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

DEPARTMENT ORDER

IN THE MATTER OF

KATAHDIN PAPER COMPANY LLC	)	SOLID WASTE ORDER
EAST MILLINOCKET,	)	
PENOBSCOT COUNTY, MAINE	)	
WOODASH UTILIZATION PROGRAM	)	LICENSE
S-21092-SE-E-A (APPROVAL WITH CONDITIONS)	)	AMENDMENT

Pursuant to the provisions of 38 M.R.S.A. section 1301 et seq., 06-096 CMR Chapter 419, Agronomic Utilization of Residuals (effective December 19, 1999), and the Department's other Solid Waste Management Regulations (effective September 6, 1999), the Department of Environmental Protection (the Department) has considered the application of the KATAHDIN PAPER COMPANY LLC (the applicant or Katahdin Paper) with its supportive data, and other related materials on file and FINDS THE FOLLOWING FACTS:

I. APPLICATION SUMMARY

- A. Application: Katahdin Paper has applied for an amendment to Department order S-21092-SE-B-R for its ash utilization program. Department order S-21092-SE-B-R was originally issued to Great Northern Paper Company, Inc. (GNP) on January 22, 1999, for renewal of GNP's license for its woodash utilization program. The Department transferred GNP's woodash utilization licenses to Katahdin Paper as part of a Global Transfer Order effective April 28, 2003 (Department order S-21092-SE-D-A).
- B. History:
  - (1) On March 27, 1985, The Department issued Program Approval order W006373-56-A-N to GNP. This initial license approved agricultural utilization of GNP woodash on approved sites in Penobscot and Aroostook counties. The Program Approval license expired on March 27, 1992.
  - (2) On June 16, 1993, the Department issued order S-21092-SE-A-N, which relicensed GNP's woodash utilization program, and approved GNP to distribute its ash to licensed compost facilities that had received Department approval to accept ash.
  - (3) On January 22, 1999, the Department issued order S-21092-SE-B-R, which renewed GNP's license for its woodash utilization program, and approved GNP to distribute its ash to compost facilities exempt from licensing.

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- (4) On May 30, 2001, the Department issued order S-021092-SE-C-A, which amended the woodash utilization program consistent with the revised rules in Chapter 419. The amendment license approved GNP's Sampling and Analytical Work Plan for its ash, and approved ash utilization without Department-issued site-specific licenses.
- (5) On April 28, 2003, the Department approved the transfer of woodash utilization licenses from GNP to Katahdin Paper.
- (6) Department records indicate that neither GNP nor Katahdin Paper have distributed ash for agricultural utilization or composting since 1993. All GNP and Katahdin Paper ash generated since 1994 has been disposed of at the applicant's licensed Dolby Landfill located in East Millinocket.

C. Summary of Proposal: Katahdin Paper proposes to amend the utilization license to allow Katahdin Paper to burn a combination of papermill sludge and clean wood in its process boiler, and to distribute the resulting bioash for agricultural utilization and composting.

## 2. FACILITY DESCRIPTION

Katahdin Paper owns a pulp and paper mill located in East Millinocket, Maine, a second papermill located in Millinocket, Maine, and a Recycle Fiber Plant (RFP) located at the East Millinocket mill. The ash proposed for utilization is generated by Katahdin Paper's biomass boiler, which is located at the East Millinocket mill.

A. Bioash Generation: The bioash proposed for utilization is generated by the bark, sludge and wood-fueled biomass boiler at the East Millinocket mill. The total fuel mix burned in the applicant's boiler consists of approximately 80% bark, 10% whole tree chips, and 10% sludge. The bark/wood fuel is generated at Katahdin Paper's mills in Millinocket and East Millinocket, and wood fuel is also purchased from other area mills as needed. The primary sludge which is generated by the RFP is currently the only sludge being burned in the boiler. However, Katahdin Paper is considering the possibility of also burning the papermaking-process sludge, which is generated by both the East Millinocket and Millinocket papermills, in its biomass boiler, and it proposes to include the resulting bioash in its utilization program. There are no chemicals added to the applicant's chipping or pulping processes. The resulting bioash generates no strong odors. Approximately 40,000 to 45,000 cubic yards of bioash is generated per year from the biomass boiler.

