

BAY SAND COMPANY INC.
CONDITIONAL USE PERMIT
PROPOSED EXPANSION PEA HILL “SAVAGE
MINE SITE”

OPERATIONAL PLAN

P. O. BOX 961
SMITHFIELD, VA 23431

OPERATIONAL PLAN

PROPERTY NARRATIVE & PROJECT NARRATIVE

Bay Sand Company, Inc. (applicant) as well as landowner Ann Marie Kirk, propose the expansion of an existing operation of a mineral extraction site pit located within the limits of Isle of Wight County. The current operation is located off Muddy Cross Road and carries tax parcel numbers 33-01-034, 41-01-054, 41-01-056, and 41-01-057. This expansion is proposed to encompass 40-50 acres of adjacent property carrying tax map number 41-01-055. All parcels are zoned Rural Agricultural. Of note is the fact the existing operation has met the State Division of Mineral Mining requirements for reclaiming approximately 60 acres on the current site as of June 10, 2019. Reclamation requirements stipulate the land will be returned to condition as good or better than the original condition.

The purpose of the application is to allow the expansion of the existing conditional use of resource extraction to be permitted on these acres which are adjacent to the current operation. Acreage to be mined consists of fill sand and topsoil to be used for various construction projects within Isle of Wight County, City of Suffolk and surrounding Hampton Roads area. Projects include roadways, larger scale commercial construction projects, and residential construction projects. Over the past five (5) years approximately 2,500,000 cy of material has been extracted from the existing location. It is estimated that with the proposed expansion between 1,000,000 and 2,000,000 cy of material will be extracted from the new site over the next five (5) years. As Bay Sand Company, Inc. compensates Isle of Wight County 23 cents per cy for material extracted, the County would receive an additional \$100,000.00 revenue annually from the proposed site.

Once approved, the mining site will be cleared on an as needed basis to accommodate excavation for materials. Disturbed topsoil will be stored on site and will be used as screening berms as well as water diversion structures. All mining draining along with storm water will be self-contained within the mining site.

Post mining land use is projected to be unmanaged forest with some acreage identified as agricultural for farming purposes along with the potential for lakefront residential development.

1. PERMIT SIGN

The permit sign will be posted at the entrance gate to the site from the approved entrance from Muddy Cross Road. The sign will be approximately 2 feet X 3 feet. The sign will contain the name of the company and the permit number. In addition, a gate at the end of the access road onto the mining site will always be maintained and locked when mining operations are not functioning.

Hours of Operation will be 7:00 a.m. to 4:30 p.m. Monday through Friday; 7:00 a.m. to 2:00 p.m. Saturday; Closed Sunday.

2. SCREENING

The site is located adjacent to Muddy Cross Road. Additionally, the mining operation will be restricted from view from the public highway by its location above the elevation of the main road and once mining begins the mine will be taken below ground level. Existing trees and ground cover will remain intact and preserved as road frontage. The mineral extraction will commence from the back acreage of the property with no visibility from the roadway.

The setback for mining excavation shall be 50-100 feet to protect adjoining property from collapse, caving or sliding, and shall not be used for any purpose during the period of excavation to include overburden and spoilage storage except as necessary for temporary topsoil storage.

3. MARKING PERMIT BOUNDARY

The permit boundary of the current acres is defined and marked as is the additional 40-50-acre tract associated with this requested expansion. Once mining begins, the footprint of each lake area will become defined by the outer perimeter containment berm that will be constructed. This will become the permanent identifiable feature that denotes the permit boundary. As additional area on the permit becomes disturbed, the boundary will be marked to define the permit boundary as identified on the attached Exhibit.

4. METHOD OF MINING

The permitted area where the mine site is located is generally level and primarily flat with very minimal changes in elevation. Typically, the elevation ranges between 35 and 40 feet above sea level. Mining will create two incised lakes on the property. Mining will be done primarily with excavators and front-end loaders. Excavation will begin at ground level and take the mine floor level to approximately 25 feet below ground level. Outer banks will initially be cut and sloped to an angle of repose for the type of material. Groundwater is encountered approximately 12 feet below the elevation of the surface.

