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S. ROTONDI & SONS, INC., AND ANGELO G. ROTONDI, INDIVIDUALLY,	:	Civil Action
Appellants,	:	On Appeal From Final Adoption of Regulation by the New Jersey Department of Environmental Protection
v.	:	
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION	:	
Defendant.	:	

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BRIEF ON BEHALF OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

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PRELIMINARY STATEMENT

In this matter, appellants seek to disturb a valid, reasonable and statutorily authorized regulation, N.J.A.C. 7:26A-4.5(a)6, properly promulgated by the Department of Environmental Protection. Specifically, appellants challenge the validity of N.J.A.C. 7:26A-4.5(a)6 and contend the application of the 1000-foot buffer to grass transfer facilities, like themselves, is unconstitutional, arbitrary, capricious and unsupported by the record. Appellants' challenge, however, must fail.

N.J.A.C. 7:26A-4.5(a)6 establishes a 1000-foot buffer between the materials staging areas and areas of human use or occupancy for facilities accepting grass. It is designed to effectuate a policy deemed vital to the health and welfare of the people in the communities surrounding facilities which accept grass clippings either for transfer or for compost. The supporting data unquestionably indicates that the unloading of grass clippings has the potential for creating obnoxious odors. In adopting the regulation, the Commissioner of the Department of Environmental Protection used his measured judgment and determined that the buffer was necessary to prevent off-site odors. As such, the regulation promotes a legitimate state interest -- the protection of human health and welfare. Therefore, N.J.A.C. 7:26A-4.5(a)6 should be upheld.

COUNTERSTATEMENT OF FACTS AND PROCEDURAL HISTORY[1]

On June 19, 2002, S. Rotondi & Sons, Inc. (Rotondi or appellants) received approval from the Department of Environmental Protection (DEP or Department) to operate a Class C recycling center[2] (General Approval) in Chatham, New Jersey in accordance

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[1] The procedural history and facts are so intertwined that they are being combined herein.

[2] N.J.A.C. 7:26A-1.3 provides the following definitions:

> "Class C recyclable material" means a source separated compostable material which is subject to Department approval prior to the receipt, storage, processing or transfer at a recycling center in accordance with N.J.S.A. 13:1E-99.34b, and which includes, but is not limited to source separated yard trimmings.
>
> "Compostable" means able to undergo physical, chemical, thermal and/or biological degradation under aerobic conditions such that the material to be composted enters into and is physically indistinguishable from the finished compost (humus), and which ultimately minerializes (biodegrades to carbon dioxide, water, and biomass) in the environment at a rate like that of known compostable materials such as paper and yard trimmings.
>
> "Composting" means the controlled biological degradation of organic matter to make compost.
>
> "Recycling center" means a facility designed and operated solely for receiving, storing, processing or transferring source separated recyclable materials . . . .
>
> "Yard trimmings" means grass clippings, leaves and brush.
>
> [N.J.A.C. 7:26A-1.3].

with N.J.S.A. 13:1E-99.34(b) and N.J.A.C. 7:26A-1.[3] Pa179.[4] The General Approval permits appellants to receive and transfer a maximum of two hundred and sixty (260) tons per day of leaves, grass clippings, brush and tree branches. Pa181; Pa194. The facility is surrounded by residential and commercial neighbors, which are located within 1000 feet of the facility entrance. Da130.

On December 17, 2001, the Department proposed, among other things, to re-adopt with amendments the Recycling Rules found at N.J.A.C. 7:26A-1 et seq. 33 N.J.R. 4273(a) (December 17, 2001). At issue herein is the Department's re-adoption with amendment of N.J.A.C. 7:26A-4.5(a)6, which requires that recycling facilities, not otherwise covered under the exemption at N.J.A.C. 7:26A-

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[3] Prior to the issuance of the General Approval, appellants operated their transfer station pursuant to the solid waste rules at N.J.A.C. 7:26B.1 et seq. See 19 N.J.R. 979 (June 1, 1987) and 28 N.J.R. 2242 (December 16, 1996). To ensure that adverse impacts, such as the migration of odors, were minimized and environmental pollution was prevented, the DEP required at N.J.A.C. 7:26B.5(b)2 and 7:26B.5(b)7 that transfer operations be conducted in an enclosed building. 19 N.J.R. 983 (June 1, 1987). Because appellants, under their solid waste facility permit, received less than 100 tons per day of vegetative waste, the Department authorized the unloading of grass clippings directly into a closed compactor hopper as an equivalent odor control method. Pa167.

[4] Pursuant to R. 2:6-8, the following abbreviations are used herein:

"Pa" for appellants' appendix; and
"Da" for the Department's appendix.

1.4(a)13,[5] receiving grass clippings, have a minimum buffer of 1000 feet between the materials staging area and areas of human use or occupancy.[6] On January 16, 2002, the Department held a public hearing and interested parties, including appellants, submitted written comments concerning the proposed re-adoption with amendments. 34 N.J.R. 2088(a) (June 17, 2002). Thereafter, the Department re-adopted the Recycling Rules with amendments, which became operative December 17, 2002. Ibid.

The underlying support for the adoption of N.J.A.C. 7:26A-4.5(a)6 follows in detail below. In the 1980s, the Department sponsored a project by Rutgers University which led to the development of the "Leaf Composting Manual for New Jersey Municipalities" (Leaf Composting Manual). Da1-2. The Leaf Composting Manual was designed to assist municipalities in the establishment and operation of vegetative waste compost operations. Da3. The Leaf Composting Manual recognized that all vegetative waste, including grass clippings, produces odor and that therefore appropriate buffer zones should be required. Da9. With respect to grass clippings, Rutgers University noted in the Leaf Composting Manual that because of the organic composition of grass clippings,

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[5] The exemption will be discussed in more detailed below.

[6] The prior rule, N.J.A.C. 7:26A-4.5(a)15v, established a minimum buffer distance of 1000 feet between the materials staging area and areas of human use or occupancy for recycling facilities which sought to receive, store and compost grass clippings. 28 N.J.R. 5395-5396 (December 16, 1996).

"they are often highly odorous by the time they are delivered" to a site. Da12. Therefore, Rutgers University strongly recommended that "additional precautions such as enlarging the buffer zone" be mandated for facilities accepting grass clippings. Ibid. Moreover, the University stated that once the grass clippings are mixed into the leaf windrows[7], no further odor problem is expected. Da12.

In 1992, Cook College forwarded a Masters thesis, entitled "Yard Waste Composting: Processing Technology, Compost Quality, and Composting Endpoint" (thesis) to the Department. Da19. The thesis was a result of field trials conducted to determine the success of incorporating grass clippings in yard waste composting. Da19. Like the Leaf Composting Manual, the thesis acknowledged that grass clippings present a serious odor problem and that the odors are present with the delivery of grass clippings to a site. Da21; Da30-31; Da32; Da42; Da45-46. Specifically, the field studies disclosed that "the strongest odors overall, by far, came from the grass clippings following arrival on site and before incorporation into the windrows." Da21.

In 1993, the Department set forth buffer zone recommendations for leave/vegetative waste composting facilities. Da47. The recommendations suggested minimum buffer distances between 150 feet and 1500 feet depending on the type of processes

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[7] A "windrow" is defined as an elongated pile. Da15.

at the compost facility and whether grass clippings would be received. Ibid. The Department's rationale for the buffer recommendations was based primarily on its concern with air quality issues for the surrounding communities. Ibid.

In 1994, in conjunction with the Department of Environmental Services at Cook College and the New Jersey Agricultural Experiment Station at Rutgers University, the Department produced "New Jersey's Manual on Composting Leaves & Management of Other Yard Trimmings," (New Jersey Manual). Da48-50. The New Jersey Manual superseded all previous versions of the Leaf Composting Manual. Da53. The New Jersey Manual reflected scientific and technological advances in the management of other yard trimmings, particularly grass clippings. Ibid. Moreover, the New Jersey Manual explained that a buffer requirement was necessary to minimize the possible negative impacts on surrounding properties by Class C recycling center operations. To that end, the New Jersey Manual noted that "a buffer zone is required between the site activities and neighboring land use to minimize possible odor, noise, dust and visual impacts. . . . If grass clippings will be brought to the site, at least 1000 foot buffer zones from the staging and grass clipping handling areas are probably necessary." Da58; Da71. As explained in the New Jersey Manual, the 1000-foot buffer zone is warranted because grass clippings are usually odorous by the time they are delivered. Da66; Da70; Da76.

Consistent with real studies' results, circa 1995, the Department established a policy that grass should only be accepted at sites that had a 1000-foot buffer from the grass receiving/handling areas to sensitive land use property line in "Design Criteria and Recommendations for Vegetative Waste Compost Facilities." Da78. However, if it was an enclosed operation, the buffer for the building setback should be 50 feet. Ibid.[8] Again, the Department's establishment of the buffer policy for composting facilities was to promote air quality. Ibid.

In 1995, the 1000-foot buffer policy was extended to facilities that sought to transfer grass clippings. In a letter from DEP to the Middlesex County Improvement Authority establishing a pilot grass recycling program for Middlesex County, the DEP required that grass clippings transfer depots be located at least 1000 feet from any area of human use or occupancy. Da79.

Subsequently, in 1996, the Department issued a policy statement entitled "Policy Concerning the Consideration of Grass Mulching Demonstration Requests" for the purpose of soliciting proposals to determine the long-term viability and to develop an appropriate regulatory framework for grass clipping mulching on farmland. Da81. The DEP required that any applications submitted for grass mulching demonstration must indicate whether the

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[8] Under the solid waste rules, transfer operations, such as those performed by Rotondi herein, were required to be an enclosed operation. See 19 N.J.R. 983 (June 1, 1987).

receiving areas for the staging of grass was closer than 1000 feet of any property line of a sensitive receptor (i.e., area of human use or occupancy).[9] Da82.

Meanwhile, in 1994, the DEP launched a comprehensive re-evaluation of its current recycling rules found at N.J.A.C. 7:26A-1 et seq. To that end, a committee, which included DEP technical staff and representatives from the regulated community, was established to evaluate the entire recycling program to determine what revisions were necessary to ensure that the State's recycling programs operated in a cost-effective and environmentally sound manner. 28 N.J.R. 2241 (Summary) (December 16, 1996). The suggestions offered by the committee formed the basis of many of the new rules, which included the introduction of a new class of recyclable materials defined as Class C recyclable material.[10] 28 N.J.R. 2241 (December 16, 1996). See also 28 N.J.R. 2262 (December 16, 1996).

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[9] Likewise, application guidelines issued in May 2001 also required that any application must indicate whether the receiving areas for the staging of grass is closer than 1000 feet of any area of human use or occupancy. Da87.

[10] Previously, Class C recyclable materials (such as leaves, grass clippings and brush) were classified as solid waste. 28 N.J.R. 2242 (December 16, 1996). To encourage the expansion of recycling activities relating to certain compostable materials, the DEP moved the requirements for solid waste composting facilities to the recycling rules and added additional operational requirements to ensure protection of the public health and the environment. Ibid. The DEP stated that the purpose of the new rules was to ease permitting requirements for composting facilities accepting yard trimmings. Ibid. See also 28 N.J.R. 2262 (December 16, 1996).

On May 6, 1996, therefore, the Department proposed operational requirements applicable to recycling centers for Class C recyclable materials in an effort to ensure the protection of the public health and the environment. 28 N.J.R. 2242 (December 16, 1996). Seven months later, the DEP promulgated Subchapter 4 of the Recycling Rules, which sets forth the operational standards and general rules for recycling centers which receive, store, process or transfer Class C recyclable material. 28 N.J.R. 5395 (December 16, 1996). N.J.A.C. 7:26A-4.5, entitled "Additional design and operational requirements for recycling centers which receive, store and process Class C recyclable materials," provides:

> (a) In addition to the requirements of N.J.A.C. 7:26A-4.1, the following operational and design criteria apply to recycling centers receiving Class C recyclable materials consisting only of yard trimmings:
>
> 15. **Recycling centers which provide composting of the Class C material** shall operate in accordance with the following:
>
> v. Materials staging and processing shall be done in areas on the site which meet the following buffer distance requirements:

Level of technology	Buffer with leaves only (FT)	Use for grass	Buffer with grass (FT)
(1) Minimal	2500[1]	No	N/A
(2) Low	50/500[2]	No	N/A
(3) Intermediate	50/150/250[3]	Yes	1000
(4) High	50	Yes	50

Notes:

1. From operations to sensitive land uses.

2. From operations to property line/to sensitive land uses.
3. From operating to property line/to sensitive land uses/to inhabited structure.
4. From grass clipping staging and handling areas to sensitive land uses.
5. Building setback for enclosed operation.

[28 N.J.R. 5395-5396 (emphasis supplied) (December 16, 1996)].

Thus, N.J.A.C. 7:26A-4.5(a)15v established various buffer distances and specifically mandated the 1000-foot buffer for facilities seeking to compost grass clippings. 28 N.J.R. 5395-5396 (December 16, 1996).

In establishing the buffer distances, the DEP Commissioner deemed that they were necessary to protect human health and welfare and stated:

> The buffer distance requirements are not new. These buffer requirements have been used by the Department in guideline form for over 10 years. The same distances are published in "New Jersey's Manual on Composting Leaves & Management of Other Yard Trimmings" last revised on December 1994. The distances have been **found over the years to be protective of human health and welfare**. These buffers also establish part of a "best management practice" for compost facilities when the Department considers enforcement actions arising from **citizen complaints concerning odors** from compost facilities.
>
> [28 N.J.R. 5374, Response to Comment 85 (emphasis supplied) (December 16, 1996). See also 28 N.J.R. 5367 and 5372, Responses to Comments 40 and 74 (December 16, 1996).

Believing that exempting some facilities from the requirement of obtaining a general or limited approval to operate

a recycling center would encourage and facilitate the establishment of new recycling operations, the Department promulgated a series of exemptions at N.J.A.C. 7:26A-1.4. 28 N.J.R. 2251 (December 16, 1996). Specifically related to the issue at hand, the Department adopted an exemption for facilities receiving yard trimmings at N.J.A.C. 7:26A-1.4(a)13. If a facility met the various conditional criteria that serve to safeguard the environment, a facility would not need a general or limited approval to operate the recycling center. 28 N.J.R. 2251 (December 16, 1996); 28 N.J.R. 2257 (December 16, 1996). In order to qualify for the exemption, a facility must, among other things, be limited to the receipt of no more than 10,000 cubic yards of yard trimmings per year. N.J.A.C. 7:26A-1.4(a)13i. In addition, if grass clippings are received, they shall constitute no more than 10 percent by volume of all yard trimmings received annually. N.J.A.C. 7:26A-1.4(a)13ii. Moreover, "the windrow composting area shall not exceed three acres. In addition, . . . if grass clippings are received, the composting windrows shall terminate a minimum of 500 feet from the property line of any area of human use or occupancy." N.J.A.C. 7:26A-1.4(a)13vi.

When the DEP adopted the exemptions relative to yard trimmings in 1996, it provided the following rationale for limiting the exemptions to facilities receiving less than 10,000 cubic yards of yard trimmings annually:

> The Department is dropping the capacity limit from 20,000 cubic yards per year to 10,000 cubic yards per year. The Department established the 20,000 cubic yard limit in 1987 [in response to the disposal ban of leaves in landfills]. . . . This limit was established with the understanding that this would accommodate the needs of most municipalities and a finding that associated environmental impacts would be minimal. Through routine inspection of many of these facilities, the Department has become aware of operational problems that have arisen since this regulation when into effect. The majority of these problems occurred at facilities with capacities in excess of 10,000 cubic yards per year. Additionally, the Department has further determined that leaf collection in the vast majority of communities . . . occurs in the course of six to eight weeks per year. The limit of 20,000 cubic yards was too high for exemption from approval given the amount of truck traffic that was occurring at the larger sites. For these reasons, the Department has reduced the size limit for exempt yard trimmings compost facilities to 10,000 cubic yards.
>
> [28 N.J.R. 2245 (December 16, 1996)].

The Department's enforcement records stemming from citizen complaints regarding odors confirm that unprocessed grass clippings like that which arrives at both transfer and compost facilities (i.e., Class C recycling facilities) generate foul odors. Da100-129. For instance, prompted by a citizen complaint on June 14, 2000, the Department conducted a field investigation to determine the source of the odors. Da100. The DEP inspector determined that odors, of a putrid, rotting character, were being

emitted from two piles of unprocessed grass/brush at a compost facility known as Nature's Choice Corporation (NCC). Da102.

On June 15, 2000, the DEP received numerous odor complaints regarding NCC. Da106. The investigator traced odors to the piles of unprocessed grass/brush and described the odors as "putrid, rotting character." Da108. Again, on June 16, 2000, a DEP inspector traced objectionable odors, described as "semi-putrid, acrid, rotting odors" to "new piles of fresh grass/brush/vegetative waste" at NCC. Da113. Responding to numerous complaints on July 9, 2000, a DEP investigator observed at NCC three large piles of unprocessed grass/vegetative waste which were emitting putrid, rotting odors. Da119. Once again, on July 21, 2000, the DEP determined that 3 piles of unprocessed grass/vegetative waste at NCC were the source of putrid, rotting odors. Da125.

In the interim, on January 17, 1992, the Legislature supplemented Title 13 of the Revised Statutes and enacted a series of related acts concerning the Department's various permitting programs. N.J.S.A. 13:1D-101 et seq. At N.J.S.A. 13:1D-111, the DEP was directed to develop a technical manual for each class or category of permit. In September 2001, the DEP developed a technical manual governing General Approvals for Class C recycling centers. Da89. The Class C Technical Manual clarified departmental policies and interpretations of regulations with

respect to the application of the 1000-foot buffer requirement to recycling centers providing transfer of grass clippings. The Class C Technical Manual reads:

> 2. Recycling Centers Providing Transfer Only
>
> The Department will require recycling centers providing only transfer of Class C recyclable materials to comply with any applicable . . . design and operational requirements at N.J.A.C. 7:26A-4.1 and 4.5. . . . Any requirement discussing composting, windrow management, curing or finished product handling is not applicable, except for the following:
>
> . . .
>
> ii. N.J.A.C. 7:26A-4.5(a)15v . . . - Materials staging and handling activities shall be performed only in areas on the site which meet the following minimum [sic] buffer distance requirements:
>
> | | Buffer with grass and/or vegetative food material |
> |---|---|
> | Not Fully Enclosed | 1000[1] |
> | Fully Enclosed | 50[2] |
>
> Notes:
>
> 1. From material staging to sensitive land uses.
> 2. Building setback for enclosed operations.
>
> [Da95-96].

Thus, the Class C Technical Manual was clearly indicative of the Department's intent to apply the 1000-foot buffer to all facilities accepting and receiving grass clippings where there was no building enclosure.

During the re-adoption of the recycling rules in 2001, the Commissioner believed that the rules would continue to provide a mechanism for the expansion of recycling activities in an environmentally sound manner. 33 N.J.R. 4273(a) (Subchapter Summary) (December 17, 2001). The Department also expected that the exemption at N.J.A.C. 7:26A-1.4(a)13 would continue to entice more facilities to begin composting, thereby saving disposal costs. In other words, the compost exemption would promote the State's recycling goal. 33 N.J.R. 4283 (Economic Impact) (December 17, 2002). See also 33 N.J.R. 4285 (Environmental Impact) (December 17, 2001).

Consistent with underlying data indicating that the strongest odors came from the grass clippings following arrival on site and before incorporation into the windrows and the Department's policy statements and its own experience, on December 17, 2001, the Department proposed an amendment to N.J.A.C. 7:26A-4.5 which would extend the 1000-foot buffer to all facilities whether composting or transferring grass clippings.[11] 33 N.J.R. 4280 (December 17, 2001). The 2001 rule proposal read:

> In addition to the requirements of N.J.A.C. 7:26A-4.1, the following operational and design criteria apply to recycling centers receiving Class C recyclable materials consisting only of yard trimmings.

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[11] Previously, the rule, at N.J.A.C. 7:26A-4.5(a)15v, only required recycling facilities composting grass to meet the 1000-foot buffer requirement. 28 N.J.R. 5395-5396 (December 16, 1996).

. . .

> 6. If the incoming material contains grass, it shall be accepted only in areas of the site that are at least 1,000 feet from any areas of human use or occupancy, and processing of such material shall begin on the day of receipt.
>
> [33 N.J.R. 4299-4300 (December 17, 2001)].

The DEP Commissioner explained:

> At N.J.A.C. 7:26A-4.5, the Department is proposing to delete certain requirements and reorder the remaining requirements to clearly separate those requirements pertaining to all recycling centers handling Class C recyclable materials and those specific to facilities that compost the materials received. . . . Similarly, N.J.A.C. 7:26A-4.5(a)14 has been reworded to clarify that any recycling center receiving grass clippings must provide a 1,000-foot buffer from areas of material receipt to neighboring properties to help prevent odor problems.
>
> [33 N.J.R. 4280 (December 17, 2001)].

A total of six comments were received concerning the 1000-foot buffer. 34 N.J.R. 2088(a) (June 17, 2002). In responding to each comment, the Commissioner noted that the 1000 buffer zone was necessary to meet the policy goals of preventing offsite odors associated with the receipt of grass clippings at recycling centers receiving more than 1,000 cubic yards of grass clippings per year. 34 N.J.R. 2088(a) (June 17, 2002). The comments and responses thereto follow.

Two comments sought clarification from the Department whether the buffer requirement was applicable to their operations.

One commenter asked whether facilities that merely transferred grass clippings would have to maintain the 1000-foot buffer. 34 N.J.R. 2103, Comment 91 (June 17, 2002). Another commenter questioned whether the buffer requirement would apply to facilities which receive commingled loads of vegetative waste material containing grass clippings. 34 N.J.R. 2103, Comment 93 (June 17, 2002). In clarifying that the buffer requirement was applicable to all facilities accepting grass clippings, the DEP noted that the purpose of the buffer requirement was to help prevent off-site odors associated with the unloading of grass clippings at a site. As such, the buffer requirement was applicable to all sites that accept grass clippings. See 34 N.J.R. 2103, Responses to Comment 91 and 93 (June 17, 2002).

The Commissioner also rejected the suggestion in a comment that the buffer zone for facilities which compost grass should be reduced to 750 feet. He replied:

> The buffer distance for areas on the site used for the receipt of grass clippings is established at 1,000 feet in an attempt to reduce potential odor problems. The Department has used this distance for more than 10 years. Over this time, compost sites accepting grass clippings at this distance have been found in violation of the Air Pollution Code at N.J.A.C. 7:27 because of odors associated with the grass clippings being received. Accordingly, if the Department were to consider a change in the buffer requirement it would be to increase the distance, not decrease it.
>
> [34 N.J.R. 2108, Response to Comment 124 (June 17, 2002)].

Two comments focused on the different buffer requirements for exempt and non-exempt recycling facilities. As stated earlier, if a facility accepts less than 1,000 cubic yards annually of grass clippings and it meets the other specific conditions of N.J.A.C. 7:26A-1.4(a)13, the facility must maintain a buffer of at least 500 feet from the property line of any area of human use or occupancy. In essence, the comments questioned why exempt recycling facilities were treated differently than permitted facilities, which were required to have a 1000-foot buffer, and recommended a buffer of 500 feet for both permitted and exempt facilities.

In developing the different buffer requirements for exempt and permitted facilities, the Department clearly stated that it had considered the maximum amount of grass clippings that would be received at a facility and the types of equipment, process and technology that a facility would utilize. Having considered those factors, the Department believed that the 500 and 1000-foot buffers for exempt and permitted, respectively, facilities would provide adequate protection from the migration of odors to neighboring properties. The Department stated:

> The 500-foot buffer provided for the receipt and composting of grass clippings at compost sites exempt from General Approval is set with the recognition that these sites may, according to regulation, only receive a maximum of 1,000 cubic yards of grass clippings over an entire season. The amount of grass delivered to the site averages less than eight cubic yards per day over a typical six-month grass season. The requirement that the compost operation be

maintained with the same 500-foot buffer takes into consideration that windrow turning is accomplished with a bucket loader and not a dedicated windrow turning machine. For compost facilities that require General Approval, the 1,000-foot buffer from areas where grass clippings are received to sensitive land uses was set because of an expectation of much greater volumes of grass clippings being delivered to the site. The buffer requirement for composting and curing areas at a site requiring General Approval are based on the technology to be used at the site. The Department has set a requirement of 500 feet only for sites that turn windrows a minimum of four times per year with a bucket loader.

[34 N.J.R. 2097, Response to Comment 54 (June 17, 2002). See also 34 N.J.R. 2103, Response to Comment 92 (June 17, 2002)].

Finally, Comment 94 was submitted by appellants:

The commenter stated that the Department is proposing a new requirement for recycling centers which receive, store, process or transfer Class C recyclable materials to maintain a 1,000-foot buffer between areas that receive material containing grass from any areas of human use or occupancy. The commenter noted that the preamble to the proposed rule stated that this new restriction is necessary to "help prevent odor problems." Based on its experience, the commenter believes the new restriction is not only unnecessary, but would result in a severe negative economic impact in that at any one point, up to one -third of incoming recyclable material may be grass. The commenter further notes that its two facilities have operated for over 24 months without a single verified odor complaint from a neighbor. Historically, both facilities have operated with only minor, sporadic odor problems. The commenter notes that the Department currently has several existing mechanisms to control odors, including requiring facilities to develop an odor control plan, as well as existing air pollution control standards that

> prohibit operating facilities from emitting odors. The commenter stated that rather than institute a mandatory 1,000-foot buffer, the Department should require recycling facilities to operate without causing off-site odor, and to develop and implement odor control provisions. The commenter further suggested that the Department adopt similar language for odor control as proposed in N.J.A.C. 7:26A-3.2(a)20 for noise control. In N.J.A.C. 7:26A-3.2(a)20, the Department requires that an applicant demonstrate the ability to meet noise control rules, rather than specify a specific noise buffer zone. The commenter also noted the proposed language contained in N.J.A.C. 7:26A-3.18(a)7, with requires compliance with New Jersey Air Pollution Control Regulation regarding odor. The commenter believes this requirements should be enforced, rather than a mandatory buffer. At the very least, existing facilities that are operating without odor problems should be grandfathered and not be required to meet a new odor buffer zone limit.
>
> [34 N.J.R. 2103 (June 17, 2002)].

The DEP's response makes clear that the DEP's overriding concern was the protection of human health and of the environment. Thus, the Commissioner stated that exempting existing facilities from the buffer requirement would undermine that public policy. The Department replied:

> The requirement for a 1,000-foot buffer from grass clippings receiving areas to areas of human use and occupancy is not a new requirement. Composting facilities accepting grass have been subject to this requirement for over 10 years, first in guideline form and then in rule form starting in December 1996. Over this time, compost sites accepting grass clippings at this distance have been found in violation of the Air Pollution Code at N.J.A.C.7:27 because of odors associated with the grass clippings being received.

> Accordingly, if the Department were to consider a change in the buffer requirement it would be to increase the distance, not remove the requirement.
>
> The Department has also required the 1,000-foot buffer at sites receiving and transferring grass clippings by policy as defined in the Technical Manual for Class C Recycling Center Approvals available by contacting the Department's Division of Solid and Hazardous Waste at (609) 984-6880 or by downloading it from this Division's web site at www.state.nj.us/dep/dshw/resource/techman.htm. Allowing existing operations to continue without having to meet the requirement would be contrary to the policy goals.
>
> With respect to the commenter's suggestion that the Department adopt an odor control provision similar to that which it uses for noise control, the Department's regulations already contain such a provision. The Department refers the commenter to N.J.A.C. 7:26A-3.18(a)2xiv recodified as N.J.A.C. 7:26A-3.18(a)7 in this adoption.
>
> [34 N.J.R. 2103-2104 (June 17, 2002)].

Thereafter, the Commissioner re-adopted with amendment N.J.A.C. 7:26A-4.5(a)6 and required all Class C recycling facilities, with the exception of those facilities operating pursuant to N.J.A.C. 7:26A-1.4(a)13, to maintain a 1000-foot buffer between the materials receipt area and areas of human use or occupancy. Rotondi, who operates pursuant to a General Approval and who is not an exempt facility, was thus subject to the rule as of December 17, 2002. 34 N.J.R. 2088(a) (June 17, 2002).

In the interim, on June 5, 2002, Department employees visited appellants' site in connection with their application for

a General Approval to operate a Class C facility. Da130. The DEP employees canvassed the surrounding community and noted that appellants had "residential and commercial neighbors within a 1000 foot buffer of the facility." Da130. The DEP employees also inspected the material drop off area where grass clippings and brush would be received and found that "odor was noticeable within the vicinity of the drop off area and emanating off the site approximately 1000 feet away at the facility entrance." Da131. Thus, the Department identified the odor emanating from the grass clippings as a major issue to be addressed in connection with Rotondi's application. Da131.

On June 19, 2002, the Department issued a General Approval to appellants to operate a Class C recycling center.[12] Pa179a. The General Approval authorizes Rotondi to receive and transfer a maximum of two hundred and sixty (260) tons per day of leaves, grass clippings, brush and tree branches. Pa181; Pa194.

On December 11, 2002, 2003, S. Rotondi & Sons, Inc. and Angelo G. Rotondi filed the instant appeal, challenging the adoption of N.J.A.C. 7:26A-4.5(a)6. Da132. Appellants then filed a motion to stay the application of N.J.A.C. 7:26A-4.5(a)6 before the Commissioner of the Department of Environmental Protection. Pa160.

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[12] By local resolution, appellants have authority to operate a leaf and grass transfer station. Pa173.

On December 17, 2002, the Commissioner granted the stay pending disposition of this appellate proceeding. Pa163.

On February 27, 2003, the Department modified the General Approval to incorporate the rule changes which became operative on December 17, 2002. Pa181. Thus, the modification required that if the incoming material contains grass, it shall be accepted only in areas of the site that are at least 1,000 feet from any areas of human use or occupancy. However, because of the Commissioner's December 17, 2002 Order which granted a stay of the application of N.J.A.C. 7:26A-4.5(a)6, Rotondi is not obligated to comply with the buffer requirement during the pendency of this appeal. Pa190-191.

Thereafter, appellants filed a motion to stay these proceedings pending disposition of another matter, Rotondi v. DEP, OAL Docket No.: EHW-7647-02; Agency Docket No.: 1405001001, before the Office of Administrative Law.[13] The Department opposed said motion on June 19, 2003. This court denied appellants' motion on July 1, 2003. Da135.

On August 15, 2003, Rotondi filed its merits brief. On October 15, 2003, the DEP filed a motion to supplement the record, which appellants opposed. This court granted the DEP's motion to supplement the record on November 17, 2003. Da136.

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[13] Hearings are scheduled for July 6, 7, 8, 9, and 12, 2004.

ARGUMENT

POINT ONE

N.J.A.C. 7:26A-4.5(a)6 IS A VALID MEASURE TO PROMOTE THE AIR QUALITY OF THE COMMUNITIES SURROUNDING FACILITIES THAT RECEIVE AND TRANSFER GRASS CLIPPINGS BECAUSE GRASS CLIPPINGS ARE USUALLY ODOROUS BY THE TIME THEY ARRIVE AT RECYCLING CENTERS.

This matter concerns a preventative effort by the Department to promote air quality by lessening actual and potential odors arising from the unloading of grass clippings. The regulation at issue, N.J.A.C. 7:26A-4.5(a)6, seeks to accomplish this by requiring a buffer of 1000 feet from the materials staging area to areas of human use or occupancy. The regulation makes no distinction between permitted facilities that compost grass clippings or merely transfer grass clippings. Moreover, the rule rationally addresses an area of recognized and legitimate local concern -- public health. It should therefore be affirmed by this court.

Under well-established judicial principles, administrative regulations are presumed to be valid and reasonable. A heavy burden is thus imposed on their challengers to prove that they are arbitrary, unreasonable or fail to comport with the legislative will. See In re Producer Assignment Program, 261 N.J. Super. 292, 302 (App. Div.), certif. denied, 133 N.J. 438 (1993). Generally, an *ultra vires* finding is disfavored. City of Newark v. Natural Resources Council in Dep't of Environmental Protection, 82 N.J. 530,

539, cert. denied, 449 U.S. 983, 101 S. Ct. 400, 66 L. Ed. 2d 245 (1980).

Moreover, a reviewing court may not substitute its judgment regarding the wisdom of an administrative action for the judgment of the agency as long as the action is statutorily authorized and is reasonable. In re of Commissioner of Insurance's Issuance of Orders A-92-189 and A-92-212, 274 N.J. Super. 385, 398 (App. Div. 1993), aff'd, 137 N.J. 93 (1994). See also Bergen County Utilities Authority v. U.S. Environmental Protection Agency, 507 F. Supp. 780, 784 (D. N.J. 1981). "Judicial deference to administrative agencies stems from the recognition that agencies have the specialized expertise necessary to enact regulations dealing with technical matters and are 'particularly well equipped to read and understand the massive documents and to evaluate the factual and technical issues that . . . rulemaking would invite.'" New Jersey State League of Municipalities v. Department of Community Affairs, 158 N.J. 211, 222 (1999) (citing Bergen Pines County Hosp. v. New Jersey Dep't of Human Services, 96 N.J. 456, 474 (1984)). Further, a reasonable and practical regulation which is generally fair and equitable, while not necessarily so as applied to a particular entity, is not unconstitutional when general regulations are necessary to accomplish an appropriate congressional purpose. Exxon Corp. v. Federal Energy Admin., 417 F. Supp. 516 (D. N.J. 1975). See also Penn Central Transport Company v. New York City,

438 U.S. 104, 98 S. Ct. 2646, 57 L. Ed. 2d 631 (1978) (Legislation designed to promote the general welfare commonly burdens some more than others); Toms River Affiliates v. Department of Environmental Protection, 140 N.J. Super. 135 (App. Div.), certif. denied, 71 N.J. 345 (1976) (Concluding that the Coastal Area Facility Review Act was a general law, this court stated, "the mere fact that the property of appellants is subject to its provisions while property in other areas of the State is not regulated does not establish a 14th Amendment deprivation of equal protection of the laws"). Applying these principles to the objections raised by Rotondi, this court should respectfully conclude that N.J.A.C. 7:26A-4.5(a)6 meets the test of a valid, reasonable, and statutorily authorized administrative action.

The Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., (the Act) provides ample authority for the Commissioner of the Department of Environmental Protection to adopt regulations necessary to promote the public health in the area of solid waste disposal. N.J.S.A. 13:1E-2 and N.J.S.A. 13:1E-9. The statutory intent of the Act is most clear -- to protect the public health through the preservation of the environment. Specifically, the Legislature found:

> that the collection, disposal and utilization of solid waste is a matter of grave concern to all citizens and is an activity thoroughly affected with the public interest; that the health, safety and welfare of the people of this State require efficient and reasonable

> solid waste collection and disposal service or efficient utilization of such waste. . . .
>
> [N.J.S.A. 13:1E-2].

Relative to the Department's jurisdiction to regulate odors, the Legislature expressly delegated to the DEP the power to establish standards requiring odor control programs "deemed necessary to protect the public health and safety and the natural environment." N.J.S.A. 13:1E-6.

In an effort to encourage recycling, in 1987, the Legislature supplemented the SWMA and enacted the New Jersey Statewide Mandatory Source Separation and Recycling Act, N.J.S.A. 13:1E-99.11 et seq. (Recycling Act). The stated purpose of the Recycling Act was to encourage recycling and source reduction of solid waste. N.J.S.A. 13:1E-99.11. Thus, it is the Department's responsibility to protect human health and the environmental through the use of its solid waste and recycling regulations.

Consistent with that directive, the DEP promulgates rules which encourage recycling but simultaneously protect the environment. 28 N.J.R. 5372, Response to Comment 74 (December 16, 1996). As the Commissioner recognized when he proposed the Class C recycling center rules, "there are potential negative environmental impacts such as ground and surface water run-off, odors, and noise which require an appropriate level of operational controls to ensure proper management of the recycling center." 28 N.J.R. 2257 (December 16, 1996). See also 28 N.J.R. 5372, Response

to Comment 74 (December 16, 1996). To that end, the Commissioner amended the recycling rules to make clear that all recycling facilities, not meeting the exemption criteria at N.J.A.C. 7:26A-1.4(a)13, had to satisfy the 1000-foot buffer requirement if they accepted grass clippings. N.J.A.C. 7:26A-4.5(a).

The legitimate state interest which the Commissioner sought to advance by the buffer requirement was the prevention of the migration of odors associated with grass clippings. The amendment at issue herein, N.J.A.C. 7:26A-4.5(a), is reasonably related to that legitimate state interest and is thus valid. The years and years of data which the DEP accumulated and analyzed in the Leaf Composting Manual, the thesis, and the New Jersey Manual undisputedly shows that grass clippings are highly odorous by the time they are delivered to a recycling facility. Da12; Da21; Da30-31; Da32; Da42; Da45-46; Da58; Da66; Da70; Da72; Da76.

Likewise, because the record demonstrates that the organic composition of grass clippings has the potential of creating a malodorous situation, the DEP required a 1000-foot buffer for grass clippings (as recommended in the aforementioned manuals) in each and every policy statement that it issued since 1993. Da47; Da78; Da81; Da87. In fact, the Department extended the 1000-foot buffer policy to a pilot program for the transfer of grass clippings in 1995. Da79. In the most recent pronouncement of that policy, the Department required in the Class C Technical Manual that grass

clippings transfer stations maintain a 1000-foot buffer between the materials staging area and areas of human use or occupancy. Da95-96. The regulation at issue is just a codification of that policy.

This court should reject appellants' argument that the regulation be cast aside because of the lack of verified odor complaints at their facility. The department inspections confirm that grass clippings emit odors. Da100-129. More important, odors were noted at the Rotondi facility during a site visit. Da130. The DEP employees specifically noted that "odor was noticeable within the vicinity of the drop off are and emanating off the site approximately 1000 feet away at the facility entrance." Da131. Moreover, the Department is hardly required to refrain from regulating recycling facilities until odors are emitted from and verified at each and every facility accepting grass clippings. Rather, consistent with its delegated responsibility, the Department of Environmental Protection is allowed to take steps to prevent environmental pollution before it occurs.

Similarly, this court should reject appellants' argument that N.J.A.C. 7:26A-4.5(a)6 is capricious. As the Court stated in Worthington v. Fauver, 88 N.J. 183 (1982),

> Arbitrary and capricious action of administrative bodies means willful and unreasoning action, without consideration and in disregard of circumstances. Where there is room for two opinions, action is [valid] when exercised honestly and upon due consideration,

> even though it may be believed that an erroneous conclusion has been reached.
>
> [Id. at 204-205 (quotation omitted)].

Here, the Commissioner held a public hearing and provided an opportunity for members of the regulated community to submit comments. The Department considered all of the comments, including Rotondi's, and determined that the best solution for preventing the off-site migration of odors was to insist on a 1000-foot buffer from the materials receipt area to areas of human use or occupancy. Under these circumstances and this record, this court should respectfully find that the regulation is reasonable and was a proper exercise of administrative expertise and discretion.

POINT TWO

N.J.A.C. 7:26A-4.5(a)6 SHOULD BE UPHELD BY THIS COURT BECAUSE IT IS WELL WITHIN THE CONTEMPLATION OF THE ENABLING ACT, IS SUPPORTED BY THE RECORD, AND IS REASONABLE IN ALL RESPECTS.

Appellants allege that the Commissioner acted arbitrarily and capriciously because it made no record justifying its decision to extend the 1000-foot buffer policy to grass clippings transfer facilities at N.J.A.C. 7:26A-4.5(a). In other words, Rotondi contends that there was an absence of administrative findings with respect to grass clippings transfer stations. In purported support of their assertion, appellants highlight certain responses made by the Commissioner during the public comment period of N.J.A.C. 7:26A-4.5(a). Rotondi's argument, however, is specious.

First, it is axiomatic that facts sufficient to justify the regulation must be presumed. In re Adoption of N.J.A.C. 10:52-5.14(d)2 and 3, 276 N.J. Super. 568 (App. Div. 1994), certif. denied, 142 N.J. 448 (1995). The burden is not upon the agency to establish that the requisite facts exist. Rather, the burden is on the challengers to establish that they do not. Ibid. (citing Consolidation Coal Co. v. Kandle, 105 N.J. Super. 104, 115 (App. Div.), aff'd, 54 N.J. 11 (1969)). Quite simply, the benefit of doubt is accorded to the agency.

Here, factual support for the extension of the buffer policy to grass clippings transfer centers is derived from the

various manuals preceding the regulation. The Leaf Composting Manual, the thesis and the New Jersey Manual all reflected that substantial odor production often occurs before the grass clippings arrive at a recycling center. Da12; Da30; Da66. The site inspections conducted by DEP, which confirmed that grass clippings emit odors, also provide the technical support for the proposition that a buffer zone is warranted. Da100-129; Da130. The numerous policy statements issued by the Department throughout the years is also indicative of the DEP's intent to apply the 1000-foot buffer to all grass clippings operations in an effort to prevent off-site odors. Da47; Da78; Da81 and Da86.

The fact that the Department did not specifically reference each and every supporting document during the public comment period does not mean that those documents did not contribute to the rule-making decision. Nor should the lack of precise memorialization in the record cause this court to disturb the wisdom of the Department in promulgating N.J.A.C. 7:26A-4.5(a)6. As this court recognized in Kandle, supra, 105 N.J. Super. at 114-119, an administrative agency is not required to make findings of facts in a rule-making proceeding. Moreover, an agency can draw upon its accumulated experience in performing its delegated duties. Securities and Exchange Commission v. Chenery Corp., 332 U.S. 194, 67 S. Ct. 1575, 91 L. Ed. 1995 (1947).

On the contrary, consistent with well-established legal principles, facts, real or presumed, sufficient to justify the regulation are accorded a presumption of existence because administrative agencies tend to consult broad relevant data. Hudson Hutton Park Gardens v. Town Council of West Orange, 68 N.J. 543 (1975) (there is an assumption that enactments by legislative bodies rest upon some rational basis within their knowledge and experience). The record here manifests that the Department consulted authoritative studies and its own experience with grass clippings in extending the buffer requirement to facilities like appellants' facility. In response to three out of the five comments, the Commissioner specifically stated that the buffer distance had been in place for more than ten (10) years. 34 N.J.R. 2103-2104 and 2108, Responses to Comments 92, 94 and 124 (June 17, 2002). Some of the replies expressly stated that the buffer distances had been required first in guideline form and then in the 1996 rule, N.J.A.C. 7:26A-4.5(a)15v. 34 N.J.R. 2103-2104, Responses to Comments 92 and 94 (June 17, 2002). Responding to Comment 124, the DEP specifically referenced the Class C Technical Manual which had required that facilities transferring grass clippings comply with the 1000-foot buffer. 34 N.J.R. 2108 (June 17, 2002). Thus, it is clear that DEP, in establishing the 1000-foot buffer, relied on a variety of pertinent technical studies.

In addition, the replies to Comments 94 and 124 refer to odor problems associated with grass clippings at compost facilities. 34 N.J.R. 2103-2104 and 2108 (June 17, 2002). Moreover, the rule-making history of the predecessor rule, N.J.A.C. 7:26A-4.5(a)15v, contains references to the New Jersey Manual[14] as support for the buffer distance. 28 N.J.R. 5272 and 5374, Responses to Comments 74 and 85 (December 16, 1996). Thus, it is reasonable to presume that the DEP was relying on the information concerning grass clippings contained in all of the collective manuals (i.e., the Leaf Composting Manual, the thesis, the New Jersey Manual and the Class C Technical Manual), all of its policy statements and its own enforcement history with facilities accepting grass clippings and not just those items that were expressly identified in the rule-making record. Moreover, the rule-making record undisputedly shows that grass clippings are highly odorous by the time they arrive at a facility. Therefore, the whole record clearly sustains the Department's decision to extend the buffer policy to all facilities accepting grass clippings as promulgated at N.J.A.C. 7:26A-4.5(a)6.

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[14] As stated previously, the New Jersey Manual specifically superseded all previous versions of the Leaf Composting Manual. Da53. Therefore, any reference to the New Jersey Manual also acknowledges the earlier manual, which is the Leaf Composting Manual.

POINT THREE

THE 1000-FOOT BUFFER REQUIREMENT FOR ALL CLASS C RECYCLING CENTERS AT N.J.A.C. 7:26A-4.5(a)6 BEARS A CLEAR NEXUS TO THE LEGITIMATE STATE INTEREST OF PROTECTING THE PUBLIC HEALTH BY PRESERVING THE ENVIRONMENT AND DOES NOT RESULT IN A TAKING OF PROPERTY WITHOUT JUST COMPENSATION.

While Rotondi has asserted in this appeal that the Department's promulgation of N.J.A.C. 7:26A-4.5(a)6 resulted in a taking of their property, both the applicable case law and the facts in this case illustrate that a taking has not occurred. The burden of demonstrating that a taking has occurred lies upon the party alleging that the state action is unconstitutional and proof must be by clear and convincing evidence. In re Egg Harbor Associates, 94 N.J. 358, 374 (1983). A party cannot establish a taking simply by showing that they have been denied the ability to exploit the property interest that they previously believed available. Penn Central Transport, supra, 438 U.S. at 104, 98 S. Ct. at 2646, 57 L. Ed. 2d at 631. Moreover, particularly in an industry that long has been the focus of great public concern and significant governmental regulation, no "reasonable" expectation of continued governmental inactivity or lack of supervision can be established. Ruckelshaus v. Monsanto, 467 U.S. 986, 1008-1009, 104 S. Ct. 2862, 2876, 81 L.Ed. 2d 815, 863 (1984).

Both the New Jersey and United States Constitutions prohibit the government from taking private property for public use

without just compensation. N.J. Const. art. 1, ¶ 20; U.S. Const. amend V. There is no set formula for determining when governmental action results in a taking; rather, the particular circumstances in each case must be examined. "It must be borne in mind that commonly resolution of constitutional questions concerning inverse condemnation represents no more than a value judgment upon a given factual complex rather than an evident application of a precise rule of law." Rieder v. State Dep't of Transportation, 221 N.J. Super. 547, 554 (App. Div. 1987).

As a result of the *ad hoc* inquiry, the courts have applied different test to determine whether there has been a regulatory taking. Under one analysis, the court reviews: the character of the governmental action, the economic impact of the regulation, and whether the regulation interfered with reasonable investment-backed expectations. In re Plan for Orderly Withdrawal from New Jersey of Twin City Fire Insurance Co., 248 N.J. Super. 616, 627-628 (App. Div. 1991), aff'd, 129 N.J. 389 (1992). Under another analysis, the court focuses on whether the regulation substantially advances a legitimate public purpose and whether it excessively interferes with property rights and interests. Gardner v. New Jersey Pinelands Commission, 125 N.J. 193 (1991). Regardless of which test is used, the analysis is essentially the same.

