Progress Energy

Michael Olive
Plant Manager
Crystal River Fossil Plant

September 22, 2003

Mr. Scott Sheplak, P.E.
Bureau of Air Regulation
Florida Department of Environmental Protection
Mail Station: 5500
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Peterson

Re: Crystal River Units 4&5 Fly Ash Loading Spouts
E.U. ID No. 016, Material Handling Activities for Coal-Fired Steam Units
Permit No. 0170004-008-AV

Progress Energy Florida is submitting notification pursuant to Florida Administrative Code 62-213.410(2) concerning an operating change of the fly ash loading spouts located at Crystal River Units 4 and 5. As previously discussed with the staff at the Bureau of Air Regulations and the Southwest District, the Crystal River facility is planning to replace the present fly ash loading spout with an automated model UN800 loading spout and a compact filter module, please see attachment. The project is scheduled to commence in the beginning of October, 2003 and to be completed in late December, 2003. The scheduled project is an enhancement to the fly ash loading operations, minimizing any possible fugitive emissions of particulate matter. All applicable permit conditions shall be maintained.

Please feel free to contact Matt Lydon at (727) 826-4152 or Cyndy Wilkinson of my staff at (352) 563-4396 if you have any questions or need any additional information regards this project.

Sincerely,

Michael Olive
Plant Manager, Crystal River Fossil Plant
Responsible Official

enclosures

cc Joel Huey, EPA Region 4
Joel Smolen, FDEP Southwest District

Progress Energy Florida, Inc.
Crystal River Fossil Plant
15760 W. Powerline Street
Crystal River, FL 34428

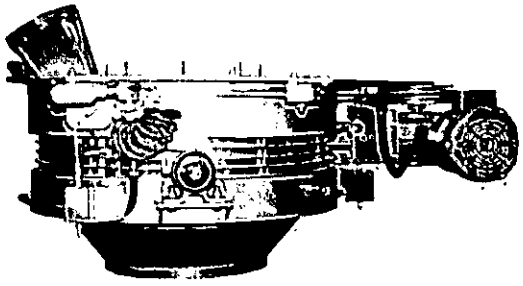
Dust Control and Loading Systems Inc

Leaders in Innovative Bulk Loading Systems Design

UN800 Loading Spout

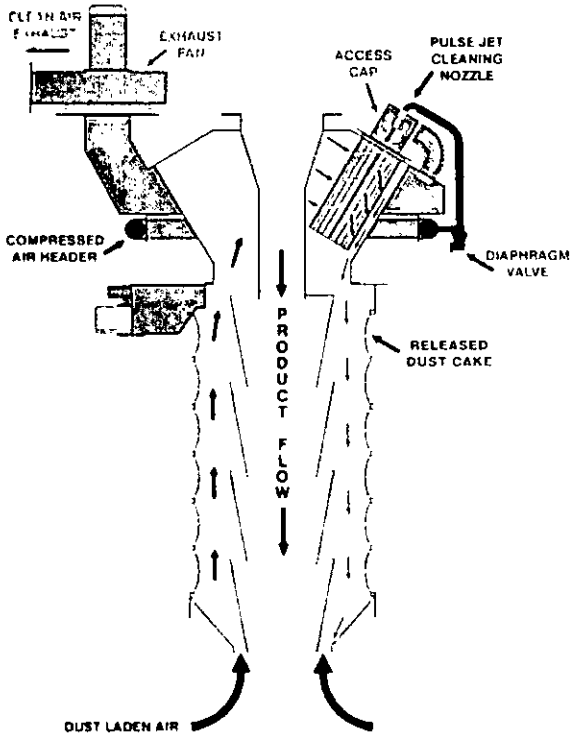
UN800 LOADING SPOUT

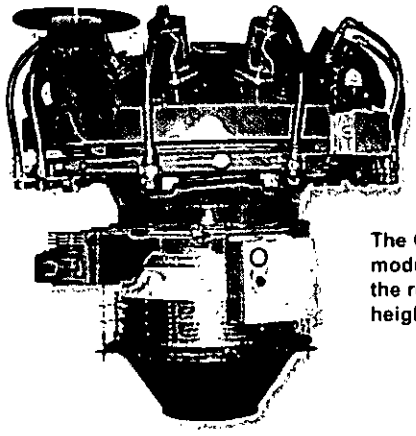
EV enclosed vehicle or OV open vehicle spouts provide excellent dust free loading performance for trucks and railcars. DCL has incoporated 20 years of experience in bulk loading of dry materials into this new service friendly retractable spout design. The low profile feature makes this spout the best choice when faced with limited space conditions.



