

217/524-3300

North Shore Sanitary District
Attn: Brian Jensen
P.O. Box 750
Wm. Koepsel Drive
Gurnee, Illinois 60031

Re: 0971905039 -- Lake County
North Shore Sanitary District – Waukegan
Permit No. 2001-443-DE
Log No. 2001-443
Permit File

Gentlemen:

Permit is hereby granted to North Shore Sanitary District to develop a solid waste management site consisting of 72.24 acres in Section 15, T45N, R12E, 3rd P.M. to store and treat municipal sewage treatment plant sludge by drying and vitrification all in accordance with the application and plans prepared by Donahue & Associates: Said application consisting of the original application, project manual and drawings dated November 26, 2001 and an addendum dated January 8, 2002. Final plans, specifications, application and supporting documents as submitted and approved shall constitute part of this permit and are identified on the records of the Illinois Environmental Protection Agency, Bureau of Land by the permit number(s) and log number(s) designated in the heading above.

Pursuant to Section 39(a) of the Illinois Environmental Protection Act (Act) and 35 Ill. Adm. Code 807.206(a) this permit is issued subject to the standard conditions attached hereto and incorporated herein by reference, and further subject to the following special conditions. In case of conflict between the application and plans submitted and these special conditions, the special conditions of this permit shall govern.

1. This permit is for construction and development only. No waste may be received at the site until such time as an operating permit is issued by the Bureau of Land.
2. The Permittee must notify the Illinois EPA in writing that the development of the site has been completed in accordance with the development permit before a pre-operation site inspection can be conducted on an Operation Permit issued.

3. This permit allows the developing of the following units listed below:

	<u>unit description</u>	<u>approximate size</u>	<u>proposed use</u>
a.	receiving bins (2)	~ 16' dia x 9' high	storage (working capacity 67 cu. yds)
b.	sludge storage bins (2)	~ 20' dia x 46' high	storage (working capacity 452 cu. yds)
c.	vatech sludge dryer	12,800 lbs. H ₂ O/hr.	to increase total solids content to 90%
d.	dry granules truck loading silo	cone 17' high, dia ~ 7'2" at the bottom cylinder ~ 23' dia x 23' high	storage (working capacity 300 cub. yds)
e.	sludge melter	3,160 lbs sludge/hr	to produce a ceramic material
f.	roll-off dumpsters (2)	20 or 30 cubic yards	storage
g.	Lotepro Oxygen generation system	90% by volume O ₂ at 10 psig	to provide oxygen to the melter to control NOX
h.	heat transfer fluid system	16,500,000 BTU/hr	to deliver the necessary energy to dry the sludge
i.	packed tower odor control system	305 908 gpm	to neutralize hydrogen sulfide, methyl mercaptan and dimethy sulfide odors
j.	nitrogen supply system	5000 25000 scfh @ 60 psig	to provide an inert environment at various points in the process
k.	all corresponding pumps, conveyors, elevators, safety systems and other appurtenances		

4. The development permit is issued with the express understanding that the Permittee is developing a facility to accept and treat only municipal sludge from NSSD Clavey Road and Gurnee sewage treatment plants as described in the approved permit application. No other wastes may be accepted at this facility. The permittee may also treat municipal sludge generated on-site at the Waukegan NSSD facility.

5. This permit does not authorize the operation of a "Pollution Control Facility" as described in Section 3.32 of the Illinois Environmental Protection Act (Act). Prior to conducting activities which would classify this site as a "New Pollution Control Facility", the permittee shall obtain a permit modification authorizing such activities. A permit

modification for these activities cannot be granted unless the applicant submits information to adequately demonstrate compliance with Section 39.2 of the Act.

6. The closure plan and cost estimates dated January 8, 2002 and which were received by the Illinois EPA on February 7, 2002, are approved in accordance with 35 Ill. Adm. Code 807.
7. The Permittee(s) shall notify the Illinois EPA's Bureau of Land in writing of its intent to close at least 45 days prior to the date closure is expected to begin. Along with this notification, the Permittee(s) shall submit the procedure and the sampling and analysis plan to be used in demonstrating the area has been properly decontaminated. The Permittee shall not implement this plan without prior written approval from the Illinois EPA's Bureau of Land.
8. The operator shall notify the Illinois EPA within 30 days after receiving the last volume of waste.
9. The operator shall implement the closure plan within 30 days after the site receives its final volume of waste.
10. The operator shall not file any application to modify the closure plan, except as specified in Condition 7 above, less than 180 days prior to receipt of the final volume of waste.
11. Upon completion of closure activities, the operator shall notify the Illinois EPA that the site has been closed in accordance with the approved closure plan utilizing the Illinois EPA's "Affidavit for Certification of Completion of Non-Hazardous Waste Facilities."
12. Any wastes generated at this site sent for disposal, storage, incineration or further treatment elsewhere shall be transported to a permitted solid waste facility utilizing a manifest and licensed special waste hauler. If the waste is certified non-special in accordance with Section 22.48 of the Act, a manifest and licensed special waste hauler is not required.
13. The permittee shall manage all treatment residue including the ceramic material produced during vitrification as waste while on-site. Except as specified below, all ceramic material produced from the municipal sewage treatment plant sludge is subject to the waste management regulations until the Permittee demonstrates through a permit modification that the ceramic material is an effective substitute for commercially available product and ships the material off site for reuse. This demonstration must consider the chemical and physical properties of the waste derived produce versus a virgin product and show that the direct use of the ceramic material and product which contains the ceramic material does not pose additional health or environmental hazards in the resulting use of the product.

