The Environmental Exchange, Inc.



P.O. Box 6308 Hermon, ME 04402 (207) 848-2397 Fax (207) 848-2319 EVMTLX@aol.com

February 25, 2004

Robert Pooler USDA National Organic Program 1400 Independence Avenue, SW Rm 4008, South Building Washington, DC 20250-0200

Dear Mr. Pooler,

Please find enclosed our petition to the national organic program for inclusion of this material on the synthetic list for approved items.

If you are in need of any further information, please call me, I am available any time. Besides the office number that is listed above, my cell phone number is 207-949-4689.

I look forward to communicating with you in the near future about this petition.

Regards,

Michael R. Haslow Operations Manager

Enclosure

The Environmental Exchange Inc. hereby submits a petition seeking evaluation of a substance to be included in the following category:

"Synthetic substance's allowed for use in organic crop production"

- 1. The substance's common name is "Lime Mud" and is made up of more than 95% CaCO3
- 2. The manufacturer's names, addresses and telephone numbers are as follows:
 - S. D. Warren CO. d/b/a SAPPI Fine Paper North America, 1329 Waterville Road, Skowhegan, ME, 04976, 207-238-3361

Domtar, 144 Main Street, Baileyville, ME, 04694, 207-427-3311

Eastern Pulp and Paper, 50 Katahdin Avenue, Lincoln, ME, 04457, 207-794-6721

Georgia Pacific One Portland Street, Old Town, ME, 04468, 207-827-0675

- 3. The intended or current use of the substance is as a plant or soil amendment micronutrient.
- 4. To be used for crops at a maximum rate of 2 tons per acre as top dressing, or 3 tons per acre incorporated. The method of application is by agricultural lime spreader.
- 5. The source of the substance and a detailed description of its manufacturing or processing procedures from the basic components to the final product are as follows:

Lime mud is generated in the chemical recovery system of paper mills. Lime mud consists of calcium carbonate ($CaCO_3$) and, to a much lesser degree, calcium hydroxide ($Ca(OH)_2$). To recausticize the pulp digesting liquors required to dissolve the lignins from wood fiber, large amounts of calcium oxide (CaO, quick lime) are used. The resulting chemical reaction yields lime mud, which is washed and added to the lime kiln. Within the kiln, $CaCO_3$ is converted to CaO that can be recycled into the recausticizing process. When components of the system are not functioning properly or are down for repairs, excess lime mud is generated within the process.

CaO is the primary chemical compound that is added to the recausticizing cycle. Small quantities of drainage aids and coagulants are added to the process to assist in the dewatering and settling of the lime mud. Salt cake (sodium sulfate) is added through the black liquor cycle. Periodically sodium hydroxide and sodium hydrosulfide are added when the recausticizing process cannot maintain production requirements. This is extremely high quality lime and typically has 96-99% available calcium carbonate equivalents. Lime mud never comes in contact with the pulp bleaching portion of the mill.

6. A summary of any available previous reviews by State or private certification programs or other organizations of the petitioned substance.

See Paragraph #7 below

7. Information regarding EPA, FDA, and State regulatory authority registrations, including registration numbers.

Approved and licensed by Maine D.E.P. to sell residual lime mud for agricultural utilization. License numbers S-022170-SD-A-N, S-021958-SG-C-M, S-021513-SG-B-M

8. The Chemical Abstract Service (CAS) number or other product numbers of the substance and labels of products that contains the petitioned substance.

NONE

9. The substance's physical properties and chemical mode of action including (a) chemical interactions with other substances, especially substances used in organic production; (b) toxicity and environmental persistence; (c) environmental impacts from its use or manufacture; (d) effects on human health; and, (e) effects on soil organisms, crops, or livestock.

See MSDS, attached Dioxin Results and Analysis of Heavy Metals

10. Safety information about the substance including a Material Safety Data Sheet (MSDS) and a substance report from the National Institute of Environmental Health Studies.

