Project No. 1070025-006-AC

Seminole Electric
COOPERATIVE, INC.
IN PARTNERSHIP WITH THOSE WE SERVE

RECEIVED
OCT 15 2007
BUREAU OF AIR REGULATION

October 9, 2007

Jeffrey F. Koerner
FDEP-Division of Air Resources management
2600 Blair Stone Road, MS # 5505
Tallahassee, FL 32399-2400

RE: Seminole Generating Station
Request to use RAMSORB 200

Dear Mr. Koerner:

This letter is written to request the Department's approval for the use of RAMSORB 200 which is a product that eliminates problems associated with wet coal handling. In severe weather conditions, coal clumps and causes plugging in various pieces of coal handling equipment, which can result in unit de-rates. RAMSORB is a sodium polyacrylate polymer that molecularly binds with water and acts as a dispersant to improve the flow of the coal. This product is extremely benign and contains no hazardous components. Sodium polyacrylates are used in disposable baby diapers, and used as "fake" snow in Hollywood. Seminole would like permission to conduct a test with this product and if successful, continue its use in severe weather conditions. Some general information and operational conditions of it's use are listed below:

- Na polyacrylate constituents: $-CH_2 - CH-$ with COONa attached to the CH
- Appearance: Nonhazardous, odorless, white powder
- Application location: Blown onto the coal at various coal conveyor feed points
- Application rate: Approximately 5 lbs of RAMSORB per ton of coal

Attached please find a copy of the product description and the MSDS. If you have any questions or require additional information please contact me at (813) 739-1224 and we look forward to your concurrence.

Sincerely,

Mike Roddy
Manager of Environmental Affairs

16313 North Dale Mabry Highway P.O. Box 272000 Tampa, Florida 33688-2000
Telephone 813.963.0994 Fax 813.264.7906 www.seminole-electric.com

Introduction and Executive Summary

RAM-3, a company created to serve the coal fuels industry has been involved over the last 3 years in a project to assist in the processing of wet coal. Many of the challenges associated with wet coal processing involve:

- Derating of the power generation plant.
- Extensive down time to clean and revamp coal milling processes.
- Removing SCR processes due to lower operating temperatures thus resulting in lost Nox credits and increased emmisions.
- Overall loss of efficiency in operation due to reduced burn rate.

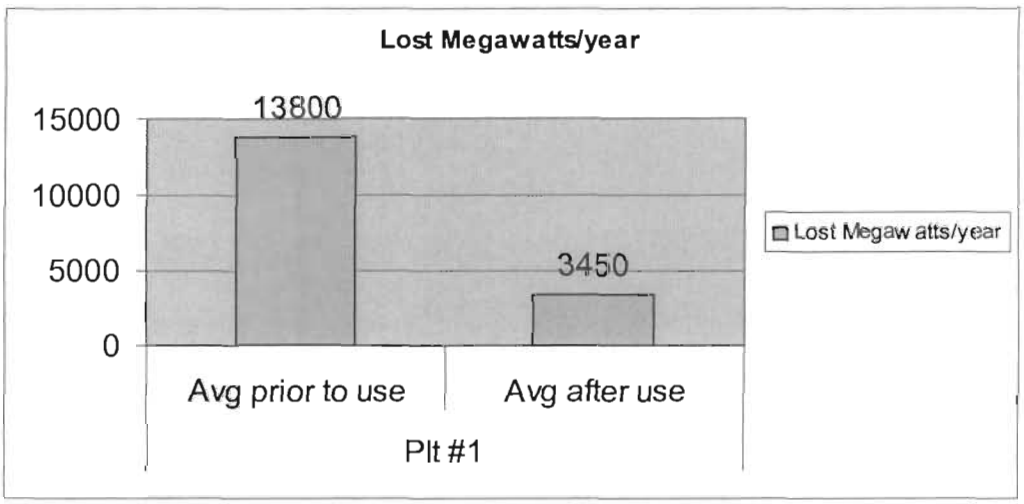
As a result of a 3 year study in a Midwestern coal burning power generation facility, RAM-3 has successfully met these identifiable challenges. This has been accomplished by the addition of a chemical agent, RAMSORB 200, which by design, molecularly binds the moisture associated with wet coal processing. The subject station consists of 3 coal fired units. Emissions are controlled by hot side precipitators, wet scrubbers and SCR technology. The coal is delivered to the facility by both barge and truck and stored in an open staging area prior to conveying and processing. A combination a coal, pet coke and synthetic fuels are burned. Although a crushing operation is available, the fuel is currently conveyed directly from the coal piles to the feed bunkers. Gravimetric mill feeders and electronic scales control the feed of fuel into Riley Ball Tube Mills. Coal is fed at a rate of 150 tons/hr. to produce an average of 400,000 kw/h. Milling and feed problems occur during periods of wet weather, when total moister exceeds 9%. The application of RAMSORB 200 has eliminated the costly procedures resulting from excess moisture with no adverse effects on equipment or personnel. RAMSORB 200 is applied directly to the coal utilizing a dry augering process as it is conveyed to the milling process. This method is flexible and may be moved to various feed points depending upon the most effective and economic application. The efficiencies achieved are illustrated in the attached graph. The amount of megawatt production and benefits obtained are totally dependent upon prevailing weather conditions and storage environment of the coal.