"A taking may more readily be found when the interference with property can be characterized as a physical invasion by

government than when interference arises from some public program adjusting the benefits and burdens of economic life to promote the common good." Twin City, supra, 248 N.J. Super. at 626 (citations omitted). See Kaiser Aetna v. United States, 444 U.S. 164, 100 S. Ct. 383, 62 L. Ed. 2d 332 (1979) (where regulation compelling owner to allow the public to use marina constituted a physical invasion); Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419, 102 S. Ct. 3164, 73 L. Ed. 2d 868 (1982) (where ordinance compelling landlords to allow cable T.V. hookups constituted a physical invasion). The character of the governmental action here cannot be characterized as a physical invasion as there is no permanent physical occupation of appellants' property. Rather, the buffer adjusts the benefits and burdens of economic life by balancing the need for recycling with environmental preservation and human health protection.

Nor can it be said that N.J.A.C. 7:26A-4.5(a)6 has interfered with Rotondi's distinct investment-backed expectations. Interference with distinct investment-backed expectations occurs only when the government has made a specific promise to induce investment in an enterprise and then later, after investments have been made in reliance on that promise, the government reneges. Twin City, supra, 248 N.J. Super. at 627-628. It is here where appellants' argument fail as they have not in any way intimated that the DEP made a promise which it then decided not to keep.

To successfully assert a claim that property has been so over-regulated that it has been "taken" by government, the regulation must be so restrictive that "the only substantial difference, in such a case, between regulation and actual taking is the restriction leaves the owner subject to the burden of taxation, while outright confiscation would relieve him of that burden." Morris County Land Improvement Co. v. Parsippany-Troy Hills Tp., 40 N.J. 539, 557 (1963) (citations omitted). The level of interference with property rights that must be shown is high; "not every impairment of value establishes a taking." Washington Market Enterprises v. Trenton, 68 N.J. 107, 116 (1975). A property owner must be deprived of "all or substantially all of the beneficial use of the totality of his property under excessive police power regulation." Orleans Bldrs. and Developers v. Byrne, 186 N.J. Super. 432. 446 (App. Div. 1982) (citations omitted). An inverse condemnation claim is defeated "if the regulations permit some reasonable use of the property in light of the statutory purposes." Morris County Land, supra, 40 N.J. at 557. In other words, where an owner possesses a full "bundle" of property rights, the destruction of one "strand" of the bundle is not a taking. Andrus v. Allard, 444 U.S. 51, 100 S. Ct. 318, 62 L. Ed. 2d 210 (1979).

Gardner is instructive. There, the plaintiff claimed that the land-use restrictions resulted in an unlawful taking of his property. Recognizing that the health, safety and morals or general

welfare may be promoted by prohibiting certain uses of land and that the prevention of damage to the environment constitutes a particularly strong justification for prohibiting inimical uses, the Supreme Court found that the Pinelands Protection Act advanced a valid public purpose by preventing or reducing harm to the public (i.e., by limiting development of certain protected lands). Id. at 207. Thus, the Court concluded that the Act and the regulations implementing it substantially advanced legitimate and important governmental objectives. Id. at 210.

Relative to the inquiry whether the regulation excessively interfered with plaintiff's property interests, the Court stated that restrictions on uses do not necessarily result in takings even though they may reduce income profits. Ibid. Finding that plaintiff retained several viable, economically-beneficial uses of his land, the Court held that plaintiff had not suffered a taking. Id. at 215. See also Kirby v. Township Committee of the Township of Bedminster, 341 N.J. Super. 276 (App. Div. 2000) (ordinance that changed minimum lot size from 3 acres to 10 acres did not result in a confiscatory taking even if property value was reduced by one-third).

Similarly, this court refused to find that a unlawful taking had occurred in United Property Owners Association of Belmar v. Borough of Belmar, 343 N.J. Super. 1 (App. Div.), certif. denied, 170 N.J. 390 (2001). In that case, a provision in an ordinance

prohibited inspection of a dwelling unit for summer rental licensing if the unit was occupied by another tenant. Plaintiffs claimed that the provision prevented them from renting their properties for an entire year. The Appellate Division, however, found that the restriction had no impact on year-round rentals and only a limited impact on seasonal rentals. Id. at 30. Thus, this court found that there was no taking as plaintiffs had retained a viable economic use of their property. Id. at 32.

New Jersey Used Car Trade Ass'n v. Magee, 1 N.J. Super. 371 (Ch. Div. 1948), relied upon by Rotondi, is readily distinguishable. There, the Chancery Division Court determined that the licensing law which required used car dealers to have a place of business consisting of a permanent building not less than one thousand square feet in floor space had no relation to the public health, morals or general welfare. Ibid. Here, however, the regulation bears a reasonable relation to the stated goal of preventing the migration of off-site odors. The materials on which the Department relied and the enforcement history of facilities receiving grass clippings collectively show that grass clippings are highly odorous vegetative waste. Therefore, the regulation at issue, which is aimed at preventing off-site odors, has a real nexus to its stated purpose. In this case, the requirement of a buffer in the regulation at issue promotes environmental, safety, and public health and welfare concerns. In fact, the buffer was

established to prevent the migration of off-site odors. The 1000-foot buffer, therefore, substantially advances a legitimate governmental objective.

Like the Gardner and Belmar plaintiffs, Rotondi has retained several rights with respect to their transfer operation. The record here reveals that there are alternative vegetative waste materials which appellants can receive and transfer. The General Approval authorizes appellants to receive and transfer a maximum of two hundred and sixty (260) tons per day of leaves, grass clippings, brush and tree branches. Pa181; Pa194. The regulation here does not preclude Rotondi from receiving and transferring leaves, brush or tree branches. Under the circumstances, the fact that the buffer may[15] prevent Rotondi from receiving grass clippings does not deprive appellants of all of their property rights, particularly when the buffer was set to prevent the migration of odors off-site. Thus, this court should find that the operation of N.J.A.C. 7:26A-4.5(a)6 does not constitute an unlawful taking.

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[15] Nothing prevents the appellants from suggesting an alternative odor control method, like the enclosed compactor/hopper which the DEP had approved when appellants were regulated as a solid waste facility. Pa167.

POINT FOUR

THIS COURT SHOULD NOT SECOND GUESS THE WISDOM OF THE DEP TO REQUIRE DIFFERENT BUFFER ZONES FOR EXEMPT AND PERMITTED RECYCLING FACILITIES RECEIVING GRASS CLIPPINGS BECAUSE THERE IS A RATIONAL RELATIONSHIP UNDERLYING THE DISPARITY OF THE TREATMENT AND THE LEGITIMATE GOVERNMENTAL PURPOSE, AND SUCH DISPARATE TREATMENT DOES NOT VIOLATE THE EQUAL PROTECTION CLAUSE.

Rotondi contends that the Department's decision to have a different buffer requirement for exempt facilities is irrational because the potential for odors is caused by the nature of the facility's operation and not by the quantity of the grass clippings which it receives. In appellants' view, the DEP must justify the different buffer zones by presenting evidence that the 500-foot buffer zone for exempt facilities accomplishes the same goal of preventing off-site odors as the 1000-foot buffer zone. However, the rule-making record shows that the DEP considered other relevant factors and policy goals, and not just the quantity of grass clippings received at a facility, in adopting the exemption at N.J.A.C. 7:26A-1.4(a)13. Rotondi's argument shifts the burden to the Department to demonstrate that 1,000 cubic yards of grass clippings[16] smell a lot less than the tons and tons of grass

[16] Rotondi misquotes the exemption as it argues that an exempt facility may receive up to 10,000 cubic yards of grass clippings per year. However, the 10,000 cubic yards limit in N.J.A.C. 7:26A-1.4(a)13i is for yard trimmings. N.J.A.C. 7:26A-1.4(a)13ii further restricts the exemption by stating that "if grass clippings are received, they shall constitute no more than 10 (continued...)

clippings which Rotondi is authorized to transfer. Quite simply, the DEP does not have to prove that a single bird is not as loud as a flock.

It has been generally held that the Equal Protection Clause is satisfied so long as there is a plausible policy reason for the classification. New Jersey State League of Municipalities v. New Jersey, 257 N.J. Super. 509, 518 (App. Div. 1992), cert. dismissed, 133 N.J. 423 (1993). The challenger bears the burden of proving that the classification is palpably arbitrary or capricious. Indeed, the challenger must refute all possible rational bases for the differing treatment, whether or not the Legislature, or in this case, the Department, cited those bases as the reasons for the enactment. Chamber of Commerce of the U.S.A. v. New Jersey, 89 N.J. 131, 159 (1982). Further, the classification must be upheld if the court can conceive of any reason to justify it. Newark Superior Officers Ass'n v. City of Newark, 98 N.J. 212, 227 (1985).

Rotindi asserts that the DEP's decision to exempt some facilities from the requirement that their operations be 1000 feet away from areas of human use or occupancy effects an equal

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[16](...continued)
percent by volume of all yard trimmings received per year." Thus, assuming that an exempt facility receives its maximum allowed capacity of 10,000 cubic yards of yard trimmings, the maximum amount of grass clippings that it may receive to qualify for the exemption is 1,000 cubic yards annually. N.J.A.C. 7:26A-1.4(a)13ii.

protection violation. The constitutional guarantee of equal protection of the laws, however, is infringed only where persons who are situated alike are not treated alike, **and** where the difference in treatment is not supported by a rational basis. New Jersey State League of Municipalities v. New Jersey, supra, 257 N.J. Super. at 519. Appellants have failed to meet their burden of establishing that the Department had no rational basis for adopting the exemption at N.J.A.C. 7:26A-1.4(a)13.

In New Jersey Chapter, American Institute of Planners v. NJ State Bd. of Professional Planners, 48 N.J. 581 (1967), our Supreme Court upheld an act exempting certain professionals from the requirements of taking and passing an examination for a planner's license. Planners, supra, 48 N.J. at 601. In summarizing the controlling case law, the Court stated:

> The constitutional mandate for equal protection does not mean that the regulation must reach every class to which it might be applied--that the Legislature must regulate all or none. The Legislature has wide discretion in the creation of or recognition of classes for different treatment. . . . If there is some reasonable basis for the recognition of separate classes, and the disparate treatment of the classes has a rational relation to the object sought to be achieved by the lawmakers, the constitution is not offended.
>
> . . .
>
> Equal protection is not denied because a regulatory statute might have gone farther than it did, or might have included some persons or classes of persons who were excluded. Regulatory need in a particular field may appear to the legislative mind in different dimensions and proportions; as more acute in

> one area than in another. Consequently the reform may proceed one step at a time, addressing itself to the aspect of the problem which seems the most pressing. . . . In short, equal protection does not demand immediate logical tidiness; nor is it violated because the legislation as enacted does not bring about the full reform or result intended to be produced. In an area of many competing pressures the constitution is satisfied if the Legislature . . . did not disregard reason in drawing its lines.
>
> [Planners, supra, 48 N.J. at 601-602 (citations omitted) (emphasis supplied)].

Again, in New Jersey State League of Municipalities v. New Jersey, supra, 257 N.J. Super. at 509, this court found that an act, which required municipalities to provide or pay for certain municipal services to condominiums, but excluded apartment complexes, did not violate equal protection guarantees. The purported purpose of the act was to foster home ownership by preventing condo owners from having to pay twice (in property taxes and in association fees) for the same municipal services. Plaintiffs complained that the distinction was irrational because a significant percentage of condo owners rented their units thus making them similarly situated to apartment owners. Id. at 518. The Appellate Division recognized, however, that the Legislature in addressing an issue must invariably draw lines and make choices, thereby creating some inequity as to those included or excluded. Id. at 519. The Court stated, "it is not sufficient grounds for invalidation that we may find that the Act's distinction is unfair,

underinclusive, unwise or not the best solution from a public-policy standpoint; rather, we must find that there is no reasonably rational reason for the differing treatment." Id. at 520. See also Toms River Affiliates, supra, 140 N.J. Super. at 148 (The mere fact that property was subject to the Coastal Area Facility Review Act while property in other areas of the State was not regulated did not establish a 14th Amendment deprivation of equal protection of the laws).

Like the plaintiffs in New Jersey State League of Municipalities v. New Jersey, appellants here contend that the exemption is irrational as compost facilities have the potential of generating more odors than transfer stations. Thus, Rotondi contends, erroneously, that the Department's decision to allow some facilities to receive grass clippings and have composting windrows containing grass clippings closer than 1000 feet from an area of human use or occupancy is not rationally related to the stated purpose of preventing the migration of odors off-site.

Under N.J.A.C. 7:26A-1.4(a)13, the DEP exempts certain composting facilities from the requirement to obtain a general or limited approval. Without referencing all the criteria for the exemption, the exemption applies only to facilities that receive less than 10,000 cubic yards per year of yard trimmings (i.e., grass clippings, leaves and brush) and whose total grass clippings receipt constitutes less than 10 percent by volume of all yard trimmings

received per year. N.J.A.C. 7:26A-1.4(a)13. In other words, the exempt facility may not receive more than 1,000 cubic yards of grass clippings. N.J.A.C. 7:26A-1.4(a)13ii. Furthermore, in order to ensure that the exempted facility is in fact a small scale operation, the windrow composting area shall not exceed three acres. If the facility accepts grass clippings, the composting windrows shall terminate a minimum of 500 feet from the property line of any area of human use or occupancy. N.J.A.C. 7:26A-1.4(a)13iv.

To adequately address appellants' argument, it is necessary to discuss the rule-making history of the recycling rules and of the exemption at issue. In 1994, the DEP launched a comprehensive re-evaluation of its current recycling rules. A committee, comprising of DEP technical staff and representatives from the regulated community, evaluated the entire recycling program to determine what revisions were necessary to ensure that the State's recycling programs operated in a cost-effective and environmentally sound manner. 28 N.J.R. 2241 (Summary) (December 16, 1996). The suggestions offered by the committee formed the basis of many of the new rules, which included the introduction of a new class of recyclable materials defined as Class C recyclable material. 28 N.J.R. 2241 (December 16, 1996). See also 28 N.J.R. 2262 (December 16, 1996).

Previously, Class C recyclable materials, leaves and grass clippings, were classified as solid waste. 28 N.J.R. 2242 (December

16, 1996). To encourage the expansion of recycling activities relating to yard trimmings, the DEP moved the requirements for solid waste composting facilities to the recycling rules and added additional operational requirements to ensure protection of the public health and the environment. Ibid. The DEP stated that the purpose of the new rules was to ease permitting requirements for composting facilities accepting yard trimmings. Ibid. See also 28 N.J.R. 2262 (December 16, 1996).

To further encourage and facilitate the establishment of new recycling operations, particularly for yard trimmings, the Commissioner adopted N.J.A.C. 7:26A-1.4(a)13, which exempts some compost operations from the requirement of obtaining a general or limited approval. In order to provide the necessary safeguards to protect public health, safety and the environment, the DEP limited the exemption to compost facilities receiving less than 10,000 cubic yards of yard trimmings, of which only 1,000 cubic yards could consist of grass clippings. 28 N.J.R. 2251 (December 16, 1996) and 28 N.J.R. 2257 (December 16, 1996). The Department also established minimum buffer distances for these exempt compost facilities. In developing the capacity limit and the minimum buffer distances, the Department considered its experience with compost operations. 28 N.J.R. 2245 (December 16, 1996). See also 28 N.J.R. 5367, Response to Comment 40 (December 16, 1996).

During the re-adoption of the recycling rules in 2001, a comment was submitted which sought the Department's rationale for treating exempt and permitted facilities differently with respect to buffer distances and which recommended that the Department establish a 500-foot set back for material containing grass clippings from the property line of any area of human use or occupancy for both permitted and exempt facilities. Explaining the reasons for the disparate treament, the Commissioner stated:

> The 500-foot buffer provided for the receipt and composting of grass clippings at compost sites exempt from General Approval is set with the recognition that these sites may, according to regulation, only receive a maximum of 1,000 cubic yards of grass clippings over an entire season. The amount of grass delivered to the site averages less than eight cubic yards per day over a typical six-month grass season. The requirement that the compost operation be maintained with the same 500-foot buffer takes into consideration that windrow turning is accomplished with a bucket loader and not a dedicated windrow turning machine. For compost facilities that require General Approval, the 1,000-foot buffer from areas where grass clippings are received to sensitive land uses was set because of an expectation of much greater volumes of grass clippings being delivered to the site. The buffer requirement for composting and curing areas at a site requiring General Approval are based on the technology to be used at the site. The Department has set a requirement of 500 feet only for sites that turn windrows a minimum of four times per year with a bucket loader.
>
> [34 N.J.R. 2097, Response to Comment 55 (June 17, 2002); See also 34 N.J.R. 2103, Response to Comment 92 (June 17, 2002)].

As is clear from the foregoing rule-making history and the Department's mandate, the Department must develop rules which balance the protection of the environment with the State's goal to reduce the solid waste stream by encouraging recycling efforts. The reduced buffer of 500 feet for exempt compost facility represents a reasonable compromise. Based on years of experience, the Department determined that limiting the amount of yard trimmings to 10,000 cubic yards annually and further limiting the amount of grass clippings to 1,000 cubic yards per year would have minimal environmental impact. Specifically, the rule-making record demonstrates that the Department considered its enforcement experience and the suggestions from the regulated community and its staff, which presumably took into account the data contained in the Leaf Composting Manual, the thesis and the New Jersey Manual which had concluded that grass clippings emit foul odors during the tipping process. The record also shows that the Department wanted to reduce the regulatory burden, including costs, associated with the permitting process so as to encourage recycling operations for yard trimmings.

Moreover, consistent with the Leaf Composting Manual and the New Jersey Manual, once the grass clippings are mixed into the leaf windrows, no further odor problem is expected. Da12; Da67. Therefore, the 500-foot buffer at N.J.A.C. 7:26A-1.4(a)13vi is neither arbitrary nor factually unsupported and is rationally

related to the legitimate state interest in encouraging recycling efforts while protecting the public welfare and the environment.

Finally, it should be noted that the decisions made by the Department were not made to single out Rotondi to have it bear alone whatever burdens are associated with the public policy of human health and environmental preservation. Different operations and processes obviously support different buffer requirements without running afoul of equal protection concerns. For these reasons, this court should not second guess the wisdom of the DEP to exclude certain compost operations from the 1000-foot buffer requirement. Accordingly, this court should find that N.J.A.C. 7:26A-4.5(a)6 and 7:26A-1.4(a)13 do not violate Rotondi's equal protection rights under either the New Jersey or United States Constitution. N.J. Const. Art 1, ¶ 1; U.S. Const. amend. XIV, § 1.

POINT FIVE

APPELLANTS CANNOT COMPLAIN THAT AN AMENDMENT TO A RECYCLING RULE IMPAIRS A CONTRACTUAL OBLIGATION WHEN THEY ARE ENGAGED IN A HIGHLY REGULATED INDUSTRY.

Rotondi next complains that N.J.A.C. 7:26A-4.5(a)6 effects an unconstitutional impairment of contract in violation of the United States and New Jersey constitutions. Specifically, appellants argue that the buffer requirement will put them out of business with respect to grass clippings, thereby impairing appellants' obligations of contracts.

The contract clause of the U.S. Constitution prohibits a state from passing any "law impairing the obligation of contracts . . . ." U.S. Const. art. I, § 10, cl. 1. The New Jersey Constitution provides a similar, parallel prohibition. N.J. Const. Art. IV, § 7, ¶ 3. However, "the [Contract] Clause is not . . . the Draconian provision that its words might seem to imply. As the United States Supreme Court has recognized, 'literalism in the construction of the contract clause would make it destructive of the public interest by depriving the State of its prerogative of self-protection.'" Allied Structural Steel Company v. Spannaus, 438 U.S. 234, 98 S. Ct. 2716, 57 L. Ed. 2d 727 (1978) (citations omitted).

In In re Recycling & Salvage Corp., 246 N.J. Super. 79 (App. Div. 1991), appellants contended that the certification requirement of N.J.S.A. 48:13A-6(a) and a BPU order, which ordered that appellants cease their solid waste business until they obtained

a certificate of public convenience and necessity, substantially impaired some contracts. This court acknowledged that the State in the exercise of its police powers may adopt regulations that result in the impairment or destruction of private contracts under certain circumstances. It stated:

> Although the language of the federal contract clause is absolute on its face, its prohibition against the impairment of contracts must be accommodated to the inherent police power of the states to safeguard the vital interests of their residents. The contract clause does not deprive the states of their power to adopt general regulatory measures even if those regulatory measures result in the impairment or destruction of private contracts. The United States Supreme Court has "long recognized that a statute does not violate the Contract Clause simply because it has the effect of restricting, or even barring altogether, the performance of duties created by contracts prior to [the statute's] enactment."
>
> [Id. at 100-101 (citations omitted)].

This court then applied the following three-pronged test:

> The first inquiry is whether the challenged regulatory measure has, in fact, caused a substantial impairment of a contractual relationship. If [so] . . ., then the second inquiry is whether the regulatory measure came into being pursuant to a significant and legitimate public purpose. Once a legitimate public purpose has been established . . ., the inquiry shifts to whether the adjustment of the rights and responsibilities of the contracting parties caused by the regulatory measure is based upon reasonable conditions and whether the adjustment is sufficiently related to the appropriate governmental objective or interest.
>
> [Id. at 101 (citations omitted)].

Although the Recycling & Salvage Court did not find a substantial impairment of an existing legal contract, the Court nonetheless, stated that even if appellants had proven a substantial impairment of an existing contract, a significant and legitimate public purpose is served by the comprehensive regulation of the solid waste industry. Id. at 102. Moreover, particularly in light of the deference to which the Legislature's judgment is entitled, the Court found that the certification requirement was a reasonable condition that was sufficiently related to an appropriate governmental interest of protecting the public from unscrupulous persons engaging in the solid waste industry. Id. at 102-103.

In determining whether a contract impairment is substantial, courts consider whether the industry has been regulated in the past. General Food Vending Inc. v. Town of Westfield, 288 N.J. Super. 442, 453 (Law. Div. 1995) (citing Connolly v. Pension Guaranty Corp., 475 U.S. 211, 106 S. Ct. 1018, 89 L. Ed. 2d 166 (1986) (those who do business in the regulated industry cannot object if the legislative scheme is buttressed by subsequent amendments to achieve the legislative end)). There is no doubt that the solid waste industry has been subject to extensive state regulation. In re Intercounty Co., 222 N.J. Super. 258 (App. Div. 1988); State v. Haulaway, Inc., 257 N.J. Super. 506 (App. Div. 1992). See also Recycling & Salvage, supra, 246 N.J. Super. at 105 (where Appellate Division found that there was no unconstitutional

interference with Recycling & Salvage's contracts or a taking because having chosen to operate in the solid waste industry, Recycling & Salvage subjected itself to the BPU's jurisdiction). Thus, it would be unreasonable for appellants to expect that their business would be immune from additional regulation necessary to protect the environment and human health. As articulated supra, N.J.A.C. 7:26A-4.5(a)6 does not impact Rotondi's contractual obligations with respect to leaves, tree branches, and brush. Appellants can continue to receive and transfer up to a maximum of 250 tons per day of these vegetative waste. Pa181; Pa194. Thus, the Department submits that the regulation at issue does not cause a substantial impairment of a contractual obligation. Even assuming arguendo, as the Recycling and Salvage Court recognized, a significant and legitimate public purpose is served by the comprehensive regulation of the solid waste industry. Recycling & Salvage, supra, 246 N.J. Super. at 102. See also Edgewater Investment Associates v. Borough of Edgewater, 201 N.J. Super. 267 (App. Div. 1985), aff'd, 103 N.J. 227 (1986) (statute, which prevent apartment owners who wished to convert the apartments to condos from evicting elderly and disabled tenants, did not violate the contract clause); Gateway Apts. v. Mayor & Township Council of Nutley, 605 F. Supp. 1161 (D. N.J. 1983) (ordinance which required landlords to share property tax rebates with their tenants, even though landlords did not necessarily return the rebate to the particular tenant who

suffered the tax, did not unconstitutionally impair the contract between the landlords and the tenants); General Food Vending, supra, 288 N.J. Super. 442 (ordinance which prohibited cigarette vending machines in town did not violate the contracts clause).

The next question is whether the buffer requirement is a reasonable condition sufficiently related to the Department's objective of preventing the migration of off-site odors. In light of the underlying data supporting the premise that grass clippings are generally highly odorous by the time they are delivered to a site and the Department's enforcement record with regards to facilities accepting grass clippings, a buffer of 1,000 feet from the grass clippings receipt area to areas of human use or occupancy is a very reasonable condition imposed upon the regulated community. In sum, this court should conclude that the regulation, N.J.A.C. 7:26A-4.5(a)6, does not violate the contracts clause.

POINT SIX

THE 1000-FOOT BUFFER REQUIREMENT FOR ALL CLASS C RECYCLING CENTERS OF N.J.A.C. 7:26A-4.5(a)6 IS RATIONALLY RELATED TO A LEGITIMATE STATE INTEREST AND DOES NOT VIOLATE APPELLANTS' SUBSTANTIVE DUE PROCESS RIGHTS.

The right to a particular occupation, "unlike the right to work in general, has never been regarded as fundamental." Greenberg v. Kimmelman, 99 N.J. 552, 572 (1985). Relative to appellants' argument that N.J.A.C. 7:26A-4.5(a)6 violates the substantive due process, it has been generally held that when legislation "does not attempt to regulate a fundamental right, then it need only be shown that it is rationally related to a legitimate state interest." Ortley Beach Property Owners Association v. Fire Commissioners of Dover Township Fire District No. 1, 320 N.J. Super. 132, 137 (Law Div. 1998), aff'd, 330 N.J. Super. 358 (App. Div.), certif. denied, 165 N.J. 530 (2000). In the context of substantive due process, our Supreme Court has consistently held that economic regulations should be upheld if they are not arbitrary, capricious, or unreasonable and the means bear a rational relationship to the legislative objective. Brown v. City of Newark, 113 N.J. 565, 572 (1989). Also in the context of due process, the New Jersey Supreme Court has ruled that when a regulation is reasonably related to a legitimate governmental interest, the courts should not substitute their judgment for that of a legislative body. Brown, supra, 113 N.J. at 565.

> Throughout this century, the United States Supreme Court has alternately resorted to the due process and the equal protection clauses to invalidate various forms of state legislation. Although both clauses are available as a means of protecting against unjustified state regulation of individual rights, they protect against different evils. When a court invalidates a statute on due process grounds, the court is saying, in effect, that the statute seeks to promote the state interest by impermissible means.
>
> [Greenberg, supra, 99 N.J. at 562].

Thus, in making the argument that the law is neither arbitrary, capricious, nor unreasonable, DEP has already made the case that it has acted in compliance with Rotondi's due process rights.

Appellants assert the DEP's requirement for a 1000-foot buffer denies them the continued operation of their business in violation of their due process rights. However, according to the Greenberg Court, it is not "the availability of . . . employment, or its greater reward" but rather of the "nature" of the right in question that the court must consider in determining the success of a due process challenge. Id. at 572. Appellants have failed to meet their burden of establishing that the nature of the restraint outweighs the apparent public justification.

In Greenberg, supra, 99 N.J. at 572, our Supreme Court upheld an amendment of the Conflicts of Interest Law that precluded the spouse of a full time member of the Judiciary, residing in the same household, from casino employment. Id. at 558. In summarizing the controlling case law the court stated:

> The protectible interest stems from the substantive due process notions implicit in article 1, paragraph 1, of the New Jersey Constitution. Notwithstanding that protection, the right to employment opportunity is subject to reasonable measures to promote the general welfare under both the federal constitution, and the New Jersey Constitution.
>
> [Id. at 570-571 (citations omitted)].

Plaintiff in Greenberg complained that the amendment would cause her great loss because the casino industry offered the most significant job opportunities in the area where she lived. Plaintiff in Greenberg established that by denying her the ability to work for a casino, over her working life, the differential could amount to one million dollars. Id. at 559. Our Supreme Court ruled that the legislative interest in preventing the appearance of impropriety was supported by a rational basis; therefore, the Legislature's interest outweighed the plaintiff's need to work in the casino industry, despite her financial loss or the absence of any actual impropriety on her part. Id. at 573-574.

Like the plaintiff in Greenberg, appellants here contend that because the loss they will incur is great and the DEP can not demonstrate that there have been odor complaints regarding its facility, the 1000-foot buffer required by N.J.A.C. 7:26A-4.5(a)6 violates their due process rights by denying them the ability to operate. Based on the evidence in the record, DEP's reasoning to enact the 1000 foot buffer to prevent odors to the surrounding public was rational.

Rotondi erroneously contends that the facts of this case are like that of Southland Corp. v. Township of Edison, 217 N.J. Super. 158 (Law Div. 1986), aff'd, 220 N.J. Super. 294 (App. Div. 1987). In that case, the Court ruled that a municipal ordinance that prohibited retail establishments from being open to business between the hours of 12 a.m. and 6 a.m. violated the plaintiff's substantive due process rights. The court made this determination because it found that "the restriction imposed unreasonably and irrationally exeed[ed] the public need." Southland, supra, 217 N.J. Super. at 178. Very unlike the case at hand, the municipality could not demonstrate that the ordinance furthered any public need whatsoever. The public need, as articulated by the municipality, was to decrease the number of armed robberies that were taking place between the hours of 12 a.m. and 6 a.m. The court did not question the power of a municipality to address the problem of armed robbery. In Southland, the court made its determination in favor of the plaintiff because the municipality completely failed to address the problem. Ibid. There was no evidence that more robberies took place between the hours in question and any other time. In fact there was evidence to the contrary. Ibid. at 178. In this case, the DEP has presented ample evidence that demonstrates that grass clippings are highly odorous by the time they arrive at recycling centers. Thus, the DEP has established a nexus between the 1000-

foot buffer and its goal to prevent bad odors from reaching members of the public.

Appellants also erroneously rely on a group of cases in which a regulation was passed to benefit private interests rather than public interests. See Borden Farm Products of New Jersey v. Board of Health of the Borough of Somerville, 36 N.J. Super. 104 (Law Div. 1955); Sheffield Farms Co., Inc. v Seaman, 114 N.J.L. 455 (1935). This case differs from such cases because there is a clear public interest in the promulgation of N.J.A.C. 7:26A-4.5(a)6 rather than a private one. Compare Borden Farm Products, supra, 36 N.J. Super. at 104 (regulation preventing the sale of out of state milk in the Borough of Somerville) with Reingold v. Harper, 6 N.J. 182 (1951) (regulation banning self-service at gasoline stations).

For example, in Magee, supra, 1 N.J. Super. at 371, the court ruled that a regulation placing certain requirements on car dealerships violated substantive due process because it favored dealerships that stored their cars in permanent buildings rather than those that stored their cars on lots. The court in Magee did not, as appellants seem to assert, strike down the regulation simply because it would cause dealerships that used lots instead of permanent buildings to go out of business; the court was merely articulating the property interest at stake in making its determination. Id. at 378. The regulation seemed to benefit only

those dealers with permanent buildings and not the general public. Ibid.

Judge Freund writing for the court stated that "[i]f the dominant purpose be the service of private interest under the cloak of the general public good, it must be adjudged a perversion of power." Id. at 378. Thus, in actuality, the court struck down the regulation because there was no evidence that the public as a whole would benefit from the regulation. Ibid. In this case, the DEP has articulated the benefit to the public and such benefit is not for the purpose of forwarding private means. For the foregoing reasons, this court should find that N.J.A.C. 7:26A-4.5(a)6 does not violate appellants' substantive due process rights.

CONCLUSION

For the foregoing reasons, the Department respectfully requests that this court find that N.J.A.C. 7:26A-4.5(a)6 is a valid, reasonable and statutorily authorized regulation, which is wholly supported by the administrative record.

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Dated: December 31, 2003

A-1819.02T1

SUPERIOR COURT OF NEW JERSEY
APPELLATE DIVISION
DOCKET NO.: A-1819-02T1

S. ROTONDI & SONS, INC., AND ANGELO G. ROTONDI, INDIVIDUALLY,	:	Civil Action
Appellants,	:	On Appeal From Final Adoption of Regulation by the New Jersey Department of Environmental Protection
v.	:	
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION	:	
Defendant.	:	

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APPENDIX ON BEHALF OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

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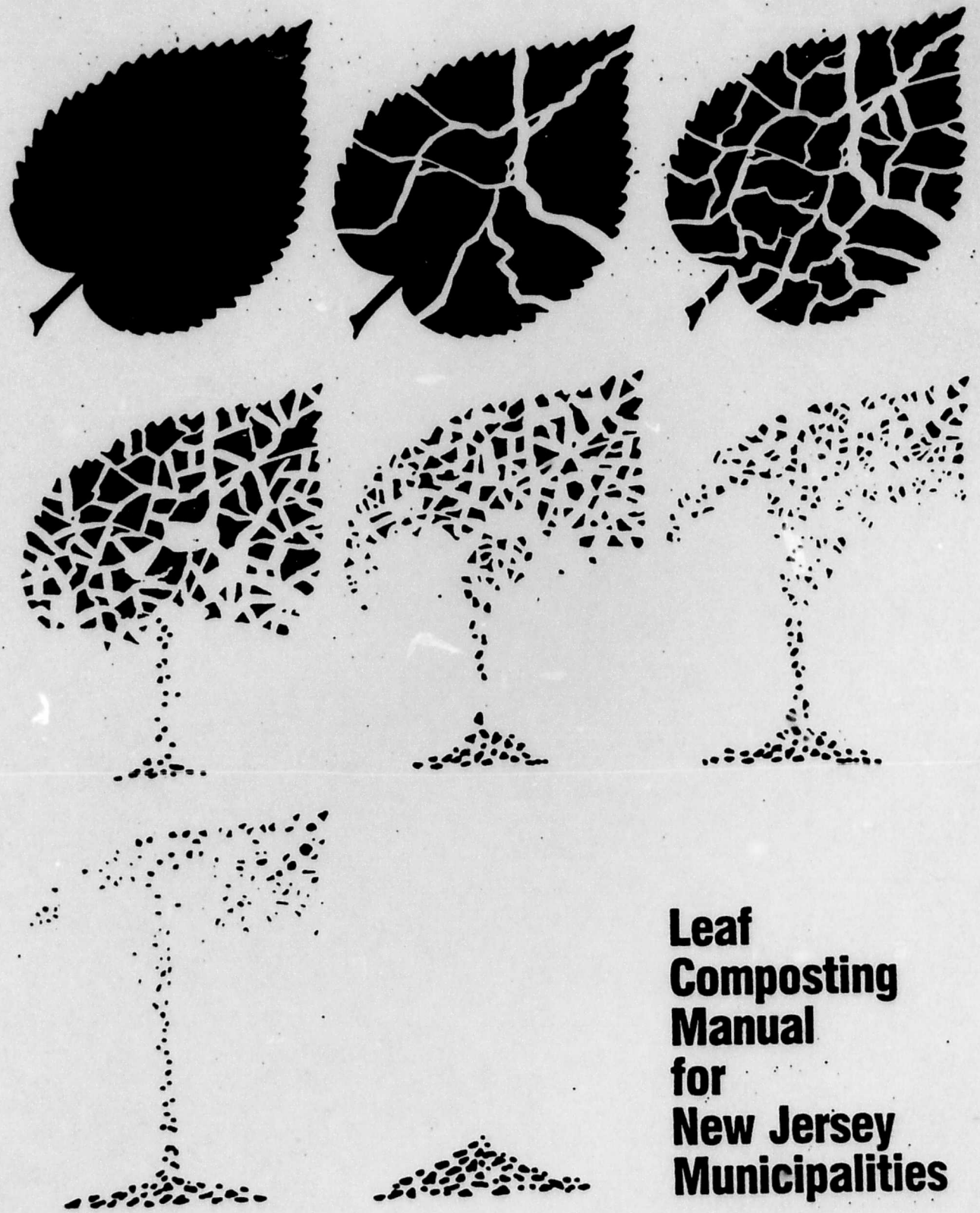
APPENDIX



Leaf Composting Manual for New Jersey Municipalities

LEAF COMPOSTING MANUAL FOR NEW JERSEY MUNICIPALITIES

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PREFACE

Leaves fallen to the floor of a forest or woodland undergo a slow process of decomposition. This is brought about through the action of numerous organisms, with microorganisms (including many different kinds of bacteria, fungi and protozoa) playing a dominant role. Forest litter, consisting of partially decomposed material, represents an intermediate step in the process. Eventually, a thoroughly decomposed state is reached, and the organic residue becomes part of the soil. The nutrients that were formerly in the leaves may now be available to plants, closing the cycle of growth and decay.

In contrast, leaves collected in developed areas represent a waste management problem. The "easy solution" of open burning was banned by New Jersey air pollution regulations in 1972. This action put an additional burden on landfills and could similarly burden alternative approaches to solid waste management now being considered throughout the state.

Like leaves in the forest, those collected from developed areas can also be decomposed microbially and the organic residue returned to the soil. However, the leaves must be processed in concentrated form, the decomposition accelerated, and the residue deliberately applied to soil. This cycle can be accomplished economically by means of the composting process linked to a compost use program.

This manual is designed to assist municipalities in the establishment and operation of leaf composting facilities and programs for use of the compost. It employs the best available scientific information to find technically simple, cost-effective solutions that may be implemented by municipal personnel. Underlying principles are first explained so that the basis of the "how-to" recommendations may be understood. In this manner the composting operation may be flexibly adapted to meet site-specific needs.

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oxygenation, is the basic consideration underlying the recommendations for windrow size and turning operations (see Section VI). If precise measurements of pile temperature are required, the County Extension Service should be consulted (see Appendix D).

H. Windrow Size and Turning

Control over process temperature and oxygen content can be exercised to a useful extent through windrow size and turning operations. A basic problem is to reconcile the needs for oxygenation and heat conservation, which are somewhat in conflict. The need for oxygenation favors small windrows to minimize the distance that air must penetrate to the pile interior. In contrast, the need for heat conservation, especially in the winter, argues for large windrows for greater insulation. Excessively large windrows, however, might result in excessively high temperatures and anaerobic conditions. These requirements can be reconciled in part by management of windrow size and turning. Specific recommendations are given in Sections V and VI.

I. Pregrinding

Pregrinding or shredding of leaves make them more susceptible to microbial attack, potentially speeding up the composting process. However, this is <u>not</u> desirable in most cases, unless provision has been made to supply the extra oxygen that will be needed, and remove the extra heat that will be generated. Thus it is normally not recommended, and the guidelines given later assume no pregrinding. Also, it should be noted that the equipment typically used for the final shredding of finished compost (see Section VI. H) is not suitable for preshredding of leaves prior to composting.

IV. FACILITY SITING AND INITIAL PREPARATION

Site selection is an extremely important decision that should be made only after careful consideration, as each situation is unique. The deliberation over site selection should take into account nearness to residences and streams, prevailing winds, traffic patterns, travel distance and its effect on equipment and labor costs, and other factors. Many of these are discussed below, yet familiarity with local circumstances is essential and cannot be reduced to written instruction. It is suggested that the County Extension Service and County Department of Solid Waste Management, among other agencies, be involved in the early stages of planning (see Appendix D).

A. Permits

In New Jersey a State permit or approval is required for all solid waste facilities, including vegetative waste and leaf composting facilities. The type of permit or approval required for vegetative waste composting facilities and leaf composting facilities depends on the amount of vegetative waste or leaves accepted and what types of materials will be composted. In October, 1988, the State adopted an emergency rule which

enabled the Department of Environmental Protection to expeditiously authorize the operation of leaf and vegetative waste composting facilities. One subsection of the new rule, N.J.A.C. 7:26-1.11, applies to leaf composting facilities with a capacity not in excess of 20,000 cubic yards annually which compost leaves only. Another subsection of the new rule, N.J.A.C. 7:26-1.7 applies to vegetative waste composting facilities which accept greater than 20,000 cubic yards of leaves annually or, any size vegetative waste composting facility which accepts, in addition to leaves, other non-crop residues such as grass clippings, tree branches, shrubbery and garden wastes.

For further information on obtaining a permit or approval for composting facilities, please contact the New Jersey Department of Environmental Protection, Division of Solid Waste Management, Bureau of Small Facility Review, 401 E. State St., CN 414, Trenton, N.J. 08625, (609) 292-3276. A pre-application meeting is strongly recommended. Composting facilities must also be incorporated into the District Solid Waste Management Plans. Please contact your County Solid Waste Management Office listed in Appendix D for further information on including your composting facility in the District Solid Waste Management Plan.

B. Area Requirement

A minimum of one acre per 3000-3500 cubic yards of leaves collected is required for the actual composting operation. This assumes the use of the low-level technology described later, and is in addition to the requirement for a buffer zone.

C. Buffer Zone

A buffer zone is required between the site activities and neighboring land use to minimize possible odor, noise, dust and visual impacts. There are no hard and fast rules, however, on the size of the buffer zone needed for composting. It would seem prudent to provide at least 50 feet between the composting operation and the property line. At least 150 feet should be allowed between composting activities and any sensitive neighboring land uses, such as residences.

The buffer zone may include a berm, consisting at least in part of finished compost to serve as a visual barrier, help control vehicular access, and reduce noise levels off-site. A landscaping plan, including plantings, is strongly recommended to enhance the appearance of the facility.

D. Location

A centralized area is preferable to reduce transportation time and costs, although such sites are not often available or otherwise practical. Access is preferably over non-crowded, non-residential, hard surface roads.

other extraneous materials. The "rejects" may be composted for an additional period, then reshredded or screened to minimize the amount requiring disposal.

This step is fairly labor intensive. Leaf compost can only be processed at about half the rated capacity of some of the equipment. Typically, a front-end loader is required for filling the hopper, and at least one person is required to operate the shredder/screener itself.

The major advantage of using a shredder or screener is that it yields a more uniform and debris-free final product. In some cases it can also be used to mix finished compost with soil. Disadvantages include the labor and equipment requirements, the need to dispose of rejects, and of course the capital cost of the specialized machine (for example, around $60,000 for one model rated at 125 cubic yards per hour). One way to reduce costs is to share a single unit among several sites or communities. Sharing is possible since the specialized equipment is only needed for a month or two per year, and scheduling can be flexible.

Shredding and screening will proceed more rapidly if the compost is not too wet. Moist material to be shredded often can be spread out to dry for a day of two beforehand.

VII. TROUBLESHOOTING

Table 3 summarizes the more common problems at leaf composting sites, their causes, and recommendations for their remedy. Most problems can be prevented by proper facility siting, design, operation, and maintenance.

A. Odor

The major problem encountered at leaf composting sites is odor. Those unfamiliar with handling large masses of leaves may be surprised at how serious a problem it can be. Starting with relatively innocuous leaves, it is possible to generate odors comparable to those of a barnyard.

In general, odor problems develop in four stages:

1) odorous compounds must be present initially or be produced during processing; 2) these odors must be released from the pile; 3) the odors must travel off-site; and 4) they must be detected by sensitive individuals (receptors). If any stage is absent, no odor problem exists.

With the minimal technology described previously, stages 1-3 all occur, but since no receptors are present (stage 4), no problem exists. Except where very large buffer zones are present, however, this approach to odor "control" is not possible.

In most cases, prevention of odor problems can best be achieved by preventing odor formation in the first place (stage 1). For leaf composting this means avoiding prolonged anaerobic conditions. Under

anaerobic conditions, volatile organic acids (which have vinegar, cheesy, goaty, and sour odors), alcohols (fruity, floral, alcohol-like), and amines and sulfur compounds (barnyard, rotten) can be produced. In contrast, with aerobic conditions only a mild earthy odor is expected. If excessive ammonia or urea-based fertilizer is added, an ammonia odor may also be produced.

The major cause of odor production at leaf composting sites is making the windrow too large, especially when first assembled. Because of the initial high concentration of readily degradable material, there is a high demand for oxygen. If the piles are too large, sufficient oxygen cannot penetrate from the outside, and a large anaerobic core develops. Decomposition slows down, switching over to the odor-producing acid fermentation described above.

A second important source of odor production is failure to form windrows quickly enough once the leaves are collected. Unless they are very dry, leaves cannot be simply dropped at the site for later composting or collected and stored elsewhere. Although the intention might be to store them, vigorous decomposition will nonetheless begin within one to two days, anaerobic conditions will develop, and odors will be produced.

If odors should be produced at a site, or if odorous materials are dropped off at the site, the second line of defense is to prevent their release (stage 2). Theoretically, this can best be accomplished by leaving the odorous mass undisturbed until oxygen has penetrated sufficiently to destroy the odors, though this may take several months or even years. Shaving off thin (perhaps 1-2 foot) layers from the edges as they become aerobic may help speed this process.

If a long wait is not practical, another approach may be possible. Since many of the odorous compounds are acidic in nature, raising the pH (neutralizing the acids) will convert them to an ionized (negatively charged, dissociated) form. In this form they cannot be released to the air and will remain in the pile.

Application of pulverized limestone is probably the best way to raise the pH. Sprinkling the limestone in powdered form directly onto surfaces from which odors are escaping may be the simplest approach, although a liquid slurry of limestone in water could also be used.

If odors are still produced and released despite these precautions, it may still by possible to minimize their offsite impact (stage 3). This approach relies on timing odor-releasing operations to coincide with favorable wind conditions. A wind sock should be installed at the site to determine wind direction, and odor releasing operations performed only when the site is downwind of residence and other sensitive neighboring land uses. Also, higher winds are preferable to calm and light conditions because the higher the wind speed and turbulence, the greater the dilution of any released odors.

of purchased organic soil amendments. The park and road departments may have the largest requirements. The compost may also be blended with poor soils to produce a good quality topsoil.

Other bulk users may include nurseries, landscapers, and builders. In some cases the compost may be offered to such users at no cost, but in others a modest charge is made.

IX. COMPOSTING OF OTHER YARD WASTES

A. Grass Clippings

Grass clippings represent another significant seasonal solid waste. In some New Jersey suburban communities they may account for nearly one-third of the total municipal refuse loading during peak grass-growing periods. Although grass clippings are readily compostable, the odor problems they pose make this treatment option difficult to implement for most communities. Likewise, State permitting requirements are more stringent, particularly with respect to staging, buffer zones, and odor control. Optimal means of co-composting leaves and grass clippings are not yet fully developed.

