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ENVIRONMENTAL MANAGEMENT COMMISSION

BEFORE THE ENVIRONMENTAL MANAGEMENT COMMISSION

ILUKA RESOURCES, INC.,)	
)	REQUEST FOR DECLARATORY
)	RULING
Petitioner.)	
)	

Pursuant to N.C. Gen. Stat. § 150B-4 and 15A N.C. Admin. Code 21.0601, Iluka Resources (NC) LLC (“Iluka”) submits this request to the North Carolina Environmental Management Commission (“Commission”) for a declaratory ruling regarding the application of the Dam Safety Law to Iluka’s planned Aurelian Springs Mineral Sands Mine. In support of this request, Iluka submits the following information:

1. Name and Address of Petitioner

Iluka Resources (NC) LLC.
 413 Becker Drive
 Roanoke Rapids, NC 27870

2. The Statute Upon Which a Ruling is Desired

N.C. Gen. Stat. § 143-215.25A

3. A Concise Statement as to Whether the Request is for a Ruling on the Validity of a Rule or on the Applicability of a Rule, Order or Statute to a Given Factual Situation

Iluka is requesting a declaratory ruling on the applicability of § 143-215.25A(a)(6) to dams that will be built at the planned Aurelian Springs Mineral Sands Mine in Halifax County, North Carolina. Specifically, Iluka seeks a determination of whether the dams are exempt from the requirements of the Dam Safety of Law of 1967, N.C. Gen. Stat. § 143-215.23 *et seq.* (the “Dam Safety Law”) or whether it must submit an application to the Department of Environment and Natural Resources (the “Department”) before beginning construction.

a. Legal Background

The Dam Safety Law was enacted “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. “When viewed in context, it is clear that the evils which the act seeks to prevent are evils which ensue from dam failure.” *Wells v. Benson*, 253 S.E.2d 602, 605 (N.C. Ct. App. 1979). Consistent with that purpose, N.C. Gen. Stat. § 143-215.25A(a) lists seven categories of dams that are exempt from the Dam Safety Law’s requirements. For this request, two of those exemptions are relevant: (1) Subsection (a)(5) exempts any dam that is “[u]nder a single private ownership that provides protection only to land or other property under the same ownership and that does not pose a threat to human life or property below the dam;” and (2) Subsection (a)(6) exempts any dam “[t]hat is less than 25 feet in height or that has an impoundment capacity of less than 50 acre-feet, unless the Department [of Environment and Natural Resources] determines that failure of the dam could result in loss of human life or significant damage to property below the dam.”

The Dam Safety Law is implemented through regulations located at 15A N.C. Admin. Code Chapter 2K, Section .0100. The regulations provide instructions for measuring a dam as follows:

- (a) For the purpose of determining size classification, the height of a dam shall be measured from the highest point on the crest of the dam to the lowest point on the downstream toe.
- (b) The total storage capacity of a dam shall be that volume which would be impounded at the elevation of the highest point on the crest of the dam.

15A N.C. Admin. Code 2K.0223.

b. *Statement of Facts*¹

The Aurelian Springs Mineral Sands Mine will involve the excavation of titanium and zircon mineral sands through pit mining on land leased, and not owned, by Iluka. As the mineral sands are excavated, they will be processed to remove the valuable minerals. The remaining “tailings,” consisting of clay, quartz sands, and gravel, will be sluiced back into the pit, where they will settle and be dewatered. At the completion of the mining process, the pit will be filled with this material, and the mined area will be near its original grade.

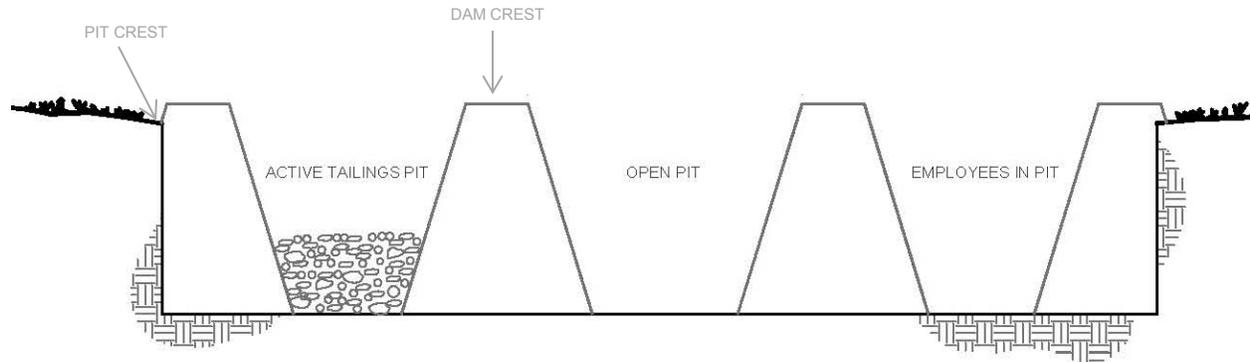
Because Iluka will be mining and producing tailings at the same time, it intends to construct dams within the pit to isolate sections that can be used as active tailings ponds while mining takes place elsewhere. The amount of water contained in a particular tailings pond will always be less than the total volume of the pit, so, for a dam facing the open pit, failure would result only in water and tailings being dispersed in the pit.² The height of a dam from the bottom of a pit to the crest of the dam will, in some cases, exceed 25 feet in height, and the impoundment capacity, calculated using the distance from the bottom of the pit to the crest of the dam, will exceed 50 acre-feet.

