

March 24, 2002

Ref: 107-013

Via Hand Delivery

Ms. Soumaya Ghosn
LDEQ-OES, Environmental Assistance Division
P.O. Box 82135
Baton Rouge, Louisiana 70884-2135

Re: Comments on the permit application of FTM & Associates, Inc. - Beneficial Use Site, Romeville, St. James Parish, Louisiana Solid Waste ID No. D-051-10711, (previously noticed as DE-051-1077), Agency Interest No. 92651, PER20010001

Dear Ms. Ghosn:

On behalf of St. James Citizens for Jobs and the Environment, a citizen group committed to protecting the health and welfare of the residents of St. James Parish; Louisiana Environmental Action Network ("LEAN"), an incorporated, non-profit community organization that serves as an umbrella organization for environmental and citizen groups; and Ms. Albertha Hasten, Ms. Helen Simmons, Ms. Diana Honor, and Ms. Mercshondria Honor, Louisiana residents; please consider the following comments on FTM & Associates, Inc.'s ("FTM's") application for a Beneficial Use Permit to apply Class B treated sewage sludge from Kenner, Louisiana to agricultural land in St. James Parish. We reserve the right to rely on any other comments made in this proceeding.

For the reasons detailed below, we urge the Department of Environmental Quality ("DEQ") to deny this permit.

I. The Record Lacks an IT Analysis that Complies with the Louisiana Constitution, Article IX, Section 1

The Louisiana Constitution, Article IX, Section 1, imposes a duty on DEQ to hold the natural resources of the state in trust for the public. That section states:

The natural resources of the state, including air and water, and the healthful, scenic, historic, and esthetic quality of the environment shall be protected, conserved, and replenished insofar as possible and consistent with the health, safety, and welfare of the people. The legislature shall enact laws to implement this policy.

The Louisiana Supreme Court in Save Ourselves v. La. Env'tl. Control Comm'n, 452 So.2d 1152, 1157 (La. 1984) outlined DEQ's responsibilities as public trustee under the Louisiana Constitution, Article IX, Section 1. The Supreme Court found that Article IX, Section 1 is a "rule of reasonableness which requires an agency or official, before granting approval of [the] proposed action affecting the environment, to determine that adverse environmental impacts have been minimized or avoided as much as possible consistently with the public welfare." *Id.* The Supreme Court went on to explain that the examination "requires a balancing process in which environmental costs and benefits must be given full and careful consideration, along with economic, social and other factors." *Id.*

The First Circuit, in In the Matter of Rubicon, Inc. further elucidated the responsibilities of public trustees by setting out a series of specific inquiries that the public trustee must address in order to satisfy the Constitutional mandate. 95-0108 (La. App. 1 Cir. 2/14/96), 12, 670 So. 475. Specifically, the public trustee, here DEQ, must address:

[W]hether: 1) the potential and real adverse environmental effects of the proposed project have been avoided to the maximum extent possible; 2) a cost benefit analysis of the environmental impact costs balanced against the social and economic benefits of the project demonstrate that the latter outweighs the former; and 3) there are alternative projects or alternative sites or mitigating measures which would offer more protection to the environment than the proposed project without unduly curtailing non-environmental benefits to the extent applicable.

Id. at 483.

These questions came to be known as the "IT Questions." The record in this case does not adequately address these IT Questions. Specifically, the record lacks an IT Questions analysis (hereinafter "IT Analysis") that adequately considers the potential and real adverse environmental effects of applying Class B sewage sludge to the agricultural lands in St. James Parish. The record lacks an adequate discussion of the costs and benefits of the proposed project. And the record lacks an adequate discussion of alternative projects, alternative sites or mitigating measures.

II. The Record Lacks an IT Analysis that Considers the Potential and Real Adverse Environmental Effects of the Application of Sewage Sludge to Agricultural Lands in St. James Parish

The IT Analysis does not adequately address the "potential and real adverse environmental effects" of spreading sewage sludge on cane fields near a school, and the homes and businesses of the citizens of St. James Parish. DEQ as public trustee is required to ensure that "environmental costs and benefits must be given full and careful consideration, along with economic, social and other factors." *Id.* Therefore, DEQ must

adequately address not only environmental impacts but also the human health impacts of spreading Class B sewage sludge on sugar cane fields near the homes and businesses of residents of St. James.

Because the application of Class B sewage sludge carries unreasonable health risks and because nothing in the record indicates that various environmental impacts have been adequately considered, DEQ must deny this permit.

A. Human Health Effects

Some of the top scientists in the country have called into question the ability of sewage sludge regulations to protect human health and the environment, including the National Research Council (“NRC”), which is the investigative arm of the National Academy of Sciences, and the Environmental Protection Agency’s (“EPA’s”) own Office of the Inspector General.