For additional information or trial demonstration, please contact:

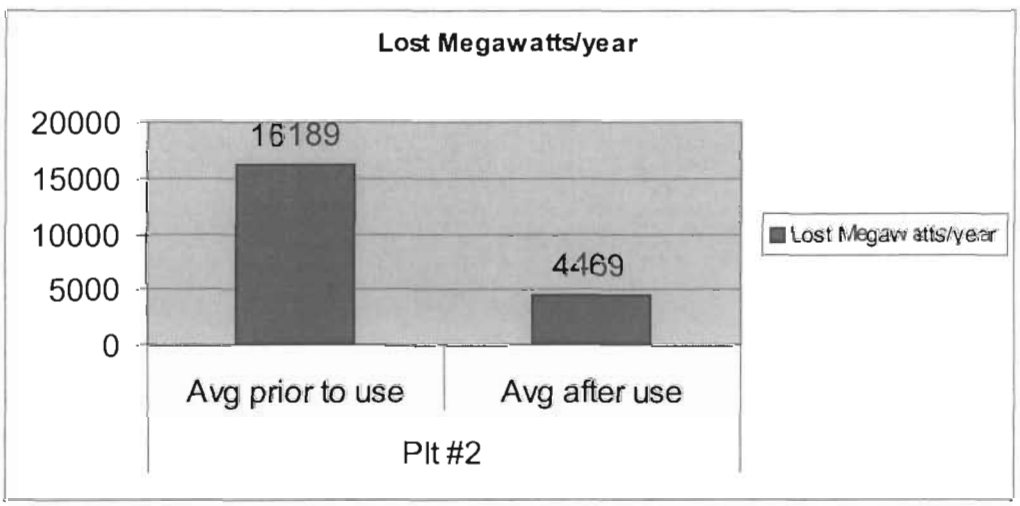
RAM 3 Combustion Technologies
8675 West Market St.
Greensboro, NC 27409
(336) 605-3086
John@ram-3.com
Ken@ram-3.com

Production and Economic Impact

Plant # 1



Plant # 2



MATERIAL SAFETY DATA SHEET

RAMSORB 200

HMIS Hazard Key	HMIS Hazard Rating
4 = Extreme	Health (Blue).....1
3 = High	Fire (Red).....0
2 = Moderate	Reactivity (Yellow).....0
1 = Slight	Protection.....B
0 = Minimal	

DISTRIBUTOR:

RAM3 Combustion Technologies
8765 West Market Street
Greensboro, NC 27409
PH:(336) 605-3086

I. PRODUCT INFORMATION

PRODUCT NAME: **RAMSORB 200**

CHEMICAL FAMILY:Non Surface Crosslinked Sodium Polyacrylate

CHEMICAL NAME OR SYNONYMS: Specific Gradient, Crosslinked Polymer

II. HAZARDOUS INGREDIENTS

COMPONENTS	WEIGHT %	HAZARD	CAS NO.	ACGIH/TLV	OSHA/PEL

Not hazardous as defined by: OSHA 29 CFR and 49 CFR

III. REGULATORY INFORMATION

General Product Information: This product is not Federally regulated as a hazardous material.
Clean Air Act: No information is available.
Component Analysis: No information is available.
Food and Drug Administration: CFR references for FDA regulated components are listed.
Sodium Polyacrylate (9003-04 – 7)
Direct Food Additives: 173.73, 173.
Indirect Food Additives: 173.105

State Regulation:

General Product Information
This product is not regulated by any State as a hazardous material

Component Analysis
None of this product's components are listed on the state lists from CA, FL, MA, MN, NJ, or PA.

Component Analysis – WHMIS IDL
No components are listed in the WHMIS IDL

IV. PHYSICAL DATA

APPEARANCE: Powder

COLOR: White

ODOR: Odorless

BOILING POINT °F: NE

FREEZING POINT °F: NA

VAPOR PRESSURE (mm Hg): < 10

VAPOR DENSITY (Air=1): NA
EVAPORATION RATE (Butyl Acetate=1): <1.0

SPECIFIC GRAVITY (H_2O=1): 0.4 – 0.7

pH: (1% solution) 5.5 – 6.5

SOLUBILITY IN WATER: Complete

V. FIRE AND EXPLOSION DATA

FLASH POINT °F: None

AUTOIGNITION TEMP. °F: None

LOWER EXPLOSION LIMIT (%): NA

UPPER EXPLOSION LIMIT (%): NA

EXTINGUISHING MEDIA: Dry chemical foam, carbon dioxide, water fog. Extremely slippery conditions are created if spilled product comes into contact with water.
SPECIAL FIRE FIGHTING PROCEDURES: Firefighters should wear full protective clothing and self contained breathing apparatus.
NFPA ratings: Health: 1 Fire: 0 Reactivity: 0

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

VI. REACTIVITY DATA

STABILITY: Stable under normal temperatures and pressures.

