible to liquefaction are termed "quick clay" and are not found in Oklahoma. These clay soils are found only in northern countries that were glaciated during the Pleistocene age.

Our investigation of the Impoundment's eastern embankment consisted of three borings, B-1, B-2 and B-2A, that were drilled across the top of the CCR Unit 3's eastern embankment. Detailed boring locations and boring logs are shown on Exhibits A2 and A-4 to A-6 in Appendix A of Terracon's October 10, 2016 Geotechnical Engineering Report, which was included as part of the Guernsey Report. The eastern embankment materials consisted of fat clays with varying amounts of shale fragments. The embankment fill was underlain by native fat clays and shaley fat clays overlying weathered shale.

The soil shear strength parameters and properties, necessary for limit equilibrium analysis of the eastern embankment were developed based upon the results of the laboratory tests conducted on soil samples extracted from the eastern embankment borings, field exploration data, established correlations of shear strength and index tests and our experience. These strength parameters are listed in Table 1. The stability of the eastern embankment, under the various conditions mentioned above, was analyzed using these strength parameters and the SLOPE/W program.

TABLE 1 - SHEAR STRENGTH PARAMETERS FOR SOIL AND BEDROCK STRATA

Material	Unit Weight (pcf)	Effective Stress Parameters	
		C' (psf)	f' (degrees)
Embankment Fill	122	40	19.5
Native Fat Clay	122	50	20
Weathered Shale	136	0	30

Note: Modification of the existing fill materials is not required beyond removing the existing vegetation and soft soils.

Embankment slopes constructed of high plasticity clays, such as the Impoundment’s eastern embankment, although stable when originally constructed, experience shrink and swell movements during alternating wet/dry weather cycles. This shrink/swell activity tends to form cracks along the slope face which allow more water into the near surface zone along the slope causing it to swell and soften to a greater depth. This swelling/softening activity forms a weaker zone of soil along the surface of an embankment. The soils in this zone of an embankment become progressively more normally consolidated and can approach what is termed a “fully softened” condition. Creep and ongoing weathering can further reduce the shear strength of the soil in this zone, causing progressive strain-softening, leading to a residual strength condition in portions of the slope. Slopes of this nature can begin to fail progressively, either in a bottom-up, or top-down fashion, leading to full mobilization of the entire slope. In the case of the Impoundment’s eastern embankment, it appears that the failure is a top-down progression. Any tension crack that formed at the crest of the slope likely served to introduce additional water seepage into the shear surface causing further shear strength reduction and downslope progression. During the site visit to the facility, discussions with the WFEC Plant Engineer indicated a slide on CCR Unit 3’s eastern embankment occurred after a series of heavy rain events in the area. Given the long dry periods that have been occurring in recent years, it is probable that shrinkage cracks developed in the Impoundment’s eastern embankment that allowed water to infiltrate into such embankment’s slope thus accelerating the shrink swell cycle.

Estimated ranges of fully softened and residual shear strength parameters for use in our analyses were developed for the embankment fill and native soils based on the index test results using the correlations developed by Dr. Timothy Stark of the University of Illinois. Using the furnished cross sections, the as-built/failed condition was modeled using the slope stability software, Slope/W and the Morgenstern-Price method of analysis. Extensive failure surface searches were performed in order to back-calculate the likely existing failure surface location.

The parameters for each material and zone were estimated based on the soil boring data, the estimated shear strength parameter ranges discussed previously, previous experience with soil slopes in this region, and observations at the site.

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For the back-calculation analysis of the failed slope, a target safety factor of 1 was used to analyze the existing slope. Soil parameters for each material and zone were varied within the anticipated ranges of fully softened and/or residual strength conditions until the factor of safety for the analyzed model reached approximately 1. The results of this back-calculation analysis are shown in Figure 1. The results of this analysis indicate a residual strength condition along the failure surface and normally consolidated (fully softened) conditions in the underlying native foundation soils. Although not shown in Figure 1, it is likely that the central core of the Impoundment's eastern embankment fill (away from the likely failure surface zone) still possesses apparent overconsolidated shear strength (higher cohesion and friction) due to the original compaction process and lack of weathering exposure.

The back-calculation results displayed in Figure 1 provide our best, pre-construction estimate of the most likely location of the aforementioned slide surface within CCR Unit 3's eastern embankment based upon the embankment soil parameters used and the slope geometry. The back-calculated, pre-construction estimate of the failure surface location was approximately 6 to 8 feet vertically below the existing embankment slope surface (about 8 to 10 feet normal to the slope surface). The actual location (depth and downslope extent) of the failure surface likely varied from the locus shown in Figure 1 due to material property, weathering and other variables not accounted for in the analysis. A pre-construction test trench into the embankment would have been required to accurately identify the precise depth, extent, and location of the failure surface.

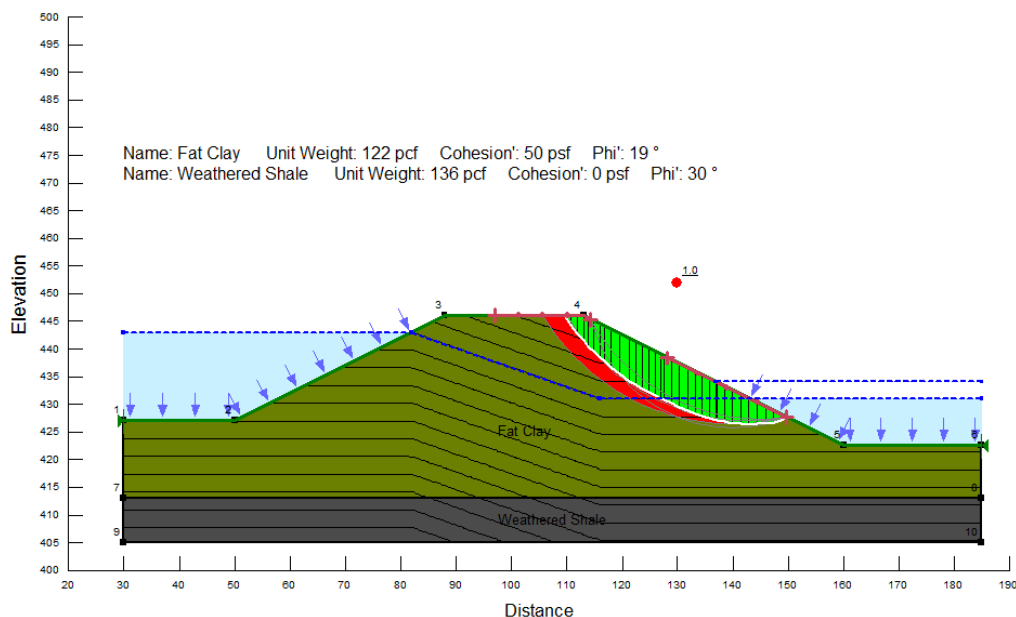


FIGURE 1: EXISTING 2H:1V SLOPE

Three alternative slope repair options were analyzed; each under various pool elevation conditions at the request of Guernsey. Alternative 1 consisted of excavating the materials in the

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failure zone, benching into the unfailed, existing embankment fill and reconstructing the embankment slope to match the original 2H:1V slope. A layer of riprap would be added to flatten the slope to approximately 2.5H:1V, provide additional protection to the slope, and add passive resistance against sliding.

Alternative 2 consisted of more extensive excavation into the existing slope to allow placement of geotextile reinforcement layers, then reconstructing the slope to the original 2H:1V slope angle using the excavated slope material. Alternative 2 consisted of reinforcing the existing 2H:1V slope using a geogrid with a minimum long-term design strength (LTDS) of 3,000 pounds per lineal foot, similar to Miragrid 7XT. Under Alternative 2, the top 8 feet of the eastern embankment would be reconstructed and the geogrid reinforcement layers would be placed every two feet vertically up the slope as shown in Figure 2. Four layers of reinforcement would be required to provide a factor of safety of 1.5. Each layer of reinforcement would be extended the width of the embankment. A layer of riprap would provide additional protection to the slope and passive resistance against sliding.