The application of sewage sludge carries unreasonable health risks. “[T]oxic chemicals, infectious organisms, and endotoxins or cellular material may all be present in biosolids,”¹ such as the sewage sludge at issue here. According to the NRC:

Biosolids are a complex mixture that may contain organic, inorganic, and biological pollutants from the wastewaters of households, commercial establishments, and industrial facilities and compounds added or formed during various wastewater treatment processes. Such pollutants include inorganic contaminants (e.g., metals and trace elements), organic contaminants (e.g., polychlorinated biphenyls [PCBs], dioxins, pharmaceuticals, and surfactants), and pathogens (e.g., bacteria, viruses, and parasites).²

To address concerns over the public health effects of sewage sludge land application, “EPA asked the National Research Council (NRC) to independently review the technical basis of the chemical and pathogen regulations for biosolids, focusing only on human health.”³ The National Research Council found that, “[t]here are anecdotal reports attributing adverse health effects to biosolids exposures, ranging from relatively mild irritant and allergic reactions to severe and chronic health outcomes.”⁴

EPA’s Office of the Inspector General conducted an audit of the sewage sludge regulations and found that “EPA does not have an effective program for ensuring compliance with the land application requirements of Part 503. Accordingly, while EPA

¹ *Biosolids Applied to Land: Advancing Standards and Practices*, National Research Council. National Academies Press, Washington D.C. 2002, at p. 4. (hereinafter “National Research Council”). Available online: www.epa.gov/ost/biosolids/nas/complete.pdf. Excerpts attached as Exhibit A.

² *Id.* at 14.

³ *Id.* at 2.

⁴ *Id.* at 4.

promotes land application, EPA *cannot assure the public that current land application practices are protective of human health and the environment.*⁵ (Emphasis added).

In addition, a study by the Cornell Waste Management Institute found that “[c]urrent US federal regulations governing the land application of sewage sludges do not appear adequately protective of human health, agricultural productivity or ecological health.”⁶

The Cornell study calls for a cautious approach to permitting the land application of sewage sludge because of “[t]he potential for widespread use of sludge on agricultural and residential land, the persistence of many of the pollutants which may remain in soils for a very long time, and the difficulty of remediation.”⁷

1. DEQ should deny this permit because the regulations governing the land application of sewage sludge are not protective of human health

The neighboring residents of St. James Parish are understandably concerned about the health impacts of living near a sewage sludge application site. The NRC found that “[t]o date, epidemiological studies have not been conducted on exposed populations, such as biosolids applicers, farmers who use biosolids on their fields, and communities near land application sites.”⁸ The NRC went on to state, “[b]ecause of the anecdotal reports of adverse health effects, the public concerns, and the lack of epidemiological investigation, the committee concluded that EPA should conduct studies that examine exposure and potential health risks to worker and residential populations.”⁹

In addition, according to the NRC, “Exposed populations may also include sensitive subpopulations, such as *children*, immunocompromised individuals, and the *elderly*, who are unlikely to be prevalent in the workplace.”¹⁰ (Emphasis added.) There is an elementary school and a senior citizens’ center near the sewage sludge application site. Because of the lack of testing of the health impacts on nearby residents, and especially where, as here, neighboring residents include identified sensitive populations, DEQ must be especially protective of human health and, therefore, must deny this permit.

The NRC also found, “[t]here are several allegations of deaths caused by exposure to biosolids and anecdotal reports of illnesses ranging from acute to chronic problems, including headaches, respiratory problems, and gastrointestinal illnesses.”¹¹ For

⁵ *Biosolids Management and Enforcement*, U.S. EPA, Office of the Inspector General, Audit Report. 2000-P-10, March 20, 2002, at p.ii. (hereinafter “Inspector General”). Available online: http://www.epa.gov/oigearth/ereading_room/list300/00P0010.pdf. Excerpts attached as Exhibit B.

⁶ Ellen Z. Harrison, Murray B. McBride & David R. Bouldin, *The Case For Caution: Recommendations for Land Application of Sewage Sludge*, at p. 1. A 1999 working paper published as “Land Application of Sewage Sludge: An Appraisal of the US Regulations.” INT. J. OF ENVIRONMENT AND POLLUTION, 1999, Vol. 11 No. 1 pp 1-36. Available online: <http://www.cfe.cornell.edu/wmi/PDFS/LandApp.pdf>. Excerpts attached as Exhibit C.

⁷ *Id.*

⁸ National Research Council, *supra* note 1, at 4.

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.* at 19.

example, a Pennsylvania couple has filed a wrongful-death lawsuit alleging that their son died from a lung infection caused by exposure to land-applied sewage sludge.¹²

Therefore, DEQ cannot simply rely on EPA's and its own regulations, but, pursuant to the Louisiana Constitution, Article IX, Section 1, must perform an independent analysis of the risks involved. Any permit decision without such an analysis would be unlawful.

2. DEQ should also consider the Synergistic Effects of the Interaction of Multiple Chemicals.

The NRC found:

Biosolids are a mixture of organic and inorganic chemicals and biological agents. Risk-assessment procedures typically quantify risks from single chemicals and assume additivity when multiple chemicals are present. Although much thought has been given to evaluating risks from chemical mixtures, strategies for considering risks from exposure to complex mixtures are still in development.¹³

Given the NRC's identifying the uncertain effects of mixtures of chemicals as a concern in the land application of sewage sludge, DEQ must fully examine the real and potential environmental effects of chemical mixtures in sewage sludge on human health. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed.

B. Environmental Effects

The IT Analysis does not at all address the potential and real adverse environmental effects of the following:

1. Surface water contamination

EPA has identified "Sewage sludge>>Soil>>Surface water>>Human" as one of the "potential exposure pathways" resulting from the land application of sewage sludge.¹⁴ In addition, "[r]unoff from fields and other application sites directly into local streams and lakes is a potential concern to residents who use and enjoy these resources."¹⁵ According to members of the St. James Citizens for Jobs and the Environment, runoff from the sewage sludge field is flowing north east of the site and contaminating the Parish Canal, which in turn feeds into Blind River. Also

¹² Lorraine McCarthy, *Lawsuit Blames Pennsylvania Boy's Death on Treated Sewage Sludge Spread on Farm*, March 6, 2003, Toxics Law Daily at <http://pubs.bna.com/ip/BNA/tld.nsf/is/A0A6N5K3Z2>. Copy attached as Exhibit D.

