JOSH STEIN ATTORNEY GENERAL



REPLY TO: CAROLYN MCLAIN ENVIRONMENTAL DIVISION TEL: (919) 716-6929 FAX: (919) 716-6767 CMCLAIN@NCDOJ.GOV

May 24, 2017

**By Electronic Mail** Woodlake CC Corporation c/o Mr. Illya Steiner, President - steiner@steiner-company.de c/o Ms. Julie Watson, Vice President - julieamej@gmail.com 150 Woodlake Blvd. Vass, NC 28394

## **By USPS**

Woodlake CC Corporation c/o National Corporation Research, Ltd, Reg. Agent 212 South Tryon Street, Suite 100 Charlotte, NC 28281

> Re: Woodlake Dam, *State of N.C. ex. rel. Regan v. Woodlake CC Corp.* (17 CVS 0082) NC State Dam ID: MOORE-040

Mr. Steiner and Ms. Watson,

It has come to our attention that the engineer of record (Schnabel Engineering South, P.C.) working at your direction on the above-referenced matter may have ceased working on Woodlake Dam due to non-payment. We also have reason to believe that the local contractor, Olde South Landscaping, who has begun site preparation work at Woodlake Dam may not be able to continue due to non-payment. We also understand that the contractor you have chosen to perform the major site work, Crowder Heavy Construction, is not yet under contract. Finally, we have not received a status report this week.

We remind you that as part of the Consent Judgment in the above-referenced matter, you are required to provide weekly status reports regarding your progress in temporarily breaching the dam. In addition, the Consent Judgment requires that construction associated with the temporary breaching of the dam be completed "within 105 days after issuance" of the Consent Judgment and that "as-built" drawings be submitted "within 135 days after issuance" of the Consent Judgment.

Please provide us with a weekly status report immediately. Any stoppage of work may result in your inability to meet the ultimate deadline of completing construction on the dam 105 days after issuance of the Consent Judgment. Please provide to us, in writing, with anticipated dates by which work will proceed on the dam, including the date by which the contract with Crowder Heavy

114 W. EDENTON STREET, RALEIGH, NC 27603 P. O. BOX 629, RALEIGH, NC 27602-0629 Construction will be executed and the date by which Schnabel Engineering and Olde South Landscaping will return to work. Please provide this information to us by COB Tuesday, May 30, 2017 Eastern Standard Time. Should we determine that you are in breach of the Consent Judgment, we may seek appropriate relief with the Superior Court in Moore County.

Please contact me if you have any questions regarding this matter.

Sincerely,

Carolyn/McLain Assistant Attorney General

Enclosure – Consent Judgment

cc: Mr. John Payne, Assistant Attorney General by electronic mail: jpayne@ncdoj.gov Mr. Daniel Tost, Steiner Company by electronic mail: d.tost@steiner-company.de Mr. Shane Cook, DEQ, DEMLR, State Dam Safety Engineer by electronic mail: shane.cook@ncdenr.gov

STATE OF NORTH CAROLINA COUNTY OF MOORE	IN THE GENERAL COURT OF JUSTICE SUPERIOR COURT DIVISION 17 CVS 82
STATE OF NORTH CAROLINA, <i>ex rel.</i> , ) MICHAEL REGAN, SECRETARY ) NORTH CAROLINA DEPARTMENT OF ) ENVIRONMENTAL QUALITY, ) DIVISION OF ENERGY, MINERAL & ) LAND RESOURCES, )	CONSENT JUDGMENT
Plaintiff, ) v. ) WOODLAKE CC CORPORATION, ) Defendant. )	MOORE COUNTY FILED MAR 15 2017 AT 2:32 O'CLOCK P M BY MP CLERK OF SUPERIOR COURT

Plaintiff, the State of North Carolina, by and through the North Carolina Department of Environmental Quality ("Plaintiff" or "DEQ"), and Defendant, Woodlake CC Corporation, hereby agree to the entry of this Consent Judgment in order to resolve the matter in controversy between the parties.