Since they are typically still green when collected, grass clippings are relatively high in nitrogen, moisture content, and readily degradable organics compared to the fallen leaves collected in autumn. For these reasons they decompose more rapidly, have a higher oxygen demand, and quickly go anaerobic. Thus they are often highly odorous by the time they are delivered to a composting site. Therefore it is especially important to properly implement and strictly enforce the odor control measures discussed in Section VII A. Addition precautions such as enlarging the buffer zone will also be necessary.

If the grass clippings could be delivered to a leaf composting site without causing odor problems, they could be incorporated (before the end of the day) into the partially composted leaf windrows. A ratio of 3 volumes of partially composted leaves to 1 volume of grass clippings is recommended, although lower ratios may also be satisfactory in some cases. Good mixing is essential and can be achieved with a front-end loader by working together 20-30 bucketfuls of material at a time, then forming a windrow with the mixture.

Once the material has been mixed in this way, no further odor problem is expected. The partially composted leaves act as a bulking agent to improve penetration of oxygen to the grass clippings. The grass in turn speeds the decomposition of the leaves by providing needed nitrogen. The end result is a higher quality compost product which is ready in shorter period of time. However, these benefits must be balanced against the increased potential for odor problems.

Other alternatives for handling grass clippings exist but depend on the generator for implementation. Probably the best alternative is not to collect them at all. Turf grass specialists, such as Dr. Henry Indyk at

Cook College, recommend mowing frequently enough so that the short clippings filter through the growing grass and return their nutrients to the soil. If the clippings must be collected they can be incorporated in moderate amounts in backyard leaf composting piles or used as a garden mulch. For use as a mulch, the clippings should be dried for a day or two first to minimize any problem with slugs.

The Cooperative Extension Service at Cook College, Rutgers University, has published a factsheet (FS 389) entitled "Minimizing Waste Disposal: Grass Clippings." A single copy is included in Appendix G. For information on obtaining additional copies, contact your County Extension Agent or Cook College.

B. Woody Materials

Wood tends to decompose very slowly, making composting of woody materials impractical in most cases. Thus woody materials should not be intentionally incorporated in leaf composting windrows. Small amounts of incidentally included branches and twigs pose little problem.

Tree trunks and large branches can usually be easily given away or even sold as firewood if cut to reasonable lengths. For smaller diameter woody materials, chipping usually produces a usable mulch.

X. BACKYARD COMPOSTING

Backyard and municipal leaf composting are complementary activities. Municipalities should encourage backyard composting as a part of their overall yard waste management program. All municipal collection, processing, and distribution costs are avoided for leaves that are composted by homeowners. Additionally, grass clippings and some other wastes can be included in backyard composting, thus reducing handling of these wastes by the municipality as well.

The Cooperative Extension Service at Cook College, Rutgers University, has published a factsheet (FS 074) on backyard leaf composting. A single copy is included in Appendix E. For information on obtaining additional copies, contact your county extension agent (in New Jersey) or Cook College. The method recommended is much less complex than those suggested by others, and was designed to make it easy for homeowners to get started with composting.

GLOSSARY

Aerobic. Oxygen present.

Anaerobic. Oxygen absent.

Buffer zone. Area between the composting operation and homes or other sensitive land uses.

Compost. Thoroughly decomposed, humidified, organic matter produced through composting and suitable for application to soil.

Composting. Process of accelerated organic matter decomposition based on microbial self-heating.

Curing. Late stage of composting, after much of the readily metabolized material has been decomposed, which provides additional stabilization.

Decomposition. The breaking down, or destruction, of dead organic materials such as fallen leaves.

Fermentation. Anaerobic decomposition involving only organic compounds.

Inorganic. Substance in which carbon-to-carbon bonds are absent; mineral matter.

Leachate. Liquid, often highly colored, which has passed through or been in contact with a composting pile.

Metabolism. Chemical processes necessary for life.

Metabolizable substance. A material which can be metabolized, or digested, to the benefit of the organism.

Microbe. Living organism of a size such that it can be seen only with a microscope.

Organic. Substance which includes carbon-to-carbon bonds.

Oxygen demand. The requirement for oxygen exerted in aerobic decomposition.

Percolation. Passage of water down through soil.

pH. A measure of how acid (pH less than 7) or basic (pH above 7) a material is.

Putrescible. Organic materials prone to degrade rapidly, giving rise to obnoxious odors.

Respiration. Metabolic functions consuming oxygen.

Self-heating. Spontaneous increase in temperature of organic masses resulting from microbial action.

Stabilization. Used synonymously with decomposition.

Staging area. Area where newly received leaves are decompressed (if compacted) and wetted, prior to forming windrows.

Windrow. An elongated pile.

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FS389

RUTGERS COOPERATIVE EXTENSION

NEW JERSEY AGRICULTURAL EXPERIMENT STATION

Minimizing Waste Disposal: Grass Clippings

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Henry W. Indyk
Specialist in
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Since refuse disposal costs have dramatically increased, and some landfills no longer accept grass clippings, many individuals and governmental agencies are seeking alternatives for disposal of clippings. During the maximum grass growing period, the municipal refuse load in some New Jersey suburban communities may contain nearly one-third grass clippings. Collected clippings become anaerobic rather quickly because of their high demand for oxygen. After becoming anaerobic they emit very unpleasant odors. Therefore, grass clippings (in quantity) are difficult to handle and to process.

From our own experience with the handling and disposal of grass clippings and discussions with others such as lawn care professionals, we suggest considering the following methods to reduce landfilling:

RETURN TO LAWN -- It is desirable to leave grass clippings uncollected on the lawn so that they are recycled, contributing to soil organic matter and supplying part of the fertilizer needs of the lawn. Adopt a mowing schedule to keep clippings short enough to filter through growing grass and not remain as a mat on top of the lawn. Research and experience indicate that only 1/4 to 1/2 of the grass length should be removed during mowing. Never allow the lawn grass to double its height between mowings. This approach not only eliminates collection and disposal problems, but also can contribute to improvement of the lawn.

Clippings are <u>not</u> a cause of thatch in lawns. Rather, thatch is formed primarily from a dense accumulation of grass roots and stemmy material.

GARDEN MULCH -- Grass clippings can be used as a garden mulch. To minimize any tendency to protect slugs, clippings should be dried in the sun for a day prior to being used in this way. Clippings can be spread on garden soil to check weed growth, reduce soil spattering, moderate soil temperatures, etc. As a precaution, do NOT use grass clippings from herbicide treated lawns until after two grass cuttings have been made.

SOIL INCORPORATION -- Clippings can serve as a source of organic matter for soil improvement when incorporated into the garden.

THE STATE UNIVERSITY OF NEW JERSEY
RUTGERS

BACKYARD COMPOSTING – Grass clippings can be composted, particularly when incorporated into a backyard leaf compost pile. However, grass has a high nitrogen content, a much higher demand for oxygen than leaves, and a tendency to mat, thereby greatly reducing the passage of oxygen. Composting piles containing grass clippings thus readily become anaerobic. This, in turn, can produce strong, unpleasant odors. These odors are particularly noticeable when the pile is disturbed.

Because of these problems, grass clippings should not be composted alone, but rather mixed with composting leaves. The partially decayed leaves which now (6-9 months after leaf fall) have a low demand for oxygen, will serve as a bulking agent permitting more oxygen to reach the grass. Grass, which is high in nitrogen, will provide a more rapid decomposition of the remaining leaves as long as it remains under aerobic conditions. Grass clippings will also contribute to a better end product (higher nitrogen content) than that obtained from composting leaves alone. One must be aware, however, that an excess of damp grass in the pile will soon become anaerobic, produce very unpleasant odors, and reduce the rate of decomposition. The objective is to keep the material aerobic.

The resulting compost can be used as a soil amendment, as a mulch for gardens, flower or shrub beds, or as a potting medium.

MUNICIPAL COMPOSTING – Some grass clippings can be incorporated into a municipal leaf composting operation. However, problems that may be experienced with backyard grass composting could be greatly magnified at a municipal facility. Even grass stored by lawn maintenance workers for 1 day or less in the back of a pick-up truck may emit very unpleasant odors when being unloaded. Research is continuing on this practice.

CLIPPING REDUCTION – The amount of grass clippings can be reduced by avoiding excessive lawn fertilizing and watering. Neither should be reduced to the point where the lawn deteriorates. Using a fertilization program in which major emphasis in fertilizing the lawn is in the fall season rather than in the spring can be effective, not only in reducing the amount of clippings produced, but also in contributing to a better lawn. Assistance with these procedures may be obtained from the Rutgers Cooperative Extension office in your county. The telephone number appears under County Government in the directory.

Fertilizing and watering above the requirements of the grasses may be more detrimental than beneficial to the lawn. One of the effects is increased production of clippings. Judicious and proper use of fertilizer can provide an attractive lawn with a reduction in the costs, effort, susceptibility to disease, and amount of clippings produced.

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NEW BRUNSWICK

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May 29, 1992

Guy Watson, Chief
Bureau of Source Reduction & Market Development
Division of Solid Waste Management
NJDEPE, CN 414
840 Bear Tavern Road
West Trenton, NJ 08625-0414

Dear Guy:

Enclosed please find a copy of Bill Schulz's Masters thesis on the incorporation of grass clippings in yard waste composting. We are submitting this as the draft final report for this portion of our contract. After your review, we can make any necessary substantive revisions and format changes.

I anticipate having a draft final report on the *Aspergillus fumigatus* portion of the project to you shortly. Please do not hesitate to call if you feel further discussion would be helpful.

Sincerely yours,

Peter F. Strom
Associate Professor

cc Brian Petitt

YARD WASTE COMPOSTING: PROCESSING TECHNOLOGY, COMPOST QUALITY, AND COMPOSTING ENDPOINT

BY WILLIAM HENRY SCHULZ

A thesis submitted to the
Graduate School-New Brunswick
Rutgers, The State University of New Jersey
in partial fulfillment of the requirements
for the degree of
Master of Science
Graduate Program in Environmental Science
Written under the direction of
Professor Peter F. Strom
and approved by

Peter F. Strom
Melvin S. Finstein
Harry J. Morris

New Brunswick, New Jersey
May, 1992

ABSTRACT OF THE THESIS

Yard Waste Composting: Processing Technology,
Compost Quality, and Composting Endpoint

by WILLIAM HENRY SCHULZ

Thesis Director: Professor Peter F. Strom

Field trials were initiated to determine the most efficacious method of composting yard waste (*i.e.* leaves, grass clippings, and brush) by comparing two types of processing technologies and by varying the ratios of materials incorporated and the amount of agitation employed. Temperature, oxygen, formation of combustible gases, pH, moisture, volatile solids, cross-sectional area, and odor were monitored in order to determine the differences between the experimental units.

Greater reductions in cross-sectional area and % volatile solids were found for windrows incorporating grass clippings into leaf windrows at a 2:1 ratio of leaves to grass than for the other leaf/grass ratios. The greatest amount of reduction was found for a windrow made solely of grass clippings. Odors were found to increase in direct response to the amount of grass clippings incorporated into the windrow. The strongest odors observed during the composting period were from the 100% grass windrow. The strongest odors overall, by far, came from the grass clippings following arrival on site and before incorporation into the windrows.

In addition to this, samples were collected from twelve composting facilities throughout the state and the following parameters determined for each: pH, conductivity, moisture, field moisture capacity, specific volume, volatile solids, total Kjeldahl nitrogen, acute phytotoxicity (by % seed germination), plant productivity (by plant growth experiments), and concentrations of seventeen elements. The samples were compared in terms of: age of the sample, processing technology employed at the site, and composition of the material (leaves versus leaves and grass clippings). The results were compared to existing and proposed standards and regulations to determine the quality of the compost. A linear regression model was performed in order to examine the relationship between plant productivity and the other parameters measured.

Substantial differences were found between material that was considered "finished" compost and that which was considered "cured" compost in terms of pH, % volatile solids, field moisture capacity, specific volume, Kjeldahl nitrogen, and conductivity. No significant direct relationship was found between any of the measured parameters and plant productivity. The samples analyzed were within related standards for heavy metals concentrations, except for the most stringent levels for cadmium.

ACKNOWLEDGEMENTS

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INTRODUCTION

The United States currently generates 180 million tons of municipal solid waste per year (EPA, 1990). An estimated 18 percent of this output is in the form of yard wastes, *i.e.* leaves, grass clippings, brush, and woody materials. The U.S. Environmental Protection Agency has set a national goal of 25 % source reduction and recycling of the solid waste stream by 1992 (Taylor and Kashmanian, 1988). New Jersey's goal of 60% is even more aggressive (Glenn, 1991). In an effort to reach these goals, an alternative to landfilling of yard wastes is essential.

Composting, particularly composting of leaves, is one possible alternative which has already demonstrated its usefulness in this regard to a large degree. The success of leaf composting facilities, of which there are more than 200 in New Jersey (NJDEP, 1990), allowed the state to pass a measure banning leaves from landfills in April, 1988 (Glenn, 1988). However, composting of grass clippings, though mandated by some other states, has received only limited research attention and many questions remain to be answered before environmentally sound full-scale implementation of this process can occur (Dusalt, 1990).

Incorporation of Grass Clippings into Leaf Composting

Grass clippings will compost, but also present a serious odor problem. Even as they are delivered to a site, bulk or bagged grass clippings may be highly odorous. Experience has shown that substantial odor production often occurs before the clippings arrive at a site (Dean and Wollenweber, 1989). This

is because grass is typically succulent and actively respiring when it is cut, so that storage for any substantial amount of time in either an airtight plastic bag or compacted in a packer truck will cause the depletion of the oxygen within the matrix due to respiration. This presents a materials handling problem that often needs to be addressed before the question of how to compost grass clippings can be resolved.

Once windrows have been constructed, several factors may lead to the production and evolution of odors. First of all, the typically high moisture content (70-80%) of freshly cut grass will reduce pore space and prevent the flow of oxygen to, and conversely, the release of ventilative heat from, the inner portions of the pile (Simpson, Martinson, and Fulford, 1990). In addition to this, grass clippings contain about 2.4% nitrogen on a dry weight basis (Poincelot, 1975). The carbon to nitrogen (C:N) ratio of grass clippings is about 19:1 (Richard *et al.*, 1990). This high amount of nitrogen will substantially lower the C:N ratio of a windrow of composting leaves if grass clippings are added to it. The C:N ratio of fallen leaves is 60:1 (Biddlestone, Gray, and Day, 1987). This initial C:N ratio may have already been somewhat reduced by the time grass clippings begin to arrive on a site in the spring. The addition of a large amount of grass clippings to a windrow of composting leaves may lower the C:N value of the material to less than between 25:1 and 30:1, which was found (Biddlestone *et al.*, 1987) to be the optimum value for the type of composting technology commonly employed at yard waste composting facilities.

The high levels of organic nitrogen brought to the composting process by the addition of grass clippings create the potential for very malodorous conditions. The main constituent of these odors is likely to be ammonia

because it is produced in large concentrations both aerobically and anaerobically by the oxidative and reductive de-amination of protein amino acids (Miller and Macauley, 1988). Major production of amines is less likely considering that amines are generally formed in a low pH range and the amount of ammonia produced in grass composting causes the pH to be alkaline (Wilber and Murray, 1990). However, under anaerobic, reducing conditions amines may be produced within the windrow and, because of the extremely low odor thresholds of some of the more prevalent amines, their contribution to any observed odors may be great (Haug, 1980). The particularly odoriferous amines putrescine and cadaverine may be produced through the degradation of the amino acids arginine and lysine, respectively (Meister, 1957).

Strom and Finstein (1986) showed that by mixing grass clippings with partially composted leaves, the odor problem could be attenuated. In fact, the addition of grass clippings to the composting leaves appeared to accelerate the process and yield a higher quality product, presumably due to the higher nitrogen content. However, the initial odor problem still remained to be addressed. Also, the best method for mixing partially composted leaves and fresh clippings had not been investigated. Another question was the minimum leaf-to-grass ratio that would be acceptable, and whether the same windrow might be used to incorporate more than one load of grass. These two factors may be critical to the success of an operation, not only in terms of cost, but also practicality. For example, some towns estimate that they collect about equal amounts of leaves and grass in a given year (Glenn, 1990). However, by the spring grass collection season, the partially composted leaves have decreased in volume by 50 % or more. Thus even a 1:2 leaf/grass ratio

might not be possible without reusing the leaves, whereas previous work has recommended using a 2:1 or 3:1 leaf/grass ratio (Strom and Finstein, 1989).

Another approach which has been mentioned is the mixing of the grass with brush and other woody materials. In general, wood does not compost at an adequate rate for waste treatment purposes (Barkdoll and Nordstedt, 1991). Therefore, such mixtures would still contain the woody material after composting. This is acceptable only if there is a use for such a mixed product. Alternatively, use of a tub grinder (a dedicated piece of equipment that is capable of turning branches and small stumps into a product that resembles a combination of small wood chips and sawdust) prior to or early in the composting process, might lead to the production of a "finished" compost material within a reasonable period of time.

Incorporation of grass clippings into leaf composting also raises the question of which type of composting technology is appropriate for this endeavor. Generally, three technologies are used in this state to compost leaves (Anonymous, 1988). Minimal technology involves forming a large windrow of leaves (*e.g.* 12 ft. high by 24 ft. wide) that is turned and reformed once a year. The material is stabilized in three to five years. Because of the amount of time that the material stays on site, and the potential for odor initially, this technology is designed for isolated sites that have little space and equipment available for the actual composting of the leaves. Low-level technology involves constructing windrows that are moderate in size (6 ft. high by 12-14 ft. wide), then combining two windrows into one in a month after the initial burst of microbial activity. The material is turned in the spring and throughout the summer. In the fall, it may be moved and formed into larger "curing" piles. The entire process usually takes about 16-18

months. Though more space is required for the actual composting than in the minimal technology, less total space is required because of the reduced buffer requirement (NJDEP, 1987). Intermediate-level technology involves more frequent turning of the material and usually has the advantage of windrow turning equipment designed for this specific purpose, while in minimal and low-level technology the turning is accomplished using front end loaders.

Compost Quality/Composting Endpoint

In addition to the actual processing of yard waste, interest has been shown towards the development of product quality criteria and specifications for yard waste compost (Glenn, 1989). Regulations exist for the land application of composts derived from sewage sludges and municipal solid waste (Kuchenrither and McMillan, 1990; De Bertoldi *et al.*, 1990). New York state has set standards that are inclusive for facilities that compost sewage sludge, septage, solid waste, and yard waste (NYDEC, 1988). Leaf composting manuals prepared in New York (Richardson, *et al.*, 1990) and New Jersey (Strom and Finstein, 1989) both include recommendations as to what constitutes a composted material in terms of pH, nutrients, and the general appearance of the product (*e.g.* color, texture, and friability). What has been missing, to date, are data that document the actual characteristics of compost derived from yard waste, and the changes that occur within the windrows during successive stages of composting.

Zucconi and de Bertoldi (1987) classify the products of composting into four groups according to age and completeness of degradation. "Fresh organic matter" (not to be called compost) is raw material that is at the beginning of

decomposition. This is the starting material of composting. "Fresh compost" defines material that has gone through the thermophilic stage of composting and has achieved sanitization but has not yet stabilized into mature compost. "Compost" represents mature compost. "Cured compost" is a highly stabilized product which results from exposing "compost" to a prolonged period of humification and mineralization beyond maturity. The latter three products may all be used as a soil amendment and it is suggested by the authors that the application of "fresh compost" may provide benefits to the soil in terms of increased organic matter and soil microbial activity. However, Riffaldi *et al.* (1986) and others (Zucconi *et al.*, 1981; Marchesini *et al.*, 1988) have expressed concern in regard to the application of compost products that are not fully stabilized. This concern has been the focus of studies carried out to evaluate the toxicity of immature compost and to determine what represents a mature compost (Dyer and Razvi, 1987; Fogarty and Tuovinen, 1991; Gouin, 1991; More and Sana, 1987).

Objectives

In the current study, experimental windrows were constructed at two composting facilities using various ratios of leaves to grass clippings. Additionally, tubgrinded brush and two by-products resulting from the processing of Perlite (Schundler Company, Metuchen, NJ) were used in several mix ratios with grass clippings. The variables examined in this study were the turning equipment, turning schedules, materials incorporated into the windrows, and the ratios of materials used.

Also, samples were collected from throughout the state at facilities that compost yard waste and analyzed to determine the organic and inorganic characteristics of the material that is presently leaving the sites as "stabilized" compost. Materials from different stages of composting, and which had been composted using differing processing technologies, were compared in order to examine the changes that occur with increased processing in terms of time and technology employed.

MATERIALS AND METHODS

Field Trials

Experimental windrows were constructed at two composting facilities in order to examine the effects of adding grass clippings to yard waste composting. Leaf to grass ratio, incorporation of other materials (brush and Perlite), processing technology, and frequency of turning were considered as variables in the field trials that were carried out.

Experimental Sites

Windrows were constructed at two sites: Kilmer Intermunicipal Compost Facility, Edison Township, Middlesex County, NJ (Kilmer) and Morris County Shade Tree Commission, Morris Township, Morris County, NJ (Shade Tree). Table 1 lists the materials and ratios used in the experimental windrows at each site. A 100% leaf windrow was constructed at each site as a positive control. A 100% grass windrow was constructed at Shade Tree.

Experimental Design

Eight windrows were constructed at the Kilmer site (Figure 1). Each windrow was constructed to the following dimensions: 30 foot length, 10 foot width, and 5 foot height. The grass clippings delivered to the site were collected from the residents of Piscataway Township and brought to the site in packer trucks.

The Perlite by-products were supplied by the Schundler Company (Metuchen, NJ). "Perlite" is a generic term for naturally occuring siliceous volcanic rock that, when heated to a certain point in its softening range, will

lower explosive limit of methane gas. Cross-sectional area was determined by measuring the distance to the edge of the pile at different heights, using a vertical pole marked at one-foot intervals placed at the edge of the base. The height of the pile was measured, then measurements were made at one-foot intervals starting at ground level up to the highest whole foot increment. The base widths of the windrows were kept constant by "cleaning-up" the windrows after turning. This was accomplished by pushing the material back within its marked boundaries using a front end loader, and to a lesser extent using a pitchfork. (The outline of each windrow was marked with a brightly colored banner attached to a stake driven into the ground so as not to interfere with the turning process.)

Laboratory Analyses

The pH of the composting material was measured weekly. The % moisture and % volatile solids were determined bi-weekly. The pH was measured on a pH meter (Model 825MP, Fisher Scientific, Springfield, NJ) by adding 10 grams of material to 500 ml of reverse osmosis purified water (Carnes and Lossin, 1970). Samples were dried at 105 °C to determine the % moisture, and ashed at 550 °C for volatile solids (American Public Health Association, 1985). Samples were collected by digging to the center of each experimental windrow with a shovel and filling a plastic bag with the material.

Odor Analyses

Odor measurements were made at both experimental sites. The technique followed for the odor study was based upon the air pollution complaint investigation procedure used by the New Jersey Department of Environmental Protection (N.J.A.C., 1987). Relative intensity of the odor was

recorded using a scale of 0 to 5, with 0 representing background levels (no perceivable odor) and 5 representing an extremely powerful odor. A qualitative description of the odor was also made. A list of terms frequently used to describe common odors was provided to the members of the odor panel to aid them in characterizing the odors. An odor panel consisting of three people was employed at both sites.

Odor was measured during the delivery, unloading, and mixing of the raw materials at a spot 50 feet downwind of the operation. After construction of the windrows, odor was measured and recorded at a distance 10 feet from the windrows during the turning process (three times at Shade Tree and once at Kilmer). At Shade Tree, readings were taken by walking down the aisle between each windrow before turning, and then by following the Wildcat windrow turner as it turned each windrow. Readings were taken at Kilmer by standing 10 feet downwind of each windrow as the front end loader cut into it and recording the intensity and quality of the escaping odor. Any interference caused by the composting leaf piles or other materials on site was determined by smelling the air 50 feet downwind of the leaf piles and 50 feet downwind of the experimental piles.

Compost Quality/Composting Endpoint

Samples were collected from nine composting facilities in New Jersey that currently compost grass clippings, or have composted grass clippings within the last year. Table 2 lists the facilities that participated in this study, the location of each by county, the processing technology employed at the site during the composting of the sample(s) collected, and the age of the sample(s)

and GL50) are compared and presented graphically in Figures 16 through 27. These plots show that the temperature averages were higher at Shade Tree for these windrows (though only initially for GL33). The control pile (L100) at Shade Tree consistently had temperature averages 10°C higher than those for the comparable windrow at Kilmer. The average % oxygen reading was lower at Kilmer for GL25 and GL33 throughout the study. The % oxygen readings for L100 were similarly low at both sites. The readings for GL50 were higher at Kilmer and less than 2% at Shade Tree for most of the trial period. The % LEL combustible gas readings were low for L100 at both sites. The readings were consistently higher at Kilmer for GL25. Higher overall combustible gas readings were found for GL33 at both sites, though the levels decreased later in the study at Shade Tree while remaining high at Kilmer. High readings were found initially for GL50 at both sites. These levels decreased at both sites later in the study.

Odor Analyses

Tables 11 and 12 present the averaged odor data generated at both sites during the set-up of the experimental windrows and then later during the turning process. The most offensive odors at both sites (in terms of both intensity and quality) were detected during the set-up of the experiment, particularly during the later stages of the set-up after the grass clippings had been on site for some time.

The odor was measured once during turning at Kilmer (day 30). The strongest and most distinct odors were detected emanating from the three Perlite/grass piles (GD50, GO50, and GO33). There was a distinct smell of ammonia from these windrows that was noticeable before each was turned, and was much stronger after the bucket of the front end loader cut into each

pile. The odors from the leaves/grass piles were not quite as strong and less offensive. The odors were described as "earthy" for GL332 and L100, and as "pungent, fatty acid" for the other three piles. There was no distinguishable single component to these odors as there was in the Perlite piles.

The strength of the odors detected during turning of the windrows at Shade Tree generally increased with increasing percentage of grass clippings in the pile. With the exception of GL50 on August 17 which was described as "slightly fecal", the odors from the grass/leaf piles (and L100) were relatively inoffensive throughout the study and were characterized as "earthy". The grass/brush combinations produced a distinct smell of ammonia on July 27 and August 8, and then, with the exception of GB50 which was characterized as having a "slight ammonia" smell, were described as "earthy" on August 17. The strongest and most offensive odors were produced by the 100% grass pile (G100). The odors emanating from G100 were described as "ammonia" smells during the first two odor analyses and "somewhat fecal" during the third measurement (August 17).

Compost Quality/Composting Endpoint

The samples were placed in one of three categories in terms of age: active, finished, and cured. The active samples included material that was taken from windrows that were being actively processed (aerated according to the turning regimen typically used at each site). Finished samples included material that was actively processed that Spring and/or Summer (1991) and had then been moved to the perimeter of the site or to one centrally located stockpile where it was to remain until its removal from the site. Cured

as grass clippings remaining within the windrow at the termination of the study. Also, the powdery nature of the Perlite dust represented a nuisance, and perhaps a potential health risk to workers. In this study, the dust was mixed during a light rain with the workers opening the bags of dust wearing nuisance dust masks.

Odor Analyses

The odor data collected from both sites reveal that the strongest and most offensive odors were detected during the arrival and mixing of grass at the sites. This initial odor problem was augmented by the conditions present at each site during construction of the experimental windrows. For instance, it was raining throughout much of the construction of the windrows at Kilmer. This caused the grass to arrive on-site wet, and once it arrived it was unloaded into areas with puddles. This added moisture seemed to exacerbate the odor problem created by the unloading and mixing of the materials.

The grass incorporated at Shade Tree was transported to the site by truckload from a neighboring composting facility in Hanover Township where it had been stored for some time. The material arrived on site highly odorous, with odors that were overpowering in both quantity and quality. A large amount of this grass was also unloaded into puddles that had collected on site. These odors were reduced to a great extent once the windrows were formed, though the piles G100, GB50, and GL50 at Shade Tree continued to release strong odors for some time after this, as did the Perlite piles at Kilmer. All the piles released some odors during the initial turnings. The strongest of these odors, again in terms of quantity and quality, emanated from G100 at Shade Tree and from the Perlite piles at Kilmer.

The odors released from the Perlite piles at Kilmer, and from the grass/brush piles at Shade Tree, were similar in that they contained a very distinct ammonia smell. The presence of ammonia in the volatile emissions from the windrows was to be expected since ammonia is a product of both aerobic and anaerobic metabolism. This ammonia smell may have resulted from the fact that Perlite is an inert mineral product which, though it may increase oxygen penetration into the pile, does not increase the carbon to nitrogen ratio of the material and, in fact, may have facilitated the release of volatile ammonia produced in the degradation of the grass clippings. The tub grinded brush, did contain large amounts of sawdust-like material that appeared to have decomposed during the trial period. However, it was largely composed of woodchip-sized material that was not degraded to any noticeable degree in the amount of time used in this study, and thus may have acted similarly to the Perlite in providing little available carbon, and allowing the ammonia produced within the pile to be released. Additionally, the highest recorded pH readings were found in these windrows (9.3 in GO50 and 9.2 in GB50). The pH readings in the grass/brush windrows at Shade Tree, and the grass/oversized Perlite windrows at Kilmer were typically higher than those found for the grass/leaf windrows throughout the course of the study. The same, however, was not true for the grass/Perlite dust windrow (GD50) at Kilmer.

Compost Quality/Composting Endpoint

Measurement of the inorganic properties of the compost was done for the purpose of comparison to exisiting and proposed standards for compost

Table 11. Kilmer: odor data.

date(time)	operation	distance	intensity	description
6/13	windrow set-up	50 ft from mixing	4	putrid, bad silage
6/14	windrow set-up	50 ft from mixing	5	putrid, bad silage
6/15	windrow set-up	50 ft from mixing	5	putrid, bad silage
7/13(8AM)	during turning	10 ft from pile:		
		GL50	3	pungent, fatty acid
		GL332	2	earthy
		GL334	2	pungent, fatty acid
		GL25	1	pungent, fatty acid
		L100	1	earthy
		GD50	4	ammonia, fecal
		GO50	4	ammonia
		GO33	3	ammonia

Table 12. Shade Tree: odor data.

date(time)	operation	distance	intensity	description
6/26	windrow set-up	50 ft from staging area	3	putrid, sour
6/27	windrow set-up	50 ft from staging area	4	putrid, fecal
6/28	windrow set-up	50 ft from staging area	5	putrid, fecal
7/27(9AM)	before turning:			
		50 ft downwind of leaf composting area	0	–
		50 ft downwind of experimental windrows	0(slight)	musty
7/27	during turning	10 ft from pile:		
		L100	1	earthy
		GL25	1	earthy
		GL33	1	earthy
		GL50	1	earthy
		B100	1	timber
		GB25	2	ammonia
		GB33	3	ammonia
		GB50	2	ammonia
		G100	2.5	ammonia
		GLB33	3	ammonia
	after turning	50 ft downwind of experimental rows	1	musty
8/8(8:30AM)	before turning:			
		50 ft downwind of leaf composting area	0	–
		50 ft downwind of experimental windrows	0	–
	during turning	10 ft from pile:		
		L100	1	earthy
		GL25	1	earthy
		GL33	2	earthy
		GL50	1	earthy
		B100	1	earthy, ammonia
		GB25	1	earthy, ammonia
		GB33	1	earthy, ammonia
		GB50	2	ammonia, septic
		G100	3	ammonia
		GLB33	1	ammonia, pungent
	after turning	50 ft downwind of experimental rows	1	ammonia (slight)

Table 12. Shade Tree: odor data (continued).

date(time)	operation	distance	intensity	description
8/17(8:30AM)	before turning			
		50 ft downwind of leaf composting area	0	–
		50 ft downwind of experimental windrows	0	–
		10 ft from pile:		
		L100	1	earthy
		GL25	1	earthy
		GL33	1	earthy
		GL50	2	slightly fecal
		B100	1	earthy
		GB25	1	earthy
		GB33	1	earthy
		GB50	1	ammonia (slight)
		G100	2	somewhat fecal
		GLB33	2	earthy
	after turning	50 ft downwind of experimental rows	1	earthy

Table 12. Shade Tree: odor data (continued).

date(time)	operation	distance	intensity	description
8/17(8:30AM)	before turning			
		50 ft downwind of leaf composting area	0	–
		50 ft downwind of experimental windrows	0	–
		10 ft from pile:		
		L100	1	earthy
		GL25	1	earthy
		GL33	1	earthy
		GL50	2	slightly fecal
		B100	1	earthy
		GB25	1	earthy
		GB33	1	earthy
		GB50	1	ammonia (slight)
		G100	2	somewhat fecal
		GLB33	2	earthy
	after turning	50 ft downwind of experimental rows	1	earthy

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Jeanne M. Fox
Acting Commissioner

Kenneth T. Hart
Director

COMPOSTING FACILITY BUFFER ZONE RECOMMENDATIONS

Below are minimum buffer recommendations developed to assist the applicant in siting and designing a leaf/vegetative waste composting facility. These buffer recommendations reflect the distance between the composting activity and the property line of the nearest sensitive receptor (i.e. residential, commercial, institutional).

Technology	Compost Cycle Time Frame	RECOMMENDED BUFFER FOR THE COMPOSTING OF: Leaves	Veg. Waste (Including Grass)
Minimal	2 - 3years	1000 feet	1500 feet
Low-Level	16 - 18 months	500 feet	1000 feet
Intermediate Level	less than 1 year	150 - 300 feet	750 feet
High-Level	less than 1 year	150 feet	150 feet

Note: The above buffer recommendations are based primarily on the Department's concern with air quality issues. The Department reserves the right to adjust buffer requirements based on additional factors, including but not limited to the following:

1. dB(A) levels on proposed equipment;
2. use of sound barriers;
3. degree of operational monitoring/controls;
4. size of windrows;
5. co-composting ratios;
6. use of air pollution control devices; and
7. proximity to environmentally sensitive areas; i.e. wetlands, surface waters, endangered plant/animal species, parklands, etc.

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New Jersey's Manual on Composting Leaves & Management of Other Yard Trimmings

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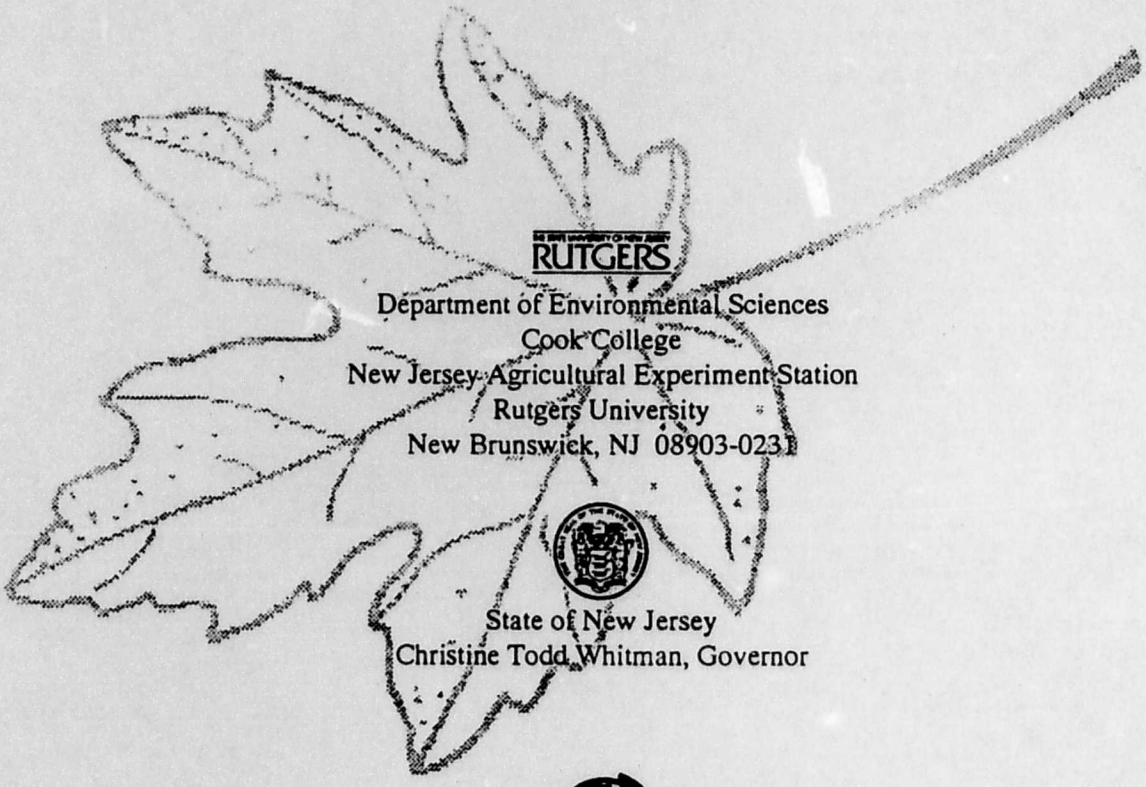

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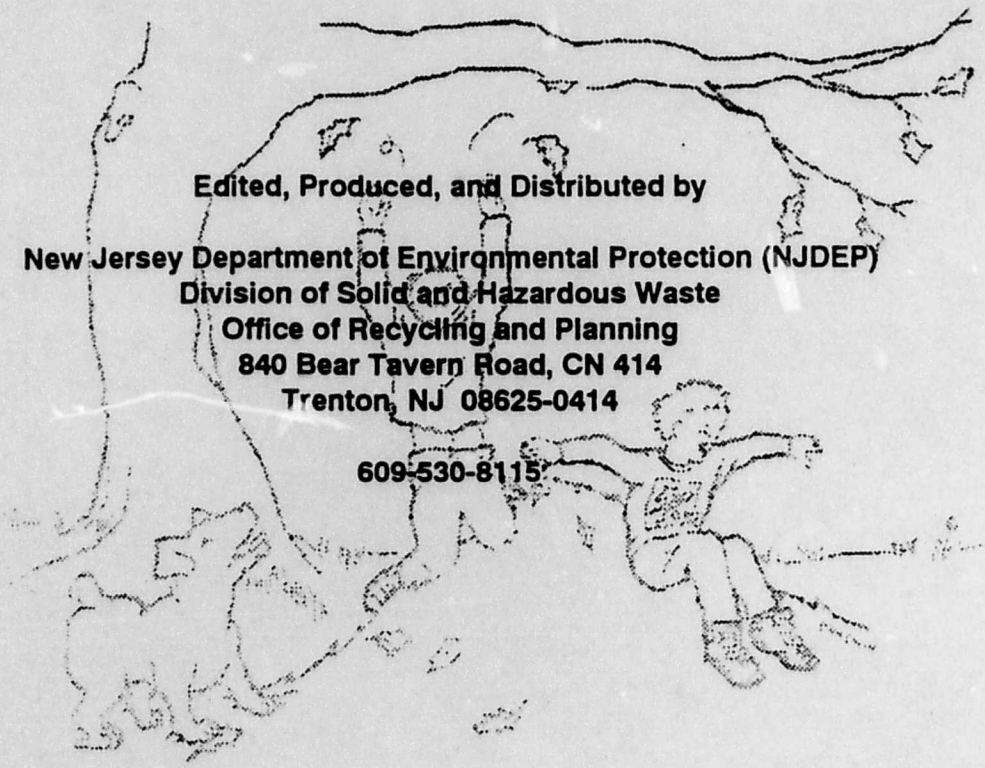

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PREFACE

This manual supersedes all previous manuals entitled "Leaf Composting Manual for New Jersey Municipalities". Scientific and technological advances made it necessary to bring the manual up to date. Previous manuals focused primarily on leaves. This revision provides information on the latest recognized technology for leaf and yard trimming composting applications. This manual also provides more information on the management of other yard trimmings, particularly grass clippings.

This manual serves as a useful tool when planning for a leaf and/or vegetative trimmings composting facility on a local, county or regional level; however, we must not ignore the continued benefits of backyard composting (source reduction). Backyard composting has been widely practiced and well accepted for many years. Residents can help our local government by reducing organic (leaf and other yard trimmings) materials at the source through home composting practices. Since leaves in New Jersey are already required to be composted or recycled, backyard composting of other organics naturally follows. Besides, by composting source separated organics and yard trimmings, a rich end product becomes readily available for immediate application around the home and yard.

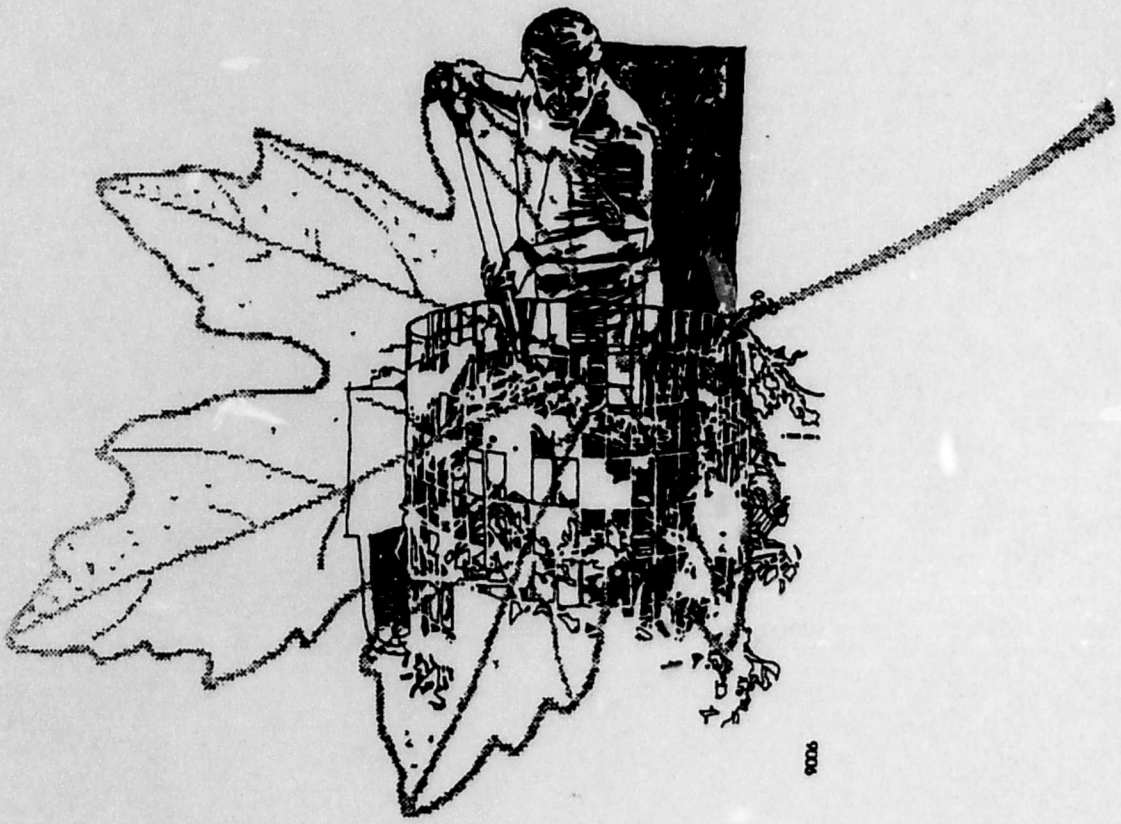
PREFACE to the Previous Versions

Leaves fallen to the floor of a forest or woodland undergo a slow process of decomposition. This is brought about through the action of numerous organisms, with microorganisms (including many different kinds of bacteria, fungi and protozoa) playing a dominant role. Forest litter, consisting of partially decomposed material, represents an intermediate step in the process. Eventually, a thoroughly decomposed state is reached, and the organic residue becomes part of the soil. The nutrients that were formerly in the leaves may now be available to plants, closing the cycle of growth and decay.

In contrast, leaves collected in developed residential areas represent a waste management problem. The "easy solution" of open burning was banned by New Jersey air pollution regulations in 1972. This action put an additional burden on landfills and could similarly strain alternate approaches to solid waste management now being considered throughout the State.

Like leaves in the forest, those collected from developed areas also can be decomposed microbially and the organic residue returned to the soil. However, the leaves must be processed in concentrated form, the decomposition accelerated, and residue deliberately applied to the soil. This cycle can be accomplished economically by means of the composting process linked to a compost use program.

This manual is designed to help municipalities in the establishment and operation of leaf composting facilities and programs for use of the compost. It employs the best available scientific information to find technically simple, cost-effective solutions that may be implemented by municipal personnel. Underlying principles are first explained so that the basis of the "how-to" recommendations may be understood. In this manner, the composting operation may be flexiblly adapted to meet site-specific needs.



ACKNOWLEDGEMENTS

Special acknowledgment is made of the work of graduate assistants William Schulz and Eric Zwerling, whose research provides much of the new technical information included in this manual. We also would like to thank all of the people at the field sites, particularly Don Hansen and Ned Scannel of the Joyce Kilmer Composting Facility, Alan C. Little of Morris County, and Matt Vastano of Middlebush Compost, Inc. who graciously allowed us access and provided needed equipment and manpower. We also owe a great deal to the energy and insight of Clarence "Pete" Peterson of Morris County, and note his passing with deep sadness. For their technical assistance we gratefully acknowledge the contributions of Dr. Harry Motto, Pegi Ballister-Howells, Jonathon Forsell, Daniel Stein, Keun Chan Oh and Roy Meyer. Ellen McShane Fox, Brian Petitt, Vivette S. Walker, Patricia Ferriola, Timothy Bartle, and Helen Kushner of New Jersey Department of Environmental Protection-Division of Solid and Hazardous Waste also made important contributions. Joan Gross and Edith Cheek typed much of this new version. We sincerely thank Dr. Donn A. Derr of Rutgers University for contributing the Addendum on the economics of composting.

The New Jersey Department of Environmental Protection-Division of Solid and Hazardous Waste, the Montclair Organizations for Conservation, and Essex County sponsored field and laboratory studies which provided much of the information incorporated in the original manual. We continue to thank the following people for assisting in those studies and with the preparation of the original manual: Richard M. Abramowitz, Jeffrey Callahan, Jean Clark, Jae-Chun Chung, Mark DiDomenico, Steven W. Fass, Franklin B. Flower, Jonathan H. Forsell, Roger M. Guttentag, John A. Hogan, Ming-Huei (Phillip) Liu, Frederick C. Miller, Paul Petto, Mary T. Sheil, Aletha Spang, James J. Stefel and Michael Winka.