¹³ National Research Council, *supra* note 1, at 19.

¹⁴ U.S. Env'tl. Protection Agency, Rep. No. EPA832-B093-005, A Guide to the Biosolids Risk Assessment for the EPA Part 503 Rule 27 (1995), (hereinafter "EPA Guide").

¹⁵ *The Role of Municipalities in Regulating the Land Application of Sewage Sludges and Septage*. (hereinafter "Role of Municipalities"). 41 Nat. Resources J. 77 at 97.

according to members of the St. James Citizens for Jobs and the Environment, nearby wetlands areas are also affected by sewage sludge contamination.

In addition, DEQ should investigate the possibility of surface water contamination as a cause of recent fish kills in Blind River.¹⁶

Given EPA's clear guidance identifying surface water contamination as a concern in the land application of sewage sludge, DEQ must fully examine the real and potential environmental effects of sewage sludge runoff on surface water. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed.

2. Odor

Odor is "one of the major nuisance problems associated with land application[,]"¹⁷ and "one of the most important issues for nearby residences."¹⁸ Not only does odor impact the quality of life of area residents, but odor problems "can easily go beyond simple aesthetic issues, and can even impact the value of neighbors' residences."¹⁹ In addition, according to the NRC, "[o]dors from biosolids are the principal complaint from citizens living near biosolids land-application sites[,] and, "concerns have been raised that odors and vector attraction could have health impacts."²⁰

Here, residents of St. James Parish have complained repeatedly about noxious odors, including complaints in several letters to DEQ. The IT analysis should consider the potential and real adverse environmental effects of sewage sludge odor. It should also consider how the odor is decreasing the quality of life for residents and people recreating in the area. And it should consider specifically the site's proximity to recreational areas, including Romeville Elementary School and the Senior Center.

Given repeated complaints by neighboring residents regarding noxious odor as a concern in the land application of sewage sludge, DEQ must fully examine the real and potential environmental effects of sewage sludge odor. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed.

¹⁶ Copy of Department of Wildlife and Fisheries fish kill report attached as Exhibit E.

¹⁷ Role of Municipalities, *Supra* note 15 at 103.

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ National Research Council, *supra* note 1, at 19.

3. Airborne toxins

EPA has identified “Sewage sludge>>Soil>>Air>>Human” and “Sewage sludge>>Soil>>Airborne dust>>Human” as two of the “potential exposure pathways” resulting from the land application of sewage sludge.²¹

Given EPA’s clear guidance identifying air contamination as a concern in the land application of sewage sludge, DEQ must fully examine the real and potential environmental effects of sewage sludge runoff on ambient air. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed.

4. Pathogens

EPA has identified 14 exposure pathways from the land application of sewage sludge:

- i. Sewage sludge>>Soil>>Plant>>Human (Consumer of Plant Products)
- ii. Sewage sludge>>Soil>>Plant>>Human (Home Gardener)
- iii. Sewage sludge>>Human (Child eating sewage sludge)
- iv. Sewage sludge>>Soil>>Plant>>Animal>>Human
- v. Sewage sludge>>Soil>>Animal>>Human (Animal ingests sludge directly)
- vi. Sewage sludge>>Soil>>Plant>>Animal
- vii. Sewage sludge>>Soil>>Animal
- viii. Sewage sludge>>Soil>>Plant
- ix. Sewage sludge>>Soil>>Soil organism
- x. Sewage sludge>>Soil>>Soil organism>>Soil organism predator
- xi. Sewage sludge>>Soil>>Airborne dust>>Human
- xii. Sewage sludge>>Soil>>Surface water>>Human
- xiii. Sewage sludge>>Soil>>Air>>Human
- xiv. Sewage sludge>>Soil>>Ground Water>>Human

Types of pathogens include “enteric viruses, fecal coliform, helminth worm ova, and salmonella sp. bacteria.”²²

Even though there are federal and state laws to govern the land application of sewage sludge, “problems continue to exist in instances when sewage sludge has been treated improperly or when sludge remains biologically hazardous” even when it satisfies applicable federal or state law.²³

²¹ EPA Guide, *supra* note 14.

²² Christopher J. Conrad, *Sewage Sludge and Land Application Practices: Do the Section 503 Standards Guarantee Safe Fertilizer Usage?* 9 Dick. J. Envtl. L. & Pol’y 147, 153.

²³ *Id* at 148.

In addition, “Class A sludge is treated at very high temperatures with the goal of eliminating all pathogens, while Class B receives treatment to reduce, but not eliminate, all pathogens. Thus Class B sludge inherently is more volatile, and should be monitored much more carefully and frequently.”²⁴

A study by the Centers for Disease Control found that “[w]orkers may be exposed to disease-causing organisms while handling, applying or disturbing Class B biosolids on agricultural lands.”²⁵

Given EPA’s clear guidance identifying the presence of pathogens as a concern in the land application of sewage sludge and given the identified human health risks, DEQ must fully examine the real and potential environmental effects of pathogens in sewage sludge. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed.

