

Golder Associates Inc.

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RECEIVED

JUN 10 2002

June 4, 2002

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BUREAU OF AIR REGULATION

Florida Department of Environmental Protection
2600 Blair Stone Road
MS 5505
Tallahassee, Florida 32399-2400

Attention: Mr. Clair Fancy, P.E., Bureau Chief, New Source Review Section

SUBJECT: USE OF GLIDFUEL AS ALTERNATIVE FUEL SOURCE

Dear Mr. Fancy:

Jefferson Smurfit Corporation (JSC) currently operates the Fernandina Beach kraft pulp mill under Title V operating permit No. 0890003-001-AV. JSC is planning to use Glidfuel at the Fernandina Beach mill as an alternative fuel. Due to the nature and characteristics of Glidfuel, we believe its use as an alternative to No. 6 fuel oil would not increase emissions of any regulated pollutant, and will actually lower emissions of several pollutants. As a result, JSC is requesting a minor modification of its permits for fuel oil burning sources at the mill, allowing Glidfuel as an alternative fuel.

The fuel oil burning sources at the Fernandina Beach mill consist of the No. 5 Power Boiler (006), the No. 4 and 5 Recovery Boilers (007 and 011), the No. 7 Power Boiler (015), and the No. 4 Lime Kiln (021). Each of these sources is currently permitted to burn virgin No. 6 fuel oil and on-spec used oil. The No. 5 Power Boiler includes a stipulation that the maximum sulfur content of the fuel oil cannot exceed 2.5 percent.

Glidfuel is a fuel that is produced by Millennium Chemicals at its Jacksonville plant. It is the top and bottom cuts off of the fractionation towers used in the process at Millennium. It is a mixture of hydrocarbons, terpenes, and terpene alcohols. A material safety data sheet (MSDS) is attached for your information.

Although not historically used at Fernandina Beach, Glidfuel has been burned as a fuel in boilers at several SCM Glidco Organics, Inc. (SCM) facilities in Florida and Georgia. Upon request from SCM (now Millennium Chemicals), the U. S. Environmental Protection Agency (EPA) has classified Glidfuel as "a product whose normal and intentional use is as a fuel". EPA further stated that Glidfuel is not a "waste-derived fuel". The EPA approval letter is also attached.

JSC has obtained analysis of Glidfuel for comparison to No. 6 fuel oil characteristics. A summary of the Glidfuel analysis is presented in Table 1. A comparison of Glidfuel and No. 6 fuel oil characteristics is presented in Table 2. As shown, Glidfuel is lower in sulfur content and equivalent SO₂ emissions. The trace element content of Glidfuel is shown to be below or similar to No. 6 fuel oil. Based on these analyses, Glidfuel should not result in emissions greater than that due to No. 6 fuel oil.

JSC will typically receive two truckloads per day of Glidfuel, or approximately 12,000 gallons per day. The Glidfuel would be added to the mill No. 6 fuel oil tank, where it will blend with the No. 6 fuel oil. JSC will maintain purchase records of Glidfuel for reporting on an annual basis.

Based on the information contained in this letter, we believe use of Glidfuel as an alternative to No. 6 fuel oil would not increase emissions of any regulated pollutant. JSC is requesting a minor modification of its permits for fuel oil burning sources at the mill, allowing Glidfuel as an alternative fuel. Attached are the first 6 pages of the Title V application form and revised pages from the Nos. 5 and Power Boilers, the Nos. 4 and 5 Recovery Boilers, and the Lime Kiln emission unit sections.

Please contact David Buff (352) 336-5699 or Bill Crews (902) 277-7746 if you need additional information or have any questions regarding this request. JSC staff will be available to meet by telephone or at your office if needed.

Sincerely,

GOLDER ASSOCIATES INC.



