



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
STATE HOUSE STATION 17 AUGUSTA, MAINE 04333

DEPARTMENT ORDER
IN THE MATTER OF

STATLER TISSUE COMPANY) SOLID WASTE ORDER
AUGUSTA, KENNEBEC COUNTY, MAINE)
SPECIAL WASTE LANDFILL)
#S-4892-WD-G-A)
(APPROVAL WITH CONDITIONS)) AMENDMENT

Pursuant to the provisions of Title 38 M.R.S.A. Section 1301 et seq., and 06-096 CMR Chapter 400 et seq., Solid Waste Management Rules, effective May 24, 1989, the Department of Environmental Protection has considered the application of STATLER TISSUE COMPANY with its supportive data, staff summary, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. APPLICATION SUMMARY

- A. Application: The applicant, STATLER TISSUE COMPANY (STATLER), has applied for an amendment to Board Order 00-4892-11020, dated June 27, 1979, which approved the siting and operation of a paper mill sludge landfill in Augusta, Maine.
- B. History: Board Order 00-4892-11020 permitted STATLER to establish a landfill to be used for the disposal of sludge generated by the Statler paper mill located in Augusta, Maine. Initially, the landfill was to be developed in five (5) phases, utilizing forty (40) acres of a sixty (60) acre parcel. On September 8, 1982, the operational plan was modified to adjust the number of phases from five to three. Phase's II and V were combined to form Phase II and Phases III and IV were combined to form Phase III. No changes to the originally permitted disposal area were made. The maximum final elevation of the sludge was approximately +155 feet, with an estimated landfill capacity of +/-1.5 million cubic yards. The landfill has an expected life span of thirty-three (33) years.
- C. Summary of Proposal: The applicant proposes to amend the license to facilitate closure of the Phase II South portion of the landfill. Statler has submitted a proposal entitled "Landfill Operational and Closing Plan Sequence - Phase II-South." Statler proposes to accept biomass ash from specified sources for use as a bulking agent in the sludge landfill and increase the final permitted height to +162.

Since August 1992, sludge has been deposited in the Phase II South area and it is near capacity. The Phase II South area will be regraded, stabilized with biomass ash, and filled to capacity with a mixture of sludge and biomass ash. Final cover will be applied once final grades are achieved. Details of the "Landfill Operational and Closing Plan Sequence - Phase II-South" are delineated below.

STATLER TISSUE COMPANY	2	SOLID WASTE ORDER
AUGUSTA, KENNEBEC COUNTY, MAINE)	
SPECIAL WASTE LANDFILL)	
#S-4892-WD-G-A)	
(APPROVAL WITH CONDITIONS))	AMENDMENT

2. ASH SOURCES

STATLER proposes to acquire biomass ash from the sources listed below:

- A. International Paper Company
- B. S.D. Warren Westbrook
- C. Lincoln Pulp and Paper
- D. S.D. Warren Somerset
- E. Scott Winslow
- F. Northeast Empire Limited Partnership Ltd.;
(Ashland, Cherryfield, and Livermore Falls)
- G. Guilford of Maine

Analyses of the ash from each of these sources have been reviewed by the Department and approved for use under the conditions of this proposal. Additional sources of ash may be identified on an as-needed basis in order to insure adequate supplies of ash for bulking of the sludge. Prior to accepting ash from sources other than those listed above, the applicant will submit the results of any analytical work to the Department for review and approval.

3. INTERIM GRADING AND DRAINAGE PLAN

Sludge already in place in the Phase II South disposal area will be bulked in-place with biomass ash and graded to a minimum 2% slope, draining internally. The mixture will be compacted with a vibratory roller to increase stability, as necessary. Further stability may be achieved by placing woven geotextile over unstable areas. To facilitate drainage and leachate collection in the remaining disposal area of Phase II South, perforated HDPE pipe, surrounded by 1.5" stone and wrapped in six ounce woven geotextile, will be installed 50 feet on center throughout the disposal area. These drains will extend south 200-300 feet into the disposal area, as necessary, and be connected to the existing drains running through the Phase II South berm. As-built drawings showing the true locations of these drains and associated clean-outs will be submitted following construction. Finally, a freeboard ditch will be constructed and maintained around the Phase II South area that will collect and direct leachate and run-off into the leachate collection system.

4. STABILIZATION AND DEPOSITION OF BULKED SLUDGE

Once the grading and drainage system have been completed, deposition of sludge bulked with biomass ash will be initiated. An 85%/15% mixture of sludge/ash, respectively, will be placed in the disposal area. The area will be filled to an interim elevation of +152.