Material Safety Data Sheet

01 --- Section 01 Chemical Product and Company Identification ---

TRADE NAME: LIME MUD (DEWATERED)

MANUFACTURER:

S.D. WARREN COMPANY

dba SAPPI FINE PAPER NORTH AMERICA

225 FRANKLIN STREET

BOSTON, MA 02110

PHONE NUMBERS:

EMERGENCY: (800) 424-9300

INFORMATION: (617) 368-6337

SYNONYMS: LIME MUD, CALCIUM CARBONATE, PRECOAT MUD, SOMERSET LIME MUD,

DEWATERED LIME MUD

MSDS PREPARED BY: STEVEN R. BRENSKE

MSDS REVISED BY: HAROLD PRATT, CIH

REVISED: 4/10/2002

02 ---- Section 02 Composition, Information on Ingredients ----

CAS # COMPOSITION

CALCIUM CARBONATE 1317-65-3 15 -80 %

SODIUM HYDROXIDE 1310-73-2 0.1 - 0.5 %

Non-Hazardous NONE 84.9 - 19.5 %

03 ---- Section 03 Hazards Identification ----

EMERGENCY OVERVIEW:

CAUSES IRRITATION AND POSSIBLE BURNS TO THE SKIN AND EYES. CONTACT WITH EXTREME HEAT MAY GENERATE CARBON DIOXIDE. CONTACT WITH ACIDIC MATERIALS MAY GENERATE HYDROGEN SULFIDE GAS. PROLONGED SKIN CONTACT MAY CAUSE BURNS.

POTENTIAL HEALTH EFFECTS:

CAUSES IRRITATION AND BURNS TO THE EYES AND SKIN. THIS MATERIAL IS PRIMARILY CALCIUM CARBONATE WITH A TRACE OF SODIUM HYDROXIDE.

04 ---- Section 04 First Aid Measures ----

FLUSH EYES WITH WATER FOR AT LEAST 15 MINUTES. FLUSH SKIN WITH WATER. IF IRRITATION PERSISTS SEEK IMMEDIATE MEDICAL ATTENTION. DO NOT INDUCE VOMITING IF SWALLOWED. IF VOMITING SHOULD OCCUR, PLACE HEAD BELOW WAIST TO PREVENT ASPIRATION.

05 ---- Section 05 Fire Fighting Measures ----

MATERIAL DOES NOT BURN

EXTINGUISHING MEDIA: N/A

HAZARDOUS COMBUSTION PRODUCTS: N/A

06 ---- Section 06 Accidental Release Measures ----

FOLLOW SITE PROCEDURES FOR SPILLED OR RELEASED MATERIALS. CONTACT THE ENVIRONMENTAL COORDINATOR TO REPORT SPILLS OR RELEASES. DO NOT ALLOW THE MATERIALS TO ENTER WATERWAYS OR WETLANDS.

07 ---- Section 07 Handling and Storage ----

AVOID CONTACT WITH ACIDIC MATERIALS OR OXIDIZERS. DUSTING MAY BE A PROBLEM WITH UNCOVERED, OUTDOOR STORAGE.

EXPOSURE LIMITS

CALCIUM CARBONATE

ACGIH TLV: 10 MG/M3

OSHA PEL: 15 MG/M3 TOTAL DUST, 5 MG/M3 RESPIRABLE FRACTION

SODIUM HYDROXIDE

ACGIH TLV: NA

ACGIH TLV-STEL: 2 MG/M3 CEILING

OSHA PEL: 2 MG/M3

OSHA PEL-STEL: NA

08 ---- Section 08 Exposure Controls, Personal Protection ----

CHEMICAL GOGGLES, IMPERVIOUS GLOVES AND OTHER PROTECTIVE EQUIPMENT NECESSARY TO PREVENT SKIN CONTACT. PARTICULATE RESPIRATORS IF EXPOSURE LIMITS MAY BE EXCEEDED. BARRIER CREAMS MAY ALSO BE USED TO SUPPLEMENT PROTECTIVE CLOTHES.