UN800 shown fully retracted in storage position.

- Easy access to drive components.
- Three cable hoist system proving maximum spout stability.
- Shipped completely assembled and tested.
- Slack cable and drive limits factory set.
- Internal stacking product flow control cones are constructed from urethane, AR steel or optional stainless steel.
- Wide selection of flexible outer spout sleeve materials for high and low temperature applications provided with heavy duty aluminum stacking type support rings.
- EV enclosed vehicle or OV open vehicle discharge configuration.
- Vertical travels up to 18 feet.
- Loading capacities of up to 450 cu ft/min of fine aerated materials.
- Collar style dust outlet for connection to a free standing dust collector or vent through frame configuration for connection to an inline filter module.





The CFM filter module adds 30" to the retracted spout height.

SPOUT / CFM COMBINATION

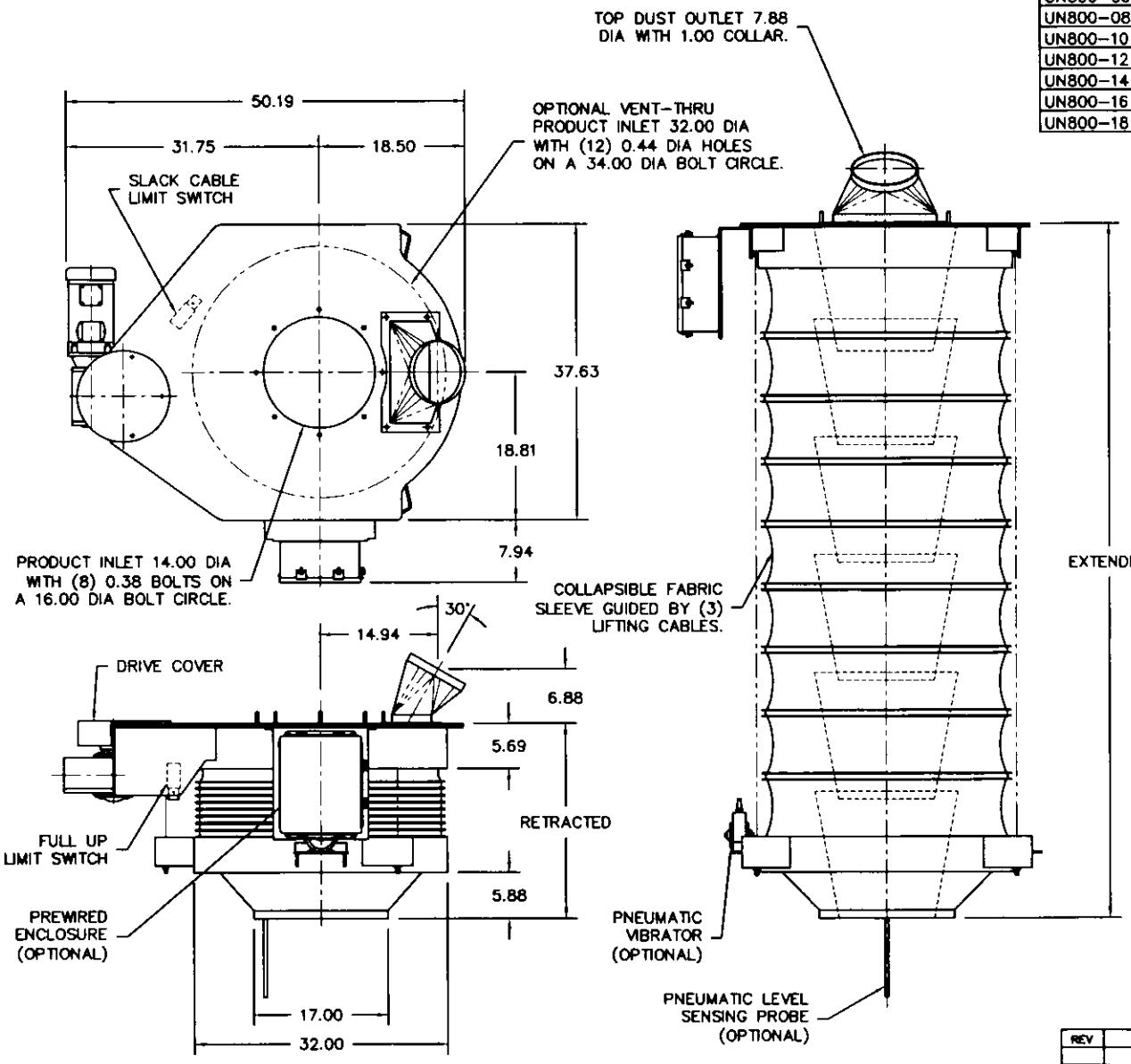
DCL's new Compact Filter Module provides the industries lowest profile filter/loading spout combination. The CFM filter module is used inline with the UN800 Loading Spout for dust control during the loading of dry, dusty materials into open or enclosed vehicles. The dust collected is re-entrained with the material being loaded which makes the CFM Filter Module an ideal and cost effective package. When comparing the new design of the CFM filter module to free standing units, the savings in space and money become apparent with the elimination of expensive duct work, discharge air locks and hopper discharge systems. For detailed CFM specifications see flier PUBc-0499-DCFM.

