

**2018 Annual Inspection  
of Settling Area  
and Cooling Pond Dikes**

**Nutrien Ltd - White Springs  
Hamilton County, Florida**



**Ardaman & Associates, Inc.**

**CORPORATE HEADQUARTERS**

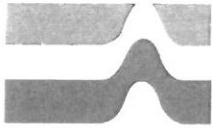
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March 13, 2019  
File Number 19-13-0001

Nutrien Ltd - White Springs  
15843 SE 78TH Street  
White Springs, Florida 32096

Attention: Mr. Cameron Lynch

Subject: 2018 Annual Inspection of Settling Area and Cooling Pond Dikes, Nutrien Ltd - White Springs, Hamilton County, Florida

Gentlemen:

The following report summarizes the findings, conclusions and recommendations of the 2018 end-of-year annual inspection of the above subject settling area and cooling pond dikes. The inspection was conducted on February 4, 2019 by Mr. Bill Jackson, P.E. of our Orlando office, accompanied by Frank Johnson and Andy Day for the Suwanee River facility and by Frank Johnson only for the Swift Creek facility. Routine inspections of the active settling area and cooling pond dikes are made weekly by the Nutrien staff and not less than semi-annually by an engineer from Ardaman & Associates, Inc. The relative location of the settling area and cooling pond dikes and associated spillways are shown on the aerial photograph and schematic diagram presented herein as Figures 1 and 2, respectively.

The Nutrien settling area and cooling pond dikes are generally well maintained, safely operated and presently in good condition. While the following report makes some recommendations concerning future maintenance and some operational constraints for your dikes and settling areas, we did not find any conditions that require immediate corrective action.

Based on FDEP's letter of July 14, 1995, Suwannee River Settling Areas 1, 2, 3A, 3B and 10 have been classified as "abandoned" and no longer require inspection. These settling areas were not inspected and are not included in the discussion contained herein.

The Suwannee River mine was shut down in 2014 and has since been dismantled. As a consequence, the remaining settling areas in the Suwannee River complex (those east of CR-137) are currently inactive and in many cases could be placed in the "retired" category. Although technically inactive, Areas 4, 6B, 7, 8, 9, 11, 12 and 13 which contain substantial free standing water associated with the transfer and management of various water sources within the Suwannee River complex, continue to be operated as "active" impoundments and are inspected on a weekly basis by Nutrien personnel.

Required minimum freeboard levels for the process water ponds included herein have been updated to be consistent with previous recommendations contained in an Ardaman report titled: "Recommended Freeboards for the White Springs Phosphogypsum Stack Systems Based on Wind Surge and Wave Runup Criteria", dated July 31, 2006. The latest revision of the design freeboard requirements was included in a letter provided to Nutrien in September 04, 2018 and titled "Temporary Use of Design Freeboard of Process Water Cooling and Storage Pond

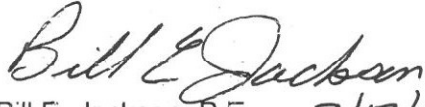
Perimeter Dikes Per Rule 62-672, F.A.C., White Springs Phosphogypsum Stack Systems, Hamilton County, Florida”.


This annual report summary is based on a visual inspection of the Nutrien settling area and cooling pond perimeter dikes and an external inspection of the associated spillway structures. Our services did not include inspection, assessment or endorsement of any process systems, gypsum disposal facilities or an internal inspection or structural evaluation of any spillway or water level control structure.

The conclusions and recommendations presented herein apply to existing conditions and operating procedures that were known to us at the time of the inspection. The inspection was conducted, the conclusions reached and the recommendations prepared in accordance with generally accepted engineering principles and practice. No other warranty, expressed or implied, is made. Nutrien must continue to inspect these facilities on a regular basis and any changes in existing conditions should be brought to our immediate attention.

It has been a pleasure assisting you with the annual dam inspection. If needed, we will be pleased to discuss in greater detail the findings and recommendations presented herein.

Very truly yours,  
ARDAMAN & ASSOCIATES, INC.  
*Certificate of Authorization No. 5950*

  
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Reinardo Rolo, Ph.D., P.E. 3/13/19  
Project Director

BEJ/RR

Enclosure

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