09 ---- Section 09 Physical and Chemical Properties ----

APPEARANCE:

SOLID MATERIAL WITH GREENISH TO LIGHT GRAY COLOR

ODOR:

SLIGHT HYDROGEN SULFIDE

BOILING POINT:

NA

SPECIFIC GRAVITY: APPROX. 3.0

VAPOR PRESSURE:

NA

VAPOR DENSITY:

NA

% VOLATILE:

NA

SOLUBILITY: SLIGHTLY

PH:

<12.5

OIL /WATER PARTITION COEFFICIENT: NA

10 ---- Section 10 Stability and Reactivity ----

GENERAL:

THIS MATERIAL IS STABLE. HAZARDOUS POLYMERIZATION WILL NOT OCCUR.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

CONTACTS WITH ACIDS AND OXIDIZERS MAY RESULT IN GENERATION OF HYDROGEN SULFIDE GAS. THERMAL DECOMPOSITION MAY PRODUCE CARBON DIOXIDE GAS.

11 ---- Section 11 Toxicological Information ----

PRIMARY ROUTE OF ENTRY: EYES AND SKIN

EYES: CORROSIVE*

SKIN: CORROSIVE*

INGESTION: CORROSIVE*

*BASED ON PH OF MATERIAL

SOURCE: S. D. WARREN CO.

12 ---- Section 12 Ecological Information ----

FOLLOW SITE PROCEDURES FOR CONTAINMENT OF SPILLED OR RELEASED MATERIALS. DO NOT ALLOW MATERIAL TO ENTER WATERWAYS OR WETLANDS.

13 ---- Section 13 Disposal Considerations ----

DISPOSE OF IN ACCORDANCE WITH STATE, LOCAL, AND FEDERAL REGULATIONS. CONTACT

SITE ENVIRONMENTAL DEPARTMENT FOR DISPOSAL INSTRUCTIONS. MATERIAL CAN BE DISPOSED OF IN A LANDFILL ACCEPTABLE UNDER FEDERAL, STATE AND LOCAL REGULATIONS.

14 Section 14 Transport Information
MATERIAL IS NOT HAZARDOUS AS DEFINED BY DOT.
15 Section 15 Regulatory Information
NOT REGULATED BY SARA.
16 Section 16 Other Information
HMIS:
HEALTH: 1
FIRE: 0
REACTIVITY: 0
PERSONAL PROTECTION: F
Disclaimer:
This Material Safety Data Shoot was propaged to

This Material Safety Data Sheet was prepared to comply with the Hazard

Communication Standard, 29 CFR 1910.1200. The information and recommendations contained herein are based upon data believed to be accurate and correct as of the date specified. No representations or warranties, express or implied, of merchantability, fitness for a particular purpose or of any other nature are made herein with respect to this information or the product to which this information refers.

11. Research information about the substance which includes comprehensive substance research reviews and research bibliographies, including reviews and bibliographies which present contrasting positions to those presented by the petitioner in supporting the substance's inclusion on or removal from the National List.

12. A ``Petition Justification Statement'' which provides justification for one of the following actions requested in the petition:

The lime mud produced by the mills provides a local, low cost premium source of $CaCO_3$ that has agronomic value to the local farms, and at the same time provides a means to recycle and conserve these resources, instead of placing them in a landfill where the value of the product is lost.

This is a conservation minded source of crop and soil nutrient. It provides a high quality calcium lime by recycling nutrients while offering a significant savings to the farmer. Agricultural use of lime mud as a liming agent greatly reduces the amount of waste that is incorporated into a landfill, were it's agricultural value is wasted.

Presently non-organic farmers are using the lime mud product, and their agronomists have seen very beneficial results from it's use.

Maine Environmental Laboratory

Report of Analyses

One Main Street Yarmouth, Maine 04096-1107

Fax (207) 846-9066 Tel (207) 846-6569

e-mail: mclab@ine.nct

Kelly Robichaud

Domtar of Maine, Inc.

144 Main Street

Bailcyville, ME 04694

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April 10, 2002

Report No: '

DTM021-02

03/26/02

Lime-Pilot Project

Sampler: K. Robichaud

03/25/02 Sampling date:

Solid Sample matrix:

Sample ID: Lime Mud

Project ID: Laboratory ID:

Date received:

DTM02102-01

Data reported on a dry weight basis.