Po Box 125
08660 Ance Road

Dust Control and Loading Systems Inc
Charlevoix, Michigan 49720
www.dclinc.com or dcl-info@dclinc.com

Tele: 800-748-0563
Fax: 231-547-3343

MODEL	TRAVEL	RETR	EXTD	URE WGT	STL WGT	URE HP	STL HP
UN800-02	24.00	18.75	42.75	543 LB	586 LB	1 HP	1 HP
UN800-04	48.00	21.50	69.50	576 LB	662 LB	1 HP	1 HP
UN800-06	72.00	24.50	96.50	609 LB	738 LB	1 HP	1 HP
UN800-08	96.00	27.00	123.00	646 LB	817 LB	1 HP	1 HP
UN800-10	120.00	28.38	148.38	673 LB	867 LB	1 HP	1 HP
UN800-12	144.00	31.13	175.13	706 LB	943 LB	1 HP	1.5 HP
UN800-14	168.00	33.88	201.88	743 LB	1022 LB	1 HP	1.5 HP
UN800-16	192.00	36.63	228.63	777 LB	1099 LB	1 HP	2 HP
UN800-18	216.00	38.00	254.00	804 LB	1147 LB	1 HP	2 HP



GENERAL NOTES:

LOADING CAPACITY: 450 CFM
AVERAGE AIR WITHDRAWAL: 1400 TO 1800 CFM
LIFTING SPEED: 16 FPM AVG

ALL INDUSTRIAL VOLTAGES ARE AVAILABLE FOR ELECTRICAL COMPONENTS.

PREWIRING OF ELECTRICAL COMPONENTS TO SPOUT FRAME JUNCTION BOX OPTIONAL.

ELECTRICAL ENCLOSURES NEMA 4 STANDARD. NEMA 4X, 7, AND 9 OPTIONAL.

COLLAPSIBLE FABRIC SLEEVE CAN BE CONSTRUCTED OF URETHANE/NYLON, HYPALON/NYLON, OR A NUMBER OF OTHER FABRICS. SLEEVES COME STANDARD WITH ALUMINUM OUTER AND INNER RINGS.

METAL SURFACES ARE POWER TOOL CLEANED, PRIMED, AND FINISHED WITH INDUSTRIAL ENAMEL.

LOADING CAPACITY LISTED IS APPROXIMATE AND BASED ON FREE FLOWING PRODUCTS. CONSULT DCL FOR ACTUAL REQUIREMENTS.

AIR WITHDRAWAL REQUIREMENTS ARE AVERAGE. CONSULT DCL FOR FINAL RECOMMENDATIONS.

CONE CONSTRUCTION NOTES: CONTAINED INNER DESIGN STANDARD WITH 0.13 AR STEEL, AND 0.13 304 OR 316 STAINLESS STEEL. OTHER MATERIALS AVAILABLE TO SUIT APPLICATION.

SPECIFICATIONS AND/OR DIMENSIONAL DATA ARE SUBJECT TO CHANGE. CONSULT DCL FOR CERTIFIED DRAWINGS.

OPTIONS:

150# INLET FLANGE. ADDS 3.00 TO RETRACTED HEIGHT.

LEVEL SENSORS; TILT PROBE, RF PROBE, CAPACITANCE PROBE, PNEUMATIC PROBE.

