

Tour of New Aggregate Plant in Les Cayes

By Herb Nordmeyer
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Nick Trout, an instructor with the American University of the Caribbean and a master mason, made arrangements to take me to see the facility where a sand and gravel plant and a block plant are being built in Les Cayes. He stated that one of the reasons the facility is being built was to produce materials for the airport expansion. He did not supply any information concerning the ownership of the facility.

He did say that since the local aggregate was of low quality, they were trucking hard aggregate in from a distance, so they could produce aggregate which met standards.

Photographs which were taken during the tour were shot to show the people involved, not to show the machinery. As a result, the upper portion of some of the machinery is not shown.

Aggregate Plant

The plant components are mobile, so they can be moved to a new area from time to time. Based on the color of the machinery and the name on it, the items were purchased from Superior Machinery Company, whose home office is in Morris, Minnesota. Superior is a leader in mobile aggregate-processing machinery.

Each of the components is designed with wheels and a hitch and is sized to be highway legal in the US.

The plant consists of many parts.

A crusher

The crusher will handle rock up to at least eight inches (20 cm) in diameter, possibly more. Note the wheels. Without a great deal of difficulty, the crusher can be moved to a different location.



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This photo shows the head end of the crusher, and below the name plate one can see hitch pin for hooking it to a tow vehicle. Due to some damage to the name plate and not taking a close-up photo of the name plate, I am not able

to determine the number of tons per hour which can be crushed.

When the plant is set up to operate, the stacking conveyor is positioned so aggregate from the crusher feeds onto a stacking conveyor. The end of the conveyor is fixed, and the conveyor can be swung so a long-curved pile of aggregate can be stacked.



By stacking the crushed aggregate, both the crushing and the screening portions can be operated separately. This has several advantages. Until production demand mandates, by operating one unit at a time a smaller crew is required. Also, if there is a breakdown with one of the units, the other unit can continue to operate at normal speed. Thirdly, by operating each unit at its most efficient speed, more finished aggregate can be produced at a lower cost.

Screening and Washing Unit

When operating the vibrating screen and washer, crushed aggregate is placed in this hopper and is metered onto the conveyor belt, which transports it to the screening and washing unit. In the background the crushing unit can be seen.



An overview of the vibrating screening and washing unit. The feeder is to the left rear. The vibrating screening component is to the right and the stacking conveyor is to the front.

Here are the base of the vibrating screens and the base of the conveyor which removes the sized aggregate.

Note the hub where the wheels attach to the unit, so it can be towed. The heavy legs can be unpinned and folded when the unit is moved.





This is the upper end of the vibrating screen washer unit.

Pea gravel sized and washed for use in producing concrete block. This is a hard aggregate and can be used to make excellent concrete block.

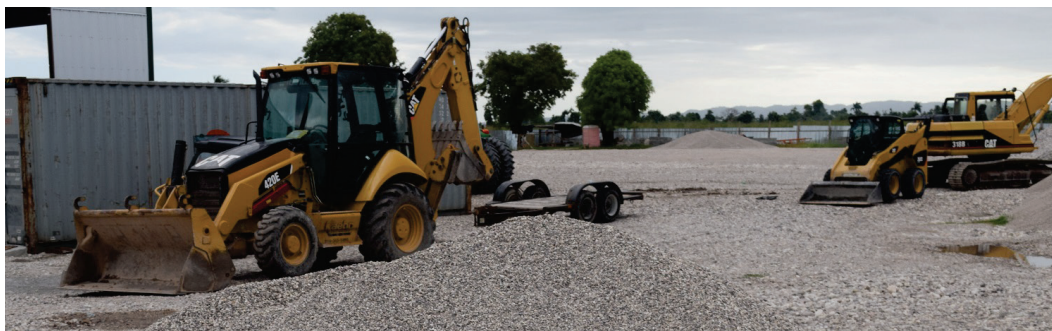


A settling pond is located near the wet vibrating screen as a source of water and to allow the washings from the sand to settle.

Shown are the settling pond with the vibrating screen and washing unit in the background.



There are loaders and other equipment for feeding the system and for stacking and loading out the finished product. Besides the backhoe, skid steer loader, and track hoe in this photo, there are a road grader and several other loaders and a least one fork lift.



With the aggregate products which can be produced with this plant, any concrete contractor could make quality concrete without having a copy of *Quality Concrete from Crap*.

My friend Clay Coleman identified the crusher as an Eagle 500-05 HIS. Through-put varies depending on the adjustments and the gear ratio of the crusher but would be about 125 tph depending on the adjustments and the gear ration. Of the through-put, about 30 to 50 tons per hour of $3/8$ inch minus aggregate would be produced. Then the screening unit would be needed to be adusted to separate that portion out.

Concluding Remarks.

While the capacity of this facility is not enough to supply all the aggregate needs for Les Cayes, it is large enough to have an impact on building. As people see that quality products are available and that trained craftsmen can build buildings which do not collapse in hurricanes and earthquakes, the demand for these products will expand.

Oposing these positive forces are people who want to build as cheaply as they can and do not consider whether the structures will survive the next disaster. This is where building codes, building inspectors, and the universities training engineers and architects come into the picture.

If this facility is successful, there will be similar facilities built in other parts of Haiti. If it is not successful, then the word “quality” will not be used for any building in Haiti.

Based on the capacity of the crushing unit and the demand of pea gravel for the block plant, there will be substantial capacity to produce concrete aggregate.