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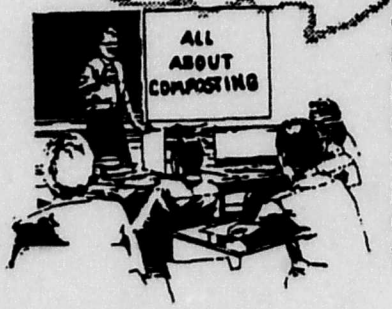
IV. FACILITY SITING AND PREPARATION

Site selection for a composting facility is an extremely important decision that should be made only after careful consideration, as each situation is unique. The deliberation over site selection should take into account proximity to residences, recreational facilities, institutions and environmentally sensitive areas (streams, wetlands). Other factors should be considered as well, such as local zoning/planning, traffic patterns, travel distance (effect on labor and equipment costs) and prevailing winds. Many of these are discussed below, yet familiarity with local circumstances is essential and cannot be reduced to written instruction. It is suggested that the county Cooperative Extension Office be involved in the early stages of planning. An important requirement for any composting facility is that the siting (location) must be approved by the host county and included in the county's Solid Waste Management Plan before the application can be submitted to the NJDEP/DSHW for permit review. Some counties have blanket plan inclusion policies to help facilitate this requirement (contact your county's Solid Waste Management Office).

A. Public Participation

When selecting a composting site, the importance of public participation must be stressed. Concerns raised by citizens may include odor, traffic, noise, litter, water pollution, and health issues, such as the fungus *Aspergillus Fumigatus*. Surrounding property owners and the general public should be educated as to the benefits of composting, and assured that their concerns will be addressed. They also need to be informed about the proposed facility, including site capacity, type of material which will be accepted, the level of technology, and equipment which will be utilized.

It is very important to have support within the community; an informed and educated public is less likely to oppose the siting and operation of a facility. It also may be necessary to deal with the emotional reaction of some community members. An open dialogue should be maintained throughout both the planning and operational phases of the project. This can be accomplished by providing educational and informal discussion sessions during hours convenient to the public. The county Cooperative Extension office can be very helpful in developing site specific programs and offering personal expertise. Many sites offer the finished compost free of charge to residents, further increasing knowledge and support within the community.



B. Permits

In New Jersey a state permit or letter of authorization is required for all solid waste facilities, including vegetative and leaf composting facilities. The type of permit or approval required depends on the amounts and types of materials accepted. In October, 1988, the State adopted an emergency rule which enabled the NJDEP to expeditiously authorize the operation of leaf and vegetative waste composting facilities. One subsection, N.J.A.C. 7:26-1.11, applies to facilities with a capacity not in excess of 20,000 cubic yards annually which compost leaves only.

Permits can also be obtained for vegetative waste composting facilities that accept a volume greater than 20,000 cubic yards annually or accept yard trimmings in addition to leaves (N.J.A.C. 7:26-2.4).

NJDEP also allows for the development of leaf composting demonstration projects for educational purposes on lands owned or operated by recognized academic institutions. Such facilities may accept up to 500 cubic yards of leaves, only.

The Soil Conservation District (SCD - see Appendix D) may assist in developing and submitting the site plans for the construction, operation, and maintenance of leaf composting facilities (leaves only) located on agricultural or horticultural land, or on lands owned or operated by a recognized academic institution. The SCD must then conduct annual inspections of these facilities to ensure compliance with NJDEP regulations.

For further information on obtaining a permit or approval for composting facilities, please contact the NJDEP/DSHW, Bureau of Resource Recovery (Appendix D). A pre-application meeting is strongly recommended. As mentioned earlier, composting facilities must be incorporated into the district solid waste management plan. Please contact your county Solid Waste Management Office (Appendix D) for further information on including your composting facility in your district's plan.

Backyard composting activities do not require a permit or approval from the NJDEP provided that they are limited to the composting of household organic/yard waste, on the premises, of one or two family dwellings.

C. Area Requirement

A minimum of an acre per 3000-3500 cubic yards of leaves collected is required for the actual composting operation. This assumes the use of the low or intermediate level technology described later, and is in addition to the requirement for a buffer zone (see Table 1). Calculation of site capacity is shown in Appendix A.

Use of the intermediate level of technology may require additional space, since smaller windrows are needed to accommodate specialized turning machines. However, this

should be determined individually for the type of equipment chosen. Windrows often can be assumed to have the approximate cross-sectional shape of a semi-circle. Necessary aisle space depends again on the type of equipment used.

D. Buffer Zone

A buffer zone is required between the site activities and neighboring land use to minimize possible odor, noise, dust and visual impacts. Other than "the larger the better," it is difficult to generalize exact buffer zone requirements for composting. It would seem prudent to provide at least 50 feet between the composting operation and the property line. At least 150 feet must be allowed between composting activities and any sensitive neighboring land uses, such as residential property lines. Additionally, at least a 250 foot buffer is needed between composting activities and a place of human occupancy (house, school, etc.). If grass clippings will be brought to the site, at least 1000 foot buffer zones from the staging and grass clipping handling areas are probably necessary (see Section VI). Calculations of area requirements for buffer zones are shown in Appendix A.

The buffer zone may include a berm (often of finished compost) to serve as a visual barrier, help control vehicular access, and reduce noise levels off-site. A landscaping plan, including plantings, is strongly recommended to enhance the appearance of the facility.

E. Location

A centrally located facility is preferable to reduce transportation time and costs, although such sites are not often available or otherwise practical. Access is preferably over non-crowded, non-residential, hard surface roads.

While siting on Green Acres land is not strictly prohibited, it will be considered only as a last resort for leaf (only) composting applications. Contact the Green Acres Program Office (see Appendix D) for more information.

F. Stream Encroachment and Water Pollution

Siting of a leaf composting facility in a flood plain normally is not allowed by state regulations. During times of high water the windrows might impede water flow, and/or leaves and leachate might wash into the stream. Flooding of the site could pose serious operational difficulties, including problems with equipment access and operation. Flooding of the windrows also may lead to extensive anaerobic conditions and the attendant problems of odor and lower decomposition rate. Flood plain maps are available through the Federal Emergency Management Agency or the NJDEP, Land Use Regulation Program (see Appendix D). Special permits may be required if operations are considered in these

V. APPROPRIATE LEVEL OF TECHNOLOGY

Four levels (minimal, low, intermediate, and high) of composting technology can be considered. The particular one that is most appropriate for a given application will depend mainly on the quantity and types of material accepted and the site selected. Available equipment and manpower are also factors. Table 1 shows that the lower the level of technology, the greater the requirements for available space and composting time, but the lower the cost.

The level of technology refers to the extent to which the ideal conditions for composting are met. Minimal technology meets the conditions poorly, leading to slow processing and a strong potential for odors. However, if site conditions allow this type of operation, it can be highly cost effective. It might be considered for leaves only, or for some agricultural wastes.

The low-level technology provides somewhat better composting conditions, cutting the time requirements and odor potential. This is considered acceptable in many cases for smaller operations handling leaves only. It is discussed in detail below as a point of comparison for the other methods.

Intermediate-level technology invests more effort into speeding up the composting process. It is appropriate for larger sites, and is necessary where grass clippings are received at a site.

The high-level of technology approaches optimum processing conditions. While not used for leaves, it is normally required to handle other municipal solid waste fractions, sludge, and other highly putrescible wastes.

A. Minimal Technology

If a large area that is well isolated from sensitive neighboring land uses is available, a very low-cost approach to leaf composting is possible. Leaves brought to the site are formed into large windrows (for example, 12 feet high by 24 feet wide) using a front-end loader. Once each year the windrow is turned and reformed. An additional windrow is constructed with the new leaves each fall. After three to five years the material in a windrow is usually sufficiently well stabilized to be used as compost.

With this "minimal" technology the necessary conditions for rapid composting are not achieved. Much of the pile remains anaerobic for a full year at a time between turnings. The center of the pile will probably also reach excessively high temperatures, especially the first year. However, the greatly reduced rate of activity is compensated for by providing a prolonged composting time.

Using this approach, odors can be expected for the first year, and serious odors likely will be released during the first turning. Usually by the second turning, odors have diminished. Because of these odors, an extensive buffer zone is required. Up to a quarter mile distance or more to sensitive neighboring land uses is recommended.

The obvious advantage of this approach is that it is extremely inexpensive. Only a few days per year of front-end loader operation is required. Even wetting of the incoming leaves may not be necessary except in very dry years. The large piles will conserve moisture, and the long time period ensures the cumulative exposure to considerable precipitation.

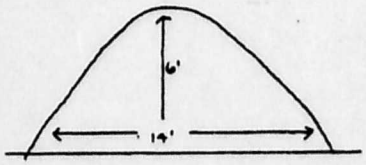
A second advantage is that little space is required for the composting itself because the piles are so large and little aisle space is needed. For example, using 12 feet high by 24 feet wide piles, a single windrow 60 yards long would contain approximately 1500 cubic yards of leaves. Though the leaves must stay on site for at least three years, a one-acre site (excluding buffer) is expected to be adequate for a yearly collection of 4000 cubic yards.

However, because of the odors produced, a large buffer zone is needed. Thus, a very large total area is required although only a small portion of it is actually used for the composting. This type of site may be available in a wooded area, where only a small clearing would be required, or at an isolated industrial site or public works yard.

B. Low-Level Technology

In densely populated New Jersey, siting of a minimal technology facility is rarely possible. Therefore, the necessary conditions for rapid and nuisance free composting have to be more nearly met. In particular this means that a better job must be done of ensuring adequate moisture content, oxygenation and temperature control.

The simplest way to achieve the desired temperature range would be to build piles large enough to conserve sufficient heat but not so large as to overheat. On the other hand, adequate oxygenation by passive diffusion of air from outside the pile could be achieved if the piles were small enough. Unfortunately no single pile size completely reconciles these conflicting goals. However, the desired conditions can be approached by starting with moderate size piles (6 feet high by 12-14 feet wide). Two piles can then be combined after the first burst of microbial activity (which lasts approximately one month). During this time a 50% reduction in volume occurs. Hence, two - one month old piles can be combined into one that is again no more than six (6) feet in height and fourteen (14) feet in width. Water addition at the outset is usually necessary to provide adequate moisture.



Using this approach it is possible to produce a thoroughly decomposed (finished) compost product in 16-18 months. The compost is ready for use in the spring, which is the time of peak demand for the product. Slight odors may be produced early in the composting cycle but these usually are not detectable more than a few yards away from the windrows. After 10-11 months large curing piles are formed around the perimeter of the site, freeing the original area to receive the new leaf collection. Costs are still quite low, as only three to four operations with a front-end loader are required after initial windrow formation (initial combining, one or two turnings, and one curing pile formation). Although more space is required for the actual composting (roughly 1 acre per 3500 cubic yards of leaves) compared to the minimal technology, less total area is needed overall because of the reduced buffer requirement.

Unless otherwise indicated, the low-level technology is recommended for small to medium size sites composting leaves only. This is the technology that NJDEP/DSHW prescribes in its permit exemption regulations (N.J.A.C. 7:26-1.11). However, this technology generally is not acceptable at larger sites, or if grass clippings are accepted.

Table 2 summarizes the scheduling and estimates of labor and equipment requirements for a moderate-sized leaf composting facility (15,000 cubic yards of leaves per year) employing the low level technology. The individual steps are discussed in more detail below. A summary sheet, meant for distribution to field personnel, is provided in Appendix B.

As indicated, a number of assumptions went into Table 2. The labor and equipment time estimates, in particular, should be considered only as a general indication of the needs at a specific site, since they may be highly variable. More details are given below.

1. Site Preparation

Before each collection season the site must be readied to allow all necessary truck access and front-end loader operations. The one part of the operation that has little scheduling flexibility is delivery of the collected leaves. Once leaves are collected, they must be promptly processed through the staging area and formed into windrows (Section V.B.2-4). It is critical, therefore, to prevent operational hangups, such as an area becoming so muddy that trucks get stuck trying to drop off their loads.

The yearly site preparation should include regrading and road and leachate system (if any) maintenance. All refuse and debris from the previous year's operation should be removed and disposed of appropriately. Normally this step will require at most a few days work. It can be scheduled any time after the active site has been cleared of the leaves from the previous year (by formation of the curing piles), but before the new collection season begins.

This step is fairly labor intensive. Leaf compost can only be processed at half the rated capacity of some equipment. Typically, a front -end loader is required for filling the hopper, and at least one person is required to operate the shredder/screener itself.

Shredding and screening will go more rapidly if the compost is not too wet. Overly moist material to be shredded might be spread out to dry for a day or two beforehand.

The major advantage of using a shredder or screener is that it yields a more uniform and debris-free final product. Sometimes it also can be used to mix finished compost with soil. Disadvantages include the labor and equipment requirements, the need to dispose of rejects, and the capital cost of the specialized machine. For amending final landfill cover or sale to topsoil companies (where it will be shredded during blending), shredding or screening is not needed.

One way to reduce costs is to share a single shredder/screener unit among several sites or communities through an inter-local agreement. Sharing is possible since the specialized equipment is only needed for a month or two per year, and scheduling can be flexible. Inter-local service agreements can often be the answer to reducing yearly municipal costs. Costs can also be subsided through the use of the tonnage grant program by the NJDEP/DSHW.

C. Intermediate-Level Technology

More frequent turning of the windrows will speed the composting process through improved aeration and physical mixing and grinding (particle size reduction). Since there is an increased rate of biological activity, turning must be continued regularly once it is started. Acid-anaerobic conditions and odors quickly develop if windrow turning is not regular. As a result, odors will be released at the next turning. During the first few weeks, two turnings per week may be required. This later can be reduced to one turning per week, then once every two weeks thereafter. The need for turning should be monitored by measurement of oxygen content and temperature within the windrows. Turning should be scheduled to prevent oxygen from dropping below 5% for prolonged periods, and to prevent temperatures from exceeding 60°C (140°F). Once the operator becomes familiar with his system, turning can be based on a schedule with only periodic monitoring. Following this approach, finished compost can be produced in as little as 6 months or even less.

Except for very small sites, such frequent turning by front-end loader is impractical. The turning takes too much time, equipment and labor costs are too high, the mixing and grinding is not very thorough, and compaction of the windrow is likely. Also, the soil at these sites is subject to getting rutted or muddy. For these reasons, specialized turning machines must be used.

Several commercially available turning machines are currently in use in New Jersey. Some are mounted on a tractor or front-end loader, and are driven first along one side of

the windrow and then the other, turning half at a time. Others straddle the pile, turning the composting material all at once and displacing it backward. Another approach applied by some equipment is to lift the material and displace it to the side.

Before investing in expensive equipment, careful thought should be given as to its advantages and disadvantages. A major advantage may be the shorter composting period. This shorter time results from faster biological action due to more thorough aeration, mixing and grinding. However, this is really an advantage only if the site is required for another use the following summer.

Besides the expense, an important disadvantage to consider is that (perhaps surprisingly) this approach may require more land than the low level technology process. This is because often windrow height is limited to only 5 feet or less for the turning machines. Some larger models can accommodate a 7 foot high windrow but piles of this size are prone to odor generation. Paired windrows cannot be used with windrow turners that are tractor or front-end loader mounted because of the need to turn windrows from both sides. However, straddle type and side displacement turners may require only narrow aisles, saving space.

Contrary to what might be expected, turning may have the effect of reducing average overall oxygen levels within a windrow. Although the turning itself does incorporate additional oxygen, the higher rate of decomposition that results from the concurrent mixing and grinding can lead to rapid (a few hours) oxygen depletion and anaerobic conditions.

Specialized turning machinery may require a better graded surface for efficient operation. On the other hand, such equipment may create fewer ruts and less muddy conditions than front end loaders.

Another point is that some of this equipment is very noisy. This should be mitigated to the maximum extent possible if homes or other sensitive land uses are located nearby. Noise levels must not exceed 65 dB(A) at the receptor's property line as set forth in the New Jersey Noise Code (N.J.A.C. 7:29-1 et seq.). These noise level considerations apply to all equipment or machinery used on the premises.

A staging area is not as important for an intermediate level of technology. Turning can be used to help reduce differences in initial windrow size, compactness, and composition. Frequent turning also makes initial water addition less critical. If inadequate moisture is present, turning during or immediately after it rains (or snows) can be used to incorporate water. This may make an on-site water source unnecessary (if fire officials approve).

Grass clippings, other than those incidental to fall leaf collection, should not be accepted at a site unless frequent turning is available (see Section VI.A). Specialized turning equipment then is required.

Finally, the overall economic impact of accelerated composting should be examined. The increased turning efficiency (time, energy, and labor) of the specialized equipment may justify the initial expense at larger sites even if the shortened composting period is not a major factor. For sites of 10,000 cubic yards or less, such equipment may not be economical unless shared, but at sites of 30,000 cubic yards or more it may be a necessity.

D. High-Level Technology

To approach a maximum rate of decomposition, near optimal levels of temperature and oxygenation are required. These factors minimize odors, as the putrescible (odor-causing) materials are quickly decomposed, and anaerobic conditions are reduced. These desired conditions can best be achieved by using an approach originally developed for sewage sludge composting, known as the Rutgers process control strategy. While this strategy has been successfully field tested for leaf composting, exact design and operation details for this application have not been fully developed.

Briefly, the Rutger's control strategy consists of using forced pressure aeration of the composting pile with the blower controlled by a temperature feedback system. When the temperature at a specific monitoring location within a pile exceeds a preset value, the blower automatically comes on to remove heat and water vapor and cool the pile. This control strategy ensures near optimum temperatures in the bulk of the material, while maintaining a well-oxygenated condition. During the start-up period (and at other times, if needed) the blowers also come on under control of a timer (perhaps for 30 seconds every 15 minutes) to provide oxygen. After 2-10 weeks of composting, the aeration system would be removed, and the windrows turned periodically. Additional information on the Rutgers strategy is provided in some of the papers listed in the Bibliography.

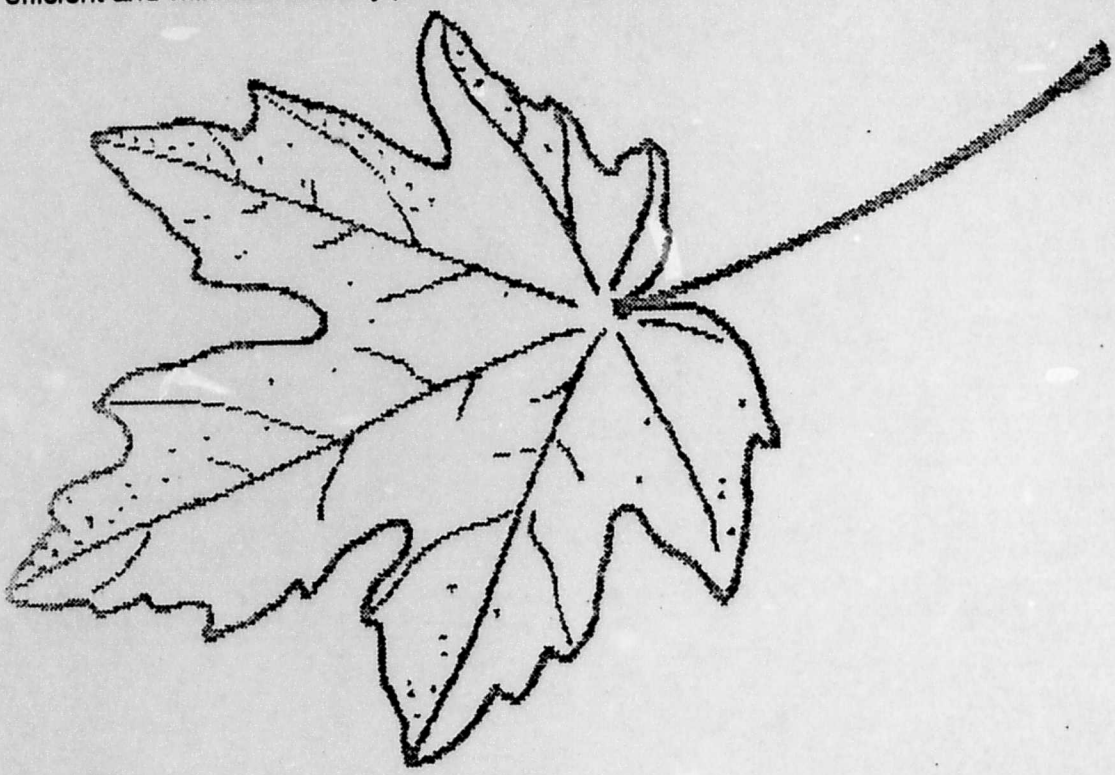
An advantage of this approach is that large windrows can be formed initially, thus using less space, yet extensive anaerobic conditions do not develop because of the good aeration. Therefore, serious odors and slowed decomposition do not occur. The largest pile tested to date was 10 feet high by 20 feet wide, which may be close to the maximum feasible. A second advantage is that because of the rapid decomposition that occurs early in the season, composting can be completed within several months, with perhaps one month of ventilation followed by a period of frequent turning.

The addition of nitrogen may be beneficial, since the temperature and oxygen limitations are largely overcome with this control strategy, unlike the case with the minimal, low, and intermediate levels of technology. This would further speed decomposition without leading to odor problems. As a first approximation, 5 pounds of nitrogen per ton of wet leaves (about one pound per cubic yard) could be tried.

A moderate size buffer zone, as with the low-level technology, is still required since the incoming leaves may, themselves, be odorous. These odors may continue to be released during initial windrow formation and start up. Also, the need for the blowers,

timers, and controllers (several hundred dollars per setup) and the additional labor for installation and security requirements will increase the cost of this approach relative to the low-level technology. Although the overall cost still is expected to be moderate, in general this approach does not seem to be warranted for leaves.

On the other hand, a high level of technology may be warranted for grass clippings and is probably necessary for food wastes. The high level of technology lends itself well to enclosed systems, and in fact some of the best composting "tunnel" systems developed in the mushroom industry are now being adapted for solid waste applications. These systems, besides employing temperature feedback control and being totally enclosed, are capable of recirculating part of the blower air stream. This makes odor control much more efficient and will minimize any potential problem with vermin.



VI. MANAGEMENT OF OTHER YARD WASTES

A. Grass Clippings

Grass clippings represent another significant seasonal solid waste. In some suburban New Jersey communities they may account for nearly one third of the total municipal solid waste load during peak grass-growing periods. Although grass clippings are readily compostable, the odor problems they pose make this treatment option difficult to implement for most communities. State permitting requirements are more stringent, particularly with respect to buffer zones, staging, and odor control. Collection costs may also be substantial.

The best alternative for grass clippings is not to collect them at all (see also Section I.B.1 and Appendix E3). Residents and lawn care services should be encouraged to leave grass clippings on the lawn. Turf grass specialists, such as Dr. Henry W. Indyk (Professor Emeritus) and Dr. James A. Murphy at Cook College, Rutgers University, recommend mowing frequently enough so that the short clippings filter through the growing grass and return their nutrients to the soil. This is best for the lawn, as well as for reducing collection and disposal costs. Clippings also can be incorporated in moderate amounts in backyard leaf composting piles or used as garden mulch.

If grass clippings are to be composted at a municipal facility, extra care must be taken to ensure that the windrows do not become anaerobic. Grass clippings are still alive when first cut, and are relatively high in nitrogen, moisture content, and readily degradable organics compared to the fallen leaves collected in autumn. For these reasons grass clippings decompose more rapidly, have a higher oxygen demand, and quickly go anaerobic. They are often highly odorous by the time they are delivered to a composting site. Therefore, it is especially important to properly implement and strictly enforce the odor control measures discussed in Section VII.A. Additional precautions such as expanding the buffer zone and improved management of leachate also will be necessary.

If the grass clippings can be delivered to a composting site without causing odor problems, they should be incorporated before the end of the day into the partially composted leaf windrows. A ratio of no less than 3 volumes of partially composted leaves to 1 volume of grass clippings is recommended. Good mixing is essential and can be achieved with a front-end loader by working together 20-30 buckets-full of material at a time. A windrow can then be formed from the mixture. The windrow should then be turned with a specialized windrow turning machine. Alternatively, a smaller amount of clippings might be placed on top of a windrow and then thoroughly mixed in with two passes of a windrow turning machine. In either case, it is preferable that a 1 foot layer of leaves, without grass clippings, be left on the bottom of the windrow initially, as grass clippings in direct contact with the soil have a greater potential for odor production. Windrows containing grass

clippings should not be constructed to a height of greater than 6 feet or width of 12 feet; however, 5 feet in height by 10 feet in width is preferable.

Since the leaves collected in the fall typically have lost half their original volume by the grass clipping collection season, the 3 to 1 ratio means that the amount of grass clippings that can be handled is only one sixth of the collected leaves. Generation ratios are often closer to 1 to 1. This serves to further emphasize the need to reduce the amount of grass clippings collected by educating residents about the benefits of recycling (cutting and leaving them) in their own yards. There may be some potential for reuse of windrows already containing grass clippings, but this is probably limited to a minimum overall ratio of 2 to 1.

Once the leaves and grass have been mixed in this way, no further odor problem is expected. The partially composted leaves act as a bulking agent to improve penetration of oxygen to the grass clippings, and as a sorbent to trap small amounts of odorous compounds. Because of their high C to N ratio, the leaves also tie up ammonia as it is released from the decomposition of the clippings, minimizing both ammonia odors and the release of nitrogen to leachate and groundwater or surface waters. The grass, in turn, speeds the decomposition of the leaves by providing needed nitrogen. The result is a higher quality compost product which is ready in a shorter period of time.

However, these benefits must be balanced against the increased potential for odor problems presented by grass clippings at the site. Only facilities that can provide an adequate buffer zone and that have the flexibility to turn the windrows on a more regular basis than is required for leaf composting alone, should attempt to compost grass clippings. The buffer zone should be 1000 feet or greater from the grass handling areas. A smaller buffer zone might be considered where demonstrated to be acceptable. Facilities that compost grass clippings also should monitor nitrogen levels in leachate and groundwater, including background sampling both upgradient from the site and on-site before receiving these materials.

Other bulking agents have been proposed for composting of grass clippings, and might serve as a partial or complete substitute for partially composted leaves. However, in addition to providing bulking for better aeration, any such materials or mixtures also must maintain a sufficient supply of available carbon to tie up ammonia as it is released from the clippings. If not, ammonia odors, even under completely aerobic conditions, and nitrogen contamination of water may occur. Woody materials, in particular, do not normally supply sufficient available carbon for this purpose, though their C to N ratios are high. The C (Carbon) is relatively unavailable to microorganisms.

B. Woody Materials

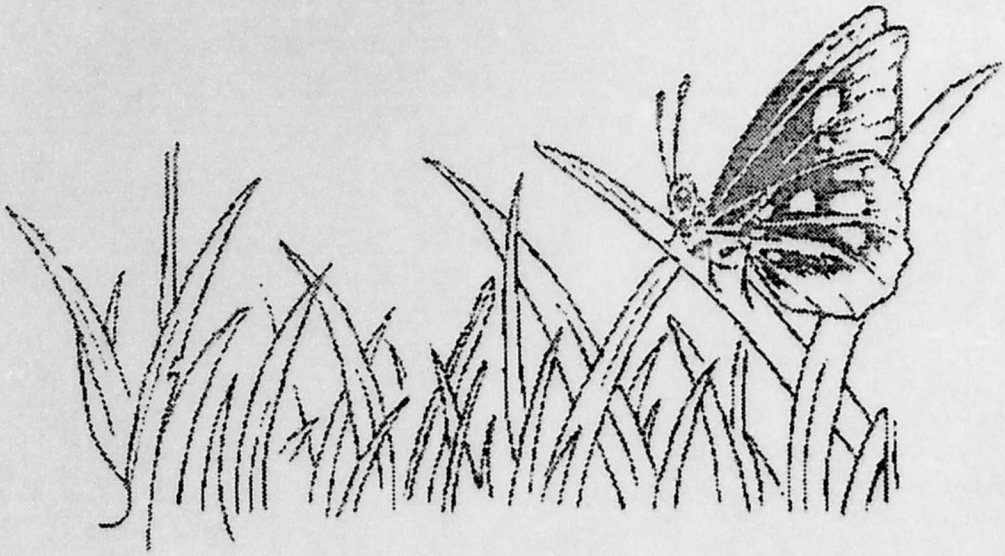
Wood tends to decompose very slowly, making composting of woody materials impractical in most cases. Thus, woody materials should not be intentionally incorporated

in leaf or leaf/grass composting windrows unless there is an end use for a mixed wood/compost product. (Separation by screening usually is too expensive.) Small amounts of incidentally included branches and twigs pose little problem.

Tree trunks and large branches often can be given away or even sold as firewood if cut to reasonable lengths. For smaller diameter woody materials, chipping, alone or followed by composting (with or without leaves or grass clippings), may produce usable mulch. Direct incorporation of woodchips or other woody materials into the soil is not recommended or allowed because of the slow rate of decomposition and the high C to N ratio.

C. Other Organic Materials

Many other organics, such as most agricultural and food wastes, are potentially compostable. However, these materials may not be suitable for the composting technologies being used at permitted leaf or yard waste composting facilities. Contact the NJDEP/DSHW Bureau of Resource Recovery (see Appendix D) for further information on the permitted composting facilities in the State of New Jersey.



VII. POTENTIAL PROBLEMS AND THEIR SOLUTIONS

Table 3 summarizes the more common problems at leaf composting sites, their causes, and recommendations for their remedy. Most problems can be prevented by proper facility siting, design, operation, and maintenance. Grass clippings present additional concerns that also are addressed in the discussion below.

A. Odor

The major problem encountered - even at leaf only composing sites - is odor. Persons unfamiliar with handling large masses of leaves may be surprised at how serious a problem this can be. Starting with relatively innocuous leaves, it is possible to generate odors comparable to those of a barnyard or worse. Grass clippings greatly intensify both the odor strength and its unpleasantness.

In general, odor problems develop in four stages:

1) odorous compounds must be present initially or be produced during processing;
2) these odors must be released from the pile;
3) the odors must travel off-site; and
4) they must be detected by sensitive individuals (receptors)

An odor problem can be prevented by eliminating any stage.

With the minimal technology described previously (Section V.A), stages 1-3 all occur, but since no receptors are present (stage 4), there is not a problem. Except where very large buffer zones are present, however, this approach to odor "control" is not possible.

Often, prevention of odor problems can best be achieved by preventing odor formation in the first place (Stage 1). For leaf composting, this means avoiding prolonged anaerobic conditions. Under anaerobic conditions, volatile organic acids (which have vinegarey, cheesy, goaty, and sour odors), alcohols and esters (fruity, floral, alcohol-like), and amines and sulfur compounds (barnyard, fishy, rotten) can be produced. In contrast, with aerobic conditions only a mild earthy odor is expected. If excessive ammonia or urea-based fertilizer, grass clippings, or other high nitrogen materials are added, an ammonia odor also may be produced even under aerobic conditions. Prevention of anaerobic conditions is virtually impossible with grass clippings.

The major cause of odor production at leaf composting sites is making the windrow too large, especially when first assembled. Because of the initial high concentration of readily degradable material, there is a high demand for oxygen. If the piles are too large, sufficient oxygen cannot penetrate from the outside, and a large anaerobic core develops.

Decomposition slows, switching over to the odor-producing acid fermentation described above.

A second important source of odor production is failure to form windrows quickly enough once the leaves are collected. Leaves cannot be simply dropped at the site for later composting, or collected and stored elsewhere. Although the intention might be to store them, temporary storage of leaves, unless they are very dry, can result in vigorous decomposition within one or two days. This in turn can lead to anaerobic conditions and the production of offensive odors. Grass clippings, as discussed earlier (Section VI.A), are usually odorous when they are delivered to the composting site.

If odors should be produced at a site, or if odorous materials are dropped off at the site (such as occurs with grass clippings or previously stored leaves), the second line of defense is to prevent their release (Stage 2). This might best be accomplished by leaving the odorous mass undisturbed until oxygen has penetrated sufficiently to destroy the odors. However, this may take several months or even years during which low levels of odor may continue to be a problem. Shaving off thin (1-2 foot) layers from the edges as they become aerobic may help speed this process.

If a long wait is not practical, another approach may be possible. Since many odorous compounds in leaf composting are acidic in nature, raising the pH (neutralizing the acids) will convert them to an ionized (negatively charged, dissociated) form. In this form they cannot be released to the air and will remain in the pile. For example, with the most commonly formed organic acid, acetic acid (vinegar), the reaction is:

$$CH_3COOH \rightarrow CH_3COO^- + H^+$$

Application of pulverized limestone is probably the best way to raise the pH. Sprinkling the limestone in powdered form directly onto surfaces from which odors are escaping may be the simplest approach, although a liquid slurry of limestone in water might be more effective. A one foot layer of finished compost spread over the odorous material also helps to reduce odor release, serving as a "bio-scrubber."

The use of limestone may be ineffective with odors generated from grass clippings or other high nitrogen wastes. Ammonia and amines are weak bases rather than acids, and raising the pH may therefore actually increase odor release:

$$NH_4^+ \rightarrow NH_3 + H^+$$

If odors are still produced and released despite these precautions, it may still be possible to minimize their off-site impact (Stage 3). This approach relies on timing odor-releasing operations to coincide with favorable wind conditions. A wind sock should be installed at the site to determine wind direction. Odor releasing operations should be performed only when the site is downwind of residences and other sensitive neighboring

land uses. Also, higher winds are preferable to calm and light wind conditions because the higher the wind speed, the greater the dilution of any released odors.

Some commercially available products claim to mask or eliminate composting odors when sprayed onto windrows. Masking agents try to use another odor (lemon, pine, roses, etc.) to hide the objectionable odors. To our knowledge, they have not been successful at composting sites. Odor elimination agents, with the exception of limestone noted above, are also unsuccessful in our experience.

B. Leachate

One way in which leachate may pose a problem is by forming small pools or "ponds." Ponding is a concern because it: can create an odor problem (since anaerobic conditions are likely to develop both in the pool and in the base of any water saturated piles); may serve as a place for mosquito breeding; and could interfere with operations on the site by generating soft, muddy areas. Prevention of ponding by properly grading the site is the best remedy. Also, windrows should run down slope rather than across, making it easier for the water to run off rather than accumulate between windrows. If ponding occurs and odors are released from the pools, adding pulverized limestone may be helpful.

Pollution of surface waters (lakes, streams) is the other major concern with leachate. While leachate from leaf composting is generally not toxic, it may deplete the dissolved oxygen in the water, possibly even to the point where fish kills could occur. Because of its dark color, leachate might also lead to a discoloration of the water.

To prevent this potential pollution, leachate should not be allowed to enter surface waters without prior treatment. This treatment might consist of simple percolation down into or through the soil, or passage through a sand barrier constructed to intercept any horizontal flow. In passing through the soil or sand, the leachate is both physically filtered and biologically degraded to remove a substantial portion of the pollutants. Contamination of ground water does not appear to be a problem associated with leaf composting.

With grass clippings, however, leachate may contain high levels of nitrogen. This may pose a problem of nitrogen contamination for both surface and groundwaters,and may not be adequately treated with simple soil or sand filters. Such contamination must be prevented either by limiting the nitrogen in the leachate (through control of the carbon to nitrogen ratio - by minimizing the amount of grass clippings, for example), or by more sophisticated (and expensive) leachate collection and treatment systems. NJDEP will consider both depth to groundwater and proposed treatment methods when reviewing permit applications.

Treatment of high nitrogen leachate on site is not a simple matter. Initially the nitrogen may be in a reduced form, either as ammonia or as organic nitrogen, but under aerobic conditions it will be converted to nitrate. Nitrate is the number one groundwater

TABLE 1

Appropriate Leaf and Grass Clippings Composting Technology

Level of Technology	Capacity[1] (yd^3/acre)	Buffer (feet)	Time (months)	Relative Cost	Use for Grass Clippings[†]
Minimal	4000	1000*	36-60	very low	no
Low	3500	50/150/250**	16-18	low	no
Intermediate	3000[11]	50/150/250**	4-6	low-moderate	perhaps[‡]
High	6000	50***	3-4	moderate	perhaps

1 Based on fall collection of leaves in one year.

11 Assumes 5 foot pile height, 10 foot width, and 10 foot aisles.

* From operations to sensitive neighboring land uses.

** From operations to: property line/sensitive neighboring land uses/place of human occupancy.

*** From operations to property line for totally enclosed system with odor control; otherwise, same as for intermediate.

† With additional requirements.

‡ Buffer zone of 1000 feet from staging and grass clipping handling areas to sensitive neighboring land uses.

Table A1 shows the resulting site capacities, in cubic yards, for various windrow and aisle sizes, considering the area used for windrowing only (including aisles between windrows, but not buffer zones, staging areas, roads, etc.). For example, for 6 foot high windrows with average 14 foot wide aisles, 3509 cubic yards per acre can be composted.

Table A2 can be used to determine the acres of site capacity (for windrowing only) required for a given leaf collection (in cubic yards). For a given windrow size and aisle width, find the acres needed per thousand cubic yards of leaves collected. Then multiply by the thousands of cubic yards collected. For the example above (6 foot high windrows, 14 foot aisles), 0.285 acres is required per 1000 cubic yards of leaves. For a leaf collection of 18,000 cubic yards, therefore, 18 x 0.285 = 5.13 acres is needed.

Table A3 can be used to determine the approximate additional acreage required to provide a buffer zone of a specified width on all sides of a site. For a given buffer size and windrowing area, find the additional acres needed from the table. For the example above, if a 150 foot buffer zone is needed in addition to the approximately 5 acres used for windrowing, this would require an additional 8.5 acres. The total acreage required would then be 5.13 + 8.5 , as well as 1 or 2 acres for staging, roads, etc., or about 15 acres.

Table A4 shows the dramatic effect of increasing buffer zone requirements on site capacity. For a given size site, with a specified buffer zone on all sides, the table gives the percentage of the total acreage that is available for composting. For example, for a 5 acre square site, a requirement for a 150 foot buffer on all sides would limit the available composting area to only 13% of the total site (Table A4a), or about 0.65 acres - enough space to compost only about 2000 cubic yards of leaves. A 50 foot buffer would make 62% of the site available, or 3.1 acres, giving a capacity of over 10,000 cubic yards. Sites which have a long rectangular (rather than square) shape have less available windrowing area.

Table A1. Maximum Initial Site Capacity
(cubic yards per acre of windrowing area)

windrow height (feet)	average aisle width (feet)							
	2	4	6	8	10	12	14	16
4	4055	3379	2896	2534	2253	2027	1843	1689
4.5	4665	3948	3421	3019	2701	2444	2231	2053
5	5280	4525	3960	3520	3168	2880	2640	2437
5.5	5897	5111	4509	4035	3650	3333	3066	2839
6	6517	5702	5068	4562	4147	3801	3509	3258
6.5	7138	6298	5635	5099	4655	4283	3966	3692
7	7761	6899	6209	5644	5174	4776	4435	4139
7.5	8385	7503	6788	6198	5702	5280	4916	4598
8	9011	8109	7372	6758	6238	5792	5406	5068

Table A2. Minimum Required Site Size
(acres of windrowing area needed per 1000 cubic yards)

windrow height (feet)	average aisle width (feet)							
	2	4	6	8	10	12	14	16
4	0.247	0.296	0.345	0.395	0.444	0.493	0.543	0.592
4.5	0.214	0.253	0.292	0.331	0.370	0.409	0.448	0.487
5	0.189	0.221	0.253	0.284	0.316	0.347	0.379	0.410
5.5	0.170	0.196	0.222	0.248	0.274	0.300	0.326	0.352
6	0.153	0.175	0.197	0.219	0.241	0.263	0.285	0.307
6.5	0.140	0.159	0.177	0.196	0.215	0.233	0.252	0.271
7	0.129	0.145	0.161	0.177	0.193	0.209	0.225	0.242
7.5	0.119	0.133	0.147	0.161	0.175	0.189	0.203	0.217
8	0.111	0.123	0.136	0.148	0.160	0.173	0.185	0.197

Table A3. Buffer Zone Area Requirements
(additional acres needed for specified buffer size)

buffer zone (feet)	Windrowing Area Required (acres)							
	1	2	3	5	10	20	30	50
50	1.2	1.6	1.9	2.4	3.3	4.5	5.5	7.0
100	2.8	3.6	4.2	5.2	7.0	9.5	11.4	14.5
150	4.9	6.1	7.0	8.5	11.2	14.9	17.8	22.4
200	7.5	9.1	10.3	12.2	15.8	20.8	24.7	30.8
250	10.5	12.5	14.0	16.5	20.9	27.2	32.0	39.6
500	32.5	36.5	39.6	44.4	53.3	65.8	75.4	90.7
1000	111.0	118.9	125.0	134.7	152.4	177.5	196.8	227.3

Assumes site is square; if length = 2 x width, add 5%; if 3 x, add 10%.

Table A4. Buffer Zone Area Requirements
(percent of site available for composting depending on buffer size)

a. Site Shape = Square (length = width)

buffer zone (feet)	Site Size (acres)							
	1	2	3	5	10	20	30	50
50	27	44	52	62	72	80	83	87
100	0	10	20	33	49	62	68	75
150	0	0	3	13	30	46	54	63
200	0	0	0	2	16	33	42	53
250	0	0	0	0	6	22	32	44
500	0	0	0	0	0	0	2	10
1000	0	0	0	0	0	0	0	0

b. Site Shape = Rectangular (length = 2 x width)

buffer zone (feet)	Site Size (acres)							
	1	2	3	5	10	20	30	50
50	21	40	49	59	70	78	82	86
100	0	2	13	27	45	59	66	73
150	0	0	0	5	24	42	51	61
200	0	0	0	0	8	27	38	50
250	0	0	0	0	0	15	26	40
500	0	0	0	0	0	0	0	2
1000	0	0	0	0	0	0	0	0

c. Site Shape = Rectangular (length = 3 x width)

buffer zone (feet)	Site Size (acres)							
	1	2	3	5	10	20	30	50
50	12	33	44	55	67	76	81	85
100	0	0	3	19	39	55	63	71
150	0	0	0	0	16	36	46	57
200	0	0	0	0	0	19	31	45
250	0	0	0	0	0	5	18	33
500	0	0	0	0	0	0	0	0
1000	0	0	0	0	0	0	0	0

Appendix E-4

FS389

RUTGERS COOPERATIVE EXTENSION

NEW JERSEY AGRICULTURAL EXPERIMENT STATION

Minimizing Waste Disposal: Grass Clippings

Peter F. Strom
Associate Professor of Environmental Science

James A. Murphy
Assistant Extension Specialist in Turfgrass Management

Henry W. Indyk
Specialist Emeritus in Turfgrass Management

Since refuse disposal costs have dramatically increased, and some landfills no longer accept grass clippings, many individuals and governmental agencies are seeking alternatives for disposal of clippings. During the maximum grass growing period, the municipal refuse load in some New Jersey suburban communities may contain nearly one-third grass clippings. Collected clippings become anaerobic very quickly because of their high demand for oxygen. After becoming anaerobic they emit strongly unpleasant odors. Therefore, grass clippings (in quantity) are difficult to handle and to process.

From our own experience with the handling and disposal of grass clippings, and discussions with others such as lawn care professionals, we suggest considering the following methods to reduce landfilling:

1. RETURN TO LAWN — It is most desirable to leave grass clippings uncollected on the lawn so that they are recycled, contributing to soil organic matter and supplying part of the fertilizer needs of the lawn. Adopt a mowing schedule to keep clippings short enough to filter through growing grass and not remain as a mat on top of the lawn. Research and experience indicate that only 1/3 of the grass length should be removed during mowing. Never allow the lawn grass to double its height between mowings. This approach not only eliminates clipping collection and disposal problems, but also can contribute to improvement of the lawn.

Clippings are not a cause of thatch in lawns. Rather, thatch is formed primarily from a dense accumulation of grass roots and stemmy material. Returning clippings along with proper mowing frequency will not increase disease problems.

Use caution when removing collection bags from mowers. Some machines are not designed to operate safely without a bag or other attachment in place. If you are unsure, check with your equipment supplier.

2. GARDEN MULCH — Grass clippings can be used as a garden mulch. To minimize any tendency to protect slugs, clippings can be dried in the sun for a day prior to being used in this way. Clippings can be spread on garden soil to check weed growth, reduce soil spattering and crusting, moderate soil temperatures, etc. As a precaution, do not use grass clippings from herbicide-treated lawns until after two grass cuttings have been made.

3. SOIL INCORPORATION — Clippings can serve as a source of organic matter for soil improvement when incorporated into the garden.

4. BACKYARD COMPOSTING — Grass clippings can be composted, particularly when incorporated into a backyard leaf composting pile. However, grass has a high nitrogen content, a much higher demand for oxygen than leaves, and a tendency to mat, thereby greatly reducing the passage of oxygen. Composting piles containing

grass clippings thus readily become anaerobic. This, in turn, can produce strong, unpleasant odors. These odors are particularly noticeable when the pile is disturbed.

Because of these problems, grass clippings should not be composted alone, but rather mixed with composting leaves. The partially decayed leaves which now (6-9 months after leaf fall) have a low demand for oxygen, will serve as a bulking agent permitting more oxygen to reach the grass. Grass, which is high in nitrogen, will provide a more rapid decomposition of the remaining leaves as long as it remains under aerobic conditions. Grass clippings will also contribute to a better end product (higher nitrogen content) than that obtained from composting leaves alone. One must be aware, however, that an excess of damp grass in the pile will soon become anaerobic, produce very unpleasant odors, and reduce the rate of decomposition. The objective is to keep the material aerobic. Also, to ensure that excess nitrogen is not given off as ammonia, do not add more than 1 part fresh grass clippings to 3 parts partially composted leaves.

The resulting compost can be used as a soil amendment, as a mulch for gardens, flower or shrub beds, or as a potting medium.

5. MUNICIPAL COMPOSTING — Some grass clippings can be incorporated into a municipal leaf composting operation. However, problems that may be experienced with backyard grass composting could be greatly magnified at a municipal facility. Even grass stored for one day or less in plastic bags or the back of a lawn maintenance pick-up truck may emit very unpleasant odors when being unloaded at the site. For this reason, grass clippings are banned at many leaf composting facilities, unless they are very isolated. Research is continuing in this area, but other problems include the high cost of collection and an inadequate supply of leaves for the amount of clippings.

Partially composted leaves should be mixed with the grass in a 3:1 ratio, or more. Because the leaves have already decomposed by the time the grass comes to the site, however, this means the ratio actually collected must be at least 6:1. For most towns this would be possible only if most of the grass clippings are handled directly by residents on their own property.