PNEUMATIC VIBRATOR KIT REQUIRES (40) CFM @ (80) PSI.

REV	DATE	BY
B	04-23-02	JNM
A	09-26-00	JNM

DCL SPECIALISTS IN ADVANCED DESIGN LOADING SYSTEMS
P.O. BOX 135 CHARLEVOIX, MICHIGAN 49720 (231) 547-9900

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONAL 1/16" DECIMALS ANGULAR 1/2

DRAWN BY: JNM
CHECKED BY: ENG
SCALE: NONE
DATE: 01-04-98

TITLE: UN800 LOADING SPOUT (EV STYLE)
DRAWING No: UN800-10001

Dust Control and Loading Systems Inc

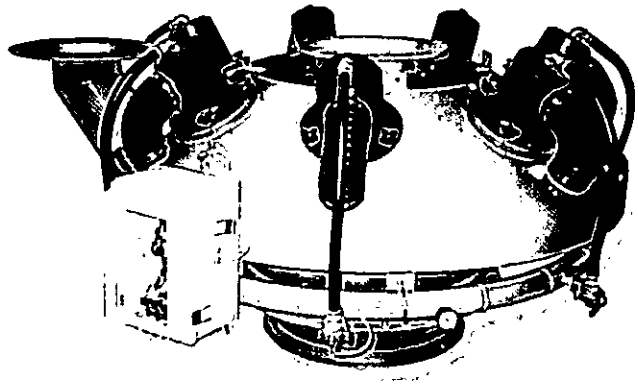
Leaders in Innovative Bulk Loading Systems Design

Compact Filter Module

APPLICATION

The CFM Compact Filter Module is ideal for use inline at any bulk material transfer point requiring dust control. It's low profile configuration also makes the CFM the best choice for inline filteration when intergrated with a DCL Loading Spout. The flow tube can be eliminated making this unit suitable as a bin vent for any tight headroom conditions.

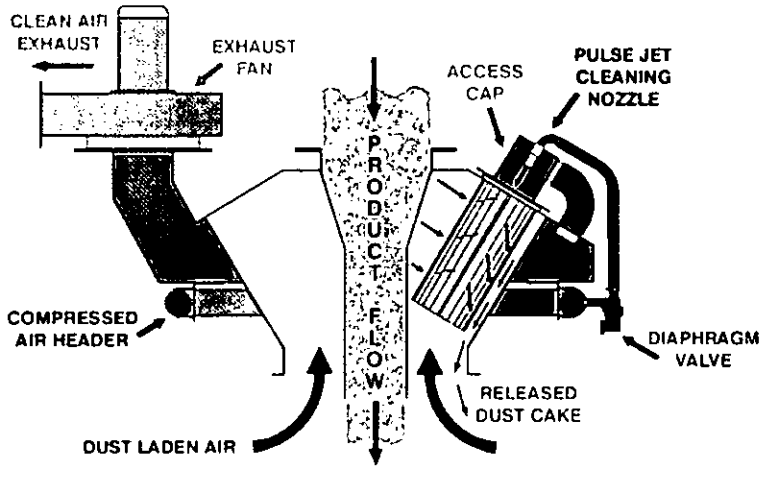
When used as an inline filter, product flows through a central flow tube while isolated from the upward dust entrained airflow. The collected dust is deposited back to the material being handled making the CFM Compact Filter Module an ideal cost effective package especially when compared to a free standing dust collector utilizing duct work, discharge air lock, and often a means to convey the dust back to the system.



Filter replacement is performed without tools while accessable from the exterior of the unit.

FEATURES

The exhaust fan, up to 5000 CFM is directly mounted to the assembly eliminating the need for a remote fan placement. The unique design provides internal velocities that are lower than what is normally expected from conventional designs resulting in less load on the filtration media. The filter elements are automatically cleaned during operation with a conventional 80 PSI pulse jet system. The unit can be provided with a final clean feature that is activated at the end of each loading cycle fully cleaning all elements, eliminating residuals.



CAPACITIES

Compact Filter Modules are available in sizes from 155 to 660 square feet of filter media. Filter media is available to accommodate most applications. Pleated design, spun bonded media features a smooth surface finish with exceptional dust cake release. The filter surface is calandered and compacted to resist penetration by collected particulate. This results in better cleaning efficiency and faster return to operating airflow after the cleaning cycle than is possible with traditional media.