The Court finds, with consent of the Plaintiff and Defendant, and makes the following:

### **FINDINGS OF FACT**

1. The Plaintiff is the sovereign State of North Carolina. This action is being brought on the relation of Michael Regan, Secretary of the North Carolina Department of Environmental Quality, the State agency established pursuant to N.C. Gen. Stat. § 143B-279.1, *et seq.*, and vested with the statutory authority to enforce the State's environmental laws, including

the Dam Safety Law of 1967, N.C. Gen. Stat. § 143-215.23, *et seq.* ("Act"). The Division of Energy, Mineral and Land Resources ("DEMLR") is a division within DEQ and all actions taken by DEMLR are necessarily actions of the Plaintiff. The Environmental Management Commission ("EMC") is an agency of the State established pursuant to the provisions of N.C. Gen. Stat. § 143B-282, *et seq.* 

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2. Defendant, Woodlake CC Corporation (hereinafter collectively known as "Defendant") is a corporation incorporated under the laws of the State of North Carolina doing business in Moore County. National Corporate Research, Ltd. is the registered agent for Defendant in North Carolina whose office is situated at 212 South Tryon Street, Suite 1000, Charlotte, Mecklenburg County. Defendant owns Woodlake Dam located at the intersection of Lobelia Road (SR 690) and McGill Road (SR 2017) Moore County.

3. Pursuant to N.C. Gen. Stat. §§ 1-493 and 143-215.36(c), jurisdiction for injunctive relief to restrain the violation of the Act, the rules promulgated thereunder, or an order issued thereunder, for "corrective action, and for such other or further relief in the premises" rests in the Superior Court of the county in which the violation has occurred. N.C. Gen. Stat. § 143-215.36 (2016).

4. Moore County, North Carolina is the proper venue because the violations that are the subject of this action for injunctive relief have occurred and are occurring in Moore County. N.C. Gen. Stat. § 143-215.36(c).

5. The Secretary of DEQ is authorized to institute an enforcement action for injunctive relief to restrain violation of the Act, the rules promulgated thereunder, or an order issued thereunder. N.C. Gen. Stat. § 143-215.36. The Act also authorizes the Secretary to obtain

corrective action or "such other or further relief" as the Court deems proper. Id.

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6. The purpose of the Act is to "provide for the certification and inspection of dams in the interest of public health, safety, and welfare, in order to reduce the risk of failure of dams; to prevent injuries to persons, damage to downstream property and loss of reservoir storage; and to ensure maintenance of minimum stream flows of adequate quantity and quality below dams." N.C. Gen. Stat. § 143-215.24.

7. If a DEMLR inspection reveals "that any dam is not sufficiently strong, is not maintained in good repair or operating condition, is dangerous to life or property, or does not satisfy minimum stream flow requirements," the Act authorizes the EMC to "issue an order directing the owner or owners of the dam to make at his or her expense maintenance, alterations, repairs, reconstruction, change in construction or location, or removal as may be deemed necessary by the Commission within a time limited by the order, not less than 90 days from the date of issuance of each order." N.C. Gen. Stat. § 143-215.32(b). The authority to issue such orders has been delegated by the EMC to the Director of the Division of Energy, Mineral and Land Resources of DEQ, Mr. Tracy E. Davis ("Director"). 15A N.C. Admin. Code 2K.0221.

8. In order to obtain a preliminary injunction to enforce the Act, the State is not required to show actual injury. Rather, it must show only that the violative acts or practices adversely affect the public interest. *See* <u>State ex rel. Edmisten v. Challenge, Inc.</u>, 54 N.C. App. 513, 284 S.E.2d 333 (1981); <u>State ex rel. Morgan v. Dare To Be Great, Inc.</u>, 15 N.C. App. 275, 189 S.E.2d 802 (1972).

9. Defendant owns Woodlake Dam ("Dam") in Moore County, North Carolina, located approximately 2,450 feet northwest of the intersection of Lobelia Road (SR 690) and

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McGill Road (SR 2017) in Moore County. The Dam is approximately twenty-three (23) feet high and has an impoundment capacity of approximately 10,000 acre-feet at the top of the Dam. According to the Moore County Register of Deeds, the deed to the properties on which the Dam is located can be found in Deed Book 4496, Page 287, identified as the Woodlake County Club, also known as the "BHF Collateral".