POLYMERIZATION: Will not occur.

INCOMPATIBILITY: (Materials to avoid) None. It is good industrial practice to be careful when handling all mixtures with strong oxidizers or reducing agents.

HAZARDOUS DECOMPOSITION: None.

VII. ACCIDENTAL SPILL AND RELEASE DATA

Containment Procedure: Sweep or vacuum material when possible and shovel into waste container. Wetted material is very slippery. Utilize dry methods of clean up where possible.

Clean-Up Procedure: Use caution after contact of product with water as slippery conditions will result. Residuals may be flushed with water into the drain for normal wastewater treatment. This is a non-hazardous waste suitable for disposal in an approved solid waste landfill.

Special Procedures: Avoid respirable dust inhalation during clean-up. Wear appropriate respirator.
or reducing agents.

VIII. HEALTH HAZARD DATA

HANDLING PRECAUTIONS: Do not get in eyes, on skin, on clothing. Wear appropriate personal protective equipment when handling this material. Review all recommended handling procedures in the specific context of the intended use of this product and determine if they are appropriate. (Also see Section IX) Consult your supervisor for further instructions if necessary. Avoid contamination of food. Do not take internally. Wash thoroughly after handling.

ROUTES OF ENTRY: _INHALATION _SKIN ABSORPTION _INGESTION _SKIN OR EYE CONTACT

EFFECTS OF OVEREXPOSURE:

INHALATION: Respirable dust may cause respiratory tract and lung irritation and may aggravate existing respiratory conditions.

EYES: Possible irritation due to individual sensitivity.

SKIN: Possible irritation due to individual sensitivity.

INGESTION: Ingestion of this product in tests shows no toxic effects. However, as in any instance of non-food consumption, seek medical attention in the event of any adverse symptoms.

SYSTEMIC OR OTHER EFFECTS: None known.

CARCINOGENICITY: None (ACGIH, IARC, NTP)

EMERGENCY AND FIRST AID PROCEDURES:

EYE CONTACT: Immediately flush eyes with cool water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of all tissues. Get medical attention if symptoms persist following first aid.

AFTER SKIN CONTACT: Remove contaminated clothing. Wash off affected area with cool water. Wash clothing before reuse. Get medical attention if symptoms persist following first aid.

IF INHALED: Remove to fresh air, treat symptomatically. Get medical attention if symptoms persist following first aid.

IF SWALLOWED: If conscious, wash out mouth and give water to drink. Do not induce vomiting unless directed so by a physician. Get

medical attention if symptoms develop. Note to Physician: Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

X. SPILL, STORAGE, AND HANDLING PROCEDURES

IN CASE OF SPILL RAMSORB 200 is not a hazardous waste. Sweep up and dispose of in accordance with local, state, and federal regulations.

WASTE DISPOSAL METHODS: Dispose of in accordance with local, state, and federal regulations.

STORAGE TEMPERATURE: Store in cool, dry place.

AVERAGE SHELF LIFE: Stable for at least one year at ambient temperatures.

SPECIAL SENSITIVITY: Keep container tightly closed during transport and storage.

XI. EMPLOYEE PROTECTION RECOMMENDATIONS

EYE PROTECTION: Use chemical workers safety glasses with side shields.

SKIN PROTECTION: To avoid individual sensitivity to material, wear gloves and protective clothing when handling.

RESPIRATORY PROTECTION: Wear respirator with high efficiency filter if particulate concentrations exceed 0.05 mg/m^3 over an eight hour period.

VENTILATION: Good general ventilation is sufficient for most conditions.

OTHER PROTECTION: Eye wash and safety shower should be immediately available.

XII. TOXICOLOGICAL INFORMATION

Acute and Chronic Toxicity ; Acute inhalation of respirable dust may cause irritation of the upper respiratory tract and lungs.

Acute Toxicity – LD50/LC50; Sodium polyacrylate (9003-04-7
LD50: Oral LD50 Rat: 40 gm/kg

Chronic Toxicity – Chronic Inhalation exposure for rats for a lifetime,(2 years), using sodium polyacrylate that hsd been micronized to a respirable particle size, (< 10 microns), produced non-specific inflammation and chronic lung injury at 0.2 mg/m^3 and 0.8 mg/m^3. Also at 0.8 mg/m^3, tumors were seen in some test animals. In the absence of chronic inflammation, tumors are not expected. There were no adverse effects detected at 0.5 mg/m^3 .

Mutagenicity – Sodium polyacrylate had no effect in mutagenicity tests.

XIII. ECOTOXICITY

General Product Information – Composted polyacrylate absorbents are nontoxic to aquatic or terrestrial organisms at predicted exposure levels from current application rates.

Environmental Fate – Polyacrylate absorbents are relatively inert in aerobic and anaerobic conditions. They are immobile in landfills and soil systems,(>90% retention), with the mobile fraction showing biodegradability. They are also compatible with incineration of municipal solid wastes. Incidental down-the-drain disposal of small quantities of polyacrylic absorbents will not affect the performance of wastewater treatment systems.