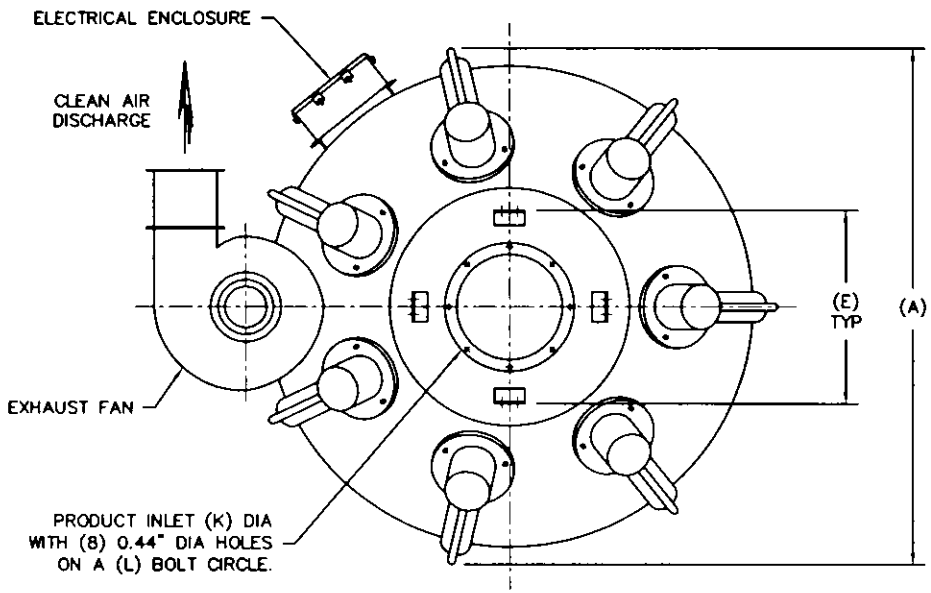
Po Box 125
08660 Ance Road

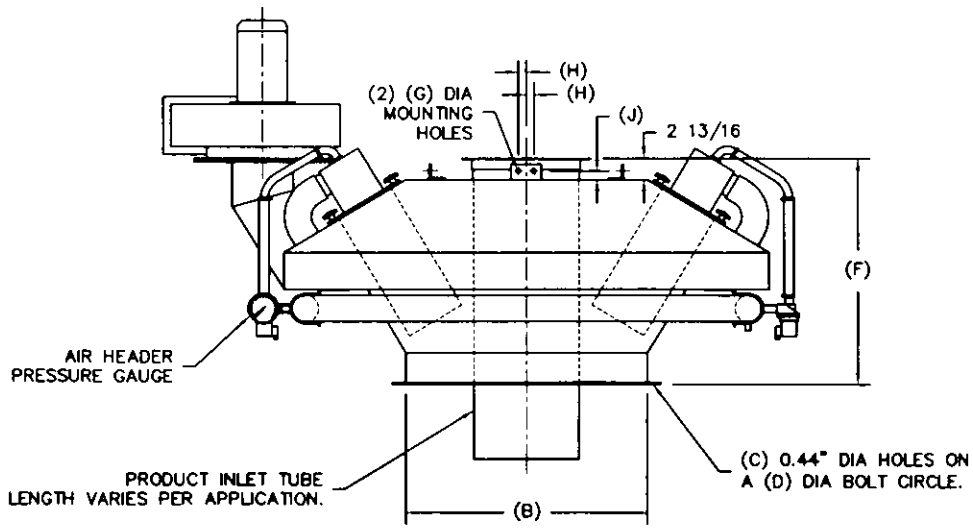
Dust Control and Loading Systems Inc
Charlevoix, Michigan 49720
www.dclinc.com or dcl-info@dclinc.com