The Permittee has demonstrated that the ceramic residual from the sludge melter is not a solid waste when used in the following manner:

- a. as bedding material or trench fill material in conjunction with utility construction projects provided:
 1. it is covered by sufficient uncontaminated soil to support vegetation within 30 days of the completion of filling or covered by a road or structure; and
 2. it meets the classification FA6 (fine aggregate) as defined by IDOT “Standard Specifications for Road and Bridge Construction.”
 - b. As an ingredient in the manufacture of blended cement provided that the cement meets the latest ASTM standard (C595) for blended cement.
14. The Permittee shall perform routine housekeeping as outlined in the approved application. Routine housekeeping measures at a minimum shall include:
- a. inspection and maintenance of the equipment identified in Condition 3 above in accordance with the manufacturer’s recommendations;
 - b. daily sweeping and cleaning of the floor area in the sludge unloading area and truck loading area;
 - c. daily inspection of the storage areas, bucket elevators and screw conveyors for spills and leaks and removal of any waste resulting from spills or releases.
15. In the event of a leak or a spill from a unit specified in Condition 3 above, the Permittee shall remove the unit from service immediately and complete the following actions:
- a. Stop the flow of waste into the unit and inspect the unit to determine the cause of the release;
 - b. Remove all waste as necessary from the unit within 24 hours of the detection of the leak to prevent further release and to allow inspection and repair of the unit;
 - c. Clean up the spilled material upon discovery; and
 - d. Properly dispose of any spilled material and visible contamination.
16. Any treatment residue from the sludge melter which does not conform to the physical and chemical properties described in the application Log 2001-443 shall be managed as a

special waste, unless certified non-special. Regardless, the material must be disposed of as a solid waste.

17. A record of any spills and leaks and the actions taken shall be maintained in the facility's operating records. These records must be available to the Illinois EPA upon request for inspection.
18. Records of all inspection and maintenance shall be maintained as part of the Facility's Daily Operating Log.
19. The Permittee shall also maintain the following information in an operating record:
 - a. The time, date, the reason for the upset that results in an uncombusted/non-classified material being generated and a description of the steps taken to correct the problem.
 - b. Records documenting the proper disposal of any uncombusted/non-classified material.
 - c. A report of any incident in which the local emergency response units were contacted.
 - d. Date, time and cause of any odor complaint which the permittee received.
20. All loading/unloading of wastes shall be accomplished inside the building. The overhead doors shall remain closed except when trucks are entering or leaving.
21. All trucks delivering waste must be tarped.
22. Any modification to the facility shall be the subject of an application for supplemental permit for site modification submitted to the Illinois EPA.
23. This permit is subject to review and modification by the Illinois EPA as deemed necessary to fulfill the intent and purpose of the Environmental Protection Act and all applicable environmental rules and regulations.
24. This permit does not relieve the permittee from the responsibility of obtaining a permit if required by Section 9 of the Illinois Environmental Protection Act.
25. The Permittee shall conduct a visual inspection of incoming wastes from offsite each time a truck is unloaded to ensure that only sewage treatment plant sludge is accepted.

26. The Permittee shall analyze a representative sample of the sewage treatment plant sludge from each sewage treatment plant on a yearly basis for the priority pollutants (total basis) annually or more often if the permittee suspects a change in the waste stream. The Permittee shall do a hazardous waste determination by TCLP analysis if the total concentration of a heavy metal increases by 10% or more. The results of the 1997 sampling shall be used as a baseline.
27. In the event of a fire, spill or explosion, personnel not assisting in the emergency response shall be evacuated to a non-affected area.

The original and two (2) copies of all certifications, logs, reports, and groundwater monitoring chemical analysis forms which are required to be submitted to the Illinois EPA by the permittee should be mailed to the following address:

Illinois Environmental Protection Agency
Reporting and Financial Assurance Unit
Bureau of Land -- #24
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Within 35 days after the date of mailing of the Illinois EPA's final decision, the applicant may petition for a hearing before the Illinois Pollution Control Board to contest the decision of the Illinois EPA, however, the 35-day period for petitioning for a hearing may be extended for a period of time not to exceed 90 days by written notice provided to the Board from the applicant and the Illinois EPA within the 35-day initial appeal period.

Work required by this permit, your application or the regulations may also be subject to other laws governing professional services, such as the Illinois Professional Land Surveyor Act of 1989, the Professional Engineering Practice Act of 1989, the Professional Geologist Licensing Act, and the Structural Engineering Licensing Act of 1989. This permit does not relieve anyone from compliance with these laws and the regulations adopted pursuant to these laws. All work that falls within the scope and definitions of these laws must be performed in compliance with them. The Illinois EPA may refer any discovered violation of these laws to the appropriate regulating authority.

Sincerely,

Joyce L. Munie, P.E.
Manager, Permit Section
Bureau of Land

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