5. Dioxin

EPA is currently assessing the human-health and environmental effects of dioxin in sewage sludge. According to EPA, “[t]he Agency’s risk assessment for land application of sewage sludge estimates that sewage sludge with concentrations of dioxins above the proposed limit may present an unreasonable cancer risk to specific highly exposed individuals.”²⁶

Given EPA’s clear guidance identifying the presence of dioxin as a concern in the land application of sewage sludge, DEQ must fully examine the real and potential environmental effects of dioxins in sewage sludge. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed.

6. Soil contamination

Among EPA’s fourteen “potential exposure pathways” resulting from the land application of sewage sludge, thirteen of them involve soil. Problems with soil contamination include both “long term productivity problems and plant health risks.”²⁷

A study by Cornell University warns, “[s]ewage sludge contains . . . pathogens and contaminants from the home and industry[,]” and, “[w]hile recycling sludges is a desirable goal, caution is warranted since many pollutants are persistent and agricultural soils are irreplaceable.”²⁸

²⁴ *Id.*

²⁵ *Workers Exposed to Class B Biosolids During and After Field Application*: DHHS (NIOSH) Publication No. 2000-158 (August, 2000), page 1. Available online: <http://www.cdc.gov/niosh/hidlist.html>. Copy attached as Exhibit F.

²⁶ 64 Fed. Reg. 72045, 72046 (2002).

²⁷ Role of Municipalities, *supra* note 15 at 102.

²⁸ Harrison, *supra* note 6 at 2.

Given EPA's clear guidance identifying soil contamination as a concern in the land application of sewage sludge, DEQ must fully examine the real and potential environmental effects of sewage sludge contamination on soil. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed.

7. Heavy metals

Another concern of land application of sewage sludge is the "uptake of metals and other substances from the sludge into plants."²⁹

DEQ must fully examine the real and potential environmental effects of heavy metals in sewage sludge. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed.

8. Vector control

According to 40 C.F.R. §503.31(k), "[v]ector attraction is the characteristic of sewage sludge that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents." DEQ should consider the potential of vectors spreading pathogens to the neighboring residents.

Given the regulations' concern with vectors' transporting the infectious agents in sewage sludge, DEQ must fully examine the real and potential environmental effects of vectors' transmitting infectious pathogens. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed.

9. Effects on the Food Chain

The proposed permit is inconsistent with 40 C.F.R. §503.32(b)(5), which restricts harvesting periods for food crops after the application of sewage sludge.

Given the regulation's concern with sewage sludge's effects on food crops, DEQ must fully examine the real and potential environmental effects of sewage sludge on the food chain. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed. In addition, it is unlawful for DEQ to issue this permit without including specific restrictions on harvesting periods consistent with the regulation.

10. Effects on groundwater due to a high water table at the site

The proposed permit is inconsistent with LAC VII.1109.E, which *requires* that "the facilities be located in a hydrological section where the historic high water

²⁹ Role of Municipalities, *supra* note 15 at 102.

table is at a minimum of a three-foot depth below the zone of incorporation, or the water table at the facility shall be controlled to a minimum of a three-foot depth below this zone.”

Especially since “[c]ontamination of groundwater from land application is a potential problem associated with landspreading,”³⁰ the IT Analysis must examine the potential and real adverse environmental effects of sewage sludge leaching through the high water table into the groundwater. Because the current record does not contain such an examination, DEQ cannot lawfully issue this permit until such an examination is completed.

In addition, it is unlawful for DEQ to issue a permit that is inconsistent with a regulation. Since this permit application is inconsistent with a regulation, DEQ must deny this permit.

III. The Record Lacks a Cost-Benefit Analysis Sufficient to Determine Whether the Social and Economic Benefits of the Project Outweigh its Environmental Costs

The “Cost-Benefit Analysis” does not discuss the costs to the community of St. James Parish including odor, decreased quality of life, fish kills, water pollution, and air pollution. And the record does not even contain a “Cost-Benefit Analysis” document.

Notably, however in a letter from DEQ to FTM “regarding items, which this Department does not consider to be in conformity with the applicable sections of LAC 33:VII,” DEQ required more information on the following:

- Where is the storage site at the sludge application facility? If the storage site is the 100’ x 100’ foot concrete slab, control from runoff and run-on from rainwater needs to be addressed.
- How will odors be controlled? Why will odors not be a concern? What level or type of treatment or what method of vector attraction reduction will be used to insure that vectors will not be a problem?
- There is a need to specifically indicate what Process to Further Reduce Pathogens the facility is using.
- There is a need to address the requirement at LAC 33:VII.1107.F.12.e and indicate the cumulative applications of cadmium and PCB’s.

The IT Analysis addresses none of these issues. So despite DEQ’s identifying that the above information is missing from the original application, DEQ did not require FTM to address these issues in its response to the IT Questions. Neither did DEQ, as public trustee, perform any of its own analysis of this information. DEQ cannot evaluate the costs versus the benefits of a project until all the issues are examined. Because the

³⁰ *Id.* at 96.

current record does not examine these issues, which DEQ, itself, identified needed to be examined, DEQ cannot lawfully issue this permit until such an examination is performed.

IV. The Record Lacks an Adequate Alternative Site Analysis

The record contains an inadequate, one paragraph discussion of alternative sites. For example, while the sewage sludge is generated in Kenner, Louisiana, FTM only considered two parishes—St. James Parish and St. Charles Parish—for potential sites. FTM referred to its “selection criteria” without explaining any further how it used criteria such as “soils,” “farm size and location,” and “proximity to neighbors and environmentally sensitive areas.” For example, FTM did not explain why “proximity to” neighboring residential areas did not dissuade it from locating in this area of St. James Parish.