Tele: 800-748-0563
Fax: 231-547-3343

PUBc-0499-DCFM

MODEL	EST WGT	# FILTER	CLOTH AREA	FILTER LGTH	A	B	C	D	E	F	G	H	J	K	L
CFM155	520 LB*	4	156 SQ FT	18.00	64.00	24.00	12	25.88	22.13	30.00	0.56	1.00	1.13	14.00	16.00
CFM195	520 LB*	5	195 SQ FT	18.00	64.00	24.00	12	25.88	22.13	30.00	0.56	1.00	1.13	14.00	16.00
CFM270	700 LB*	7	273 SQ FT	18.00	68.00	32.00	12	34.00	30.00	30.00	0.56	1.00	1.13	14.00	16.00
CFM330	700 LB*	7	329 SQ FT	22.00	68.00	32.00	12	34.00	30.00	30.00	0.56	1.00	1.13	14.00	16.00
CFM470	1600 LB*	10	470 SQ FT	22.00	90.00	38.00	16	40.00	45.00	43.00	0.69	3.00	2.00	16.00	18.00
CFM660	1600 LB*	14	658 SQ FT	22.00	100.00	C/F	C/F	C/F	50.00	54.50	0.75	7.00	2.00	C/F	C/F





GENERAL NOTES:

ALL INDUSTRIAL VOLTAGES AVAILABLE FOR ELECTRICAL COMPONENTS.

PREWIRING OF ELECTRICAL COMPONENTS TO CFM HOUSING JUNCTION BOX OPTIONAL.

ELECTRICAL ENCLOSURES NEMA 4 STANDARD. NEMA 4X, 7, AND 9 OPTIONAL.

METAL SURFACES ARE POWER TOOL CLEANED, PRIMED, AND FINISHED WITH INDUSTRIAL ENAMEL.

AIR REQUIREMENTS FOR COMPRESSED AIR HEADER ARE (16) CFM @ (80–100) PSI.

SPECIFICATIONS AND/OR DIMENSIONAL DATA ARE SUBJECT TO CHANGE. CONSULT DCL FOR CERTIFIED DRAWINGS.

C/F = CONSULT FACTORY

*ESTIMATED WEIGHTS DO NOT INCLUDE EXHAUST FAN.

REV	DATE	BY
C	04-23-02	JNM
B	09-28-00	JNM
A	10-16-97	JNM

DCL SPECIALISTS IN ADVANCED DESIGN LOADING SYSTEMS

P.O. BOX 125 CHARLEVOIX, MICHIGAN 49720 (231) 547-6800

TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONAL 1/16" DECIMAL.06 ANGULAR 1/2

DRAWN BY: JNM CHECKED BY: ENG SCALE: NONE DATE: 03-04-97

TITLE: CFM COMPACT FILTER MODULE

DRAWING No. CFM-10001

RECEIVED
NOV 19 2001
BUREAU OF AIR REGULATION

Florida Power
A Progress Energy Company

November 16, 2001

Mr. Scott Sheplak, P.E.
Administrator, Title V Section
Division of Air Resources
Florida Department of Environmental Protection
2600 Blair Stone Road, MS #5505
Tallahassee, Florida 32399-2400

Dear Mr. Sheplak:

Re: Crystal River Plant - Use of Coal Binder
Response to Request for Additional Information

In response to the October 26, 2001 letter requesting additional information regarding the use of the Product CLC-3 as a dust suppressant, please refer to the restated requests and responses below.

1. **Please provide an ultimate analysis of the liquid tall oil and tall oil pitch. Include a chemical breakdown that shows individual components, as well as the percentages of hydrogen sulfide (and its related compounds) and other compounds that could be of concern with regards to odor and/or contemporaneous emissions increases.**

Response

The following is an ultimate analysis of Tall Oil Pitch typically used in the formulation of CLC-3 (analysis enclosed). Please note that CLC-3 is an emulsion that is approximately thirty-five percent Tall Oil Pitch by weight, the remaining portion is primarily water. Crude Tall Oil is included for reference however it is not expected to be used in significant quantities in the CLC-3 formulation.

Ultimate Analysis Wt %

	Tall Oil Pitch	Crude Tall Oil
Carbon	58.76%	58.49%
Hydrogen	8.44%	9.11%
Nitrogen	<.02%	<.02%
Chlorine	.01%	.02%
Sulfur	.60%	.48%
Ash	.38%	.05%
Oxygen	31.81%	31.70%

ENVIRONMENTAL SERVICES SECTION • MAC BB1A
ONE POWER PLAZA • 263 – 13TH Avenue South • St. Petersburg, FL 33701-5511
P.O. Box 14042 • St. Petersburg • Florida 33733 4042 • (727) 820-5151

Typically, crude tall oil and tall oil pitch will have a small amount of sulfur, present as oxidized sulfur, most commonly in the form of inorganic sulfate, therefore concentrations of hydrogen sulfide and related compounds are expected to be less than 0.1%.