David A. Buff, P.E.
Principal Engineer
Florida P.E. #19011
SEAL

DB/SLW/BJP

Enclosures: Revised application pages
MSDS for Glidfuel
U. S. EPA letter to SCM Glidco Organics, Inc.

cc: Bill Crews, JSC
Christopher Kirts, P.E., DEP Northeast District

P:\Projects\2001\0137599 Jefferson Smurfit\44.1\060402b.doc



Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: Jefferson Smurfit Corporation (U.S.)			
2. Site Name: Fernandina Mill			
3. Facility Identification Number:		0890003	[] Unknown
4. Facility Location: Street Address or Other Locator: North 8th Street City: Fernandina Beach County: Nassau Zip Code: 32034			
5. Relocatable Facility? [] Yes [X] No		6. Existing Permitted Facility? [X] Yes [] No	

Application Contact

1. Name and Title of Application Contact: Bill Crews, Environmental Manager			
2. Application Contact Mailing Address: Organization/Firm: Jefferson Smurfit Corp. (U.S.) Street Address: North 8th Street City: Fernandina Beach State: FL Zip Code: 32034			
3. Application Contact Telephone Numbers: Telephone: (904) 277 - 7746 Fax: (904) 277 - 5888			

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	<i>06-10-02</i>
2. Permit Number:	<i>0890003-006-AC</i>
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- Initial Title V air operation permit for an existing facility which is classified as a Title V source.
- Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: _____

- Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit number to be revised: _____

- Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected: _____

- Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised: _____

Reason for revision: _____

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

- Air construction permit to construct or modify one or more emissions units.
- Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
- Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official: Warren S. Flenniken, V.P. and General Manager
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Jefferson Smurfit Corp. (U.S.), Mill Div. Street Address: North 8th Street City: Fernandina Beach State: FL Zip Code: 32034
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: (904) 261 - 5551 Fax: (904) 277 - 5888
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i> Signature <u>W. S. Flenniken</u> Date <u>06-06-02</u>

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: David A. Buff Registration Number: 19011
2. Professional Engineer Mailing Address: Organization/Firm: Golder Associates Inc. Street Address: 6241 NW 23rd Street, Suite 500 City: Gainesville State: FL Zip Code: 32653-1500
3. Professional Engineer Telephone Numbers: Telephone: (352) 336 - 5600 Fax: (352) 336 - 6603

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [X], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

(seal)

Date

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
006	No. 5 Power Boiler	ACM2	
007	No. 4 Recovery Boiler	ACM2	
011	No. 5 Recovery Boiler	ACM2	
015	No. 7 Power Boiler	ACM2	
021	NCG Collection/No. 4 Lime Kiln	ACM2	

Application Processing Fee

Check one: [] Attached - Amount: \$: _____ [] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

The purpose of this application is to revise existing permits to include Glidfuel as an alternative to No. 6 fuel oil for the No. 5 Power Boiler, the No. 4 Recovery Boiler, the No. 5 Recovery Boiler, the No. 7 Power Boiler and the Lime Kiln.

2. Projected or Actual Date of Commencement of Construction **July 1, 2002**

3. Projected Date of Completion of Construction: **Dec. 31, 2002**

Application Comment

[Empty box for Application Comment]

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)**

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>No. 5 Power Boiler</p>			
<p>4. Emissions Unit Identification Number:</p> <p>ID: 006</p>		<p><input type="checkbox"/> No ID</p> <p><input type="checkbox"/> ID Unknown</p>	
<p>5. Emissions Unit Status Code:</p> <p>A</p>	<p>6. Initial Startup Date:</p>	<p>7. Emissions Unit Major Group SIC Code:</p> <p>26</p>	<p>8. Acid Rain Unit?</p> <p><input type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>No. 5 Power Boiler is a combination boiler which may be fired with oil, Glidfuel and/or carbonaceous fuels.</p>			

