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Interoffice Memorandum

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TO Nick Bruno

FROM John A Reese *jr*

DATE December 18 1986

SUBJECT Sumter County Landfill Application for Permit to Operate and Modify a Solid Waste Resource Recovery and Management Facility

The subject application has been reviewed and the following comments are offered

GENERAL COMMENTS

1 The application is unclear about what the facility is to be The application form indicates it is to be a composting shredder facility however the insufficient information supplied seems to indicate it will be a shredded waste-landfill operation

2 The facility and operation of it is poorly described it is not clear what will be done at this facility A complete description of what will be done how it will be done and what equipment will be used should be provided

3 The DER landfill identification number is not correct The GPSI computer file shows it to be 4060C00092 for the landfill location The shredder facility should be assigned a separate unique number

SPECIFIC ATTACHMENT ITEMS

1 Foundation analysis a foundation analysis should be provided for landfill areas The application does not clearly describe or discuss such areas but any expansion of the disposal area must conform to the landfill criteria of Section 17-7 050 F A C

2 Conformance with local zoning Evidence that this type of facility is within the zoning provisions should be given An existing site may have been grandfathered in and may not allow for expansion of this nature

3 Facility design The site location and legal description or orientation of property to be used are not given Sheet 2 of the drawings seems to indicate that the shredding facility may be placed over portions of the landfill disposal areas The relationship between the two sites should be explained and shown on labeled drawings

Identification labels are needed on Sheets 1 and 2 of the drawings A building is labeled metal building does this mean it will house recovered metals or that it will be constructed of metal? The composting area is not identified on sheet 1 it is assumed to be the area on the left of the drawing An apparent pit in lower right of Sheet 1 is not identified

The applicant states the facility has a ground water monitoring plan Which facility the existing landfill or the proposed shredding facility? Locations of the monitoring wells should be shown and identified

The applicant mentions that all new cells in the reserve area will have liners and a leachate collection system but these are not discussed or identified

Limestone is not acceptable as a liner material due to the acidic character of leachate Stormwater control for the facility is not shown The burn pits are not described what is their purpose?

4 Landfill Performance and Design Standards the new cells that are mentioned are not described or illustrated in the application

Limestone is not acceptable as a liner material It is not clear what the term $1E-7$ cm/s means

Any swale ditches used to collect leachate would need to be lined with an impermeable material

Stormwater controls are not shown and no information is provided about the volume of water to be handled The paved areas will cause stormwater flows which must be controlled

5 Operations Plan the applicant should provide a detailed operation plan for the daily operation of the facility and the complete composting process i e composting times temperatures moisture content and controls turning or handling detailed descriptions of the equipment involved material flow description Of particular interest is how the materials separation occurs how are plastics glass metals stones etc separated from the organic fraction

It is stated the composted material will be moved off site by the contractor Who is the contractor? Since no specific information is provided about the composting process or resultant product it should not be moved off site At this point it is a solid waste that has been processed for volume reduction It is well recognized that municipal waste contains quantities of hazardous wastes The DER rule changes enacted in 1985 which set more stringent criteria for land disposal of solid waste are not to be subverted by processing the waste and distributing it about the countryside without safeguards for the environment and public health Federal regulations are presently being developed by the U S EPA as mandated by the Congress to control the disposal of municipal solid waste Composting has not been discussed in the development of the federal regulations

The applicant should be aware that a number of composting operations have been undertaken in Florida and they have failed due to the lack of markets for the products

6 Water quality standards what volumes of water are expected to be handled? Who will have transport to the wastewater treatment facility? Is there an agreement with the wastewater treatment facility to accept the leachate and can it be handled without upset?

7 Closure the statement that the landfill will not be closed in contradictory At some point it should reach capacity The meaning of gradual stabilization is not clear and requires explanation

Continuous closure is required by Section 17-7 050(5(o) Financial responsibility for closure and post closure is not addressed

SPM Waste-to-Compost System

1 The simple schematic drawings of the system do not fully explain its operation. What is the operating schedule, how much and what types of waste will be processed? How will hazardous waste, dangerous materials, infectious waste be handled? What will be done with unprocessable wastes? Dead animals? A contingency plan in the event of breakdown is required (Section 17-7 090(5) F A C). Is this the installation that will be used at the Sumter County Landfill site? It appears to be a diagram of some equipment which is not related to the application or the site plan drawings. Where is this system operating now and can supporting documentation be provided? Construction details should be provided.

Drawing SPM-101 shows a transport fan which one must assume blow the shredded waste up to the top of the cyclone. The ballistic characteristics of small shredded metal particles and other dense solid materials such as glass do not lend themselves to aerial flight very well. Blowers used in this manner are generally used in for air classification of shredded materials while conveyor belts are used to transport the relatively dense solid waste. Design and operation should include provisions for handling the denser materials that may not fly. If the blower is to be of such a size to make these objects fly then the lighter fractions of waste could become an air emissions problem out of the cyclone tower.

The purpose or need for the pneumatic transport and tall cyclone tower is not clear. Is the cyclone tower and hopper beneath it to be used for waste storage in the absence of trucks? If so, how will waste jams be prevented or cleared in the hopper funnel due to bridging of the waste? Hoppers of this design are not suitable for storage of solid waste.

The scale given on drawing SPM 102, 1 inch equals 2 feet, if used on the drawing would indicate a refuse truck 3.75 feet long.

2 Specifications for the SPM system indicate an input capacity of 25 tons per hour, but it does not state how much waste will be processed for the county or the operating hours or other details of the process.

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What is the nature of the bacteria to be added to the waste and what are its environmental and health effects. Most composting does not require the addition of bacteria.

In the section Capacity and Performance an assumption is made about the waste handling sorting and equipment used. There should be no assumptions. Specific operating procedures and equipment must be described.

Newspaper clippings are not a technical support document for an application.

3 The application does not clearly state what process or system will be used. The specifications of the SPM Waste Compost System are attached to the application form are not clearly identified as the process that will be used. It is not a complete system description as required by Section 17-7 090(3) F A C.

4 The Geophile International Incorporated Process booklet attached to the application is also not tied to the application. It appears to be a collection of general information on composting but contains little specific information on composting. As an example page 5 item 1 a contains the statement the stable end product of uniform characteristics will meet and/or exceed all EPA guidelines. What are the characteristics of the product - a complete analysis for metals hazardous components pesticides organic and inorganic materials carcinogens and pathogen content and types should be provided.

What are the EPA guidelines and which ones are exceeded? I have contacted the U S EPA Office of Solid Waste in Washington D C they are not aware of any guidelines for composting mixed municipal solid waste and their first reaction was that it should not be done. They will however look into it and advise me during the week of December 22 1986.

Section 17-7 040 F A C Prohibitions states that no solid waste shall be disposed of except by sanitary landfill incineration recycling process or other method approved by the Department and consistent with this Chapter (17-7) and applicable approved local agency programs or regulations. Composting of mixed municipal solid waste is not addressed in Chapter 17-7 because it has not been an accepted method of

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disposing of this type of waste largely due to the unknown quality of the end product and the lack of uses for it

Experimental methods and operations may be evaluated by the department in accordance with 17-7 090(11) but the incompleteness and insufficiency of the application does not allow it to be evaluated on an experimental basis

JAR/tkm

cc Robert W McVety
Marshall T Mott-Smith
Roger Menendez
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