STATLER TISSUE COMPANY	3	SOLID WASTE ORDER
AUGUSTA, KENNEBEC COUNTY, MAINE)	
SPECIAL WASTE LANDFILL)	
#S-4892-WD-G-A)	
(APPROVAL WITH CONDITIONS))	AMENDMENT

Exterior grades will be constructed to a 6% slope, while interior grades will be established at 10%, as shown on Sheet 3 of the Plans.

An interior access road will be constructed to gain access to the center of the disposal area. This will require additional stabilization of the area to establish a load-bearing surface. A 12" layer of ash and/or woodwaste may be installed first for a drainage layer. Next, woven geotextile will be placed over the sludge or woodwaste/ash and nine inches of gravel will be laid down and compacted. Finally, a layer of microgrid and an additional nine inches of gravel will be installed. The road will be 20 feet wide and enter the disposal area from the east.

Access to the interior of the disposal area will permit the sludge/ash mixture to be deposited and graded to a final elevation of +162. Exterior grades will be established and maintained at 6% to shed run-off to the south, east and west of the landfill. The 6% slope exceeds the previously proposed slope of 2% and takes into account the consolidation of the sludge over time. Interior grades will be established and maintained at 10% to drain run-off and leachate to the north, where it will be collected by the drainage system.

5. EXTENSION OF PHASE II SOUTH BERM

On April 30, 1990, a berm was constructed, using sand and gravel, across the southern portion of Phase II to elevation +140. On August 31, 1992, the berm was enlarged and raised to elevation +145, using a mixture of biomass ash and Statler sludge. As outlined in the proposal, this berm will be extended to the southwest and constructed to the final elevation of +145. The berm will be constructed of a 1:2 mixture of sludge/ash, respectively, in one foot lifts. Compaction of the berm will be carried out using a vibratory or static roller, as necessary.

6. STABILITY ANALYSIS

A stability analysis was performed for the Phase II South portion of the landfill in response to questions posed regarding stability as related to the proposed elevation and slope of the area. The analysis consisted of two test borings of the disposal area, laboratory analyses of samples taken in the field, and an evaluation of the technical data as it relates to the proposed operation and closing sequence plan. A minimum safety factor of +1.8 was calculated, based on the proposed 10% interior slopes, a top elevation of +/-160 and field piezometer results. Further analysis based on higher water levels resulted in a calculated minimum safety factor of +1.5. The analysis stressed the importance of providing for adequate drainage of the sludge disposal area, as higher saturation of the waste may comprise the overall stability of the Phase II South disposal area.

STATLER TISSUE COMPANY	4	SOLID WASTE ORDER
AUGUSTA, KENNEBEC COUNTY, MAINE)	
SPECIAL WASTE LANDFILL)	
#S-4892-WD-G-A)	
(APPROVAL WITH CONDITIONS))	AMENDMENT

As a means of monitoring settlement over time of the sludge due to dewatering and consolidation, four (4) settlement monuments will be installed as shown on the May 11, 1993 submittal. These plates will be evaluated once a month, with readings recorded to the nearest 1/100 of a foot. Information garnered from the settlement monuments will be used to insure a minimum 5% slope of the waste disposal area, as required by the Solid Waste Regulations. Additional work may be required should post-consolidation slopes settle to less than 5%.

7. VARIANCE REQUEST - FINAL COVER SYSTEM

As part of the relicensing application filed on March 30, 1990, STATLER has proposed a variance to the final cover requirements. Current DEP standards for final cover over secure landfills require a minimum of 24 inches of recompacted clay under a flexible membrane liner (FML). Additionally, a 12 inch sand drainage layer beneath 12 inches of soil suitable for establishing vegetative cover must be installed over the FML. If warranted, a sand gas transmission layer may also be required. STATLER proposes to install a 12 inch sand gas transmission layer under 18 inches of recompacted clay with a minimum permeability of 1×10^{-7} cm/sec. A 12 inch layer of soil suitable for growing grass will also be installed. The topsoil layer will be limed, fertilized, seeded with one of two suitable seed mixtures, and mulched. The need for additional seeding will be evaluated one year after initial application of seed cover. Additional seeding will be performed on an as-needed basis.

Alternatively, STATLER may install a cover system utilizing STATLER sludge as hydraulic barrier medium. The cover will consist of a 12 inch sand gas transmission layer beneath 32 inches of compacted sludge, placed in 8 inch lifts. A 9 inch sand drainage layer will be placed over the sludge cap, followed by 6 inches of topsoil. The topsoil layer will be seeded and mulched in order to establish vegetative cover. Small scale evaluations of cover systems using STATLER sludge have been performed, and a larger-scale project has been proposed to further evaluate the merits of sludge as a capping material.