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B. East Millinocket Mill and RFP Sludge: Katahdin Paper’s East Millinocket papermill annually produces approximately 280,000 tons of directory paper and newsprint. The applicant also owns and operates a pulp mill at the East Millinocket mill that annually generates approximately 180,000 tons of wood pulp using the stone groundwood process. This mechanical pulp constitutes approximately 45% of the fiber utilized for papermaking at the East Millinocket mill. Additionally, the applicant annually generates approximately 128,000 tons of recycled pulp at the RFP, all of which is utilized for papermaking at the East Millinocket mill. The recycle pulp accounts for approximately 35% of the fiber used at the mill. Katahdin Paper also purchases additional thermomechanical pulp, and chemical pulp produced from the Kraft bleaching process, which constitute approximately 5% and 10%, respectively, of the fiber utilized for papermaking at the East Millinocket mill. Approximately 160,000 cubic yards of sludge is generated annually from the treatment of wastewater at the RFP, and approximately 40,000 cubic yards of sludge is generated annually from the treatment of process wastewater at the East Millinocket pulp and papermill. Although the East Millinocket papermill’s wastewater treatment plant receives a small amount of sanitary wastewater from the mill, the Department finds that, should Katahdin Paper start burning the sludge in its biomass boiler, the combustion temperatures within the boiler would destroy all disease pathogens potentially present in the sludge.

C. Millinocket Mill Sludge: Katahdin Paper’s Millinocket papermill annually produces approximately 180,000 tons of specialty and directory paper. The Millinocket mill no longer conducts any processes that produce wood pulp. Mechanical pulp from the stone groundwood method at the East Millinocket mill is shipped by pipeline to the Millinocket mill. This mechanical pulp constitutes approximately 10% of the fiber utilized for papermaking at the Millinocket mill. Similar to its East Millinocket operations, Katahdin Paper also purchases additional thermomechanical pulp and Kraft pulp, which constitute approximately 55% and 10%, respectively, of the fiber utilized for papermaking at the Millinocket mill. Approximately 50,000 cubic yards of sludge is generated annually from the treatment of wastewater from the papermaking process at the Millinocket mill.

### 3. SAMPLING AND ANALYTICAL WORKPLAN

A. Sample Plan: Pursuant to GNP’s application for ash utilization license amendment S-021092-SE-C-A, GNP submitted a sampling and analytical work plan (S&A Work Plan) for sampling and analyzing GNP woodash, that substantially satisfied the requirements for waste characterization described in Chapter 405 section 6.B(2). However, GNP’s S&A Work Plan proposed testing

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its ash for an incomplete list of analytical parameters. The applicant has submitted the results of a complete bioash analysis, and Katahdin Paper proposes that composite, representative samples of its ash will be obtained and tested on a quarterly basis as outlined by GNP's S&A Work Plan. Since the GNP S&A Work Plan proposed incomplete ash testing, the Department finds that the applicant must sample and analyze Katahdin Paper bioash on a quarterly basis for baseline nutrients, calcium carbonate equivalents (CCE), and total inorganic compounds, including available phosphorus, in accordance with Chapter 405 sections 6.D(2)(a), (c) and (d). Additionally, since the applicant has provided only one complete analysis of the bioash generated from the revised fuel mix, the Department finds that the applicant should submit the results of an additional analysis of one composite sample of its bioash for these parameters, prior to resuming distribution of its bioash for utilization or composting. Further, the Department finds that the applicant must submit a revised sampling and analytical work plan for its bioash, for review and approval by the Department, prior to distributing the ash for agronomic utilization or composting.

B. Bioash Analysis:

- (1) Baseline nutrients: The applicant has analyzed its bioash for the baseline nutrients listed in Chapter 405 section 6.D(2)(a). The applicant proposes to continue to sample and analyze its ash for these nutrients on a quarterly basis. The Department finds that the proposed ongoing testing adequately satisfies the requirements for agronomic utilization, as specified in Chapter 405 section 6.D, provided the applicant includes testing of the ash for available phosphorus.
- (2) Calcium Carbonate Equivalents: The applicant has analyzed its bioash for calcium carbonate equivalents (CCE) as described in Chapter 405 section 6.D(2)(c), to determine proper loading rates at utilization sites. The applicant proposes to continue to sample and analyze its ash for CCE on a quarterly basis. The Department finds that the proposed ongoing testing adequately satisfies the requirements for agronomic utilization, as specified in Chapter 405 section 6.D.
- (3) Total Inorganic Compounds: The applicant has analyzed its bioash for the total inorganic compounds listed in Chapter 405 section 6.D(2)(d). The applicant proposes to continue to sample and analyze its ash for inorganic compounds on a quarterly basis. The Department finds that the proposed ongoing testing adequately satisfies the requirements for agronomic utilization, as specified in Chapter 405 section 6.D, provided that the ash is tested quarterly for all parameters listed in section 6.D(2)(d).

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(4) Periodic Reports: Within 30 days of receipt by Katahdin Paper or its agent, the applicant should submit the results of bioash analysis to the Department.

C. Additional Sludge Sources: The only sludge currently burned in the applicant's biomass boiler is that which is generated by the Recycle Fiber Plant. However, the applicant proposes to also burn sludge generated by the treatment of process wastewater from both the East Millinocket and Millinocket papermills, and to include the resulting bioash in its utilization program. The Department finds that, if/when the fuel mixture is altered to include sludge from the East Millinocket and/or Millinocket papermills, the applicant must recharacterize its bioash, in accordance with Chapter 405 section 6.D(2), and receive written approval from the Department, prior to distributing the resulting ash for agronomic utilization or composting.