			Date	Reporting	:	
Parameter	Results	units	Analyzed	Detection Limit	Method	Reference
Aluminum, total	630	mg/kg	04/03/02	70	7020/3050B	SW8
Antimony, total	ND	mg/kg	04/02/02	0.6	7041/3050B	SW8
Arsenic, total	1,6	mg/kg	04/09/02	0.4	7060A/3050B	3W2
Barium, total	260	mg/kg	04/04/02	50	7080A/3050B	sws
Beryllium, total	0.06	mg/kg	04/02/02	0.05	7091/3050B	SW8
Cadmium, total	1.2 J	mg/kg	04/04/02	1.4	7130/3050B	SW8
Calcium, total	296100	mg/kg	04/04/02	2000	7140/3050B	SW8
Chromitum, total	10	mg/kg	04/04/02	6	7190/3050B	SW8
Cobalt, total	ND	mg/kg	04/05/02	6	7200/3050B	SW8
Copper, total	22	mg/kg	04/04/02	6	7210/3050B	SW8
Ттоп	700	mg/kg	04/03/02	40	7380/3050B	SW8
Lead, total	36	mg/kg	04/04/02	7	7420/3050B	'SW8
Magnesium, total	2040	mg/kg	04/04/02	4()	7450/3050B	SW8
Manganese, total	1040	mg/kg	04/05/02	40	7460/3050B	SW8
Mercury, total	0.11	mg/kg	04/08/02	0.06	7471A	SW8
Molybdenum, total	4.1	mg/kg	04/01/02	0.6	7481/3050B	SW8
Nickel, total	9	mg/kg	04/05/02	6	7520/3050B	SW8
Potassium, total	380	mg/kg	04/05/02	40	7610/3050B	SW8
Selenium, total	0.7	mg/kg	04/08/02	0.4	7740/3050B	SW8
Silver, total	ND	mg/kg	04/05/02	7	7760A/3050B	SW8
Sodium, total	8100	mg/kg	04/05/02	400	7770/3050B	SW8
Thallium, total	ND	mg/kg	04/02/02	0.7	7841/3050B	SW8
Vanadium, total	ND	mg/kg	04/04/02	50	7910/3050B	SW8
Zinc, total	248	mg/kg	04/04/02	ó	7950/3050B	SW8
Boron	4 }	mg/kg	04/02/02	5	4500B-B/M	STM
CaCO3 Equivalence	74.78	%	04/05/02	0.01	2340B	STM
Chlorida	26 J	mg/kg	04/03/02	31	9056	SW8
Cyanide	ND	mg/kg	04/03/02	1.2	9010B	SW8
oH*	12,06	su	03/27/02	10.0	9045C	SW8
Phosphorus	2100	mg/kg	04/08/02	400	4500P	STM
Total Solids	81.06	%	04/02/02	0.01	CLP 4F	CLP
TVS	4.50	%	04/09/02	10.0	160.4	EPA
Total Carbon	2.52	%	0 4 / 04/02	0.03	calculation	
TOWN CHOOM		•				

^{*} Data reported on an as received basis.

Maine Environmental Laboratory

Report of Analyses

One Main Street Yarmouth, Maine 04096-1107

Tel (207) 846-6569 Fax (207) 846-9066 c-mail: melab@ime.nct

K. Robichaud

Page 2 of 2

Domtar Maine Corp. 144 Main Street

June 27, 2002

Baileyville, ME 04694

Report No:

DTM027-02

Date received:

06/25/02

Project ID: Laboratory D: Lime Mud Sample 2 DTM02702-01

Sampler: K. Robichaud/BS

Sampling date: 06/24/02

Sample matrix: Solid

Sample ID: Line Mud

Data reported on a dry weight basis

Parameter	Results	units	Date Analyzed	Reporting Detection Limit	Method	Reference
CaCO3 Equivalence	98.7	%	06/26/02	3.0	1.006	AQA

