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APR 21 2008

BUREAU OF AIR REGULATION

April 16, 2008

Jonathon Holtom, P.E.  
Florida Dept. of Environmental Protection  
New Source Review Section, Bureau of Air Regulation  
2600 Blair Stone Road, MS# 5505  
Tallahassee, FL 32399-2400

Re: Project No. 1070025-006-AC  
Seminole Generating Station  
Trial of Wet Coal Additive, RAMSORB 200  
Extension of Exemption from Requirement to Obtain Air Construction Permit

Dear Mr. Holtom,

Pursuant to our recent telephone conversation, Seminole Electric Cooperative Inc. (SECI) requests an extension of condition 5 in our Exemption letter dated on October 15, 2007. The letter states on page 4:

*5. This authorization expires on May 1, 2008.*

Seminole Electric requests that an extension of this date be made to encompass the historically wet season during the summer months. Seminole Generating Station has not used any RAMSORB 200 to date. An extension during the summer months would give SECI the time and conditions needed for a proper trial of this additive.

I have enclosed SECI's original letter and FDEP's exemption letter. If you have any questions please feel free to contact me at 813-739-1219.

Sincerely,

Juan Ramirez  
Senior Environmental Engineer



April 18, 2008

Mr. Holtom,

I have to apologize because yesterday April 17<sup>th</sup>, I sent a certified mail package to you from Juan Ramirez without the letterhead that I am including here. Sorry about the inconvenience.

*Beatriz Vega*

Beatriz Vega





## **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 emissions.
- Overall loss of efficiency in operation due to reduced burn rate.

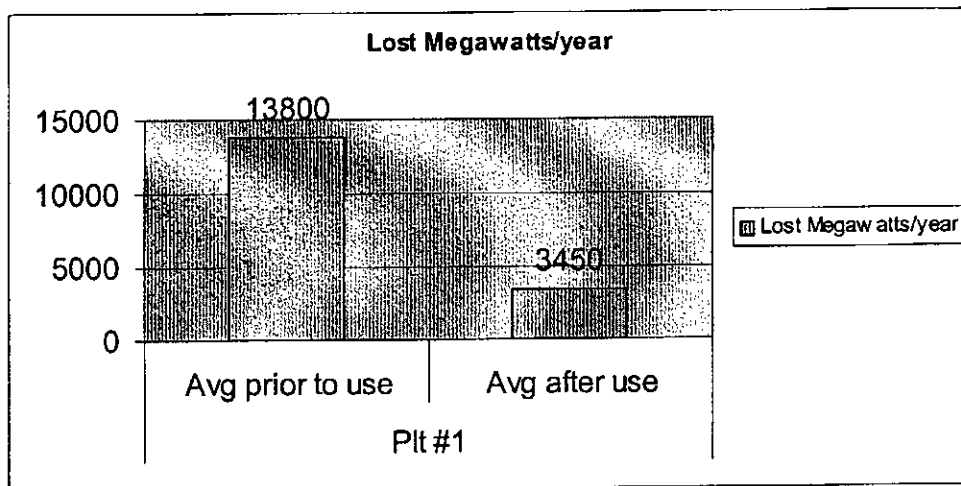
As a result of a 3 year study in a Midwestern coal burning power generation facility, RAM-3 has successfully met these identifiable challenges. This has been accomplished by the addition of a chemical agent, RAMSORB 200, which by design, molecularly binds the moisture associated with wet coal processing. 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 moisture 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:

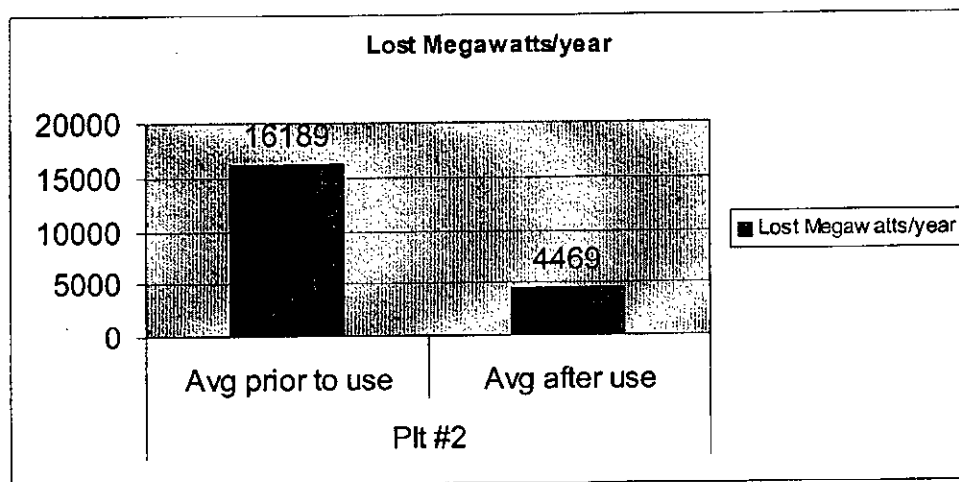
RAM 3 Combustion Technologies  
8675 West Market St.  
Greensboro, NC 27409  
(336) 605-3086  
[John@ram-3.com](mailto:John@ram-3.com)  
[Ken@ram-3.com](mailto:Ken@ram-3.com)