D. Soil Testing: The applicant proposes to not analyze the soil at utilization sites each year, prior to spreading ash. Rather, the applicant states that end-users will be required to purchase the ash. Farmers will therefore have an economic incentive to conduct soil tests, and to only purchase the amount of ash needed to properly adjust soil pH. The Department finds that Katahdin Paper should not distribute more bioash to any end-user in a given year than can be used at their site during that year.

#### 4. AGRONOMIC BENEFIT

##### A. Land Application:

(1) For direct land application, the applicant proposes to distribute bioash as a lime substitute. Additionally, bioash is a significant source of phosphorus, potassium and magnesium. The applicant has performed analysis of its bioash for baseline nutrients and calcium carbonate equivalents (CCE), in accordance with Chapter 405 sections 6.D(2)(a) and (c). Results of analysis of the applicant's bioash indicate that the ash contains 77% CCE, 3.5% potassium, 0.65% phosphorus (P), and 1.1% magnesium.

(2) The applicant proposes to apply bioash at a rate based on the liming requirements of the soil. Applications of bioash will be limited to two tons of lime equivalents (CCE) per acre per year if topdressed, and three tons of CCE per acre per year if ash is incorporated. Because Katahdin Paper has submitted the results of only one complete analysis of its bioash since converting to the current fuel mixture, the Department finds that the

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applicant should submit the results of a complete analysis of one composite sample of its bioash, for baseline nutrients, CCE and total inorganic compounds, including available phosphorus, in accordance with Chapter 405 sections 6.D(2)(a), (c) and (d), for review by Department staff, prior to resuming distribution of its bioash for utilization or composting.

- (3) Department order S-021092-SE-C-A, which was issued to GNP and transferred to Katahdin Paper, approved distribution of woodash for agronomic purposes without requiring site-specific licenses. Condition #4 of order S-021092-SE-C-A required the applicant to submit written Best Management Practices (BMPs) that would be provided to each recipient of woodash, for review & approval by the Department, prior to resuming distribution of ash for utilization without site-specific permitting. The BMP notice was to provide a list of setbacks to be observed when spreading and storing woodash, and details regarding storage and loading rate limitations, including a loading rate based on crop uptake rates of P. Neither GNP nor Katahdin Paper have submitted the draft BMP notice, nor has the applicant's ash been analyzed for available P. The Department therefore finds that the applicant must submit the written BMPs that would be provided to each end-user of bioash, including a loading rate based on crop uptake rates of P, for review & approval by the Department, prior to distribution of bioash for utilization.
- (4) The applicant will maintain records for all loads of bioash delivered to agricultural utilization sites.

B. Compost Blending:

- (1) The applicant also proposes to distribute bioash for compost blending. Bioash will provide micronutrients to the compost, increase the compost pH, and assist in creating a darker compost product. Additionally, bioash will be used to insulate compost piles to maintain pile temperatures and to control odors. Bioash will be distributed to compost facilities based on the requirements of the individual compost facility, and any conditions of the compost facility license. The Department finds that this is acceptable, provided that bioash delivered to any license-exempt compost facilities meets the parameters contained in Chapter 419, Table 419.5, and provided the applicant notifies the Department a minimum of 24 hours prior to delivery of its ash to any new compost sites. The Department also finds that this is acceptable for compost facilities that have received approval to

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accept ash from ash generators that have program approval, for any bioash which meets the parameters contained in Chapter 419, Table 419.4.

- (2) The applicant will provide records of the total amount of bioash distributed to compost facilities, and will assure, by chemical analyses, the quality of any bioash delivered to compost facilities.

- C. Loading Rates: The applicant has proposed to utilize bioash at the recommended liming rate not to exceed two dry tons CCE per acre per year if topdressed, or three dry tons CCE per acre per year if incorporated. The Department finds that, if current bioash analysis results indicate that applying bioash at the recommended liming rates would exceed the amount of P that the proposed crops could take up during the growing season, the applicant should limit annual bioash applications to not exceed the crop uptake rates for P.

## 5. ASH STORAGE

The applicant will continue to store a limited volume of bioash temporarily at the East Millinocket mill site. Bioash will also be stored for up to two (2) years at compost facilities, and may be field stacked for no longer than eight (8) consecutive months at utilization sites. Additional bioash storage at sites other than utilization or compost sites will require permitting in accordance with Chapter 419 sections 10 and 11.