I. Vol. Org. Comp	s.		Samplin	ng Days	
	Parameter	Standard	4/28-29/03	3/12/1992	3/13/1992
(Micrograms/L)	Chloromethane		ND		
	Bromomethane		ND		
	Vinyl Chloride	200	ND	ND	ND
	Chloroethane		ND		
	Methylene Chloride		ND		
	Acetone		ND		
	Carbon Disulfide		ND		
	1,1-Dichloroethane		ND		
ND= Not Detected	1,1-Dichloroethene	700	ND	ND	ND
	1,1-Dichloroethene Tot.		ND		
	Chloroform	6000	ND	ND	ND
	1,2-Dichloroethane	500	ND	ND	ND
	2-Butanone		ND		
	1,1,1-Trichloroethane		ND		
	Carbon Tetrachloride	500	ND	ND	ND
	Bromodichloromethane		ND		
	1,2-Dichloropropane		ND		
	cis-1,3-Dichloropropene		ND		
	Trichloroethene	500	ND	ND	ND
	Dibromochloromethane		ND		
	1,1,2-Trichloroethane		ND		
	Benzene	500	ND	ND	ND
	trans-1,3-Dichloropropene		ND		
	Bromoform		ND		
	4-Methyl-2-pentanone		ND		
	2-Hexanone		ND		
	Tetrachloroethene	700	ND	ND	ND
	Toluene		ND		
	1,1,2,2-Tetrachloroethane		ND		
	Chlorobenzene	100000	ND	ND	ND
	Ethyl Benzene		ND		
	Styrene		ND		
	Xylenes (Tot.)		ND		

J. Semi-Volatile Compounds

(micrograms/L)

7/25/1990 <10.0 <10.0 <10.0 <10.0 <10.0 <50.0 <10.0 3/13/1992 2 9 2 αN 呈 2 Sampling Days 4/28-29/03 3/12/1992 呈 2 皇 2 2 2 9 ND QN 읖 2 2 일 QN Q. Standard 400000 7500 3000 2000 2000 200 2,2'-oxybis(1-Chloropentane)# bis(2-Chloroethoxy) Methane N-Nitroso-di-n-dipropylamine Hexachlorocyclopentadiene 4-Chloro-3-methylphenol bis(2-Chloroethyl) Ether ,2,4-Trichlorobenzene Hexachlorobutadiene 2,4,6-Trichlorophenol .3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene 2,4,5-Trichlorophenol 2-Methylnapthalene 2-Chloronapthalene 2,4-Dimethylphenol 2,4-Dichlorophenol Hexachloroethane Dimethylphthalate 4-Methylphenol 2-Chlorophenol 2-Methylphenol 4-Chloroaniline 2-Nitroaniline Nitrobenzene 2-Nitrophenol Napthalene sophorone Parameter Phenol

ND= Not Detected

7 0	. Semi-Volatile	Spunodmo
	7	O

(micrograms/L)

ND= Not Detected

		ű	Sampling Days	ys	
Parameter	Standard	4/28-29/03	3/12/1992	3/13/1992	7/25/1990
Acenaphthylene		QN			
2,6-Dinitrotoluene		QN			:
3-Nitroaniline		QN			
Acenaphthene		QN	:		
2,4-Dinitrophenol		QN			
4-Nitrophenol		QN			
Dibenzofuran		QN			
2,4-Dinitrotoluene	130	QN	QN	QN	<10.0
Diethylphthalate		QN			
4-Chlorophenyl-phenyl Ether		QN			
Fluorene		QN			
4-Nitroaniline		QN			
4,6-Dinitro-2-methylphenol		QN			
N-nitrosodiphenylamine		QN			
4-Bromophenyl-phenyl ether		ΩN			
Hexachlorobenzene	130	ND	QN	ND	<10.0
Pentachlorphenol	100000	QN	QN	ND	<50.0
Phenanthrene		QΝ			
Anthracene		QN			
Carbazole		GN			
Di-n-butylphthalate		QΝ			
Fluoranthene		QN			
Pyrene		QN			
Butylbenzylphthalate		QΝ	-		
3,3'-Dichlorobenzidine		QN			
Benzo(a)anthracene		ΠN			
Chrysene		QN			
bis(2-Ethylhexyl)phthalate		ND			
Di-n-ocytylphthalate		ND			

J. Semi-Volatile			Š	Samplin
Compounds	Parameter	Standard	Standard 4/28-29/03 3/12/1	3/12/1
	Benzo(b)fluoranthene		QN	
(micrograms/L)	Benzo(k)fluoranthene		QN	