6. CLIPPING REDUCTION — Fertilizing and watering above the requirements of the grasses may be more detrimental than beneficial to the lawn. One of the effects is increased production of clippings. (Another is potential ground or surface water pollution.) Judicious and proper use of fertilizer and water can provide an attractive lawn with a reduction in the costs, effort, susceptibility to disease, and amount of clippings produced. A fertilization program should emphasize fertilizing the lawn in the fall season rather than in the spring. This can be effective not only in reducing the amount of clippings produced, but also in contributing to a better lawn.

Two related fact sheets: "Backyard Leaf Composting" (FS074) and "Using Leaf Compost" (FS117), and assistance with procedures covered above, may be obtained from the Rutgers Cooperative Extension office in your county. The telephone number appears under County Government in your local phone directory.

1500.04.92.REV

RUTGERS COOPERATIVE EXTENSION
N.J. AGRICULTURAL EXPERIMENT STATION
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY
NEW BRUNSWICK

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CIRCA 1995

State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection

Robert C. Shinn, Jr.
Commissioner

Division of Solid and Hazardous Waste
CN 414
Trenton, NJ 08625-0414
Tel. # (609) 530-8591
Fax. # (609) 530-8899

DESIGN CRITERIA AND RECOMMENDATIONS FOR VEGETATIVE WASTE COMPOST FACILITIES

1. PILE SIZE - Windrows shall be constructed and reconstructed to a height of 6' with a corresponding base of 14'. Such piles may be constructed in pairs with 2' separation on one side and 16' on the other. In general, separation distance between piles can be reduced with demonstration of equipment maneuverability. Pile height can be increased if dedicated windrow turning equipment is proposed, i.e. not front end loaders or other bucket loaders, or if nearest sensitive land use is over 1000' from site. Sensitive land use shall include residential, commercial, and recreational and passive open space used by the public.

2. GRASS - Grass may be accepted at a site only if the following are met:

   - A distance of 1000' from the grass receiving/handling areas to sensitive land use property line.
   - Dedicated windrow turning equipment is proposed unless the buffer area from the site to any sensitive land uses is greater than 2500'.
   - Temperature and oxygen monitoring equipment on site for daily monitoring of windrows.
   - Schedule of pile turning based on maintenance of pile temperature below 140°F and oxygen levels above 5%.
   - Pile height no greater than 6'.
   - Mixing with semi-composted leaves at a ratio of 1 volume of grass to 3 volumes of leaves.
   - Grass may be incorporated into existing piles up to two times.

3. BUFFER ZONE REQUIREMENTS

LEVEL OF TECHNOLOGY[1]	TIME (MONTHS)	BUFFER W/LEAVES ONLY (FT)	USE FOR GRASS	BUFFER WITH GRASS (FT)
MINIMAL	36-60	1000[2]	NO	N/A
LOW	16-18	50/150/250[3]	NO	N/A
INTERMEDIATE	4-6	50/150/250	YES	1000[4]
HIGH	3-4	50[5]	YES	50[5]

Notes:
1. Technologies defined in Leaf Composting Manual for NJ Municipalities.
2. From operations to sensitve land uses.
3. From operations to property line/to sensitive land uses or areas/to place of human use or occupancy (structure).
4. From grass clipping staging and handling areas to sensitive land uses.
5. Building setback for enclosed operations; otherwise, same as INTERMEDIATE.

The above criteria are based primarily on the Department's concern with air quality, sound level impact, and compost product quality issues. The Department reserves the right to adjust buffer requirements and other criteria based on additional factors, including but not limited to the following:

- Sound levels associated with proposed equipment;
- Use of sound barriers and/or use of odor control devices;
- Degree of operational monitoring/controls;
- Size of windrows;
- Co-composting ratios;
- Types of materials proposed for composting; and
- Proximity to environmentally sensitive areas, i.e. wetlands, surface waters, endangered plant/animal species, parklands, etc.

State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection

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Robert C. Shinn, Jr.
Commissioner

May 8, 1995

Mr. Richard Pucci, Executive Director
Middlesex County Improvement Authority
101 Interchange Plaza
Cranbury, New Jersey 08512

Re: Middlesex County District Yard Waste Management Plan
Pilot Grass Recycling Program

Dear Mr. Pucci:

This office has reviewed your request to Director Hart of April 20, 1995 regarding the establishment of grass clipping transfer depots in Middlesex County. While such facilities would normally be treated as transfer stations in accordance with N.J.A.C. 7:26, we are of the position that with the appropriate safeguards, such transfer points can be considered as convenience centers. The minimum requirements outlined in your letter fulfill these appropriate safeguards. As such, your pilot program is hereby approved.

Given that this is the first county-wide plan of its kind, we are limiting approval to September 30, 1996, pending evaluation of program results. The following conditions shall be adhered to during the course of the pilot program:

1. Sites to be utilized for transfer depots shall be located at least 1000 feet from any area of human use or occupancy.

2. A listing of all sites approved for transfer shall be submitted to this office upon inclusion in the District Plan.

3. All grass delivered to the site(s) shall be placed/loaded into roll-off containers upon receipt and shall be removed from the site by the contractor on the same calendar day as received.

4. Provisions shall be made for the control of spillage and odors.

5. Security shall be provided (i.e., personnel during hours of open access, locked gates, etc.) to preclude contamination of materials.

6. A schedule of hours of operation will be posted and complied with.

7. Grass shall be delivered loose or in biodegradable paper bags. No plastic bags will be utilized.

8. Only residents, or municipal vehicles of participating municipalities will be permitted to bring grass clippings to the site(s). No commercial firms or landscapers will be permitted to utilize the site(s).

9. Operators of existing compost sites shall submit a request for modification to this office to provide for grass clippings transfer operations at their sites. No grass clippings can be accepted without approval from this Division.

10. The MCIA or its designated agent(s) shall inspect all participating sites at least once each week during any grass collection season. Site operators shall identify any problems being experienced to the inspector.

11. Monthly reports shall be submitted by the 15th of the following month to this office. Said reports shall include site inspection reports for all participating sites and the number and size of containers removed from each site. The contractor shall further provide the final destination of each container.

We look forward to working with the MCIA in the future development of the county-wide recycling program. If you should have any questions or concerns, please do not hesitate to contact me.

Sincerely,

Robert C. Ciolek
Assistant Director
Engineering and Finance

TTB/lk
c: D. Samuel, CME Assoc.
G. Sondermeyer, Planning
J. Feast, Solid Waste Enforcement
C. Majorossy, Middlesex County

State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection
Division of Solid and Hazardous Waste
CN 414
Trenton, NJ 08625-0414
Tel. # (609) 984-6900
Fax. # (609) 984-6874

Robert C. Shinn, Jr.
Commissioner

POLICY CONCERNING THE CONSIDERATION OF GRASS MULCHING DEMONSTRATION REQUESTS

Given that grass clippings are currently considered a solid waste, no individual can receive grass clippings for use or disposal without approval from the Department of Environmental Protection. Further, while the Department encourages the beneficial use of grass clippings through the "Cut It and Leave It" Program and composting, it continues to consider other management options to provide alternatives to landfilling and incineration. The option which is the subject of this policy is grass clipping mulching on farmland. The Department seeks proposals from individuals to demonstrate this technology to determine its long term viability and to develop an appropriate regulatory framework.

A prospective operator requesting permission to conduct demonstrations shall provide an application to:

Robert Ciolek, Assistant Director
Office of Permitting
Division of Solid and Hazardous Waste
CN 414
Trenton New Jersey 08625-0414

The application must include:

1. Written documentation of support from the host solid waste management district (county).

2. A plot plan of the area intended for grass clipping application.

3. A Nutrient Management Plan on which the application rate of grass clippings will be based. The plan may be prepared by the farmer, an agent acting on behalf of the farmer or the local Soil Conservation District (SCD) office and shall be approved by the SCD for each farm field on which grass clippings will be mulched. A copy of the approval shall be provided. The Nutrient Management Plan shall be based on the U.S.D.A. Soil Conservation Service Technical Guide.

4. A detailed description of the proposed use of grass clippings, including, but not limited to, the type of crop(s) to be grown from the grass amended soil, the timing of grass application relative to crop growth and the measure which will be used to determine success of the demonstration, such as reduction in fertilizer use or in water consumption.

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5. A description of operations, including but not limited to, the schedule of grass clipping receipt and application, the types of vehicles transporting grass clippings, the method of grass clipping application, and activities which follow application.

6. A description of the equipment to be used for the handling and spreading of grass clippings.

7. A description of the proposed methods for controlling odors associated with grass clippings.

8. A description of how the farm will comply or not comply with the following criteria. For any of the criteria which the farm can not comply, the prospective operator shall explain what mitigating circumstances exist or will be provided which would provide equal environmental performance.

   a. Only those lands which have been deemed actively devoted to agricultural or horticultural use, as defined in the Farmland Assessment Act of 1964, N.J.S.A. 54:4-23.5, shall be used for grass mulching activities.

   b. The farm shall possess good access roads providing a firm surface for delivery vehicles and good access controls to prevent unauthorized persons from entering after operational hours.

   c. Receiving areas for staging of grass shall be no closer than 1000 feet of any property line of a sensitive receptor (area of human use or occupancy).

   d. Grass shall be delivered to the farm un-bagged and free from debris.

   e. Within twenty-four (24) hours after delivery, the participating farm operator shall make all reasonable effort to spread or land apply the clippings at the loading rate specified in the Nutrient Management Plan.

   f. The location of the grass mulching activity shall not be within a 100 year floodplain zone or within 100 feet of a surface water body (whichever is more stringent); nor shall the operation of grass mulching activities conflict with the objectives of any applicable Federal, State or local land use and environmental requirements.

   g. A farm shall not operate grass mulching activities within 50 feet of the property line. A buffer of at least 150 feet shall also be provided to the property line of the nearest sensitive receptor , and 250 feet from any occupied structure.

   h. The operator shall maintain a written log of the date and time of delivery, the estimated volume of grass clippings delivered, the solid waste registration number of the vehicle delivering the grass clippings (if applicable), the date and time of grass clipping application, and a sketch of the approximate location where the spreading occurred.

After review of an application, the Division may ask for additional information, deny the request based on failure of the demonstration to meet any of the criteria in Number 8 above, or issue an approval letter with conditions. The conditions will include, but not be limited to:

1. The acceptance of odorous grass at demonstration farmland must be prevented to the greatest extent possible. If at any time a load of odorous grass is delivered, the farm operator shall immediately notify the sending community of the necessity to deliver grass within shorter time frames.

2. A grass mulching demonstration shall be terminated if one of the following occurs:

   a. The owner or operator fails to obtain any applicable permits or approvals required by Federal, State, County and local statute, rule and ordinance;

   b. The owner or operator fails to comply with the requirements and restrictions of the demonstration approval for grass mulching; or

   c. The Department determines that the facility poses a threat to the public health, safety or the environment.

3. The Department may enter and inspect the facility, at any time, in order to ascertain compliance or non-compliance with such Federal, State or local land use and environmental requirements. No person shall refuse, prohibit or otherwise inhibit the Department from lawfully entering and inspecting the facility, at any time. This right to inspect includes, but is not limited to:

   a. Sampling any materials on site;

   b. Photographing any portion or portions of the facility;

   c. Investigating an actual or suspected source of pollution of the environment;

   d. Reviewing and copying all applicable records, which shall be furnished upon request and made available at all reasonable times for inspection.

4. A final report of findings shall be prepared and submitted at the completion of the demonstration which includes:

   a. A discussion of the initial objective of the project;

   b. A copy of the daily logs maintained during the demonstration;

   c. A discussion of any unexpected problems which arose; and,

   d. A discussion of the final results.

State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection

Robert C. Shinn Jr.
Commissioner

Division of Solid and Hazardous Waste
P.O. Box 414
Trenton, NJ 08625-0414
Tel. # (609) 984-6880
Fax. # (609) 777-0769

MAR 9 2000

Mr. Bernard Paterson
Recycling Coordinator
Township of Woodbridge
225 Smith Street
Keasbey, New Jersey 08816

RE: Township of Woodbridge, Middlesex County
Grass Clipping Transfer General Approval Application
Facility ID# 1225001419

Dear Mr. Paterson:

Your application has been reviewed for ADMINISTRATIVE COMPLETENESS and found to be COMPLETE. Accordingly, your application has been assigned for technical review. Please note that during the technical review, further information may be requested by your reviewer. However, at this time your attention is drawn to the following issues. These issues need to be resolved before the technical review continues.

1. Please be advised that the inclusion of the township's operation in the district solid waste management plan was contingent on compliance with mandated conditions as set forth in the Department's letter dated May 8, 1995 (copy enclosed). Condition 1 of that letter states that the sites to be utilized for transfer depots shall be located at least 1000 feet from any area of human use or occupancy. The site plan dated October 1997 submitted with your March 16, 1998 letter shows a distance of 425 feet from the proposed tipping area to the residential area. Please explain this discrepancy. Further, you have stated in your letter that you have been operating this facility in this fashion since 1995 under the pilot program with the Middlesex County Improvement Authority. If this is the case, the operation has not been in compliance with the approved pilot program.

2. The site is located adjacent to a tidal waterway. A Waterfront Development Permit is required for any construction or activity on all lands lying within 500 feet of the mean high water line of the tidal waterway. If a Waterfront Development Permit has already been procured for the site

from the Department please provide a copy of the permit. If not, please contact Robert Piel of Bureau of Inland Regulation at (609) 633-6563 for further assistance.

The additional information shall be submitted to my attention within 30 days of receiving this letter as an addendum to the application for a Recycling Center General Approval. Failure to submit the requested additional information as required shall constitute cause for denial of the application.

Should you have any questions with any aspect of the issues discussed above, please do not hesitate contact Krish Kasturi of my staff at (609) 984-6664 for assistance.

Sincerely,

Robert M. Confer
Chief
Bureau of Resource Recovery &
Technical Programs

Enclosure
KK
C: Richard Pucci, Executive Director, MCIA
Edward Windas, Recycling Manager, MCIA
Brian Petitt, Compliance and Enforcement

State of New Jersey

James E. McGreevey
Governor

Department of Environmental Protection
Division of Solid and Hazardous Waste
Bureau of Resource Recovery and Technical Programs
P.O. Box 414 401 East State Street
Trenton, New Jersey 08625-0414
Telephone: (609) 984-6985 Telecopier: (609) 633-9839
http://www.state.nj.us/dep/dshw/rrtp/rrtp.htm

Bradley M. Campbell
Commissioner

APPLICATION GUIDELINES FOR A CERTIFICATE OF AUTHORITY TO OPERATE FOR A RESEARCH, DEVELOPMENT AND DEMONSTRATION PROJECT FOR LAND APPLICATION OF GRASS CLIPPINGS AS A SOIL AMENDMENT

The receipt, storage and processing of grass clippings for use or disposal requires approval from the Department of Environmental Protection. While the Department encourages the beneficial use of grass clippings through the "Cut It and Leave It" Program and composting, it continues to consider other management options to provide alternatives to landfilling and incineration. The option which is the subject of these guidelines is land application of grass clippings as a soil amendment. The Department seeks Research, Development and Demonstration (RD&D) proposals to demonstrate this technology to determine its long-term viability and to develop an appropriate regulatory framework.

A prospective operator requesting permission to conduct an RD&D project shall provide an application to:

Assistant Director
Office of Permitting and Technical Programs
Division of Solid and Hazardous Waste
P.O. Box 414
Trenton New Jersey 08625-0414

The application must include:

1. **The location of the RD&D project, including a site plan map and a plot plan of the area(s) intended for grass clipping application.**

2. **A description of the proposed project including:**

   a. **Identification of the proposed source(s) of grass clippings.**

   b. **A detailed description of the use of grass clippings, including, but not limited to, the grass clipping application rate, type of crop(s) to be grown from the grass amended soil, and the timing of grass application relative to crop growth. The application rate of grass clippings specific to each crop shall be based on a Nutrient Management Plan. The plan may be prepared by the operator, an agent acting on behalf of the operator or the local Soil Conservation District (SCD) office and shall be approved by the SCD for each field on which grass clippings will be mulched. A copy of the approval shall be provided. The Nutrient Management Plan shall be based on the U.S.D.A. Soil Conservation Service Technical Guide.**

   c. **A description of operations, including but not limited to, the schedule of grass clipping receipt and application, the types of vehicles transporting grass clippings, the method of grass clipping application, and activities which follow application.**

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d. A description of the equipment to be used for the handling, and land application process of spreading and soil incorporation.

3. The proposed duration of the project, including a start and end date.

4. An outline of the need for the project and the measure which will be used to determine success of the demonstration, such as reduction in fertilizer use or in water consumption.

5. A description of the information or improved operation that this project will provide and/or a description of the data gaps this project will fill.

6. A description of the improved environmental effectiveness and/or efficiency of operations that will be demonstrated.

7. The operational procedures to minimize, control and mitigate impacts such as noise, air quality, traffic, and stormwater runoff including but not limited to a description of the proposed methods for controlling odors associated with grass clippings.

8. A description of the sampling and analytical plan of the material and process being demonstrated and the potential air, water or soil emissions or discharges. As a minimum, incoming grass clippings and soils receiving grass clippings shall be sampled and analyzed for moisture and pH and on a dry-weight basis for Nitrogen (total, nitrite/nitrate and ammonium), Phosphorus, Potassium, Copper, Magnesium, Manganese, and Zinc.

9. A description of the quality assurance/quality control plan for the overall demonstration and the sampling and analytical plan.

10. A copy of the written approval issued by the designated implementation agency which indicates that the project is included in the district solid waste management plan for the county/district within which the project is located.

11. A description of how the operation will comply or not comply with the following criteria. For any of the criteria which the operation can not comply, the prospective operator shall explain what mitigating circumstances exist or will be provided which would provide equal environmental performance.

    a. Only those lands which have been deemed actively devoted to agricultural or horticultural use, as defined in the Farmland Assessment Act of 1964, N.J.S.A. 54:4-23.5, or lands requiring restoration shall be used for grass mulching activities.

    b. The site shall possess good access roads providing a firm surface for delivery vehicles and good access controls to prevent unauthorized persons from entering after operational hours.

    c. Receiving areas for staging of grass shall be no closer than 1000 feet of any property line of a sensitive receptor (area of human use or occupancy).

    d. Grass shall be delivered to the site un-bagged and free from debris.

    e. The operator shall make all reasonable effort to spread clippings at the loading rate specified in the Nutrient Management Plan and incorporate the clippings into the soil on the day of receipt. In no case shall grass clippings be staged for more than 24 hours.

f. The location of the grass application activity shall not be within a 100-year floodplain zone or within 100 feet of a surface water body (whichever is more stringent); nor shall the operation conflict with the objectives of any applicable Federal, State or local land use and environmental requirements.

g. Land application activities shall not occur within 50 feet of the property line. A buffer of at least 150 feet shall also be provided to the property line of the nearest sensitive receptor, and 250 feet from any occupied structure.

h. The operator shall maintain a written log of the date and time of delivery, the estimated volume of grass clippings delivered, the solid waste registration number of the vehicle delivering the grass clippings (if applicable), the date and time of grass clipping application, and a sketch of the approximate location where the spreading occurred.

After review of an application, the Division may ask for additional information, deny the request based on failure of the demonstration to meet any of the criteria in Number 11 above, or issue a Certificate of Authority to Operate with conditions. The conditions will include, but not be limited to:

1. The acceptance of odorous grass at a demonstration site must be prevented to the greatest extent possible. If at any time a load of odorous grass is delivered, the operator shall immediately notify the sending community of the necessity to deliver grass within shorter time frames.

2. A Certificate of Authority to Operate shall be terminated if one of the following occurs:

   a. The owner or operator fails to obtain any applicable permits or approvals required by Federal, State, County and local statute, rule and ordinance;

   b. The owner or operator fails to comply with the requirements and restrictions of the demonstration approval for grass mulching; or

   c. The Department determines that the facility poses a threat to the public health, safety or the environment.

3. The Department may enter and inspect the facility, at any time, in order to ascertain compliance or non-compliance with such Federal, State or local land use and environmental requirements. No person shall refuse, prohibit or otherwise inhibit the Department from lawfully entering and inspecting the facility, at any time. This right to inspect includes, but is not limited to:

   a. Sampling any materials on site;
   b. Photographing any portion or portions of the facility;
   c. Investigating an actual or suspected source of pollution of the environment; and,
   d. Reviewing and copying all applicable records, which shall be furnished upon request and made available at all reasonable times for inspection.

4. A final report of findings shall be prepared and submitted at the completion of the demonstration which includes: a discussion of the initial objective of the project; a copy of the daily logs maintained during the demonstration; a discussion of any unexpected problems which arose; and, a discussion of the final results.

Revised May 2001

Technical Manual

for

CLASS C RECYCLING CENTER APPROVALS

Bureau of Resource Recovery & Technical Programs
Division of Solid and Hazardous Waste

September 2001

DONALD T. DiFRANCESCO, ACTING GOVERNOR
STATE OF NEW JERSEY

ROBERT C. SHINN, JR. COMMISSIONER
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

MISSION STATEMENT

The mission of the New Jersey Department of Environmental Protection is to conserve, protect, enhance, restore and manage our environment for present and future generations. We strive to prevent pollution; ensure the efficient use of safe, environmentally sound and reliable energy resources; provide opportunities for recreation and enjoyment of natural and historic resources; and promote a healthy and sustainable ecosystem.

Bureau of Resource Recovery & Technical Programs
Division of Solid and Hazardous Waste
NJDEP
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(609) 984-6985

PROLOGUE

This manual has been produced by the Department of Environmental Protection (DEP) to make the permit process less complicated and time-consuming for you. This manual is one of a series of technical manuals produced by DEP under the requirements of the Environmental Management Accountability Plan (P. L. 1991, Chapter 422) with the goal of making the permit application process more consistent and predictable. In each technical manual, you will find summaries and explanations of policies that may not be fully described or explained in environmental laws or regulations. In addition, the manuals contain guidance on how the Department defines other standards, such as "state-of-the-art" control technologies or "best management practices."

Unless otherwise required by federal or state law, the policies and procedures contained in a technical manual on the date an application is filed will be binding on both the DEP and the applicant. The technical manuals may be updated every six months or whenever a regulatory change requires revisions. Any revision made to a technical manual will have no effect upon a permit application that was submitted to the department prior to adoption of the revision. This is a technical manual prepared pursuant to N.J.S.A.13:1D-111 to 1D-113. Because it by necessity condenses and summarizes statutes, regulations, and other documents, it may not always precisely reflect all the requirements set forth in same. In the case of any inconsistency between this technical manual and any statutes, regulations, or policy determinations based upon same, the requirements of the statutes, regulations, or policy determinations shall prevail. Accordingly, this technical manual should not be used as a substitute for a through analysis of the law and the facts as they apply to any specific project or proposal. The State of New Jersey, including its Department of Environmental Protection and all agents and employees thereof, hereby disclaims any warranties (express or implied) and any legal liability for the accuracy, completeness, or usefulness of any of the information set forth in this technical manual.

In addition to the information contained in this manual, the department endorses the environmental management hierarchy which establishes an order of preference, placing multi-media pollution prevention first, followed by recycling, reuse, treatment and finally, disposal options. Therefore, pollution prevention is the first and preferred practice in environmental management as defined in the 1991 New Jersey Pollution Prevention Act (N.J.S.A. 13:1d-35 et seq.). Pollution prevention practices reduce the demand for and the generation of hazardous substances prior to treatment, control, storage, or recycling. This reduction is typically attained through process modifications, product reformulations, improved operation and maintenance, raw material substitution and in-process recycling

The department considers the term "state-of-the-art" to include a process whereby the applicant considers the environmental management hierarchy in the effort to encourage pollution prevention. The department believes that the applicant has primary control over consideration and implementation of pollution prevention options while the department retains control over allowable release limits based on treatment and control requirements. This division of responsibility is designed to encourage the applicant to implement pollution prevention measures before exploring treatment and control options under department review.

Only after pollution prevention options are determined to be infeasible should control options be considered. Therefore, it is the department's policy that "state-of-the-art" reflects a demonstration of the applicant's having sequentially considered the environmental management hierarchy.

You may request additional copies of this manual or information on other manuals offered by the department by contacting:

Maps & Publications
P. O. Box 438
Trenton, NJ 08625-0438

(609) 777-1038

TABLE OF CONTENTS

I. Introduction

This document describes the procedural and substantive requirements for the completion of an application for each type of approval administered by the Bureau of Resource Recovery and Technical Programs for recycling centers who receive, store, process or transfer Class C Recyclable Materials.

This manual, together with the New Jersey Recycling Regulations found at N.J.A.C. 7:26A-1 et seq. and the applicable Administrative Completeness Checklist, provides the applicant with the technical guidance necessary to prepare a complete application. The manual includes information on how to submit the required information, how the Department will review the submittal, clarification of the Department's interpretation of applicable regulations, and a description of pertinent Department policies that are not defined by the regulations. This manual was developed pursuant to N.J.S.A. 13:1D-111 to 113.

Questions concerning this technical manual or the applicable regulations should be directed to the Bureau of Resource Recovery and Technical Programs, Division of Solid and Hazardous Waste, NJDEP, 401 East State Street, P.O. Box 414, Trenton, New Jersey 08625, telephone 609-984-6985. Office hours are 8:00 a.m. thru 4:30 p.m. Monday thru Friday. Copies of the Recycling Regulations may be obtained by contacting West Group, 610 Opperman Drive, P.O. Box 64526, St. Paul, Minnesota 55164-0526, telephone 800-808-9378. A nonjudicial version of the regulations may be viewed by visiting the Division's web site at www.state.nj.us/dep/dshw.

II. Application Submission

The application for each permit or approval should be submitted in accordance with the instructions, guidance and Administrative Completeness Checklist for each type of approval (detailed in each specific section of item VI. below), applicable sections of the Class C Recycling Center General Approval Application Review Checklist (Appendix A), the GIS Mapping and Digital Data Standards (Appendix B) and the regulations at N.J.A.C. 7:26A-1 et seq.

III. Application Review

A Department project manager will perform an administrative review of the information submitted using the applicable Administrative Completeness Checklist as a general guide and, within 30 days of receipt of the application, will determine whether the application is administratively complete. If the application fails to meet the criteria for administrative completeness, the Department will so advise the applicant and will specify in writing what additional information is required. The applicant shall submit the requested additional information within 30 days of receipt of the notice of incompleteness. Failure of the applicant to submit the requested additional information in a timely manner will result in termination of review of the application.

Once the application has been determined to be administratively complete, our project manager will perform a detailed technical review of the information submitted (including site visits to verify field conditions) using applicable portions of the attached Approval Application Review Checklist and the regulations as a general guide and, within 90 days of issuance of the letter of administrative completeness (depending upon the type of permit or approval and whether technical deficiencies are noted and addendum to the application are required), the Department will issue the approval.

IV. Interpretation of Regulations

The Department's interpretation of pertinent specific regulatory requirements for Class C Recycling Center approvals are detailed in Appendix A and in each specific section of Item VI. below.

V. Explanation of Policies

The Department's policies related to Class C Recycling Center approvals that are not directly addressed in the regulations are detailed in Appendix A and in each specific section of Item VI. below.

VI. Specific Sections Applicable to Each Permit or Approval

The numbered sections below include specific instructions, technical guidance, and an Administrative Completeness Checklist for each approval related to Class C Recycling Centers.

3. Geographic Description [N.J.A.C. 7:26A-3.2(a)2]

The Department considers "description of the geographical location" to include not only the name of the municipality but also the name of the county in which the recycling center will be located; and to include not only the tax map lot and block numbers and current land use of all adjacent properties, but also the names of the current property owners of all adjacent properties.

4. Sensitive Land Uses [N.J.A.C. 7:26A-4.5(a)4, (a)15v and 4.5(b)3]

The Department considers "sensitive land uses" to mean the same as "sensitive receptors" as stated in N.J.A.C. 7:26A-3.2(a)10 (e.g. homes, schools, hospitals, playgrounds, etc.). Required buffer distances are to the nearest property line of the sensitive land use.

5. Vegetative Visual Screen Buffer [N.J.A.C. 7:26A-4.5(a)4 and 4.5(b)3]

The Department considers "vegetative visual screen buffer" to include any landscaping provisions that effectively prevent individuals on adjacent and proximate properties from seeing recycling center operations. This may include solid fencing material in addition to grassed berms and trees/shrubs.

VI. Explanation of Policies

In addition to the policies detailed in Appendix A, the Department's policies related to Class C Recycling Center general approvals which are not directly addressed in the regulations are as follows:

1. Pre-Application Conference

The Department strongly recommends that all applicants for a Class C Recycling Center general approval schedule and complete a pre-application conference with the Bureau of Resource Recovery and Technical Programs. The purpose of the conference is to discuss and clarify application requirements in order to eliminate confusion and submission of unnecessary information.

2. Recycling Centers Providing Transfer Only

The Department will require recycling centers providing only transfer of Class C recyclable materials to comply with any applicable application submittal requirements at N.J.A.C. 7:26A-3.2, 3.4 and 3.18 and design and operational requirements at N.J.A.C. 7:26A-4.1 and 4.5. Depending on the size of the operation, the transfer of leaves can qualify for an exemption. Any requirement discussing composting, windrow management, curing or finished product handling is not applicable, except for the following:

i. N.J.A.C. 7:26A-4.5(a)4 and (b)3 - The perimeter of the recycling center shall be separated from any and all adjacent residential, commercial and or other sensitive land uses through the establishment of an effective visual screen buffer.

ii. N.J.A.C. 7:26A-4.5(a)15v and (b)8 - Materials staging and handling activities shall be performed only in areas on the site which meet the following minumum buffer distance requirements:

	Buffer with grass and/or vegetative food material
Not Fully Enclosed	1000[1]
Fully Enclosed	50[2]

Notes:
1. From material staging to sensitive land uses
2. Building setback for enclosed operations

2. Sensitive Land Uses [N.J.A.C. 7:26A-4.5(a)4, (a)15v and 4.5(b)3]

The Department considers "sensitive land uses" to mean the same as "sensitive receptors" as stated in N.J.A.C. 7:26A-3.2(a)10 (e.g. homes, schools, hospitals, playgrounds, etc.). Required buffer distances are to the nearest property line of the sensitive land use.

3. Vegetative Visual Screen Buffer [N.J.A.C. 7:26A-4.5(a)4 and 4.5(b)3]

The Department considers "vegetative visual screen buffer" to include any landscaping provisions that effectively prevent individuals on adjacent and proximate properties from seeing recycling center operations. This may include solid fencing material in addition to grassed berms and trees/shrubs.

V. Explanation of Policies

In addition to the policies detailed in Appendix A, the Department's policies related to Class C Recycling Center modifications which are not directly addressed in the regulations are as follows:

1. Pre-Application Conference

The Department strongly recommends that all applicants for a Class C Recycling Center modification schedule and complete a pre-application conference with the Bureau of Landfill and Recycling Management. The purpose of the conference is to discuss and clarify application requirements in order to eliminate confusion and submission of unnecessary information.

2. Submittal of Application Information to Local Officials

N.J.A.C. 7:26A-3.10(c) requires that applicants provide written notice of requests for modifications to certain local officials, depending upon the type of approval. In addition, the Department will require that written notice and a copy of the application for modification be submitted not only to the county solid waste or recycling coordinator, but also to the municipal clerk.

3. Compliance with New Requirements

The Department will require that applications for a modification to a general or limited approval demonstrate compliance with all new regulatory requirements that have been adopted since the date of issuance of the approval being modified. The Department may also require that the application demonstrate compliance with new policy determinations that have been made by the Department since the date of issuance of the approval being modified.

4. Recycling Centers Providing Transfer Only

The Department will require recycling centers providing only transfer of Class C recyclable materials to comply with any applicable application submittal requirements at N.J.A.C. 7:26A-3.2, 3.4 and 3.18 and design and operational requirements at N.J.A.C. 7:26A-4.1 and 4.5. Depending on the size of the operation, the transfer of leaves can qualify for an exemption. Any requirement discussing composting, windrow management, curing or finished product handling is not applicable, except for the following:

i. N.J.A.C. 7:26A-4.5(a)4 and (b)3 - The perimeter of the recycling center shall be separated from any and all adjacent residential, commercial and/or other sensitive land uses through the establishment of an effective visual screen buffer.

ii. N.J.A.C. 7:26A-4.5(a)15v and (b)8 - Materials staging and handling activities shall be performed only in areas on the site which meet the following minumum buffer distance requirements:

	Buffer with grass and/or vegetative food material
Not Fully Enclosed	1000[1]
Fully Enclosed	50[2]

Notes:
3. From material staging to sensitive land uses
4. Building setback for enclosed operations

		COMPLETE (Y/N)	TECHNICALLY ADEQUATE (Y/N)	NOT APPLICABLE	COMMENTS	N.J.A.C. 7:26A CITE
2. ADDITIONAL INFORMATION REQUIRED FOR RECEIPT, STORAGE, PROCESSING OR TRANSFER OF RECYCLABLE MATERIALS OTHER THAN OR IN ADDITION TO YARD TRIMMINGS						
2.1	Additional Information For Class C Recycling Centers who receive recyclable materials other than or in addition to yard trimmings, provide the following additional information:					3.18(b)
2.1.1	Process Flow Diagram A flow diagram of the proposed processing steps for all recyclable materials received.					3.18(b)1
2.1.2	Mass Balance A total mass balance of the proposed processing operation.					
2.1.3	Equipment Description A description of all equipment to be used, including the information required by item 1.8 above and a demonstration that the equipment is compatible with the proposed process and thruput.					3.18(b)2
2.1.4	Profile Views Provide profile views of the facility site showing the following:					3.18(b)3
2.1.4.1	Access Roads					
2.1.4.2	Drainage Systems Swales, ditches, etc.					
2.1.4.3	Existing and Final Grades					
2.1.4.4	Facility Superstructure Include a demonstration that recycling center operations are fully enclosed, unless vegetative food material is the only food material received by the recycling center. Note: Recycling centers not fully enclosed shall meet the buffer distance requirements for recycling centers handling grass clippings found at N.J.A.C. 7:26A-4.5(a)15v.					4.5(b)7 4.5(b)8 4.5(a)15v
2.1.4.5	Utilities					3.18(b)3
2.1.4.6	Other Structures					

EFO-002 (DEQ 062)
9/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENFORCEMENT FIELD OPERATIONS
AIR & ENVIRONMENTAL QUALITY ENFORCEMENT

FIELD INVESTIGATION ASSIGNMENT REPORT

PLANT ID #	INSPECTOR ASSIGNED
85229	660

DATE ASSIGNED	DATE DUE
6/14/00	
DATE COMPLETED	COUNTY
7/7/00	Warren

COMPANY NAME Nature's Choice
LOCATION Fool Rift Rd White Twsp

TYPE OF ASSIGNMENT: ☒ Complaint ☐ APEDS ☐ Order Followup ☐ PRIORITY CODE _____

CYCLE

CDS CLASS: A1___ A2___ B___ NSPS___ NESHAPS___ PSD___ CMS___

AIR GRANT (105): ☐ Yes ☐ No PLLT: PT___ S2___ CO___ N2___ VO___ Toxic___ Other___

COMPLAINANT NAME _____ PHONE # _____
COMPLAINANT ADDRESS TD# 00-06-14-1751-23
DATE RECEIVED 6/14/00 TIME RECEIVED 1751 COMP. LOG _____ RECORDED BY TD

ASSIGNMENT Odor complaint regarding above facility.

PLANT CONTACT Stephen Reiter
TITLE President
6/14/00 TIME AT PLANT (Military Time) 2015 TO 2045
TOTAL ASSIGNMENT TIME/ OT 6.0HR/4.0HR
STACKS INSPECTED 1 TEMPS —
OF SOURCES INSPECTED 1 STK TEST REQ N

SAMPLE TYPE	VIOLATIVE	SAMPLE #

SUBCHAPTER	# INSP	RPT Y/N
5	1	
OTHER		

EFO-007(DEQ-012)Completed for Subchap. AO/OC&PA
NJAC 7:27-5.2(a)

COMPLAINT	TYPE	NUMBER
	OD	1

Time/Date at Complainant 1910, 6/14/00
Verified: ☒ Yes ☐ No
Sub 5 SOP followed: ☒ Yes ☐ No
Give details below

VIOLATION FOLLOWUP INSPECTION
Violation Log # _____
Order Dated _____
Subchapter Violated _____
Compliance Achieved ☐ Yes ☐ No
Give details below

COMMENTS (by code) NJEMS Incident # 6610
Billable Stacks: ____ (give details below)
DETAILS OF INSPECTION NJEMS IN000011 Incident Investigation.

INSPECTOR'S SIGNATURE Philip Demore
TITLE: SES
SUPERVISOR'S REVIEW INITIALS: (illegible) DATE: 7/7/00

SEE ATTACHED FOR ADDITIONAL INFORMATION: ☒ YES ☐ NO

NJEMS
INV CCCCII

Facility Name Nature's Choice Corp. APC ID# 85229
NJDEP-Air Enforcement Inspection Date 6/14/00 Report Date 6/29/00
Written by P.Savoie

6/ 14/00 Odor Complaint Investigation

An odor complaint was received on this date regarding the above facility during Night Time Surveillance on this date. An after hours response was made at the request of the complainant who had complained to the Department and indicated the incident was ongoing. TD Case# 00-06-14-1751-23 & NJEMS Incident# 5538.

17:57 hrs Received complaint from Trenton Dispatch for an odor complaint believed to be emanating from the Nature's Choice composting facility in White Twsp., Warren County.

18:10 hrs. Called the complainant, who indicated that the odors were ongoing and objectionable. The complainant also indicated that the odors were also being smelled inside their home and was effecting her asthma condition. Proceeded to White Twsp. Weather conditions for the Phillipsburg area (Allentown, PA) were reported by NOAA @ 17:10 hrs-60 F, winds from the east @ 7 mph.

19:05 hrs Arrived area and passed gates of Nature's Choice on the way to the complainant's property. The gates were shut.

19:10 hrs. Arrived at the complainant's home. Windows and doors were observed shut and no one was outside. Odors of a raw tobacco character, scale 1 were detected at this time. I met with the complainant who stated that the odors have been occurring regularly every "couple of weeks". The Subchapter 5 procedure was discussed at this time.

19:45 hrs. While at the complainant's property the odors began to increase in intensity to a scale 3 and had a "raw tobacco" and " acrid, burned wood" type character. This odor remained at the property for approximately 20 minutes. This inspector agreed at this time that the criteria for "unreasonable interference of the enjoyment of life or property" was met and obtained a Statement-of-Complaint.

20:00 hrs. Began upwind survey. A five (5) mile loop was completed around the area as follows: see attached map.

1. Drove north on Foul Rift Rd. Odors dropped off in intensity within ¼ mile of the complainant's property. No odors were detected along the rest of this road to Rt. 620.
2. Continued to the intersection of Foul Rift Rd. & County Rd. Rt. 620. Passed the Belvidere Wastewater Treatment Plant, no odors detected.
3. Proceeded south on Rt. 620 to the intersection of Rt. 620 & Rt. 519. No odors detected.
4. Passed through Country View Terrace (Lamp Lighter Village) briefly on Lamplighter Circle. No odors detected.
5. Proceeded south on Rt. 519 past the Warren County Complex (20:07 hrs.). No odors detected. Also noted that the flag on the flagpole was not moving and hanging limp.
6. Proceeded west on Foul Rift Rd. No odors were detected until just past Harmony Sand & Gravel facility. At this location the odors detected at the complainant's

property began to be detected again, increasing in intensity back to the complainant's property, at a scale 3 intensity.

20:15 hrs Completed the drive around the area. Entered the facility from Foul Rift Rd., near the complainant's property, following the odors back into the Nature's Choice facility. The facility's property is no more than 100-200 feet off of Foul Rift Rd. near the Delaware River. Upon entering the facility large, steaming piles of compost were observed. These windrows also were emitting odors that had a "acrid burned wood/raw tobacco" type character that was detected at the complainant's property. The perimeter of the facility was walked and odors were mainly detected along the northern, southern and western property lines. The eastern property line had little or no odors.

Also observed on site were three (3) 830 Trommel Power screens. This equipment does not appear to be equipment the company currently has permits for. A follow up file check will be performed. Next to two of these screens, two large piles of unprocessed grass/brush were observed. Odors from these piles were detected at a scale 3-4 of a putrid, rotting character. These piles appeared to be approximately 8-10 feet high and 10-40 feet in length.

Some windrows had paperbags of grass directly mixed into older piles. Several large piles of finished? materials were on site, approximately 20 feet high.

20:45 hrs. Completed upwind survey and investigation. The source of the odors was traced to the Nature's Choice facility. The site was not in operation during this time.

6/15/00 During another inspection and series of odor complaints, the facility operator, Mr. Albert Steckl was notified of the previous evening's verified odor violation. He was told to let the facility owner, Mr. Stephen Reiter, know about the violation and that documents would be sent to the company in the near future.

Recommended action: Based upon the past enforcement history regarding violations of NJAC 7:27-5.2(a), issue AONOCAPA for violation of this code.

85229 NATURE'S CHOICE CORP-WHITE TOWNSHIP SITE, White Twp (AIR)

Requirement	Status	Results or Comments

Subject Item: AV01 - Air Violation

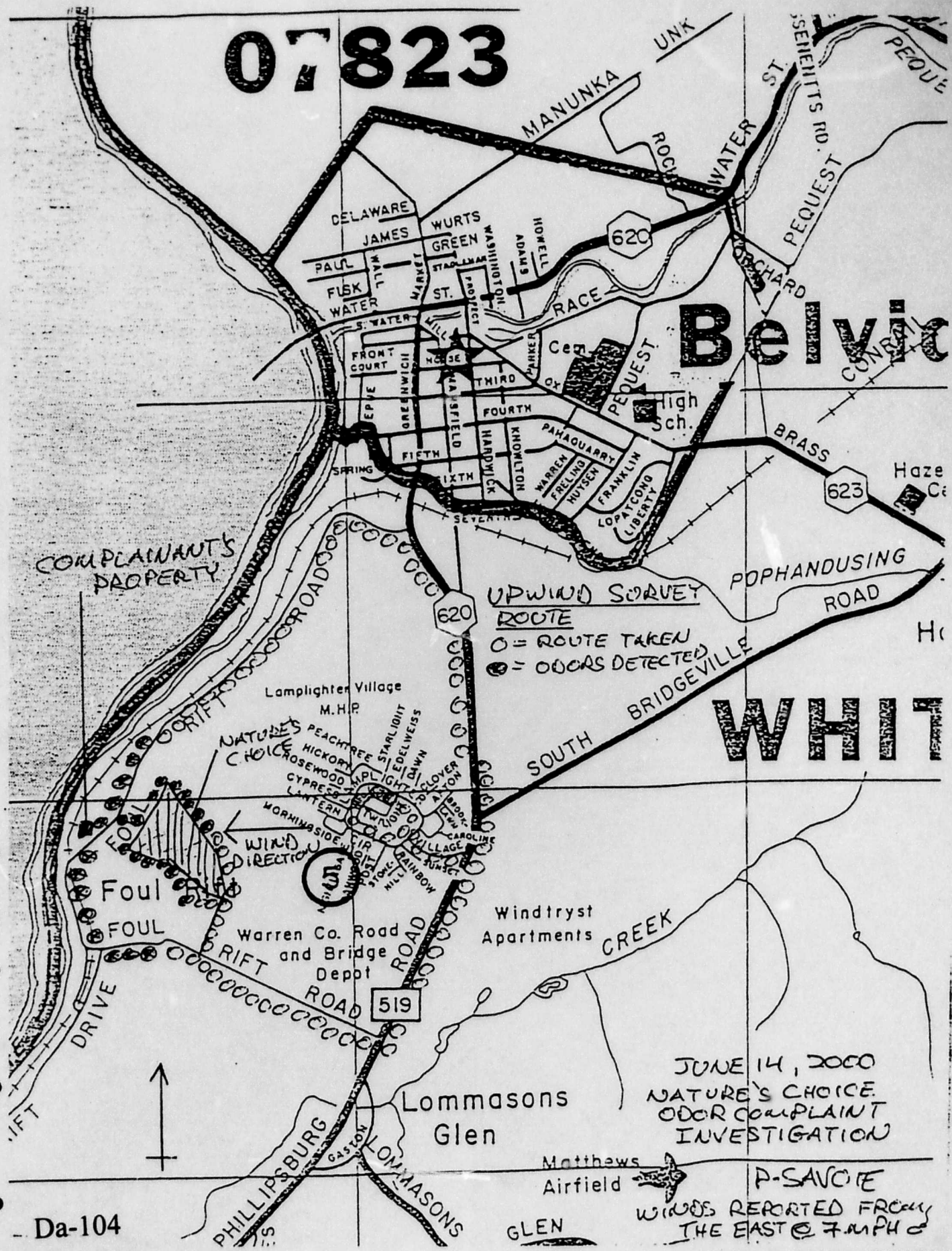
Operating Status: Not Operating

Comments: Verified odor complaint at this composting/solid waste processing facility.

No person shall cause, suffer, allow or permit to be emitted into the outdoor atmosphere substances in quantities which shall result in air pollution as defined herein. Air pollution is the presence in the outdoor atmosphere of one or more air contaminants in such quantities and duration as are, or tend to be, injurious to human health or welfare, animal or plant life or property, or would unreasonably interfere with the enjoyment of life or property throughout the State and in such territories of the State as shall be affected thereby and excludes all aspects of employer-employee relationship as to health and safety hazards.[N.J.A.C. 7:27- 5.2(a)]	OC	You permitted "acrid, burned wood" and "acrid raw tobacco" type odors from the composting operation on site to be emitted into the outdoor atmosphere in quantities which resulted in air pollution.

