

Final Report

Table 5 – Summary of 2020 “CY2020 Annual Inspection of Waste Phosphatic Clay Settling Area Dikes” Ardaman & Associates Field Inspection Notes with Nutrien Responses provided December 7, 2021.

Ardaman & Associates Inspection Notes	Nutrien Response and/or Action
Settling Area 8 SRM – Spillway 24 will need to be renovated or sealed if Area 8 continues to be used for water management or clay slurry disposal. Alternatively, a cofferdam can be built behind the spillway but it must be constructed so that it is capable of remaining safely stable in the event of the Spillway or of the partition dike.	A cofferdam was constructed around Spillway 24 in October 2021.
Settling Area 1 SCM – Measures ought to be taken to prevent the two pipes penetrating through the west dike of Area 1 near the clay launder chute from being submerged, even partially. The water level in the area has to be lowered below the invert of the pipes.	The pipes in question have been in place for several years. The ground elevations in the area prevent their presence from being a safety concern. Previous inspections have not found the pipes to be a safety issue.
Settling Area 1 SCM – The stilling basin area should have a dedicated dredge to extricate the current buildup of sand in the basin and maintain the liquid level against the west wall not higher than elevation 159.5 feet (NGVD).	As noted in the 2019 EOY Annual Inspection, the dam was raised to 164.0 ft. with an approved operating level of 161.0 ft. The dredging of the basin is a regular channel maintenance activity and was last conducted in 2019. Nutrien has ready access to dredging services if needed, making a dedicated dredge unnecessary.
Settling Area 4 SCM – Spillway 14 should be abandoned and sealed with concrete as soon as practicable.	Spillway 14 was abandoned and sealed with concrete in September 2021.
Settling Area 6A SCM – The fluid level in Area 6A was at design maximum level at the time of inspection. A dredge should be kept in Area 6A to transfer clay slurry to other available settling areas and to aid in preventing the fluid level in Area 6A from exceeding the design maximum.	An additional dredge is not necessary to accomplish this objective. At the time of inspection, material from other settling areas was being dredged and pumped to SA 6A in order to fill SA 6A to its maximum capacity with thickened clay. Dredging activity has ceased to SA 6A and the fluid elevation fluctuates with Settling Area 8A.
Settling Area 8A – It is emphasized that Area 8A (as well as Area 8B) was not being safely operated at the time of the inspection in accordance with Rule 62-672, F.A.C., insofar as the combined areas 6A, 8A, and 8B system with it's (sic) very large catchment area does not have sufficient surge capacity to manage operational flow and runoff generated by a design rain event generating a precipitation depth of 12 inches in 24 hour period, all the while maintaining a minimum freeboard of 5 feet. The pond level must be lowered sufficiently to allow these settling areas to conform to safe operation in accordance with the rule.	As the owner and operator of this system, we strongly dispute the statement that these settling areas were ever being operated in an unsafe manner. The water elevations in Nutrien's clay settling area are managed on a daily basis in full consideration of weather forecasts, the capacity of discharge spillways, and the ready ability to redirect clay slurry to other settling areas if needed. The combination of those management strategies ensure that we have sufficient surge capacity. Nutrien standard operating procedure is to lower the water elevations in settling areas prior to storm events by discharging water to the approved NPDES outfalls. Hydrological modeling is performed annually based on current conditions to determine maximum operating levels appropriate to meet the conditions in Rule 62-672, F.A.C.
Settling Area 8A – Increase dredge capacity in Area 8A to prevent continue overflow of waste clays through Spillway 22 into the return water ditch and to increase surge capacity in settling area.	At the time of the inspection, an additional dredge was operating, providing increased capacity to help prevent overflow of waste clay through Spillway 22. This system continues to operate and has been effective in preventing the overflow of clay through SW 22.
Settling Area 8A – Waste clays sedimented in the return water ditch ought to be dredged out immediately in order to re-establish the flow capacity of the ditch and recovery the minimum required freeboard and return to safe operation of the return ditch.	The periodic dredging of the return water ditch is normal maintenance practice. Dredging maintenance in the return water ditch is on-going and will continue in 2022.
Settling Area 8B – Waste clays sedimented in the return water ditch ought to be dredged out in order to re-establish the flow capacity of the ditch and to recovery the minimum required freeboard.	
Settling Area 9 - Waste clays sedimented in the return water ditch ought to be dredged out in order to re-establish the flow capacity of the ditch and to recovery the minimum required freeboard.	
Settling Area 10V - Waste clays sedimented in the return water ditch ought to be dredged out in order to re-establish the flow capacity of the ditch and to recovery the minimum required freeboard.	