10. The Dam is classified as "high hazard" because failure of the Dam could pose a threat to human life and property downstream. A breach of the Dam will likely cause serious damage to downstream single-family residences at 3862 Lobelia Road and 1484, 1492, and 1494 McGill Road, as well as State Road 690 (Lobelia Road) and State Road 2017 (McGill Road). State Road 690 is a public roadway with a traffic count of approximately 4,000 vehicles per day. State Road 2017 is a public roadway with a traffic count of approximately 330 vehicles per day. The Emergency Action Plan which was submitted by Geosyntec Consultants of NC, PC "Geosyntec" to DEMLR indicated that there are at least 551 structures, including both business and residential structures, that could potentially be inundated by a breach of the subject dam.<sup>1</sup>

11. The Dam has a long history of regulatory enforcement actions. A Notice of Deficiency ("NOD") was issued to the then owners as early as 1996. DEMLR conducted various inspections at the Dam between 1997 and 2000, identifying such deficiencies as the following:

- a. Joints in the concrete spillway were deteriorating;
- b. Upstream wave erosion was damaging the front slope of the Dam;
- c. Riprap in the exit channel was washing out;
- d. 15 to 18 boils<sup>2</sup> were observed in the spillway near the joint between the sloped

<sup>&</sup>lt;sup>1</sup> N.C. Gen. Stat. § 143-215.31(a1)(6) provides that "Information included in an Emergency Action Plan that constitutes public security information, as provided in G.S. 132-1.7, shall be maintained as confidential information and shall not be subject to disclosure under the Public Records Act." Therefore, a copy of the EAP has not been included with this complaint.

 $<sup>^{2}</sup>$  A boil is a swirling turbulent upheaval of water occurring downstream of a dam. It occurs when water is flowing under the spillway structure and pushing soil material within the dam to the water surface.

and horizontal section of the concrete on the downstream side;

e. Seepage was noted coming from under the 4-inch PVC seepage drainage system.

As a result of these inspections, repair work was conducted on the Dam in 1998 and 1999 and eventually an approval to impound was issued by DEMLR on July 9, 1999, indicating that the repair work completed was in conformance with the approved plans and specifications pursuant to the Dam Safety Act.

12. DEMLR performed inspections at the Dam between 2000 and 2008. No NODs or DSOs were issued during this time period.

13. On February 12, 2009, an NOD was issued to the then owners, Woodlake Partners, LLC, due to the following deficiencies identified at the Dam:

a. Cracks in the concrete spillway;

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- b. Areas of concern in the drains;
- c. Spalling<sup>3</sup> of concrete in the spillway;
- d. The bottom drain not operating properly; and
- e. Various other maintenance related items.

14. A repair plan for the noted deficiencies was submitted and an approval to repair the deficiencies was issued by DEMLR on January 8, 2010. However, the approval letter also noted additional deficiencies which required repair, including repair of the concrete spillway and replacement of the spillway walkway and lift gates. Revised design plans were submitted to DEMLR dated January 17, 2011 and DEMLR sent a follow-up revision request letter on March 10, 2011.

15. DEMLR performed inspections at the Dam in February 2011 and February 2012 and, by letter, reminded the then owners of the Dam that it was still under NOD and requested a

<sup>&</sup>lt;sup>3</sup> Spalling is fragmentation or degradation of concrete where reinforcing bars are corroding from within and splitting the concrete causing areas to fall away.

status update for anticipated repair plans.

16. DEMLR issued two additional NODs on March 13, 2013 and April 22, 2014, noting the same deficiencies as those identified in the 2009 NOD as well as the following additional deficiencies:

- a. Void under spillway;
- b. Void along wing wall;
- c. Void right of center at the bottom of the spillway;
- d. Sheet piling decayed;
- e. Voids around sheet piling;
- f. Seepage noted on the downstream slope;
- g. Obstruction of drop inlet; and
- h. Other maintenance items.

17. A repair plan dated August 22, 2014 was received by DEMLR on September 5, 2014, addressing some but not all of the deficiencies in the Dam and also proposing that repairs would take place in a structured timeline, with final as-built drawings submitted by April 30, 2016.

18. On September 19, 2014, the then owners of the Dam, Woodlake Partners, LLC, filed a Chapter 11 petition for bankruptcy in the U.S. Bankruptcy Court for the Middle District of North Carolina. (In re: Woodlake Partner, LLC., Case No.: 14-81035 (Bankr. M.D. N.C.))

19. After DEMLR issued a revision request letter on October 6, 2014, a new repair plan was submitted on December 4, 2014. This new repair plan included a multi-phase construction approach, with repairs to be completed by May 1, 2017.

20. DEMLR issued a DSO to Woodlake Partners, LLC, on December 15, 2014, requiring that within 91 days, plans and schedule for repairing or breaching the Dam be developed.