IC - In Compliance
OC - Out of Compliance
NI - Not Inspected
NC - No Obvious Concern
H - Heading
N - No

ND - Compliance Not Determined
NA - Not Applicable
PV - Potential Violation
ON - Out of Compliance, Non-referred
Y - Yes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MANUNKA
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FIFTH
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SPRING
GREENWICH
EPVE
HARDWICK
KNOWLTON
PAHAQUARRY
WARREN
FRELING HUYSEN
FRANKLIN
LOPATCONG
LIBERTY
SEVENTH
High Sch.
CONRAIL
BRASS
623
Haze
COMPLAINANT'S PROPERTY
UPWIND SURVEY ROUTE
O = ROUTE TAKEN
● = ODORS DETECTED
POPHANDUSING ROAD
620
BRIDGEVILLE
SOUTH
WHIT
Lamplighter Village M.H.P.
NATURE'S CHOICE
PEACHTREE
HICKORY
ROSEWOOD
CYPRESS
LANTERN
STARLIGHT
EDELWEISS
DAWN
CLOVER
BROOK
CAROLINE
SUNSET
RAINBOW
HILL
STONE
POST
FIR
TWILIGHT
VILLAGE
MORNINGSIDE
LIGHT
DRIFT ROAD
FOUL
WIND DIRECTION
Foul
FOUL
DRIFT ROAD
Warren Co. Road and Bridge Depot
519
ROAD
DRIVE
Windtryst Apartments
CREEK
Lommasons Glen
Matthews Airfield
PHILLIPSBURG
GASTON
LOMMASONS
GLEN
JUNE 14, 2000
NATURE'S CHOICE
ODOR COMPLAINT
INVESTIGATION
P-SAVOIE
WINDS REPORTED FROM THE EAST @ 7 MPH
Da-104

E.O-002 (DEQ-062)
9/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENFORCEMENT FIELD OPERATIONS
AIR & ENVIRONMENTAL QUALITY ENFORCEMENT

FIELD INVESTIGATION ASSIGNMENT REPORT

PLANT ID #	INSPECTOR ASSIGNED
85229	660

DATE ASSIGNED	DATE DUE
6/15/00	
DATE COMPLETED	COUNTY
7/7/00	Warren

COMPANY NAME Nature's Choice
LOCATION Foul Rift Rd. White Twsp.

TYPE OF ASSIGNMENT: ☒ Complaint ☐ APEDS ☐ Order Followup ☐ PRIORITY CODE _____ CYCLE

CDS CLASS: A1___ A2___ B___ NSPS___ NESHAPS___ PSD___ CMS___

AIR GRANT (105): ☐ Yes ☐ No PLLT: PT___ S2___ CO___ N2___ VO___ Toxic___ Other___

COMPLAINANT NAME MULTIPLE SEE LIST BELOW PHONE # _____

COMPLAINANT ADDRESS _____

DATE RECEIVED_____ TIME RECEIVED_____ COMP. LOG_____ RECORDED BY _____

ASSIGNMENT Odor complaints regarding the above facility.

PLANT CONTACT Stephen Reiter
TITLE President
6/15/00 TIME AT PLANT (Military Time) 17:12 18:45 TO 13:30 19:30
TOTAL ASSIGNMENT TIME/ OT 6.0 HR / 4.5 HR
STACKS INSPECTED 5 TEMPS —
OF SOURCES INSPECTED 5 STK TEST REQ N

SAMPLE TYPE	VIOLATIVE	SAMPLE #

SUBCHAPTER	# INSP	RPT Y/N
5	1	
8	4	
OTHER		

EFO-007(DEQ-012)Completed for Subchap.
ADVOCHPA
NJAC 7:27-5.2(a)
NJAC 7:27-8.3 (a)+(b)

COMPLAINT	TYPE	NUMBER
	OD	10

Time/Date at Complainant ____/____
Verified: ☒ Yes ☐ No
Sub 5 SOP followed: ☒ Yes ☐ No
Give details below

VIOLATION FOLLOWUP INSPECTION
Violation Log # _____
Order Dated _____
Subchapter Violated _____
Compliance Achieved ☐ Yes ☐ No
Give details below

COMMENTS (by code) _____ Billable Stacks: ____ (give details below)

DETAILS OF INSPECTION

1. NJEMS # 6489
2. NJEMS # 6614 / TD# 00-06-15-1544-16
3. NJEMS # 6615 / TD# 00-06-15-1807-58
4. #6442 / TD# 00-06-08-1356-43
5. #6436 / TD# 00-06-08-1649-51
6. #6437 / TD# 00-06-08-1700-10
7. #6612
8. #6611 / TD# 00-06-09-1900-07
9. #6613 / TD# 00-06-10-1254-51
10. #6457 / TD# 00-06-10-1932-31

NJEMS INV000012 Incident Investigation

INSPECTOR'S SIGNATURE Philip Sorel
TITLE: SES
SUPERVISOR'S REVIEW INITIALS: AS DATE: 7/7/00

SEE ATTACHED FOR ADDITIONAL INFORMATION: ☒ YES ☐ NO

NJEMS
INV 6666.12 -

Facility Name Nature's Choice Corp. APC ID# 85229
NJDEP-Air Enforcement Inspection Date 6/15/00 Report Date 6/29/00
Written by P.Savoie Page 1 of 4

6/15/00 Odor Complaint Investigations

Three odor complaints were received on this date regarding the above facility. This inspector made a response after receiving two of the complaints while this inspector was attending a training course in Warren County at NJDEP Pequest Fish Hatchery (16:00 hrs.). Complaint #s: NJEMS#6489 & TD#00-06-15-1544-16/NJEMS#6614. The other complaint received on this date was TD# 00-06-15-1807-58/NJEMS#6615.

Also investigated were seven (7) other complaints on this date that could not be previously investigated. All of these complaints were from the same area as the current complaints; these complaints occurred on 6/8, 6/9 & 6/10/00. Their case#'s are as follows:

TD# 00-06-08-1356-43 / NJEMS#6442
TD# 00-06-08-1649-51 / NJEMS#6436
TD# 00-06-08-1700-10 / NJEMS#6437
NJEMS#6612
TD# 00-06-09-1900-07 / NJEMS#6611
TD# 00-06-10-1254-51 / NJEMS#6613
TD# 00-06-10-1932-31 / NJEMS#6457

16:15 hrs. Departed NJDEP Pequest Fish Hatchery for White Twsp. complaints. Weather conditions for the area was reported as follows: Phillipsburg (Allentown, PA) 16:00 hrs. 72 F winds south @ 6 mph.

16:50 hrs. Arrived at Country View Village, a retirement community where most of the complaints had come from. See attached map of complex and streets within the complex.

I first went to Brooklawn Ct. for TD Case# 00-06-15-1544-16 / NJEMS#6614. This same address had complained under the following case #'s TD # 00-06-08-1700-10 / NJEMS #6437, TD# 00-06-09-1900-07 / NJEMS#6611 & TD# 00-06-10-1932-31 / NJEMS#6457. I met with this complainant, but no odors were present. I discussed the case briefly and the Department's Subchapter 5 procedure. These four complaints were not verified.

The next complainant visited was also on this street. TD# 00-06-08-1649-51 / NJEMS#6436. I met with this complainant but did not verify any odors at this residence. I discussed the case briefly and the Department's Subchapter 5 procedure.

One final complainant was visited on this street. TD# 00-06-10-1254-51 / NJEMS#6613. Again, I met with the complainant and did not verify any odors. I discussed the case briefly and the Department's Subchapter 5 procedure. I continued on with the investigation, leaving this area @ 17:00 hrs.

17:12 hrs. Entered Nature's Choice facility. In operation, met w/ Mr. Albert Steckl, the onsite manager. The company was in the process of processing the piles of grass/brush that had been observed the prior evening. I informed him of the violation and that I was inspecting the facility. He stated that I was allowed to continue w/the inspection. As before, the windrows were observed as the prior evening. The piles being processed were emitting a putrid, rotting odor, similar to vomit, scale 3 to 4. Mr. Steckl stated that he was trying to process as much of the material as possible, but that he wasn't sure if they

could get to all of it due to hours of operation restrictions for this site. Also observed was the following equipment:

1. Three (3) 830 Trommel Rotary Screens, diesel engine powered.
   A. SSN#9201153, mfg. 7/31/97.
   B. SSN#9201954, mfg. Not available.
   C. SSN#9200334, mfg. 11/18/95.

2. A Diamond Z tub grinder, model#1460B, SSN#9FX3424XN147001, mfg. Aug. 1999. This equipment is also diesel engine powered.

A file check for permitting compliance will be checked on the equipment. Mr. Steckl stated that the equipment was purchased approximately three years ago.
17:30 hrs. Departed Nature's Choice.

17:45 hrs Arrived at the next complainant's property, at Wyndtryst Apartments. NJEMS#6489. I met with this complainant but did not verify any odors at this residence. I discussed the case briefly and the Department's Subchapter 5 procedure. She indicated that this is an ongoing problem in the area.

18:00 hrs returned to Country View Village to follow up on some of the other complaints. I first went to Willow Drive to TD# 00-06-08-1356-43 / NJEMS#6442. Upon arriving, I detected strong putrid, rotting odors-scale 3, similar in character to the ones I had detected at the composting site. The complainant's windows and doors were shut. I met with the complainant at this time, who indicated that the odors were not allowing him to enjoy the outdoor environment. He also indicated he believe the odors effect his respiratory functions negatively as well. I agreed with the complainant at this time that the standard for "unreasonable interference of enjoyment of life or property" had been exceeded and left a Statement-of –Complaint for completion. I then proceeded to the next complainant close by.

18:10 hrs. I arrived at next complainant who also lives on Willow Drive, NJEMS#6612. I met with the complainant, who was also experiencing odor problems at this time. The complainant was inside her home and windows to the home were observed shut. The same putrid, rotting odors were also detected by this inspector at this residence-scale 3. The complainant was also given a Statement-of-Complaint to complete at this time.

During this visit, I received another call fromTrenton Dispatch, informing me of another odor complaint at this location. The information was received and I proceeded to the next complainant, TD# 00-06-15-1807-58/NJEMS#6615.

18:15 hrs Met with the complainant, TD# 00-06-15-1807-58/NJEMS#6615, and also detected the putrid, rotting odors detected at the last two complainants properties. The complainant's doors and windows were shut, as well as running central air conditioning due to the heat outside and not being able to open doors or windows due to the odors. I agreed, once again, that the intensity of the odors-scale 3, and the constant duration in the

neighborhood met or exceeded the standard for "unreasonable interference of enjoyment of life or property". A Statement-of –Complaint was completed at this time.
18:23 hrs. Departed the last complainant's property and collected the Statement-of – Complaints from the prior two verified complaints.

18:30 hrs. Began upwind survey.
Weather conditions at this time were also checked, with the current conditions in Phillipsburg (Allentown, PA) @ 1800 hrs. NOAA 72 F, winds from the west @5 mph. A five (5) mile loop was completed around the area as follows: see attached map.

1. Left Country View Terrace (Lamp Lighter Village) on Lamplighter Circle. No odors detected by exit to Rt. 519.
2. Proceeded south on Rt. 519 past the Warren County Complex. No odors detected. Also noted that the flag on the flagpole was not moving and hanging limp.
3. Proceeded west on Foul Rift Rd. Passed the gates to Nature's Choice, which were shut and locked at this time. No odors were detected.
4. Drove north on Foul Rift Rd. No odors were detected along the rest of this road to Rt. 620.
5. Continued to the intersection of Foul Rift Rd. & County Rd. Rt. 620. Passed the Belvidere Wastewater Treatment Plant, no odors detected.
6. Proceeded south on Rt. 620 to the intersection of Rt. 620 & Rt. 519. No odors detected.
7. Re-entered County View Terrace. Odors still present in the complex in the Morningside Drive area.

18:45 hrs. Completed perimeter check. Followed the odors on foot past #13 Morningside Drive and through a farm field approximately ½ mile to the composting site. As noted from the driving survey, the site was no longer in operation for this day. The odors were traced to the piles of unprocessed grass/brush waste near the Power screens, that had been observed earlier on site. Odors from these piles were detected at a scale 3-4 of a putrid, rotting character. These piles appeared to be approximately 8-10 feet high and 10-25 feet in length. The odors from these piles were the same character that had been detected at the complainants' properties.

19:20 hrs. Returned to Country View Terrace, via the farm field, odors abating.

19:30 hrs. Completed upwind survey and investigation. The source of the odors was traced to the Nature's Choice facility. No further complaints were received from Trenton Dispatch regarding this facility.

6/16/00 During another inspection and series of odor complaints, the facility operator, Mr. Albert Steckl was notified of the previous evening's verified odor violation. He was told to let the facility owner, Mr. Stephen Reiter, know about the violation and that documents would be sent to the company in the near future.

Recommended action: Based on prior enforcement history of this facility issue AONOCAPA for violation of NJAC 7:27-5.2(a) odor complaints.

Additionally, based on a file review of permitted equipment for the company, all equipment does not appear to have valid permits at this time. The equipment does not match equipment permitted for the site for the rotary screens; the permitted equipment is smaller that the equipment on site at this time. The tub grinder was manufactured in Aug. 1999 according to the plate on the equipment but the permit was obtained in 1996; therefore this is not the same equipment. An AONOCAPA is also recommended for this equipment for NJAC 7:27-8.3(a) & (b) as it was observed installed and operating without valid Air Pollution Permits/Certificates.

85229 NATURE'S CHOICE CORP-WHITE TOWNSHIP SITE, White Twp (AIR)

Requirement	Status	Results or Comments

Subject Item: AV01 - Air Violation

Operating Status: Operating

Comments: Verified odor complaints (3) from composting/solid waste processing operation.

No person shall cause, suffer, allow or permit to be emitted into the outdoor atmosphere substances in quantities which shall result in air pollution as defined herein. Air pollution is the presence in the outdoor atmosphere of one or more air contaminants in such quantities and duration as are, or tend to be, injurious to human health or welfare, animal or plant life or property, or would unreasonably interfere with the enjoyment of life or property throughout the State and in such territories of the State as shall be affected thereby and excludes all aspects of employer-employee relationship as to health and safety hazards.[N.J.A.C. 7:27- 5.2(a)]	OC	You permitted putrid, rotting odors from the unprocessed grass/vegetative waste piles from the composting/solid waste operation to be emitted into the outdoor atmosphere in quantities which resulted in air pollution.

Subject Item: AV02 - Air Violation

Operating Status: Operating

Comments: A Trommel 830, diesel powered, rotary screen, SSN#9201153, installed without a P/CT.

No person may construct, reconstruct, install, or modify a significant source that is not covered by a permit and certificate without first obtaining a preconstruction permit.[N.J.A.C. 7:27- 8.3(a)]	OC	You installed a Trommel 830, diesel powered, rotary screen, SSN#9201153 without first obtaining a preconstruction permit. This equipment was installed in approximately 1997, processes >50 lbs. of raw materials in any one hour and has air pollutants.

Subject Item: AV03 - Air Violation

Operating Status: Operating

Comments: A Trommel 830, diesel powered, rotary screen, SSN#9201954, installed without a P/CT.

No person may construct, reconstruct, install, or modify a significant source that is not covered by a permit and certificate without first obtaining a preconstruction permit.[N.J.A.C. 7:27- 8.3(a)]	OC	You installed a Trommel 830, diesel powered, rotary screen, SSN#9201954 without first obtaining a preconstruction permit. This equipment was installed in approximately 1997, processes >50 lbs. of raw materials in any one hour and has air pollutants.

Subject Item: AV04 - Air Violation

Operating Status: Operating

Comments: A Trommel 830, diesel powered, rotary screen, SSN#9200334, installed without a P/CT.

No person may construct, reconstruct, install, or modify a significant source that is not covered by a permit and certificate without first obtaining a preconstruction permit.[N.J.A.C. 7:27- 8.3(a)]	OC	You installed a Trommel 830, diesel powered, rotary screen, SSN#9200334 without first obtaining a preconstruction permit. this equipment was installed in approximately 1997, processes >50 lbs. of raw materials in any one hour and has air pollutants.

Subject Item: AV05 - Air Violation

Operating Status: Operating

Comments: A Diamond Z tub grinder, model#1460B, SSN#9FX3424XN147001, mfg.8/99, w/out a P/CT.

No person may construct, reconstruct, install, or modify a significant source that is not covered by a permit and certificate without first obtaining a preconstruction permit.[N.J.A.C. 7:27- 8.3(a)]	OC	You installed a Diamond Z tub grinder, model#1460B, SSN#9FX3424XN147001, diesel powered, manufactured in August 1999 without first obtaining a preconstruction permit. This equipment was installed in approximately 1999, processes >50 lbs. of raw materials in any one hour and has air pollutants.

85229 NATURE'S CHOICE CORP-WHITE TOWNSHIP SITE, White Twp (AIR)

Requirement	Status	Results or Comments

Subject Item: AV06 - Air Violation

Operating Status: Operating

Comments: A Trommel 830, diesel powered, rotary screen, SSN#9201153, operating without a P/CT.

No person shall operate (nor cause to be operated) a significant source without a valid operating certificate.[N.J.A.C. 7:27- 8.3(b)]	OC	You operated the Trommel 830, diesel powered, rotary screen, SSN#9201153 without first having obtained a valid operating certificate. This equipment was installed in approximately 1997, processes >50 lbs. of raw materials in any one hour and has air pollutants.

Subject Item: AV07 - Air Violation

Operating Status: Operating

Comments: A Trommel 830, diesel powered, rotary screen, SSN#9201954, operating w/out a P/CT.

No person shall operate (nor cause to be operated) a significant source without a valid operating certificate.[N.J.A.C. 7:27- 8.3(b)]	OC	You operated the Trommel 830, diesel powered, rotary screen, SSN#9201954 without first having obtained a valid operating certificate. This equipment was intalled in approximately 1997, processes >50 lbs. of raw materials in any one hour and has air pollutants.

Subject Item: AV08 - Air Violation

Operating Status: Operating

Comments: A Trommel 830, diesel powered, rotary screen, SSN#9200334, operating w/out a P/CT.

No person shall operate (nor cause to be operated) a significant source without a valid operating certificate.[N.J.A.C. 7:27- 8.3(b)]	OC	You operated the Trommel 830, diesel powered, rotary screen, SSN#920334 without first having obtained a valid operating certificate. This equipment was installed approximately 1997, processes >50 lbs. of raw materials in any one hour and has air pollutants.

Subject Item: AV09 - Air Violation

Operating Status: Operating

Comments: A Diamond Z tub grinder, model#1460B, mfg. 8/99, operating w/out a P/CT.

No person shall operate (nor cause to be operated) a significant source without a valid operating certificate.[N.J.A.C. 7:27- 8.3(b)]	OC	You operated the Diamond Z tub grinder, model#1460B, SSN#9FX3424XN147001, manufactured in August 1999, diesel powered unit, without first having obtained a valid operating certificate. This equipment was, installed in approximately 1999, processes >50 lbs. of raw materials in any one hour and has air pollutants.

IC - In Compliance
OC - Out of Compliance
NI - Not Inspected
NC - No Obvious Concern
H - Heading

ND - Compliance Not Determined
NA - Not Applicable
PV - Potential Violation
ON - Out of Compliance, Non-referre
Y - Yes

EFO-002 (DEQ-062)
9/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENFORCEMENT FIELD OPERATIONS
AIR & ENVIRONMENTAL QUALITY ENFORCEMENT

FIELD INVESTIGATION ASSIGNMENT REPORT

PLANT ID #	INSPECTOR ASSIGNED
85228	GEO

DATE ASSIGNED	DATE DUE
6/16/00	
DATE COMPLETED	COUNTY
7/7/00	Gloucester

COMPANY NAME Nature's Choice

LOCATION Fool Rift Rd. White Twsp.

CDS CLASS: A1___ A2___ B___ NSPS___ NESHAPS___ PSD___ CMS___

AIR GRANT (105): ☐ Yes ☐ No PLLT: PT___ S2___ CO___ N2___ VO___ Toxic___ Other___

TYPE OF ASSIGNMENT
☒ Complaint ☐ APEDS
☐ Order Followup
☐ PRIORITY CODE ___

CYCLE

COMPLAINANT NAME ___ PHONE # 908-475-00?

COMPLAINANT ADDRESS TD# 00-06-16-1622-41

DATE RECEIVED 6/16/00 TIME RECEIVED 1622 COMP. LOG ___ RECORDED BY TD

ASSIGNMENT Odor complaint regarding above facility.

PLANT CONTACT Stephen Reifer

TITLE President

6/16/00 TIME AT PLANT (Military Time) 1726 TO 1740

TOTAL ASSIGNMENT TIME/ OT 6.0 HR T 2.5 HR

STACKS INSPECTED 1 TEMPS —

OF SOURCES INSPECTED 1 STK TEST REQ N

SAMPLE TYPE	VIOLATIVE	SAMPLE #

SUBCHAPTER	# INSP	RPT Y/N
5	1	
OTHER		

EFO-007(DEQ-012)Completed for Subchap.
AONCAPA
NJAC 7:27-5.2(a)

COMPLAINT TYPE: OD NUMBER: 1

Time/Date at Complainant 1705, 6/16/00

Verified: ☒ Yes ☐ No

Sub 5 SOP followed: ☒ Yes ☐ No

Give details below

VIOLATION FOLLOWUP INSPECTION

Violation Log # ___

Order Dated ___

Subchapter Violated ___

Compliance Achieved ☐ Yes ☐ No

Give details below

COMMENTS (by code) NJEMS incident # 6500 Billable Stacks: ___ (give details below)

DETAILS OF INSPECTION NJEMS INV000013 Incident Investigation.

Da-112

SEE ATTACHED FOR ADDITIONAL INFORMATION: ☒ YES ☐ NO

INSPECTOR'S SIGNATURE Philip Davis

TITLE: SES

SUPERVISOR'S REVIEW INITIALS: AS DATE: 7/7/00

6/ 16/00 Odor Complaint Investigation

An odor complaint was received on this date regarding the above facility. An after hours response was made at the request of the complainant who had complained to the Department and indicated the incident was ongoing. TD Case# 00-06-16-1622-41 & NJEMS Incident# 6500.

16:35 hrs. Departed NJDEP Pequest Fish Hatchery.

16:45 hrs.Received odor complaint from NRO regarding Nature's Choice in White Twsp. Weather conditions for the area was reported as follows: Bloomsbury (Doylestown, PA) 17:10 hrs. 83 F winds south @ 9 mph. Proceeded to White Twsp.

16:50 hrs. Arrived at Country View Village, a retirement community where the complaint had come from. A flag at the common meeting building for the development indicated a moderate breeze from the south when observing the flag. See attached map of complex and streets within the complex.

17:05 hrs. Arrived at the complainant's property, and witnessed semi-putrid, acrid, rotting odors,-scale 3. These odors were detected in the presence of the complainant, who indicated that the odors were ongoing and objectionable. The complainant also indicated that the family could not use their porch outside and was upset by the intrusion of odors inside their home. Furthermore, while the complainant had central air conditioning, the complainant felt she had to keep her windows and doors open for fresh air during hot weather, as power costs were too expensive to run the central air on a fixed income. The doors and windows were observed open upon arrival, but no one was outside the residence. A Statement-of-Complaint was accepted at this time.

17:16 hrs. Began the upwind survey. . A five (5) mile loop was completed around the area as follows: see attached map.

1. Proceeded south on Rt. 519 past the Warren County Complex. No odors detected.
2. Proceeded west on Foul Rift Rd. No odors were detected.

17:26 hrs. Entered Nature's Choice facility. The facility was in operation and new piles of fresh grass/brush/vegetative waste were observed on the ground waiting to be processed. These piles were giving off the same semi-putrid, acrid, rotting odors witnessed at the complainant's property. Mr. Steckl was on site and notified that an ongoing investigation was proceeding. He expressed concern about the ability to finish processing the piles of new material due to the late drop off of the loads at the facility and the restrictions on the hours of operation. I informed him that he should do the best he could but that the odors appeared to be coming from the facility. I informed him my investigation was still proceeding and that I had not yet determined this was the source but was a likely source. He stated the facility would be operating on Saturday to try to finish the processing and he would put finished materials on the new, unprocessed materials to try to lessen the offsite odor impacts. He was also concerned that the facility might get materials on Saturday that could not be fully processed.

17:40 hrs. Departed Nature's Choice and continued the upwind survey.

3. Continued west on Foul Rift Rd. No odors were detected.
4. Drove north on Foul Rift Rd. Odors were detected north of the Nature's Choice site-scale2, along this road prior to reaching the Belvidere Wastewater Treatment plant at the intersection of Foul Rift Rd. & County Rd. Rt. 620. Passed the Belvidere Wastewater Treatment Plant, no odors detected.
5. Proceeded south on Rt. 620 to the intersection of Rt. 620 & Rt. 519. No odors detected.
6. Proceeded south on Rt.519 and returned to Country View Terrace (Lamp Lighter Village) briefly on Lamplighter Circle. No odors detected.

17:50 hrs. Completed upwind survey and investigation. The source of the odors was traced to the Nature's Choice facility to the new piles of materials waiting to be processed..

6/20/00 After discussing the facts of this case in this office, for this particular incident, a decision was made by the REO that this was a valid violation as well. Mr. Stephen Reiter, the company president, was contacted to let him know about the violations and that documents would be sent to the company in the near future. He was informed of the odor violation that had also occurred on Saturday June 17, 2000, investigated by T. Boyer.

Recommended action: Based upon the past enforcement history regarding violations of NJAC 7:27-5.2(a), issue AONOCAPA for violation of this code.

Compliance Evaluation Report

Start Date: 6/16/00 Page 1 of 1

Activity: INVC00013 Incident Investigation Lead Investigator: Avoie, Phillip

85229 NATURE'S CHOICE CORP-WHITE TOWNSHIP SITE, White Twp (AIR)

Requirement	Status	Results or Comments

Subject Item: AV01 - Air Violation

Operating Status: Operating

Comments: Verified odor complaint at this composting/solid waste processing facility.

No person shall cause, suffer, allow or permit to be emitted into the outdoor atmosphere substances in quantities which shall result in air pollution as defined herein. Air pollution is the presence in the outdoor atmosphere of one or more air contaminants in such quantities and duration as are, or tend to be, injurious to human health or welfare, animal or plant life or property, or would unreasonably interfere with the enjoyment of life or property throughout the State and in such territories of the State as shall be affected thereby and excludes all aspects of employer-employee relationship as to health and safety hazards.[N.J.A.C. 7:27- 5.2(a)]

OC You permitted putrid, rotting odors from the unprocessed grass/vegetative waste piles from the composting/solid waste operation to be emitted into the outdoor atmosphere in quantities which resulted in air pollution.

IC - In Compliance
OC - Out of Compliance
NI - Not Inspected
NC - No Obvious Concern

ND - Compliance Not Determined
NA - Not Applicable
PV - Potential Violation
ON - Out of Compliance, Non-referred

EHO 002 (DEQ 062)
9/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENFORCEMENT FIELD OPERATIONS
AIR & ENVIRONMENTAL QUALITY ENFORCEMENT

PLANT ID #	INSPECTOR ASSIGNED
85229	660

FIELD INVESTIGATION ASSIGNMENT REPORT

DATE ASSIGNED	DATE DUE
7/9/00	
DATE COMPLETED	COUNTY
7/14/00	Warren

COMPANY NAME Nature's Choice
LOCATION 48 Fool Rift Rd White Twsp.

TYPE OF ASSIGNMENT: ☒ Complaint ☐ APEDS ☐ Order Followup ☐ PRIORITY CODE _____ | CYCLE

CDS CLASS: A1___ A2___ B___ NSPS___ NESHAPS___ PSD___ CMS___

AIR GRANT (105): ☐ Yes ☐ No PLLT: PT___ S2___ CO___ N2___ VO___ Toxic___ Other___

COMPLAINANT NAME MULTIPLE SEE LIST BELOW PHONE # _____

COMPLAINANT ADDRESS _____

DATE RECEIVED _____ TIME RECEIVED _____ COMP. LOG _____ RECORDED BY _____

ASSIGNMENT Odor complaints regarding the above facility.

PLANT CONTACT Stephen Reiter
TITLE President
7/9/00 TIME AT PLANT (Military Time) 1100 TO 1330
TOTAL ASSIGNMENT TIME/OT 13HR / 1.5HR
STACKS INSPECTED 6 TEMPS —
OF SOURCES INSPECTED 6 STK TEST REQ N

SAMPLE TYPE	VIOLATIVE	SAMPLE #

SUBCHAPTER	# INSP	RPT Y/N
5	6	
8	5	
OTHER		

EFO-007(DEQ-012)Completed for Subchap.
ACKCAPA:
NJAC 7:27-5.2(a)

COMPLAINT	TYPE	NUMBER
	00	6

Time/Date at Complainant ____ / ____
Verified: ☒ Yes ☐ No
Sub 5 SOP followed: ☒ Yes ☐ No
Give details below

VIOLATION FOLLOWUP INSPECTION
Violation Log # _____
Order Dated _____
Subchapter Violated _____
Compliance Achieved ☐ Yes ☐ No
Give details below

COMMENTS (by code) _____ Billable Stacks: ____ (give details below)

DETAILS OF INSPECTION

1. TD# 00-07-09-0723-22 / NJEMS # 6691
2. TD# 00-07-09-0811-38 / NJEMS # 6692
3. TD# 00-07-09-0821-46 / NJEMS # 6693
4. TD# 00-07-09-1031-36 / NJEMS # 6694
5. TD# 00-07-09-1239-07 / NJEMS # 6695
6. TD# 00-07-09-1316-33 / NJEMS # 6698

NJEMS INV 00015 Incident Investigation

INSPECTOR'S SIGNATURE _____
TITLE: SES

SUPERVISOR'S REVIEW
INITIALS: _____ DATE: 7/14/00

SEE ATTACHED FOR ADDITIONAL INFORMATION: ☒ YES ☐ NO

NJEMS
INV CCCCCS

Facility Name Nature's Choice Corp. APC ID# 85229
NJDEP-Air Enforcement Inspection Date 7/9/00 Report Date 7/13/00
Written by P.Savoie Page 1 of 4

7/9/00 Odor Complaint Investigations

Six odor complaints were received on this date regarding the above facility. This inspector made a response after receiving a call from Inspector J.Meyer (MA44) who had received a call from Trenton Dispatch. Three complaints were received by Inspector Meyer from Trenton Dispatch, one was received enroute to the investigation and two came in after the investigation was completed.

Their case#'s are as follows:
TD# 00-07-09-0723-22 / NJEMS#6691
TD# 00-07-09-0811-38 / NJEMS#6692
TD# 00-07-09-0821-46 / NJEMS#6693
TD# 00-07-09-1031-36 / NJEMS#6694
TD# 00-07-09-1239-07 / NJEMS#6695
TD# 00-07-09-1316-33 / NJEMS#6698

08:30 hrs. Received a call from Inspector J.Meyer (MA44) regarding odor complaints allegedly from the Nature's Choice facility in White Twsp., Warren County. Three complaints had been received within one hour.

08:55 hrs. Called Inspector T.Boyer (MA 45) to determine if was available for a response. He was not available.

09:00 hrs. Called the first complainant, TD# 00-07-09-0723-22 / NJEMS#6691. No one was home and a message was left on the complainant's answering machine.

09:04 hrs. Called the second complainant, TD# 00-07-09-0811-38 / NJEMS#6692. Spoke w/the complainant, who indicated that the odors were ongoing. She stated that the odors were of such intensity that she had to shut all of her windows and doors to keep the odors out of her home. She stated that the odors were not in her home but definitely still outside.

09:07 hrs. Called the third complainant, TD# 00-07-09-0821-46 / NJEMS#6693. Spoke w/the complainant, who also indicated that the odors were ongoing. She stated that the odors were of such intensity that she also had to shut all of her windows and doors to keep the odors out of her home. She stated that the odors were not in her home but definitely still outside.

09:45 hrs. Based upon the statements from the contacted complainants, a response was made to the area to investigate the complaints. Departed home station.

10:10 hrs. Weather conditions for the area was reported as follows: Central Park, NYC 10:00 hrs. Sunny, 73 F winds from the west @ 11 mph. (1010 WINS AM radio)

10:35 hrs. Enroute to the complaints, a fourth complaint was received for this area, TD# 00-07-09-1031-36 / NJEMS#6694. This complainant lives in the same complex.

10:55 hrs. Weather conditions for the area was reported as follows: Phillipsburg (Allentown, PA) 10:00 hrs. Sunny, 74 F winds variable @ 7 mph.

11:00 hrs. Arrived at Country View Village, a retirement community where the complaints had come from. A flag at the community building at the entrance to the complex was observed for wind direction; the observed direction was wind blowing from the south. See attached map of complex and streets within the complex.

11:03 hrs. Arrived at TD# 00-07-09-0821-46 / NJEMS#6693 complainant's property (6 Lantern Lane). Upon arrival I noted that the windows and doors of the complainant's home were shut. No people were observed outside of the residence. A strong rotting, putrid odor was detected, scale 3. I met with the complainant and witnessed the odors in her presence. I agreed with the complainant that the odors exceeded the standard of "unreasonable interference" and accepted a Statement-of-Complaint. The complainant indicated that the odors had been present from approximately 01:30 hrs this morning.

11:15 hrs. Departed from the first complainant's property.

11:20 hrs. Arrived at TD# 00-07-09-0811-38 / NJEMS#6692 complainant's property (2 Willow Drive). Upon arrival I noted that the windows and doors of the complainant's home were shut. No people were observed outside of the residence. A rotting, putrid odor was detected, scale 2. I met with the complainant and witnessed the odors in her presence. She felt the odors also had a "sewage" type character to them. I agreed with the complainant that the odors exceeded the standard of "unreasonable interference" and accepted a Statement-of-Complaint.

11:28 hrs. Departed from the second complainant's property.

11:30 hrs. . Arrived at TD# 00-07-09-1031-36 / NJEMS#6694 complainant's property (11 Willow Drive). Upon arrival I noted that the windows and doors of the complainant's home were shut. No people were observed outside of the residence. A rotting, putrid odor was detected, scale 2. I met the complainant and witnessed the odors in her presence. She indicated that she was very upset over the odors, stating that she was expecting company and did not know if to proceed having the company over due to the odors. . I agreed with the complainant that the odors exceeded the standard of "unreasonable interference" and accepted a Statement-of-Complaint.

11:35 hrs. Departed from the third complainant's property.

11:40 hrs. Arrived at TD# 00-07-09-0723-22 / NJEMS#6691 complainant's property (13 Caroline Drive). The doors and windows to the complainant's home were observed open. No odors were detected. I met briefly with the complainant and explained that since no odors were present I could not proceed any further with this case. The complainant expressed frustration with trying to resolve this problem, which I

acknowledged. I informed her that the odors had been verified at other complainants' properties on this date, in the complex. No further action on this complaint.

11:47 hrs. Departed the fourth complainant's property. Called Trenton Dispatch, no further complaints @ this time. Began upwind survey.

A five (5) mile loop was completed around the area as follows: see attached map.

1. Left Country View Terrace (Lamp Lighter Village) on Lamplighter Circle. No odors detected by exit to Rt. 519.
2. Proceeded south on Rt. 519 past the Warren County Complex. No odors detected.
3. Proceeded west on Foul Rift Rd. No odors were detected.

11:52 hrs. Entered Nature's Choice facility. Gates were shut and no operations were occurring. 3 large piles of unprocessed grass/vegetative waste were observed by the Trommel screens. Putrid, rotting odors were detected from these piles, scale 3. It was not clear, but it appeared that some newly processed materials may have been thrown on top of the unprocessed materials in an attempt to keep odors down, as previously discussed with the Mr. Albert Steckl, the on-site manager. A small pile of lime(?) was also observed, possibly to be used for odor control. This pile was 4-5 feet high with a similar diameter on the ground.

The perimeter of the facility was walked. At the back of the facility by the tub grinder, a large , unprocessed woody brush pile was noted. This pile was 10-15 feet high and 30-40 feet long by 10-15 feet in width. Also noted by this pile was a pile of logs that were 2-2 5 feet in diameter.

Some of the windrows in the middle of the overall facility appeared to be freshly turned. Some odors were detected from these piles that had a similar character to the odors coming from the unprocessed piles, although not as strong. In the area of the facility nearest the impacted properties, some of the windrows appeared to have unprocessed bags (paper waste bags) of grass/brush mixed in, as well as a few logs larger than 4" in diameter. A 30 cu.yd. dumpster was observed on site with larger logs inside.

A review of the equipment was briefly performed. The tub grinder and three 830 Trommel rotary screens previously observed on site were all accounted for. However, a fourth Trommel rotary screen was observed installed on site. This unit is a Trommel 620, diesel powered rotary screen, SN#9103764. After checking the three sites listed in NJEMS for Air P/CT's, none was found. The company has been called to provide information on this equipment. None has been given so far.

In general, odors were detected from the unprocessed piles of grass/vegetative waste and turned windrows from the piles through the middle of the site to the center north and northeastern boundaries of the site. The northwestern, western, southern (except by the piles of unprocessed materials) and some of the eastern boundaries did not have any odors. This completed the site visit.

12:30 hrs. Departed Nature's Choice. Called Trenton Dispatch, no further complaints at this time. I informed Trenton I would be leaving the area shortly. Continued upwind survey. Upon leaving the facility, I was flagged down by a resident living next to the facility, Mr. Fred Postma, @ 48 Foul Rift Rd. he has complained about the odors as well

from the facility. He wanted to talk about the facility and stated that the odors had been bad since the previous evening since approximately midnight. This confirmed what one of the other complainants had stated about when the odors had started. He was briefed on this day's investigation.

13:10 hrs. Departed Mr. Postma's property and continued on the upwind survey.

4. Continued west on Foul Rift Rd. No odors detected.
5. Drove north on Foul Rift Rd. No odors were detected along the rest of this road to Rt. 620.
6. Continued to the intersection of Foul Rift Rd. & County Rd. Rt. 620. Passed the Belvidere Wastewater Treatment Plant, no odors detected.
7. Proceeded south on Rt. 620 to the intersection of Rt. 620 & Rt. 519. No odors detected.

13:20 hrs. Re-entered County View Terrace. The putrid, rotting odors were still present in the complex in the area of the construction yard by the end of Lantern Lane, scale 3.

13:30 hrs. Investigation concluded. Odors were traced back to the Nature's Choice facility.

Two other complaints were received on this date; TD# 00-07-09-1239-07 / NJEMS#6695 & TD# 00-07-09-1316-33 / NJEMS#6698. They were not investigated due to this investigator informing Trenton Dispatch @ 12:30 hrs that I was leaving the area. I called both of the complainants on 7/12/00 and informed them of the results of the investigation.

7/12/00 Called Nature's Choice to inform them of the violation and obtain information regarding the other Trommel 620 rotary screen observed on site. A message was left on James Panzini's voice mail. No return message has been received.

Recommended action: Based on prior enforcement history of this facility issue AONOCAPA for violation of NJAC 7:27-5.2(a) odor complaints.

Additionally, based on a file review of permitted equipment for the company, at all three sites listed in NJEMS (85229 (White Twsp.), 07618 (West Caldwell) & 16713 (Edison)) the newly observed Trommel 620 rotary screen does not appear to have a valid permit at this time. An AONOCAPA is also recommended for this equipment for NJAC 7:27-8.3(a) & (b) as it was observed installed and operating without valid Air Pollution Permit/Certificate, if the company cannot provide adequate proof of permitting.

Compliance Evaluation Report Start Date: 7/9/2000 Page 1 of 1

Activity: INV000015 Incident Investigati Lead Investigato ivoie , Phillip

85229 NATURE'S CHOICE CORP-WHITE TOWNSHIP SITE, White Twp (AIR)

Requirement	Status	Results or Comments

Subject Item: AV01 - Air Violation

Operating Status: Not Operating

Comments: Three verified odor complaints (out of six complaints on this date) traced to this facility.

No person shall cause, suffer, allow or permit to be emitted into the outdoor atmosphere substances in quantities which shall result in air pollution as defined herein. Air pollution is the presence in the outdoor atmosphere of one or more air contaminants in such quantities and duration as are, or tend to be, injurious to human health or welfare, animal or plant life or property, or would unreasonably interfere with the enjoyment of life or property throughout the State and in such territories of the State as shall be affected thereby and excludes all aspects of employer-employee relationship as to health and safety hazards.[N.J.A.C. 7:27- 5.2(a)]	OC	You permitted putrid, rotting odors from the unprocessed grass/vegetative waste piles from the composting/solid waste operation to be emitted into the outdoor atmosphere in quantities which resulted in air pollution.

IC - In Compliance
OC - Out of Compliance
NI - Not Inspected
NC - No Obvious Concern
H - Heading
N - No

ND - Compliance Not Determined
NA - Not Applicable
PV - Potential Violation
ON - Out of Compliance, Non-referred
Y - Yes

EFO-002 (DEQ-062)
9/94

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF ENFORCEMENT FIELD OPERATIONS
AIR & ENVIRONMENTAL QUALITY ENFORCEMENT

PLANT ID #	INSPECTOR ASSIGNED
52Fi	666/713

FIELD INVESTIGATION ASSIGNMENT REPORT

DATE ASSIGNED	DATE DUE
7/21/00	
DATE COMPLETED	COUNTY
7/27/00	Warren

COMPANY NAME Nature's Choice
LOCATION Foul Rift Rd. White Twsp.

TYPE OF ASSIGNMENT: ☒ Complaint ☐ APEDS ☐ Order Followup ☐ PRIORITY CODE _____

CYCLE:

CDS CLASS: A1___ A2___ B___ NSPS___ NESHAPS___ PSD___ CMS___

AIR GRANT (105): ☐ Yes ☐ No PLLT: PT___ S2___ CO___ N2___ VO___ Toxic___ Other___

COMPLAINANT NAME multiple see below, PHONE # _____
COMPLAINANT ADDRESS 6 complaints.
DATE RECEIVED 7/21/00 TIME RECEIVED _____ COMP. LOG _____ RECORDED BY _____

ASSIGNMENT Odor complaints regarding compost facility.

PLANT CONTACT Stephen Reiter
TITLE President
7/21/00 TIME AT PLANT (Military Time) 1700 TO 1945
TOTAL ASSIGNMENT TIME/ OT 1.5HR/3.5HR
STACKS INSPECTED 1 TEMPS —
OF SOURCES INSPECTED 1 STK TEST REQ'D

SAMPLE TYPE	VIOLATIVE	SAMPLE #

SUBCHAPTER	# INSP	RPT Y/N
5	1	
OTHER		

EFO-007(DEQ-012)Completed for Subchap.
AQCC ASK
NJAC 7:27-5.2(a)

COMPLAINT TYPE: OD NUMBER: 6
Time/Date at Complainant 17:50, 7/21/00
Verified: ☒ Yes ☐ No
Sub 5 SOP followed: ☒ Yes ☐ No
Give details below

VIOLATION FOLLOWUP INSPECTION
Violation Log # _____
Order Dated _____
Subchapter Violated _____
Compliance Achieved ☐ Yes ☐ No
Give details below

COMMENTS (by code) _____ Billable Stacks: ____ (give details below)

DETAILS OF INSPECTION NJEMS INV0000016 Incident Investigation

NJEMS incident #6793 for all 6 complaints.
1. 00-07-21-1350-34
2. 00-07-21-1314-36
3. 00-07-21- NA placed into CCHD @ 1520 HRS referred to WRC
4. 00-07-21-1522-36
5. 00-07-21-1551-05
6. 00-07-21-1808-21

INSPECTOR'S SIGNATURE Philip Reiter
TITLE: SES/EO

SUPERVISOR'S REVIEW: _____ DATE: 7/27/00

SEE ATTACHED FOR ADDITIONAL INFORMATION: ☒ YES ☐ NO

7/21/00 Odor Complaint Investigations

Six odor complaints were received on this date regarding the above facility. These inspectors made an after hours response after receiving notifications from Trenton Dispatch and a call from Warren County Health Dept., that stated it would not be able to handle two odor complaints it had received on this date. All complaints, except the last one were received prior to departure for this area.

Their case#'s are as follows:
TD# 00-07-21-1310-34 / NJEMS#6793
TD# 00-07-21-1314-36 / NJEMS#6793
NA-phoned into WCHD @ 15:20 hrs.& referred to NRO / NJEMS#6793
TD# 00-07-21-1522-36 / NJEMS#6793
TD# 00-07-21-1551-08 / NJEMS#6793
TD# 00-07-21-1808-21 / NJEMS#6793

16:30 hrs. Depart NRO to respond to 5 odor complaints allegedly emanating from Nature's Choice compost facility in White Twsp., Warren County. Weather conditions for the area was reported as follows: Phillipsburg (Allentown, PA) 15:10 hrs. Sunny, w/clouds, 81 F winds west @ 8 mph.

17:50 hrs. Arrived at Country View Village, a retirement community where the complaints had come from. A flag at the community building at the entrance to the complex was observed for wind direction; the observed direction was wind blowing from the southwest. See attached map of complex and streets within the complex.

Arrived at NJEMS#6793 complainant's property (25 Morningside Drive). Upon arrival we noted that the windows and doors of the complainant's home were open. No people were observed outside of the residence. A strong rotting, putrid odor was detected, scale 3. Inspector M.Burghoffer met with the complainant and witnessed the odors in her presence. The complainant indicated that the reason her windows and door was open was due to living on a fixed income and not being able to run her central air conditioning. Otherwise she would have shut the openings to avoid the odors. He agreed with the complainant that the odors exceeded the standard of "unreasonable interference" and accepted a Statement-of-Complaint.

17:53 hrs. Arrived at TD# 00-07-21-1551-08 / NJEMS#6793 complainant's property (6 Lantern Lane). Upon arrival I noted that the windows and doors of the complainant's home were shut. The central air conditioning system for this residence was observed in operation. No people were observed outside of the residence. A rotting, putrid odor was detected, scale 3. I met with the complainant and witnessed the odors in her presence. The odors were constant in duration during this visit. I agreed with the complainant that the odors exceeded the standard of "unreasonable interference" and accepted a Statement-of-Complaint.

18:00 hrs. Inspector P.Savoie departs from the second complainant's property. Inspector M.Burghoffer departs from the first complainant's property.

18:03 hrs. Inspector P.Savoie arrives at TD# 00-07-21-1310-34 / NJEMS#6793 complainant's property (11 Morningside Drive). Upon arrival I noted that the windows and doors of the complainant's home were shut. No people were observed outside of the residence. A rotting, putrid odor was detected, scale 3. I met the complainant and witnessed the odors in his presence. He indicated he was tired of having to go inside his residence to escape the odors and not being able to use his outdoor property comfortably. He also indicated that he feels the odors effect his respiratory function. I agreed with the complainant that the odors exceeded the standard of "unreasonable interference" and accepted a Statement-of-Complaint.

18:13 hrs. Received a call from Trenton Dispatch regarding another odor complaint at the complex, TD# 00-07-21-1808-21 / NJEMS#6793. Call taken by Inspector M.Burghoffer.

18:14 hrs. Complianant from current call (15 Morningside Drive) comes over to the current complainant's property (11 Morningside Drive). Inspector M.Burghoffer met with the complainant (TD# 00-07-21-1808-21/ NJEMS#6793) and accepted a Statement-of-Complaint. Inspector M.Burghoffer then proceeded to the complainant's property (15 Morningside Drive). No odors were detected in the presence of the complainant. He did not agree with the complainant that the odors exceeded the standard of "unreasonable interference". No violation recorded.