5. PROCESSING

Currently, there are no plans to install any type of processing plant or to process sand onsite. Should material processing become necessary, the operational plan will be amended for processing.

6. TOPSOIL STORAGE

The mine area is farm fields and cut-over woods land. The topsoil will be removed from the area to be disturbed and retained for reclamation in the containment berm around the perimeter. As expansion occurs and additional topsoil is stripped, the topsoil will be retained on site and used in the construction and extension of the screening berm.

7. OVERBURDEN & WASTE DISPOSAL

Overburden removed during mining will remain on the site. These materials will be used to repair and fill the slopes as the site is reclaimed in the final reclamation of the site.

No metal, lumber, or debris will be left on the mine site once mining is completed.

Debris, building materials, tires, or garbage will not be brought on the site during the life of this operation. Any site generated waste will be removed and disposed properly. No other buildings will be retained after mining.

8. HAUL ROADS & ACCESS ROADS

The main entrance road to the mine is approved from Muddy Cross Road (Route 620) at the northern end of the permitted area. The entrance is currently in existence and constructed according to an approved plan with no intersection of any public road and the appropriate angle of less than 60 degrees.

The land is level with no significant differences in elevations. The internal grade will be constructed according to the drawing provided.

The road will be maintained to control dust by wetting and applying water as necessary.

If conditions cause tracking of materials from the mine road public highway, the tracked materials will be cleaned up promptly. Bay Sand has enlisted the services of an on-call contractor to keep Route 620 clean at the site entrance.

9. SEDIMENT & DRAINAGE CONTROL

Temporary controls such as silt fencing and straw bales will be used to control drainage and sedimentation temporarily until permanent controls can be constructed.

Once the pit area is started and excavation begins, the pit or basin will serve as the drainage and sedimentation collection basin for the applicable section of the permitted area. The proposed site will have two basins established by mining operator that is more than adequate to provide .125 acre/feet of capacity per disturbed acre for each section. The size of the lakes when completed will cover an area between and 30 acres to a depth of approximately 10 feet deep.

10. GROUND WATER MANAGEMENT

Excavation is conducted below the water table. The land is generally level. The ground surface elevation ranges thirty-five to forty feet above sea level. The water table is located 12 feet below ground elevation throughout the permitted acreage. The actual groundwater level has been determined by where water was encountered by exploration of the property. The maximum mining depth is approximately 25 feet below ground elevation.

Precautions will be taken to prevent the introduction of pollutants into the ground water. The preventative measures will include:

- Presently, no fuel will be stored on site. Should fuels be stored on site, either a double walled fuel storage tank with outer containment will be located on the site or if a single walled tank is used, it will be placed within an earthen spill containment berm constructed around the tank.
- All scheduled maintenance of equipment will be done away from the pit to prevent spills of motor oils, hydraulic fluids, transmission fluids, grease, anti-freeze, degrease solvents, etc. on the site that could potentially enter the surface waters.
- The equipment will be inspected for leaks of fluids.
- Leaks will be repaired promptly and not allowed to contaminate the ground and potentially enter the ground water.
- Any trash generated will be collected, removed from the site, and properly disposed.
- Should a spill of potentially toxic or hazardous materials occur, all measures to contain and confine the spill are to be implemented. The spill will be controlled by the construction of a berm from sand or other absorbent materials to prevent spreading into the water or being carried by water or rain into the drainage basin.
- Any contaminated materials used to contain a spill will be removed from the site and properly disposed.
- Professional assistance will be used if needed to properly clean a spill.
- At this time, pumping to dewater the pit for mining is not planned. However, should it become necessary to dewater the pit for mining, pumping will cease immediately upon having an accidental spill to prevent the spread of the spill and to further prevent the spread of the contamination. Dewatering will not resume until all the contaminated materials have been removed from the site.