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): External Combustion Boilers, Industrial, Wood/Bark Waste Fired		
2. Source Classification Code (SCC): 1-02-009-02		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 53.8	5. Maximum Annual Rate: 470,978	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: 8.5
10. Segment Comment (limit to 200 characters): Wood/Bark Waste is carbonaceous fuel which includes wood, bark, bark ash, sawdust wood residue sludge, and recycle paper residual. Heat content of carbonaceous fuel assumed to be 4,250 Btu/lb.		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): External Combustion Boilers, Industrial, Residual Oil – Grade 6 Oil Fired		
2. Source Classification Code (SCC): 1-02-004-01		3. SCC Units: Thousand Gallons Burned
4. Maximum Hourly Rate: 4.417	5. Maximum Annual Rate: 33,726	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 2.5	8. Maximum % Ash:	9. Million Btu per SCC Unit: 149
10. Segment Comment (limit to 200 characters): Max annual rate based on 92,400 gal/day. Fuel oil includes No. 6 fuel oil, on-spec used oil and Glidfuel. Max hourly rate of 4,417 gal/hr is based on max hourly heat input for fuel oil of 657.8 Btu/hr.		

III. EMISSIONS UNIT INFORMATION

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**A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)**

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>No. 4 Recovery Boiler</p>			
<p>4. Emissions Unit Identification Number:</p> <p>ID: 007</p>		<p><input type="checkbox"/> No ID</p> <p><input type="checkbox"/> ID Unknown</p>	
<p>5. Emissions Unit Status Code:</p> <p>A</p>	<p>6. Initial Startup Date:</p>	<p>7. Emissions Unit Major Group SIC Code:</p> <p>26</p>	<p>8. Acid Rain Unit?</p> <p><input type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p>			

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Pulp and Paper and Wood Products, Sulfate (Kraft) Pulping, Recovery Furnace/Indirect Contact Evaporator		
2. Source Classification Code (SCC): 3-07-001-10		3. SCC Units: Tons Air-Dried Unbleached Pulp
4. Maximum Hourly Rate: 55	5. Maximum Annual Rate: 481,800	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): Maximum hourly rate based on 137,500 lbs(BLS)/hr fed to No. 4 Recovery Boiler and 2,500 lbs(BLS)/ton (ADUP).		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): In-Process Fuel Use: Residual Oil: General		
2. Source Classification Code (SCC): 3-90-004-89		3. SCC Units: Thousand Gallons Burned
4. Maximum Hourly Rate: 3	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 2.5	8. Maximum % Ash:	9. Million Btu per SCC Unit: 150
10. Segment Comment (limit to 200 characters): 8.3 gpm/gun x 6 guns x 60 min/hr = 3,000 gal/hr. Fuel oil includes No. 6 fuel oil, Glidfuel and on-spec used oil. It is burned for startup, shutdown, and malf. Consequently, an annual rate is not appropriate.		

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)**

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p>No. 5 Recovery Boiler</p>			
<p>4. Emissions Unit Identification Number:</p> <p>ID: 011</p>		<p><input type="checkbox"/> No ID</p> <p><input type="checkbox"/> ID Unknown</p>	
<p>5. Emissions Unit Status Code:</p> <p>A</p>	<p>6. Initial Startup Date:</p>	<p>7. Emissions Unit Major Group SIC Code:</p> <p>26</p>	<p>8. Acid Rain Unit?</p> <p><input type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p>			

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Pulp and Paper and Wood Products, Sulfate (Kraft) Pulping, Recovery Furnace/Indirect Contact		
2. Source Classification Code (SCC): 3-07-001-10		3. SCC Units: Tons Air-Dried Unbleached Pulp
4. Maximum Hourly Rate: 62.712	5. Maximum Annual Rate: 537,316	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): The max hourly rate based on permit limit of 156,780 lbs(BLS)/hr fed to No. 5 Recovery Boiler and 2,500 lbs(BLS)/ton (ADUP). Hours of operation limited to 8,568 hrs/yr.		

Segment Description and Rate: Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters): In-Process Fuel Use: Residual Oil: General		
2. Source Classification Code (SCC): 3-90-004-89		3. SCC Units: Thousand Gallons Burned
4. Maximum Hourly Rate: 3	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 2.5	8. Maximum % Ash:	9. Million Btu per SCC Unit: 150
10. Segment Comment (limit to 200 characters): 8.3 gpm/gun x 6 guns x 60 min/hr = 3,000 gal/hr. Fuel oil includes No. 6 fuel oil, Glidfuel and on-spec used oil. It is burned for startup, shutdown, and malf. Consequently, an annual rate is not appropriate.		