21. Repair plans were submitted to DEMLR on January 28, 2015, indicating that the

bankruptcy court had approved continuation of work on Woodlake Dam. On May 15, 2015, DEMLR issued an Approval to Repair for phase 1 of the repairs to Dam.

22. A DSO was issued by DEMLR to the Dam's new owners after bankruptcy, identified as Defendant Woodlake CC Corp., on July 27, 2015, requiring that, within 91 days, the approved plans be initiated or plans for breaching the dam be developed.

23. Prior to repair of the Dam, on or about October 10, 2016, Hurricane Matthew struck the Moore County area. During the evening of October 10, 2016, DEMLR received notification from a nearby property owner regarding concern for the integrity of the Dam. Within several hours of notification, DEMLR and representatives of Defendant activated the Emergency Action Plan for the Dam and determined that a large portion of the middle section of the concrete spillway had collapsed. They determined that the Dam had the potential for imminent and catastrophic failure. The water level in the reservoir was determined to be approximately 6inches short of overtopping the Dam. Emergency measures were taken, including opening the gates of the Dam to activate the emergency spillways, and installation of large pumps, to decrease the water level in the reservoir. Subsequently, due to the failing structural integrity of the middle section of the concrete spillway, the middle gates of the Dam were closed and sand bags were placed to support closure of the middle gates by the National Guard. Based on the Dam's potential imminent failure and as part of the implementation of the EAP, inhabitants of communities downstream from the Dam were evacuated by local Emergency Management personnel. Over a period of approximately 36 hours, Defendant and DEMLR determined that the water level in the reservoir was dropping. Within approximately 72 hours from initial notification, it was determined that the emergency actions taken to reduce the water level in the

reservoir had significantly reduced the potential for a catastrophic failure of the Dam. Even with

this reduction, the Dam was determined to still be structurally unsound.

- 24. During an on-site inspection on October 12, 2016, DEMLR noted deficiencies at the Dam, including these major structural problems:
  - a. The middle section of the concrete spillway on the downstream side had collapsed;
  - b. Erosion under the collapsed spillway section had occurred;
  - c. The seepage drainage system had been damaged;
  - d. The downstream spillway walls had been overtopped and soil erosion had occurred from behind the walls; and
  - e. Most of the gates were not completely functional and were damaged.

25. On October 28, 2016, Defendant's engineer, Geosyntec, submitted interim conceptual design plans for repair to address the damage at the Dam from Hurricane Matthew.

26. On November 2, 2016, DEMLR issued an approval to complete interim emergency repairs.

27. On November 8, 2016, Geosyntec submitted the design package for bidding of the

interim remedy to DEMLR.

28. On November 17, 2016, a third DSO was issued to the Defendant. The DSO

identified the following deficiencies that threatened its structural integrity:

- a. During Hurricane Matthew, a large portion of the concrete spillway system collapsed on the Dam, damaged the underdrain system, and washed out a large portion of the downstream embankment of the Dam.
- b. Boils were noted downstream of the Dam while the reservoir was draining and since the reservoir has been drained, large amounts of sand and other types of soil have been found on the downstream side of the Dam which seems to indicate that undermining of the soil under the concrete spillway has occurred.
- c. Several cracks were noted in the concrete of the principal spillway of the Dam. Areas of concern are located along the right side (as viewed facing downstream) subsurface drain outlets. All joints in the principal spillway are in need of maintenance or repair. In addition, large areas of spalling concrete are present at the entrance and outfall of the spillway.

- d. A void [in the concrete spillway] of unknown size is present at the bottom of the principal spillway. Unsuccessful attempts have been made to stabilize these voids with concrete debris deposited at the end of the spillway.
- e. Voids are present along the right side (as viewed facing downstream) wing wall as well as at the subsurface drain outlet locations.
- f. Seepage was noted at various locations on the downstream slope of the Dam.
- g. Independent Hydrologic and Hydraulic engineering modeling was completed by DEMLR staff that indicate that it is possible for the spillway to be activated during a 4.75 inch in 6-hour rain event even with the reservoir completely drained and with both bottom drains fully open. Since October 2015, there have been at least 3 storm events that have exceeded this rainfall amount and duration in the area. Should another one of these types of storm events occur before the dam is temporarily breached, the spillway could be activated and the flow of water could continue to damage the spillway to a point that a breach of the dam could occur at or near full pool which could cause major destruction to downstream property and potential loss of life.
- h. The Dam is currently hydraulically deficient under applicable regulatory requirements and could potentially overtop during the regulatory design storm event. The Dam is capable of passing and/or storing 9.14 inches of rainfall in a 6-hour period without overtopping the Dam in a pre-hurricane condition (reservoir being at normal pool before the storm event) based on the Independent Hydrologic and Hydraulic analyses performed by DEMLR staff. The regulatory minimum spillway design storm for a large high hazard dam in Moore County is a <sup>3</sup>/<sub>4</sub> PMP (22.9 inches of rainfall) described in 15A NCAC 2K.0205(a).

