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February 2, 2012

Thomas W. Weber
Jonas Rosenthal
Environmental Quality Program
Travis County Transportation and Natural Resources
411 West 13th St.
P.O. Box 1748
Austin, Texas 78767

RE: Application to Travis County for Basic Development Permit, received
July 27, 2011 (receipt no. 2194)

Dear Mr. Weber:

In response to your letter of August 9, 2011, I respond as follows:

General comments

Attached are new plans for the delivery and transfer by the septage haulers, spillage drains and tanks for the spillage, portalogic intake device, geotubes, and tanks and sprinkler system with attached information for the geotube, portalogic, and sprinkler heads. An updated property plat is also attached.

Specific Comments

1. Discrepancy in the acreage is that the state allows us 78+ acres. Travis County only allows for 49 acres under its rules.
2. The buffer in blue should be >8.
3. Description of equipment and methods
 - A. Septage will be brought in trucks to the drop off point where the truck will be backed into one of three bays.

- B. A 4-6" hose will be connected to the excavation port on the truck which is connected to the portalogic
- C. The trucker has to enter a code for his truck and company into the portalogic unit. Upon acceptance of the code by the portalogic unit, the trucker is authorized to use the facility. Security cameras are at the entrance to the facility which is accessed by a card reader. Security cameras are also located at the trucking bays.
- D. The trucker will then be able to open his valve to release the septage. The portalogic will automatically detect the PH of the septage. If the PH is at a minimum of 12, the port will open allowing the septage to run into the geotube.
- E. If the PH is lower than 12, the portalogic will not allow the septage to flow past the portalogic. At this point, the trucker will be required to add lime to his septage tank and will be required to sit for a minimum of 30 minutes or until his septage reaches a PH of 12.
- F. If a spill occurs at the truck bays, the spill will flow into the drains at each bay. The drain is connected to tanks. The tanks are connected to the portalogic. If the spilled septage is the proper PH, it will then go to the geotube through the portalogic. If the spilled septage is not the proper PH, lime will be added to bring the PH up and then, it will go to the geotube through the portalogic.
- G. The geotube is a screen. The geotube screens out solids, paper, and plastic. Water with only microscopic solids will flow through the screening geotube to the first tank which will hold approximately 45,000 gallons of fluid septage. From this tank, the septage will flow down to the second, and then the third tanks.
- H. Two schedule 40 Pvc pipes with float systems will be in the third tank. Each of the pipes will be attached to five horsepower pumps.
- I. Each pump will pull approximately 80 to 150 gallons per minute from the tank.
- J. One pump will deliver water to the west area from the tanks. The other pump will deliver water to the north of the tanks. Only one sprinkler head will be open at each area at any one time.
- K. The pastures that will accept water will be covered with sufficient Nelson "Big Gun" sprinkler heads to deliver the water evenly to

the allowable area. These pastures will be fenced off from grazing areas of live stock.

- L. Water will also be put into a tractor pulled tank. This water will be delivered to the areas between sprinkler heads so as to evenly deliver the water.
- M. After the solids that are screened in the geotube dry, they will be carried to the land fill for disposal.

4. Control of odors, vectors and other nuisance conditions

The geotube controls odors. The geotubes are to be located on concrete pads which channel the water to the gutters going to the tanks. Because the solids flocculate in the geotube, there are few odors that are released. When I visited Burnet Municipal Wastewater, I did not smell any significant odor when I stood next to the tube. Since the water will be spread on the pastures daily except during rain, I would expect little or no odor from the water.

As to vectors, due to little odor, I expect no attraction to vectors. All tanks will be surrounded by 6' chain link fence as required by code (TCEQ).

As to the aeration, two methods of aeration are anticipated. First, aeration will happen as the water goes from tank to tank either through pipe or over a concrete gutter which will connect each tank to the next. A second type of aeration is a submersible 1 hp mud pump purchased at tractor supply which will be attached to a floating sprinkler head which will float on top of each tank. It is my understanding that keeping each tank in motion will stop the growth of algae and odor. Because the water will be evacuated from the tanks each day except during rain events, the pumps will probably only run during rain events.