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)**

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): No. 7 Power Boiler with Coal and Ash Handling System</p>			
<p>4. Emissions Unit Identification Number: ID: 015</p>		<p><input type="checkbox"/> No ID <input type="checkbox"/> ID Unknown</p>	
<p>5. Emissions Unit Status Code: A</p>	<p>6. Initial Startup Date:</p>	<p>7. Emissions Unit Major Group SIC Code: 26</p>	<p>8. Acid Rain Unit? <input type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p> <p>Consists of the No. 7 Power Boiler, Coal Handling System, and Ash Handling System. No. 7 Power Boiler is primarily fired with coal.</p>			

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 1 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters): External Combustion Boilers, Industrial, Bituminous Coal, Pulverized Coal: Dry Bottom (Tangential)		
2. Source Classification Code (SCC): 1-02-002-12		3. SCC Units: Tons Burned
4. Maximum Hourly Rate: 41	5. Maximum Annual Rate: 359,160	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash: 7	9. Million Btu per SCC Unit: 25
10. Segment Comment (limit to 200 characters): Maximum %S limited to the formula: %S = (6.32 E-05) x (Btu/lb coal). Maximum rates based on 12,500 Btu/lb and 1,021 MMBtu/hr.		

Segment Description and Rate: Segment 2 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters): External Combustion Boilers, Industrial, Residual Oil: Grade 6 Oil		
2. Source Classification Code (SCC): 1-02-004-01		3. SCC Units: Thousand Gallons Burned
4. Maximum Hourly Rate: 6.8	5. Maximum Annual Rate: 5,963	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 2.5	8. Maximum % Ash:	9. Million Btu per SCC Unit: 150
10. Segment Comment (limit to 200 characters): Fuel oil includes No. 6 fuel oil, on-spec used oil and Glidfuel. Only used as supplemental fuel, standby when coal is not available, startups & shutdowns. Basis: 1,021 MMBtu/hr; limited to 10% annual capacity factor.		

III. EMISSIONS UNIT INFORMATION

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**A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)**

Emissions Unit Description and Status

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): NCG Collection/No. 4 Lime Kiln</p>			
<p>4. Emissions Unit Identification Number: ID: 021</p>		<p><input type="checkbox"/> No ID <input type="checkbox"/> ID Unknown</p>	
<p>5. Emissions Unit Status Code: A</p>	<p>6. Initial Startup Date:</p>	<p>7. Emissions Unit Major Group SIC Code: 26</p>	<p>8. Acid Rain Unit? <input type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p>			

E. SEGMENT (PROCESS/FUEL) INFORMATION
(All Emissions Units)

Segment Description and Rate: Segment 3 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Pulp and Paper and Wood Products, Sulfate (Kraft) Pulping, Lime Kiln: General		
2. Source Classification Code (SCC): 3-07-001-06		3. SCC Units: Tons Air-Dried Unbleached Pulp Produced
4. Maximum Hourly Rate: 186	5. Maximum Annual Rate: 1,627,320	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): Max Annual Rate is based on sum of maximum production rates for the Kamyr Digester System and the Batch Digester System.		

Segment Description and Rate: Segment 4 of 5

1. Segment Description (Process/Fuel Type) (limit to 500 characters): In-Process Fuel Use: Residual Oil: Lime Kiln		
2. Source Classification Code (SCC): 3-90-004-03		3. SCC Units: Thousand Gallons Burned
4. Maximum Hourly Rate: 1.1768	5. Maximum Annual Rate: 10,281	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 3	8. Maximum % Ash:	9. Million Btu per SCC Unit: 145
10. Segment Comment (limit to 200 characters): Maximum Annual Rate based on 8,736 hrs/yr. Residual oil includes No. 6 fuel oil, Glidfuel and on-spec used oil.		