2. **Please provide information on the actual heat content of Product CLC-3 and compare it to the coal to which it will be applied.**

Response

The heat content of Product CLC-3 BTU is 5965 BTU/pound on an as received basis and 16,514 BTU/pound on a dry basis (analysis enclosed). The typical coal BTU content is 12,300 BTU/pound on an as received basis.

3. **Please provide information on the maximum potential sulfur content of Product CLC-3 and compare it to the actual sulfur content of the coal to which it will be applied.**

Response

The sulfur content of Product CLC-3 is 0.14 % on an as received basis and 0.39 % on a dry basis (analysis enclosed). The sulfur content of the coal to which the Product CLC-3 is being applied typically ranges from 0.68 to 1.20% on an as received basis.

4. **Based on the as-applied thickness, please provide an analysis of the total amount of Product CLC-3 that will be contained in a representative as-fired volume of coal.**

Response

The typical Product CLC-3 application rate is approximately 0.75 % by weight of coal.

5. **Please provide a detailed evaluation of the effects of combustion of Product CLC-3, comparing future potential emissions to the past actual emissions from the intended boiler(s).**

Response

The high combustion temperatures and combustion residence times occurring in the Crystal River coal-fired units are expected to result in essentially complete combustion of the Product CLC-3 material to carbon dioxide (CO_2), water (H_2O) and small amounts of sulfur dioxide (SO_2) and ash. Since the heat content of the Product CLC-3 is similar to that of the coal and the sulfur and ash content is lower, no increase in SO_2 or particulate emissions is expected.

6. **Please address the potential increase in hazardous air pollutant (HAP) emissions, as well as all criteria pollutant emissions, as a result of the combustion of Product CLC-3.**

Response

No increase expected. (See response to No. 5.)

7. Please address the potential increase in emissions of heavy metals, if any, as a result of the combustion of Product CLC-3.

Response

No increase expected. (See response to No. 5.)

8. Is the coal feed rate directly and continuously controlled by the instantaneous heat input recorded at the boilers?

Response

No. The required MW load of the unit more directly dictates the coal feed rate. Instantaneous heat input is not recorded at the boilers.

9. How are you proposing to insure that the permitted hourly heat input limit is not violated by the addition of Product CLC-3?

Response

The heat input rates noted in the permit are for the purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity. Regular record keeping is not required for heat input. In order to establish the appropriate heat input is being met during compliance testing, the unit's heat rate and MW load are used.

In general, the unit output (MW load) is blind to the source of heat input, therefore to obtain the same expected unit MW output, the same amount of heat input is required. Since a small portion of the heat input of the treated coal will come from the Product CLC-3, a small reduction (although not significant) in the amount of coal consumed can be expected.

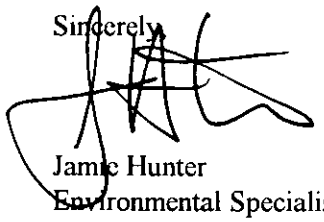
10. Please address the potential for odor as a result of the delivery, handling, storage, and combustion of coal treated with Product CLC-3.

Response

Based on information provided by the supplier, users of the product, as well as our own analysis of product samples, no odor issues are expected as a result of the delivery, handling, storage or combustion of coal treated with Product CLC-3.

Please feel free to contact me at (727) 826-4363 if you have any questions or need additional information.

Sincerely,



Jamie Hunter
Environmental Specialist

jjh/JJH018

enclosures

c(w/enc): Jonathan Holtom, FDEP – Tallahassee
Hamilton Oven, FDEP – Tallahassee
Jerry Kissel, FDEP – SW District
Jennifer Stenger, P.E., Florida Power

MINERAL LABS, INC.
Box 549
Salyersville, Kentucky 41465
Phone (606) 349-6145

COMPANY REQUESTING ANALYSIS:

Date Analyzed: 11/07/01

Lab No.: 991110012 4466

Sample Taken By:

CEREDO LIQUID TERMINAL, INC.
P.O. BOX 308
ATTN: ORVILLE LYON
CEREDO, WV 25507

Sample I.D.:
PITCH

PROXIMATE ANALYSIS	As Received	Dry Basis	M A F B.T.U.
% Moisture	0.00		
% Ash	0.38	XXX	
% Volatile	XXX	XXX	
% Fixed Carbon	XXX	XXX	
B.T.U.	XXX	XXX	XXX
% Sulfur	0.60	XXX	