At times, there will be employees working in the portions of the pit. In order to protect the employees from the risk of a dam failure, there will always be a second dam between the employees and the active tailings ponds. This will ensure that there is always an empty chamber between the active tailings pond and the employees. As a result, a failure of the dam on the active tailings pond would only result in water entering the empty chamber and reaching the second dam; it would not result in water entering the chamber where the employees are working.

¹ The facts stated here reflect Iluka’s plans for construction and operation of the mine. Iluka fully intends to comply with all applicable laws, regulations, and permits and will adjust its plans as necessary in the future to do so.

² The pit will also involve dams along the perimeter of the pit, the purpose of which will be to keep water from leaving the pit. Iluka is not seeking a declaratory ruling with respect to these dams.

Additionally, whenever employees are required to work in the pit, daily safety inspections will be made of the dam.



c. Application of Law to State of Facts

Iluka requests that the Commission determine the applicability of N.C. Gen. Stat. §§ 143-215.25A(a)(5) and (6) as follows:

i. N.C. Gen. Stat. §§ 143-215.25A(a)(5)

This exemption applies to dams with three characteristics: (1) single private ownership, (2) providing protection to land or other property under the same ownership, and (3) do not pose a threat to human life or property below the dam. The dams described above will meet the first characteristic. For the second characteristic, the dams do not provide protection to land or other property. Unlike a more traditional in-stream dam, these dams do not retain water upstream that could, in the case of a dam failure, travel off-site to affect downstream property owners. Their purpose is not to protect downstream property from the possibility of flooding. Rather, their purpose is to segment the mining pit for different uses, to facilitate the disposal of mine tailings, and to speed mine reclamation. The failure of one of these dams would result only in water and tailings being distributed into an adjacent cell of the pit. The only harm would be to hamper mining operations. On the third characteristic, as already stated, the dams do not pose a threat to

property below the dam. In the absence of appropriate safety measures, they could pose a threat of harm to human life, based on the risk to employees working in the pit. However, as long as employees are separated from every active tailings pit by an empty cell of appropriate size, that threat is eliminated.³ Accordingly, a dam constructed for a tailings impoundment contained entirely within a mining pit, and which is separated from employees by another dam, is properly classified as a dam that is “[u]nder a single private ownership that provides protection only to land or other property under the same ownership and that does not pose a threat to human life or property below the dam.”

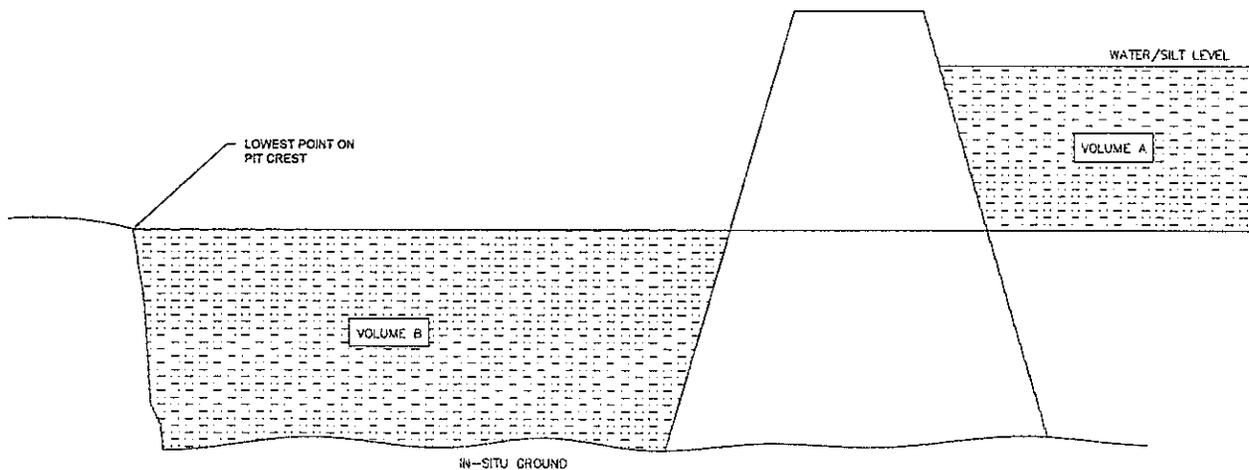
ii. N.C. Gen. Stat. §§ 143-215.25A(a)(6)

This exemption applies when (1) the Department has not determined that failure of a dam could result in loss of human life or significant damage to property below the dam and (2) either of the other two conditions are met: (a) the dam is less than 25 feet in height or (b) it has an impoundment capacity of less than 50 acre feet. In effect, this exemption applies to smaller dams for which the consequences of dam failure are low.