The DSO ordered Defendant that:

- a. The reservoir surface elevation shall be immediately drawn down to a maximum plan elevation of 211 feet and maintained at or below that elevation until repair, alteration, reconstruction or breaching is accomplished pursuant to plans and specifications developed by a licensed engineer and approved by Tracy E. Davis, PE, CPM, Director, Division of Energy, Mineral, and Land Resources. Any devices necessary to control erosion and prevent discharge of sediment shall be installed in the interim. Re-impoundment will also require the issuance of a Certificate of Approval to Impound after a design for a new permanent spillway has been submitted to and approved by DEMLR, said spillway has been constructed under the supervision of a North Carolina licensed professional engineer, and as-builts of said construction have been certified by a North Carolina licensed professional engineer and approved by DEMLR.
- b. Woodlake CC Corp. shall by December 5, 2016 complete final design of the interim emergency remedy or emergency plans for temporary breaching the Dam and submit such design to DEMLR in accordance with 15A NCAC

2K.0302(b), AND

c. Woodlake CC Corp. shall by December 8, 2016 initiate the construction of the emergency remedy or emergency temporary breach in accordance with 15A NCAC 2K.0302(b) and said construction shall be completed by March 1, 2017. All construction or breach activities at the Dam shall be conducted in a manner that will preclude the washing of sediment downstream.

The DSO was delivered to Defendant's registered agent, National Corporate Research, Ltd., on November 25, 2016.

29. On December 6, 2016, DEMLR notified Defendant and Defendant's engineer's that plans for the final submittal of the final design of the interim emergency remedy for the Dam had not yet been submitted, as required by the November 17, 2016 DSO.

30. On December 9, 2016, DEMLR notified Defendant and Defendant engineer's that plans for the final submittal of the final design of the interim emergency remedy for the Dam had not yet been submitted, nor had construction begun on interim emergency remedy, as required by the November 17, 2016 DSO.

31. On December 20, 2016, DEMLR received notification that Geosyntec, Defendant's engineer-of-record for the Dam, had terminated their contract with the Defendant due to non-payment.

### **CONCLUSIONS OF LAW**

1. This Court has personal jurisdiction over the parties and subject matter jurisdiction over the controversy. The complaint states a claim upon which relief can be granted. The Plaintiff is entitled to injunctive relief pursuant to N.C. Gen. Stat. § 143-215.36(c).

2. This Consent Judgment entered into by the parties is fair and will terminate the controversy between them in regards to this proceeding. However, the Court will retain

continuing jurisdiction in this case until the parties have complied with all provisions of this Consent Judgment.

3. Defendant's failure to correct the violations observed in the State's inspections and described in the Dam Safety Order poses an immediate, irreparable injury to the State of North Carolina and its citizens and constitutes continuing violations of the Act. If left uncorrected there is a substantial possibility that the Dam will fail, risking damage to life and property and endangering public safety downstream.

4. Upon full and complete compliance with the terms as enumerated below, this matter shall be dismissed with prejudice.

5. The contempt provisions of Article 2, Chapter 5A of the North Carolina General Statutes shall be available to the Court to enforce this Consent Judgment.

6. The parties agree that this Consent Judgment may be signed out of county, out of session, and out of district.

IT IS THEREFORE ORDERED, ADJUDGED, AND DECREED that:

1. Defendant shall maintain the reservoir surface elevation at a maximum plan elevation of 211 feet and maintain it at or below that elevation until breaching, repair, alteration, and/or reconstruction is accomplished pursuant to plans and specifications developed by a licensed engineer and approved by DEMLR. Any devices necessary to control erosion and prevent discharge of sediment shall be installed in the interim.

2. Defendant shall bring Woodlake Dam into compliance with the Dam Safety Law through one of two options, enumerated below. Defendant shall, as soon as possible but no later than within 15 days after issuance of this Consent Judgment, notify DEMLR in writing of which

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option they choose.