## 6. RESIDUAL SUITABILITY AND RISK MANAGEMENT

Based upon a review of the analytical results of Katahdin Paper bioash, the Department finds that the ash produced by the facility is physically and chemically suitable for the intended utilization activity, is not a hazardous waste, and is of a known and consistent quality. The following requirements apply to the utilization program in order to manage potential risks from utilization of Katahdin Paper bioash.

- A. Phosphorus: Katahdin Paper bioash contains significant levels of phosphorus (P), and nutrient calculations have shown that land-application of Katahdin Paper bioash at the maximum allowable rate of three tons CCE/acre/year could result in P being applied in excess of the uptake rates for the crops proposed to be grown. Therefore, the Department finds that the applicant must include testing for available P with quarterly ash analyses, and that the applicant must ensure that bioash is not land-applied in excess of crop uptake rates for P at unlicensed utilization sites. If Katahdin Paper bioash is applied at less than the crop uptake rates of P, the applicant will not be subject to the siting standards in Chapter 419 section 3.B, the operating standards in section 4.M, or the prohibition in section 4.E(3)(c).

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- B. Heavy Metals: The applicant has performed initial analysis of Katahdin Paper bioash for total inorganic compounds, in accordance with Chapter 405 section 6.D(2)(d). Results of this analysis indicate that the regulated inorganics in the ash were within the applicable limits in Chapter 419, Table 419.4 columns A through C, and Chapter 418, Appendix A, except for antimony. Following the initial excessive result for antimony in the ash, the applicant has submitted the results of three (3) subsequent analyses that indicated antimony levels in the applicant's ash were less than the applicable screening standard in Chapter 419, Table 419.4 columns A through C. These additional analyses indicate that the excessive antimony concentration initially observed in Katahdin Paper bioash was an anomaly, and that ongoing concentrations of the regulated inorganics in the ash should be within the applicable limits. Therefore, the applicant is not subject to the additional operating standards in Chapter 419 section 4.J.
- C. Target Compounds and PCB: The applicant has submitted the results of bioash analyses for target semi-volatile organic compounds (SVOCs) and polychlorinated biphenyls (PCBs), in accordance with Chapter 405 sections 6.D(2)(j) and (k). The results of SVOC and PCB analyses indicated that these compounds were all non-detect in Katahdin Paper bioash. Given these results, and an assessment of the inputs into the system that produces the ash, the Department finds that Katahdin Paper bioash will not contain any regulated target compounds in concentrations that would exceed the screening standards in Chapter 418, Appendix A.
- D. Dioxin: The applicant has submitted the results of bioash analysis for polychlorinated dibenzo-p-dioxins (PCDDs) and polychlorinated dibenzofurans (PCDFs), collectively referred to as dioxin, in accordance with Chapter 405 section 6.D(2)(m). The results of the dioxin analysis indicated that Katahdin Paper bioash contains less than 27 parts per trillion (ppt) 2,3,7,8-TCDD toxicity equivalency factors (TEFs). Therefore, the applicant is not subject to the additional operating standards in Chapter 419 section 4.K.
- E. Best Management Practices: The applicant has not submitted a copy of the Best Management Practices (BMPs) that will be provided to individuals receiving Katahdin Paper bioash for agricultural use. Therefore, the Department finds that the applicant must submit the written BMPs that would be provided to each end-user of bioash, including a loading rate based on crop uptake rates of phosphorus, for review and approval by the Department, prior to distribution of bioash for utilization. The BMP notice should provide the list of setbacks and loading rates to be observed when utilizing bioash on agricultural sites, and verify the acreage for each site. To ensure that the operating standards in Chapter 419 section 4.E

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will be met at utilization sites, the Department further finds that the applicant should ensure that all end-users receiving bioash sign a copy of the BMP notice pertaining to ash utilization. The BMP notice must stipulate that all spreading sites shall be located a minimum of 300 feet from public water supplies, a minimum of 100 feet from water supply wells, a minimum of 50 feet from surface water bodies, and a minimum of 25 feet from drainage diversions, property lines and public roadways. The BMP notice must also specify that bioash must not be applied to frozen, saturated or snow-covered ground, and it must further outline the additional requirements for field stacking the ash, to ensure that storage sites will meet the general siting and design standards in Chapter 419 sections 10.A and B, and the operational standards in Chapter 419 sections 12.A and B. The Department further finds that the applicant shall maintain copies of signed BMP notices, which confirm bioash deliveries to utilization sites and the sites' acreages, for a period of five (5) years from the dates of delivery, and shall make these copies available for Department review upon request.

- F. Buffers to Protected Natural Resources: The Department finds that limiting ash spreading to established agricultural sites will meet the intent of the setbacks required under Chapter 419 section 4.G and Chapter 400 section 4.E(1)(b). However, the applicant has not submitted a copy of the Best Management Practices (BMPs) which will be provided to individuals receiving Katahdin Paper bioash. The Department finds that the applicant should submit a draft BMP notice to be provided to owners and/or operators of utilization sites, as described in Finding of Fact 6.E of this order, for review and approval by Department staff, prior to resuming distribution of Katahdin Paper bioash for utilization without site-specific permitting. Katahdin Paper bioash does not contain nitrogen, is not a sludge, contains no human pathogens, and is not putrescible.
  