Table 1. Glidfuel Analysis

Date	Ash (%)	Total Halides (ppm)	Total Chloride (ppm)	Sulfur (%)	Chromium (ppm)	Copper (ppm)	Lead (ppm)
January-01	1.60	<500	<500	1.00	1.5	<5.0	<1.0
February-01	0.99	<500	<500	1.20	<1.0	<5.0	<1.0
March-01	0.76	<500	<500	0.97	2.7	12.0	<1.0
April-01	0.40	<500	<500	1.40	<1.0	<5.0	<1.0
May-01	1.50	<500	<500	0.23	<1.0	<5.0	<1.0
June-01	0.46	<500	<500	0.42	1.6	<5.0	<1.0
July-01	0.36	<500	<500	0.94	1.3	<5.0	<1.0
August-01	0.65	<500	<500	0.81	1.5	<5.0	<1.0
September-01	0.50	<500	<500	0.53	<1.0	<5.0	<1.0
October-01	0.90	<500	<500	0.82	1.5	<5.0	<1.0
November-01	1.10	<500	<500	1.03	<1.0	<5.0	<1.0
December-01	1.00	<780	<780	1.10	<2.0	<10.0	<2.0
January-02	0.80	<500	<500	0.93	<1.0	<5.0	<1.0
February-02	--	<500	--	--	--	--	<1.0

Note: Values with less than sign were undetectable, with detection limit shown.
ppm = parts per million by weight.

Source: Millennium Chemicals, 2002.

Table 2. Comparison of No. 6 Fuel Oil and Glidfuel Characteristics

Parameter	Glidfuel	No. 6 Fuel Oil (Typical)
Specific Gravity	0.904	0.96
Denisty (lb/gal)	7.52	8.00
Heating Value (Btu/lb)	19,000	18,750
(Btu/gal)	142,880	150,000
Sulfur Content (%)	0.2 - 1.5	2.5 (max)
Equivalent SO ₂ Emissions (lb SO ₂ /MMBtu)	0.21 - 1.6	2.67
Ash (%)	0.3 - 1.6	0.05 - 0.10
Total Halides (ppm)	<500	12 ^c
Total Chloride (ppm)	<500	12 ^c
Chromium (ppm)	0 - 2.7 (avg 1.1)	1.3 ^c
Copper (ppm)	<5 ^a	2.8 ^c
Lead (ppm)	<1.0	3.5 ^c
Arsenic (ppm)	<1.0 ^b	0.8 ^c
Cadmium (ppm)	<2.0 ^b	2.3 ^c

^a All samples less than detection limit, except one sample result was 12 ppm.

^b Based on one sample.

^c Emissions Assessment of Conventional Stationary Systems: Vol. III.
External Combustion Sources For Electricity Generation. TRW, Inc., 1981
NTIS #PB81-145195. (Table 70).

Material Safety Data Sheet



MSDS Number 1548
 Product Code 18R55
 Revision Date 10/23/00
 Supersedes Date 04/27/00

1. IDENTIFICATION

Trade Name: **GLIDFUEL(TM) 791**

CAS Number : None (mixture)
 Chemical Name: Mixture of terpene hydrocarbons, terpene alcohols, terpene polymers
 Physical State : Liquid. Color: Dark brown. Odor: Pine-type.

Headquarters: Millennium Specialty Chemicals P.O. Box 389 Jacksonville, FL 32201, USA Telephone: 904-788-5800 Fax: 904-788-2200	Europe: SCM Europe SANV 141 Rue St-Lambert Bte 2 B-1200 Bruxelles, Belgique Telephone: 322-771-2110 Fax: 322-722-4217
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2. COMPOSITION

CAS Number	Ingredient	Typical Wt %
68956-56-9	HYDROCARBONS, TERPENE PROCESSING, BY-PRODUCT	10-50
68938-00-1	TERPENES AND TERPENOIDS, TURPENTINE-OIL RESIDUES	10-50
NONE	TERPENE ALCOHOLS	10-50

IEC Classifications

Symbol(s)	Risk Phrases	Safety Phrases
Xn	R(10)-65	S62

3. HAZARDS IDENTIFICATION

Carcinogenicity
 Not considered a carcinogen by NTP or IARC or OSHA.
Risks Summary
 Flammable. Harmful if swallowed.