## Production and Economic Impact

Plant # 1



Plant # 2



# MATERIAL SAFETY DATA SHEET

## RAMSORB 200

### DISTRIBUTOR:

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

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	

### 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
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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<sub>2</sub>O=1): 0.4 - 0.7

pH: (1% solution) 5.5 - 6.5

SOLUBILITY IN WATER: Complete

## V. FIRE AND EXPLOSION DATA

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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

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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

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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

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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**

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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**

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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  $0.05 \text{ mg/m}^3$  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 had been micronized to a respirable particle size, (< 10 microns), produced non-specific inflammation and chronic lung injury at  $0.2 \text{ mg/m}^3$  and  $0.8 \text{ mg/m}^3$ . Also at  $0.8 \text{ mg/m}^3$ , tumors were seen in some test animals. In the absence of chronic inflammation, tumors are not expected. There were no adverse effects detected at  $0.5 \text{ mg/m}^3$ .

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.





# Florida Department of Environmental Protection

Bob Martinez Center  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

October 15, 2007

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BUREAU OF AIR REGULATION

*Sent by Electronic Mail, Received Receipt Requested*

Mr. James S. Frauen, Manager of Environmental Affairs  
Seminole Electric Cooperative, Inc.  
16313 North Dale Mabry Highway  
Tampa, Florida 33618

Re: Project No. 1070025-006-AC  
Seminole Generating Station  
Trial of Wet Coal Additive, RAMSORB 200  
Exemption from Requirement to Obtain Air Construction Permit

Dear Mr. Frauen:

On October 10<sup>th</sup>, we received a request on behalf of Seminole Electric Cooperative, Inc. for authorization to try a wet coal additive on one of the existing units at the Seminole Generating Station, which is located in Putnam County at 890 North U.S. Highway 17, north of Palatka. During wet weather, the plant is occasionally forced to reduce the coal firing rate because of problems with maintaining the flow of coal. The plant proposes a trial of RAMSORB 200, which is added at a rate of approximately 5 pounds per ton of wet coal. The additive consists of sodium polyacrylate, which is a non-hazardous material that absorbs water from the wet coal to keep it from clumping.

For the trial, the vendor will provide a blower unit to feed the additive into a three-inch hole in the coal inspection chute. The trial will be conducted during wet weather (downpour of rain) on one unit and is expected to last for one day. Approximately 10 metric tons of the additive will be used. Based on the material proposed and the charging rate, it is not expected to result in any changes in emissions.

**Determination:** The Department approves your request as conditioned by the provisions attached to this letter. Pursuant to Rule 62.4.040(1)(b), F.A.C., the Department exempts this temporary project from the requirement to obtain an air construction permit. This determination may be revoked if the proposed activity is substantially modified or the basis for the exemption is determined to be materially incorrect. A copy of this letter shall be maintained at the site of the proposed activity. This permitting decision is made pursuant to Chapter 403, Florida Statutes.

**Permitting Authority:** Applications for air construction permits are subject to review in accordance with the provisions of Chapter 403, Florida Statutes (F.S.) and Chapters 62-4, 62-210, and 62-212 of the Florida Administrative Code (F.A.C.). The Department of Environmental Protection's Bureau of Air Regulation is the Permitting Authority responsible for making a determination for this project. The Permitting Authority's physical address is: 111 South Magnolia Drive, Suite #4, Tallahassee, Florida 32301. The Permitting Authority's mailing address is: 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. The Permitting Authority's telephone number is 850/488-0114.