ND= Not Detected

		•				
Ð			Sa	Sampling Days	S/	
	Parameter	Standard	Standard 4/28-29/03 3/12/1992	3/12/1992	3/13/1992 7/25/1990	7/25/1990
	Benzo(b)fluoranthene		QN			
	Benzo(k)fluoranthene		QN			
	Benzo(a)pyrene		QN			-
	Indeno(1,2,3-cd)pyrene		QN			
	Dibenz(a,h)anthracene		QN			
ted	Benzo(g,h,l)perylene		QN			

L.(1) Pesticides

(micrograms/L)

ND = Not Detected

		Sampling Date
Parameter	Standard	3/12/92
alpha-BHC		
beta-BHC		
delta-BHC		·
gamma-BHC (Lindane)	400	ND
Heptachlor	8	ND
Aldrin		
Heptachlor epoxide	8	ND
Endosulfan I		
Dieldrin		
4,4'-DDE		
Endrin	20	ND
Endosulfan II		
4,4'-DDD		
Endosulfan sulfate		, and the second
4,4'-DDT		
Methoxychlor	10000	ND
Endrin Ketone		
Endrin aldehyde		
alpha-Chlordane	30	ND
gamma-Chlordane		
Toxaphene	500	ND

L.(2) Herbicides

(micrograms/L)

		Sampill	Sampling Date
Parameter	Standard	3/12/92	3/13/92
2,4-D	10000	QN	QN
2,4,5-TP	1000	ND	QN

M. Dioxins

(b/gd)

ND= Not Detected 1,2,

		Sampli	Sampling Date
		Carre	ng Date
Parameter	Standard	4/18/03	8/3/93
2,3,7,8-TCDD		QN	QN
Total TCDD		QN	QN
1,2,3,7,8-PeCDD		QN	QN
Total PeCDD		QN	QN
1,2,3,4,7,8-HxCDD		ND	QN
1,2,3,6,7,8-HxCDD		ΩN	QN
1,2,3,7,8,9-HxCDD		QN	QN
Total HxCDD		ΠN	QN
1,2,3,4,6,7,8-HpCDD		0.167	Q
Total HpCDD		0.324	QN
OCDD		1.42	QN
2,3,7,8-TCDF		QN	QN
Total TCDF		QΝ	ΩN
1,2,3,7,8-PeCDF		QΝ	QN
2,3,4,7,8-PeCDF		QN	QN
Total PeCDF		QN	QN
1,2,3,4,7,8-HxCDF		QN	QN
1,2,3,6,7,8-HxCDF		QN	QN
2,3,4,6,7,8-HxCDF		QN	QΝ
1,2,3,7,8,9-HxCDF		QΝ	QN
Total HxCDF		QN	QN
1,2,3,4,6,7,8-HpCDF		QN	QN
1,2,3,4,7,8,9-HpCDF		QN	QN
Total HpCDF		ND	QN
OCDF		0.353	QN

B= analyte detected in blank. Barium in blank was 0.0133 mg/L

					Samplii	Sampling Date		2A	14	
Parameter	Standard	12/12/02	8/29/02	9/19/01	9/18/01	8/26/99	2/10/98	3/12/92	3/12/92	7/25/90
Arsenic	5.0	QN	ND	ΩN	QN	<0.02	<0.04	<0.1	<0.1	<0.5
Barinm	100.0	1.9	2.3	0.5	1.8	B 0.978	0.5	1.3	2.1	<0.5
Cadmium	1.0	QN	0.01J	GΝ	0.02J	<0.025	<0.01	<0.01	<0.01	<0.10
Chromium	5.0	0.2J	0.1	0.1J	0.1J	<0.0375	0.2	<0.2	<0.2	<0.50
Lead	5.0	0.1J	ND	0.1J	QN	<0.01	<0.1	<0.1	<0.1	<0.5
Mercury	0.2	QN	ND	QN	QN	<0.2	<0.002		<0.002	<2.0
Selenium	1.0	ND	ND	ND	QN	<0.025	<0.04		<0.1	<0.1
Silver	5.0	ND	QN	ND	ND	<0.0375	<0.1	<0.1	<0.1	<0.5