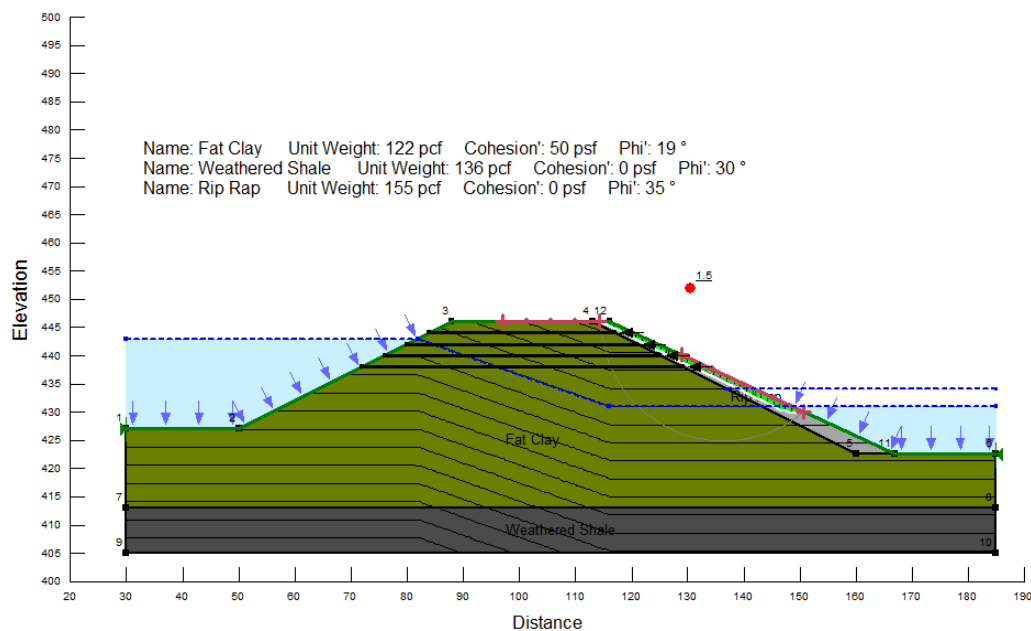


FIGURE 2: ALTERNATIVE 2 - 2H:1V REINFORCED SLOPE - WITH RIPRAP

Alternative 3 consisted of reconstructing the existing embankment slope to 3H:1V as shown in Figure 3.

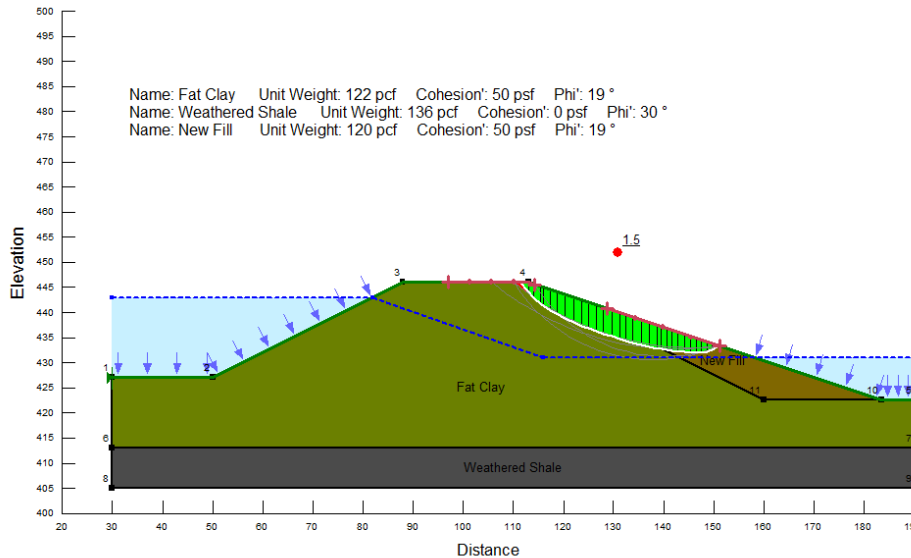


FIGURE 3: ALTERNATIVE 3 - SLOPE MODIFIED TO 3H:1V

Each alternative was analyzed for stability under the three conditional requirements requested by Guernsey.

- n a normal pool elevation of 443 feet, F.S. ≥ 1.5
- n a maximum pool elevation at the top of the embankment, F.S. ≥ 1.4
- n under seismic loads at a pool elevation of 445 feet, F.S. ≥ 1.0

A compilation of stability analyses for the existing eastern embankment of the Impoundment and the three alternatives is presented in Table 2.

TABLE 2 - SLOPE STABILITY ANALYSES RESULTS

WFEC Hugo Power Plant Impoundment Eastern Embankment, CCR Unit 3	FACTOR OF SAFETY
Existing - 2H:1V Slope	1.0
Existing Slope w/ Riprap - 2.5H:1V Slope	1.3
Alt. #2 - 2H:1V Reinforced Slope - pool elevation at 443 ft.	1.5
Alt. #2 - 2H:1V Reinforced Slope - maximum pool elevation at 446 ft.	1.5

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WFEC Hugo Power Plant Impoundment Eastern Embankment, CCR Unit 3	FACTOR OF SAFETY
Alt. #2 - 2H:1V Reinforced Slope - pool elevation at 445 ft. under seismic loads	1.1
Alt. #3 - 3H:1V Slope - pool elevation at 443 ft.	1.5
Alt. #3 - 3H:1V Slope - maximum pool elevation 446 ft.	1.4
Alt. #3 - 3H:1V Slope - pool elevation 445 ft. under seismic loads	1.03

Alternative 2, which met all of the CCR Rule and ODEQ's counterpart regulations, was chosen to repair the slide that had occurred on the southern portion of CCR Unit 3's eastern embankment.

In October 2016, David Sonntag, the Plant Manager for the WFEC, Hugo Plant, requested an additional analysis to determine the factor of safety of the intact remainder of the CCR Unit 3 embankment as well as north storage pond embankment which is referred to as CCR Unit 2. This analysis was accomplished using the same soil parameters developed for the south embankment analysis in conjunction with new detailed measurements of the north embankment cross section. These additional embankment sections were analyzed under the same conditional requirements as the failed section on the south embankment of CCR Unit 3:

A compilation of stability analyses for the remaining embankment for CCR Unit 3 and CCR Unit 2 under the three conditional requirements is presented in Table 3.

TABLE 3 - SLOPE STABILITY ANALYSES RESULTS

WFEC Hugo Power Plant Impoundment Eastern Embankment	FACTOR OF SAFETY
Existing - 2H:1V Slope	1.2
2.5H:1V Reinforced Slope w/ Riprap	1.5
2H:1V Reinforced Slope - pool elevation at 446 ft.	1.5
2H:1V Reinforced Slope - pool elevation at 446 ft. & seismic load	1.04

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The results of this additional analysis were detailed in Terracon's Report 03165399 to David Sonntag dated November 14, 2016. Although no visible signs of distress had been observed on the Impoundment's eastern embankment other than the shallow slide that had occurred on the southern portion of CCR Unit 3's eastern embankment, the entirety of the Impoundment's eastern embankment did not meet the safety factor requirements of the CCR Rule and ODEQ's counterpart regulations.

Alternative 2, which met all of the CCR requirements and ODEQ's counterpart regulations, was chosen to repair the slide that had occurred on the southern portion of CCR Unit 3's eastern embankment. The repair of the failed section and modification of the remainder of the embankment for CCR Unit 3 were to be accomplished in Phase 1 of the CCR Impoundment Repair and Modification Project for WFEC. Cardinal Engineering provided the construction drawings and daily inspections services for the project and Terracon was retained to provide field and laboratory testing of the soils used in the repair and modification of the eastern embankment. WFEC Plant Manager, David Sonntag requested, that upon completion of Phase 1 of the project, Terracon provide a letter of verification that the modified CCR Unit 3 eastern embankment would meet the required safety factor requirements of the CCR Rule and ODEQ's counterpart regulations. Terracon agreed to provide this verification based upon the field and laboratory tests performed by Terracon representatives, observations made during periodic visits to the project by a Terracon representative, and regular correspondence and progress photographs furnished by a Cardinal Engineering representative at the project site.

In preparation for the start of Phase 1, soil samples from the existing eastern embankment fill and the imported borrow were obtained and tested by Terracon to establish the target densities and moisture contents for each soil source to be used in the project. The pool elevations of the CCR Unit 3 and the Plant Discharge Pond were lowered to allow access to CCR Unit 3's eastern embankment slopes for the contractor. Work began for Phase 1 in March 2017.

Photographs documenting the various stages of construction for Phase 1 of the CCR Impoundment Repair and Modification Project are provided in Figures 4 through 15 below.