The allowable septage to be accepted as set out in the TCEQ application is 219,000 per acre per year. The septage will be accepted on 6 days per week unless a trucking company has an unusual event. If we are approved for 48 acres, we can accept 10,512,000 gallons. If an average truck is 2,500 gallons, we would be able to accept 4,205 truck loads per year. At 312 business days per year, we would average between 13 and 14 truck loads per day. $14 \text{ loads} \times 2500 \text{ gallons per load} = 35,000 \text{ gallons per day}$. Each tank holds 45,000 gallons. We would be able to accept septage for approximately 3.86 days. If the rain event were in excess of that number of days, we would have to close until the event were to end.

5. Sources of septage.

The sources of the septage will be septage from the septic tanks of homes in the area whether they be homes constructed on site or mobile homes. Our expectation is that the septage would be from Travis County and the contiguous counties thereto. The portalogic unit has the capabilities to test the septage as it gets to the unit. The unit can be set to stop septage that has a PH of less than 12. An attendant will be on hand to view the log sheets of each driver for the source of the septage. Any septage which has a commercial source will be denied access to drop off.

Lime will be added to each truck that has not added lime prior to entry upon the facility. It is anticipated that each trucking company contracting with the applicant will began putting lime in the truck after evacuating the load which is delivered to the facility.

The facilities are as shown in the plans which will be provided.

6. The application area which is shown in the provided plats will be fenced .
7. The application area is expected to be approximately 48 acres. The estimates for TCEQ were prior to the plats prepared for Travis County.
8. The housing seen on the site visit have been reduced. 4 homes are for living quarters: 2 for the owner and his family, 1 for the ranch hand, 1 for the facilities manager. The larger buildings are for the office and the rest area for the drivers. Minimal setbacks from these structures are expected.
9. The square was for tax purposes for the homestead versus the farm use exemptions. It has no significance to the area to receive the septage.
10. Provided.
11. Cover crops are established. Coastal covers the home pasture surrounding the homes. The pasture to the west and north of the home pasture has oats at the present time. Hay grazer and/or coastal will be planted in these areas when I can expect to have water/septage.

As to the volumes, attached is the response to the TCEQ which provides articles as to the volume of nitrogen required.

The grasses, coastal in the warm months and winter rye require the nitrogen year round.

12. If a truck is utilized, it will be of the "big wheels" type which has little effect on soil compaction. T he same as to tractors with trailers. Larger tires are used due to the potential for smaller tires getting stuck in the black clay.

Sprinkler lines will be buried. The sprinkler heads will be on 4 to 5 foot stands which will be surrounded by a stand to protect from vehicles which may be used to cultivate the land or harvest crops.

13. 2 to 3 inch schedule 40 pipes will be buried to take the septage from the tanks to the sprinkler heads. The information on the sprinkler heads is attached.
14. No water wells unregistered or registered are closer than 9 to 10 miles. The water is deep, over 1200 ft. and the water is not usable even at that depth. No one would drill a well costing in excess of \$100,000 for the available water.
15. The ranch will employ one employee for accounting, a facility manager who will maintain the grounds, pumps, and sprinkler heads. Different pieces of equipment will be maintained under service contracts including the portalogic, and pumps for the lime sludge and recovery pump, the entry cameras and delivery site cameras. The facility manager will have one helper. No licenses are required.
16. See TCEQ application maps for soil sample locations.
17. I have included information on the geotubes. After the geotube is filled and dried, the bag which is 60 foot in diameter by 100 foot long will be split open, and unloaded into trucking containers by tractor. The containers and the separated bag are taken to a land fill.

If you have further questions, please call.

Very truly yours,


Robert D. Kizer

RDK/tim