- G. Contingency Plans: Katahdin Paper currently disposes of its ash by landfilling it at Katahdin Paper's licensed solid waste landfill (Dolby landfill) located in East Millinocket. Katahdin Paper bioash, that is not distributed for agricultural utilization or composting, will be properly disposed of at the applicant's landfill.

## 7. SITE LICENSING PROCESS

- A. No Licenses: The applicant proposes to distribute Katahdin Paper bioash, as a liming agent, without licensing individual utilization sites or field stockpile sites. The Department finds that not licensing individual agricultural utilization sites or associated field stockpile sites is appropriate, provided that:

- (1) The approved BMPs are provided to all agricultural end-users of the ash;

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- (2) Katahdin Paper does not distribute more ash to a site in a given year than can be utilized at that site during the growing season; and
- (3) The ash, when applied at the maximum annual application rate of two dry tons of CCE per acre if topdressed or three dry tons of CCE per acre if incorporated, does not trigger any of the siting standards in Chapter 419 section 3.

B. Site Specific Utilization Licenses: Utilization of Katahdin Paper bioash subject to Chapter 419 section 3.B(1)(b), as determined by the characterization of the ash and the maximum annual application rate of two dry tons of CCE per acre if topdressed or three dry tons of CCE per acre if incorporated, shall only occur on sites which have been specifically approved by Department order. A complete application for a bioash utilization site subject to Chapter 419 section 3.B(1)(b), must include all of the information in Chapter 419 section 7.B.

C. Site Specific Storage Licenses: The applicant must obtain a site-specific storage license for its ash if more ash is to be stored on an individual utilization site than can be used in one year, if the storage areas are within sites that require a site-specific license, or if the site is for storage only and not associated with a utilization site. A complete application for approval of a storage license should include the information in Chapter 419 section 11, unless otherwise provided for in writing by the Department.

## 8. TRAFFIC

The applicant will provide contract trucking to transport the bioash from their facility to utilization or compost sites. Based on GNP's records of previous ash deliveries, and based on the projected amount of ash generated, staff estimates that the bioash utilization program will result in fewer than 16 additional vehicle trips per day to any given utilization site. The applicant therefore meets the alternative traffic standards in Chapter 419 sections 4.F and 10.B(8).

## 9. NUISANCES AND AIR QUALITY

- A. Noise: Ash utilization at established agricultural sites or compost facilities will not generate noise in excess of that which is generated during normal operations at these sites.
- B. Odors: Previous handling of Katahdin Paper ash has confirmed that field stacking and/or utilization of the ash will not generate odors.

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C. Dust: The applicant currently conditions Katahdin Paper bioash with water to a moisture content of approximately 33%, prior to removing it from the mill. The Department finds that the applicant should ensure that Katahdin Paper bioash is covered during transport to utilization or composting sites.

#### 10. SCENIC CHARACTER

Landspreading or field-stacking ash should not affect existing uses at utilization sites or compost facilities. No new permanent structures or development are proposed to be constructed for the project. All facilities necessary to support the program currently exist either at the mill site or at the applicant's landfill, and the scenic character of these sites is not expected to change. Utilization of bioash is consistent with the related ongoing activities at agricultural sites.

#### 11. EROSION

Bioash utilization decreases the erosion potential at utilization sites by promoting better plant growth. The applicant is subject to the erosion control standards in Chapter 419 section 12.A(8) at any storage sites where soils will be disturbed, and Chapter 400 section 4.J(1) for soil disturbance at utilization sites.

#### 12. UTILITIES

No new utilities are proposed for the project. No new utilities are needed since the project is consistent with the ongoing agricultural activities at utilization sites.

#### 13. FLOODING

Utilization of bioash will not increase the flooding potential of any area.

#### 14. RECORD KEEPING & REPORTING

The applicant will maintain records and file all required reports in accordance with Chapter 419 section 6. An annual report that meets the standards in Chapter 419 section 6.C, including a summary of the volume of Katahdin Paper bioash distributed for agricultural utilization and/or composting, the sites delivered to and the dates of delivery, bioash application rate calculations, along with a signed certification statement, will be submitted to the Bureau of Remediation and Waste Management by February 28<sup>th</sup> of each year. Bioash analyses which had not previously been submitted to the Department will also be included with this annual report.

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16. ALL OTHER

All other Findings of Fact, not modified by this order, remain as approved in Department orders S-21092-SE-A-N, S-21092-SE-B-R and S-21092-SE-C-A, as amended.