FIGURE 4: REMOVAL AND STOCKPILING OF THE EXISTING RIPRAP



FIGURE 5: BEGINNING EARTHWORK OPERATIONS

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In the early stages of the earthwork operations, a slippage crack was discovered in the western face of the eastern embankment of CCR Unit 3. A Cardinal representative at the project site notified Terracon of this new development. A repair was designed that required the contractor to excavate the Western face of the eastern embankment of CCR Unit 3 to the bottom of the slippage crack and backfill the failed soil with imported borrow. This soil would be reinforced with geogrid that would be extended into benches cut into the existing eastern embankment.

Specifically, and as detailed in the attached Cardinal Engineering Daily Construction Reports, the eastern embankment of CCR Unit 3 was constructed to implement a combination of both Alternative 2 and Alternative 3 (discussed above) as well as additional repairs recommended by Terracon. The aforementioned slippage crack was excavated down to what appeared to be a sandstone seam. This excavation was continued at the base of the western face of the eastern embankment of CCR Unit 3 to remove poorer quality material. A layer of geogrid was placed along the bottom of the excavation and subsequent lifts of imported fill were placed and compacted followed by additional layers of geogrid reinforcement. Both faces of the eastern embankment of CCR Unit 3 were ultimately shaped to a 3H:1V slope. Rip rap was placed along both faces of the embankment to protect and stabilize the slopes.

The construction activity on the western face and upper eight feet of the CCR Unit 3 embankment are detailed in Figures 6 through 15 below.



FIGURE 6: EXCAVATING THE SOIL AROUND THE SLIPPAGE CRACK



FIGURE 7: REINFORCING THE TRENCH WITH GEOGRID



FIGURE 8: THE TRENCH BACKFILLED AND SECURED TO THE EMBANKMENT WITH GEOGRID



FIGURE 9: ADDITIONAL FILL IS DELIVERED AND PLACED ON THE EMBANKMENT



FIGURE 10: FIRST LAYER OF GEOGRID FOR THE UPPER 8 FEET OF THE EMBANKMENT



FIGURE 11: FILL PLACED OVER GEOGRID



FIGURE 12: ADDITIONAL LAYERS OF GEOGRID AND FILL ARE PLACED TO BRING EMBANKMENT UP TO FINAL GRADE



FIGURE 13: FINAL LAYER OF FILL WAS PLACED ON APRIL 5, 2017



FIGURE 14: PLACEMENT OF RIPRAP FOR SLOPE PROTECTION

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FIGURE 15: COMPLETED CCR UNIT 3 EASTERN EMBANKMENT FOR PHASE 1 OF THE PROJECT

Phase 2 of the CCR Impoundment Repair and Modification Project consisted of the modification of the CCR Unit 2 eastern embankment to meet the specified safety factor requirements. Phase 2 began operations in late July, 2017, with the removal of all vegetation and riprap from the eastern embankment slopes. Earthwork activities for the modification continued until operations were halted August 11, when the contractor uncovered a concrete utility duct that was buried in the eastern embankment. A review of the new survey provided by Cardinal Engineering and subsequent observations of the eastern embankment of CCR Unit 2 revealed a moderate slide that was occurring on the eastern face of the embankment. Based upon these developments, a new modification approach was designed for the CCR Unit 2 eastern embankment. To meet the required CCR Rule and ODEQ safety factors, this new design required modifying the slope to 3:1, constructing a rock filled key trench to stabilize the slope, and reinforcing the key trench and eastern embankment with geogrid as shown in Figure 16 below.

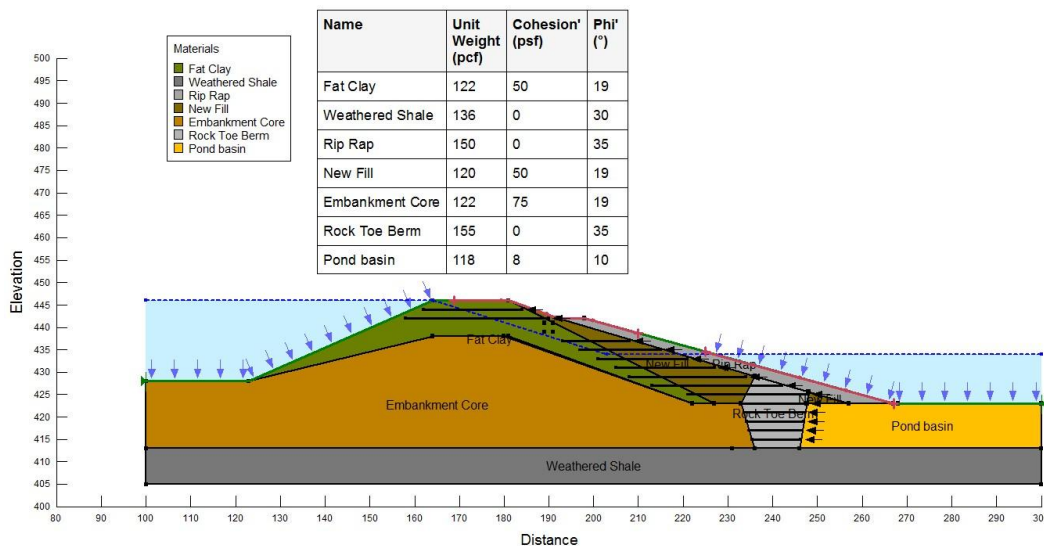


FIGURE 16: MODIFIED DESIGN FOR CCR UNIT 2 EASTERN EMBANKMENT - PHASE 2

A compilation of stability analyses for the revised modification of the CCR Unit 2 eastern embankment under the three conditional requirements is presented in Table 4.

TABLE 4 - SLOPE STABILITY ANALYSES RESULTS OF REVISED CCR UNIT 2 EASTERN EMBANKMENT

WFEC Hugo Power Plant CCR Unit 2 Eastern Embankment (REVISED)	FACTOR OF SAFETY
3H:1V Revised Slope w/ Rock Toe Berm at pool 443 ft.	1.7
3H:1V Revised Slope w/ Rock Toe Berm at pool 446 ft.	1.7
3H:1V Revised Slope w/ Rock Toe Berm at pool 445 ft. under seismic loads	1.02

Construction resumed for Phase 2 on September 15, 2017 with the contractor excavating the trench for the rock toe berm. The trench was backfilled with a well-graded rock with a maximum aggregate size of 12 inches. The rock was placed in layers 2 feet thick, with geogrid reinforcement placed between layers. The eastern embankment slope was modified with imported fill that was placed and compacted in benches cut into the existing eastern embankment. A layer of geogrid

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reinforcement was placed every 2 feet vertically to secure the rock toe berm and new fill into the existing eastern embankment. Two additional layers of geogrid were placed across the width of the embankment within the top 6 feet. These layers were spaced 2 feet vertically. Utility lines that were buried within the top 6 feet were located by hydrovac operations to avoid damage during placement of geogrid and fill. Photographs documenting the various stages of construction for Phase 2 of the CCR Impoundment Repair and Modification Project are provided in Figures 17 through 23 below.



FIGURE 17: EXCAVATION OF TOE TRENCH FOR ROCK TOE BERM



FIGURE 18: PLACEMENT OF ROCK AND GEOGRID IN ROCK TOE BERM



FIGURE 19: PLACEMENT OF GEOGRID TO SECURE ROCK TOE BERM TO EMBANKMENT



FIGURE 20: PLACEMENT OF ADDITIONAL FILL BENCHED INTO THE EMBANKMENT



FIGURE 21: HYDROVAC EXCAVATION TO EXPOSE BURIED UTILITIES



FIGURE 22: COMPLETION OF CCR UNIT 2 EASTERN EMBANKMENT PRIOR TO PLACEMENT OF RIPRAP



FIGURE 23: COMPLETION OF CCR UNIT 2 EASTERN EMBANKMENT WITH RIPRA PROTECTION

A site visit was made by a Terracon representative on October 18, 2017 to review the configuration of the modified Impoundment eastern embankment. At that time, the modification of eastern embankment of CCR Unit 2 was complete with the exception of the placement of sod for the upper slope and crushed stone for the road surfacing along the crest of the embankment. This completed Terracon's obligations in the construction phase of the project for WFEC.