FTM also stated, “Once the areas were selected, four farmers were determined to meet the requirements, three in St. Charles and one in St. James Parish.” But FTM did not explain what those “requirements” were and why there were only four farmers to meet those “requirements.” FTM then completely dismissed the three St. Charles farmers, stating that they “were eliminated for one of the following reasons: site already permitted for beneficial use facility, or the farmer not interested in participating.”

The record does not provide the farmers’ names or the specific location of the land. Because FTM only considered two of Louisiana’s parishes and did not explain the criteria it used to arrive at its conclusion that the sewage sludge should be spread at this particular site in St. James parish, the alternative sites analysis is under-inclusive and inadequate. It is therefore impossible for DEQ to adequately examine the availability of alternative sites. As a result, DEQ cannot lawfully grant this permit.

V. The Record Lacks an IT Analysis that Fully Considers Alternative Projects or Mitigating Measures

The record does not include any alternative method of application besides broadcasting. For example, the record does not include the alternatives of immediately tilling the sludge into the soil or waiting until a dry day to mitigate the potential runoff problem.

The record mentions the so-called prohibitively expensive method of treating the sludge to Class A to “reduce the pathogens and provide additional protection to the environment.” But the document failed to discuss how Class B sludge would potentially affect the environment, and how treating the sludge to Class A to reduce the pathogens would mitigate some of the sludge’s harmful effects.

In addition, the record also does not contain any of the following measures to mitigate the following potential and real adverse environmental effects:

1. Surface Water Contamination

Methods to reduce surface water contamination include requiring that the sludge be incorporated into the soil within a certain time period after it is applied, directly injecting the sludge into the soil, allowing application only on well-drained soil, specifying a minimum solid content, specifying maximum slope, and increasing buffer zone requirements.³¹

According to EPA, “[a]pplying properly treated sewage sludge to well vegetated sites and where tillage is a standard practice further minimizes the potential for adverse water quality impacts of such applications.”³² EPA then warned, “Where such conditions or tillage practices are not typically the case, land managers should consider possible short term adverse water quality effects.”³³

Given EPA’s clear guidance identifying surface water contamination as a concern in the land application of sewage sludge, DEQ must fully examine alternative projects or measures to mitigate the effects of surface water contamination. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed.

2. Odor

Methods to reduce odor include requiring that the sludge be incorporated into the soil within a certain time period after it is applied, directly injecting the sludge into the soil, increasing buffer zone requirements, and requiring a facility that receives a certain amount of complaints to cease operations until it eliminates the odor problem.³⁴

Also the permit application itself states, “[o]dors from the site will be controlled using optimum wind conditions.” However, the various complaints of noxious odors emanating from the site demonstrate that the permittee obviously has not been adequately controlling odors in the past more than seventeen months.

Given repeated complaints by neighboring residents regarding noxious odor as a concern in the land application of sewage sludge, DEQ must fully examine alternative projects or measures to mitigate the effects of sewage sludge odor. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed.

3. Pathogens

³¹ *Id.* at 98, 99.

³² 56 Fed. Reg. 33186, 33187 (2001).

³³ *Id.*

³⁴ Role of Municipalities, *supra* note 15 at 97, 99, 103.

A method of decreasing pathogens would include treating it to Class A sludge, “with the goal of eliminating all pathogens.”³⁵

Given EPA’s clear guidance identifying the presence of pathogens as a concern in the land application of sewage sludge and given the possible adverse health impacts, DEQ must fully examine alternative projects or measures to mitigate the effects of pathogens in sewage sludge. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed.

4. Soil Contamination

Methods to reduce potential soil contamination include limiting the amount of sludge applied and/or the frequency of application, and requiring that soil maintain certain pH levels.³⁶

Given EPA’s clear guidance identifying soil contamination as a concern in the land application of sewage sludge, DEQ must fully examine alternative projects or measures to mitigate the effects of sewage sludge contamination on soil. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed.

5. Heavy Metal Contamination

Methods to reduce potential heavy metal contamination include limiting the amount of sludge applied and/or the frequency of application, and requiring that soil maintain certain pH levels.

DEQ must fully examine alternative projects or measures to mitigate the effects of heavy metals in sewage sludge. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed.

6. Groundwater Contamination

Methods to reduce potential groundwater contamination include controlling the location and/or size of sludge application.³⁷

Because there is a specific regulation that aims to protect groundwater, and because the agency’s duties under the Louisiana constitution require it, DEQ must fully examine alternative projects or measures to mitigate the effects of groundwater contamination. Because the current record does not contain such a study, DEQ cannot lawfully issue this permit until such a study is completed.

³⁵ Conrad, *supra* note 22, at 156.

³⁶ Role of Municipalities, *supra* note 15 at 102.

³⁷ Role of Municipalities, *supra* note 15 at 96, 97.

VI. The Proposed Permit is Inconsistent with 40 C.F.R. §503.32(b)(5) which Restricts Harvesting Periods for Food Crops after the Application of Sewage Sludge

EPA's regulation, 40 C.F.R. §503.32(b)(5) sets out a series of restrictions on harvesting crops after the application of sewage sludge. Among the restrictions is the requirement that "food crops, feed crops, and fiber crops shall not be harvested for 30 days after the application of sewage sludge." Nothing in the record demonstrates FTM's compliance with these provisions.