BASED on the above Findings of Fact, and subject to the conditions listed below, the Department makes the following CONCLUSIONS:

1. The proposed project will not pollute any water of the state, contaminate the ambient air, constitute a hazard to health or welfare, or create a nuisance, provided that:
  - A. The applicant submits the results of an additional analysis of one composite sample of its bioash, for baseline nutrients, CCE, total inorganic compounds and available phosphorus, in accordance with Chapter 405 sections 6.D(2)(a), (c) and (d), for review by Department staff, prior to resuming distribution of its bioash for utilization or composting;
  - B. The applicant analyzes Katahdin Paper bioash on a quarterly basis for baseline nutrients, CCE, total inorganic compounds and available phosphorus, in accordance with Chapter 405 sections 6.D(2)(a), (c) and (d), if Katahdin Paper distributes its bioash for utilization or composting during the calendar year. If all bioash generated during the calendar year is landfilled, the applicant will analyze its bioash once annually for these same parameters;
  - C. The applicant recharacterizes Katahdin Paper bioash, if/when the fuel mixture is altered to include sludge from the East Millinocket and/or Millinocket papermills, in accordance with Chapter 405 section 6.D(2), and receives written approval from the Department, prior to distributing the resulting ash for agronomic utilization or composting;
  - D. The applicant submits the draft BMP notice that will be provided to owners and/or operators of utilization sites, for review and approval by Department staff, prior to resuming distribution of Katahdin Paper ash for utilization without site-specific permitting. The notice will describe the Best Management Practices to be followed by site operators when utilizing ash, the setbacks to be observed when spreading and storing ash, and a bioash loading rate based on crop uptake rates of phosphorus;
  - E. The applicant does not distribute more bioash to any end-user in a given year than can be used during that year at the end-user's site, without first obtaining a utilization license for the site. Bioash application rates will not exceed two dry

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tons of CCE per acre per year if topdressed, or three dry tons of CCE per acre per year if incorporated;

- F. The applicant submits a revised sampling and analytical work plan for its bioash, that includes testing of the ash on a quarterly basis for baseline nutrients, CCE, total inorganic compounds and available phosphorus, in accordance with Chapter 405 sections 6.D(2)(a), (c) and (d), for review and approval by the Department, prior to distributing the ash for agronomic utilization or composting;
- G. The applicant submits the results of bioash analyses for Department review within 30 days of receipt by Katahdin Paper or its agent;
- H. The applicant notifies the Department a minimum of 24 hours prior to delivering bioash to compost sites that have not received prior Department approval to utilize ash and that have not previously composted Katahdin Paper bioash;
- I. The applicant ensures that all Katahdin Paper bioash, which is distributed to unlicensed agricultural sites for direct land-application, or to compost facilities that have received approval to accept ash from ash generators that have program approval, meets the parameters contained in Chapter 419, Table 419.4 columns A through C;
- J. The applicant ensures that all Katahdin Paper bioash, which is distributed to license-exempt compost facilities, meets the parameters contained in Chapter 419, Table 419.5;
- K. The applicant ensures that Katahdin Paper bioash is not land-applied in excess of crop uptake rates for phosphorus at unlicensed utilization sites;
- L. The applicant provides a copy of the approved BMP notice to all agricultural end-users of Katahdin Paper bioash, and ensures that all end-users have signed a copy of the BMP notice;
- M. The applicant shall maintain copies of signed BMP notices, which confirm all bioash deliveries to utilization sites and list the sites' acreages, for a period of five (5) years from the dates of delivery, and shall make these copies available for Department review upon request;
- N. If Katahdin Paper bioash to be utilized is subject to Chapter 419 section 3.B(1)(b), then the applicant only utilizes the ash on sites licensed by the Department. Determination of the applicability of Chapter 419 section 3 will be based on the characterization of the bioash and the maximum annual application rate of two dry

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tons of CCE per acre if topdressed, or three dry tons of CCE per acre if incorporated. A complete application for a bioash utilization site must include all of the information in section 7.B;

- O. The applicant obtains a site-specific storage license for Katahdin Paper bioash if more of the ash is to be stored on an individual utilization site than can be used in one year, if the storage areas are within sites that require a site-specific license, or if the site is for storage only. A complete application for approval of a storage license must include the information in Chapter 419 section 11, unless otherwise provided for in writing by the Department;
  - P. The applicant ensures that Katahdin Paper bioash is covered during transport to utilization or composting sites;
  - Q. The applicant submits an annual report that meets the standards in Chapter 419 section 6.C, including a summary of the volume of Katahdin Paper bioash distributed for agricultural utilization and/or composting, the sites delivered to and the dates of delivery, bioash application rate calculations, along with a signed certification statement, to the Bureau of Remediation and Waste Management by February 28<sup>th</sup> of each year;
2. The applicant has the financial and technical ability to develop the project in a manner consistent with State environmental standards;
  3. The applicant has made adequate provisions for traffic movement of all types into, out of, and within utilization sites;
  4. The proposed project fits harmoniously into the existing natural environment and will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipalities or in neighboring municipalities;
  5. Proposed facilities and utilization sites will be on soils types suitable to the nature of the undertaking and will not cause unreasonable erosion of soil or sediment;
  6. Proposed facilities and utilization sites will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur;
  7. The applicant has made adequate provisions for utilities including water supplies, sewerage facilities, solid waste disposal and roadways required for the project, and the proposed facilities will not have an unreasonable adverse effect on the existing or proposed utilities and roadways in the municipalities or area served by those services;

