

Summary of observations during site visit to Wake Stone Triangle Quarry (92-10)

Date: 04-05-2019

ON SITE: 11:15 AM (approx.)

OFF SITE: 1:00 PM (approx.)

Weather: 58 degrees; steady moderate rainfall

Summary: Met with David Lee who is the Environmental Manager for Wake Stone at the mine office building. We briefly reviewed the plan set for the mine site and discussed how the mined stone is processed at the site.

The inspection was limited to the areas of the mine site with the potential to impact water quality in the locations referenced in the complaint from Mr. Morris. This included the stone processing area and process water settling ponds, the process water reservoir, the bypass channel, and the North Pond. The bypass channel runs from a culvert under I-40 roughly southwest to northeast through the middle of the permitted area around the process water reservoir to the North Pond. The North Pond is the pond downstream of the process water reservoir. We then walked the receiving channel downstream of the North Pond to its confluence with Crabtree Creek. Alleged accumulation of fines from the mine's stone processing plant in this channel was the subject of the complaint (which included the video posted on YouTube).

Regarding the processing plant area, the water used in washing the stone is confined within a closed-loop system. The runoff produced at the wash screen drains into the process water settling ponds which subsequently drain to the process water reservoir. Most of the fines carried by the runoff settle out into the settling ponds. Any that don't are carried to the reservoir. The water in the reservoir is then reused to wash the stone. The reservoir has an emergency spillway, but Mr. Lee reports that it has not been activated since Hurricane Fran in 1996. Because of this closed-loop approach, none of the process water ever has an opportunity to leave the site.

There are some places where sediment-laden runoff from the mine haul roads and other open areas may enter the bypass channel. The day of the inspection, there was a steady downpour of rain and I did not observe an excessive amount of sediment entering this channel. As I stated before, the bypass channel flows around the process water reservoir and discharges to the North Pond. There was evidence of previous years of deposition of material in the form of a sand bar in the headwaters of the North Pond. Using the age of the woody vegetation growing on this sand bar as a gauge, this has probably been accumulating very slowly over the last 30+ years. This indicates that the North Pond has been very effectively trapping/settling particles in the runoff from the mine site and (upstream of the mine) for many years. To my knowledge, Wake Stone has reported no parameter exceedances as a result of periodic water sampling and testing under their NPDES permit. A review of stormwater records would be needed to confirm this.

In summary, I found no violations either of the mining permit or NPDES SW permit on the day of my visit. I further observed that the visual quality in the stream flowing from the North Pond was virtually indistinguishable from visual quality of the water flowing in Crabtree Creek just upstream of the confluence of these two channels.

Respectfully submitted by: Bill Denton