Phases 1 and 2 of the CCR Impoundment Repair and Modification Project at the WFEC Plant near Hugo, have been completed. To the best of our knowledge, information, and belief, based upon the observations and tests performed by Terracon representatives and the project progress correspondence and photos furnished by Cardinal Engineering, the subgrade of the aforementioned embankments for CCR Units 2 and 3, as tested and observed by Terracon, appears to be in general accordance with the project plans and specifications provided to Terracon. Based upon the premise that the embankments for CCR Units 2 and 3 were constructed according to the repairs recommended by Terracon, these embankments meet the required CCR Rule and ODEQ safety factors for stability as follows:

WFEC Hugo Power Plant Impoundment CCR Unit 3 Embankment **	FACTOR OF SAFETY
2.5H:1V Reinforced Slope w/ Riprap	1.5
2H:1V Reinforced Slope - pool elevation at 446 ft.	1.5
2H:1V Reinforced Slope - pool elevation at 446 ft. & seismic load	1.04

****Note:** These safety factors correspond to Terracon's original design. As described herein, CCR Unit 3 was actually constructed to a 3H:1V slope, so the safety factors are likely higher.

WFEC Hugo Power Plant Impoundment CCR Unit 2 Embankment	FACTOR OF SAFETY
3H:1V Revised Slope w/ Rock Toe Berm at pool 443 ft.	1.7
3H:1V Revised Slope w/ Rock Toe Berm at pool 446 ft.	1.7
3H:1V Revised Slope w/ Rock Toe Berm at pool 445 ft. under seismic loads	1.02

It should be noted that our testing and observation services were performed on an as-requested basis, and only when requested by the above-listed client or their designated representative. We offer no opinion regarding materials not tested or observed by Terracon representatives.

This letter is provided solely for the benefit of the above-listed client and does not impact in any way the rights and obligations of third parties, including contractors and subcontractors who may have provided the materials and/or construction services tested or observed.

We appreciate the opportunity to work with you on this project. Should you have any questions concerning the contents of this letter, or if we can be of further service in other ways, please contact us.

Sincerely,

TERRACON CONSULTANTS, INC.

Cert. Of Auth. #CA-4531 exp. 6/30/19

Jeff Dean, P.E.
Oklahoma No. 16998



Jeremy Basler, P.E.
Principal / Geotechnical Manager

JD:JB\srs\n\projects\2017\03171071\project documents\nov2017

Attachments: Cardinal Construction Report, Phase I (Rpt. Nos. 1 - 33)
Cardinal Construction Report, Phase II (Rpt. Nos. 34 - 65)

Copies to: Addressee (1 via email)

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 1 **Date:** 03-09-2017
S M T W **T** F S

Weather: Overcast **Min. Temp:** 53 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 74 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>3</u>	Dozer	<u>2</u>
Terracon	<u>2</u>	Track Hoe	<u>3</u>
_____	_____	Grader	<u>0</u>
_____	_____	Water Truck	<u>0</u>
_____	_____	Front End Loader	<u>0</u>
_____	_____	Sheep's Foot Compactor	<u>1</u>
_____	_____	_____	_____
_____	_____	_____	_____

TESTING:
Terracon onsite to perform penetrometer tests, nuclear density gauge tests and a proof rolling test.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation completes stripping off the top 8 feet of the CCR#3 dam. There was some substantial cracking and sliding of material along the CCR#3 side of the dam. This was documented by myself and Terracon.

Terracon performed several penetrometer tests, nuclear density gauge tests and proof rolled the top of the entire dam to collect data.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
_____ **SIGNED:** 
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 2 **Date:** 03-10-2017
S M T W T F S

Weather: Overcast **Min. Temp:** 54 F
Precipitation: 0.00 Inches **Max. Temp:** 72 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	6	Dozer	2
Terracon	1	Track Hoe	3
		Grader	0
		Water Truck	0
		Front End Loader	0
		Sheep's Foot Compactor	1

TESTING:

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation applied first layer of geogrid along top of dam and a 6-IN to 8-IN lift of material and compacted to passing specifications. Nation excavated some material under the apparent longitudinal crack on the CCR#3 face of the dam down to an apparent sandstone seam. This material was reddish in color, sandy with low plasticity and cohesion and ran along the dam for approximately 30-FT or so. Nation smoothed out material on side sloped and stockpiled some material on top of the dam to prepare for rainfall over the weekend.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Received phone call from Terracon to stop applying geogrid. The recommendation from Terracon was to dig out the area where the crack formed. I then notified Paul Luhring regarding the recommended additional scope of work.

Conference call with Dave Sonntag, Paul Luhring, Durland (WFEC), Jeff Dean and Farid Ahmad (Terracon) and me. Jeff Dean with Terracon provided some additional guidance on handling soft spots by increasing the vertical frequency of geogrid application.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** 
 Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 3 **Date:** 03-13-2017
S M T W T F S

Weather: Overcast **Min. Temp:** 35 F
Precipitation: 0.19 Inches **Max. Temp:** 59 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>3</u>	Dozer	<u>2</u>
Terracon	<u>1</u>	Track Hoe	<u>3</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		Front End Loader	<u>0</u>
		Sheep's Foot Compactor	<u>1</u>

TESTING:

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation excavated along the seam of bad material at the base of the dam along the CCR #3 side of the dam, and encountered what appears to be old road base material, red shale-type material and a yellow colored material. Below that, the material base appeared suitable for tying the imported fill material back into. With the rainfall, this morning, construction was halted to prevent any sort of issue associated with leaving excavation open. The plan for tomorrow is to uncover, and excavate the questionable material out, perform some penetrometer tests to verify that the base meets performance specifications, and begin tying the fill material into the existing dam.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Spoke with the Contractor and Terracon Representative regarding the planned construction resuming tomorrow morning, and relayed that information directly to Paul Luhring.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** 
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 4 **Date:** 03-14-2017
S M **T** W T F S

Weather: Clear **Min. Temp:** 34 F
Precipitation: 0.00 Inches **Max. Temp:** 59 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>5</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>2</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		10-Wheeler	<u>9</u>
		Sheep's Foot Compactor	<u>1</u>

TESTING:
Terracon used DSP to test stiffness of base on NW side of CCR 3.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation hauling in clay from borrow site, and spreading out along the top for the second lift. Nation also excavated extents of poor quality material on NW side of the dam on the CCR 3 side down to good material, as well as along the center portion of the dam. Terracon performed DCP test to determine stiffness, and to identify the extents of the poor-quality materials. Base was representative of dark olive colored material in original Proctor sample. Red imported clay material was brought in and spread in a lift along the NW corner, inside face of dam, but moisture content was too high to proceed any further today.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Conversation/communication with D. Sonntag, and P. Luhning about where progress stood at various points throughout the day.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** *Colby Codner*
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 5 **Date:** 03-15-2017
S M T **W** T F S

Weather: Clear **Min. Temp:** 37 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 55 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>6</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>2</u>
_____	_____	Grader	<u>0</u>
_____	_____	Water Truck	<u>0</u>
_____	_____	10-Wheeler	<u>9</u>
_____	_____	Sheep's Foot Compactor	<u>1</u>
_____	_____	_____	_____
_____	_____	_____	_____

TESTING:
Terracon used nuclear density gauge to test moisture and density for various sections of the project.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:
Moisture test was within specified parameters, and imported material was brought in for the top of the dam, and along the NW side of CCR 3 and compacted. The trench along the N side of CCR 3 was also compacted.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:
Conversation/communication with D. Sonntag, and P. Luhing about where progress stood at various points throughout the day.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
_____ **SIGNED:** *C. Codner*
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod
Contractor: Nation Contracting, Inc.
Engineer:
Report No: 5
CARDINAL PN. WFEC162640
WFEC Project No:
Date: 03-15-2017
S M T W T F S

Weather: Clear
Precipitation: 0.00 Inches
Min. Temp: 37 F
Max. Temp: 55 F

Table with 4 columns: Personnel Working, Number, Equipment Working, Number. Lists personnel (Nation Contracting, Inc., Terracon) and equipment (Dozer, Track Hoe, Grader, Water Truck, 10-Wheeler, Sheep's Foot Compactor).

TESTING:
Terracon used nuclear density gauge to test moisture and density for various sections of the project.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:
Moisture test was within specified parameters, and imported material was brought in for the top of the dam, and along the NW side of CCR 3 and compacted. The trench along the N side of CCR 3 was also compacted.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:
Conversation/communication with D. Sonntag, and P. Luhing about where progress stood at various points throughout the day.