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8. The activity will not unreasonably cause or increase the flooding of the areas or adjacent properties nor create an unreasonable flood hazard to any structure; and
9. All other Conclusions, not modified by this order, remain as approved in Department orders S-21092-SE-A-N, S-21092-SE-B-R and S-21092-SE-C-A, as amended.

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

1. The Standard Conditions of Approval, a copy attached as Appendix A.
2. The applicant shall submit the results of an additional analysis of one composite sample of its bioash, for baseline nutrients, CCE, total inorganic compounds and available phosphorus, in accordance with Chapter 405 sections 6.D (2)(a), (c) and (d), for review by Department staff, prior to resuming distribution of its bioash for utilization or composting.
3. The applicant shall analyze Katahdin Paper bioash on a quarterly basis for baseline nutrients, CCE, total inorganic compounds and available phosphorus, in accordance with Chapter 405 sections 6.D(2)(a), (c) and (d), if Katahdin Paper distributes its bioash for utilization or composting during the calendar year. If all bioash generated during the calendar year is landfilled, the applicant will analyze its bioash once annually for these same parameters.
4. The applicant shall recharacterize Katahdin Paper bioash, if/when the fuel mixture is altered to include sludge from the East Millinocket and/or Millinocket papermills, in accordance with Chapter 405 section 6.D(2), and shall receive written approval from the Department, prior to distributing the resulting ash for agronomic utilization or composting.
5. The applicant shall submit the draft BMP notice that will be provided to owners and/or operators of utilization sites, for review and approval by Department staff, prior to resuming distribution of Katahdin Paper ash for utilization without site-specific permitting. The notice will describe the Best Management Practices to be followed by site operators when utilizing ash, the setbacks to be observed when spreading and storing ash, and a bioash loading rate based on crop uptake rates of phosphorus. The BMP notice must stipulate that all spreading sites shall be located a minimum of 300 feet from public water supplies, a minimum of 100 feet from water supply wells, a minimum of 50 feet from surface water bodies, and a minimum of 25 feet from drainage diversions, property lines and public roadways. The BMP notice must also specify that bioash must not be

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applied to frozen, saturated or snow-covered ground, and it must further outline the additional requirements for field stacking the ash, to ensure that storage sites will meet the general siting and design standards in Chapter 419 sections 10.A and B, and the operational standards in Chapter 419 sections 12.A and B.

6. The applicant shall not distribute more bioash to any end-user in a given year than can be used during that year at the end-user's site, without first obtaining a utilization license for the site. Bioash application rates will not exceed two dry tons of CCE per acre per year if topdressed, or three dry tons of CCE per acre per year if incorporated.
7. The applicant shall submit a revised sampling and analytical work plan for its bioash, that includes testing of the ash on a quarterly basis for baseline nutrients, CCE, total inorganic compounds and available phosphorus, in accordance with Chapter 405 sections 6.D(2)(a), (c) and (d), for review and approval by the Department, prior to distributing the ash for agronomic utilization or composting.
8. The applicant shall submit the results of bioash analysis for Department review within 30 days of receipt by Katahdin Paper or its agent.
9. The applicant shall notify the Department a minimum of 24 hours prior to delivering bioash to compost sites that have not received prior Department approval to utilize ash and that have not previously composted Katahdin Paper ash.
10. The applicant shall ensure that all Katahdin Paper bioash, which is distributed to unlicensed agricultural sites for direct land-application, or to compost facilities that have received approval to accept ash from ash generators that have program approval, meets the parameters contained in Chapter 419, Table 419.4 columns A through C.
11. The applicant shall ensure that all Katahdin Paper bioash, which is distributed to compost facilities that have not obtained approval for receiving ash, meets the parameters contained in Chapter 419, Table 419.5.
12. The applicant shall ensure that Katahdin Paper bioash is not land-applied in excess of crop uptake rates for phosphorus at unlicensed utilization sites.
13. The applicant shall provide a copy of the approved BMP notice to all agricultural end-users of Katahdin Paper bioash. End-users must sign a copy of the BMP notice.
14. The applicant shall maintain copies of signed BMP notices, which confirm all bioash deliveries to utilization sites and list the sites' acreages, for a period of five (5) years from the dates of delivery, and shall make these copies available for Department review upon request.