Dewatering

Dewatering of the mine is not planned at this time. Should it become necessary to dewater for mining, the applicable DEQ Discharge Permit will be acquired. The discharge will be regulated by DEQ. All inflow and outflow are self-contained.

Treatment of Water

The normal PH of the water in the area is acidic. If pumping becomes necessary, the water will be treated prior to discharging off the permitted area. Pumping would only be done during operating hours while personnel are present on the site and pumping operations can be monitored.

A DEQ Discharge permit will be acquired if the pumping becomes necessary and the discharge will be regulated by DEQ.

The nearest home is located approximately 1000 feet from the permitted area.

There are water wells located within 1000 feet of the permitted area. The known wells are approximately 400 feet in depth and is separated from the surface aquifers by a clay and sand layer below the depth of mining.

11. SIMULTANEOUS RECLAMATION

The mining operation will develop one lakes upon completion of mining. The depth of the water will be approximately 10 feet minimum in most of the lake and in no case less than 4 feet deep. The floor of the pit will be maintained smooth as possible. All outer perimeter slopes around the lake will be sloped and graded to 3:1 or flatter for final reclamation.

All areas of the slope above water will be limed, fertilized, mulched, and seeded with the approved permanent vegetation mix as described in the re-vegetation section of this plan.

Any area where mining is not complete, but there has been no disturbance in one year, will be sloped to at least 3:1 and seeded with temporary cover vegetation.

Any area where mining is totally complete and there has not been any disturbance for at least one year, the area will be reclaimed. Slopes will be final graded to 3:1 or flatter. Approximately 4 to 6 inches of topsoil will be applied. Soil tests will be taken to determine the appropriate rates for lime or fertilizer that is to be applied. The graded area will be prepared as a seedbed, the ground scarified, and seeded with the approved permanent vegetation mix listed in the re-vegetation section of this plan. A straw mulch will be applied after seeding.

12. POST MINE LAND USE

The area is presently zoned agricultural. The mining operation will develop a single lake area upon completion of mining and final reclamation. The lake will be self-contained and will not have an outlet because the water table will remain approximately 12 feet below the ground elevation. The minimum water depth will be greater than four feet in all areas and in most applications, depth will be approximately 10 feet. All banks located above the water will be sloped to 3:1 or flatter and vegetated as described in the re-vegetation section of this plan. Access roads into the property may be left at the landowner's discretion during the final reclamation.

Previous mines have been restored and used as water fowl sanctuaries, wildlife preserves, as well as residential development. Currently there is a proposed development for a post mine site such as Exhibit "A".

13. RE-VEGETATION

No plant species considered a highly invasive species by the Department of Conservation & Recreation will be planted on the mine site.

The soil will be tested prior to final seeding to determine the appropriate rates of fertilizer and/or lime. Recommended rates of 1000 lbs./acre of 10-10-10 fertilizer or equivalent will be used. The recommended rate of application of two tons of agricultural lime will also be used, if determined appropriate by the soil test, on all the areas receiving fertilizer and permanent seeding.

The temporary seed mixture will consist of 50 lbs/acre of annual rye to establish quick ground cover. Foxtail millet may be applied with any of the permanent seed mixtures to be sown to provide a permanent ground cover. Straw mulch will be applied at the rate of 1500 pounds per acre after seeding. The permanent seed mixture and seeding rate will be:

Ky. 31 Fescue-----	108 lbs/acre
Seasonal Nursery Crop-----	20 lbs/acre
Red Clover-----	10 lbs/acre
Love Grass-----	20 lbs/acre

14. TRAFFIC IMPACT

Due to the rural location of the area, traffic of all types is minimal other than peak travel times as commuters travel to and from their work locations. The impact of Commercial Hauling Trucks will be the same as the current operation averaging 8-10 trucks daily with the probability of hauling 4-5 loads each. All truck traffic will utilize the identified Access Haul Road except for the short distance (approximately .3 mile) required on Muddy Cross to reach Rt. 10.

In consideration of safety and the narrow road conditions, all truck traffic leaving the area of operation is prohibited from turning left onto Muddy Cross as there is no outlet to a major highway.