VISITORS TO SITE
INSPECTOR: Colby Codner
SIGNED: [Signature]
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 6 **Date:** 03-16-2017
S M T W **Th** F S

Weather: Overcast **Min. Temp:** 43 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 65 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>6</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>2</u>
_____	_____	Grader	<u>0</u>
_____	_____	Water Truck	<u>0</u>
_____	_____	10-Wheeler	<u>9</u>
_____	_____	Sheep's Foot Compactor	<u>1</u>
_____	_____	_____	_____
_____	_____	_____	_____

TESTING:
Terracon used nuclear density gauge to test moisture and density for various sections of the project. Terracon used a t-probe to test the trenched area on the far SE side on the face of the CCR 3 side of the dam.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:
Nation placed geogrid in about 70% of the trench along the CCR 3 side of the dam (where densities and moisture passed yesterday), and began placing the first lift of import. Second layer of geogrid was placed on the NW side (CCR 3 side), and import placed and compacted. Far south west side of CCR 3 toe (where a pocket of perched water was encountered) was brought up with 2 lifts of geogrid and a 1-ft layer of compacted soil.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:
Conversation/communication with D. Sonntag, and P. Luhring about where progress stood at various points throughout the day. Jeff Dean arrived onsite to look at project. Attended meeting with Jeff Dean and Dave Sonntag.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** 
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 7 **Date:** 03-17-2017
S M T W T **F** S

Weather: Overcast **Min. Temp:** 63 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 74 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>6</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>2</u>
_____	_____	Grader	<u>0</u>
_____	_____	Water Truck	<u>0</u>
_____	_____	10-Wheeler	<u>9</u>
_____	_____	Sheep's Foot Compactor	<u>1</u>
_____	_____	_____	_____
_____	_____	_____	_____

TESTING:
Terracon used nuclear density gauge to test moisture and density for all areas along the toe of the CCR 3 face of the dam, coming up.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:
Nation continued to import, place and compact material along the toe of the CCR 3 face of the dam coming up, with a goal to tie the different elevations of the excavated areas into one, uniform contour. Geogrid placed in every 2-ft vertical lift.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:
James contacted Farid regarding some additional clarification about whether the red imported clay could exceed the +2% moisture content requirement. Farid spoke with Jeff Dean, and Jeff Dean determined that the red clay would be acceptable above 20.9% moisture content. Average shots for the material indicated moisture content around 24%.

VISITORS TO SITE _____
INSPECTOR: Colby Codner
SIGNED: 
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 8 **Date:** 03-20-2017
S M T W T F S

Weather: Overcast **Min. Temp:** 65 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 87 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>6</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>2</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		10-Wheeler	<u>6</u>
		Sheep's Foot Compactor	<u>1</u>

TESTING:
Terracon used nuclear density gauge to test moisture and density for all areas along the toe of the CCR 3 face of the dam, coming up.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Terracon tested the lower course left over the weekend, and the moisture was too low. Nation scraped off a few inches of material, Terracon retested, and the moisture content was within acceptable range. Nation placed some geogrid starting on the NW face of CCR 3, and continued the geogrid along the entire face of the contour.

Nation continued to import, place and compact material along the toe of the CCR 3 face of the dam coming up, with a goal to tie the different elevations of the excavated areas into one, uniform contour.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Discussion with Paul Luhning regarding estimated Contractor effort to complete the first phase of the project with regards to the change in scope (substantial additional excavation, geogrid and imported fill). I looked at the quantities a couple of different ways and came up with similar sums as what the Contractor proposed. The estimated cost for the change in scope amounts to approximately \$180,000.00. I notified Paul Luhning of the amount, and he tentatively accepted the additional cost in a face to face meeting at approximately 4 pm, and requested that I send this information via email.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** *C. Codner*
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 9 **Date:** 03-21-2017
S M W T F S

Weather: Overcast **Min. Temp:** 65 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 87 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>5</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>2</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		10-Wheeler	<u>8</u>
		Sheep's Foot Compactor	<u>1</u>

TESTING:
Terracon used nuclear density gauge to test moisture and density for all areas along the toe of the CCR 3 face of the dam, coming up.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:
Terracon tested the lower contour moving up the CCR 3 dam face. Densities passed and the moisture content was within acceptable parameters. Nation completed the second course in the lift, and began placing the third course. Elevation on the lower course, at this time, is between 436 and 437 feet.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:
James with Terracon called Farid and updated him on the status of the construction per my request. I wanted to give Jeff Dean an opportunity to come and observe the progress before we got much further along.
Spoke with Bill Swain and Neil Robinson regarding the status of the project

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** *C. Codner*
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 10 **Date:** 03-22-2017
S M T **W** T F S

Weather: Overcast **Min. Temp:** 58 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 69 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>5</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>2</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		10-Wheeler	<u>8</u>
		Sheep's Foot Compactor	<u>1</u>

TESTING:
 Terracon used nuclear density gauge to test moisture and density for all areas along the toe of the CCR 3 face of the dam, coming up.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:
 Nation brought up the CCR 3 face of the dam to approximately elevation 434 (6-ft below the proposed top of dam), and began placing 2nd layer of geogrid across the top of the dam.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____

INSPECTOR: Colby Codner
SIGNED: *Colby Codner*
 Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 11 **Date:** 03-23-2017
S M T W F S

Weather: Sunny **Min. Temp:** 53 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 84 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>5</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>1</u>
_____	_____	Grader	<u>0</u>
_____	_____	Water Truck	<u>0</u>
_____	_____	10-Wheeler	<u>8</u>
_____	_____	Sheep's Foot Compactor	<u>1</u>
_____	_____	_____	_____
_____	_____	_____	_____

TESTING:
Terracon used nuclear density gauge to test moisture and density for all areas across the top of the dam

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:
Nation placed 2 lifts of compacted fill material across the top of the dam.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE Farid Ahmad (Terracon) **INSPECTOR:** Colby Codner
SIGNED: _____ *C. Codner*
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 12 **Date:** 03-24-2017
S M T W T **F** S

Weather: Overcast **Min. Temp:** 56 F
Precipitation: 0.69 Inches **Max. Temp:** 70 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>0</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>1</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		10-Wheeler	<u>8</u>
		Sheep's Foot Compactor	<u>1</u>

TESTING:
Terracon used nuclear density gauge to test moisture and density for across the top of the dam. This is the second lift, of the second layer

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation called today a rain day. I observed Terracon perform moisture and density testing across the top of the dam.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** 
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod
Contractor: Nation Contracting, Inc.
Engineer:
Report No: 13
CARDINAL PN. WFEC162640
WFEC Project No:
Date: 03-27-2017
S M T W T F S

Weather: Overcast
Precipitation: 0.00 Inches
Min. Temp: 54 F
Max. Temp: 71 F

Table with 4 columns: Personnel Working, Number, Equipment Working, Number. Lists personnel (Nation Contracting, Inc., Terracon) and equipment (Dozer, Track Hoe, Grader, Water Truck, 10-Wheeler, Sheep's Foot Compactor).

TESTING:
No testing.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation called today a rain day. 0.61 inches of rain fell on Sunday, March 26th, and the borrow site was inaccessible.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Phone conversation with Client, Terracon and Contractor.

VISITORS TO SITE
INSPECTOR: Colby Codner
SIGNED: [Signature]
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 14 **Date:** 03-28-2017
S M W T F S

Weather: Overcast **Min. Temp:** 49 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 75 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	0	Dozer	1
Terracon	0	Track Hoe	1
_____	_____	Grader	0
_____	_____	Water Truck	0
_____	_____	10-Wheeler	1
_____	_____	Sheep's Foot Compactor	1
_____	_____	_____	_____
_____	_____	_____	_____

TESTING:
No testing.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation called today a rain day. Borrow site was inaccessible.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Phone conversation with Client, Terracon and Contractor.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** *C. Codner*
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod
Contractor: Nation Contracting, Inc.
Engineer:
Report No: 15
CARDINAL PN. WFEC162640
WFEC Project No:
Date: 03-29-2017
S M T W T F S

Weather: Overcast
Precipitation: 0.35 Inches
Min. Temp: 59 F
Max. Temp: 76 F

Table with 4 columns: Personnel Working, Number, Equipment Working, Number. Lists personnel (Nation Contracting, Inc., Terracon) and equipment (Dozer, Track Hoe, Grader, Water Truck, 10-Wheeler, Sheep's Foot Compactor) with their respective counts.

TESTING:
No testing.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation called today a rain day. Borrow site was inaccessible.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Phone conversation with Contractor.

VISITORS TO SITE
INSPECTOR: Colby Codner
SIGNED: [Signature]
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod
Contractor: Nation Contracting, Inc.
Engineer:
Report No: 16
CARDINAL PN. WFEC162640
WFEC Project No:
Date: 03-30-2017
S M T W T F S

Weather: Partly Cloudy
Precipitation: 0.00 Inches
Min. Temp: 46 F
Max. Temp: 65 F

Table with 4 columns: Personnel Working, Number, Equipment Working, Number. Lists personnel (Nation Contracting, Inc., Terracon) and equipment (Dozer, Track Hoe, Grader, Water Truck, 10-Wheeler, Sheep's Foot Compactor) with their respective counts.