**Petitions:** A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative hearing in accordance with Sections 120.569 and 120.57, F.S. The petition

## CASE-BY-CASE EXEMPTION

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must contain the information set forth below and must be filed with (received by) the Department's Agency Clerk in the Office of General Counsel of the Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. Petitions filed by the applicant or any of the parties listed below must be filed within 21 days of receipt of this Written Notice of Exemption. Petitions filed by any persons other than those entitled to written notice under Section 120.60(3), F.S., must be filed within 21 days of publication of a Public Notice or within 21 days of receipt of this Written Notice of Exemption, whichever occurs first. Under Section 120.60(3), F.S., however, any person who asked the Permitting Authority for notice of agency action may file a petition within 21 days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above, at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under Sections 120.569 and 120.57, F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention (in a proceeding initiated by another party) will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205, F.A.C.

A petition that disputes the material facts on which the Permitting Authority's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner; the name, address and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of when and how each petitioner received notice of the agency action or proposed decision; (d) A statement of all disputed issues of material fact; (e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action; (f) A statement of the specific rules or statutes the petitioner contends require reversal or modification of the agency's proposed action including an explanation of how the alleged facts relate to the specific rules or statutes; and, (g) A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the agency to take with respect to the agency's proposed action. A petition that does not dispute the material facts upon which the Permitting Authority's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301, F.A.C.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Permitting Authority's final action may be different from the position taken by it in this Written Notice of Exemption. Persons whose substantial interests will be affected by any such final decision of the Permitting Authority on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

**Mediation:** Mediation is not available in this proceeding.

**Effective Date:** This permitting decision is final and effective on the date filed with the clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition pursuant to Rule 62-110.106, F.A.C., and the petition conforms to the content requirements of Rules 28-106.201 and 28-106.301, F.A.C. Upon timely filing of a petition or a request for extension of time, this action will not be effective until further order of the Department.

**Appeal:** Any party to this permitting decision (order) has the right to seek judicial review of it under Section 120.68, F.S., by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel, Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000, and by

**CASE-BY-CASE EXEMPTION**

filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

  
Trina Vielhauer, Chief  
Bureau of Air Regulation

TLV/jfk

enclosure

**CERTIFICATE OF SERVICE**

The undersigned duly designated deputy agency clerk hereby certifies that this order was sent by electronic mail with received receipt requested before the close of business on 10/16/07 to the persons listed:

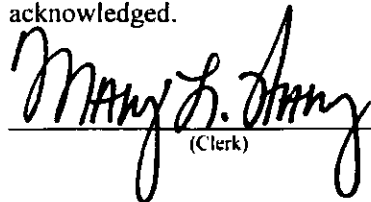
Mr. James S. Frauen, Seminole Electric Cooperative, Inc. ([JFrauen@seminole-electric.com](mailto:JFrauen@seminole-electric.com))

Mr. Mike Roddy, Seminole Electric Cooperative, Inc. ([WMRoddy@seminole-electric.com](mailto:WMRoddy@seminole-electric.com))

Mr. Chris Kirts, NED Office ([Christopher.Kirts@dep.state.fl.us](mailto:Christopher.Kirts@dep.state.fl.us))

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

  
(Clerk)

10/16/07  
(Date)

## CASE-BY-CASE EXEMPTION

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Subject to the following conditions, Seminole Electric Cooperative, Inc. is authorized to conduct the following temporary trial.

1. Seminole Electric Cooperative, Inc. is authorized to add RAMSORB 200 to wet coal fired in one of the units. The trial is expected to occur on one wet weather day (downpour of rain). The injection rate will be approximately 5 pounds per ton of wet coal fired and approximately 10 metric tons for the trial. The additive injection rate shall be monitored and recorded during the trial.
2. During the trial, the existing continuous emissions monitoring systems shall be operating and properly functioning. The plant shall collect emissions data for carbon monoxide, nitrogen oxides and sulfur dioxide while injecting the wet coal additive.
3. During the trial, the plant shall comply with all conditions of the current Title V air operation permit.
4. Within 45 days of completing the trial, Seminole Electric Cooperative, Inc. shall submit a report to the Bureau of Air Regulation summarizing the following information: a description of the weather conditions during the trial; the additive injection rate; the coal firing rate; the heat input rate; a comparison of the carbon monoxide, nitrogen oxides and sulfur dioxide emissions rates (lb/MMBtu and lb/hour) during the trial with the baseline case; and a conclusion by the plant on the effectiveness of the wet coal additive. Copies of the report shall also be sent to the Department of Environmental Protection's Northeast District Office.
5. This authorization expires on May 1, 2008.