ULTIMATE ANALYSIS	As Received	Dry Basis
Moisture	0.00	
Carbon	58.76	XXX
Hydrogen	8.44	XXX
Nitrogen	<0.02	XXX
Chlorine	0.01	XXX
Sulfur	0.60	XXX
Ash	0.38	XXX
Oxygen (diff.)	31.81	XXX

- SULFUR FORMS -	
% Pyritic Sulfur	XXX
% Sulfate Sulfur	XXX
% Organic Sulfur	XXX
% Total Sulfur	XXX
T-250 Temp. of Ash	XXX

- FUSION TEMPERATURE OF ASH -	Reducing	Oxidizing
Initial	XXX °F	XXX °F
Softening	XXX °F	XXX °F
Hemispherical	XXX °F	XXX °F
Fluid	XXX °F	XXX °F

- MINERAL ANALYSIS -	% Wt. Ignited Basis
Phos. pentoxide, P_2O_5	XXX
Silica, SiO_2	XXX
Ferric oxide, Fe_2O_3	XXX
Alumina, Al_2O_3	XXX
Titania, TiO_2	XXX
Lime, CaO	XXX
Magnesia, MgO	XXX
Sulfur trioxide, SO_3	XXX
Potassium oxide, K_2O	XXX
Sodium oxide, Na_2O	XXX
Undetermined	XXX

Base/Acid Ratio XXX

% Mercury XXX

Water Soluble Alkalies

As Na_2O XXX

As K_2O XXX

- HARDGROVE GRINDABILITY INDEX XXX

- FREE SWELLING INDEX XXX

- EQUILIBRIUM MOISTURE XXX

2110017

Submitted By W. Brandon Mays

MINERAL LABS, INC.
Box 549
Salyersville, Kentucky 41465
Phone (606) 349-6145

COMPANY REQUESTING ANALYSIS:

Date Analyzed: 7/23/01 Y

Lab No.: 991080002 4466

Sample Taken By: MLI

CEREDO LIQUID TERMINAL, INC.
P.O. BOX 308
ATTN: ORVILLE LYON
CEREDO, WV 25507

Sample I.D.:
CLC-3; FROM JULY 9, 2001; KCT PROTO RUN

PROXIMATE ANALYSIS	As Received	Dry Basis	M.A.F. B.T.U.
% Moisture	63.88		
% Ash	0.28	0.78	
% Volatile	XXX	XXX	
% Fixed Carbon	XXX	XXX	
B.T.U.	5,965	16,514	16,644
% Sulfur	0.14	0.39	

ULTIMATE ANALYSIS	As Received	Dry Basis
Moisture	63.88	
Carbon	25.55	70.74
Hydrogen	2.90	8.04
Nitrogen	0.14	0.39
Chlorine	0.01	0.02
Sulfur	0.14	0.39
Ash	0.28	0.78
Oxygen (diff.)	7.10	19.64

SULFUR FORMS		
% Pyritic Sulfur	XXX	XXX
% Sulfate Sulfur	XXX	XXX
% Organic Sulfur	XXX	XXX
% Total Sulfur	XXX	XXX
T-250 Temp of Ash	XXX	XXX

FUSION TEMPERATURE OF ASH	Reducing		Oxidizing	
Initial	XXX	°F	XXX	°F
Softening	XXX	°F	XXX	°F
Hemispherical	XXX	°F	XXX	°F
Fluid	XXX	°F	XXX	°F

MINERAL ANALYSIS	% Wt. Ignited Basis
Phos. pentoxide, P_2O_5	0.57
Silica, SiO_2	3.61
Ferric oxide, Fe_2O_3	2.96
Alumina, Al_2O_3	1.15
Titania, TiO_2	0.09
Lime, CaO	2.24
Magnesia, MgO	0.56
Sulfur trioxide, SO_3	35.40
Potassium oxide, K_2O	2.33
Sodium oxide, Na_2O	2.70
Undetermined	48.39

Base/Acid Ratio XXX

% Mercury XXX

Water Soluable Alkalies

As Na_2O XXX

As K_2O XXX

HARDGROVE GRINDABILITY INDEX XXX

FREE SWELLING INDEX XXX

EQUILIBRIUM MOISTURE XXX

208000

Submitted By H. Brandon Mink