18:15 hrs. Inspector P.Savoie departs from the third complainant's property and meets Inspector M.Burghoffer at 15 Morningside Drive. The doors and windows to the complainant's home were observed shut. No people were observed outside of the residence.

18:20 hrs. Both inspectors depart Morningside Drive area and proceed to the next complainant's property.

18:27 hrs. Arrived at the next complainant's property.TD# 00-07-21-1314-36 / NJEMS#6793 (5 Oak Wood Trail). No odors were detected. We met briefly with the complainant and explained that since no odors were present we could not proceed any further with this case at this time. The complainant expressed frustration with trying to resolve this problem, which was acknowledged. Inspector Burghoffer informed him that the odors had been verified at other complainants' properties on this date, in the complex. No further action on this complaint.

18:31 hrs. Departed the fifth complainant's property.

18:33 hrs. Arrived at the last complainant's property, TD# 00-07-21-1522-36 / NJEMS#6793 (6 Caroline Drive). No odors were detected. We met with the complainant and explained that since no odors were present we could not proceed any further with this case at this time. The complainant expressed frustration with trying to resolve this problem, which was acknowledged.

18:50 hrs. Departed the last complainant's property. Called Trenton Dispatch, no further complaints @ this time. Began upwind survey. Weather conditions for the area was reported as follows: Phillipsburg (Allentown, PA) 18:00 hrs. Sunny, 77 F winds southwest @ 13 mph.

A five (5) mile loop was completed around the area as follows: see attached map.

1. Left Country View Terrace (Lamp Lighter Village) on Lamplighter Circle. No odors detected by exit to Rt. 519.
2. Proceeded south on Rt. 519 past the Warren County Complex. No odors detected.
3. Proceeded west on Foul Rift Rd. No odors were detected.

18:55 hrs. Entered Nature's Choice facility. Gates were shut and no operations were occurring. A walking perimeter tour was performed at the facility. 3 large piles of unprocessed grass/vegetative waste were observed by one of the Trommel screens. Putrid, rotting odors were detected from these piles, scale 3. Also observed on the eastern end of the facility was grass and vegetative waste barely mixed into on e of the windrows on site. Odors were detected from this area as well. A small pile of lime(?) was also observed, possibly to be used for odor control. This pile was 4-5 feet high with a similar diameter on the ground. The pile did not appear to have changed in size from previous inspections on site.

The perimeter of the facility was walked. At the northern end (middle) of the facility, a large, unprocessed woody brush pile was noted. This pile was the same pile noted in previous inspections. The pile was not as large as during the previous visit but was still fairly large in size. Also noted by this pile was a pile of logs that were 2-2.5 feet in diameter. As previously noted a 30 cu.yd. dumpster was observed on site with larger logs inside. This appears to be the same dumpster and logs. It does not appear to be emptied that often and may be the same materials observed several weeks ago.

A review of the equipment was briefly performed. No changes from previous inspections were noted. However, in a recent call to Mr. James Panzini of the company, he indicated that the Trommel 620 rotary screen was a rental and would be leaving the site shortly.

In general, odors were detected from the unprocessed piles of grass/vegetative waste and windrows from the piles through the middle of the site to the center north and northeastern boundaries of the site, as well as the windrows observed with barely turned in materials on the eastern end of the site. The northwestern, western, southern (except by the piles of unprocessed materials), and some of the southeastern boundaries did not have any odors. This completed the site visit.

19:30 hrs. Departed Nature's Choice. Continued upwind survey.

4. Continued west on Foul Rift Rd. No odors detected.
5. Drove north on Foul Rift Rd. No odors were detected along the rest of this road to Rt. 620.
6. Continued to the intersection of Foul Rift Rd. & County Rd. Rt. 620. Passed the Belvidere Wastewater Treatment Plant, no odors detected.

7. Proceeded south on Rt. 620 to the intersection of Rt. 620 & Rt. 519. Odors were detected-scale 2, the same type and character as noted at the compost facility.
8. Entered the Gro-Rite facility on Rt.519 (19:40 hrs.), north of the impacted area and facility. In fields north of Rt.620 and Country View Village, but south of the mulch pile on Gro-Rite's property, the compost type odors could still be detected-scale 2. The Gro-Rite mulch pile was eliminated as a potential odor source based on proximity and wind direction.

19:45 hrs. Re-entered County View Terrace. The putrid, rotting odors were still present in the complex in the area of the construction yard by the end of Lantern Lane and Morningside Drive scale 3. Investigation concluded. Odors detected on this date at the complainants' properties were of the same character that was detected at the Nature's Choice facility. Nature's Choice was determined to be responsible for the odors at the complainants' properties.

7/25/00 Inspector M.Burghoffer called Nature's Choice to inform them of the violation.

Recommended action: Based on prior enforcement history of this facility issue AONOCAPA for violation of NJAC 7:27-5.2(a) odor complaints.
re

Compliance Evaluation Report Start Date: 7/21/2000

Activity: INV000016 Incident Investigation Lead Investigator: Savoie , Phillip

85229 NATURE'S CHOICE CORP-WHITE TOWNSHIP SITE, White Twp (AIR)

Requirement	Status	Results or Comments

Subject Item: AV01 - Air Violation

Operating Status: Not Operating

Comments: 3 verified complaints out of 6 odor complaints received on 7/21/00.

No person shall cause, suffer, allow or permit to be emitted into the outdoor atmosphere substances in quantities which shall result in air pollution as defined herein. Air pollution is the presence in the outdoor atmosphere of one or more air contaminants in such quantities and duration as are, or tend to be, injurious to human health or welfare, animal or plant life or property, or would unreasonably interfere with the enjoyment of life or property throughout the State and in such territories of the State as shall be affected thereby and excludes all aspects of employer-employee relationship as to health and safety hazards.[N.J.A.C. 7:27- 5.2(a)]

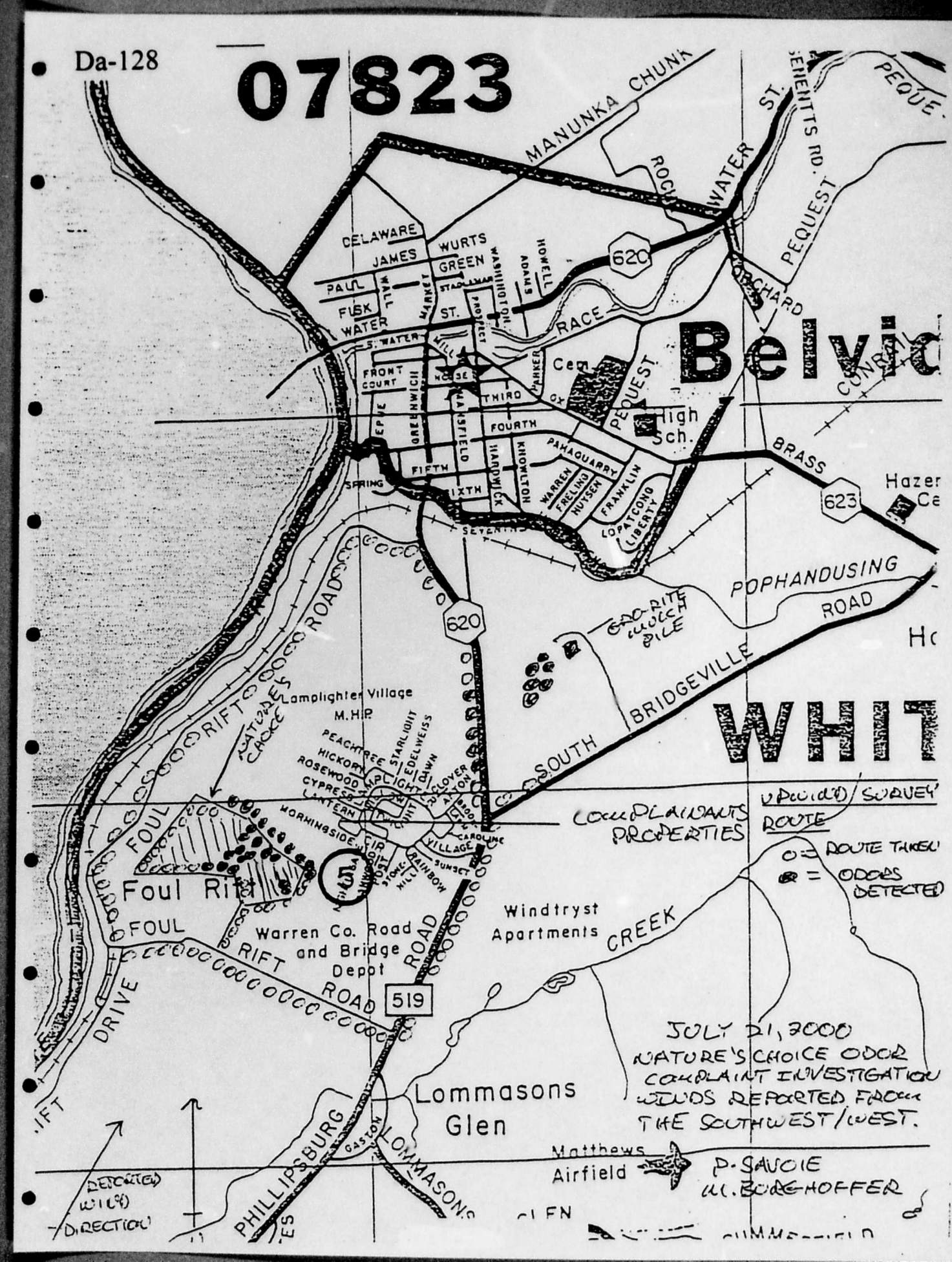
OC You permitted putrid, rotting odors from the unprocessed grass/vegetative waste piles from the composting/solid waste operation to be emitted into the outdoor atmosphere in quantities which resulted in air pollution.

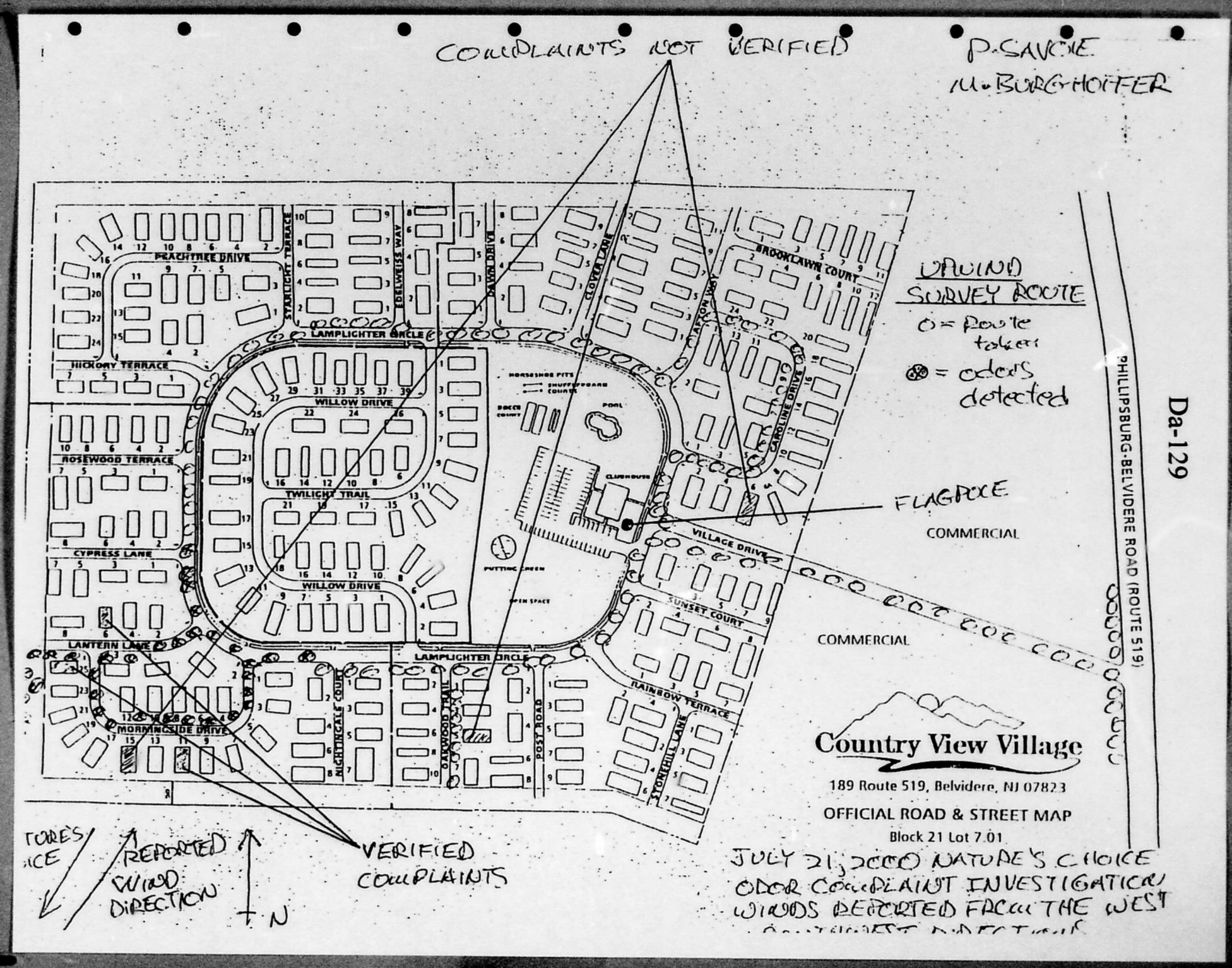
IC - In Compliance
OC - Out of Compliance
NI - Not Inspected
NC - No Obvious Concern
H - Heading
N - No

ND - Compliance Not Determined
NA - Not Applicable
PV - Potential Violation
ON - Out of Compliance, Non-referred
Y - Yes

Da-128

07823


MANUNKA CHUNK
WATER ST.
BENNETTS RD.
PEQUEST
ORCHARD
620
DELAWARE
JAMES
WURTS
GREEN
PAUL
FISK
WATER
MARKET
WASHINGTON
ADAMS
HOWELL
PROSPECT
RACE
S. WATER
FRONT
COURT
ORANGE
MAPLE
THIRD
FOURTH
FIFTH
SIXTH
SPRING
SEVENTH
HARDWICK
KNOWLTON
PAHAQUARRY
WARREN
FRELING
HUYSEN
FRANKLIN
LOPATCONG
LIBERTY
High Sch.
BRASS
623
Hazen
POPHANDUSING ROAD
BRIDGEVILLE
SOUTH
ODO-RITE MULCH PILE
Lamplighter Village M.H.P.
NATURE'S CHOICE
PEACHTREE
HICKORY
ROSEWOOD
CYPRESS
LANTERN
STARLIGHT
EDELWEISS
DAWN
CLOVER
ALTON
BROOK
CAROLINE
VILLAGE
SUNSET
RAINBOW
STONE HILL
HORNINGSIDE
FOUL RIFT
FOUL RIFT ROAD
FOUL RIFT DRIVE
Warren Co. Road and Bridge Depot
519
Windtryst Apartments
CREEK
COMPLAINANTS PROPERTIES
UPWIND/SURVEY ROUTE
= ROUTE TAKEN
= ODORS DETECTED
JULY 21, 2000
NATURE'S CHOICE ODOR COMPLAINT INVESTIGATION
ODORS REPORTED FROM THE SOUTHWEST/WEST.
Lommasons Glen
PHILLIPSBURG
GASTON
LOMMASONS
Matthews Airfield
P. SAVOIE
M. BORGHOFFER
DETECTED WIND DIRECTION


COMPLAINTS NOT VERIFIED
P. SAVOIE
M. BURGHOFFER
PEACHTREE DRIVE
STARLIGHT TERRACE
EDELWEISS WAY
DAWN DRIVE
CLOVER LANE
CARTON WAY
BROOKLAWN COURT
LAMPLIGHTER CIRCLE
HICKORY TERRACE
WILLOW DRIVE
ROSEWOOD TERRACE
TWILIGHT TRAIL
CYPRESS LANE
WILLOW DRIVE
LANTERN LANE
MORNINGSIDE DRIVE
LAMPLIGHTER CIRCLE
NIGHTINGALE COURT
OAKWOOD TRAIL
POST ROAD
RAINBOW TERRACE
STONEHILL LANE
CAROLINE DRIVE
VILLAGE DRIVE
SUNSET COURT
HORSESHOE PITS
SHUFFLEBOARD COURTS
BOCCE COURTS
POOL
CLUBHOUSE
PUTTING GREEN
OPEN SPACE
FLAGPOLE
COMMERCIAL
COMMERCIAL
PHILLIPSBURG-BELVIDERE ROAD (ROUTE 519)
UPWIND SURVEY ROUTE
O = Route taken
⊗ = odors detected
Country View Village
189 Route 519, Belvidere, NJ 07823
OFFICIAL ROAD & STREET MAP
Block 21 Lot 7.01
FORESTICE
REPORTED WIND DIRECTION
N
VERIFIED COMPLAINTS
JULY 21, 2000 NATURE'S CHOICE
ODOR COMPLAINT INVESTIGATION
WINDS REPORTED FROM THE WEST

MEMORANDUM

TO: FILE

THROUGH: Timothy Bartle, Supervisor
Compost and Incineration Section

FROM: Richard Campbell

SUBJECT: SITE VISIT REPORT

DATE: June 5, 2002

A. FACILITY NAME: Chatham Transfer Facility

B. SITE LOCATION: Chatham Borough, off Watchung Avenue

C. DATE OF VISIT: May 30, 2002

D. FACILITY STAFF PRESENT: Tony Canace, office staff

E. DEP STAFF PRESENT: Rich Campbell, Solid & Hazardous Waste
Tim Bartle, Solid & Hazardous Waste

F. NOTES AND OBSERVATIONS: The Chatham Transfer facility was visited to determine whether the facility generally agreed with the application for General Approval submitted by Dewling Associates, Inc. Canvassing of the surrounding streets indicate that the facility has residential and commercial neighbors within a 1000 foot buffer of the facility.

The overall facility operations is established in two areas - an exempt operation for the receipt, processing and transfer of brush and tree parts and a facility operating under a general approval for the receipt and transfer of leaves, grass clippings and brush operating concurrently and adjacent to one another. A description of the exempt facility as observed is included with this report.

The exempt facility purportedly operating within the bounds of Lot 17 was observed to have expanded beyond the bounds of the Lot boundaries. Chain link fences formerly along two bounds of the facility have been removed. Vehicles were observed being stored beyond where the fence lines previously existed. To get to one of the expanded areas, a drainage ditch has to be crossed. A small homemade bridge was constructed to accomplish this. This situation probably is not authorized under the Land Use regulations at this time.

Rotondi has stored a large quantity of large tree parts on the exempt Lot. Some of the tree parts appear to have been there for some time. This material was observed being transferred into tandem trailers for removal from the facility. The tree parts material extends perhaps a few feet beyond the property boundary along the Passaic River and along the drainage ditch. The property boundary along the Passaic River is within probably ten feet of the river edge. Rotondi also has saleable products delivered to this Lot.

The facility operating under the general approval rules also has one location where the chain link fence has been removed along the northern boundary adjacent to the power company right of way where

vehicles are being stored. Vehicles accessing the facility appear to drive into this area to get around the facility office building and vehicles adjacent to the building. The material drop off area was being used for receipt of grass clippings and brush. A ramp constructed of logs and soil was adjacent to the drop off area and is used to load the received material into trailers. Odor was noticeable within the vicinity of the drop off area and emanating off the site approximately 1000 feet away at the facility entrance on Watchung Avenue.

Rotondi is conducting its operations within a confined area. The operations appear to require significantly more area than is available. As a result Rotondi has undertaken steps to utilize land that is not known, via the application, to be company property or authorized for the company's use.

G. MAJOR ISSUES: Rotondi is operating a recycling center at this location that is not large enough allow free movement of vehicles within the facility bounds. This is evident from the fact that Rotondi has removed chain link fencing to allow tandem vehicles to turn around outside the facility bounds. Rotondi has too much material at this facility.

Rotondi appears to have installed a bridge over a drainage ditch that should be evaluated for NJPDES permitting.

Rotondi has utilzed space adjacent to both the General approval and exempt facility Lots not currently known to be company property or authorized for company use.

Odor emanating from grass clippings.

H. RECOMMENDED ACTION: Rotondi must erect new fencing to replace the removed fencing. Rotondi must contain the operation to company land area. Rotondi must remove the majority of the material in storage in order to allow vehicles to maneuver within the facility bounds. Rotondi must control the odor from the grass clippings.

The Land Use Regulation office must be contacted to determine whether the bridge over the ditch is acceptable.

C: R. Confer, Chief

NOTICE OF APPEAL
SUPERIOR COURT OF NEW JERSEY – APPELLATE DIVISION

	:	**Attorney of Record**
S. ROTONDI & SONS, INC. AND ANGELO G. ROTONDI, INDIVIDUALLY,	:	NAME: Carl R. Woodward, III Carella, Byrne, Bain, Gilfillan, Cecchi, Stewart & Olstein
	:	ADDRESS: 6 Becker Farm Road Roseland, New Jersey 07068
	:	PHONE: (973) 994-1700
Appellants	:	ATTORNEY FOR: Appellants S. Rotondi & Sons, Inc. and Angelo G. Rotondi
v.	:	
	:	ON APPEAL FROM
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION,	:	New Jersey Department of Environmental Protection
	:	TRIAL COURT OR STATE AGENCY Agency Docket No. 29-01-11/135
Respondent.	:	TRIAL COURT OR AGENCY NUMBER TRIAL COURT JUDGE
	:	CIVIL [ ] CRIMINAL [ ] JUVENILE [ ]

NOTICE IS HEREBY GIVEN THAT S. ROTONDI & SONS, INC. AND ANGELO G. ROTONDI APPEAL TO THE SUPERIOR COURT OF NEW JERSEY, APPELLATE DIVISION, FROM THE

JUDGMENT [ ] ORDER [ ] OTHER (SPECIFY) [X]

ADOPTION OF N.J.A.C. 7:26a-4.5(A)(6) PERTAINING TO RECYCLING CENTERS WHICH TRANSFER GRASS CLIPPINGS, IN THE RECYCLING RULES PROMULGATED AND READOPTED WITH AMENDMENTS, TO N.J.A.C. 7:26A, BY THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION EFFECTIVE MAY 17, 2002, WITH AMENDMENTS EFFECTIVE JUNE 17, 2002, WHICH REGULATIONS BECOME OPERATIVE DECEMBER 17, 2002.

HAVE ALL ISSUES AS TO ALL PARTIES BEEN DISPOSED OF IN THIS ACTION IN THE TRIAL COURT OR AGENCY? (INCONSOLIDATED ACTIONS, ALL ISSUES AS TO ALL PARTIES IN ALL ACTIONS MUST HAVE BEEN DISPOSED OF) YES [X} NO [ ] IF NOT, IS THERE A CERTIFICATION OF FINAL JUDGMENT ENTERED PURSUSANT TO R. 4:42-2? YES [ ] NO [ ]

IN CRIMINAL, QUASI-CRIMINAL, AND JUVENILE CASES . . .
GIVE A CONCISE STATEMENT OF THE OFFENSE AND OF THE JUDGMENT, DATE ENTERED AND ANY SENTENCE OR DISPOSITION IMPOSED:

IF DEFENDANT INCARCERATED? YES [ ] NO [ ]
WAS BAIL GRANTED OR THE SENTENCE OR DISPOSITION STAYED? YES [ ] NO [ ] IF IN CUSTODY, GIVE PLACE OF CONFINEMENT _____

NOTICE OF APPEAL HAS BEEN SERVED ON:

NAME	DATE OF SERVICE	TYPE OF SERVICE
Trial Court Judge:		
Trial Court Clerk/State Agency: NJDEP	December 11, 2002	Personal Delivery
Attorney General or Attorney for other Governmental Body pursuant to R. 2:5-1(a). (e) or (h)	December 11, 2002	Personal Delivery

OTHER PARTIES NAME & DESIGNATION	ATTORNEY NAME, ADDRESS & TELEPHONE NO.	DATE OF SERVICE	TYPE OF SERVICE

I HEREBY CERTIFY THAT I HAVE SERVED A COPY OF THIS NOTICE OF APPEAL ON EACH OF THE PERSONS AS INDICATED ABOVE.

Date: December 11, 2002

(Signature of Attorney of Record)

PRESCRIBED TRANSCRIPT REQUEST FORM HAS BEEN SERVED ON:
(ALSO INDICATE IF SOUND RECORDED)

NAME	DATE OF SERVICE	AMOUNT OF DEPOSIT
Court Reporter's Supervisor/ Clerk of Court or Agency	**Not applicable**	
Court Reporter		

I HEREBY CERTIFY THAT I SERVED THE PRESCRIBED COURT TRANSCRIPT REQUEST FORM ON EACH OF THE ABOVE PERSONS.

Date: _____

_____
(Signature of Attorney of Record)

I HEREBY CERTIFY THAT:

[X] THERE IS NO VERBATIM RECORD

[ ] TRANSCRIPT OF THE PROCEEDINGS ARE IN THE POSSESSION OF THE ATTORNEY OF RECORD.

[ ] A MOTION FOR ABBREVIATION OF TRANSCRIPT HAS BEEN FILED WITH THE COURT OR AGENCY BELOW.

[ ] A MOTION FOR FREE TRANSCRIPT HAS BEEN FILED WITH THE COURT BELOW.

Date: December 11, 2002

_____
(Signature of Attorney of Record)

#163253 v1 - NOTICE OF APPEAL

A-1819-02T1

ORDER ON MOTION

S ROTONDI & SONS INC ET AL
VS
NEW JERSEY DEPARTMENT OF
ENVIRONMENTAL PROTECTION

SUPERIOR COURT OF NEW JERSEY
APPELLATE DIVISION
DOCKET NO. A -001819-02T1
MOTION NO. M -005413-02
BEFORE PART: I
JUDGE(S): PRESSLER

MOTION FILED: JUNE 09, 2003
ANSWER(S) FILED: JULY 19, 2003

BY: S ROTONDI & SONS
ENVIRONMENTAL PROTECTION

RECEIVED
APPELLATE DIVISION
JUL 01 2003
SUPERIOR COURT
OF NEW JERSEY

SUBMITTED TO COURT: JUNE 25, 2003

O R D E R

THIS MATTER HAVING BEEN DULY PRESENTED TO THE COURT, IT IS ON THIS 30th DAY OF JUNE, 2003, HEREBY ORDERED AS FOLLOWS:

	GRANTED	DENIED	OTHER
MOTION BY APPELLANT - TO STAY APPELLATE PROCEEDINGS	( )	(X)	(X)

SUPPLEMENTAL: The facial challenge that is the subject of this appeal is a separate issue from the proceedings pending on appellant's permit application. If the latter are completed prior to the disposition of this appeal and if appellants remain aggrieved, they may amend their notice of appeal to include any adverse decision and a new scheduling order will be issued.

I hereby certify that the foregoing is a true copy of the original on file in my office.

CLERK OF THE APPELLATE DIVISION

FILED
APPELLATE DIVISION
JUL 1 2003
CLERK

FOR THE COURT:

SYLVIA B. PRESSLER P.J.A.D.

JUMMH

A-1819-02T1

Docket
Marge Hunter
609-633-2254

ORDER ON MOTION

S ROTONDI & SONS INC ET AL
VS
NEW JERSEY DEPARTMENT OF
ENVIRONMENTAL PROTECTION

SUPERIOR COURT OF NEW JERSEY
APPELLATE DIVISION
DOCKET NO. A -001819-02T1
MOTION NO. M -000860-03
BEFORE PART: E
JUDGE(S): PRESSLER
PARKER

MOTION FILED: OCTOBER 15, 2003 BY: DEP
ANSWER(S) FILED: NOVEMBER 6, 2003 S. ROTONDI & SONS, INC

RECEIVED
APPELLATE DIVISION
NOV 17 2003
SUPERIOR COURT
OF NEW JERSEY

SUBMITTED TO COURT: NOVEMBER 10, 2003

O R D E R

THIS MATTER HAVING BEEN DULY PRESENTED TO THE COURT, IT IS ON THIS 14 DAY OF NOVEMBER, 2003, HEREBY ORDERED AS FOLLOWS:

	GRANTED	DENIED	OTHER
MOTION BY RESPONDENT - TO SUPPLEMENT THE RECORD	(X)	( )	( )

SUPPLEMENTAL:

I hereby certify that the foregoing is a true copy of the original on file in my office.
CLERK OF THE APPELLATE DIVISION

FILED
APPELLATE DIVISION
NOV 17 2003
CLERK

GPS NOT AVAILABLE

FOR THE COURT:

JUMMH

SYLVIA B. PRESSLER P.J.A.D.

DAVID SAMSON
ATTORNEY GENERAL OF NEW JERSEY
Division of Law
124 Halsey Street, 5th Floor
P.O. Box 45029
Newark, New Jersey 07101
Attorney for the State of New Jersey
Department of Environmental Protection

By: Caroline Vachier
Deputy Attorney General
(973) 648-4866

SUPERIOR COURT OF NEW JERSEY
APPELLATE DIVISION
DOCKET NO. A-001819-02T1

S. ROTONDI & SONS, INC. AND ANGELO G. ROTONDI, INDIVIDUALLY, Appellants, v. NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION, Respondents.	Civil Action STATEMENT OF ITEMS COMPRISING THE RECORD ON APPEAL

TO: EMILLE R. COX, ESQ.
Clerk of the Appellate Division
Superior Court of New Jersey
Hughes Justice Complex
P.O. Box 006
Trenton, New Jersey 03625

CARL R. WOODWARD, III, ESQ.
CARELLA, BYRNE, BAIN, GILFILLAN,
CECCHI, STEWART & OLSTEIN
6 Becker Farm Road
Roseland, New Jersey 07068

Please take notice that the New Jersey State Department of Environmental Protection certifies and files pursuant to R. 2:5-

Pra la

4(b) the Statement of Items Comprising the Record on appeal in the above captioned case. The items comprising the record are:

1. Stenographic transcript of proceedings by Dawn N. Nielsen, Certified Shorthand Reporters, dated January 16, 2002.

2. Memorandum from Karen Hershey, Esq., Office of Legal Affairs, DEP, to Terri Slack, Rule Manager, DEP, dated April 3, 2002, enclosing a log and comments, as follows:

   - Log describing all the comments attached to the April 3, 2002 memorandum.
   - Letter from Commissioner Andrew H. Anderson, dated February 12, 2002.
   - Letter from Alan W. Avery, Jr., Director, Ocean County Department of Solid Waste Management, February 5, 2002.
   - Letter from James J. Blaney and Linda Morehouse, County of Bergen, Department of Health Services, Environmental Program, dated February 7, 2002.
   - Letter from Heather S. Bowman, Director of Environmental Affairs and Deputy General Counsel, Electronic Industries Alliance, dated February 15, 2002.
   - Letter from James Butler, Regulatory Complaince Officer, Cycle Chem, Inc., dated January 28, 2002.
   - Letter from Cielo DeStefano, Braen Stone Industries, Inc., dated February 7, 2002.
   - Letter from Charles DeWeese, Soil Sage, dated February 15, 2002.
   - Draft letter from Electronic Industries Alliance dated February 15, 2002 along with an e-mail from Holly Evans, Environmental Advisor, Electronic Industries Alliance, dated March 20, 2002.
   - Letter with attachment from Larry Gindoff, Solid Waste Coordinator, MCMUA, dated February 14, 2002.
   - Letter with attachment from Richard J. Hills, Division Head, County of Middlesex, Department of Planning,

Division of Solid Waste Management, dated February 13, 2002.

- Letters from John C. Kicks, dated February 14, 2002.
- Letter from William F. Layton, Executive Director, New Jersey Concrete and Aggregate Association, dated February 6, 2002.
- Letter with attachment from Neil P. Mulvey, Senior Associate, Dewling Associates, Inc., and S. Rotondi & Sons, Inc., dated February 15, 2002.
- Letter with attachment from Charles M. Norkis, P.E., Chief Engineer, Cape May County Municipal Utilities Authority, dated February 14, 2002.
- Letter from Nicholas R. Smolney, Director of Special Service, Middlesex County Utilities Authority, dated February 15, 2002.

3. Memorandum from Karen Hershey, Esq., Office of Legal Affairs, DEP, to Terri Slack, Rule Manager, DEP, dated January 30, 2002, enclosing a log and comments, as follows:

   - Log describing all the comments attached to the January 30, 2002 memorandum.
   - Letter from Cielo DeStefano and Richard S. Gribbin, Braen Stone Industries, Inc., dated January 23, 2002.
   - Letter from Stephen Reiter, CEO, Nature's Choice Corporation, dated January 11, 2002.
   - Letter with attachment from Edward J. Windas, Recycling Manager, Middlesex County Improvement Authority, dated January 23, 2002.

4. Memorandum from Karen Hershey, Esq., Office of Legal Affairs, DEP, to Terri Slack, Rule Manager, DEP, dated February 5, 2002, enclosing a log and comments, as follows:

   - Log describing all the comments attached to the February 5, 2002 memorandum.
   - Letter from John R. Purves, Esq., dated January 24, 2002.

Pra 3a

5. Memorandum from Karen Hershey, Esq., Office of Legal Affairs, DEP, to Terri Slack, Rule Manager, DEP, dated February 8, 2002, enclosing a log and comments, as follows:

   - Log describing all the comments attached to the February 8, 2002 memorandum.

   - Letter from Stephen Reiter, CEO, Nature's Choice Corporation dated January 31, 2002.

6. Letter from Albert Fralinger, III - President, Association of New Jersey Recyclers, dated February 15, 2002.

7. Proposed to Re-Adopt with Amendments and New Rules, N.J.A.C. 7:26A, published in the December 17, 2001. New Jersey Register (See 33 N.J.R. 4273).

8. Re-Adoption with Amendments and New Rules, N.J.A.C. 7:26A, published in the June 17, 2002 New Jersey Register (See 34 N.J.R. 2088).

Respectfully submitted,

DAVID SAMSON
ATTORNEY GENERAL OF NEW JERSEY
Attorney for the New Jersey
Department of Environmental Protection

By: Caroline Vachier
Caroline Vachier
Deputy Attorney General

Dated: 1-10-03

RECEIVED
APPELLATE DIVISION

NOV 0 6 2003

SUPERIOR COURT
OF NEW JERSEY

CARELLA, BYRNE, BAIN, GILFILLAN,
CECCHI, STEWART & OLSTEIN
5 Becker Farm Road
Roseland, New Jersey 07068
(973) 994-1700
Attorneys for Appellants

S. ROTONDI & SONS, INC. AND ANGELO G. ROTONDI, INDIVIDUALLY, Appellants, v. NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION, Respondent.	SUPERIOR COURT OF NEW JERSEY APPELLATE DIVISION Civil Action DOCKET NO. A-1819-02T1 On Appeal From Final Adoption of Regulation by the New Jersey Department of Environmental Protection **OPPOSITION CERTIFICATION OF ANGELO G. ROTONDI**

ANGELO G. ROTONDI, of full age, hereby certifies to the following:

1. I am the president and principal owner of appellant S. Rotondi & Sons, Inc. ("S. Rotondi") and an individual appellant in this matter. I submit this certification on behalf of the appellants in opposition to the motion to supplement the administrative record filed by respondent New Jersey Department of Environmental Protection ("NJDEP"), in connection with the pending appeal of the NJDEP's adoption of N.J.A.C. 7:26A-4.5(a)(6).

2. I have reviewed the documentation which the NJDEP seeks permission to include at this late date in the administrative record on the challenged rule adoption. All of the documents which the NJDEP contends constitutes its "institutional knowledge", designated in the NJDEP's motion appendix at pages Dma 1 to Dma 98, are not addressed to and do not concern vegetative waste **transfer stations**, such as S. Rotondi's transfer station facility located in Chatham, New Jersey (the "Transfer Station"). Rather, those documents concern vegetative waste composting facilities, which are substantially and materially different in nature and function from vegetative waste transfer stations. Consequently, those documents are not relevant or material to facilities which simply transfer vegetative waste including grass clippings. Such facilities are required to move all grass clippings off-site within 24-hours of receipt. The inclusion of said documentation in the administrative record should not, respectfully, be permitted since they have no reasonable bearing or relation to the NJDEP's adoption of the 1,000-foot buffer zone requirement for vegetative waste transfer stations.

3. At pages Dma 99 to Dma 128 of the NJDEP's motion appendix, the agency is inappropriately attempting to obtain leave to include in the administrative record documents consisting of NJDEP field investigations of numerous composting-based odor violations caused by a composting facility operated not by S. Rotondi, but by one of its competitors, Nature's Choice Corp. That facility is located in White Township, Warren County, New Jersey. This documentation extensively delineates the serious odor conditions suffered by residents neighboring that composting facility. Nature's Choice's **composting facility** is not a transfer station. Therefore, Dma 99 to Dma 128 are not relevant to and have no bearing upon the validity of the 1,000-foot buffer zone

requirement established for transfer only facilities accepting grass clippings. Those facilities do not engage in the composting of vegetative waste. These untimely documents should not, respectfully, be included in the administrative record on this appeal.

4. The NJDEP's effort to supplement the record to include the Nature's Choice composting odor violation records shows it has no documented evidence which establishes or suggests that vegetative waste transfer facilities which merely accept and transfer grass clippings within a time limited window of a single day may create odor conditions which are violations of applicable air pollution statutes and regulations, or that S. Rotondi's Transfer Station's acceptance of such materials may present such an environmental concern.

5. S. Rotondi has operated the Transfer Station, with NJDEP approval and permits, since 1990. During its thirteen-year operation, S. Rotondi has never received a complaint from any neighboring residence or business concerning odor problems relating to the grass clippings accepted or received at this facility. Furthermore, during that period of time S. Rotondi has never received a complaint from the municipal government of the Borough of Chatham, New Jersey pertaining to any odor problems relating to S. Rotondi's acceptance of grass clippings at the Transfer Station

6. During its thirteen-year operation of the Transfer Station, S. Rotondi has never received any document from the NJDEP advising that a complaint has been received by the agency concerning odor problems generated by the receipt of grass clippings at this facility. During the last thirteen years, S. Rotondi has never received a

field investigation report or notice of violation issued by the NJDEP with respect to any odor problems related to that facility's acceptance of grass clippings.

7. The absence of any documented odor complaint violation in the motion appendix demonstrates that the acceptance of grass clippings at transfer stations, as distinct from composting facilities, does not result in odor problems, which constitute, or may constitute, violations of applicable air pollution statutes or regulations. Because S. Rotondi's Transfer Station is located not far from several neighboring businesses and residences, the absence of any documented odor problems from S. Rotondi's time limited acceptance of grass clippings at that facility further establishes the factually insupportable and unreasonable nature of the challenged 1,000-foot buffer zone regulation.

8. The only odor related document pertaining to a vegetative waste transfer station, Dma 129 to Dma 130, included in the administrative record, or the NJDEP's motion appendix must be addressed specifically. That document is a purported internal NJDEP memorandum dated June 5, 2002. S. Rotondi never received a copy of this memorandum and, more importantly, no documented field investigation or notice of violation was ever issued by the NJDEP as a result of the subject May 30, 2002 inspection. Furthermore, the purported facts in this memo are largely inaccurate and erroneous, in particular those claiming "odor emanating from grass clippings". The memo itself does not contend that any "odor" had traveled off-site. Rather, it conclusively states the odor was noticed "approximately 1,000 feet away at the facility's entrance". The memo also claims the agency personnel "canvassed" the surrounding streets which revealed a number of neighboring projects were within 1,000 feet of the facility. Moreover, the requisite agency standards for investigating an actual odor

complaint, as set forth in the Nature's Choice investigation documents, are not met. Rather, the "odor" contentions of this memo are vague, conclusory and insupportable. It is important to note that S. Rotondi's present recycling center general approval was issued by the NJDEP on June 19, 2002, just two weeks after this memo (Pa 179a).

9. The two agency personnel referenced therein, Timothy Bartle and Richard Campbell, were present at S. Rotondi's facility on May 30, 2002 and met with John Canace, S. Rotondi's sales manager. They advised they were there to inspect for the purpose of issuance of the recycling center general approval. On that date, I spoke by telephone with Mr. Canace while said personnel were still present. I asked him whether or not they needed to speak with me and if there were any problems they needed to be addressed. Mr. Canace informed me that the NJDEP personnel indicated they had no reason to speak with me and there was no problem with which they were concerned. No formal field investigation report or notice of violation was ever issued to or received by S. Rotondi from the NJDEP with respect to the May 30, 2002 inspection of the Transfer Station.

10. To the best of my knowledge, there is only one other vegetative waste transfer facility operated in New Jersey, and it is located in rural Atlantic County. There is no scientific or other documentation in the existing administrative record, whether or not supplemented by the documents which are the subject of this motion, which supports a conclusion that (1) the acceptance of grass clippings at a transfer station causes odor based air pollution, or (2) a 1,0000-foot zone buffer is necessary to prevent such pollution. The absence of same reveals the unreasonable and arbitrary nature of the challenged regulation.

11. At the present time, S. Rotondi accepts grass clippings, pursuant to NJDEP licensure, from approximately 35 towns and municipalities, including Chatham Borough, this facility's host community. S. Rotondi is required to accept the host community's said clippings without compensation. Over one-third of the materials accepted and transferred at this facility by S. Rotondi are grass clippings. If the challenged regulation is upheld, S. Rotondi's Transfer Station will be prohibited from accepting that substantial volume of vegetative waste materials. As a result, its ability to operate the Transfer Station will be destroyed, together with its business. Such a grievous injury would be caused by an arbitrary and wholly unreasonable regulation which has been promulgated by the NJDEP without any supporting scientific information, reports, analyses, studies or documentation suggesting that the time limited acceptance of grass clippings at vegetative waste transfer stations, such as S. Rotondi's Transfer Station, presents even a potential source of odor based air pollution.

12. The complete lack of scientific or other evidential support in the record for this regulation demonstrates it was adopted solely with the purpose of precluding of S. Rotondi from accepting grass clippings at its Transfer Station.

I hereby certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

ANGELO G. ROTONDI

Dated: November 6, 2003

Pra lla

I hereby certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

ANGELO G. ROTONDI

Dated: November 6, 2003

CERTIFICATION PURSUANT TO R.1:4-4(c)

I hereby certify that Angelo G. Rotondi hereby acknowledged the genuineness of his signature and that this document, or a copy with an original signature affixed, will be filed if requested by the court or any party.

BRIAN H. RENLON, ESQ.

DATED: November 6, 2003

#200331 v1 - A.G. Rotondi Facsimile Signature Certification

RECEIVED
APPELLATE DIVISION
NOV 0 6 2003
SUPERIOR COURT
OF NEW JERSEY

CARELLA, BYRNE, BAIN, GILFILLAN,
CECCHI, STEWART & OLSTEIN
5 Becker Farm Road
Roseland, New Jersey 07068
(973) 994-1700
Attorneys for Appellants

S. ROTONDI & SONS, INC. AND ANGELO G. ROTONDI, INDIVIDUALLY,	SUPERIOR COURT OF NEW JERSEY APPELLATE DIVISION
Appellants,	Civil Action
v.	DOCKET NO. A-1819-02T1
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION,	On Appeal From Final Adoption of Regulation by the New Jersey Department of Environmental Protection
Respondent.	**OPPOSITION CERTIFICATION OF NEIL P. MULVEY**

NEIL P. MULVEY, of full age, hereby certifies to the following:

1. I am a senior associate with Dewling Associates, Inc., the environmental consulting firm which represents appellants S. Rotondi & Sons, Inc. and Angelo G. Rotondi, individually (collectively "S. Rotondi"). I submit this certification, on behalf of S. Rotondi, in opposition to the pending motion to supplement the administrative record filed by respondent New Jersey Department of Environmental Protection (the "NJDEP").

2. By way of a brief recitation of my environmental qualifications, I graduated from Rutgers University with a Bachelors of Science degree in Environmental

Science in 1979, and received my Masters degree in Science in Environmental Engineering from the New Jersey Institute of Technology in 1982. I was employed by the United States Environmental Protection Agency in Region 2 in New York, New York from 1979 to 1981. Thereafter, I was employed by a chemical corporation and, from 1986 to 1989, I served as the Assistant Director for the NJDEP's Release Prevention and Response Group. Subsequent to 1989, I have been employed by a number of environmental consulting firms, most recently with Dewling Associates, Inc. for the last four and one-half years, in which I have provided environmental consulting services to a broad spectrum of corporate and other clients.

3. I was responsible for the preparation and submission to the NJDEP of S. Rotondi's formal comments on the proposed vegetative waste recycling rules, Chapter 26A, which are part of the administrative record in this appeal. (Pa 101a to Pa 105a). As S. Rotondi's environmental consultant, I have reviewed the documentary materials which the NJDEP seeks by way of the pending motion to add to its statement of items comprising the record.

4. The NJDEP is attempting to supplement the administrative record by adding the following data thereto; (i) a set of ten manuals, studies or recommendations which the agency asserts constitutes its "institutional knowledge" concerning the receipt of grass clippings at solid waste transfer facilities, vegetative waste composting facilities, and vegetative waste transfer facilities; and (ii) certain composting based odor violation inspection reports maintained by the NJDEP and a purported agency memorandum dated June 5, 2002 pertaining to S. Rotondi's vegetative waste transfer station in Chatham Borough, New Jersey (the "Transfer Station").