- A. Temporary Full Breach In choosing this option, Defendant shall proceed with a temporary full breach of Woodlake Dam in accordance with the plans identified and approved in DEMLR's November 2, 2016 Approval to Complete Interim Emergency Repairs, RE: *Approval to Repair Temporary Breach* letter. (Attached as Exhibit A) Defendant shall, within 60 days after issuance of this Consent Judgment, initiate the construction and breach activities approved in the November 2, 2016 Approval and said construction shall be completed within 105 days after issuance of this Consent Judgment. "As-Built" drawings shall be submitted to DEMLR within 135 days after issuance of this Consent Judgment. All construction and breach activities at this dam shall be conducted in a manner that will preclude the washing of sediment downstream.
- B. Submittal of New Temporary Full Breach Plans In choosing this option, Defendant, no later than 12:00 PM on April 10, 2017, shall submit new approvable plans, including a temporary full breach plan as a minimum, to bring Woodlake Dam into compliance with the Dam Safety Law. Defendant shall, within 60 days after issuance of this Consent Judgment, initiate the construction and breach activities associated with the newly submitted and approved plans and said construction shall be completed within 105 days after issuance of this Consent Judgment. "As-Built" drawings shall be submitted to DEMLR within 135 days after issuance of this Consent Judgment. All

construction or breach activities at this dam shall be conducted in a manner that will preclude the washing of sediment downstream.

3. Defendant shall, within 20 days after issuance of this Consent Judgment, begin providing DEMLR with weekly status updates to include: water elevation reports; Defendant's progress on obtaining a contractor(s) to complete work required by this Consent Judgment; dates for bid, preconstruction and construction meetings; and work status updates related to the selected option referenced in paragraph 2 of this Section.

4. For the purposes of this Consent Judgment, the date of issuance of the Consent Judgment shall be the date on which the Court approves and signs this Consent Judgment.

5. Defendant must in all respects comply with the Dam Safety Law of 1967, N.C. Gen. Stat. § 143-215.23, *et seq.*, and the rules codified at Title 15A of the N.C. Administrative Code, Subchapter 2K. Nothing in this Consent Judgment shall be interpreted or applied to allow Defendant to violate any applicable statute or rule in the course of complying with its terms.

6. Failure of the Defendant to fully comply with this Consent Judgment shall subject the Defendant to civil and/or criminal contempt of court proceedings and punishment as provided by law.

Entered this the 15 day of MARCH, 2017, at 2:20 P.M. in Open Court. James W. Webb Superior Court Judge Presiding

[Signatures on Following Page]

## WE CONSENT:

WOODLAKE CC CORPORATION

By:

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> Julie Watson, Vice President Woodlake CC Corporation

# NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY

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By:

Tracy E. Davis, PE, CPM Director, Division of Energy, Mineral, and Land Resources.

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Energy, Mineral and Land Resources ENVIRONMENTAL QUALITY PAT MCC

DONALD R. VAN DER



TRACY DAVIS

Director

## Approval to Complete Interim Emergency Repairs

November 2, 2016

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Woodlake CC Corp. c/o National Corporate Research, Ltd. 212 South Tryon Street; Suite 1000 Charlotte, North Carolina 28281

CERTIFIED MAIL RETURN RECEIPT REQUESTED

Woodlake CC Corp. 401 South Tryon Street; Suite 3000 Charlotte, North Carolina 28202

RE: Approval to Repair – Temporary Breach Woodlake Dam Moore County State Dam ID: MOORE-040

Dear Sir or Madam:

This letter is in response Geosyntec Consultants' memorandum dated October 28, 2016 submitted on your behalf with regards to the subject high hazard dam recently damaged by Hurricane Matthew. The letter serves as an approval to perform emergency repairs under the authority of §143-215.27(b) of the North Carolina General Statutes. The scope of the emergency repairs is limited to a partial temporary breach of the dam and design of temporary lowered primary weir crest and armored spillway.

The memorandum received by this office on October 28, 2016 provides a description and supporting engineering documents for performing emergency repairs, which includes the scope of work outlined above. The plans, specifications and design data submitted to this office were prepared under the supervision of Mr. Njoroge Wainaina, PE.