TESTING:
No testing.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation called today a rain day. Borrow site was inaccessible.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Phone conversation with Contractor.

VISITORS TO SITE
INSPECTOR: Colby Codner
SIGNED: [Signature]
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 17 **Date:** 03-31-2017
S M T W T **F** S

Weather: Partly Cloudy **Min. Temp:** 45 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 80 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>0</u>	Dozer	<u>1</u>
Terracon	<u>0</u>	Track Hoe	<u>1</u>
_____	_____	Grader	<u>0</u>
_____	_____	Water Truck	<u>0</u>
_____	_____	10-Wheeler	<u>1</u>
_____	_____	Sheep's Foot Compactor	<u>1</u>
_____	_____	_____	_____
_____	_____	_____	_____

TESTING:
 No testing.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation called today a rain day. Borrow site was inaccessible.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Phone conversation with Contractor.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** 
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod
Contractor: Nation Contracting, Inc.
Engineer:
Report No: 18
CARDINAL PN. WFEC162640
WFEC Project No:
Date: 04-03-2017
S M T W T F S

Weather: Partly Cloudy
Precipitation: 0.00 Inches
Min. Temp: 45 F
Max. Temp: 80 F

Table with 4 columns: Personnel Working, Number, Equipment Working, Number. Rows include Nation Contracting, Inc., Terracon, Dozer, Track Hoe, Grader, Water Truck, 10-Wheeler, Sheep's Foot Compactor.

TESTING:
No testing.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation called today a rain day. Borrow site was inaccessible.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Phone conversation with Contractor.

VISITORS TO SITE
INSPECTOR: Colby Codner
SIGNED: [Signature]
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 19 **Date:** 04-04-2017
S M **T** W T F S

Weather: Partly Cloudy **Min. Temp:** 45 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 80 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>5</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>1</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		10-Wheeler	<u>1</u>
		Sheep's Foot Compactor	<u>1</u>

TESTING:
Terracon tested moisture and density for 2 placed lifts of compacted material.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:
Nation placed two complete lifts and the final layer of geogrid. Material was salvaged from the overbuilt sides for use on the top, and the CCR #3 side of the dam slope was partially shaped, but not quite to a 2:1 side slope.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:
Updated Terracon and Client on progress.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
_____ **SIGNED:** *Colby Codner*
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 20 **Date:** 04-05-2017
S M T **W** T F S

Weather: Partly Cloudy **Min. Temp:** 49 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 65 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>5</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>2</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		10-Wheeler	<u>1</u>
		Sheep's Foot Compactor	<u>1</u>

TESTING:
Terracon tested moisture and density for 2 placed lifts of compacted material.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:
Nation continued to pull material from the CCR #3 side slope to place on top (and to shape to a 2:1 side slope). Nation also cleaning up their borrow site from rain storm last night.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:
Updated Terracon and Client on progress.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
_____ **SIGNED:** *Colby Codner*
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod
Contractor: Nation Contracting, Inc.
Engineer:
Report No: 21
CARDINAL PN. WFEC162640
WFEC Project No:
Date: 04-06-2017
S M T W T F S

Weather: Partly Cloudy
Precipitation: 0.00 Inches
Min. Temp: 49 F
Max. Temp: 71 F

Table with 4 columns: Personnel Working, Number, Equipment Working, Number. Lists personnel (Nation Contracting, Inc., Terracon) and equipment (Dozer, Track Hoe, Grader, Water Truck, 10-Wheeler, Sheep's Foot Compactor).

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation finished up grading all sloped to 3:1 or greater, and began placing rip rap along the short portion of the dam.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE
INSPECTOR: Colby Codner
SIGNED: [Signature]
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 22 **Date:** 04-07-2017
S M T W T **F** S

Weather: Partly Cloudy **Min. Temp:** 42 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 73 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>0</u>	Track Hoe	<u>3</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		10-Wheeler	<u>1</u>
		Sheep's Foot Compactor	<u>1</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation finished up grading all sloped to 3:1 or greater, and completed placing stockpiled rip rap along both faces of dam. Nation began placing new rip rap along faces of dam.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** *Colby Codner*
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 23 **Date:** 04-10-2017
S M T W T F S

Weather: Rain **Min. Temp:** 63 **F**
Precipitation: 2.30 **Inches** **Max. Temp:** 71 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>3</u>
_____	_____	Grader	<u>0</u>
_____	_____	Water Truck	<u>0</u>
_____	_____	10-Wheeler	<u>1</u>
_____	_____	Sheep's Foot Compactor	<u>1</u>
_____	_____	_____	_____
_____	_____	_____	_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation finished completed rip rap placement for process pond side of dam, and upper portion of CCR Unit 3 face of dam. Rain started around noon, and work was halted

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Sent update to Terracon.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** *Colby Codner*
 Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 24 **Date:** 04-11-2017
S M W T F S

Weather: Rain **Min. Temp:** 55 **F**
Precipitation: 0.01 **Inches** **Max. Temp:** 70 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>0</u>	Dozer	<u>1</u>
Terracon	<u>0</u>	Track Hoe	<u>3</u>
_____	_____	Grader	<u>0</u>
_____	_____	Water Truck	<u>0</u>
_____	_____	10-Wheeler	<u>1</u>
_____	_____	Sheep's Foot Compactor	<u>1</u>
_____	_____	_____	_____
_____	_____	_____	_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

No work today. Rain day. I walked around the dam and took some images of the rip rap placement, and general condition of the site.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Sent Farid Ahmed and Jeff Roberts a report showing the current site conditions and construction completed to date.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** C. Colby Codner
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 25 **Date:** 04-12-2017
S M T **W** T F S

Weather: Rain **Min. Temp:** 60 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 76 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>0</u>	Dozer	<u>1</u>
Terracon	<u>0</u>	Track Hoe	<u>3</u>
_____	_____	Grader	<u>0</u>
_____	_____	Water Truck	<u>0</u>
_____	_____	10-Wheeler	<u>1</u>
_____	_____	Sheep's Foot Compactor	<u>1</u>
_____	_____	_____	_____
_____	_____	_____	_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

No work today. Rain day. I walked around the dam and took some images of the rip rap placement, and general condition of the site. I then updated Terracon and WFEC of the site conditions and conversation with Jeff Dean at Terracon

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Spoke with Jeff Dean at Terracon about his e-mail yesterday, and my report. Jeff suggested that a few areas of placed rip rap with heavier clay be removed and replaced with new rip rap. I relayed this information to WFEC and the Contractor.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** *C. Codner*
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 26 **Date:** 04-13-2017
S M T W **Th** F S

Weather: Cloudy **Min. Temp:** 60 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 81 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>0</u>	Track Hoe	<u>2</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		10-Wheeler	<u>1</u>
		Sheep's Foot Compactor	<u>1</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation placed rip rap on CCR Unit 3 face of dam, and almost completed work until an O-ring on the loading track hoe gave out.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** C. Colby Codner
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 27 **Date:** 04-14-2017
S M T W T **F** S

Weather: Cloudy **Min. Temp:** 60 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 81 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>7</u>	Dozer	<u>1</u>
Terracon	<u>0</u>	Track Hoe	<u>2</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		10-Wheeler	<u>1</u>
		Sheep's Foot Compactor	<u>1</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation Completed rip rap placement and began washing off rip rap with a rented firetruck and hoses.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Coordinated with Terracon to arrange a site visit for Jeff Dean to review construction.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** C. Alf
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod
Contractor: Nation Contracting, Inc.
Engineer:
Report No: 28
CARDINAL PN. WFEC162640
WFEC Project No:
Date: 04-17-2017
S M T W T F S

Weather: Rain
Precipitation: 2.30 Inches
Min. Temp: 59 F
Max. Temp: 69 F

Table with 4 columns: Personnel Working, Number, Equipment Working, Number. Lists items like Nation Contracting, Inc., Terracon, Dozer, Track Hoe, Grader, Water Truck, 10-Wheeler, Sheep's Foot Compactor.