4. FIRST AID MEASURES

Eye Contact
 Flush with water for at least 15 minutes. If irritation develops, get medical attention.

Skin Contact
 Remove contaminated clothing. Wash affected areas with plenty of soap and water. If irritation develops, get medical attention.

Inhalation
 Seek fresh air immediately. If breathing is difficult, get medical attention.

Ingestion
 Drink lots of water to dilute substance. Do not induce vomiting. Get medical attention immediately.

Notes To Physician
 Do not induce vomiting. Aspiration of the vomitus may cause lung damage.

5. FIRE FIGHTING MEASURES

Means of Extinction
 Carbon dioxide, dry chemical, foam. If water must be used, use as a spray only.

Unusual Fire/Explosion Hazards
 Flammable liquid. Avoid heat, sparks and open flames.

Hazardous Combustion Products
Carbon dioxide, carbon monoxide, acid fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Refer to Section 8 for personal protection equipment information.

Environmental Precautions

Do not discharge into lakes, streams, ponds or public waters.

Cleanup Procedures

Small spills should be adsorbed by dirt, sand or other suitable adsorbent. Large spills may be pumped into closed containers for recovery or disposal.

7. HANDLING AND STORAGE

Handling

Wear safety glasses or goggles, rubber gloves and apron when handling.

Storage

Do not store in close proximity to heat, sparks, open flames, strong acids, strong bases. To minimize product degradation, avoid prolonged exposure of the material to air. Keep container tightly closed when not in use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION EQUIPMENT

EXPOSURE CONTROLS

Ventilation

Not normally required. Local mechanical exhaust may be needed in confined and warm areas.

Safety Stations

An eyewash and safety shower should be readily available.

Contaminated Equipment

Clean contaminated equipment with soap and water. Do not discharge wash water into lakes, streams, ponds or public waters.

PERSONAL PROTECTION EQUIPMENT

Eye Protection

Wear safety glasses or goggles.

Hand Protection

Wear standard industrial type rubber gloves.

Skin Protection

A rubber apron is recommended when handling large quantities of this material.

Respiratory Protection

A respirator is not normally required. If the vapor concentration is high, use a NIOSH approved organic vapor respirator.

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Result
Flash Point	108 deg.F (Tag Closed Cup)
pH	Not Determined.
Boiling Point	154°C (Distillation)
Melting Point	Not Determined.
Autoignition Temperature	Not Determined.
Flammability	Not Determined.
Explosive Properties	Not Determined.
Oxidizing Properties	Not an oxidizer.
Vapor Pressure	Not Determined.
Vapor Density (Air = 1)	Not Determined.
Evaporation Rate (Butyl Acetate = 1)	Not Determined.
Viscosity	Not Determined.
Specific Gravity	0.904 at 25/25°C
Partition Coefficient (n-Octanol/Water)	Not Determined.
Solubility in Water (Weight%)	Not Determined.
Solubility in Alcohol (Weight%)	100!

10. STABILITY AND REACTIVITY

Conditions to Avoid

Prolonged or excessive heat and/or exposure to air may cause decomposition or oxidation of the material.

Materials to Avoid

Avoid contact with strong acids, strong bases, and materials that react with unsaturated hydrocarbons, alcohols.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide, acrid fumes.

11. TOXICOLOGICAL INFORMATION

Target Organs: Respiratory system. Primary Entry Routes: Ingestion.

Medical Conditions Aggravated by Overexposure

None known.

ACUTE TOXICITY

Acute Oral (LD50, rat)	Not determined.
Acute Inhalation (LC50, rat)	Not determined.
Acute Dermal (LD50, rabbit)	Not determined.
Eye Irritancy	Prolonged contact with the undiluted material may cause irritation.
Dermal Irritancy	Prolonged contact with the undiluted material may cause irritation.
Skin Sensitization	Not determined.

CHRONIC TOXICITY

Mutagenicity	Not determined.
Teratogenicity	Not determined.

12. ECOLOGICAL INFORMATION

Biodegradability	Not determined.
Aquatic Toxicity	Not determined.
Mobility	Not determined.
Bioaccumulation Potential	Not determined.