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15. If Katahdin Paper bioash to be utilized is subject to Chapter 419 section 3.B(1)(b), then the applicant shall only utilize the ash on sites licensed by the Department. Determination of the applicability of Chapter 419 section 3 will be based on the characterization of the bioash and the maximum annual application rate of 2 dry tons of CCE per acre if topdressed, or 3 dry tons of CCE per acre if incorporated. A complete application for a bioash utilization site must include all of the information in section 7.B.
16. The applicant shall obtain a site-specific storage license for Katahdin Paper bioash if more of the ash is to be stored on an individual utilization site than can be used in one year, if the storage areas are within sites that require a site-specific license, or if the site is for storage only. A complete application for approval of a storage license must include the information in Chapter 419 section 11, unless otherwise provided for in writing by the Department.
17. The applicant shall ensure that Katahdin Paper bioash is covered during transport to utilization or composting sites.
18. The applicant shall submit an annual report that meets the standards in Chapter 419 section 6.C, including a summary of the volume of Katahdin Paper bioash distributed for agricultural utilization and/or composting, the sites delivered to and the dates of delivery, bioash application rate calculations, along with a signed certification statement, to the Bureau of Remediation and Waste Management by February 28<sup>th</sup> of each year.

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19. All other Findings of Fact, Conclusions and Conditions, not modified by this order, remain as approved in Department licenses S-21092-SE-A-N, S-21092-SE-B-R and S-21092-SE-C-A, as amended.

DONE AND DATED AT AUGUSTA, MAINE, THIS 7<sup>th</sup> DAY  
OF January, 2004.<sup>5</sup>

DEPARTMENT OF ENVIRONMENTAL PROTECTION

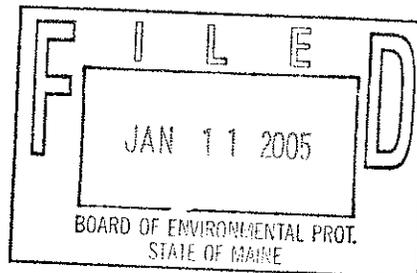
BY:   
Dawn R. Gallagher, Commissioner

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

Date of initial receipt of application: June 23, 2004

Date of application acceptance: July 15, 2004

Date filed with Board of Environmental Protection:



This order was prepared by Rick Haffner, Bureau of Remediation and Waste Management.

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## Appendix A

### STANDARD CONDITIONS TO ALL SOLID WASTE FACILITY LICENSES

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. **Approval of Variations from Plans.** The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed by the licensee. Any consequential variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.
2. **Compliance with All Applicable Laws.** The licensee 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. **Compliance with All Terms and Conditions of Approval.** The licensee shall submit all reports and information requested by the Department demonstrating that the licensee has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.
4. **Transfer of License.** The licensee may not transfer the solid waste facility license or any portion thereof without approval of the Department.
5. **Initiation of Construction or Development Within Two Years.** If the construction or operation of the solid waste facility is not begun within two years of issuance or within 2 years after any administrative and judicial appeals have been resolved, the license lapses and the licensee must reapply to the Department for a new license unless otherwise approved by the Department.
6. **Approval Included in Contract Bids.** A copy of the approval must be included in or attached to all contract bid specifications for the solid waste facility.
7. **Approval Shown to Contractors.** Contractors must be shown the license by the licensee before commencing work on the solid waste facility.
8. **Background of key individuals.** A licensee may not knowingly hire as an officer, director or key solid waste facility employee, or knowingly acquire an equity interest or debt interest in, any person convicted of a felony or found to have violated a State or federal environmental law or rule without first obtaining the approval of the Department.
9. **Fees.** The licensee must comply with annual license and annual reporting fee requirements of the Department's rules.

ADDITIONAL STANDARD CONDITIONS FOR  
SOLID WASTE DISPOSAL FACILITIES

10. **Recycling and Source Reduction Determination for Solid Waste Disposal Facilities.** This condition does not apply to the expansion of a commercial solid waste disposal facility that accepts only special waste for landfilling.

The solid waste disposal facility shall only accept solid waste that is subject to recycling and source reduction programs, voluntary or otherwise, at least as effective as those imposed by 38 MRSA Chapter 13.

11. **Deed Requirements for Solid Waste Disposal Facilities.** Whenever any lot of land on which an active, inactive, or closed solid waste disposal facility is located is being transferred by deed, the following must be expressly stated in the deed:

- A. The type of facility located on the lot and the dates of its establishment and closure.
- B. A description of the location and the composition, extent, and depth of the waste deposited.
- C. The disposal location coordinates of asbestos wastes must be identified.