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Rain Day

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE
INSPECTOR: Colby Codner
SIGNED: [Signature]
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 29 **Date:** 04-18-2017
S M T W T F S

Weather: Partly Cloudy **Min. Temp:** 58 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 81 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>5</u>	Dozer	<u>1</u>
Terracon	<u>0</u>	Track Hoe	<u>2</u>
_____	_____	Grader	<u>0</u>
_____	_____	Water Truck	<u>0</u>
_____	_____	10-Wheeler	<u>1</u>
_____	_____	Sheep's Foot Compactor	<u>1</u>
_____	_____	_____	_____
_____	_____	_____	_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation continued cleaning rip rap.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** *C. Codner*
Resident Project Representative



Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 33 **Date:** 04-25-2017
S M **T** W T F S

Weather: Partly Cloudy **Min. Temp:** 54 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 82 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>7</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>1</u>
_____	_____	Grader	<u>1</u>
_____	_____	Water Truck	<u>0</u>
_____	_____	Bobcat	<u>1</u>
_____	_____	Sheep's Foot Compactor	<u>1</u>
_____	_____	_____	_____
_____	_____	_____	_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation placed sod along both sides of gravel drive across top of dam.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Notified Kris Raymond that project was completed. Paul Luhring was out of office.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** *Colby Codner*
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 34 **Date:** 07-31-2017
S M T W T F S

Weather: Partly Cloudy **Min. Temp:** 54 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 82 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>2</u>	Dozer	<u>0</u>
Terracon	<u>0</u>	Track Hoe	<u>1</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		Bobcat	<u>0</u>
		Sheep's Foot Compactor	<u>1</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation began removing rip rap from back face of CCR Unit 2, and stockpiling.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Electrical bank was uncovered in the back face of dam, and not under the top of dam. I notified Jeff Dean of the change in location and asked for guidance on how to proceed with geogrid placement around existing structure.

Notified Jeff Dean that an area between CCR units 2 and 3 subsided (out of scope), and asked for guidance on how to repair.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** _____
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 35 **Date:** 08-01-2017
S M T W T F S

Weather: Partly Cloudy **Min. Temp:** 54 F
Precipitation: 0.00 Inches **Max. Temp:** 82 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>0</u>	Track Hoe	<u>2</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		Bobcat	<u>0</u>
		Sheep's Foot Compactor	<u>1</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation continued removing rip rap from back face of CCR Unit 2, and stockpiling. Nation began moving material out into lower pond to create a toe berm.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Conversation with Jeff Dean about yesterday's findings. Jeff requested survey information on the overflow pond WSEL, and the location of the electrical bank for cross-sections to aid him in analysis. I scheduled for a survey to be conducted on Thursday (Aug 3rd). I then relayed all information to Paul Luhring.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 36 **Date:** 08-28-2017
S M T W T F S

Weather: Cloudy, Rain **Min. Temp:** 70 **F**
Precipitation: 2.00 **Inches** **Max. Temp:** 84 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>0</u>	Track Hoe	<u>2</u>
_____	_____	Grader	<u>0</u>
_____	_____	Water Truck	<u>0</u>
_____	_____	Bobcat	<u>0</u>
_____	_____	Sheep's Foot Compactor	<u>1</u>
_____	_____	_____	_____
_____	_____	_____	_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Nation continued removing rip rap from back face of CCR Unit 2, and stockpiling. Nation began moving material out into lower pond to create a toe berm. Work suspended due to rain.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Communicate with Terracon engineer regarding excavation dimensions at toe of berm.

VISITORS TO SITE _____ **INSPECTOR:** Colby Codner
 _____ **SIGNED:** _____
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 37 **Date:** 08-29-2017
S M T W T F S

Weather: Partly Cloudy **Min. Temp:** 67 F
Precipitation: 0.00 Inches **Max. Temp:** 85 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>0</u>	Track Hoe	<u>2</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		Bobcat	<u>0</u>
		Sheep's Foot Compactor	<u>1</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Contractor excavated toe of back face of CCR Unit 2 according to plan, removed material from area. Backfilled and compacted excavated area with rip rap. Checked site conditions of soil borrow area. Site conditions too wet for soil removal at this time.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Conversation with Terracon geo-technician regarding soil density testing schedule. Technician scheduled for Friday morning.

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 38 **Date:** 08-30-2017
S M T W T F S

Weather: Partly Cloudy **Min. Temp:** 67 F
Precipitation: 0.00 Inches **Max. Temp:** 85 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>0</u>	Track Hoe	<u>2</u>
_____	_____	Grader	<u>0</u>
_____	_____	Water Truck	<u>0</u>
_____	_____	Bobcat	<u>0</u>
_____	_____	Sheep's Foot Compactor	<u>1</u>
_____	_____	_____	_____
_____	_____	_____	_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Soil borrow area conditions too wet for use at this time.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Contractor expects soil borrow area will be usable tomorrow.

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 39 **Date:** 08-31-2017
S M T W T F S

Weather: Partly Cloudy **Min. Temp:** 73 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 87 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>0</u>	Track Hoe	<u>2</u>
_____	_____	Grader	<u>0</u>
_____	_____	Water Truck	<u>0</u>
_____	_____	Bobcat	<u>0</u>
_____	_____	Sheep's Foot Compactor	<u>1</u>
_____	_____	_____	_____
_____	_____	_____	_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Soil borrow area conditions too wet for use at this time.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Contractor expects soil borrow area will be usable tomorrow.

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 40 **Date:** 08-31-2017
S M T W T F S

Weather: Partly Cloudy **Min. Temp:** 73 F
Precipitation: 0.00 Inches **Max. Temp:** 87 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>0</u>	Track Hoe	<u>2</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		Bobcat	<u>0</u>
		Sheep's Foot Compactor	<u>1</u>
		Dump Truck	<u>5</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Began placing and compacting clay liner at toe and along slope of berm. Contractor plans to add additional dump trucks hauling soil tomorrow.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Confirmed density testing technician schedule for tomorrow morning.
Requested quantity difference of liner material due to change in design project engineer.

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 41 **Date:** 09-1-2017
S M T W T F S

Weather: Partly Cloudy **Min. Temp:** 73 F
Precipitation: 0.00 Inches **Max. Temp:** 88 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>1</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		Bobcat	<u>0</u>
		Sheep's Foot Compactor	<u>1</u>
		Dump Truck	<u>5</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Continued placing, compacting and testing clay liner at toe and along slope of berm. Completed five lifts of clay material.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Terracon engineer to conduct site visit Tuesday.

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 43 **Date:** 09-6-2017
S M T W T F S

Weather: Partly Cloudy **Min. Temp:** 61 F
Precipitation: 0.00 Inches **Max. Temp:** 83 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>1</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		Bobcat	<u>0</u>
		Sheep's Foot Compactor	<u>1</u>
		Dump Truck	<u>3</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Continued placing, compacting and testing clay liner at toe and along slope of berm. Completed 3½ lifts of clay.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Discussed change order quantities of clay and rip rap with owner.

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 44 **Date:** 09-7-2017
S M T W T F S

Weather: Partly Cloudy **Min. Temp:** 52 F
Precipitation: 0.00 Inches **Max. Temp:** 81 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>1</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		Bobcat	<u>0</u>
		Sheep's Foot Compactor	<u>1</u>
		Dump Truck	<u>3</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Continued placing, compacting and testing clay liner at toe and along slope of berm. Completed 3½ lifts of clay.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Discussed soil moisture content with Terracon engineer. Engineer agreed up to 4% moisture is acceptable.

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 45 **Date:** 09-8-2017
S M T W T F S

Weather: Sunny **Min. Temp:** 56 F
Precipitation: 0.00 Inches **Max. Temp:** 83 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>1</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		Bobcat	<u>0</u>
		Sheep's Foot Compactor	<u>1</u>
		Dump Truck	<u>3</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Discovered separation in clay material from berm. Contacted Terracon engineer. Engineer arrived on site for evaluation of separation. Engineer will provide corrective plan as soon as possible.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 46 **Date:** 09-13-2017
S M T W T F S

Weather: Sunny **Min. Temp:** 63 F
Precipitation: 0.00 Inches **Max. Temp:** 87 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	_____	Track Hoe	<u>1</u>
	_____	Grader	<u>0</u>
	_____	Water Truck	<u>0</u>
	_____	Bobcat	<u>0</u>
	_____	Sheep's Foot Compactor	<u>1</u>
	_____	Dump Truck	<u>3</u>
	_____		_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Contractor continued removing recompacted clay berm material. Prepared area for new berm design.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Contractor will be ready to construct berm toe rock trench be Friday.