In the context of a pit mine, the term “impoundment capacity” has a different connotation than it would in the context of a riverine dam or surface waste impoundment. In a pit mine, water is impounded by the pit itself. Were there no dam, the water would still be contained within the pit. The dam’s function is not to hold back water that would otherwise rush off-site but to segregate a portion of the pit for use as an active tailings pond. The dam only functions like a traditional dam if it creates impoundment capacity above that of the pit itself. Thus, for a dam located in a pit mine, the impoundment capacity attributed to the dam should not include

³ The risk that the second dam would also fail could be considered in this analysis if the failure of the first dam were likely to cause the second dam to fail. *See* 15A N.C. Admin. Code. 2K.0105(e) (“When dams are spaced so that the failure of an upper dam would likely fail a lower dam, the consequence of the lower dam's failure shall be a determining factor for the upper dam's hazard classification.”) However, the risk of a second dam failure can be excluded if the failure of the upper dam is not likely to cause the failure of the lower dam.

capacity that is attributable to the pit. That is, it should be calculated using the distance from the pit crest to the top of the dam. In the figure below, if water were impounded to the right side of the dam, the impoundment capacity would be “Volume A.”



When the volume calculated in this fashion is less than 50 acre-feet, a dam may still be regulated if the Department determines that it poses a threat to human life or property below the dam. For reasons stated above, the dams at issue here do not pose a risk to human life or property.

4. Arguments or Data which Demonstrate that the Petitioner is Aggrieved by the Rule or Statute or its Potential Application to Him/Statement of the Consequences of a Failure to Issue a Declaratory Ruling in Favor of the Petitioner

Iluka is entitled to seek a declaratory ruling pursuant to N.C. Gen. Stat. § 150B-4 because it is a “person aggrieved.” A “person aggrieved” is “any person or group of persons of common interest directly or indirectly affected substantially in his or its person, property, or employment by an administrative decision.” N.C. Gen. Stat. § 150B-2(6). Here, Iluka is adversely affected because it has proposed to construct dams as described in the Statement of Facts above and has been told by a representative of the Department that such dams are not exempt from the Dam

Safety Law. Because of this, Iluka must either change its plans and build smaller dams or submit an application to the Department before beginning construction. Because Iluka must make decisions now about future operations as it prepares an application for a mining permit, the interpretation of the statutory exceptions has a current adverse impact. (Ex. A.)

Iluka first submitted a proposal for the construction of dams to the Department on May 31, 2013, in a document titled “Draft Impoundment Design Guidelines.” (Ex. A-1.) The Department responded with comments dated June 27, 2013, in which it indicated where Iluka should make changes to the proposal. (Ex. A-2.) Iluka met with Department staff on July 26, 2013. Iluka submitted a second proposal on September 9, 2013. (Ex. A-3.) The Department again responded with comments (Ex. A-4) and provided a separate document for determining when dams would be regulated (Ex. A-5). According to the second document, “[v]olume calculations will be from the lowest in-situ ground point to the maximum pool level within the impoundment as defined by the crest elevation of the containment dike.” (*Id.* (emphasis in the original).)

Based on this correspondence, Iluka understands the Department’s position to be that the two statutory exemptions do not apply to the dams described above and that when Iluka files its statement concerning the height, impoundment capacity, purpose, location and other information, as required by N.C. Gen. Stat. § 143-215.26, the Department will require Iluka to submit an application before constructing the dams as proposed.

5. A Draft of the Proposed Ruling

1. A dam constructed for the purpose of creating a tailings pond within a mine pit is exempt from the Dam Safety Law pursuant to 143-215.25A(a)(5) as a dam that is under a single private ownership that provides protection only to land or other property under the same ownership and that does not pose a threat to human life or property below the dam under the following circumstances: (1) were the dam to fail, all contents of the tailings pond would be contained within the pit, and (2) the Department has determined that the failure of the dam would not pose a threat to human life below the dam.

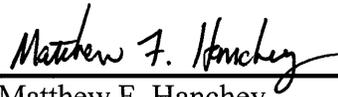
2. A dam constructed for the purpose of creating a tailings pond within a mine pit is exempt from the Dam Safety Law pursuant to 143-215.25A(a)(6) under the following circumstances: (1) the impoundment capacity attributable to the dam, calculated using the distance from the pit crest to the crest of the dam, is less than 50 acre-feet, and (2) the Department has determined that the failure of the dam would not pose a threat to human life below the dam.

6. A Statement of Whether an Oral Argument is Desired, and, if so, the Reason(s) for Requesting Such an Oral Argument

Iluka requests the opportunity to present oral argument for the purpose of providing additional detail about its plans for the Aurelian Springs Mineral Sands Mine and addressing any questions the Commission has regarding how the dams will be situated and operated.

Respectfully submitted, this the 5th day of May, 2014.

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