Once final grades have been achieved in Phase II South, one of the two cover systems outlined above will be installed. A closure plan will be submitted to the Department for review and approval, at which time one of the above cover systems will be proposed by Statler. The Department will make a determination regarding this variance request upon review of the closure plan.

STATLER TISSUE COMPANY 5 SOLID WASTE ORDER
 AUGUSTA, KENNEBEC COUNTY, MAINE)
 SPECIAL WASTE LANDFILL)
 #S-4892-WD-G-A)
 (APPROVAL WITH CONDITIONS)) AMENDMENT

BASED on the above FINDINGS OF FACT, and subject to the CONDITIONS listed below, the Department makes the following CONCLUSION:

1. The amendments to Board Order 00-4892-11020, as proposed by STATLER TISSUE COMPANY, will not cause the facility to pollute any waters of the State, contaminate the ambient air, constitute a threat to health or welfare or create a nuisance provided that a final closure plan is submitted to the Department for review and approval.

THEREFORE, the Department APPROVES the above noted application of STATLER TISSUE COMPANY, SUBJECT TO THE ATTACHED CONDITIONS, and all applicable standards and regulations:

1. The Standard Conditions of Approval, a copy attached as Appendix A.
2. Within thirty (30) days of completion of construction of the base drainage system in Phase II - South, the applicant shall submit to the Department as-built drawings noting the locations of the 6-inch drainage pipes.
3. Should additional sources of ash be required in order to maintain the bulking ratio necessary for stability, other than those previously identified above, the results of analytical work shall be submitted to the Department for review and approval.
4. The applicant shall submit to the Department for review and approval a plan to establish and maintain a minimum 5% final slope whenever post-closure monitoring indicates settlement such that slopes are less than 5%.
5. All other Findings of Facts, Conclusions, and Conditions remain as approved in Board Order 00-4892-11020, and are incorporated herein.

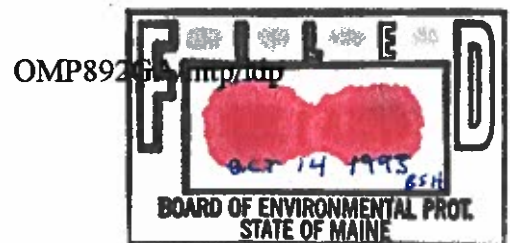
DONE AND DATED AT AUGUSTA, MAINE, THIS 14th DAY
 OF October, 1993.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: Alan M. Piqueres
 Dean C. Marriott, Commissioner

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

Date of initial receipt of application: 05/11/93.
 Date of application acceptance: 05/12/93.
 Date filed with Board of Environmental Protection:



Appendix A

SOLID WASTE LICENSE STANDARD CONDITIONS

STRICT CONFORMANCE WITH THE STANDARD AND SPECIAL CONDITIONS OF THIS APPROVAL IS NECESSARY FOR THE PROJECT TO MEET THE STATUTORY CRITERIA FOR APPROVAL. VIOLATIONS OF THE CONDITIONS UNDER WHICH A LICENSE IS ISSUED SHALL CONSTITUTE A VIOLATION OF THAT LICENSE, AGAINST WHICH ENFORCEMENT ACTION MAY BE TAKEN, INCLUDING REVOCATION.

1. This order is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from the plans, proposals and supporting documents is subject to the review and approval of the Board or the Commissioner prior to implementation.
2. The applicant shall secure and comply with all applicable Federal, State and local licenses, permits, authorizations, conditions, agreements, and orders, prior to or during construction and operation as appropriate.
3. The applicant shall submit all reports and information requested by the Board or Department demonstrating that the applicant has complied or will comply with all conditions of this approval. All preconstruction terms and conditions must be met before construction begins.
4. Advertising relating to matters included in this application shall refer to this approval only if it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.
5. No person shall transfer a license for a solid waste disposal facility without first obtaining Board approval for the transfer of the ownership of the solid waste disposal facility. For a solid waste disposal facility, the Board, at its discretion, may require that the proposed new owner of the facility apply for a new license or may approve the transfer of the existing license upon a satisfactory showing that the new owner can abide by its terms and conditions and comply with the provisions of 38 M.R.S.A. Section 1310-Q. Public notice shall be provided in accordance with Chapter 400.4.D of the Solid Waste Management Rules.
6. If the construction or operation of the activity is not begun within two years, this approval shall lapse and the applicant shall reapply to the Board for a new approval. The applicant may not begin construction or operation of the development until a new approval is granted. Reapplications for approval shall state the reasons why the development was not begun within two years from the granting of the initial approval and the reasons why the applicant will be able to begin the activity within two years from the granting of a new approval, if granted. Reapplications for approval may include information submitted in the initial application by reference.