5. With respect to the documentation the NJDEP contends represents its "institutional knowledge", those documents are included in the NJDEP's motion appendix at pages Dma 1 to Dma 98. I will address each of those documents as follows:

A. **Document entitled "Leaf Composting Manual for New Jersey Municipalities" (Dma 1 to Dma 16).** This document relates to and addresses vegetative waste composting facilities only, and makes no reference to or addresses vegetative waste transfer stations. Rather, they relate to composting facilities. Moreover, this manual was designed to assist municipalities in establishing and operating leaf-composting facilities. Importantly, this manual, which is inapplicable on its face to transfer only facilities, states that there "are no hard and fast rules, however, on the size of the buffer zone needed for composting." (Dma 9). This document does not contain or present any factual or scientific justification for the requirement of a 1,000-foot buffer zone between areas of human use or occupancy, i.e., neighboring residences or businesses, for transfer facilities accepting grass clippings;

Attached to this document is another entitled **"Minimizing Waste Disposal: Grass Clippings"** is an undated document issued by the Rutgers Cooperative Extension (Dma 17 to 18). This document is addressed to minimizing solid waste disposal of grass clippings by briefly discussing numerous composting and other actions which might limit or present alternatives for disposal of clippings. With respect to composting of grass clippings, this document suggests that research is on going;

B. **Masters Thesis of William Henry Schultz entitled "Yard Waste Composting: Processing Technology, Compost Quality and Composting End Point" (Dma 20 to Dma 46).** This student's thesis presents certain data on composting

technology, including odor analyses. However, it fails to contain any data or analysis which addresses transfer only vegetative waste facilities. A transfer facility is distinctly different in nature and function from a composting facility. These differences make it inappropriate to correlate odor data from a compost facility to a transfer only facility. For example, transfer stations typically receive vegetative waste on the same day of removal, and must move off-site any grass clippings received at that facility within the same day of receipt. Compost facilities may receive waste containing grass clippings several days later, significantly increasing the potential for odor. In fact, the Master's thesis notes, on page Dma 42, that grass received at the Shade Tree site (e.g. one of the test sites) was received after "it had been stored for some time." This distinct difference does not allow for a scientific or reasonable comparison of the referenced compost facility data to transfer facilities accepting grass clippings. As a result, this document is not appropriately considered in connection with the agency's adoption of the challenged regulation;

C. **Document entitled "Composting Facility Buffer Zone Recommendations Dated Circa 1993" (Dma 47).** This document presents recommended buffer zone requirements purportedly adopted to assist applicants in the siting and designing of a leaf/vegetative waste composting facilities in the future. There is no reference or correlation made by the agency in this document to transfer only vegetative waste facilities. Therefore, the information set forth therein is neither relevant or material to the establishment of a buffer zone requirement addressed to that type of facility. Furthermore, this document on its face was designed to assist applicants seeking to establish, design and site new vegetative waste composting facilities on a going

forward basis, and S. Rotondi's Transfer Station had already been operating for three years at that time;

D. Document entitled "New Jersey's Manual on Composting Leaves, and Management of Other Yard Trimmings by Peter F. Strom and Melvin S. Finstein (Dma 48 to Dma 76). Once again, this document was designed by its drafters to assist municipalities in the establishment and operation of leaf composting facilities. Therefore, there is no reference or correlation made therein to the pertinent considerations pertaining to vegetative waste recycling facilities which merely transfer, as opposed to composting, such materials. As such, this document is not relevant or material to the agency's consideration of adopting a buffer zone requirement pertaining to transfer only facilities;

E. Document entitled "NJDEP's Design Criteria and Recommendations for Vegetative Waste Compost Facilities, Circa 1995" (Dma 77). This document on its face addresses design criteria and recommendations for vegetative waste composting facilities, not transfer only facilities. There is no reference or correlation made therein to transfer only facilities, such as S. Rotondi's Transfer Station. Consequently, the information therein is neither relevant nor material to the NJDEP's adoption of a buffer zone requirement addressed to transfer only facilities;

F. Document entitled "NJDEP's May 8, 1995 letter approving Middlesex County Pilot Grass Recycling Program" (Dma 78 to Dma 79). This document indicates and identifies a number of conditions for this first countywide pilot program on grass clippings transfer depots located in Middlesex County. It advises that, pending evaluation of results, those conditions may be altered. While the NJDEP

imposed a 1,000-foot buffer zone on grass transfer depots established pursuant to this pilot program, there is no correlation therein to any other grass clipping transfer operations, including vegetative waste transfer facilities accepting grass clippings nor is there any scientific or other data, evaluation or analyses addressed to the required buffer zone. In fact, there is no summary or report of the results of this pilot program that can be scientifically applied to other transfer facilities;

G. Document entitled "NJDEP's Policy Concerning the Consideration of Grass Mulching Demonstration Requests, revised February 1996" (Dma 80 to Dma 82). This document states a policy for grass clipping mulching conducted on farmland. While this document states that receiving areas for staging of grass at a farm mulching operation be no closer then 1,000-feet of any property line of an area of human use or occupancy, it further provides that a grass mulching farm shall not operate grass mulching activities within 50-feet of its property line, and establishes a buffer of at least 150-feet to the property line of the nearest sensitive receptor, and 250-feet from any occupied structure. The provisions of this document are inconsistent with the challenged regulation as the NJDEP will accept buffers of substantially less then 1,000-feet for grass mulching operations. Further, mulching of grass clippings is not conducted at a transfer only facility accepting grass clippings, and consequently, there is no correlation or relevance to activities at transfer only facilities or the adoption of a 1,000-foot buffer for such facilities;

H. Document entitled "NJDEP's March 9, 2000 letter to the Township of Woodbridge" concerning its application for a grass clipping transfer facility general approval (Dma 83 to Dma 84). This document again references the

1,000-foot buffer zone condition established in the NJDEP's May 8, 1995 approval of the Middlesex County Pilot Program. See my commentary with respect to the document reference in paragraph G above;

I. **Document entitled "NJDEP's Application Guidelines For A Certificate Of Authority To Operate For A Research, Development And Demonstration Project For Land Application Of Grass Clippings As A Soil Amendment" (Dma 85 to Dma 87).** This document purports to establish certain guidelines for a research and development project pertaining to grass clippings. It states a conclusory finding that receiving areas for staging of grass should be no closer then 1,000-feet of any property line of a sensitive receptor, i.e., area of human use or occupancy. This conclusion on such buffers is stated without any supporting scientific data, study, analyses or evidential material. There is no reference or correlation made between the land application of grass clippings and transfer only facilities. This document, therefore, is neither relevant or material to such facilities; and

J. **Document entitled "NJDEP's September 2001 Technical Manual For Class C Recycling Center Approvals" (Dma 88 to Dma 98).** The policies set forth in the manual are related to applications by potential permittees for recycling Class C general approvals. The manual again contains the NJDEP's conclusory statement that areas of staging and handling for grass clippings should meet a minimum buffer requirement of 1,000-feet for those facilities accepting grass and/or vegetative food material from material staging areas to areas of human use or occupancy. Once again, the reference to the buffer requirement is not supported by and does not refer to any

scientific studies, analyses, data or documentary evidence concerning the necessity for or desirability of such a buffer at vegetative waste transfer only facilities.

6. Review of the foregoing documents reveals that the only non-conclusory information contained therein is addressed to composting operations. While there are several references therein to the NJDEP's position that receiving areas for staging of grass clippings should be no closer then 1,000-feet to the property line of any area of human use or occupancy, there is no scientific information, studies, analyses, data or other evidence to support the establishment of such buffers for transfer only facilities. For example, these documents contain no measurements of odor at specific distances from vegetative waste transfer facilities handling grass clippings. At lease seven of the referenced documents are addressed to vegetative waste composting facilities and are neither relevant nor material to the establishment of buffer zone regulations pertaining to transfer only operations. As previously noted, transfer only facilities are distinctly different from compost facilities.

7. The "institutional knowledge" which the NJDEP contends is set forth in this documentation provides no information specifically pertaining to vegetative waste transfer only facilities. Those documents contain no scientific analyses, data or information which in any way refer to as support for the establishment of a 1,000-foot buffer requirement for transfer only facilities such as S. Rotondi's Transfer Station. In light of the foregoing, the documentation included in the NJDEP's motion appendix at pages Dma 1 to Dma 98 is not appropriately considered as part of the administrative record on the NJDEP's adoption of the challenged regulation, inasmuch as that

information has no relevance, materiality or correlation to the agency's promulgation of the arbitrary and scientifically unsupported regulation under appeal.

8. In addition, the NJDEP's pending motion seeks to add a number of documents consisting of field investigation assignment reports issued by the NJDEP during the period June 14, 2000 to July 21, 2000 concerning odor complaints registered to the NJDEP by neighbors of a vegetative waste composting facility operated by Nature's Choice Corporation in White Township, Warren County, New Jersey. The facility in question is not a vegetative waste transfer facility, rather it is a composting facility. Because the operation and function of a composting facility is entirely different from that of transfer only facilities, these documents are irrelevant and immaterial to the NJDEP's action in adopting the challenged 1,000-foot buffer zone requirements for transfer only facilities. Consequently, these documents should not be included in the administrative record in this appeal.

9. The last document included in the NJDEP's motion appendix is a purported NJDEP internal memorandum dated June 5, 2002. It concerns a site visit by two agency personnel to S. Rotondi's Transfer Station on or about May 30, 2002. Therein, this memorandum contended that the agency personnel detected "odor emanating from grass clippings on site." This memorandum does not contend that the odors allegedly detected on that date had emanated off-site, as it confirms the "odors" were detected on-site. Moreover, the NJDEP personnel state they canvassed the neighboring streets to the Transfer Station, yet record no odor detected there. The memorandum confirms they visited the Transfer Station on that date "to determine whether the facility generally agreed with the application for general approval submitted

by Dewling Associates, Inc.". The vague and evidentially unsupported statement that odor emanated from grass clippings on-site was not triggered by any complaint registered to the NJDEP by any business or residence neighboring the Transfer Station. Importantly, no field investigation assignment report was undertaken or issued by the NJDEP in response to this memorandum. Further, no notice of violation was ever issued by the NJDEP to S. Rotondi arising out of the May 30, 2002 site inspection, and no other action with respect thereto was taken by the agency.

10. The NJDEP's statement of items comprising the record and motion appendix contains no record of any complaint against S. Rotondi's Transfer Station, during its more than thirteen years of operation, relating to odor-based air pollution caused by the acceptance of grass clippings at this facility. This constitutes substantial credible evidence that the Transfer Station has operated, and will continue to do so in the future, without creating any odor problems or air pollution. The simple fact that the NJDEP was unable to produce any record of any odor problem for this facility, or any other vegetative waste transfer facility, establishes that there is no scientific or evidential support for the establishment of the 1,000-foot buffer zone requirement challenged by S. Rotondi in this appeal.

I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

NEIL P. MULVEY

Dated: November ____, 2003

#199991 v1 - Neal P. Mulvey's Opposition Certification

Pra 24a

I certify that the foregoing statements made by me are true. I am aware that if any of the foregoing statements made by me are willfully false, I am subject to punishment.

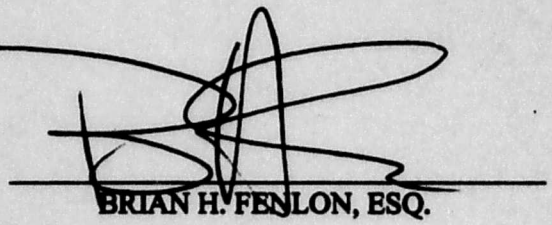
NEIL P. MULVEY

Dated: November 4, 2003

#199991 v1 - Neil P. Mulvey's Opposition Certification

CERTIFICATION PURSUANT TO R.1:4-4(c)

I hereby certify that Neil P. Mulvey hereby acknowledged the genuineness of his signature and that this document, or a copy with an original signature affixed, will be filed if requested by the court or any party.



BRIAN H. FENLON, ESQ.

DATED: November 6, 2003

#200332 v1 - Neil Mulvey Facsimile Signature Certification

State of New Jersey

OFFICE OF ADMINISTRATIVE LAW

33 Washington Street
Newark, NJ 07102
(973) 648-7248

A copy of the administrative law judge's decision is enclosed.

This decision was mailed to the parties on NOV 20 2003

State of New Jersey
OFFICE OF ADMINISTRATIVE LAW

TRANSCRIPT
ORAL INITIAL DECISION
OAL DKT. NO. ESW 9656-02

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION,
DIVISION OF SOLID WASTE AND HAZARDOUS WASTE,
Petitioner,

v.

WPAR, INC.
Respondent.

Caroline Vachier, Deputy Attorney General, for petitioner
(Peter C. Harvey, Attorney General of New Jersey, attorney)

Arthur Bergman, Esq., for respondent
(Sokol Behot& Fiorenzo, attorneys)

Record Closed: October 31, 2003 Decided: November 13, 2003

This is a transcript of the administrative law judge's oral initial decision rendered pursuant to *N.J.A.C.* 1:1-18.2

BEFORE **STEPHEN G. WEISS**, ALJ:

Let me convene the proceedings. This is the day which I had scheduled for delivering an oral decision in the captioned matter. I'm rendering an oral decision today in conformance with the OAL rules which permit that to be done. A transcript of my oral

decision will be prepared and sent out within fifteen days of the date of the decision. Of course, counsel will get a copy of that transcript.

This matter was originally transmitted to the Office of Administrative Law by the agency in November 2002 as a result of the filing of a request for a hearing by the petitioner, WPAR, Inc. challenging the agency's denial earlier that year – I think in February 2002 – of a request for a minor modification of its general Class B recycling center approval. The denial was predicated on the Department's findings that: one, there was a requirement that there be a 1000 foot buffer between on-site areas where grass was received and areas of human use or occupancy and in this case that 1000 foot buffer had not been provided; and secondly, reference to the pendency of a proposed amendment to *N.J.A.C.* 7:26A-4.5(a) which memorialized the 1000 foot buffer requirement vis-à-vis receipt of grass. The matter was the subject of oral argument before me I believe at the end of August of this year. Decision was reserved in connection with a motion for summary decision that had been made by the agency for me to determine as a matter of law if it was entitled to favorable decision dismissing the appeal by WPAR. I now have reviewed the briefs and considered the arguments that were presented at the oral argument and I'm prepared to render an oral decision at this point.

As I indicated, the case involves a request for a minor modification by WPAR of its recycling center approval and a challenge to the agency's determination to deny it, at least in part, on the failure to provide a 1000 foot buffer on site concerning where grass is received and the distance from areas of human use or occupancy. The agency's denial letter set forth that the application failed to indicate that that buffer requirement had been met. It also made reference, as noted, to then a pending rule amendment which would memorialize that 1000 foot requirement.

WPAR operates a Class A and Class B recycling center in West Paterson. In July 2001 it submitted a minor modification request to its Class B permit for a grass clipping transfer station. On August 9, 2001 the Department issued a Notice of

Deficiency with respect to that application and provided thirty days for WPAR to revise it. On September 15, 2001 the agency sent another letter to WPAR requesting information to complete the application. Having received no response the DEP returned the minor modification request to WPAR on November 8, 2001.

Shortly thereafter, on November 21, 2001, WPAR resubmitted its minor modification request application for a grass clipping transfer operation and described in that application the process which took place at the site concerning the receipt of grass clippings; namely, they would inspect it for contaminants, it would be off-loaded on an impermeable surface and contaminants not initially discovered would then be removed by a employee with or without use of machinery and placed in a dumpster. Clippings would then be loaded by WPAR into a larger transportation vehicle for transportation to the company's composting sites.

On February 20, 2002, the DEP issued a denial letter with respect to the minor modification request. In that denial the agency explained that the Department's policy required a 1000 foot buffer zone be maintained between any on-site areas where grass is received and any areas of human use or occupancy. That denial letter is Exhibit D to the Hansel certification. That is the determination which was appealed as a contested case and transmitted to the OAL.

Under the OAL rules, a party may move for summary decision upon any or all of the substantive issues in the case and the ALJ may rule in favor of the motion where the papers filed, along with any supporting affidavits, show that no genuine issue as to any material fact exists and that the moving party is entitled to a decision as a matter of law. *N.J.A.C.* 1:1-12.5(b). Our summary decision rule essentially tracks the New Jersey Court Rules concerning summary judgments. In the landmark case of *Brill v. Guardian Life Insurance Co.*, 142 *N.J.* 520 (1995), the New Jersey Supreme Court explained that when making a summary decision analysis the trier of fact, the ALJ in this case, has to determine whether the evidence presents sufficient disagreement to require a hearing, or whether it is so one-sided that one party must prevail as a matter

of law. Therefore, a court should deny a motion only where the party opposing the motion has come forward with evidence that creates a genuine issue of material fact. An ALJ can summarily dispose of a contested case without plenary hearing in accordance with that analysis and this has happened on many occasions.

In this case we are involved with an application for a permit modification. There are several classes of permits that the Department has designated concerning recyclable materials, A, B, C and D, and they are codified in *N.J.A.C.* 7:26A-1.3. I just make that reference and won't read into the record what those definitions, or those explanations as to different classes are. In this case the agency, as I previously indicated, had in August 2001 issued a Notice of Deficiency letter raising concerns with respect to various sections of the Administrative Code which apply to companies of this sort. The primary concern later articulated by the Department had to do with the 1000 foot buffer zone requirement which was contained in a policy that the agency had not yet published at that point, and it is not clear exactly how soon thereafter it was published. The deficiencies noted by the agency in August 2001 did not include the 1000 foot buffer, but in reference to the resubmission application which came in November, the agency, at that point, took a look at the 1000 foot buffer zone requirement. In its February 20, 2002 denial it specifically made reference to the fact that there was now a policy requirement for the 1000 foot buffer zone, and on its face the application did not indicate that was met. There is no dispute in this case that there is no 1000 foot buffer. I recall from counsel's oral argument that it is 400 or 500 feet, I believe.

In addition to making references to the 1000 foot buffer zone requirement in its February 2002 denial, the agency also referenced a pending proposed rule amendment to *N.J.A.C.* 7:26A-4.5(a) and indicated that it anticipated that rule change would be adopted as a regulation by May 2002. That reference also may be found in Hansel's Certification, Exhibit D. The agency argues that WPAR should have been aware of the buffer zone requirement even when it first applied because it was not new and in fact, a similar rule had been promulgated in 1996 which pertained to facilities that compost

recyclable material, *N.J.A.C.* 7:26-4.5(a)15. In 2002, as the Department noted in its denial letter, it had proposed another amendment which would cover the WPAR site. At that point, in February 2002, the rule had not been adopted – it had simply appeared in the New Jersey Register so that opportunity to comment on it could be made. Thereafter, that 1000 foot buffer rule was adopted and, indeed, I am informed by counsel for the agency that the regulation is presently under challenge in the Appellate Division by another operator as being arbitrary and capricious, as well as in violation of various state and federal constitutional provisions. That case is *S. Rotundi & Sons v. NJDEP*, Superior Court, Appellate Division, Dkt. No. A-1819-02T1. Counsel have informed me the case is still pending and that there has not yet been submission of briefs on the merits.

The major issue before me is to determine whether the 1000 foot buffer zone requirement as set forth in the Department's Technical Manual (which, by the way, is Exhibit C to the Bartle Certification), is an enforceable policy or whether it gets into what we would describe as a rule or regulation requiring adoption in some manner other than a technical manual. In order to make that determination I believe it necessary to explore the nature of a rule and its effect on administrative policy-making generally for agencies are afforded great latitude in selecting the appropriate procedures to effectuate their regulatory duties and statutory goals. Of course, the landmark case is *Metromedia, Inc. v. Director Division of Taxation*, 97 *N.J.* 313 (1984). Also see the decision in *St. Barnabas Medical Center v. New Jersey Hospital Rate Setting Commission*, 250 *N.J. Super.* 132 (App. Div. 1991).

However, the flexibility given to an agency does not permit it to overlook the requirements of the Administrative Procedure Act (APA). Therefore, an agency's discretion, as in *Metromedia* and other cases as pointed out, is not unlimited. While there is wide discretion to select a procedure the agency believes is best suited to advance its regulatory objectives, there are parameters. The APA was enacted by the New Jersey Legislature to create and define the procedures to be used by agencies and departments of the agencies in their rulemaking activities. *N.J.S.A.* 52:14B-1 to -15

contains the statutory language. The Act requires compliance with its standards and guidelines for any rule promulgated by an agency to be considered valid, but also specifically provides for procedures prior to the adoption, amendment or repeal of any rule, except as may be otherwise provided.

In that respect, the DEP argues that an exception does apply with regard to the development of "technical manuals". Thus, another statute, *N.J.S.A.* 13:1D-111, provides the Department with the authority to develop a technical manual for classes or categories of permits and Subsection D provides: "Adoption of a technical manual or revision thereto shall not be subject to the notice and publication requirements of the Administrative Procedure Act". Thus, the Department argues in this case that since the 1000 foot buffer requirement is contained in the technical manual, it therefore was not required to be adopted in accordance with the APA.

The APA, however, defines an administrative rule as being, unless otherwise modified, each agency's statement of general applicability and continuing effect that implements or interprets law or policy or describes the organization, procedure or practice requirements of an agency. If the action falls within the contours of a rule it must comply with the specific procedure outlined in the APA. In that respect see the *Metromedia* decision at pages 330-331 and at page 334. An important reason for that requirement is that there should be general fairness surrounding the promulgation of rules and regulations, and one way to carry that out is to provide the kind of due process that the APA is designed to provide in terms of notice to the public and an opportunity to be heard. Typically, therefore, when an agency action deals with broad policy issues affecting a significant segment of the regulated or general public, rulemaking is implicated and I would refer counsel to the decision in *Crema v. Department of Environmental Protection*, 94 *N.J.* 286 (1983), one year before the Metromedia decision.

While a rule adoption must follow the APA, agency action other than rulemaking may be undertaken as long as an agency has been given the specific statutory authority

to do so, such as the option of promulgating a technical manual. In determining whether or not an agency action is a rule requiring APA compliance, the Supreme Court in *Metromedia* adopted a six factor test. It stated that you could draw a conclusion that the agency was engaged in rulemaking if it appears that the following are present. First, the proposed action is intended to have wide coverage encompassing a large segment of the regulated or general public rather than an individual or a narrowly selected group; second, it is intended to be applied generally and uniformly to all similarly situated persons; third, it is designed to operate in future cases, that is to say, prospectively; fourth, it prescribes a legal standard or directive that is not otherwise expressly provided by, or clearly and obviously inferable from, the enabling statutory authority; fifth, that it reflects an administrative policy that was not previously expressed in any official or explicit agency determination, adjudication or rule or (b) constitutes a material and significant change from a clear past agency position on the identical subject matter; and, sixth, reflects a decision on administrative regulatory policy and the nature of the interpretation of law or general policy. That's the teaching in *Metromedia*, and I also refer counsel to the more recent decision in *Hampton v. Department of Corrections*, 336 *N.J. Super.* 520 (App. Div. 2001). These six factors, either singly or in combination, have to be applied to each individual case to determine whether the agency action should have been rendered through rulemaking. As the Supreme Court said in *Metromedia*, "if the several relevant features that typify administrative rules and rulemaking weigh in favor of action that is quasi-legislative rather than quasi-judicial, that balance should determine the procedural steps required to validate the ultimate agency action".

In this case, setting aside the potential existence of an issue that I talked to counsel about before I began the oral decision portion; namely, a fire control plan, the issue that was addressed in the briefs seems to me to be strictly legal. What is the applicable standard to be applied and did the Department apply it correctly? It's apparent that WPAR transfers grass clippings and may even process them on occasion, such as removing impurities, but I don't see any allegation that WPAR composts the materials at the West Paterson facility. At the time WPAR resubmitted its

application in November 2001, the applicable regulation, *N.J.A.C.* 7:26A-4.5(a)6 only required a buffer zone for facilities that composted grass clippings, not those that merely processed or stored the materials. Therefore that regulation, which preexisted the application, did not in my judgment apply to the facility, although the agency argues that it did.

Another argument raised by the Department for applying the 1000 foot buffer zone standard is, of course, its inclusion in the technical manual which had been specifically exempted from the requirements of the APA with respect to notice and publication prior to adoption.

The purpose of a technical manual, according to the provision in Title 13, is to define the procedural and substantive requirements and clarify departmental policies and interpretations. In my judgment, although the Legislature therefore has given the Department authorization to adopt technical manuals without following the APA, it has not given the Department authorization to promulgate rules without following the APA. I therefore do not believe that the existence of the technical manual, alone, would resolve this matter. I still have to determine whether the 1000 foot buffer zone requirement should have been adopted as a rule and should have been promulgated in accordance with the six factor test established in *Metromedia*.

In that respect, I think the Title 13 language refers to the authority to issue a manual, but I don't think it trumps the APA in terms of what that manual says in terms of whether the policies articulated therein should have been adopted as a rule. So, in that regard I have to examine whether the 1000 foot buffer requirement does meet all or most of the *Metromedia* standards. With respect to the first standard, the buffer zone requirement in the manual is based on the size of the facility; it applies to every recycling facility in New Jersey that falls into that category, which is a large segment of the public that the requirement can possibly apply to. Thus, I think the first standard with regard to the scope of the applicability set forth in *Metromedia* is met in this case. With regard to the second, the requirements apply in the same manner to any entity

seeking a permit to operate a recycling facility, therefore, it's application not only is to a wide segment of the regulated public but it can also be applied uniformly.

Thirdly, the buffer zone requirement is applied to applications when submitted and if it's incomplete the technical manual requirement applies to it. The purpose, as I have said, of technical manuals is to clarify policies and interpret and define procedural and substantive requirements. In my view, the buffer zone 1000 foot standard cannot be limited to consideration that is simply a clarification of policy or an interpretation or a definition of a requirement for a completed application. If the buffer zone was only a clarification, interpretation or definition of a requirement, the application could not have been complete on November 21, 2001 and it was. The buffer zone requirement in my judgment is a legal standard that must meet the requirements of the *Metromedia* test. It goes beyond a mere clarification or interpretation.

The initial application that was returned to WPAR as incomplete was submitted prior to the purported effective date in the manual, September 2001, and, indeed, I don't believe the February 2002 denial even made reference to the manual at all. There was an argument by the Department that although the first application for minor modification came in July 2001 since it was incomplete, had to be returned, and was not resubmitted until November 21 – the publication in the interim (September 2001) made it applicable.

It's not clear when that manual was even published, nor how a manual of that sort becomes known to the regulated public in the first place. It has a date of September 2001, but that's all it has on it. It leaves me in the dark in terms of the exact date of its publication and how the regulated public was even to become aware of it - so it has that deficiency as well.

. The major deficiency I find, however, is that the 1000 foot buffer clearly is a legal standard of general application that refers to all of the permitees or proposed permitees within the scope of the regulation, and imposing it by way of a technical manual without

meeting the requirements of the APA is inappropriate. In short, the only possible conclusion that I can come to from the application of *Metromedia* to the requirements of the buffer zone in the technical manual is the fact that the Department was engaged in rulemaking and as such was required to follow the APA.

Again, although there is a specific statutory exemption related to technical manuals and the need to follow the APA, the requirement - which I'm holding to be a "rule" – of the 1000 foot buffer zone seems to me, for the reasons I've stated, to fall outside the scope of that exemption. Accordingly, the State's motion for summary decision on the basis of the 1000 foot buffer requirement contained in the technical manual is **DENIED**.

There was no cross-motion by the WPAR for summary decision in its favor. In fact, as Mr. Bergman corroborated when I questioned counsel before we started, summary decision may not be proper for, among other reasons, because there is a fact question, i.e., is the 1000 foot buffer arbitrary and capricious? That is an issue involved in the *Rotondi* case. However, putting aside the fire control plan question (which I am told will be addressed subsequently by the agency), there doesn't seem to me to be any reason for a hearing. Thus, I will treat Mr. Bergman's position as a cross-motion for summary decision - that if the 1000 foot buffer requirement was not adopted as a rule, as it should have been in accordance with the APA, it is therefore invalid and cannot be applied to WPAR's application for a minor modification. Therefore, I'm going to grant summary decision, as it were, in favor of WPAR on that issue.

This determination will be transcribed in written form and will be sent to the parties and, of course, will be sent to the agency for review since it's only an initial decision. Whether or not I retain the case for other purposes is still somewhat up in the air. It probably makes sense for counsel to more closely examine into the record of this case to see whether the fire control plan or any other issues remain, and if you agree they do, then somebody has to determine it either at the agency level or at the OAL. My suggestion is that with this decision going to the agency for its review, it also look at

the existence of any other issues that might be in the case and possibly could be resolved at that point – I don't know – that's something that we really didn't talk about at oral argument or at any time during the pendency of this matter before me.

What I'm going to do then is issue a summary decision to the agency on the issue of the 1000 foot buffer. The tape will now be transcribed, I will draw specific attention to the fact that there are other issues requiring they further be addressed, that the parties might be able to consent to their existence and/or work them out and if not, then the agency either can decide it itself or return it to the OAL for an additional hearing as the case may be. But as far as the 1000 foot buffer zone requirement is concerned, which is the major predicate for the agency's action in this case, for the reasons I've stated I'm denying the State's motion, and granting the cross-motion by WPAR on that issue.

Do counsel have any questions concerning my decision?

Counsel: No. Thank you, Your Honor.

As I've said, under the rule I have fifteen days which will take us to the middle of November to get the written transcript out.

That concludes my oral determination in this case.

END OF TRANSCRIPT

OAL DKT. NO. ESW 9656-02

I, Marie V. Hackett, certify that the foregoing is a true and accurate transcript, to the best of my ability, of Judge Stephen G. Weiss' oral decision rendered in the above matter on October 31, 2003.

I hereby **FILE** my initial decision with the **COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION** for consideration.

This recommended decision may be adopted, modified or rejected by the **COMMISSIONER OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION**, who by law is authorized to make a final decision in this matter. If the Commissioner of the Department of Environmental Protection does not adopt, modify or reject this decision within forty-five (45) days and unless such time limit is otherwise extended, this recommended decision shall become a final decision in accordance with *N.J.S.A.* 52:14B-10.

Pra 39a

OAL DKT. NO. ESW 9656-02

Within thirteen (13) days from the date on which this recommended decision was mailed to the parties, any party may file written exceptions with the **DIRECTOR, OFFICE OF LEGAL AFFAIRS, DEPARTMENT OF ENVIRONMENTAL PROTECTION, 401 East State Street, 4th Floor, West Wing, PO Box 402, Trenton, New Jersey 08625-0402**, marked "Attention: Exceptions." A copy of any exceptions must be sent to the judge and to the other parties.

November 13, 2003
DATE

Marie V. Hackett
MARIE V. HACKETT, Secretary

November 13, 2003
DATE

STEPHEN G. WEISS, ALJ

Receipt Acknowledged:

11/18/03
DATE

Sharon Lynbuck
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Mailed to Parties:

ACTING DIRECTOR AND CHIEF ADMINISTRATIVE LAW JUDGE

NOV 2 0 2003
DATE

OFFICE OF ADMINISTRATIVE LAW

\mvh

Pra 40a

James E. McGreevey
Governor

State of New Jersey
Department of Environmental Protection

Bradley M. Campbell
Commissioner

Office of Legal Affairs
401 E. State Street,4th Flr., PO Box 402
Trenton, New Jersey 08625

Office of Administrative Law
Attention: Librarian
9 Quakerbridge Plaza
Quakerbridge Road
P.O. Box 049
Trenton, New Jersey 08625

RE: New Jersey Department of Environmental Protection/Division of Solid & Hazardous Waste, Petitioner, v. WPAR, Inc., Respondent.
OAL Dkt. No. ESW 9656-02N

Dear Librarian:

Enclosed please find an Order in the above-referenced matter which was signed by Bradley M. Campbell, Commissioner, Department of Environmental Protection.

Sincerely,

Joan Brown

Joan W. Brown

Enclosure
cc: Service List

Pra 41a

State of New Jersey
Department of Environmental Protection
PO Box 402
Trenton, NJ 08625-0402

James E. McGreevey
Governor

Bradley M. Campbell
Commissioner
Tel. # (609) 292-2885
Fax # (609) 292-7695

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION, DIVISION OF SOLID WASTE AND HAZARDOUS WASTE,

PETITIONER,

v.

WPAR, INC.,

RESPONDENT.

FINAL DECISION

OAL DOCKET NO. ESW-9656-02N
DEP DOCKET NO. 1616001182

Without adopting the reasoning presented therein the decision of the ALJ is affirmed.

IT IS SO ORDERED

DATE: January 2, 2004

Bradley M. Campbell
Commissioner
New Jersey Department of
Environmental Protection

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State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF SOLID WASTE MANAGEMENT
CN 414, Trenton, NJ. 08625-0414
(609) 530-8591
Fax # (609) 530-8899

John V. Czapor
Director

SMALL SCALE SOLID WASTE FACILITY PERMIT

Under the provisions of N.J.S.A. 13:1E-1 et seq. known as the Solid Waste Management Act this Permit is hereby issued to:

S. ROTONDI & SONS, INC.

FACILITY TYPE:	Vegetative Transfer Station
LOT NO(S).:	16
BLOCK NO(S).:	140
MUNICIPALITY:	Borough of Chatham
COUNTY:	Morris
CAPACITY:	98 tons per day
FACILITY REGISTRATION NO.:	1405C1SP01 / 1405 00100 1
EXPIRATION DATE:	10/95

This Permit is subject to compliance with all conditions specified herein and all regulations promulgated by the Department of Environmental Protection as same may be amended in the future. Any references herein to specific regulations include any future amendments thereto.

This Permit shall not prejudice any claim the State may have to riparian land, nor does it permit the Permittee to fill or alter or allow to be filled or altered, in any way, lands that are deemed to be riparian, wetlands, stream encroachment areas or flood plains, or that are within the Coastal Area Facility Review Act (CAFRA) zone or are subject to the Pinelands Protection Act of 1979, nor shall it allow the discharge of pollutants to waters of this State without prior acquisition of the necessary grants, permits or approvals from the Department of Environmental Protection.

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Compliance with the terms of this Permit does not relieve the Permittee of the obligation to comply with all applicable state and federal statutes, rules and other permits.

Failure to comply with all of the conditions specified herein may result in the revocation of this Permit and/or other regulatory or legal actions which the Department is authorized to institute by law.

This Solid Waste Facility Permit is non-transferable without approval from the Department pursuant to N.J.A.C. 7:26-2.7(e).

OCT 3 1990

Date of Signature

Edward J. Londres, P.E.
Assistant Director

Small Scale Solid Waste Facility Permit for S. Rotondi and Sons, Inc., Chatham, Morris County, New Jersey, Facility Identification Number 1405C1SP01.

This Small Scale Solid Waste Facility Permit which includes the Certificate of Approved Registration and Engineering Design Approval (hereinafter "Permit") is conditioned upon the compliance with all applicable statutes, rules, regulations and ordinances, and implementation of the following:

1. Permitted Waste Types

Only the following waste materials may be accepted for transfer at this facility:

TYPE	WASTE
23	Vegetative Waste (exclusively leaves and grass)

2. Prohibited Waste Types

The following materials are specifically prohibited for disposal at this facility:

TYPE	WASTE
10	Municipal (household, commercial and institutional)
12	Dry sewage sludge
13	Bulky waste
23	Vegetative waste (except as referenced above in condition #1)
25	Animal and food processing waste
27	Dry industrial waste
72	Bulk liquid and semi-liquid
73	Septic tank clean-out waste
74	Liquid sewage sludge
—	Hazardous waste (as defined at N.J.A.C. 7:26-1.4 and as set forth at N.J.A.C. 7:26-8)
—	Medical Waste (as defined in N.J.A.C. 7:26-3A.5(b))

In accordance with N.J.S.A. 13:1E-99.21, leaves which are accepted for transfer at this facility must be delivered and recycled at a DEP permitted or approved compost facility, agricultural or horticultural lands to be mulched into the soil, or a recycling center authorized or approved by the Department to accept leaves.

3. Referenced Engineering Plans

a. The Engineering Design prepared by Robert C. Kirkpatrick, New Jersey License Number 11359, dated June 1988, latest revision dated June 8, 1990.

b. The Permit application dated September 29, 1989 along with the engineering narrative.

c. The Operation and Maintenance Manual dated June 1990.

In case of conflict, the most recent revisions and supplemental information, approved by the Department, shall prevail over prior submittals and designs, and the conditions of this Permit shall supersede those of the engineering design referenced above.

4. Stream Encroachment Permit

The Permittee shall submit to the Division of Coastal Resources an application for a stream encroachment permit. A copy of the application shall be submitted to this Division within thirty (30) days of the date of this Permit as proof of filing. Upon receipt of a stream encroachment permit, a copy shall be submitted to this office. The Division of Coastal Resources may be contacted at (609) 777-0456.

5. Facility Staffing

The facility shall maintain sufficient staff to ensure the proper and orderly operation of all system components, along with the ability to handle all routine facility maintenance requirements.

A fully trained and qualified foreman or supervisor designated and authorized by the Permittee to direct and implement all operational decisions shall be present at the facility during all operating hours.

6. Facility Personnel Training

All personnel who are directly involved in facility waste management activities or who operate, service or monitor any facility equipment, machinery or system shall successfully complete an initial program of classroom or on-the-job training that includes instruction in the operations and maintenance of the equipment, machinery and systems which teaches them to perform their duties in a manner that ensures the facility's compliance with the requirements of N.J.A.C. 7:26 and the conditions of all Departmental permits issued to the facility.

The training program shall ensure that facility personnel are able to effectively respond to any equipment malfunction or emergency situation which may arise. The training program shall provide instruction in the use of safety equipment, procedures for inspecting and repairing facility equipment, machinery and monitoring systems and the procedures to be followed during planned or unplanned shutdown of operations.

7. Certification of Construction

Prior to operation, the Permittee shall retain the services of a licensed professional engineer registered in the State of New Jersey who shall certify in writing to the Department that he/she has personally examined each major phase of the facility construction and that the facility has been constructed in accordance with this Permit, the documents, statements, designs and plans submitted in whole or as part of the application as approved by the Department.

All certifications shall bear the raised seal of the licensed professional engineer, his/her signature, and the date of certification. The certification shall include the following statement: "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment".

The certification of construction shall be submitted to the Department within thirty (30) days of the date of this Permit.

8. Waste Delivery Schedule

Waste shall be accepted for processing at the facility in accordance with the following schedule and shall not exceed the maximum approved capacities specified in condition 14:

Oct. through December, six (6) days a week, (Mon-Sat), 9:00 am to 4:00 pm
Apr. through September, five (5) days a week, (Mon-Fri), 9:00 am to 4:00 pm

Waste deliveries to the facility shall be scheduled in such a manner as to minimize truck queueing on the facility property. Under no circumstances shall delivery trucks accessing or exiting the facility be allowed to back-up or queue on any public road.

9. Vehicle Registration N/A.

The Permittee shall allow only collection and transfer vehicles properly registered with the Department in accordance with N.J.A.C. 7:26-3, to transport solid waste to and from the facility.

10. Unauthorized Waste

By the start of commercial operations, a program shall be established and maintained to detect and remove unauthorized waste from the waste stream entering the facility which, at a minimum, shall include the following:

a. Continuous visual monitoring of the discharged waste shall be conducted by the facility personnel. Any suspected unauthorized waste shall be removed from the processing stream.

b. Any suspected hazardous waste, waste-containing drums, or liquids found in a load accepted at the facility shall not be returned to the generator. Such material shall be segregated and stored in a secured manner and its discovery shall immediately be brought to the attention of the NJDEP Environmental Action Line (609) 292-7172 (available 24 hours and weekends/holidays). Such waste shall be handled as hazardous waste for storage and disposal purposes, unless otherwise directed by the Department. The Permittee shall apply to obtain an EPA ID Number as a hazardous waste generator in order to facilitate disposal of this type of waste.

Any negligent or known processing of any hazardous waste or other unauthorized waste, shall be cause of revocation of this Permit.

11. Waste Retention Time

No waste material shall be allowed to remain at this facility for more than twenty-four (24) hours.

12. On-Site Traffic Control

On-site traffic control measures shall be implemented to provide for orderly vehicle movement on the facility grounds. The measures implemented shall include the appropriate use of lane delineation and signs. Delivery and transfer vehicles shall queue, as necessary, in the areas within the facility specifically identified for that purpose.

Transfer or collection vehicles shall not be parked or queued on public streets or roads. All on-site roads subject to truck traffic associated with the transfer station operations shall be constructed, paved and maintained to withstand heavy traffic usage.

13. Traffic Control

If the additional traffic generated by the operation of this facility results in congestion of surrounding roads, corrective measures shall be developed, submitted to the Department for approval and implemented to alleviate any traffic related problems.

14. Waste Acceptance and Processing Rates

At no time shall solid waste be delivered to the facility at a rate exceeding the facility's capacity to process the waste. The facility shall not process solid waste in excess of 98 tons per day.

15. Conformance with Resolution

This Permit is conditioned upon conformance with the Chatham Borough Board of Adjustment Resolutions dated October 26, 1988 and February 22, 1989 with the exception of volume of waste being processed at the facility, (see condition number 14).

16. Maintenance and Repair

Through an effective inspection, planned maintenance, repair and parts replacement program, the facility systems and related appurtenances shall, at all times, be kept in proper operating order. As part of this program, the Permittee shall maintain an inventory of spare parts and replacement equipment to ensure continued operation of the facility.

The results of all inspections shall be recorded in a bound inspection log. These records shall include the date and time of the inspection, the name of the inspector, a notation of observations, recommendations and the date and nature of any repairs or other remedial action taken. These records shall be made available for inspection by the appropriate representatives of the Department upon request.

17. Wastewater Disposal

Prior to the disposal of any wastewater, the Permittee shall acquire all necessary approvals/permits from the Division of Water Resources. Submittal shall be made to the Division of Water Resources within thirty (30) days of the date of this Permit and a copy sent to this Division. Upon receipt of approval, a copy shall also be submitted to this Division.

18. Housekeeping

Routine housekeeping and maintenance procedures shall be implemented within the facility to prevent the accumulation of dust and debris and to maintain general cleanliness in the working environment.

All areas where solid waste has come in contact shall be washed daily. In the event of freezing weather, the areas shall be cleaned by utilizing high pressure steam or as otherwise approved by the Department.

Facility exterior grounds shall be maintained in a manner free of litter and debris. All paved areas on-site shall be swept on a routine basis and the entrance area shall be policed regularly to prevent the accumulation of dirt and debris on the public roads.

19. Processing Equipment

The waste processing equipment at this facility shall be consistent with that as described in the engineering report entitled "Rotondi and Sons Leaf Transfer Station Application Submission Requirements", including a minimum of two (2) 65 cubic yard capacity transfer trailers and one (1) 8 cubic yard compactor.

20. Odor Control

In the event natural ventilation is not effective in preventing odor associated with the solid waste, a non-toxic deodorant or equivalent as approved by this Division shall be employed to mitigate odors so that they are not detectable off-site.
The operation of this facility shall not result in odors associated with solid waste being detected off-site in any area of human use or occupancy.

21. Vermin Control

The Permittee shall institute and maintain an effective vermin control program at the facility, directed by a qualified applicator of pesticides as set forth in the New Jersey Pesticide Control Code N.J.A.C. 7:30.

22. Noise Control

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Noise control shall be implemented to ensure that sound levels generated by the facility operation, including vehicles, shall not exceed the standards set forth at the New Jersey Noise Control Code N.J.A.C. 7:29.

Within thirty (30) days from the date of this Permit, the Permittee shall submit to this Division a certification by a licensed professional engineer that the sound level generated by facility operation does not exceed standards of New Jersey Noise Control Code N.J.A.C. 7-29. The

certification shall include sound readings at any current receptor point during facility operation.

The Permittee shall act to prevent the continued acceptance of any vehicle not equipped with properly operating muffler systems or those which create excessive noise, by notifying the vehicle owners of the potential violation and by reporting these vehicles to the appropriate local authorities.

23. Fire Protection

An adequate water supply and/or fire fighting equipment shall be available on-site or on call to extinguish any and all fires. Fire-fighting procedures shall be posted, and shall include the telephone numbers of local fire, police, ambulance and hospital facilities.

24. Safety Procedures

A copy of the operating safety procedures shall be posted on site. The Permittee shall follow the Occupational Safety and Health Administration (OSHA) standards in the operation of this facility for the safety of employees and for other persons entering the premises.

25. Operations and Maintenance Manual

The facility shall be operated and maintained in accordance with the approved O & M manual. A copy of the approved O & M manual shall be maintained at the facility at all times for reference. Any subsequent changes shall not be implemented until approved by the Department.

26. Monthly Summaries

The permittee shall maintain daily records of wastes received and submit monthly summaries to the Division of Solid Waste Management in accordance with N.J.A.C. 7:26-2.13. Monthly summaries of the records shall be submitted by the Permittee to the Division of Solid Waste Management, Bureau of Registration and Permits Administration before the 20th day of each month following the month for which the information was recorded.

27. Plans On-Site

One complete set of the approved engineering plans, the engineering report, the operation's records, the O & M manual, and these conditions shall be kept on file at the facility, and shall be available for inspection by Departmental personnel or its designated representatives.

28. Emergency Provisions for Equipment Breakdown or Power Failure

In the event of a facility outage or other significant malfunction, which result in the facility's inability to process waste at a rate equal to or exceeding the rate of incoming waste, the operator shall immediately report to the N.J.D.E.P., Division of Solid Waste Management at (609) 530-8597. At no time shall transfer or collection vehicles be parked or queued on public roads. In the event the queuing area within the facility becomes depleted, all other collection vehicles shall be rerouted for

direct disposal to the registered disposal facility identified by the Department through an Emergency Waste Flow Redirection Order established by the Department and Board of Public Utilities pursuant to N.J.A.C. 7:26-6.7.

29. Right of Entry

The Permittee hereby agrees and authorizes Departmental personnel or its designated representatives to make whatever inspections and examinations of all premises occupied by the facility which may be impacted by the activities authorized by this Permit whenever these representatives, in their discretion, consider such an inspection or examination necessary to determine the extent of compliance with any and all conditions of the Permit. Any refusal to allow entry to the Department's representatives shall constitute grounds for either suspension or revocation of this Permit.

30. Duration of Permit

This Permit is valid for a maximum period of five (5) years from the effective date of the permit subject to approval pursuant to N.J.A.C. 7:26-16. This Permit may be renewed, upon proper application pursuant to N.J.A.C. 7:26-2.7, provided that the operation will meet all Departmental requirements that may exist when the renewal application is made.

31. Conformance with the Solid Waste Management Plan

This Permit is conditioned upon conformance with all requirements of the Morris County District and State Solid Waste Management Plans as adopted and promulgated pursuant to N.J.S.A. 13:1E-1 et seq. as amended, and all other District Solid Waste Management Plans, modifications and waste flow requirements specified at N.J.A.C. 7:26-6.5.

Failure to comply with any or all limitations heretofore mentioned will result in the Department seeking relief under N.J.S.A. 13:1E-1 et seq., the Solid Waste Management Act. Specifically, each day of failure to so comply shall constitute a separate violation on the basis of which a fine shall be assessed and may result in loss of operating authority, pursuant to N.J.S.A. 13:1E-12.

The issuance of this Permit and the conditions of operation identified herein shall not be interpreted as relieving the applicant of his/her responsibility to secure and maintain all other applicable Federal, State and local permits or similar forms of authorization relating to the construction and operation of this facility.

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