In addition, LAC 33.VII.1109G.b.ii provides that "if there is no contact between the waste and edible portions of the crop, or if crops are grown more than 18 months after application or incorporation, the conditions specified in Subsection G.3.b.i of the Section only apply." LAC 33.VII.1109G.b.i restricts public access and animal grazing. Again nothing in the record demonstrates FTM's compliance with these regulations. Therefore it would be unlawful for DEQ to grant this permit absent a permit condition that requires that FTM comply with these regulations.

VII. The Proposed Permit Lacks the Required Letter from the Louisiana Resource Recovery and Development Authority

Under LAC 33.VII.1105(I), FTM is required to have a letter from the Louisiana Resource Recovery and Development Authority ("LRRDA") stating that the operation conforms to the applicable statewide plan. No such letter exists in the record. Instead, FTM's application states, "Requested LRRDA approval on 12/5/2000, awaiting approval." It is now nearly two years later, and FTM still does not have a letter it is legally required to have. FTM's application is therefore incomplete, and DEQ cannot lawfully grant this permit.

VIII. The Proposed Permit is Vague and Inconsistent about the Method to be used to Apply the Sewage Sludge

The record is vague and inconsistent about what method FTM is using currently and what method it plans to use in the future to apply the sewage sludge. In addition, the record fails to explain when the sludge will be "incorporated" into the soil after it is applied. This is important because during the time that the sludge is applied to the surface before it is incorporated below the surface, it is much more vulnerable to runoff, much more attractive to disease spreading vectors, and much more of an odor nuisance to the neighboring residents.

At the public hearing a representative from FTM shed some light on the permit's vague description of the method being used to apply the sewage sludge. There he stated that the sludge was applied using a machine (specifically a *Pro-Twin Slinger*³⁸) that sprays the sludge 70 feet out and approximately 15 feet high into the air.

³⁸ See photograph of FTM's St. James land application site, taken February 18, 2003, attached as Exhibit G.

Accordingly, there are several problems with the way the sewage sludge is currently applied. Upon information and belief, the farmer is actually spreading the sewage sludge before and after rainstorms seemingly in contravention of the conditions specified in the permit application. Also upon information and belief, the sludge also is sprayed onto the access roads and into the drainage canals. These accounts comport with the specifications of the *Pro-Twin Slinger* machine. Indeed, how could a machine that sprays so far up and so far out not indiscriminately spray roads and canals?

FTM states in the permit application that “waste will not be applied within 100 feet of clean water ponds, lakes, or the 10-year high water mark for streams,” and that “[w]aste will not be applied within 300 feet of drinking water wells, irrigation wells, or industrial water supply wells.”³⁹ Again, the *Pro-Twin Slinger* sprays the sewage sludge 70 feet out and 15 up into the air. As is clear from the drainage map in the permit application,⁴⁰ there are drainage canals that run throughout the site, making it virtually impossible for the *Pro-Twin Slinger* not to spray sludge into the drainage canals. Also FTM has stated that there are 3 wells on the site.⁴¹ It is unclear from the permit whether FTM is complying with the requirement that the sludge not be spread within 300 feet of these wells.

The permit also states, “The spreading equipment is adjusted to apply the material at the prescribed application rates.”⁴² But the permit application does not state how FTM plans to do this. DEQ should require that the permit application be more specific, especially since by FTM’s own description of the *Pro-Twin Slinger*, it seems to spray the sludge indiscriminately over a broad area.

Because the record is vague and inconsistent about the method of application, DEQ cannot adequately address the potential and real adverse environmental effects of one method over another. It would therefore be unlawful for DEQ to grant this permit.

In addition, the applicant states that the sludge will be applied and incorporated into the top 6 inches of soil. The permit, however, contains no conditions that limit application of sludge after the cane grows. After the cane has reached a certain height, it will be impossible to incorporate the sludge into the soil. This condition will last during the better part of each year.

Upon information and belief, the farmer has actually been spraying sewage sludge onto sugar cane crops that were as much as four feet high in contravention of the regulations and the permit application provisions that the sludge be immediately incorporated into the soil. The requirement that the sludge be incorporated into the soil is important in guarding against the human health and the environmental impacts of odors, runoff, and vector and wind-carried pathogens.

³⁹ Permit Application (hereinafter “App.”) at 7.

⁴⁰ App. at Exhibit D.

⁴¹ App. at 7.

⁴² App. at 10.

Because this permit contains no condition forbidding application of sewage sludge once cane is growing in the field, it is inconsistent with the regulations and permit application provisions requiring the sewage sludge to be incorporated into the soil. Therefore, DEQ cannot lawfully grant this permit.

IX. The Proposed Permit Does Not Provide for the Adequate Storage of Sludge

The permit application is vague regarding the layout of the storage area. For example, it does not specify whether the storage area is a completely enclosed unit. The application states, “The slab has a 4 foot high concrete retaining wall around three sides (the low sides) with the higher side is [sic] open for truck and tractor access.” However, as is apparent from the attached photograph,⁴³ the so-called “retaining wall[s]” are merely stacks of concrete building blocks, with cracks and joints between them, easily allowing the leachate from sewage sludge to seep out.

The application goes on to state that FTM “*will provide* a cover, tarps or shed roof to protect the material from rain.” (emphasis added). This means that the storage area is currently stored in an open-air pile, exposed to the elements.⁴⁴ Uncovered, stockpiled sewage sludge is susceptible to runoff during rainfall. Moreover the concentration of sewage is diminishing the quality of life of nearby residents who are repeatedly subject to its noxious odors.