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 47 **Date:** 09-15-2017
S M T W T F S

Weather: Sunny **Min. Temp:** 66 F
Precipitation: 0.00 Inches **Max. Temp:** 88 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	_____	Track Hoe	<u>1</u>
	_____	Grader	<u>0</u>
	_____	Water Truck	<u>0</u>
	_____	Bobcat	<u>0</u>
	_____	Sheep's Foot Compactor	<u>1</u>
	_____	Dump Truck	<u>3</u>
	_____		_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Contractor began excavating berm toe to confirmed firmness. Began placing and compacting rock in 2 foot lifts with geogrid between lifts.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Contractor will be ready to construct berm toe rock trench be Friday.

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 48 **Date:** 09-18-2017
S M T W T F S

Weather: Sunny **Min. Temp:** 71 F
Precipitation: 0.00 Inches **Max. Temp:** 91 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	_____	Track Hoe	<u>2</u>
	_____	Grader	<u>0</u>
	_____	Water Truck	<u>0</u>
	_____	Bobcat	<u>0</u>
	_____	Sheep's Foot Compactor	<u>1</u>
	_____	Dump Truck	<u>3</u>
	_____		_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Completed excavating berm toe to confirmed firmness. Continued placing and compacting rock in 2 foot lifts with geogrid between lifts. Completed 1½ lifts.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Contractor will have additional trucks delivering rock for trench.

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 51 **Date:** 09-21-2017
S M T W T F S

Weather: Sunny **Min. Temp:** 74 F
Precipitation: 0.00 Inches **Max. Temp:** 92 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>2</u>	Dozer	<u>1</u>
Terracon	_____	Track Hoe	<u>2</u>
	_____	Grader	<u>0</u>
	_____	Water Truck	<u>0</u>
	_____	Bobcat	<u>0</u>
	_____	Sheep's Foot Compactor	<u>1</u>
	_____	Dump Truck	<u>3</u>
	_____		_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Contractor not receiving rock until afternoon. Contractor updated status at end of the day. Received 4 loads of rock, completed lift 4, will begin placing and compacting clay tomorrow.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 52 **Date:** 09-22-2017
S M T W T F S

Weather: Sunny **Min. Temp:** 74 F
Precipitation: 0.00 Inches **Max. Temp:** 92 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>2</u>	Dozer	<u>1</u>
Terracon	_____	Track Hoe	<u>2</u>
	_____	Grader	<u>0</u>
	_____	Water Truck	<u>0</u>
	_____	Bobcat	<u>0</u>
	_____	Sheep's Foot Compactor	<u>1</u>
	_____	Dump Truck	<u>3</u>
	_____		_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Placed geogrid across berm fill material and across rock where lift 4 complete. Contractor still waiting for quarry to begin sending rock. Began placing and compacting berm material where lift 4 of rock complete.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 53 **Date:** 09-25-2017
S M T W T F S

Weather: Sunny **Min. Temp:** 67 F
Precipitation: 0.00 Inches **Max. Temp:** 89 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>2</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		Bobcat	<u>0</u>
		Sheep's Foot Compactor	<u>1</u>
		Dump Truck	<u>3</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Completed placing lift 4 of rock, completed placing geogrid. Continued placing, compacting and testing berm material. Completed 3 lifts of berm material.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 54 **Date:** 09-26-2017
S M T W T F S

Weather: Pt. Cloudy **Min. Temp:** 69 F
Precipitation: 0.00 Inches **Max. Temp:** 89 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>2</u>
		Grader	<u>0</u>
		Water Truck	<u>0</u>
		Bobcat	<u>0</u>
		Sheep's Foot Compactor	<u>1</u>
		Dump Truck	<u>3</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Continued placing, compacting and testing berm material. Placed layer of geogrid across rock trench and berm material. Placed, compacted and tested 3 lifts of berm material.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 55 **Date:** 09-27-2017
S M T W T F S

Weather: Pt. Cloudy **Min. Temp:** 67 F
Precipitation: 0.00 Inches **Max. Temp:** 85 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>1</u>
		Grader	<u>0</u>
		Water Truck	<u>1</u>
		Bobcat	<u>0</u>
		Sheep's Foot Compactor	<u>1</u>
		Dump Truck	<u>3</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Continued placing, compacting and testing berm material. Placed layer of geogrid across berm material for every approximately every 2 feet of compacted berm fill material. Placed, compacted and tested 5 lifts of berm material and 2 layers of geogrid.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 57 **Date:** 10-2-2017
S M T W T F S

Weather: Cloudy **Min. Temp:** 66 F
Precipitation: 0.00 Inches **Max. Temp:** 82 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>1</u>
		Grader	<u>0</u>
		Water Truck	<u>1</u>
		Bobcat	<u>0</u>
		Sheep's Foot Compactor	<u>1</u>
		Dump Truck	<u>3</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Continued placing, compacting and testing berm material in 6 inch lifts. Verified elevation of waterline within berm. Began removing and stockpiling berm fill material above waterline to approximately 1 foot above waterline.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 59 **Date:** 10-6-2017
S M T W T F S

Weather: Cloudy **Min. Temp:** 66 F
Precipitation: 0.00 Inches **Max. Temp:** 82 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>1</u>
_____	_____	Grader	<u>0</u>
_____	_____	Water Truck	<u>1</u>
_____	_____	Bobcat	<u>0</u>
_____	_____	Sheep's Foot Compactor	<u>1</u>
_____	_____	Dump Truck	<u>3</u>
_____	_____	_____	_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Complete removing berm material above waterline. Placed geogrid across entire berm top, began placing, compacting and testing berm fill material. Completed three lifts of berm fill material. Began final grading of berm slope.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 61 **Date:** 10-11-2017
S M T W T F S

Weather: Sunny **Min. Temp:** 52 F
Precipitation: 0.00 Inches **Max. Temp:** 73 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
Terracon	<u>1</u>	Track Hoe	<u>1</u>
		Grader	<u>0</u>
		Water Truck	<u>1</u>
		Bobcat	<u>0</u>
		Sheep's Foot Compactor	<u>1</u>
		Dump Truck	<u>2</u>

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Completed placing, compacting and testing final lift of clay berm fill Material. Began placing rip rap on slope.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 63 **Date:** 10-12-2017
S M T W T F S

Weather: Sunny **Min. Temp:** 53 F
Precipitation: 0.00 Inches **Max. Temp:** 82 F

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>1</u>
	_____	Track Hoe	<u>2</u>
	_____	Grader	<u>0</u>
	_____	Water Truck	<u>1</u>
	_____	Bobcat	<u>0</u>
	_____	Sheep's Foot Compactor	<u>0</u>
	_____	Dump Truck	<u>2</u>
	_____		_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Continued placing rip rap on slope. Instructed contractor to add additional rip rap in low areas. Continued observing rip rap loading to verify rip rap is not intermingle soil with rock while loading.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas
 _____ **SIGNED:** _____
Resident Project Representative



DAILY CONSTRUCTION REPORT
CCR IMPOUNDMENT REPAIR & MODIFICATION

Project: CCR Impoundment Repair & Mod **CARDINAL PN.** WFEC162640
Contractor: Nation Contracting, Inc. **WFEC Project No:** _____
Engineer: _____
Report No: 64 **Date:** 10-13-2017
S M T W T F S

Weather: Sunny **Min. Temp:** 68 **F**
Precipitation: 0.00 **Inches** **Max. Temp:** 91 **F**

<u>Personnel Working</u>	<u>Number</u>	<u>Equipment Working</u>	<u>Number</u>
Nation Contracting, Inc.	<u>4</u>	Dozer	<u>2</u>
	_____	Track Hoe	<u>2</u>
	_____	Grader	<u>0</u>
	_____	Water Truck	<u>1</u>
	_____	Bobcat	<u>0</u>
	_____	Sheep's Foot Compactor	<u>0</u>
	_____	Dump Truck	<u>2</u>
	_____		_____

TESTING:
None.

DESCRIPTION OF WORK IN PROGRESS AND LOCATION:

Completed placing rip rap on slope. Instructed contractor to add additional rip rap in low areas. Continued observing rip rap loading to verify rip rap is not intermingle soil with rock while loading. Conducted final grading of material stock pile area.

INSTRUCTIONS AND CONVERSATIONS WITH SUPERINTENDENT, FOREMAN, OWNER, AND OTHERS:

Terracon engineer scheduled to conduct final inspection on October 18, 2017.

VISITORS TO SITE _____ **INSPECTOR:** Jeff Thomas

SIGNED: _____
Resident Project Representative