13. DISPOSAL CONSIDERATIONS

Disposal Methods	This material, if discarded, is considered a hazardous waste by EPA regulations 40 CFR 261.
Safe Handling of Wastes	Refer to Section 8 for information on personal protection equipment and exposure controls when handling this material for disposal.
Community Provisions	Dispose of this material at a government approved landfill, incinerator or recovery facility.

14. TRANSPORTATION INFORMATION

DOT Shipping Name	Flammable Liquid, n.o.s. (Terpenes and Terpenoids), 3, UN1993, PGIII
DOT Hazard Class	3
UN/NA I.D.	UN1993
Packing Group	III
ERG Number	128
ADR/RID	1993 Flammable Liquid, n.o.s.; 3, 31(c) ADR
IMDG Class	3.3 (IMDG Page 3345)
IATA Classification	Flammable Liquid, n.o.s., 3, UN1993, PGIII
Marine Pollutant	Yes (alpha-Pinene)

15. REGULATORY INFORMATION

INVENTORIES STATUS

USA (TSCA)	Compliant
European Union	Not Compliant
Canada	Not Compliant
Australia	Not Compliant
Japan	Not Compliant
Korea	Not Compliant
Philippines	Not Determined
China	Not Determined

CERCLA Reportables:

Due to its flammability characteristic, this product is CERCLA reportable if the quantity released is greater than 100 pounds.

16. OTHER INFORMATION

(Hazardous Materials Information System (HMIS))

Health	Flammability	Reactivity	Personal Protection
1	2	1	C - See Section 8

References

RIFM - Research Institute for Fragrance Materials.
 RTECS - Registry of Toxic Effects of Chemical Substances

Company Contact(s)

Environmental and Regulatory Affairs Department

Acronyms

NTP - National Toxicology Program; IARC - International Agency For Research on Cancer; OSHA - Occupational Health and Safety Administration

The information contained in this document is believed to be current and accurate. However, these data are provided without any warranty expressed or implied regarding its correctness or accuracy. Recipients are advised to determine in advance the safe conditions for use of this product.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30385

FEB 21 1995

4WD-RCRA

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Michael Tipping, Manager
Environmental and Regulatory Affairs
SCM Glidco Organics, Inc.
Post Office Box 389
Jacksonville, Florida 32201

SUBJ: Regulatory Status of Glidfuel and Associated Streams
FLD049765811, Jacksonville Operations
GAD980847339, Colonel's Island Operations

Dear Mr. Tipping:

The United States Environmental Protection Agency ("EPA") has reviewed the documentation submitted by SCM Glidco Organics ("SCM") pertaining to Glidfuel. SCM has taken the position that the Glidfuel is not a waste derived fuel, but is in fact a product whose normal and intentional use is as a fuel. The Agency as well as SCM have spent significant resources in coming to this final decision. Most importantly, EPA believes that this was a "close call" which would have had a significant impact on the definition of solid waste.

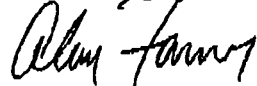
After careful consideration of the facts, affidavits, and evidence collected, EPA concurs with SCM. Therefore, SCM facilities located in Jacksonville, Florida, and Colonel's Island, Georgia, are not considered illegal boilers under the Boiler and Industrial Furnace Rule, 40 C.F.R. Part 266, Subpart H. EPA cautions SCM that this decision is based on the current regulations, and that this is not an insurance policy against future regulatory changes. In addition, please note that the state Agency in Florida or Georgia is not bound by EPA's decision and can be more stringent.

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I hope that this letter resolves the issue concerning Glidfuel. If you should have any questions on this matter, please contact Mr. David Langston, of my staff, at 404-347-3555, VMX. 6392.

Sincerely yours,



G. Alan Farmer
Chief, RCRA Branch
Waste Management Division

cc: Mr. Satish Kastury, FDEP
Ms. Jennifer Kaduck, GEFD
Mr. Ernest Frey, FDEP
Mr. David Yardumian, GEFD

JAN 25 '02 10:19

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** TOTAL PAGE.03 **