Further, in its permit application, FTM has not committed to the type of cover it plans to use to shield the sewage sludge. There is a vast difference between the level of protection a “shed roof” provides versus a “tarp.”

Because the record is vague regarding the layout of the storage area, DEQ cannot adequately address the potential and real adverse environmental effects of the stockpiled sewage sludge. In addition, as the photograph demonstrates, FTM’s current practice of storing sewage sludge is inconsistent with the permit application. It would, therefore, be unlawful for DEQ to grant this permit.

X. In Order for FTM to Take Advantage of the Multiple Site Permit, FTM Must Identify Sites in Advance and Allow for Public Comment on Those Sites

LAC 33.VII.1103(C) states, “The administrative authority may issue a single beneficial-use permit for multiple beneficial-use locations provided that the permit application includes required information for each location, each location meets the standards provided in this chapter, and the same solid waste stream (from a single generation site) is disposed of at all locations. The multiple locations will be considered as one facility and each location will be a unit of the facility.”

⁴³ See photograph of FTM’s St. James land application site, taken February 18, 2003, attached as Exhibit H.

⁴⁴ See photograph of FTM’s St. James land application site, taken February 18, 2003, attached as Exhibit I.

This provision allows DEQ to issue a single permit for multiple locations. But in order to do so, DEQ must have the required information for each location to ensure that each location is consistent with the regulations. Here, FTM has not even identified future multiple locations. Therefore the public has no way to comment on these unknown future sites. If FTM were able to simply provide the identifying information at a later time and automatically qualify for multiple use permits absent public participation, it would completely avoid the required notice and opportunity for public comment. This could result in a sewage sludge application site that is permitted behind closed doors without public knowledge and without public participation. It is therefore unlawful for DEQ to include a provision allowing multiple use locations without requiring the necessary information about the future sites. Therefore, DEQ cannot lawfully grant this permit.

XI. The Proposed Permit Does Not Address the Potential for Nitrogen to Enter the Groundwater as Required by §1109.G(3)(a)(iv)

LAC 33.VII.1109.G(3)(a)(iv) requires that “[t]he potential for nitrogen to enter the groundwaters shall be addressed.” FTM dismissed this requirement with a one-sentence response, stating, “The potential for groundwater contamination with Nitrogen is very remote, as we will apply at the specified application rate.”

The regulations require that FTM address potential groundwater contamination with nitrogen. It is not enough that FTM dismiss that requirement by stating that it complies with the requirement that nitrogen levels meet specified limits. Without any discussion in the record of the potential for nitrogen to enter groundwater, it is impossible for DEQ to examine the potential and real adverse environmental effects of nitrogen in groundwater. Therefore, DEQ cannot lawfully grant this permit.

XII. The Proposed Permit Does Not Discuss the Facility Surface Hydrology as Required by §1109.C

Absent from FTM’s permit application is any discussion of the following requirements of LAC 33.VII.1109(C) regarding the facility surface hydrology:

1. Land slope shall be controlled to prevent erosion.
2. Waste shall be applied in accordance with the slope guidelines in the [table provided].
3. The topography shall provide for drainage to prevent standing water and shall allow for drainage away from the facility.

Again, FTM’s permit application is incomplete and does not demonstrate compliance with the regulations. DEQ, therefore, cannot lawfully grant this permit.

XIII. The Proposed Permit Does Not Discuss the Potential Surface Water Contamination of Blind River, a Natural and Scenic River

Drainage canals on the site drain into Parish Canal, which eventually flows into Blind River, a Natural and Scenic River.⁴⁵

The Natural and Scenic Rivers statute and regulations require a special permit for any activity that has the potential to impact a Natural and Scenic River.⁴⁶

We have submitted a request to the Department of Wildlife and Fisheries to perform a five mile radius search on the application site to begin the process of determining whether permitting the land application of sewage sludge at this site has the potential to impact Blind River, a Natural and Scenic River.

Because the potential that granting this permit will affect a Natural and Scenic River is currently being investigated, DEQ cannot lawfully grant this permit until the Department of Wildlife and Fisheries completes its review, and both agencies have determined that issuing the permit will not violate the law.

XIV. The Proposed Permit Does Not Discuss the Potential Effect on the Lake Maurapas Wildlife Management Area

Drainage canals on the site drain into Parish Canal, which eventually flows into Blind River and through the Lake Maurapas Wildlife Management Area.⁴⁷

LAC 33:vii.1107.A.1 requires the permittee to identify any wildlife management areas “within 1,000 feet of the facility perimeter or *as otherwise appropriate*.” (emphasis added). Even if the Lake Maurapas Wildlife Management Area is not within 1,000 feet of the facility perimeter, the drainage patterns demonstrate that water from the site drains and flows through this area.

Therefore DEQ must either investigate or require the permittee to investigate the potential impact to the Lake Maurapas Wildlife Management Area. Accordingly, FTM’s permit application is incomplete. DEQ cannot lawfully grant this permit based on an incomplete application that does not show compliance with these regulations.

XV. Compliance Concerns

According to the EPA’s own Inspector General, “EPA does not have an effective program for ensuring compliance with the land application requirements of Part 503.”⁴⁸ Additionally, “EPA performs few biosolids related inspections of POTW operations, virtually no inspections of land applications sites, and few records inspections at POTWs

⁴⁵ See the site drainage map, App. at Exhibit D.