Woodlake CC Corp. Approval to Repair – Temporary Breach November 2, 2016 Page 2 of 3

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This letter constitutes approval of the proposal to perform the emergency repairs to the subject dam according to the plans and specifications received by this Division on October 28, 2016, with the following stipulations:

- 1. A minimum flow of 16 cubic feet per second must be released from the dam site at all times, even during construction.
- 2. Project construction shall be supervised by Mr. Njoroge Wainaina, PE. Mr. Njoroge Wainaina, PE, shall be responsible for field observation of construction as necessary to ensure compliance with approved plans [GS 143-215.29].
- 3. The impoundment shall be completely drained and remain in a drained state at all times until an approval to impound is issued by this division.
- 4. During construction, the Division of Energy, Mineral, and Land Resources may require such progress reports as are deemed necessary. Continued submittal of written status reports on an at least weekly basis is required.
- 5. In accordance with GS 143-215.30 and NCAC 15A-2K .0203, .0212, .0215, and .0216, within 30 days of completion of the project, Mr. Njoroge Wainaina, PE, shall inspect the completed work and upon finding that the work has been done as specified and that minimum stream flow requirements have been satisfied and the dam is safe, shall file with the Division of Energy, Mineral, and Land Resources two sets of record drawings and a certificate stating that the emergency repair work has been completed in accordance with approved plans, specifications and other requirements.
- 6. In accordance with GS 143-215.30 and NCAC 15A-2K .0220, final written consent must be issued by the Director of the Division of Energy, Mineral, and Land Resources for use of this dam pursuant to these repairs.
- Prior to issuance of final written consent for use of this dam pursuant to these repairs, the requirements of Session Law 2014-122, Section 8, as revised by Session Law 2015-7 must be met. Session Law 2015-7 requires all owners of high and intermediate hazard dams to submit an Emergency Action Plan (EAP) to the Department of Environment and Natural Resources (DENR) and the Department of Public Safety (DPS) no later than December 31, 2015. As such, a revised Emergency Action Plan (EAP) will be required by this office prior to final approval of the completed emergency repairs.
- 8. This approval does not convey the right to access the private property of others. Any required access to perform the approved work must be secured prior to initiation of construction activities.
- You must notify Mr. Brad Cole, PE, Chief of Regional Operations, Land Quality Section, 512 N Salisbury Street, Raleigh, North Carolina 27604, telephone number (919) 707-9221 before the start of construction.
- 10. The designs of the temporary breach are considered a preliminary design for this emergency remedy as per the letter submitted on October 28, 2016. Therefore, the final designs for the

Woodlake CC Corp. Approval to Repair – Temporary Breach November 2, 2016 Page 3 of 3

temporary breach must be submitted to this office by 5:00 pm on Tuesday, November 8, 2016. Construction per the preliminary design as approved by this letter may commence before the final plans have been submitted as long as this Division is notified.

The engineer-of-record or his qualified representative shall provide continuous on-site observations from the time construction commences until the time construction concludes. Weather forecasts shall be monitored by the engineer-of-record or his qualified representative to ensure that no accidental breach of the dam occurs during construction by a rain event. All safeguards shall be taken to ensure that the reservoir is completely drained and remains in a drained state during and after construction until notified otherwise by this Division. If a rain event should occur during construction, all resources shall be implemented to ensure that the reservoir stays in a drained state. Should a rain event be forecasted, or other conditions of concern arise, the owner or his representative shall take immediate steps to: (a) drain the reservoir, (b) notify their engineer, and (c) notify this Division of the conditions at the site.

The Army Corps of Engineers and the Division of Water Resources of this Department should be contacted to determine if additional permits are required. Also, the erosion and sediment control program having jurisdiction should be contacted to determine permit requirements. In any case, sediment must be prevented from entering the waters of the state or flowing onto neighboring property.

Please contact Mr. Nick Mills at the Fayetteville Regional Office at (910) 433-3300 or a staff member of the Dam Safety Program in the Raleigh Central Office at telephone number (919) 707-9220.

Sincerely, Davis, PE, CPM irector

TED/bsc

cc: Mr. Njoroge Wainaina, PE, Geosyntec Consultants of NC, PC Ms. Julie Watson, Woodlake Country Club Mr. Brad Cole, PE, DEMLR Chief of Regional Operations Mr. Nick Mills, DEMLR Fayetteville Regional Office Surface Water Protection Regional Supervisor - FRO

Filename: MOORE-040\_20161102\_Interim COAR\_Woodlake Dam - Emergency Temporary Breach