⁴⁶ LA R.S. 56:1840, *et seq*; LAC 76:IX.101 *et seq*; LAC 33:IX.1109 *et seq*.

⁴⁷ See the site drainage map, App. at Exhibit D.

⁴⁸ Inspector General, *supra* note 5 at ii.

or land applicers. EPA regions do not maintain data on the cumulative amounts of pollutants at land applications sites, even though Part 503 requires maintaining this data.”⁴⁹

In light of the self-reporting nature of the regulations, combined with the potential for serious adverse health impacts, DEQ, if it decides to grant this permit, which it should not, must be especially vigilant in enforcing and monitoring the permittee’s self-reporting procedures.

XVI. Additional Concerns

A. DEQ Should Ensure that No Waterbodies are Impaired

Many of Louisiana’s waterbodies are already impaired by fecal coliform, one of the pathogens present in sewage sludge. DEQ should ensure that permitting this source of fecal coliform contamination will not affect nearby surface waters.

As the drainage pattern map shows, there are drainage canals on the site that drain into Parish Canal.⁵⁰ Parish Canal ultimately flows into Blind River. According to FTM’s permit application, it has been applying sewage sludge to this site since July of 2000. Beginning in January 2001, there have been at least two unexplained spikes of fecal coliform contamination that occurred in Blind River.⁵¹ DEQ should thoroughly investigate this sewage sludge application site as a possible reason behind those spikes. DEQ must refuse to grant this permit until it completes this investigation and determines whether the incidents of excessive fecal coliform contamination in Blind River were related to the land application of sewage sludge.

Additionally, DEQ must require the permittee to develop mechanisms to collect and treat the stormwater runoff that flows into the drainage canals. DEQ cannot grant this permit until a proper stormwater collection mechanism is in place to guard against this runoff.

B. DEQ Should Require Clear Posting

LAC 33:VII.1109 requires that a sewage sludge application site be properly posted. According to the permit application, “The two entrances will be posted with signs that read “Beneficial Use Site- No Trespassing.” Upon information and belief, there are no signs on the site at the present time, despite the fact that FTM has been spreading sewage sludge on the site for over 17 months. In addition, the term “beneficial use site” is an administrative designation, whose meaning is unclear to the public at large. The purpose of the regulation requiring posting is to protect the public from the possible adverse health impacts of coming into contact with Class B sewage sludge. The term “beneficial use site” does not provide sufficient warning. Especially in light of the fact that the

⁴⁹ *Id.*

⁵⁰ See the site drainage map, App. at Exhibit D.

⁵¹ See copy of DEQ documents responding to our public records request of 2003, attached as Exhibit J.

farmer himself may have misrepresented to the community that he is no longer spreading sewage sludge,⁵² if DEQ does grant this permit, which it should not, DEQ must require proper signs to sufficiently warn the public. The signs must make it clear to the public that the land is a sewage sludge application site and that anyone who trespasses on the site may be subject to dangerous pathogens and suffer adverse health impacts as a result.

C. DEQ Should Investigate the Payment Structure

The NRC recommended the following:

Any payment program designed to promote agricultural use of treated effluents or biosolids should be carefully structured to avoid the creation of incentives to apply reclaimed water or biosolids at rates in excess of agronomic rates, and to avoid undermining farm management practices needed to protect public and occupational health and the environment.⁵³

Upon information and belief, the farmer, Mr. Carol Shexnayder, is being paid to spread sewage sludge on his farmland. In light of the NRC's express warning, DEQ must specifically examine the payment structure at issue to ensure that it does not induce poor farming practices that adversely effect not only the viability of the soil but also human health.

D. DEQ Should Investigate Night Trucking of Sewage Sludge

A condition in the permit application specifies that the maximum operation time is 12 hours a day, seven days a week.⁵⁴ Upon information and belief, FTM is trucking the sewage sludge to the site at night, and possibly spreading the sewage sludge at night. This practice would suggest that FTM may have already been violating the conditions in the permit application. DEQ must, therefore, investigate the night trucking of sewage sludge, and take any appropriate enforcement actions against the permit applicant.

E. The Proposed Permit Does Not Discuss Potential Environmental Justice Concerns

The population of the city of Kenner, where the sewage sludge is generated, is 68% white.⁵⁵ In light of the fact that the city of Kenner is majority white, DEQ must investigate the demographic statistics for the area surrounding the land application site to determine whether this permit application raises environmental justice concerns.

⁵² Howard Castay, *Patin Says Farmer Has Stopped Using Human Waste in Fields*, News Examiner, February 13, 2003, at p.1. Copy attached as Exhibit K.

⁵³ National Research Council, *supra* note 1, at 18.

⁵⁴ App. at 10

⁵⁵ See U.S. Census data, attached as Exhibit L. Available online:
<http://censtats.census.gov/data/LA/1602239475.pdf>

XVI. In Conclusion

Because the land application of Class B sewage sludge carries unreasonable health risks, because this permit application lacks an IT Analysis that complies with the Louisiana Constitution, Article IX, Section 1, and because the permit application is inconsistent with several regulations, DEQ cannot lawfully grant this permit.

Respectfully submitted,

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**SUPERVISING ATTORNEY'S INTRODUCTION OF STUDENT ATTORNEY
AND NOTICE OF APPROVAL OF STUDENT APPEARANCE**

As the student attorney's supervising attorney, I approve of the student attorney's appearance in this matter. Written consent of the applicable clients to an appearance by student attorneys in this matter has also been submitted.

Signed:

Esther Boykin